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Grammatical Categories in Australian Languages

edited by R.M. W. Dixon

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Contents

1. Introduction	<i>R. M. W. Dixon</i>	1
Plenary Papers		
2. Phonological change in New England	<i>Terry Crowley</i>	19
3. Nyangumarda phonology: a preliminary report	<i>James E. Hoard & Geoffrey N. O'Grady</i>	51
4. The adjoined relative clause in Australia	<i>Kenneth Hale</i>	78
5. Accusative marking in Duungidjawa (Waga-Waga)	<i>S. A. Wurm</i>	106
6. Hierarchy of features and ergativity	<i>Michael Silverstein</i>	112
7. Substantival hierarchies: addendum to Silverstein	<i>Jeffrey Heath</i>	172
8. Nominal hierarchies in Yukulta	<i>Patrick McConvell</i>	191
Topic A: The derivational affix 'having'		
9. Rapporteur's introduction	<i>R. M. W. Dixon</i>	203
10. Walmadjari	<i>Joyce Hudson</i>	205
11. Kuuku Ya'u	<i>D. A. Thompson</i>	208
12. Yidinj	<i>R. M. W. Dixon</i>	212
13. Warungu	<i>Tasaku Tsunoda</i>	214
14. Gugu-Badhun and the Flinders Island language	<i>Peter Sutton</i>	225
15. Bāgandji	<i>L. A. Hercus</i>	229
16. Wangaybuwan	<i>Tamsin Donaldson</i>	231
17. Gumbaynggir	<i>Diana Eades</i>	238
18. Dyirbal	<i>R. M. W. Dixon</i>	242
19. Muruwari	<i>Lynette Oates</i>	244
20. Kulin	<i>L. A. Hercus</i>	249
21. Warluwara and Bularnu	<i>J. G. Breen</i>	250
22. Alawa	<i>M. C. Sharpe</i>	257
23. Arabana-Wangganguru	<i>L. A. Hercus</i>	263
24. Biri	<i>Tony Beale</i>	266
25. Yir Yorond	<i>B. Alpher</i>	269
26. Wunambal	<i>E. Vászolyi</i>	282
27. Ritharngu	<i>Jeffrey Heath</i>	285
28. Murinjpatha	<i>Michael Walsh</i>	287
29. Proprietary markers and kinship terms	<i>J. G. Breen</i>	290
30. The 'having' affix and other morphemes in fifty Australian languages	<i>Peter Sutton</i>	297
31. Rapporteur's summary	<i>R. M. W. Dixon</i>	306
Topic B: Ergative, Locative and Instrumental case inflections		
32. Rapporteur's introduction	<i>R. M. W. Dixon</i>	313
33. Yidinj	<i>R. M. W. Dixon</i>	315
34. Dja:bugay	<i>Kenneth Hale</i>	321
35. More on Yidinj	<i>R. M. W. Dixon</i>	327
36. Kuuku Ya'u	<i>D. A. Thompson</i>	329
37. Warluwara and Bularnu	<i>J. G. Breen</i>	331
38. Wangkumara	<i>J. G. Breen</i>	336
39. Bidjara	<i>J. G. Breen</i>	339
40. Wagaya	<i>J. G. Breen</i>	340

41. Muruwari <i>Lynette Oates</i>	342
42. Wangaybuwan <i>Tamsin Donaldson</i>	348
43. Southern Bägandji <i>L. A. Hercus</i>	350
44. Yuulngu <i>Bernhard Schebeck</i>	352
45. Garawa <i>Velma J. Leeding</i>	382
46. The Western Barkly Languages <i>Neil Chadwick</i>	390
47. Djamindjungan <i>W. G. Hoddinott & F. M. Kofod</i>	397
48. Ngangikurungur <i>W. G. Hoddinott & F. M. Kofod</i>	401
49. Murinjpatha <i>Michael Walsh</i>	405
50. Nunggubuyu <i>Jeffrey Heath</i>	408
51. Rapporteur's summary <i>R. M. W. Dixon</i>	411
52. On Ergative and Locative Suffixial Alternations in Australian Languages <i>Kenneth Hale</i>	414

Topic C: The bivalent suffix -ku

53. Rapporteur's introduction and summary <i>B. J. Blake</i>	421
54. Wunambal <i>E. Vászolyi</i>	424
55. Pitjantjatjara <i>John T. Platt</i>	427
56. The Western Barkly Languages <i>Neil Chadwick</i>	432
57. Djamindjungan <i>W. G. Hoddinott & F. M. Kofod</i>	437
58. Murinjpatha <i>Michael Walsh</i>	441
59. Nunggubuyu and Ritharngu <i>Jeffrey Heath</i>	444
60. Kuuku Ya'yu <i>D. A. Thompson</i>	450
61. Ogh Unjdjan <i>Bruce A. Sommer</i>	452
62. Warungu <i>Tasaku Tsunoda</i>	456
63. Galgadungu <i>B. J. Blake</i>	464
64. Arabana-Wangganguru <i>L. A. Hercus</i>	467
65. Muruwari <i>Lynette Oates</i>	472
66. Wangaybuwan <i>Tamsin Donaldson</i>	475

Topic D: Are Australian Languages Syntactically Nominative-Ergative or Nominative-Accusative?

67. Rapporteur's introduction and summary <i>B. J. Blake</i>	485
68. Rembarnga <i>G. R. McKay</i>	494
69. Alawa <i>M. C. Sharpe</i>	505
70. Thangu and Atjnjamathanha <i>Bernhard Schebeck</i>	516
71. Lardil <i>T. J. Klokeid</i>	550
72. Miriwung <i>F. M. Kofod</i>	584
73. Warluwara and Bularnu <i>J. G. Breen</i>	586
74. Wagaya <i>J. G. Breen</i>	590
75. Yandruwandha <i>J. G. Breen</i>	594
76. Arabana-Wangganguru and Bägandji <i>L. A. Hercus</i>	598
77. 'Ergative/Accusative' Typologies in Morphology and Syntax <i>Jeffrey Heath</i>	599

Topic E: Simple and compound verbs: conjugation by auxiliaries in Australian verbal systems

78. Rapporteur's introduction and summary <i>A. Capell</i>	615
79. Ngarrinjin <i>A. Capell</i>	625
80. Wunambal <i>E. Vászolyi</i>	629

81. Miriwung <i>F. M. Kofod</i>	646
82. Walmadjari <i>Joyce Hudson</i>	653
83. Pitjantjatjara <i>John T. Platt</i>	667
84. The Daly Family <i>D. T. Tryon</i>	673
85. Ngangikurungur <i>W. G. Hoddinott & F. M. Kofod</i>	691
86. Djamindjungan <i>W. G. Hoddinott & F. M. Kofod</i>	698
87. Gunwinjgu <i>Peter J. Carroll</i>	704
88. Alawa, Mara and Warndarang <i>M. C. Sharpe</i>	708
89. North-east Arnhem Land <i>Jeffrey Heath</i>	735
90. Arabana-Wangganguru <i>L. A. Hercus</i>	740
91. Dieri <i>A. Capell</i>	742
92. Ngamini, and note on Midhaga <i>J. G. Breen</i>	745
93. Yandruwandha <i>J. G. Breen</i>	750
94. Dhirari <i>Peter Austin</i>	757
95. Wangaybuwan <i>Tamsin Donaldson</i>	763

Index of Australian languages

771

Contributors

775

Maps:

The languages of New England and northern New South Wales	20
Conjugation systems in Australia	614
Location of Australian languages	770

1. Introduction

R. M. W. Dixon

The direct inspiration for this volume comes from Peter Ucko who, from his appointment as Principal of AIAS in November 1972, introduced new standards of scholarship and organisation into Australian anthropology and linguistics. Ucko conceived of a new format for the Institute's Biennial Conference, in 1974: this involved consecutive (rather than simultaneous) sessions, invitations to a number of distinguished overseas scholars, and the precirculation of papers, enabling the conference sessions to be devoted to informed and critical discussion.

Two linguistic symposia were included in the 17-day programme—a one-day meeting on Cape York (whose proceedings have been published by AIAS, edited by the convener Peter Sutton) and a three-day session 'Grammatical Categories in Australian Languages' for which the present editor was convener.

The papers in this volume were—with six exceptions (numbers 6, 27, 30, 35, 52 and 89)—precirculated and discussed at the conference. Seven papers prepared for the conference have—at the authors' request—not been prepared for publication; these are mentioned at the appropriate point below. Almost all papers were thoroughly revised by their authors, in the light of comments and discussion at the conference (and, in some cases in the light of new data from later field work).

To gain some unity of theme and the maximum cross-fertilisation, we conceived the idea of inviting papers on five specific grammatical topics. Anyone expressing interest in this symposium received, in December 1973, a forty-page document consisting of a general introduction, and one or two sample papers, for each of the topics. The 'rapporteur' for topics A and B was the editor, for topics C and D—Barry Blake, and for topic E—Arthur Capell. Participants were asked to address themselves to the questions ventilated in each introduction and to—as far as possible—follow the format of the sample papers. At the conference each of the topics was introduced by its rapporteur, who at the end attempted a summary of the papers presented, and drew conclusions and generalisations where possible.

In this volume the introductions for topics A and B are published as they were originally circulated, to show the sort of guidelines that were provided for contributors; for these topics a separate rapporteur's summary is included at the end. In the case of topics C, D and E, however, the rapporteurs have preferred to revise their introduction, including it and the conclusions of the conference in a single paper.

In addition, a number of papers on other grammatical topics were invited from chosen participants (notably, those from overseas). They are included

in this volume—under the heading ‘Plenary Papers’—ahead of the five set topics. Bruce Rigsby’s paper ‘Possession in Gugu-Dhayban’, although originally presented at the Grammatical Categories symposium, is being published in the volume on Cape York languages. Two other plenary papers are omitted from this volume since revised versions were not received by the deadline—Stanley Peters’ ‘Presupposition’ and Terry Klokeid’s ‘Tense, topic and focus in Lardil complement sentences’. Klokeid’s paper was essentially a further illustration of Hale’s thesis in ‘The adjoined relative clause in Australia’ (paper 4) for Lardil, spoken on Mornington Island; it forms a part of his PhD thesis which hopefully will be prepared for publication in the near future.

Crowley on Nganjaywana (paper 2)

It has long been believed (although, of course, it has not yet been proved) that all or most Australian languages are genetically related. Ten or twelve years ago there were thought to be two possible exceptions. One was Mbabaram—spoken west of Mareeba, north Queensland—of which just a few words had been published by N. B. Tindale and J. B. Birdsell (1941). The present editor gathered some data from the last speaker between 1964 and 1971, and it can be shown that Mbabaram is descended from a language of the normal Australian type (Dixon 1972:347–50). (There is in fact a longish old vocabulary of Mbabaram, the ‘Walsh River language’ of John Mathew, 1899:205–72. It should have been possible to reconstruct the phonological changes from this, but those scholars who suggested Mbabaram was anomalous do not seem to have been familiar with Mathew’s work, or with Schmidt’s (1919:170) discussion of it.)

The other exception was Anewan, from the New England highlands. In late 1973, Terry Crowley—while a third-year undergraduate—reconstructed the phonological changes by which Nganjaywana (to give a more accurate spelling) had evolved, again from an ancestor of a normal Australian type. In view of the importance of Crowley’s discovery he was invited to submit his paper on the languages of the New England area for this conference. It is worth noting that the materials used by Crowley are almost all of considerable age, and were available to those linguists who commented on Anewan’s supposed anomalous nature (see, for instance, Wurm 1965:376; 1972:40).

Phonological rules in Nyangumarda (paper 3)

In contrast to the diachronic changes so insightfully reconstructed by Crowley, Hoard and O’Grady present synchronic phonological rules for Nyangumarda, a Western language. They sensibly present first, in §§ 2–3, the paradigmatic data that requires principled explanation and then, in § 4, the relevant rules; these achieve an elegant analysis of the rather complex conjugational alternations in Nyangumarda, highlighted by a rewardingly simple statement of (positive) imperative. One point of note is that whereas many linguists would recognise five contrastive points of articulation for Nyangumarda, Hoard and O’Grady deal with the retroflex series in terms of a sequence of *r* plus the corresponding alveolar; this reduces the phonemic inventory but of course complicates the phonotactics (virtually the only consonant clusters in affix-initial and syllable-final positions are those involving *r* as first member).

Adjoined versus embedded relative clauses (paper 4)

Hale’s seminal paper provided one of the high-spots of the conference. He argues lucidly and convincingly that many Australian (and other) languages have an ‘adjoined’ type of relative clause, and attaches historical priority to this. Hale suggests that Walbiri has relative clauses entirely of the adjoined type, whereas Kaititj could be said to have relative clauses that are adjoined at the level of deep structure but are—through the operation of an attraction rule—embedded in surface structure. He also says that other languages might, through grammatical reanalysis, have developed embedded relative clauses at the deep level. (It came out in discussion that Hale does not consider the possible development of relative clauses to be entirely linear—although Australian languages provide evidence of a movement from adjoined to embedded types, it is quite feasible that embedded clauses could be superceded by the adjoined variety. We thus have the possibility of a circular (potentially never-ending) scheme of syntactic change.)

It appears that Dyirbal, from north-east Queensland, is an example (complementary to those described by Hale, but anticipated by him) of a language with embedded relative clauses in deep structure. Four pieces of evidence can briefly be cited (and see Dixon 1972:99–105, 176–79):

(a) a relative clause will always show strict case concord with the coreferential NP in the main clause;

(b) word order in spontaneous Dyirbal conversation is extraordinarily free, but a main informant (speaking the Dyirbal dialect) would use a norm ‘underlying order’ in elicitation of simple and complex sentences; she preferred to place a relative clause after the head noun of the coreferential NP in the matrix sentence. However, a sample of 200 relative clauses in texts embraces all ordering possibilities—a relative clause can precede or follow the coreferential NP within the main clause, or (equally as often) follow the entire main clause. It may be that the latter possibility is an instance of the tendency to move a long constituent to the end of the sentence (as in English object-NP/phrasal-verb-preposition ordering—we can have *he ate up the meat* or *he ate the meat up* but *he ate up the large juicy steak dripping with mushroom sauce* is preferred to *he ate the large juicy steak dripping with mushroom sauce up*).

(c) relative clauses in Dyirbal are pretty well confined to NP-relative interpretations, and the nominative NP in the relative clause must be coreferential with an NP in the main clause. (The writer has only very occasionally encountered a clause that could have T-relative interpretation);

(d) a Dyirbal sentence can involve more than one relative clause—it seems in fact that there can be a relative clause corresponding to every NP in the main clause. Thus an informant from the Mamu dialect, when asked about this point, gave:

(1) *dungaraŋu /ŋayguna baŋgul balgan /miyandaŋuru*
cry-REL-NOM I-OBJECT he-ERG hit-PRES/PAST laugh-REL-ERG
He, who was laughing, hit me, who was crying

and

- (2) *ɲada bayi buyan |maɲɲaɲuru |balgalɲaju*
 I-SUBJECT he-NOM see-PRES/PAST eat-REL-ERG hit-ɲay-REL-NOM
yibigu
 woman-DAT
 I, whilst eating, saw him hitting the woman

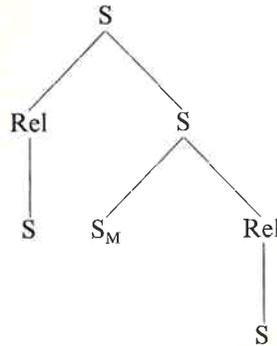
Note that this informant either postposed both subject and object relative clauses, as in (2), or preposed the object clause whilst postposing the subject one, as in (1).

The evidence suggests that Dyrirbal has embedded relative clauses, with an optional late (and, probably, dialect-determined) 'extraction rule' (although the tremendous freedom of word order in Dyrirbal does severely impede investigation of any rule of this kind). But this is by no means a final judgement—the topic deserves a fuller investigation than it has yet received (ideally, by a native speaker trained as a linguist).

(Hale now suggests—private communication, February 1975—that he is less sure that the existence of relative clauses modifying more than one NP in a sentence does provide clear evidence of embedded status. Hale mentions that he has recorded Walbiri sentences similar to (1–2) for example:

- (3) *|kuɖu yali kutja-ka ɲalari-mi, ɲula-ɲku kapi paka-ni maliki yalumpu, kutja-ka ɲuna-mi yama-ɲka|*
 (child that:distal REL-AUX laugh-nonpast, that-erg AUX strike-nonpast
 dog that:prox, REL-AUX lie-nonpast shade-loc)
 That child over there who is laughing will hit that dog that is lying in the shade.

and feels that the relative clauses may be 'stacked'—that is, with underlying structure:



where S_M is the main assertion. This whole topic requires—as Hale stresses—more detailed study. But even if this criterion is not conclusive, points (a–c) above are sufficient tentatively to characterise relative clauses in Dyrirbal as the embedded type.)

It is interesting to compare relative clauses in Yidij, a language geographically contiguous but not genetically close to Dyrirbal; the evidence here does not yield a straightforward decision between 'adjoined' and 'embedded' types, in terms of Hale's criteria. There are four relevant points:

- (a) over 90 per cent of relative clauses in the Yidij corpus have an NP

coreferential with an NP in the main clause, and in both clauses this NP must be in nominative case (direct object or intransitive subject function). Since nominative has zero case inflection there is no chance of discovering if there is any 'case concord' involved;

(b) there are some (5–10 per cent) clauses that have no coreferential NP and can only have T-relative interpretation—these are greatly outnumbered by the NP-relative clauses, but they are too numerous to be ignored;

(c) a relative clause will normally follow the main clause (word order in Yidij is much less free than in Dyrirbal); it will sometimes be preceded by an intonational pause but most often falls into the same intonational group as the main clause. Some relative clauses are preposed (and then always comprise a distinct intonational group); a relative clause is *never* inserted into the middle of the main clause;

(d) no instance is known of a Yidij sentence involving more than one relative clause (indeed, the criterion on coreferentiality—involving the nominative NP in both main and subordinate clauses—would preclude two clauses with NP-relative interpretation).

Detailed discussion of this aspect of Yidij syntax would be out of place here (there is a full discussion, with exemplification, in Dixon forthcoming). But it is clear from (b–d) above that Yidij relative clauses show some of the characteristics of the adjoined type, and—from (a)—some of the embedded type. It may be that (following Hale's suggestion concerning diachronic reanalysis) Yidij has adjoined relative clauses, but they are just entering the process of historical change by which they are attracted into an NP in the main clause.

There are three inflections that can mark the verb of a relative clause in Yidij, and they are homophonous with the dative, purposive and ablative case inflections on nouns (*-nda*, *-gu* and *-mu* respectively). A substantial case can be made out for providing parallel syntactic explanations of relative clauses and of peripheral (that is, not subject or object) NPs in Yidij (Dixon, forthcoming). This suggests a plausible historical development:

peripheral NP → adjoined relative clause → embedded relative clause.

In Dyrirbal, on the other hand, there are two inflections that mark the verb of a relative clause (*-ɲu* and *-mi*) and they coincide in form with the two genitive inflections on nouns (roughly 'present possession' and 'past possession'—Dixon 1972:105–10). A strong case can be made out for regarding possessive phrases as, in deep structure, a type of relative clause (Dixon 1972:179–84). Michael Silverstein has suggested (in conversation) that the historical development might have been the other way around, with possessive phrases—which one assumes would always have been embedded in a main clause NP—giving rise to embedded relative clauses. This presents an alternative origin for embedded relative clauses, and it is quite conceivable that embedded relative clauses in different languages (or even different types of embedded relative clause in the same language) could have developed some by the path: adjoined NP → adjoined clause → embedded clause, and some through: embedded possessor NP → embedded clause.

This and the whole question of relative clauses in Australian languages is,

as Hale emphasises, a large and absorbing topic that will well repay detailed study. One relevant point may be that a peripheral case is surely more likely to be extended to mark adjoined relative clauses if it has a fairly wide range of nominal use. The Dyrbal ablative is restricted to the local sense (*from a place, out of a hole*) and one would hardly expect it to give birth to a relative clause. But the Yidip ablative has a 'causal' sense (I'm full *from food*, I'm sore *from a wasp*) that can easily be extended to causal relative clauses. (I'm full *from eating (food)*, I'm sore *from being stung (by a wasp)*). Certainly Hale's inspiring paper opens up new vistas of synchronic and diachronic syntactic inquiry.

Hale's hypothesis also has important consequences for grammatical theory in the most general sense. For instance, it has been the established doctrine—since Chomsky 1957:72—that modifying adjectives derive from relative clauses (with predicate adjectives) in deep structure. But many languages with just adjoined relative clauses may allow only one relative clause per sentence (Yidip seems to be one example), whereas every NP can involve one or more adjectives. We would then have to allow modifying adjectives to be directly generated as part of an NP by the phrase structure rules (a solution argued for, on independent grounds, by Dixon 1972:205–8). But then, if adjoined relative clauses are—by historical change—attracted, and re-analysed as embedded clauses, are adjectives suddenly to be re-analysed as derived from relative clauses? The implausibility of this suggestion must surely lend weight to the universal treatment of modifying adjectives in terms of simple PS expansion of NP (treating adjectives like Det) rather than through underlying predicational clauses.

Duungidjawan (paper 5)

Wurm's paper is particularly welcome, especially as it is the first data-based paper on an Australian language that he has produced (although, over the last twenty years, Wurm is believed to have worked on ten or more languages, some now extinct). The 'accusative' affix *-na* ~ *-na* occurs in most Australian languages, but with some variation of function and of the classes of words it can be affixed to. The occurrence of *-na* ~ *-na* can be explained in terms of a 'grammatical hierarchy' (see paper 6–8 and comments below): in some languages the affix occurs only with pronouns, in others with pronouns and proper nouns, in others with pronouns, proper nouns, and common nouns that have human reference, in others this is extended to nouns with animate reference, and in others to some or all non-animate common nouns. Typically, *-na* ~ *-na* marks direct object function, but there are languages where it marks transitive object and also intransitive subject, and yet others where the affix is said to mark just subject function. (Examples of all these types of class and function variation are summarised in Dixon 1970:94–97.)

As Wurm points out, the behaviour of the accusative affix in Duungidjawan shows several interesting features:

- (a) the canonical form seems to be *-na*, involving an apical, in place of the usual laminal, nasal;
- (b) it can be added to pronouns, common (and, one presumes, proper) nouns with human reference, to certain nouns with animate reference (the examples

given are: 'dog', but not 'kangaroo'), and, under certain conditions only, to at least two inanimate nouns ('tree' and 'fire/camp');

(c) it can be extended to mark indirect object function.

The most fascinating example quoted is of *-na* affixed to each of the words in a relative clause which qualifies a main clause direct object. Unfortunately, Wurm was only able to attend the part of the symposium that involved discussion of his own paper; it would have been interesting to discover how relative clauses in Duungidjawan measure up to Hale's criteria for adjoined versus embedded. As Wurm comments (personal communication) 'the subject is a very extensive one and will require a lot of extra study'; it is greatly to be hoped that he will be able to make time to undertake this study, in the near future.

Grammatical hierarchy (papers 6–8)

The papers given at the conference by Jeffrey Heath and Patrick McConnell were extensions of original work by Michael Silverstein, known chiefly from a draft paper 'Hierarchy of features and ergativity'. Silverstein had unfortunately not been invited to the conference, but he has allowed us to include here a revised and enlarged version of this thought-provoking paper.

Basically, Silverstein is concerned with languages which mix an 'ergative system' of inflections (with a marked, 'ergative' case for transitive subject, and an unmarked 'nominative'—or, as Silverstein prefers 'absolutive'—case for both intransitive subject and transitive object functions) with an 'accusative system' (here a marked, 'accusative', case indicates transitive object function, and an unmarked 'nominative' case is used for transitive and intransitive subject functions). Silverstein sets up a hierarchy, roughly:

1st and 2nd person pronouns	3rd person pronouns	proper nouns	human common nouns	animate common nouns
----	----	----	----	----
1	2	3	4	5
ACCUSATIVE →			← ERGATIVE	

and suggests that for each language which mixes ergative and accusative case systems, everything to the left of a certain point on this hierarchy will show an accusative paradigm, and everything to the right an ergative system of case marking. Thus, for some languages the critical point is '2'—pronouns will then be morphologically accusative and all nouns ergative; other languages take as their critical point '1' or '3' or '4' or '5', and so on.

Silverstein suggests a natural explanation for this division. Referents of items to the left in the hierarchy are natural instigators of actions, whereas as one moves to the right, each new class is progressively less likely to occur as transitive subject. It is thus reasonable to *mark* the rightmost classes (with the ergative inflection) when they occur with this marked function; but it is less necessary to mark the leftmost classes when they occur in their most natural function, transitive subject. The reverse argument applies for accusative: direct object is an unusual or 'marked' function for the leftmost classes, so accusative marking is more natural at this end of the hierarchy. We thus have, effectively, two independent parameters—the marking of 'transitive subject' (which extends inwards some distance from the right) and the marking of 'transitive object' (which extends in from the left). If the

cut-off points of these two parameters coincide we get a simple split ergative/accusative system. But the parameters can overlap and we will then get some part of the middle of the hierarchy—say, third person pronoun—having three distinctive case inflections: ergative (for transitive subject), accusative (for transitive object) with just intransitive subject receiving the unmarked case inflection (often, zero).

Silverstein gives detailed consideration, in § 1.1–1.2, to the nature of markedness and hierarchical organisation within the class of first and second person pronouns. His closely reasoned argumentation, and justification for the features he sets up, well repays close study. The hierarchy is related to split-ergative systems in § 1.3 and illustrations from a range of Australian languages appear in § 1.4.

In § 2.1–2.3 Silverstein presents detailed and elegant justification for the hierarchy which underlies the Chinookan pronominal system; the discussion is extended in § 2.4–2.6 to cover syntactic derivation and discourse structure. Silverstein then examines Dyirbal, in § 3, and by assessing its syntax in terms of co-reference and switch-reference relations is able to detect significant similarities in the subordinating apparatuses of Dyirbal and Chinook. Finally § 4 suggests theoretical conclusions concerning the general syntactic relevance of grammatical hierarchy.

Heath (paper 7) adds further theoretical points and provides a fascinating example from Nungubuyu and Ngandi. McConvell (8) investigates the nature of the grammatical hierarchy in Yukulta (utilising the data in Sandra Keen's thesis) which determines the type of construction used. It is clear that the notion of hierarchy has an important role to play in explaining the mixed syntactic nature of Australian languages (and in attempting to reconstruct the syntactic nature of proto-Australian) as well as in describing all sorts of grammatical details in individual languages. For instance, in Yidip a type of indirect object can be marked by dative or by locative case; and inalienable possession can be shown by genitive inflection or by simple apposition. In each case, no fixed 'yes/no' rule can be given for which alternative to employ in any instance; *both* alternatives are *possible*, in most cases, but one of the choices becomes more and more frequent as one moves along a hierarchy, similar to that illustrated above. The use of different types of demonstratives and interrogatives is governed by the same kind of considerations. (For detailed discussion see Dixon, forthcoming.)

Topic A: The derivational affix 'having' (papers 9–31)

This topic attracted a large number of, on the whole, detailed and well-organised papers. The guidelines suggested by the rapporteur were generally followed rather closely, so that it is an easy matter to compare the form, grammatical function, and semantic range of the 'having' affix in different languages. Some contributors listed semantic functions additional to those given as 1–7 in paper 9, and only occasionally were these senses ones that properly belonged under 1–7.

Only limited conclusions seem possible at present (paper 31) concerning the origin and development of this nominal affix, and its possible relation to a verbal 'intransitiver'. But the data presented here constitute an excellent guide for future fieldworkers (on what to look for) and a good foundation for future comparative study on this topic.

Some cautions should be directed to the kinds of comparison of grammatical morphemes proposed in some of these papers. Since most Australian languages have a relatively small set of phonemes (the majority, between 16 and 23) there are likely to be many coincidences of form, within a language and between languages. Thus, what are properly two homophonous affixes in a certain language (with quite different meaning and function) are sometimes wrongly regarded as two 'uses' of 'one morpheme'. And, with two-hundred-odd languages to choose from it is always possible to find some affix in some language with similar form and meaning to a given affix; the two affixes are then not necessarily genetically related! As mentioned in paper 31, comparative reconstruction in Australia will only be possible within a framework of genetic subgrouping (justified quite rigorously, in terms of shared grammatical and phonological innovations and retentions); this is not presently available.

Somewhat rashly, the rapporteur took a vote at the conclusion of discussion of this topic (which in fact ended the conference) on a suitable name for the 'having' affix. The term 'propriative' won, and has been used by some authors in the revisions of their papers. This term seems more fitted to some of the typical semantic functions of this affix than to others. Thus, one could appropriately use the term 'proprietor' for *I have a spear* (I spear-'having'), less appropriately for *I have a moustache*, less so again (depending on degree of chauvinism!) for *I have a wife*. And 'proprietor' is surely quite inappropriate to describe relations like *I am going hunting with my father* (. . . father-'having') or *I am going hunting by moonlight* (. . . moon-'having'). The writer admits to joining the (growing?) minority who are dissatisfied with the result of this vote, and intend to use the term 'comitative' for this nominal affix (as for the verbal affix that derives a transitive from an intransitive stem, for example, *bring* (= *come with*) from *come*).

Two of the papers published here—27 by Heath and 30 by Breen—were not discussed at the conference but were written specially for this volume in late 1974. The paper given by David Birk on the comitative in Malak-Malak is to be published as part of his Ph.D. thesis [forthcoming].

Topic B: Ergative, locative and instrumental case inflections (papers 32–52)

There were, when this symposium began, three open problems concerning these three cases:

(1) almost every Australian language (outside Arnhem Land) has an ergative case, marking transitive subject function. This normally has a fair number of allomorphs, with the same kind of patterning of phonological form and conditioning recurring in widely separated languages. As a rule, all allomorphs end in *-u*. The form after a consonant is most often a homorganic stop plus *-u*, but sometimes just *-du* (with no or only limited assimilation). After a vowel we get *-lu* ~ *-ŋgu*. The problem here concerns the origin of this post-vocalic alternation, involving as it does such phonologically different segments as *-l-* and *-ŋg-*.

(2) most languages with an ergative case inflection have another case whose realisation exactly (or almost exactly) corresponds to ergative—repeating all the allomorphic alternations—except that the final vowel is *-a* and not *-u*. This inflection most frequently indicates locative case. The problem here is

why ergative (a major syntactic case) should so exactly parallel locative (a local case) rather than, say, dative (which is normally *-gu*, without much allomorphy—see Topic C in this volume).

(3) for most languages an 'instrumental' function can be recognised. In just about every one of these languages instrumental inflection coincides either with ergative or with locative. The question here is why instrumental should be distributed over just these two cases (and what determines which of the two it coincides with)? Does this question tie in with (2), the matter of close realisational parallel between ergative and locative?

Whilst it was realised that solutions to these three problems might well be interrelated, this symposium Topic was designed to attract data that might suggest an answer to question (3). Unfortunately, although a number of sound papers were contributed, none of their data really suggested a solution. It may be, in fact, that the problem should be looked at not so much in terms of morphological shift (why did instrumental move from ergative to locative in some languages, or vice versa) but from a more basic, syntactic point of view. In terms of an articulated syntactic description of each language, what are the syntactic processes giving rise to an instrumental NP? And, in terms of these, what case should be assigned to an instrumental NP? This approach is developed in paper 51.

The most exhilarating moment of the conference was undoubtedly when Ken Hale went to the blackboard and explained how ergative and locative alternants (*-ŋgu* ~ *-lu*, *-ŋga* ~ *-la*) might have evolved. This actually took place at the Cape York symposium but Peter Sutton, editor of that volume, has generously agreed that Hale's write-up of this idea (paper 52) is most appropriately published under this Topic; Hale's hypothesis came up again in discussion on each subsequent day of the conference.

Briefly, Hale postulates that ergative was originally *-lu*, which became *-du* after a consonant, with later assimilation. He suggests that some ancestral Australian language(s) may have proscribed vowel-final disyllabic words—and that this may have been achieved by simply adding a final *-ŋ*. At a later stage the number of consonantal segments that could end a word was reduced, by firstly dropping non-coronals; a stem *CVCVŋ#* would now become *CVCV#*, and its ergative *CVCVŋ+gu#* could be reanalysed as *CVCV+ŋgu#*. The ergative inflection on trisyllabic vowel-final stems would have remained *-lu* throughout.

We thus get the modern pattern of ergative allomorphy, explained entirely in terms of an original form **-lu*, and a number of general phonological changes (of types well-attested for Australian languages). This also suggests an original locative **-la*: plainly the *-l-* here would have undergone the same changes as ergative *-l-*, so that the formal parallelism between ergative and locative in modern languages is simply the result of a uniform series of historical changes. We have now posited original ergative **-lu* and locative **-la*; these coincide in the consonantal segment but there is surely nothing significant in this (that is, it implies no hidden syntactic connection).

Hale's hypothesis thus puts forward an answer to question (1) above, and disposes of question (2). And it may be that it will, in time, suggest a further line of attack for question (3).

Topic C: The bivalent suffix *-ku* (papers 53–66)

There are a number of examples in Australian languages of verbal and nominal affixes having both formal and semantic similarity (for instance, Ray 1907:10); the most notable, recurring example is—as Capell 1956:77–79 felicitously named it—'the bivalent affix *-gu*' (or *-ku*, to those who prefer the voiceless symbols). Papers under this topic survey the form and function of this affix in a wide geographical range of languages; there are also comments on languages lacking an affix *-ku*, but with an affix of different form that covers the grammatical/semantic range typically found with *-ku*.

Nominal *-ku* always covers 'dative' function (marking an indirect object, complement noun, and so on). Allative is sometimes identical to dative and sometimes involves an increment to dative *-ku* (in other languages, allative can coincide with or be based on the locative case—see Topic B). Genitive is frequently identical to dative—both being shown by *-ku*—and occasionally involves an increment to dative (but the reverse—with dative being based on genitive—is never found). This opens up all sorts of historical possibilities. One (suggested in personal discussion by Michael Silverstein) is simple affix shift; from

(4) man dog-*ku* The man is [going, etc] for the dog

we could get

(5) man-*ku* dog The man's dog

The suggestion is that the semantic link between (4) and (5) could lead to the affix hopping from 'implicated' to 'possessor', and then being employed in both genitive—example (5)—and dative—example (4)—senses. (The affix *-ku* is effectively a construction marker in sentences like (4), marking the relation between its NP and the whole of the rest of the sentence, and shifts to become a genuine case-ending in (5).) This would add a new storey to the possible development of embedded relative clauses, as sketched in the commentary on paper 4 above. To match an extension of Hale's scheme:

peripheral NP → adjoined clause → embedded clause

we could have, as an alternative line of development:

peripheral (dative) NP → embedded (genitive) NP → embedded clause

The one disappointing aspect of this Topic was the lack of any really detailed syntactic discussion. It is surely fascinating to search out deep syntactic justification as to why certain NPs, and certain verbs, should both receive the same surface marking, *-ku*. (One line of explanation is pursued in Dixon 1972:141–47, 156–76; but there must be many different syntactic approaches that could be tried.) The paper given by David Birk on Topic C will be published as part of his Ph.D. thesis [forthcoming].

Topic D: Are Australian languages syntactically nominative-ergative or nominative-accusative? (papers 67–77)

This is perhaps, from the viewpoint of syntactic theory, the most important of the five Topics. It attracted four detailed and well-argued deep syntactic analyses (68–71) and five accounts of some relevant surface data (72–76).

The topic of 'ergativity' has perhaps been over-exposed of late, and—following Hale (1970) and Dixon (1972)—there is surely too much attempt to

force each language into a straightjacket of 'strictly ergative' or 'strictly accusative' deep syntax. Silverstein's pioneering work on hierarchies (paper 6) was unfortunately not available for precirculation to contributors; he shows that surface 'ergativity' proceeds on a sliding scale, rather than in terms of absolute pigeonholing, and it may well be that Silverstein's ideas could be extended to provide a more fluid and appropriate typology of deep syntaxes. In this connection, Heath's suggestions (paper 77) are also salutary, with his reference to multiple-intransitivity in Choctaw hinting at interesting new lines of semantic enquiry.

But, talking in terms of the current ergative/accusative dichotomy, some of the papers from this conference should have helped dispel at least one persistent bogey. There are a number of linguists who, while agreeing that Dyirbal certainly does have an ergative deep syntax (as claimed in Dixon, 1972), argue that it may be unique in this. The writer finds this inconceivable—surely the odds are enormous against Dyirbal being the only one out of over 200 Australian languages (or the only one out of 5,000 or so world languages!) to be 'truly ergative'. In point of fact, only a handful of Australian languages have been or are being investigated thoroughly enough at the syntactic level (by scholars with the right sort of professional expertise) to ask whether or not they are ergative. (Note that in most cases this question can only be answered for a language that is still actively spoken; sufficient material is unlikely to be obtained in the case of a language that is only 'remembered' by one or two very old people.) Of the languages for which the question can be answered it appears that Rembarnga (paper 68) and probably Alawa (paper 69) are predominantly 'ergative', as are Yidij (Dixon, forthcoming), and Bandjalang (Terry Crowley, personal communication). On the other side Walbiri (Hale, 1970), Lardil (paper 71), Atjnjamathanha (paper 70) and Dhirari/Diyari (Peter Austin, personal communication) seem to be accusative. But in most of these cases the verdict is only a majority one—there is some evidence for one possibility, but rather more for the other. In fact, the more languages there are investigated in these terms, the more a strict 'yes/no' typology seems misguided. There is surely a continuum of some kind and Dyirbal is interesting in that it is very far to the ergative end of it.

Two papers originally circulated for this topic have not been submitted for publication—Blake on Kalkatungu (this was the sample paper which was circulated—together with an earlier version of paper 67—to potential contributors in December 1973) and Michael Walsh on Murinjpa.

Topic E: Simple and compound verbs: conjugation by auxiliaries in Australian verbal systems (papers 78–95)

Some Australian languages have an open class of verbs that it is difficult or impossible exhaustively to list. For instance, the writer has the best part of a thousand monomorph-ic verb roots for Dyirbal, from north-east Queensland, and new items crop up on every day of field work. In other languages, however, the number of monomorph-ic verb roots is distinctly limited. Thus O'Grady (1970:849, see also 1957:306–8) reports only about 100 simple verbs in Nyangumarda (from the north-west coast) a language which he knows well, having lived and worked with speakers for half-a-dozen years. That is, there are only about 100 forms which can take verbal affixes—for tense, aspect, and so on. There is, in fact, a potentially open-ended set of

compound verbs—each having a non-inflecting first component, followed by one of the set of simple verbs.

As one moves due east from Nyangumarda, so the number of monomorphemic verbs decreases. Joyce Hudson (personal communication) reports around 60 for Walmadjari, and Patrick McConvell (personal communication) no more than 30 for Gurindji, over the border into the Northern Territory. As one moves north, from Walmadjari into the 'Kimberley languages' there are only something like a dozen forms that can take verbal inflections; all verbs contain one of these items as their final component. Such small sets of 'simple verbs' have been referred to as 'auxiliaries'; and since all verbal inflections go onto the auxiliary (rather than onto the preceding lexical element, which bears the major semantic load) verbal systems of this kind are said to involve 'conjugation by auxiliaries'.

Papers 79–89 survey languages of this type. The set of simple, monomorphemic verbs is in most cases quite small, ranging from ten to thirty or so in size. In some cases all inflecting verbal forms can occur as bound or as free verbs, but in other cases only certain 'simple verbs' can occur free, others being restricted to occurrence in compounds (these contrasting systems are exemplified in papers 86 and 85 respectively, by Hoddinott and Kofod).

Papers 90–94 exemplify a typologically similar but genetically quite different sort of phenomenon, in languages of the Lakes area, South Australia. Here there is evolving a set of 'auxiliary verbs' that originally had (and still have, when used alone) referential meanings—'lie', 'enter' and so on. When these auxiliaries occur with non-auxiliary verbs they then have a tense/aspect-type significance—'lie' → 'state just attained', 'enter' → 'state recently attained', etc. The evolution of 'tenses/aspects' from referential verbs, in the Lakes languages, is of great interest to any linguist concerned with the once-tabooed topic of the origin and development of human language.

Paper 95 deals with Wangaybuwan, from New South Wales, and describes a set of eight 'simple verbs'; these do not obligatorily occur with a lexical verb, but serve as base for evaluative adverbs, describing the ways in which a certain action was performed.

There is a parallelism between verbal auxiliaries (of the type dealt with in papers 79–89) and noun (gender) classes. Whereas each noun normally occurs with a certain gender marker, each verb normally selects a certain auxiliary, in each case the selection being partly semantically (and sometimes partly formally) determined. Further in some languages a noun may occur with several different noun class markers, with a difference of meaning in each case; so also a verb may—in certain languages—take one of several auxiliaries, again with different semantic effects. Wangaybuwan auxiliaries seem more similar to those of the northern type (79–89) than to recent developments in the Lakes region (90–94). But whereas the Kimberley/Arnhem Land auxiliaries resemble a gender-carrying article in an NP (*accompanying* the head, and agreeing with it), the Wangaybuwan forms are more like gender-determined pronouns (which may *replace* the head).

There remains one difficulty of terminology. Some central Australian languages have a special constituent which includes various tense and number/person morphemes (that are affixed to the verb in other languages) attached to a root that Capell (1956:11, etc.) has called a 'catalyst'. There are most often just three or four possible forms filling the catalyst slot, and they

often have modal-type significance ('indicative', 'interrogative', 'admonitive', etc.—see, for instance, paper 82 by Joyce Hudson). These catalytic verbs have—by natural extension from the terminology of English grammar—sometimes been referred to as 'auxiliaries'. For instance, Hudson's paper on Walmadjari follows Hale in using the term 'auxiliary' to refer to this modal-type constituent, rather than for members of the set of 60 monomorphemic verb roots (one of which *must* occur in each VP). But the set of Walmadjari simple verbs are plainly comparable with (and some items may be cognate with) the sets of a dozen or so simple verbs in the Kimberley languages; and the latter are referred to (in papers 78–80, and elsewhere) as 'auxiliaries'. There is here a confusion of terminology which Australianists must surely resolve before long; for the time being the reader must simply be warned of this double use of the term 'auxiliary'.

Paper 89 by Jeffrey Heath was not precirculated for the conference, but was written specially for this volume in late 1974. An earlier version of 78, together with 79 and 91, was sent out as a guide to potential contributors, in December 1974. David Birk's contribution to this topic will appear in Birk [forthcoming].

Acknowledgements

A volume such as this (and the conference on which it is based) must depend on the co-operation of many people. The authors of papers were unfailingly courteous about the deadlines imposed on them, and diligent in supplying data and ideas to meet the various rapporteurs' needs and schemes. It is worthy of note that almost every linguist currently working on Australian languages took part in this conference. One of the few absentees was Jean Kirton, whose caravan, notes and tapes were damaged by floods at Borroloola at about that time; the contribution that she would have made was missed.

The conference was run in such a way that there was no rigid time-keeping. Chairmen were asked not to curtail productive discussion or to allow any non-productive session to become too drawn out. Some sections ended earlier than originally planned whilst others went on longer; there was a general balancing-out in each day's programme. The shape of the present volume owes a good deal to Barry Blake, Ray Cattell, Ken Hale, Geoff O'Grady, Stanley Peters, Bruce Rigsby and Peter Sutton for their imaginative and guiding chairmanship.

The editor's debt to his co-rapporteurs, Arthur Capell and Barry Blake, should be quite evident. Peter Ucko suggested the format of the conference and provided advice and encouragement at every stage. Jacquie Lambert, as conference co-ordinator, planned and organised the mechanics of invitations, paper precirculation, travel, accommodation, dinners and so forth—work that requires as much skill and ability as writing an academic paper, but which seldom receives the same recognition and reward.

Shirley Andrew, the AIAS Editor, transformed a hideous pile of manuscript into a presentable volume. No praise is too high for her skill, and her forbearance.

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Plenary Papers

2. Phonological change in New England

Terry Crowley

Abstract

This paper discusses the linguistic situation of the New England region of New South Wales, defining as far as possible the relationships of Yugambal, Ngarbal, Marbal, Baanbay, Gamblamang, 'Enneewin' and Nganjaywana (see map on page 20). Particular attention is paid to the latter, which has often been thought to be completely unrelated to the rest of the languages of Australia. It is shown here that it is in fact derived from a normal New South Wales north coast language by a series of rather far-reaching phonological changes, expressible in terms of natural phonological rules, some of which show remarkable similarity to historical rules discovered in other, quite independent, linguistic situations in Australia.

General introduction

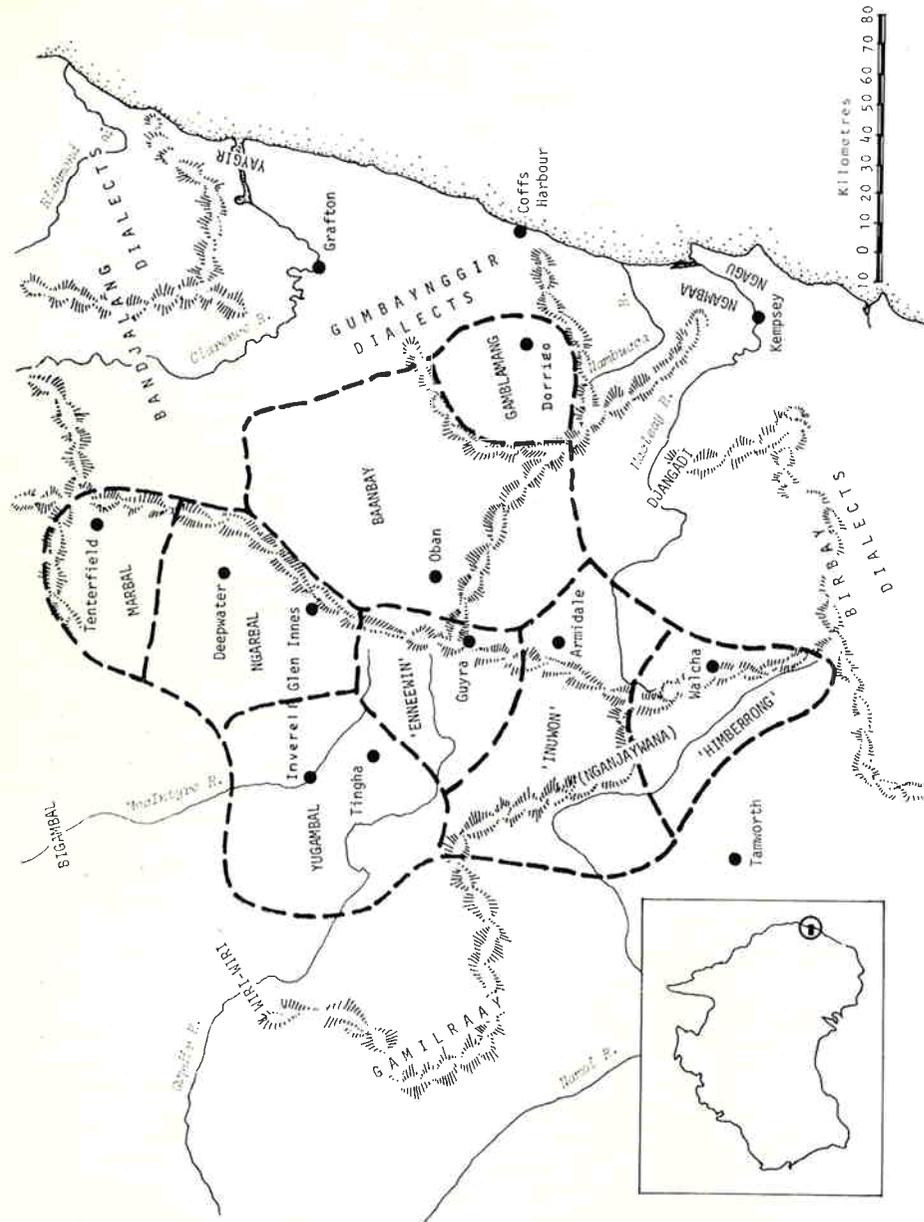
For whatever reasons, the languages of the New England Aborigines died out much earlier than in the coastal and inland areas, where the languages still survive to varying degrees. The result of this early loss of language is that today, very little is known of the languages that used to be spoken in this area before the white man moved in. Much of what was published up to the 1930s is difficult to interpret, and often contradictory. Since the 1930s, almost nothing has been published. The present paper is an attempt to sort out the confusion that exists, establishing just what languages were spoken in the region, and what relationships the languages exhibited between themselves and with the other languages on the coast and inland.

Gamblamang

Gamblamang was spoken on the eastern extremity of the New England Tableland in the Dorrigo Plateau area. All that is known of the language is its name, which was given by a Gumbaynggir speaker during a field trip conducted by the writer in early 1973. The informant said that Gamblamang was 'almost the same' as Gumbaynggir; from this comment it would seem that the two were probably only dialects of one language.

Baanbay

Baanbay was the language of the New England Tableland around Wollomombi, Oban, Ben Lomond and the catchment area of the Boyd and Mitchell River systems generally. From the small amount of data available, Hoddinott (1967) has shown that it is very closely related to Gumbaynggir in its lexicon, phonology and grammar, so there is no need to enter into a detailed discussion of the position of this language.



The languages of New England and northern New South Wales

Note: Language names in this map and throughout this paper are spelt according to the 1972 recommendations of the 'A.I.A.S. Convention for the Representation of Tribal and Language Names.'

Yugambal

Yugambal was originally spoken in the area between Boggy Creek and Inverell, with Bingara, Bundarra and Tingha being on the extremities of the territory covered by this language. There is some published material on Yugambal, but it is scant (MacPherson 1931, 1934; Mathews 1901): the MacPherson sources consist of lists of lexical items only, and Mathews provides only a five page grammatical sketch of the language, with some details of the noun cases, pronoun paradigms and verb inflections. There are also the unpublished sources of Mathews and MacPherson, as well as the more recent fieldnotes of Court (1963), Austin (1972, 1973) and Crowley (1972-73), bringing the corpus to about 120 lexical items, and even some short sentences.

Ngarbal

Ngarbal was evidently spoken adjacent to Yugambal, on the latter's north-western limits, covering the territory from Stonehenge to Bolivia, including Glen Innes, Wellingrove and Deepwater. Less has been published on Ngarbal than on Yugambal (see again MacPherson 1931, 1934; also MacPherson 1930) and the manuscript data provided by MacPherson is also much more scanty. The total Ngarbal corpus comes to approximately 60 lexical items and about 40 place names.

Marbal

Marbal used to adjoin Ngarbal to the north, covering the country around Tenterfield. The only reference to this language is in MacPherson (1904:679, 683; 1930:123). No linguistic information is provided, though we are told that Marbal, Ngarbal and Yugambal were all mutually intelligible (MacPherson 1904:683).

Of course we cannot decide questions of mutual intelligibility with respect to Marbal, though we can compare the vocabularies of Ngarbal and Yugambal. Comparison reveals that lexically, these two dialects are very close: fourteen out of the twenty comparable lexical items are the same (70 per cent). This suggests that they can probably be considered dialects of a single language.

There are two short vocabularies in Curr (1887:294-97). One is quoted as being taken from Glen Innes (Ngarbal territory) and the other from Tenterfield (Marbal territory). These clearly belong to this dialect group, and one is even referred to as 'Yucombe' (obviously Yugambal). They are both very close lexically, though it is impossible to be sure about which dialect each belongs to because of the limited scope of the corpora.

Despite the restricted nature of the data on Yugambal-Ngarbal-Marbal, we can still be fairly certain about the external relationships of this dialect group. Some words are identical to words from the Bandjalang dialects to the east, but the number is so small that it should be put down to loan influence. Otherwise the group seems to be related to the languages of the Macleay valley, and mention of a particular phonological correspondence between Yugambal and Djangadi is made below on page 34; and on page 40 it is pointed out that culturally the two areas are thought to be closely related.

Unclassifiable data

There remains a certain amount of miscellaneous data from New England which cannot be adequately incorporated into the linguistic and geographic

groupings of the present discussion. If we were to try to account for all the references in various texts and manuscripts without recourse to knowledgeable informants in the field for checking, the whole situation would become little more than a mass of contradictions. The map as presented on page 20 shows only the locations of those languages which are adequately attested by reliable sources. MacPherson (1904) mentions the following other tribes for example: Gee-én-yun (at Tabulam), Wólroi (Warialda, Parramallowa, Terry-hie-hie), Giróombul (Manilla, Barraba) and Kóomilroi (Breeza, Narrabri, Moree) as distinct from Gamilraay ('Kámilroi'). None of these names fits in with information from other sources, so they are ignored in this paper. (It may simply be that these names refer to hordes or other sub-tribal units.)

Much of the most recent material that has been collected during field trips to the New England region is also unclassifiable. In the field notes of Court (1963), Austin (1972, 1973) and Crowley (1972-73), some of the material tallies exactly with the Yugambal-Ngarbal corpus and the Nganjaywana corpus, and some is clearly from surrounding languages, especially Djangadi, Gumbaynggir and Gamilraay. There is quite a residue however, which cannot be definitely placed in any one of the *known* New England languages, nor in any of the coastal or inland languages close to the New England region, though we know it must belong to one of the languages from New England. Such Unspecifiable New England Material (U.N.E.M.) plays a role in parts of the discussion below, so we cannot ignore it simply because we cannot specify exactly to which of the languages a word belongs. It may be that there are other languages in this region which the writer has not been able to place geographically or linguistically and that this data should fit here (possibly belonging to the mysterious tribal names mentioned on this page).

'Enneewin'

This is the language of Tingha, Wandsworth, Ollera, Black Mountain and Guyra. It must be pointed out that this is not the same language as Nganjaywana (Anēwan).¹ The territorial limits described by MacPherson (1904:678) for 'Enneewin' lie outside, though adjacent to, the limits described by Mathews (1903:251) for Nganjaywana, and the lexical items, as far as the twenty item 'Enneewin' corpus allows us to decide, are not the same as those of Nganjaywana. The 'Enneewin' lexicon is still basically of Nganjaywana stock however (about 65 per cent) though it seems that words which begin with *r-* in Nganjaywana have a prothetic *a-* in 'Enneewin', as in:

'Enneewin'		Nganjaywana
<i>arula</i>	'stone'	<i>rula</i>
<i>aruda</i>	'cod'	<i>ruda</i>

'Enneewin', being geographically adjacent to the Baanbay-Gumbaynggir-Gamblamang dialect group, has apparently undergone a certain amount of loan influence from these dialects, more so than has non-contiguous Nganjaywana.

Nganjaywana

Tribal geography

In the area given by Mathews (1903:251) as being occupied by Nganjaywana, MacPherson recognises two groups: (1) 'Himberrong': around Walcha,

Ingleba, etc; (2) 'Inuwon': from Bundarra to Uralla, including Armidale. From MacPherson's comment that the 'Himberrong' and the 'Inuwon' understood each other, but not the 'Enneewin' (MacPherson 1904:683), we can conclude that (1) and (2) were either closely related dialects of one language, or they were names for sub-tribal units (e.g. local groups or hordes). Mathews seems to have confused the situation; 'Anēwan' is obviously supposed to represent the same word as the spelling 'Enneewin', the name of the language spoken to the north, which was, as has already been mentioned on page 22, not mutually intelligible with the language he was actually describing. The name Nganjaywana ('Anēwan'), referring to Himberrong and Inuwon collectively, is kept however, since it can be distinguished from its northerly neighbour by retaining the orthographic representation of the name of the latter used by MacPherson. (Incidentally, the confusion of the two languages by Mathews may also account for the discrepancies in the pronoun paradigms between the different Mathews notebooks and his published account of the language.)

Non-Australian languages in Australia

Nganjaywana has great interest for linguists in Australia since it has often been thought to be a non-Australian language. Wurm (1965:376) comments

Less than 1% of the languages in Australia appear to be unrelated or perhaps only very distantly related to the other Australian languages. One of these languages, Anewan, used to be spoken in Northern New South Wales near Armidale . . . and another one, Babaram, in the rain-forest area of North Queensland.

Tasmanian, which seems to be a genetically related group of possibly as many as eight languages or dialects, is placed similarly:

Taking everything into account that has been said . . . about the Tasmanian languages, it appears that they are more appropriately regarded as unrelated, than as distantly related, to the Australian languages. (Wurm 1972:174.)

We find these views also expressed by others, for example O'Grady, Voegelin and Voegelin (1966:15-20).

Because the material is so poor and because it is now no longer possible to engage in detailed fieldwork on any of these isolates,² it has been easy in the past to make claims concerning their linguistic position without scientifically based arguments for support. However, from information gained from the last speaker of Mbabaram, Dixon (1972b:347-50; and forthcoming) has shown that the un-Australian characteristics of this language are the result of a series of rather drastic phonological changes operating on an originally normal north Queensland type language. And, by completely reworking the entire Tasmanian corpus, including the recently discovered Robinson manuscripts, it is found that all the evidence supports the hypothesis that Tasmanian should be regarded as a phonologically absolutely normal Australian language³ (Crowley and Dixon, forthcoming).

In the latest general survey of Australian languages to appear, it is actually suggested that Nganjaywana may in fact be related to the remaining Australian (and Tasmanian?) languages (Wurm 1972:139):

This now extinct language has been regarded as unrelated to other Australian languages by some linguists (O'Grady, Voegelin and Voegelin 1966) in view of the paucity of definite cognates which may not be loans, though typologically and in the form of some of its bound morphemes, it resembles other Australian languages of the same area. It seems likely that the same situation prevails with Aniwana as has been discovered to be the case with Mbabaram of the Mbabaramic group.

Wurm presents no further concrete evidence on this point however. Tryon (1971:351) also says that Nganjaywana should be regarded as a member of a homogeneous Australian macro-phylum, but, once again, no evidence is presented. The aim of the rest of the present paper is to definitely establish the linguistic position of Nganjaywana among the Australian languages.

Sources for Nganjaywana

An exhaustive listing of sources for Nganjaywana appears to be:

- (a) Parts of Court's fieldnotes of 1963.
- (b) R. H. Mathews' four page grammatical sketch of 1903, followed by a 210 item word list. Mathews' original fieldnotes have also been used. These provide some new material, as well as enabling us to cross-check some of the published statements and spellings.
- (c) Buchanan (1901), with 58 lexical items.
- (d) Radcliffe-Brown (1930a, 1930b) with eight lexical items, and an account of the kinship system.
- (e) Crowley's fieldnotes of 1973, with two lexical items remembered by Mr Frank Archibald of Armidale, a Baanbay speaker himself, who spent part of his earlier life with Nganjaywana speakers as well. Mr Archibald once knew more Nganjaywana than at present however, as shown by the records of an interview with Court in 1963.

General description of Nganjaywana phonology

From examples of conditioned and free variation in the sources, it is possible to set up the phoneme inventory for Nganjaywana as given in table 1.

The semi-retroflex continuant γ , similar to the phoneme γ of Gamilaray, Gumbaynggir, Djangadi and most other Australian languages, was only recognised by Court, and then not completely consistently. The other sources made no provisions to distinguish it from the trill r . Voiced and voiceless stops interchange freely, and, as in the languages along the coast, there is no phonological contrast between palatal and dental laminals. Vowel length is non-contrastive, and there is also sufficient evidence to suggest that phonetic mid-vowels are non-distinctive variants of the three vowel phonemes, with the pattern:

/i/ [i] ~ [e]
/u/ [u] ~ [o]
/a/ [e] ~ [a] ~ [o]

(Interpolating from the phonological pattern of many Australian languages, it is possible that [a] alternates with more open mid-vowels such as [ɛ] and [ɔ], but the orthographic systems used in the sources do not allow us to

		bilabial	alveolar	laminal	velar
stop		b	d	ɖ	g
nasal		m	n	ɱ	ŋ
lateral			l	ɭ	
trill			r		
semi-retroflex continuant				ɽ	
semi-vowel				y	w
vowel	high			i	u
	low			a	

Table 1: Nganjaywana phonemes

assume this.) The rules for stress placement are largely unknown, but the Nganjaywana forms in the Court notebooks carry stress on the first syllable—how general this rule is, is not known.

Because reference is made in the text below to distinctive features, a feature breakdown of this phonology is presented here. It must be noted that the choice of features is rather arbitrary, and will undoubtedly prove unsatisfactory for many purposes, though for the uses to which they are put in the present discussion they are adequate.

	b	m	g	ŋ	d	n	ɖ	ɱ	l	ɭ	r	ɽ	y	w	i	u	a
syllabic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	+	+	+
consonantal	+	+	+	+	+	+	+	+	+	+	+	+	—	—	—	—	—
rhotic	—	—	—	—	—	—	—	—	—	—	+	+	—	—	—	—	—
peripheral	+	+	+	+	—	—	—	—	—	—	—	—	—	—	—	—	—
oral closure	+	+	+	+	+	+	+	+	—	—	—	—	—	—	—	—	—
low	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	+
front	+	+	—	—	+	+	—	—	+	—	+	—	+	—	+	—	—
oral release	+	—	+	—	+	—	+	—	—	—	—	—	—	—	—	—	—

Table 2: Nganjaywana distinctive features

Phonological aberrations in Nganjaywana

Although the phoneme inventory presented in table 1 looks like that of any normal Australian language (except that the laminal lateral is unusual for an east coast language), the phonotactic behaviour of Nganjaywana is highly aberrant. The following aspects mark the major points of divergence with other New South Wales languages:

(a) Most of the surrounding languages allow only semi-vowels and a restricted number of nasals and stops to begin a word (though the Yugambal dialects do occasionally have an initial vowel). Nganjaywana however freely allows initial vowels and laterals as well, and also *r* (though apparently not *r̥*), for example:

<i>ila</i>	'eye'	<i>lala</i>	'frost'
<i>uwara</i>	'brown hawk'	<i>lundu</i>	'jewfish'
<i>abaŋa</i>	'father'	<i>rilwinu</i>	'curlew'

(b) The semi-vowels in most of the surrounding languages cannot follow consonants at the beginning of a word (though in Gumbaynggir, there are word initial occurrences of *Cy-* and *Cw-*, derived from underlying unstressed *Ci-* and *Cu-* respectively). In Nganjaywana however, semi-vowels are able to enter into word initial clusters with a number of consonants (these being difficult fully to specify with the corpus available), for example:

<i>gwaŋa</i>	'child'	<i>byana</i>	'fat'
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(c) There are numerous examples in Nganjaywana of initial clusters of nasals followed by homorganic stops.⁴ Initial clusters of any kind are totally forbidden in all the nearby languages (except Gumbaynggir, as mentioned above, which allows *Cy-* and *Cw-*), but note Nganjaywana forms such as:

<i>mbuŋa</i>	'kangaroo'	<i>ŋdara</i>	'eel'
<i>ndabayi</i>	'uphill'	<i>ŋgada</i>	'fog'

(d) At the end of a word, the surrounding languages allow any vowel and a varying number of non-stop continuants, that is *l*, *r* and *y* (and in Gumbaynggir and Bandjalang also *w*), and of the nasals *n* and *ŋ* and generally *ŋ* (and in Bandjalang, Yaygir and Gumbaynggir, also *m*). Nganjaywana however seems to allow only vowels to occur word finally. Some final consonants do occur in the sources, but these are often found to alternate with the consonant followed by *-a*, suggesting the application of an optional synchronic rule to delete the final *-a*. The most frequent final vowel to appear at the end of a word is *-a*, as the following statistics show:

final <i>-a</i>	96%	(including the 7% found only with final consonants assumed to have undergone the low level final <i>-a</i> deletion rule)
final <i>-i</i>	2%	i.e. <i>duwi</i> 'forehead' <i>ndabayi</i> 'uphill' <i>nabanadi</i> 'run' <i>-ŋi</i> 'ablative suffix'
final <i>-u</i>	2%	i.e. <i>rilwinu</i> 'curlew' <i>guyu</i> 'cod' <i>-gu</i> 'dative suffix' <i>-ŋu</i> 'genitive suffix'

(e) The intervocalic clusters permissible in Nganjaywana are a little more restricted than those in the neighbouring languages. Thus, we have only homorganic clusters, and clusters in which the first member is an apical continuant and the second a peripheral stop (*-nb-*, *-ng-*, *-lb-*, *-lg-*, *-rb-*, *-rg-*) and also, rarely, some with a peripheral non-stop as the second member (only *-lm-* and *-rm-* are attested). Unlike many of the surrounding languages, there are no clusters of the type *-rŋ-*, *-lŋ-*, *-rw-*, *-nm-*, *-ŋb-*, etc.

Phonological correspondences between Nganjaywana and nearby languages

Although the sources for Nganjaywana are on the whole phonetically rather poor, it is possible, by a process of comparison between the sources, to arrive at a tentative phonemicisation for most of the items in the word list. Once the tentative phonemicisations were arrived at, these were checked off carefully against vocabularies from languages in the area for which interpretable material exists. This includes Gamilraay (Austin ms.; Court ms.), Yugambal (Court ms.; Austin ms.; Crowley ms.; Mathews ms.; MacPherson ms., 1931, 1934), Gumbaynggir (Smythe 1948-49; Eades ms.; Crowley ms.; Mathews 1909), Djangadi (Holmer 1966, 1967; Crowley ms.), Gadjang (Holmer 1966, 1967) and the Bandjalang dialects (Crowley ms.; Holmer 1971; Geytenbeek and Geytenbeek 1971; Cunningham 1969).

To the west, lexical comparison with Gamilraay proved rather unrewarding. However, by comparing Nganjaywana with the complex of coastal languages, of which those listed above are taken as being representative, just over 70 lexical cognates were found—this means that more than 30 per cent of the total Nganjaywana corpus appears to be related to coastal vocabulary.⁵ These cognates do not seem to have been recognised before because the Nganjaywana forms have been greatly modified by a series of rather drastic phonological changes. All of the changes that have taken place can be expressed in terms of natural rules (that is, rules that seem intuitively feasible, and which operate in terms of natural classes of segments). The naturalness of the rules is shown by the fact that similar rules have been formulated for certain other Australian languages, particularly those spoken in Cape York and in parts of central Australia. The rules for each of these changes in Nganjaywana are presented below with all of the pertinent examples that have been discovered.

Initial syllable reduction

These rules specify the ways in which the first syllable of a word is reduced in different ways in different environments. In some cases, the initial consonant is lost, and in others, the initial consonant (where there is one) and the following vowel disappears. Rules like this, dropping all or part of the initial syllables of words, have been observed applying completely independently in other parts of Australia. For example, we find that such a rule has applied in many of the Cape York languages (Hale 1964:259):

proto-Paman	Linngidhigh	
* <i>bama</i>	<i>ma</i>	'person'
* <i>dalan</i>	<i>lan</i>	'tongue'

In Nganjaywana, the rules are fairly complex. When the vowel of the first syllable is long, the initial consonant is dropped and the vowel is retained

(note once again that there is no contrastive vowel length in Nganjaywana, so the original features referring to length are deleted; see page 29). Such a rule would account for the correspondences in:

Coastal	Nganjaywana		
	phonemic spelling	source spelling	
1 <i>ya:nay</i> (Dja.Gad.) ⁶	<i>anaya</i>	anunga (M)	'who'
2 <i>wi:gan</i> (Gum.) ⁷	<i>igana</i>	ikana (M)	'snow'
3 <i>di:ya</i> (Gum.)	<i>iya</i> ⁸	ira (C)	'tooth'
4 <i>ba:baya</i> (Gum.)	<i>abaya</i>	ab-bang (B)	'father'
5 <i>mi:gin</i> (Yug.Nga.)	<i>igina</i>	ec-kee-na (B)	'star'
6 <i>mi:l</i> (Gum.)	<i>ila</i>	ila (M)	'eye'
7 <i>ma:ni</i> (Gum.)	<i>ani</i> ⁹	anin (M)	'take'
8 <i>ga:liya</i> (Yug.Nga.) ¹⁰	<i>aliya</i>	ell-een/ya (Mac)	'black snake'
9 <i>gabulga:n</i> (Dja.) ¹¹ (* <i>ga:bulga:n</i>)	<i>abulgana</i>	abulgan (RB)	'shark, rainbow serpent'

When the intervocalic cluster of the related languages reflects an original non-homorganic cluster, the vowel of the initial syllable is also retained to ensure that the cluster does not occur at the beginning of the word, that is, the vowel effectively acts as a 'support' for the cluster. Correspondences of this type are illustrated by:

Coastal	Nganjaywana		
	phonemic spelling	source spelling	
10 <i>bargan</i> (Dja.Yug.Gad.)	<i>argana</i>	arkana (M)	'boomerang'
11 <i>ɟurguŋ</i> (Dja.Gad.)	<i>urguŋa</i>	urkūng (M)	'mopoke'
12 <i>winba</i> (U.N.E.M.)	<i>inba</i>	inba (C)	'fire'
13 <i>garbuŋ</i> (Gum.)	<i>arbuŋa</i>	arbong (RB)	'section-name'
14 <i>ga:rgan</i> (Gum.)	<i>argana</i>	arkon (RB)	'section-name'

With

Coastal	Nganjaywana		
	phonemic spelling	source spelling	
15 <i>wi:ru:ŋ</i> (Gum.)	<i>iyuŋa</i>	irong (RB)	'section-name'

and 59 and 75 below, we show that if the intervocalic position is occupied by the semi-retroflex continuant γ , we must delete only the initial consonant because Nganjaywana does not seem to tolerate γ in word initial position. (This runs contrary to the pattern noted for most Australian languages in Dixon (1972b:3) where it is pointed out that many languages allow initial γ , but few allow initial r .)

In all other environments, the initial syllable reduction rules delete the first consonant, as well as the following vowel, and in the few cases which are reconstructed with only an initial vowel, this vowel undergoes deletion. This rule accounts for the changes at the beginnings of the words in 16–35.

Coastal	Nganjaywana		
	phonemic spelling	source spelling	
16 <i>mijay</i> (Dja.Gad.)	<i>naya</i>	nyanga (M)	'what'
17 <i>buruluŋ</i> (Dja.Gad.)	<i>ruluŋa</i>	rulunga (M)	'fly'
18 <i>wambuŋ</i> (Dja.Gad.)	<i>mbuŋa</i>	mboinya (M)	'kangaroo'
19 <i>bagar</i> (Dja.)	<i>gara</i>	kara (C)	'meat'
20 <i>ganay</i> (Dja.Gad.Gum. Ban.)	<i>naya</i>	naia (M)	'yamstick'
21 <i>maŋdar</i> (Dja.) = fish	<i>ndara</i>	ndyarra (M)	'eel'
22 <i>wambuŋ</i> (Dja.Gum.) = section-name	<i>mbuŋa</i>	mbo:ŋə (C)	'bandicoot'
23 <i>dimin</i> (Gum.)	<i>mina</i>	minna (M)	'nits'
24 <i>gayanda</i> (Dja.) = go back	<i>yanda</i>	yanda (M)	'behind'
25 <i>wanda:ral</i> (Ban.) = bora ring	<i>ndarala</i>	daral (RB)	'totem of medicine man'
26 <i>mubul</i> (U.N.E.M.) = stomach	<i>bula</i>	bulla (M)	'anus'
27 <i>arada</i> (U.N.E.M.)	<i>rada</i>	rata (C)	'smoke'
28 <i>agaɟir</i> (Yug.)	<i>gaɟira</i>	kat'ərə (C)	'woman'
29 <i>guruman</i> (Dja.Gad.Gum.)	<i>rumana</i>	roomunna (M)	'boy'
30 <i>wara</i> (Dja.Gad.Gum.)	<i>ra</i>	rāgya (M)	'stand'
31 <i>buju</i> (Dja.Gad.)	<i>ju</i>	nyoona (M)	'hit'
32 <i>ŋambi</i> (Dja.Gum.)	<i>mbi</i>	ambia, imbekka (M)	'drink'
33 <i>ɟama</i> (Dja.)	<i>ma</i>	mēka (M)	'eat'
34 <i>baya</i> (Dja.)	<i>ya</i>	yenna (M)	'go'
35 <i>marula</i> (U.N.E.M.)	<i>rula</i>	rula (C)	'stone'

Taking into account all of these facts, we can attempt to set out a formalisation of the rules which are involved in the reduction of the initial syllable. The first rule to apply would be the *Initial Consonant Deletion Rule*, which says simply

$$C \rightarrow \phi / \# -$$

(A consonant or semi-vowel at the beginning of a word is deleted.) Then we would apply the *Initial Short Vowel Deletion Rule*, which drops the vowel left at the beginning of the word if it is short under certain conditions. This rule would look like:

$$\left[\begin{array}{c} V \\ -\text{long} \end{array} \right] \rightarrow \left\{ \begin{array}{l} \left[\begin{array}{c} V \\ -\text{long} \end{array} \right] / \# - \left\{ \begin{array}{l} \left[\begin{array}{c} \alpha \text{ peripheral} \\ \beta \text{ front} \end{array} \right] \left[\begin{array}{c} \gamma \text{ peripheral} \\ \delta \text{ front} \end{array} \right] \\ [t] \end{array} \right\} \\ \phi \end{array} \right\} \begin{array}{l} \text{(a)} \\ \text{(b)} \end{array}$$

where it is not the case that both $\alpha = \gamma$ and $\beta = \delta$

The parts of the rule are disjunctively ordered, with (a) applying before (b).

This is a standard procedure for dealing with an 'elsewhere' rule such as this. The rule reads: A short vowel is deleted at the beginning of a word unless it is followed by a non-homorganic cluster or by the semi-retroflex continuant.

After this rule has applied we must apply a *Vowel Length Deletion Rule* to delete all reference to vowel length in the distinctive feature system of Nganjaywana. This rule would have the form:

[F long] → φ

The three rules presented so far must be ordered in the order discussed, that is,

(Initial Consonant Deletion (I))
(Initial Short Vowel Deletion (II))
(Vowel Length Deletion (III))

The output of (I) provides the input for (II). Ordered the other way round (i.e. II before I), we would not be able to predict the loss of the vowel as well as the initial consonant in 16–35. (III) must follow (II) because we must preserve the specifications of vowel length at the stage at which (II) applies, otherwise we could not explain why in 16–35 the vowel is lost, yet in 1–9 it is retained.

-A Addition

The examples already given also necessitate the formulation of a rule which stipulates that *-a* is added to a stem which does not already end in a vowel. Formally, this rule is:

φ → a/C — #

There is no need to order this rule (IV) with respect to (I), (II) or (III). (IV) would explain the overwhelming occurrence of word final *-a* in Nganjaywana as noted on page 26. The rare occurrences of final *-i* and *-u* noted on page 26 would presumably have had this vowel in the earlier stage of the language. The languages that share the same ancestor language as Nganjaywana have apparently gained a number of words with final high vowels because the percentages of final *-i* and *-u* (just over and under 10 per cent respectively for most of the languages) is generally rather higher than for Nganjaywana (2 per cent for both *-i* and *-u*).

This *-a* addition rule, or a rule very similar to it, must have developed quite independently in Aranda, because in this language, the typical word final segment is *-a* (Strehlow, 1942–44).

Semi-vowel Assimilation

Nganjaywana also has rules which have the effect of transferring the quality of certain segments of the initial syllable of a word, that is to be later deleted by the initial syllable reduction rules, to another part of the word. Similar rules have been encountered in other parts of Australia. Cape York is one such area; Hale (1964:259) gives this kind of rule to explain the following correspondences between proto-Paman and Yinwum:

proto-Paman	Yinwum	
* <i>damba</i>	<i>mbi</i>	'give'
* <i>dalan</i>	<i>lin</i>	'mouth'
* <i>yana</i>	<i>ni</i>	'go'
* <i>yinda</i>	<i>ndi</i>	'spear'

where the initial palatals trigger an umlaut rule of the form *a* → *i*. Dixon (1972b:347–48) has noticed the application of a similar rule in Mbabaram. This rule states that *a* in the second syllable of a word is raised to *ɔ* if the previous syllable begins with a back consonant (a velar) and to *ε* if the previous syllable begins with a front consonant (a palatal), as in:

proto-Paman	Mbabaram	
* <i>wula-</i>	<i>lɔ-</i>	'die'
* <i>dawa</i>	<i>wε</i>	'mouth'
* <i>guwa</i>	<i>wɔ</i>	'west'
* <i>dana-</i>	<i>nε-</i>	'stand'
* <i>diba</i>	<i>bε</i>	'liver'

In Nganjaywana however, the rule is not quite of the same nature as in Yinwum or Mbabaram. Instead, as apparently happens in certain other Cape York languages, we find the introduction of an assimilatory semi-vowel, which maintains the original lexical distinctions. This assimilation rule is probably rather complex and from the data available, we may never be able to uncover these complexities in full. The most easily observable part of the rule is that which says: if the first syllable has short *i* or *u*, then we add the appropriate semi-vowel (i.e., *y* and *w* respectively) after the consonant or consonant cluster preceding the vowel of the second syllable. The rule could be given the form:

$$\phi \rightarrow \left[\begin{array}{l} \text{Glide} \\ \alpha \text{ front} \end{array} \right] / (C) \left[\begin{array}{l} V \\ -\text{low} \\ \alpha \text{ front} \end{array} \right] C(C) - V$$

A rule such as this would explain the presence of the semi-vowel in 36–38, and also in 52, 57, 58, 82 and 86.

Coastal	Nganjaywana		
	phonemic	source	
	spelling	spelling	
36 <i>wigay</i> (Dja.)	<i>gyaya</i>	'kyaya' (C)	'food'
37 <i>biba:n</i> (Dja.)	<i>byana</i>	pyenna (M)	'fat'
38 <i>gugana</i> (Yug.)	<i>gwana</i>	gwá:ŋa (Cr)	'child'

The non-application of (V)—the *Semi-Vowel Assimilation Rule*—in the examples listed below is the result of the morpheme structure rules for Nganjaywana which prohibit the appearance of *w* and *y* in certain environments. Details on this point are scarce but it would seem that *y* can follow only *b* and *g*, though *w* can follow both of these, and apparently also *d* and *l*. Non-initially, no semi-vowel can precede its corresponding vowel, so sequences of *-yi-* and *-wu-* are forbidden. Hence:

16 <i>mijan</i> → <i>nana</i>	not <i>nyana</i>	'what'
17 <i>buruluŋ</i> → <i>ruluŋa</i>	„ <i>rwuluŋa</i>	'fly'
23 <i>dimin</i> → <i>mina</i>	„ <i>myina</i>	'nits'
26 <i>mubul</i> → <i>bula</i>	„ <i>bwula</i>	'anus/stomach'
29 <i>guruman</i> → <i>rumana</i>	„ <i>rwumana</i>	'boy'
31 <i>bunu</i> → <i>nu</i>	„ <i>nwu</i>	'hit'

(V) must be ordered before the initial syllable reduction rules (I) and (II), or

the conditioning segment for the insertion of the semi-vowel (generally the vowel of the first syllable as stated above, but sometimes apparently the initial consonant; see below) would have been deleted beforehand, leaving us with no way of predicting which semi-vowel would be inserted in which environments.

When *y* is added after an apical consonant or consonant cluster, we find assimilation in the form of a laminal assimilation, as in 39, and also 48, 80 and 83.

Coastal	Nganjaywana		
	phonemic	source	
	spelling	spelling	
39 <i>dinda</i> (Dja.)	<i>ɲda</i>	<i>indya</i> (M)	'here'

This process of assimilation might explain the origin of the laminal lateral—where *y* is introduced after *l*, assimilation would produce *l*. Unfortunately there are no cognates available to check this suggestion. A formal expression of the *Laminal Assimilation Rule* (VI) is:

$$\left[\begin{array}{c} C \\ - \text{ peripheral} \\ + \text{ front} \end{array} \right] \left(\left[\begin{array}{c} C \\ - \text{ peripheral} \\ + \text{ front} \end{array} \right] \right) \left[\begin{array}{c} \text{Glide} \\ + \text{ front} \end{array} \right] \rightarrow$$

$$\left[\begin{array}{c} C \\ - \text{ peripheral} \\ - \text{ front} \end{array} \right] \left(\left[\begin{array}{c} C \\ - \text{ peripheral} \\ - \text{ front} \end{array} \right] \right)$$

Laminal Assimilation must of course be ordered after *Semi-Vowel Assimilation*, or the conditions for its application would not be met.

The sources provide two examples which may necessitate some further modification of this rule, though there are insufficient cases to make any generalisations.

(i) In some cases (unspecifiable with the corpus available), the conditioning factor in the choice of semi-vowel may be the consonant of the first syllable, rather than the first vowel, for example:

Coastal	Nganjaywana		
	phonemic	source	
	spelling	spelling	
40 <i>dumba:l</i> (Gum.)	<i>mbyala</i>	<i>imbiāla</i> (M)	'carpet snake'

If the rule were as stated above, we would predict *mbwala* rather than *mbyala*. See also 70.

(ii) Example 41 could mean that with a long vowel, an initial consonant transfers its quality to the vowel of the first syllable as a diphthongisation:

Coastal	Nganjaywana		
	phonemic	source	
	spelling	spelling	
41 <i>ɲa:ga</i> (Dja.)	<i>ayga</i>	<i>aikunna</i> (M)	'see'

From examples 1–9 we could conclude that this may occur only with initial laminals, because the following initial segments are observed to have no effect on the following long vowel: *b-*, *m-*, *d-*, *ŋ-* and *w-*. The explanation for the

peculiar behaviour of the laminals *ŋ-* and *d-* may be due to markedness. With the features $\left[\begin{array}{c} - \text{ peripheral} \\ - \text{ front} \end{array} \right]$ the laminals may be the most marked

consonant series, and so receive special treatment.

Apical correspondences

Nganjaywana, Gumbaynggir, Yugambal, Ngarbal and Gadjang have four members in their apical series of consonants, a nasal *n*, a stop *d*, a lateral *l* and a trilled rhotic *r*. There is some evidence to suggest that the proto-language may have had a fifth apical which we can represent as **L*. The nasal and the rhotic phonemes are preserved in all of the coastal and New England languages, but there are some irregularities with respect to the distribution of the stops and laterals, suggesting the previous existence of the separate phoneme **L*. This hypothesised new phoneme has no apparent relation with any supposed Common Australian phonology (Capell 1962:4–8; Dixon 1972a:84–86) and its presence in the proto-Coastal phonology cannot be explained in the present state of our knowledge. However, the arguments in favour of recognising an earlier five-way apical distinction on the New South Wales north coast and in New England are fairly compelling.

We can see this if we take each of the three problematic proto-phonemes in turn and examine their varying reflexes. (**n* and **r* present no problems and are of no further relevance to the present discussion.) The proto-phoneme **d* seems to be always reflected as *d*. The proto-phoneme **l* has its reflex in both Nganjaywana and all the New England and coastal languages as *l*, except that at the end of some words in all languages except Nganjaywana it is lost. Examples 6, 17, 26 and 40 illustrate cases where **l* is reflected as *l*.

	Nganjaywana	Other Coastal	
6	<i>ila</i>	<i>mi:l</i> (Gum.)	'eye'
17	<i>ruluja</i>	<i>buruluŋ</i> (Dja.Gad.)	'fly'
26	<i>bula</i>	<i>mubul</i> (U.N.E.M.)	'anus/stomach'
40	<i>mbyala</i>	<i>dumba:l</i> (Gum.)	'carpet snake'

The loss of **l* at the end of some words in languages other than Nganjaywana is illustrated by examples 42–51.

Coastal	Nganjaywana		
	phonemic	source	
	spelling	spelling	
42 <i>gubi</i> (U.N.E.M.)	<i>bwila</i>	<i>pwela</i> (C)	'possum'
43 <i>yama</i> (Yug.Gum.)	<i>mala</i>	<i>mel-la</i> (B)	'hand'
44 <i>garuga</i> (Dja.)	<i>rugala</i>	<i>rokala</i> (M)	'kookaburra'
45 <i>daru</i> (Dja.Yug.)	<i>rula</i>	<i>rulla</i> (M)	'stone'
46 <i>bara</i> (U.N.E.M.)	<i>rala</i>	<i>relə</i> (C)	'hair'
47 <i>ɲu:ɲa</i> (Gum.)	<i>ɲala</i>	<i>uralla</i> (M)	'camp'
48 <i>dina</i> (Yug.Gad.)	<i>ɲala</i>	<i>nyalla</i> (M)	'foot'
49 <i>yara</i> (Dja.)	<i>rala</i>	<i>orrulla</i> (M)	'gum-tree'
50 <i>buyu</i> (Yug.) = leg	<i>yula</i>	<i>yula</i> (M)	'calf'
51 <i>buru</i> (Yug.)	<i>rula</i>	<i>rula</i> (M)	'male'

(See also 84.) Compare 45 with 35; we cannot say whether the source for *rula* is **marula* or **darul*. What conditions the loss of **l* in these words in the coastal

languages and some of the New England languages is not known. It is possible that some of the proposed etymologies are spurious, but it is also possible to find further evidence suggesting an original final **l* in some of these words. There is a U.N.E.M. word for 'hand', *yamala*; instead of deleting the *-l* in this word, the language has added *-a*, as in Nganjaywana. There is also a U.N.E.M. word *gubila* 'possum' corresponding to another U.N.E.M. word *gubi*, sharing the same relationship as *yama* : *yamala*. The Gamilraay word for 'stone' has been recorded as *yapul*, and there is a Bandjalang word *darul*, which are probably both reflexes of the reconstructed form **darul*. The morphophonemic behaviour of Gumbaynggir *ɲu:ɲa* suggests an underlying form *ɲu:ɲal*, in which the final *-l* is deleted in the nominative. The locative of a normal *-l* root is simply *-a*, as in *mi:la* 'in the eye', from the nominative *mi:l*, and for a normal *-a* word, the locative ends in *-ɲga*. For *ɲu:ɲa* however, the locative is *ɲu:ɲa:la*, not, as we would expect for an *-a* root, *ɲu:ɲa:ɲga*.¹²

The hypothesised original phoneme **L* is reflected in Nganjaywana as *d* in all positions, following the *L-Stopping Rule* (VII), which says

$$L \rightarrow d$$

From the information we have on (VII), it is not possible to be certain about its ordering with respect to other rules. If we had any reliable examples of reconstructions of the form *CiLV-*, we might be able to draw some conclusions concerning the ordering of *L-Stopping* and *Semi-Vowel Assimilation*. If (VII) were to apply before (V), *L* would have as its reflex a laminal stop ($L \rightarrow d \rightarrow dy \rightarrow d$), but if it were to apply after (V), we would find instead presumably a laminal *L* ($L \rightarrow Ly \rightarrow L_r$), which has not been discovered in any of the sources. (For the phonetic nature of non-laminal *L* see page 36.) The only possible relevant etymology is 67, where a proposed original **L* (in **giLay* 'moon') is presumed to have changed to *d*, though the example is not fully reliable, and we must be careful in any case not to generalise from a single example.

In the other north coast and New England languages, **L* has as its reflex either a stop or a lateral. In Djangadi, we can explain the origin of the possible phonological distinction between intervocalic *t* and *d* with rules of the form:

$$L \rightarrow \begin{matrix} (t^{13}/V - V) & (a) \\ | & (b) \\ d \rightarrow d \end{matrix}$$

(These rules are not expressed in terms of distinctive features since to do so would mean devising a distinctive feature system for Djangadi phonology, which will prove impracticable until the details of Djangadi phonology are definitely worked out.)

In Yugambal, **L* is reflected in all positions as *d* intervocalically and *l* elsewhere. The rule would then be of the same form as the possible revision of the Djangadi rule mentioned in note 13. The existence of this systematic, though poorly attested, correspondence between Djangadi and Yugambal shows that there is some degree of genetic relationship between the two. (This relationship was first noted by Schmidt (1919:123-24).)

In the remaining languages under discussion (that is, Gadjang, Gumbaynggir and some U.N.E.M.), **L* is reflected as *l* in all positions. Examples of these apical correspondences are:

	Nganjaywana	Djangadi	Yugambal	Other	
52	<i>buLal dwala</i> 'twala (M)'	<i>buta</i>	<i>buda</i>	<i>bula</i> (Gad.)	'two'
53	<i>ɲambuL mbuda</i> 'imbota (M)'	<i>ɲambul</i>	—	<i>ɲa:mbul</i> (Gum.) ¹⁴	'magpie'
54	<i>buguL guda</i> 'kuta (M)'	<i>bugul</i>	—	—	'hill'
55	<i>manɲaL ɲgada</i> 'ngatta (M)'	<i>manɲal</i>	—	—	'fog'
56	<i>babiL bida</i> 'pēta (M)'	—	<i>babil</i>	—	'father'
57	<i>wigaL gyada</i> 'kyatta (M)'	—	—	<i>wigal</i> (U.N.E.M.)	'food'
58	<i>wuLa dwa</i> 'twaka (M)'	<i>wuta</i>	—	—	'cry'
59	<i>miɲiLan ɲɪdaɲa</i> 'irritanga (M)'	—	—	<i>miɲila</i> (Gam.)	'dog'
60	<i>guruL ruda</i> 'ruta (M)'	—	<i>gurul</i>	—	'cod'
	<i>giLa</i> —	<i>gita</i>	—	<i>gila</i> (Gad.)	'urinate'
	<i>ɲulu</i> —	<i>ɲutu</i>	—	<i>ɲulu</i> (Gad.)	'forehead'
	<i>wiLiɲ</i> —	<i>witiɲ</i>	—	<i>wiliɲ</i> (Gad.)	'lip'
	<i>ɲaLi di-</i> (see 81, 85)	<i>ɲati</i>	<i>ɲadi</i>	<i>ɲali</i> (Gum. Ban.)	'we'

(The blanks indicate that the appropriate form is either unknown or etymologically unrelated.) See also examples 67, 71 and 73 for examples of reflexes of **L* in Nganjaywana

Some comment needs to be made concerning the relationship between the Gamilraay form *miɲila* 'dog' and Nganjaywana *ɲɪdaɲa*. From this example, and from 15 and 75, we can conclude that intervocalic *r* conditions the retention of the short vowel of the first syllable, as set out in (II) above. Evidence shows that the loss of final peripheral nasals (*ɲ* and *m*) is a characteristic of Gamilraay, so the $-\phi \sim -ɲa$ correspondence with Nganjaywana is quite regular if we assume that the coastal languages still had the original form *miɲiLan* at the time that Nganjaywana separated. Nganjaywana would then have applied the *-a Addition Rule*. Since then, *miɲiLan* was lost in the coastal languages (though some have retained it as the disyllable *miɲi*) and Gamilraay, which also shared the word with the coastal languages through a weaker genetic relationship or through borrowing, lost its peripheral nasals at the end of a word. Evidence supporting the claim that Gamilraay has lost final *-ɲ* and *-m* comes in the following correspondences (from Austin, personal communication):

Gamilraay	Other	
<i>biɲi</i>	<i>biɲiɲ</i> (Dja.)	'chest'
<i>guna</i>	<i>gunan</i> (Dja.Ban.)	'excrement'
<i>bina</i>	<i>binan</i> (Ban.)	'ear'
<i>burulu</i>	<i>buruluɲ</i> (Dja.)	'fly'
<i>miɲa</i>	<i>miɲan</i> (Gum.Dja.)	'what'
<i>ɲi:</i>	<i>ɲi:m</i> (Gum.Ban.)	'anus'

It is interesting to speculate on the phonetic nature of the original phoneme **L*. The variation in reflexes between laterals and stops suggests a possible pre-stopped lateral. This sound still occurs widely along the coast between Port Stephens in the south and beyond the Queensland border in the north,

though in all languages only as an allophonic variant of the lateral phoneme, the major allophone of which is a non-prestopped lateral. Another suggestion could be that *L* represents an original cluster of *-ld-*. Such clusters tend to be very unstable in Australia, and in Cape York languages, for example, *-ld-* clusters are often resolved as simply *-d-*. However in proto-N.S.W. north coast, *L* occurs word finally, and the proto-language allowed no consonant clusters in this position, suggesting that *L* must have been some kind of unitary phoneme.

Anomalous correspondences

There remains a fair number of awkward forms. Some, hopefully all, of these, are probably the result of mistranscription in the sources. The irregularities presented in 61–68 involve sounds that untrained observers often found difficult to deal with, and so may in fact have been quite regular by the rules presented above.

Coastal

	predicted form	source spelling	phonemicisation from source	
61 <i>ɖaŋgu:r</i> (Gum.)	<i>ŋgura</i>	indora (M)	<i>ndura</i>	'leaf'
62 <i>gʊŋur</i> (Gum.)	<i>ŋura</i>	nura (M)	<i>nura</i>	'jew lizard'
63 <i>ŋa:ŋa</i> (Gum.)	<i>ɖa</i>	enna (M)	<i>ana</i>	'me'
64 <i>ɖibilan</i> (Dja.)	<i>bilan</i>	pillang (M)	<i>bilan</i>	'bird'
65 <i>ŋɪawara</i> (Dja.)	<i>ɪawara</i>	no-aran (M)	<i>nawara</i>	'be afraid'
66 <i>ginda</i> (Dja.Yug.)	<i>ɪda</i>	indeka (M)	<i>nda</i>	'laugh'
67 <i>ŋulɪŋ</i> (Gum.) (* <i>ŋuLɪŋ</i>)	<i>ɖɪŋ</i>	duna (M)	<i>duna</i>	'penis'
68 <i>ɪɪɪ</i> (Dja.)	<i>ɪɪ</i>	nina (M)	<i>ni</i>	'sit'

There is a small group of words in which Nganjaywana *-nda* corresponds to final *-n* or *-ŋ* of other coastal languages (the final syllable after original *-ŋ*, written as *-da*, may actually have been *-ɖa*):

	predicted form	source spelling	phonemicisation from source	
69 <i>ŋurɪŋ</i> (Yug.Nga.Ban.)	<i>ɪŋ-ɖ-a</i>	runda (M)	<i>runda</i>	'emu'
70 <i>wambɪŋ</i> (Dja.Gad.)	<i>mbwɪŋ-ɖ-a</i> ¹⁵	mboanda (M)	<i>mbwanda</i>	'kangaroo'
71 <i>ɖatan</i> (Dja.) (* <i>ɖaLan</i>)	<i>ɖan-ɖ-a</i>	tunda (M)	<i>danda</i>	'tongue'
72 <i>wada:n</i> (Dja.)	<i>ɖan-ɖ-a</i>	tyunda (M)	<i>ɖanda</i>	'goanna'
73 <i>gitan</i> (Dja.) (* <i>giLan</i>)	<i>ɖan-ɖ-a</i>	tan'-da (Mac) ¹⁶	<i>danda</i>	'moon'

These correspondences suggest that a *-da* or *-ɖa* was added as some kind of empty accretive (in some words only), but of course the whole story cannot be known. It may also mean that the etymologies are inappropriate.

Some other possible correspondences are:

Coastal

	phonemic spelling	source spelling	
74 <i>gɪɪnma</i> (Dja.)	<i>ɪirma</i>	nirmatin, nêriman (M)	'scratch'
75 <i>maŋuŋba</i> (Dja.) = improve	<i>arunba</i>	aroonba (M)	'good'
76 <i>gi:rbay</i> (Dja.)	<i>irbaɖa</i>	ērpatha (M)	'white cockatoo'

Application of (I) and (II) in 74 results in an initial sequence of *ɪi-* which could easily have been misheard as *ni-*, as spelt in the source (see also 68 for a similar case). The morpheme structure rules of Nganjaywana prohibit sequences of *-nm-*, while *-rm-* is allowed, so it is possible that a substitution took place. In 75, the not tolerated *-ɪb-* could have been replaced by the permissible *-nb-*. The *Initial Consonant Deletion Rule* and other obligatory rules could be expected to produce phonemic *irbaya* in Nganjaywana in example 76. The irregularity in the final syllable could have the same explanation as the irregularity in 69–73, with deletion of *ɪ* before a laminal (cf. discussion of a *-ɪɪ-* cluster on page 39¹⁷).

Grammatical comparison of Nganjaywana and other languages

An examination of Nganjaywana grammatical categories and forms reveals quite a number of significant similarities with the surrounding languages.

Nganjaywana nouns follow the nominative-ergative pattern of inflection common to most other languages of Australia. The ergative (which is the formally marked category) also functions as the instrumental, as in the surrounding languages:

gaɖira-nda *ɖaŋa-ɖ* *ɪu-na* *naya* *-nda*¹⁸
 woman erg. man nom. hit pres. yamstick inst.
 'The woman is hitting the man with a yamstick'

It can be seen however that the form of the ergative in Nganjaywana, *-nda* (and rarely, also *-lda*), is different from the usual coastal *-gu* (and various allomorphic variants). The inflections for the allative and genitive, *-gu* (77) and *-ɪu* (78) respectively, are exactly the same as those found in Baanbay, which is related to the other coastal languages.

In its pronominal system, Nganjaywana makes the same distinctions as in neighbouring Baanbay, Gumbaynggir and Gamilraay, that is, there are separate forms for the singular, dual and plural, and in the first person non-singulars, there is a distinction between inclusive and exclusive functions. The morphological nominative-accusative pattern for pronouns is similar to the languages on the coast such as Gadjang and Djangadi, and indeed most of the languages of Australia (except some east coast languages, which incidentally include Gumbaynggir and Bandjalang. In some or all persons, these languages make a three-way distinction of function.). The forms of some of the pronouns are difficult to determine because of the bad transcriptions

	singular	dual		plural
1st	<i>ŋaya, yaga</i>	incl.	<i>diga</i>	<i>ɪaga</i>
		excl.	<i>dala</i>	<i>nala</i>
2nd	<i>ɪɖaga, ruŋga</i>	<i>ɖwaga</i>		?
3rd	?	?	?	?

Table 3: Nganjaywana nominative pronouns

and the proliferation of alternative forms (especially in the third person, where, according to Mathews, locational reference is also made). Table 3 lists the subject forms in Nganjaywana that are adequately attested in the sources. This pronoun paradigm looks completely unlike the pronoun paradigm for any other Australian language. Only the first person singular form *ɲaya* can be recognised, and this is probably an intrusion from neighbouring Baanboay or Gamilraay. However, if we propose the following forms in the proto-language for some of the other pronouns, we can relate the Nganjaywana pronouns by the regular rules mentioned above.

	Nganjaywana		Djangadi	Other	
	phonemic spelling	source spelling			
79	* <i>ɲaya</i>	<i>yaga</i>	yukka (M)	<i>ɲaya</i>	<i>ɲaya</i> (Gum.) 1 sg.
80	* <i>ɲinda</i>	<i>ɲɔga</i>	indyukka (M)	<i>ɲinda</i>	<i>ɲinda</i> (Gum.) 2 sg.
81	* <i>ɲaLi</i>	<i>diga</i>	tēka (M)	<i>ɲati</i>	<i>ɲali</i> (Gum.) 1 dl. incl.
82	* <i>buLa</i>	<i>dwaga</i>	twukka (M)	<i>buta</i>	<i>bula</i> (Gad.) 2 dl.
83	* <i>ɲina</i>	<i>ɲaga</i>	nyukka (M)	<i>ɲina</i>	— 1 pl. incl.
84	* <i>ɲanal</i>	<i>nala</i>	nāla (M)	—	<i>ɲana</i> (Yug.) = 1 dl. excl. 1 pl. excl.

(Now, only *ruŋga* '2 sg.' and *dala* '1 dl. excl.' cannot be related to forms in languages nearby.) The rules involved in the derivation of each respective form are given in order:

- 79 I → II → III
 80 V → VI → I → II → III
 81 VII → I → II → III
 82 VII → V → I → II → III
 83 V → VI → I → II → III
 84 I → II → III

(Vowel Length Deletion (III) must apply to every word in the language, whether it has short vowels or long, to ensure that Nganjaywana vowels are neither short nor long—they are simply left unmarked for vowel length.)

The role of *-ga* in these correspondences is not fully understood. It is probably significant that the *-ga* follows only those forms in which the non-suffixed pronoun would be a monosyllable by the regular phonological rules. Despite its great phonological aberrations, it is possible that Nganjaywana never abandoned the widespread Australian preference for disyllabic words (Dixon 1972b:3). (But note the monosyllable in example 39, *ɲda* 'this'.) If a functionally empty syllable were to be added to a monosyllable for the purpose of creating a two-syllabled word, we would expect to find the least marked syllable to be chosen. In the light of this presumption, the choice of *-ga* does not seem surprising. Note that Giramay of north Queensland also creates a disyllabic pronoun from *ɲay* '1 sg.' and *ɲin* '2 sg.' by adding *-ba* to form *ɲayba* '1 sg.intr.subj.' and *ɲinba* '2 sg.intr.subj.' (Dixon 1972b:51, 245). The initial consonants of the suffixes *-ba* in Giramay and *-ga* in Nganjaywana share the feature [+peripheral] suggesting that peripheral consonants (that is, *b, g, m, ɲ*) are unmarked with respect to the non-peripheral consonants (that is, *d, ɟ, n, ɲ*). (Note also the comment made on

page 33 concerning the highly marked nature of laminals in the language from which Nganjaywana is derived.) For Nganjaywana, we may need to formulate some kind of productive *Syllable Addition Rule* (VIII) to account for this phenomenon of *-ga* suffixation, which would say:

$$\phi \rightarrow S^0/\#S - \#$$

where *S* stands for any single syllable and *S⁰* for the unmarked syllable *-ga*. This rule would have to follow the initial syllable reduction rules which create monosyllables, or it could not apply since it requires a monosyllabic input.

The *-a Addition Rule* may have had a similar origin to the *Syllable Addition Rule* just described. It may be that this rule earlier added *-a* only to monosyllables ending in consonants, such as reflexes of *mijaŋ* 'what', *wambuŋ* 'kangaroo', *bagar* 'meat', totem' and so on, and that *-ga* was added to monosyllables ending in vowels, such as reflexes of *ɲaya* '1 sg.', *ɲinda* '2 sg.' and so on. By analogy with the many disyllables formed by *-a Addition*, longer words such as *buruluŋ* 'fly', *guruman* 'boy' and so on would have adopted this rule, it ceased to be a rule to create disyllables as was still the case with *-ga* addition, and it became a rule to create word final vowels. It seems likely that in the proto-language, the unmarked syllable after a vowel was *-ga* and after a consonant, *-a*, in keeping with a universal tendency to produce syllable structures of the form *CVCV*.

The objective pronoun paradigm for Nganjaywana is given in Table 4.

	singular	dual		plural
1st	<i>aŋa</i>	incl.	<i>dija</i>	<i>naŋabura</i>
		excl.	<i>dwaja</i>	<i>nanambija</i>
2nd	<i>naŋa</i>	<i>dwaja</i>		?
3rd	?	?		?

Table 4: Nganjaywana accusative pronouns

Of these, we can derive by the rules already proposed, *aŋa* (see 63) and also the dual forms *dija* and *dwaja*. The latter two are derived from:

	Nganjaywana		Rules	
	phonemic spelling	source spelling		
85	* <i>ɲaLiŋa</i>	<i>dija</i>	tenya (M) VII → I → II → III	'1 dl.incl.'
86	* <i>buLaŋa</i>	<i>dwaja</i>	tuanya (M) VII → V → I → II → III	'1 dl.excl.'

Reflexes of the bases **ɲaLi* and **buLa* are found in other languages of Australia (see 81 and 82) and the **ɲa* (87) is the accusative marker of Common Australian generally found on pronouns and personal nouns, discussed by Dixon (1972a:94-97). There is even an attested form *ɲadija* '1 dl.incl.' for Yugambal, derived from **ɲaLiŋa* by the rule mentioned in note 13. The original form for *aŋa*, i.e. **ɲa.ŋa* (see 63) can probably be

analyzed as **ɲayna*, with deletion of the *y* in the unstable cluster *-yyɪ-*, with compensatory lengthening of the preceding vowel.

The verbal inflectional system in Nganjaywana is poorly recorded, though it does seem to have been fairly complex, with a number of tense-type distinctions that are not made in the other languages along the coast. The verbal inflections that can be recognised are: *-φ* (present), *-(mbi)na* (non-future), *-la* (immediate future), *-marala* (general future), *-mara* and *-ga* (imperative), *-(y)gadi-* (reflexive) and *-daga-* (reciprocal). The morpheme *-na* (88), generally used for the present tense, but occasionally also for the past, is clearly related to the Djangadi present-past *-n* and the Gamilraay present of the same form, by the *-a* Addition Rule. The immediate future *-la* (89) may be related to the *-la* which in some of the Bandjalang dialects carries a general non-past reference (Cunningham 1969:87) and in others a specific present reference (Crowley ms.). Capell (1962:75) suggests that there may be some connection between the reflexive *-(y)gadi-* (90) in Nganjaywana and reflexives in many other New South Wales languages of the form *-gili-* (which is often reduced to *-li-*, as in Bandjalang). The original form may have been **-gaLi-* or **-giLi-*, explaining the *d:l* correspondence. Note that in the language from which Gadjang and Djangadi are derived, the reflexive-reciprocal suffix must have been *-Li-*, which appears in Gadjang as *-li-* and Djangadi as *-ti-*. A reflex of an original **-gaLi-* appears in Warungu, spoken 1400 km to the north along the Herbert River near Ingham in Queensland, as *-gali-* (Tsunoda 1974:122). In citing verbs, Mathews sometimes gives forms with a *-ga* (91) suffix; this is not explained, but it could have been an imperative, related to the imperative *-ga* of a great many Australian languages, and in particular the 'imperative' *-ga* of some Bandjalang dialects.¹⁹

Conclusions concerning Nganjaywana

Just over 30 per cent of the available purely lexical items in Nganjaywana (that is, over 70 out of about 220) are related to forms in nearby languages by more or less regular phonological rules. Some of these rules are found to apply in a number of other parts of Australia. We could conclude therefore that Nganjaywana was originally very closely related to the other languages of the New South Wales north coast and that it underwent a series of rather drastic phonological changes, setting it very much apart from the neighbouring languages, and indeed from the rest of the languages of Australia.

It has been suggested that there is evidence from material culture pointing to the existence of an original tribal group extending right along the Macleay valley and then north along the ranges as far as Yugambal territory. It is also suggested in this paper that there is a linguistic group covering the same area.

The corpus is not as extensive as we could wish, and the figure of 70 per cent for the non-coastal constituent of the Nganjaywana vocabulary may be misleading. However, although this 70 per cent cannot be related to the coastal material by the rules presented, it is nevertheless phonologically quite homogeneous with the explainable 30 per cent. We could suggest therefore that the rules operated on a language quite homogeneous with the surrounding languages. This is arguing against a conclusion that Nganjaywana was originally un-Australian, and that about 30 per cent of its lexicon was borrowed from the surrounding Australian languages prior to the application

of the rules (that is, that the Australian content is by diffusion only). If this were the case, we would expect the non-Australian 70 per cent of the Nganjaywana corpus to be phonologically quite different to the remaining 30 per cent. As stated above, this is simply not so.

But we must still explain the fact that there is nevertheless a rather large difference in lexical content between Nganjaywana and the coastal and other New England languages to which it is related. If we assume that Nganjaywana, after undergoing these drastic changes, became unpopular as a source of loans, we must conclude that lexical replacement in these other languages had to be from languages elsewhere nearby. Thus there would have been an exchange of words between all the languages of the coastal area except Nganjaywana. Dixon (1972b:349-50) says, for example, that after sound changes took place in Mbabaram, the surrounding languages stopped borrowing from it, but continued borrowing from each other. But it seems that Mbabaram continued borrowing from its neighbours as well:

In a one-way situation such as this, the language that borrows (but is not borrowed from) is likely to have more of its phonologically idiosyncratic words replaced by words from neighbouring languages, that conform to the standard Australian pattern . . . Eventually, we are likely to get a language whose vocabulary is phonologically 'normal', but many of its grammatical forms will still display a deviant patterning.

Nganjaywana has not followed this course however. There does seem to have been some borrowing into Nganjaywana from the surrounding languages, but this is scarcely enough to enter into consideration here. The only definite loans are: *waylara* 'black cockatoo' from Bandjalang, *wamara* 'woomera' from Djangadi and *ɲaya* 'I' from Baanbay or Gamilraay. So, Nganjaywana apparently actually did become a linguistic isolate—neither borrowing nor being borrowed from.

The phonological changes in Nganjaywana discussed above must have taken place some considerable time ago to allow the other languages to replace up to 70 per cent of their lexicons with non-coastal material. Why then did Nganjaywana become so linguistically isolated? A possible solution to this is this: There may have been no *need* for Nganjaywana to borrow new lexical material. Dixon (1972b:31) says the main reason for lexical replacement in Australian languages is a tabu throughout the continent that forbids the mentioning of a word identical or similar to the name of someone who has died recently. To avoid this situation, most languages would borrow a word from a neighbouring language which had a different form. Some languages such as Walbiri in central Australia and Tiwi in Bathurst and Melville Islands however have sets of 'reserve' items for use when the usual word is put under tabu and so do not have the same need to borrow from other languages. Mathews mentions the presence of a 'mystic' or 'secret' vocabulary in Nganjaywana, for which he provides some lexical correspondences with the everyday language. This 'mystic' language could have been used in a similar way to these reserve vocabularies, thus obviating the need to borrow from the other coastal languages in cases of this particular tabu applying. Mathews does state that the mystic language was used during initiation ceremonies, but it could have had a wider use than he realized.

Apart from the above arguments which suggest that the similarities of

Nganjaywana to the coastal languages are due to genetic relationship rather than lexical diffusion, we are also able to find the following similarities of a non-lexical nature, which are much less likely to be the result of diffusion:

(a) a very close overlap in the grammatical functions overtly realized;

(b) numerous formal morphological similarities with other Australian languages, particularly those geographically closest: allative *-gu* and genitive *-ŋu* on nouns, accusative *-ŋa* on pronouns, the non-future *-na*, the immediate future *-la*, the reflexive *-(ŋ)gadi-* and the imperative *-ga* on verbs;

(c) many cognates in the pronominal paradigms: this includes the interrogative pronouns 'who' and 'what' and many of the first and second person forms in the nominative and accusative functions.

General results of the present investigation into the New England linguistic situation

By taking into account all of the available sources, new and old, published and unpublished, for the languages of the New England region, we can come to the following conclusions:

(i) Baanbay and Gamblamang are very closely related, belonging to the same dialect group as Gumbaynggir. (Gumbaynggir itself apparently exists in two separate dialects, each with the same name, a northern dialect spoken inland along the Nymboida valley and the Clarence River upstream from around Cowper, and a southern dialect, spoken along the coast between Coffs Harbour and Nambucca Heads and in the Bellinger River catchment area.)

(ii) Yugambal, Ngarbal and Marbal belong to the same dialect group. These dialects have undergone some lexical infusion from neighbouring Gamilraay and related dialects. The Yugambal dialect seems to be genetically most closely related to the languages of the Macleay valley, with which it shares some common phonological developments.

(iii) Nganjaywana (that is, Himberrong and Inuwon) is most closely related to 'Enneewin', though the latter has borrowed to some extent from the adjacent Gumbaynggir dialects, while the former has undergone very little loan influence. Nganjaywana, which was originally thought to be a non-Australian language, is quite definitely related to the other languages of the area, and therefore, to the rest of the Australian languages. Its closest relatives seem to be the Yugambal-Djangadi group, with which it shares the retention of some distinctions made by the original language, which are completely neutralized in all the other languages. (Note that the Gadjang, Birbay and Warimi dialects of the Manning, Hastings and Karuah rivers between Newcastle and Kempsey form a group of their own, which also seems to be related to the Djangadi-Nganjaywana-Yugambal dialect group.)

As a closing note, this paper points out the danger of taking too seriously the comment by Capell (1962:83-84) that:

... the observed sound laws in Australia operate only within rather unpredictable limits ... There does not seem to be the Indo-European consistency of laws.

Appendix I

Index of reconstructed forms and Nganjaywana rule summary

The following is an alphabetical list of reconstructed proto-northern New South Wales lexical items that have been deduced in this paper. The list could be added to if we did not restrict ourselves to reconstructions with reflexes attested only in Nganjaywana. Some of the items are found in Capell's Common Australian vocabulary in similar or identical form (Capell 1962: 85-94); these are shown in italics below. Some items, particularly the pronouns, also have cognates in many parts of Australia, though they are not necessarily mentioned by Capell as being C.A.

anus	ŋi:m	foot	<i>ɖinal</i>
bandicoot	wambuŋ	forehead	ŋuLu
be afraid	ŋuŋawara	go	baya
be good	maŋuŋba	goanna	waɖa:n(da)
bird	ɖibilan	gum-tree	yaral
black snake	ga:liŋa	hair	baral
boomerang	bargan	hand	yamal
bora ring	wanda:ral	here	ɖinda
boy	guruman	hill	buguL
calf	buyul	hit	<i>buŋu</i>
camp	ŋu:ɾal	jew lizard	guŋur
carpet snake	ɖumba:l	kangaroo	wambuŋ
catch	<i>ma:ni</i>	kill	<i>buŋu</i>
chest	biɾiŋ	kookaburra	garugal
child	gugaŋa	laugh	ginda
cod	guruL	leaf	ɖaŋgu:r
cry	wuLa	lip	wiLiŋ
dog	miɾiLaŋ	magpie	ŋambuL
drink	ŋambi	male	burul
ear	<i>binan</i>	meat	bagar
eat	<i>ɖama</i>	moon	giLaŋ
emu	ŋurup(ɖa)	mopoke	ɖurguŋ
excrement	<i>gunan</i>	nits	dimin
eye	<i>mi:l</i>	penis	ŋuLuŋ
fat	biba:n	possum	gubil
father	ba:baŋa, babiL	rainbow serpent	ga:bulga:n
fire	winba	return	gayanda
fish	maŋdar	scratch	giŋinma
fly	buruluŋ	section-names	wambuŋ, wiɾu:ŋ, garbuŋ, ga:rgan
fog	maŋgaL	see	<i>ŋa:ga</i>
food	wigaL, wigay	totem	bagar
shark	ga:bulga:n	totem of medicine	
sit	<i>ŋipi</i>	man	wanda:ral
snow	wi:gan	tooth	<i>di:ɾa</i>
stand	wara	two	<i>buLal</i>
star	mi:gin	urinate	<i>giLa</i>
stomach	mubul	white cockatoo	gi:rbaɾ(ɖa)
stone	ɖarul/marula?	woman	agaɖiɾ
take	<i>ma:ni</i>	yamstick	ganay
tongue	<i>ɖaLaŋ(ɖa)</i>		

The list below contains the pronominal and grammatical forms reconstructed in this paper:

what	miɲaŋ	2 dl.acc.	buLɲa
who	ŋa:naŋ	1 pl.excl.nom.	ɲina
1 sg.nom.	ŋaya	allative	-gu
1 sg.acc.	ŋa:ɲa	genitive	-ŋu
2 sg.nom.	ŋinda	accusative	-ɲa
1 dl.incl.nom.	ŋaLi	non-future	-n
1 dl.incl.acc.	ŋaLiɲa	immediate future	-la
1 dl.excl.nom.	ŋanal	imperative	-ga
1 dl.excl.acc.	buLɲa	reflexive	-(ŋga)Li-
2 dl.nom.	buLa		

The phonological rules by which Nganjaywana is related to the other northern New South Wales languages are listed.

(I) *Initial Constant Deletion*

$$C \rightarrow \phi / \# -$$

(II) *Initial Short Vowel Deletion*

$$\left[\begin{array}{c} V \\ - \text{long} \end{array} \right] \rightarrow \left\{ \begin{array}{l} \left[\begin{array}{c} V \\ - \text{long} \end{array} \right] / \# - \left\{ \left[\begin{array}{c} C \\ \alpha \text{ peripheral} \\ \beta \text{ front} \end{array} \right] \left[\begin{array}{c} C \\ \gamma \text{ peripheral} \\ \delta \text{ front} \end{array} \right] \right\} \\ \phi \end{array} \right\} \begin{array}{l} (a) \\ (b) \end{array}$$

where it is not the case that both $\alpha = \gamma$ and $\beta = \delta$

(III) *Vowel Length Deletion*

$$[F \text{ long}] \rightarrow \phi$$

(IV) *-a Addition*

$$\phi \rightarrow a / C - \#$$

(V) *Semi-Vowel Assimilation*

$$\phi \rightarrow \left[\begin{array}{c} \text{Glide} \\ \alpha \text{ front} \end{array} \right] / (C) \left[\begin{array}{c} V \\ - \text{low} \\ \alpha \text{ front} \end{array} \right] C(C) - V$$

(VI) *Laminal Assimilation*

$$\left[\begin{array}{c} C \\ - \text{peripheral} \\ + \text{front} \end{array} \right] \left(\left[\begin{array}{c} C \\ - \text{peripheral} \\ + \text{front} \end{array} \right] \right) \left[\begin{array}{c} \text{Glide} \\ + \text{front} \end{array} \right] \rightarrow$$

$$\left[\begin{array}{c} C \\ - \text{peripheral} \\ - \text{front} \end{array} \right] \left(\left[\begin{array}{c} C \\ - \text{peripheral} \\ - \text{front} \end{array} \right] \right)$$

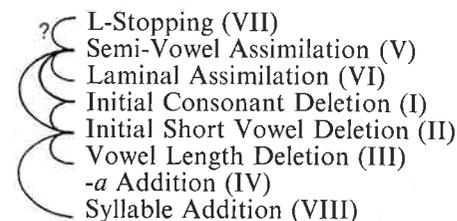
(VII) *L-Stopping*

$$L \rightarrow d$$

(VIII) *Syllable Addition*

$$\phi \rightarrow S^u / \# S - \#$$

These rules must be ordered as follows:



Appendix II

Yaygir

The main interest of this paper lies in its discussion of the initial-dropping nature of Nganjaywana. A number of analogies have been pointed out with the various initial-dropping areas of Cape York. Initial-dropping also occurs over a wide area of central Australia, in Aranda, Adnjamadhanha and other languages. There is one other initial-dropping area in New South Wales that deserves to be mentioned since no data has yet been published on this language. Yaygir, spoken on the New South Wales coast around the mouth of the Clarence River (see map) has dropped some initial stops and semi-vowels (but no nasals) and lenited others to *y*. The conditions for dropping, lenition and retention are unknown with the limited nature of the corpus that has been assembled. Examples of initial-dropping in Yaygir are:

Gumbaynggir	Yaygir	
di:na ²⁰	ina	'foot'
gi:daŋ	i:daŋ	'moon'
wu:ɲu	uɲu ²¹	'neck'

(Note that the Yaygir forms are compared with Gumbaynggir, since these two are clearly quite closely related.) Cases of initial-lenition contrasting with initial-dropping are:

Gumbaynggir	Yaygir	
ɖala:ɲ	ya:laŋ	'mouth'
bulu:ɲ	yu:lɲ	'stomach'
gaɲa:mbil	yaɲa:mbil	'tongue'

Some examples which show that initial nasals are not dropped or lenited are presented:

Gumbaynggir	Yaygir	
ni:ɲum	niɲum	'cold'
ma:ɲa	maɲa	'hand'
ŋa:ɲi	ŋaɲi	'leg'

Initial-dropping in central Australia and Cape York is often associated with

a stress retraction rule. It is mentioned on page 24 that we know very little about stress in Nganjaywana, but for Yaygir it is quite certain that stress has not shifted. The same syllables are stressed in the Yaygir forms as in the Gumbaynggir forms.

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Notes

1. Anewan (or Aniwān) is the traditional name for the language which should more accurately be referred to as Nganjaywana. Holmer (1967:51) and Crowley (1973) record forms with the initial velar nasal. The final vowel is recorded in the R. H. Mathews manuscripts. The medial diphthong is attested in Holmer and Mathews.
2. The last speaker of a Tasmanian language died in the 1870s. Some remnants of the language were collected by Tindale at Cape Barren Island and Kangaroo Island in the 1930s and by Crowley in Hobart in 1973, but the amount was extremely small. Mbabaram (referred to by Tindale, and later, Wurm, as Babaram) is also extinct, though Dixon worked with the last speaker (who died in 1972) between 1964 and 1971 to gain some valuable information. Nganjaywana has not been spoken since the 1930s, though Court's 1963 notebooks do contain some lexical material from this language. Crowley visited the area in 1973, but could find only a very small amount of Nganjaywana material still remembered by Mr Frank Archibald of Armidale.
3. Note that it is not being claimed that Tasmanian can be proved to be related to other Australian languages, only that this is now a likely possibility rather than an improbability, as was claimed before.
4. Initial clusters such as *mb-*, *nd-*, *nd-* and *ng-* were often misheard as being preceded by a vowel. This could mean that the initial nasal was sometimes syllabic. Court's notes however clearly show that these clusters did exist without the initial vowels. The sources often vary in the nature of the vowel actually recorded, and this itself is a sign that there was an initial nasal-stop cluster (see example 31). Sometimes, the nasal was missed altogether, and it is inserted in these cases as a probability (see example 24).
5. Even if we accept the lexicostatistical method of linguistic classification (as in O'Grady, Voegelin and Voegelin 1966; Wurm 1972; *et al.*), which has been shown mathematically to be of dubious value for Australian languages by Dixon (1972b:331-37), Nganjaywana would belong to the same 'subgroup' as the coastal languages, and certainly not to different 'macrophyta' as is in fact stated.

6. The abbreviations here refer to:

Dja.	Djangadi (Thangatti)
Gad.	Gadjang (Kattang)
Gum.	Gumbaynggir (Gumbaingar)
Yug.	Yugambal (Yookumbul)
Nga.	Ngarbal (Ngarrabul)
Ban.	Bandjalang
Gam.	Gamilraay (Kamilaroi)
M	Mathews (1903, ms.)
C	Court (ms.)
B	Buchanan (1901)
Mac	MacPherson (1931, 1934, ms.)
RB	Radcliffe-Brown (1930a, 1930b)
Cr	Crowley (ms.)

U.N.E.M. Unspecifiable New England Material

7. In example 2, and also in 5 and 8, the long vowel in the first syllable is considered the most likely form because it makes a general explanation of the historical changes possible, though the sources from which these forms were taken do not consistently mark vowel length.
8. In example 3, the source was not specific as to the distinction between *r* and *ɾ*, and the form given is once again a supposition. See also 15, 47, 59 and 75 for the same problem.
9. The verb forms in the sources are generally inflected in some way. The form quoted is the root, which we can generally extract from the cited form by comparing verb inflections and other roots, and by looking at Mathew's grammatical notes describing verb morphology (see pages 39-40).
10. *aliŋa* 'black snake' is actually only attested in 'Enneewin', and not Nganjaywana. This item may have been originally Nganjaywana, borrowed by 'Enneewin' after the form had undergone the change, and subsequently lost in Nganjaywana.
11. The Djangadi form *gabulga:n* has a short vowel in the initial syllable, though this may have been long at an earlier stage of the language. This shortening could have been prompted by the long vowel in the third syllable. A word in Djangadi can apparently have only one syllable with a long vowel and no more.
12. The locative of *di:na* 'foot' in Gumbaynggir however is *dina:ŋga*, not *dina:la*, despite the reconstruction of **dinal*. This could possibly be explained as the result of analogy with the regular locative inflection *-ŋga* on nouns ending in *-a*.
13. If it turns out that this contrast is not phonemic in Djangadi, then the rule would simply be:

$$L \rightarrow \left\{ \begin{array}{l} d / \text{intervocally} \\ l / \text{elsewhere} \end{array} \right.$$
14. The role of the length in *ŋa:mbul* is not known. Presumably the addition of length into the Gumbaynggir form is a later development, as is the loss of length in Djangadi (see note 12).
15. *mbwajida* is disallowed by the morpheme structure rules of Nganjaywana. *mbwajida* is a possible dissimilation. An explanation for the existence of the couplet *mbujā ~ mbwajida* is not available. Perhaps different rules

- applied in Nganjaywana and 'Enneewin', and there was subsequent dialect borrowing. Such an explanation is often to be found for couplets in better studied languages of the world.
16. *danda* is recorded in both Nganjaywana and 'Enneewin', but the MacPherson spelling for the 'Enneewin', form is given here in preference to that of Mathews or Buchanan for Nganjaywana for its closer correspondence to the reconstructed situation.
17. There is also a Gamilraay form *buralga* 'native companion' which could be related to Nganjaywana *ralganda*. By the rules given, we would expect *rwalga*. Perhaps *rw-* clusters are disallowed and become simply *r-*. It is known that Gamilraay loses final peripheral nasals (see page 35). If some *-n* were lost as well we could set up a proto-form **buralgan*. Then, the final *-da* could be given the same explanation as the final syllable in 69-73 and 76. (The 'maybes' here seem too numerous to allow this as a valid etymology.)
18. The sentence is taken from Mathews. The phonemicizations of the lexical items represented are deduced from all the sources available to us, not just the Mathews spelling:
- kettyuranda tana nyuna naianda
- which is inaccurate in certain respects.
19. *-ga* in Bandjalang is not really an imperative, though in many Australian languages it is. In Bandjalang, it actually marks a sentence as speaking about something that cannot or should not be avoided. A sentence such as:
- If you come home late, your mother will hit-*ga* you.
- appears with *-ga*, though it can hardly be called an imperative.
20. The Yaygir corpus is so small that the vowel length alternations with Gumbaynggir must remain a mystery.
21. The symbol *ɾ* in Yaygir represents a third rhotic phoneme, a voiceless trill. It is generally derived from an earlier *r* preceded by a long vowel, which is then shortened.

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3. Nyangumarda phonology: a preliminary report

James E. Hoard & Geoffrey N. O'Grady

Introduction

The Nyangumarda language, which has two principal dialects, is spoken by an estimated 900 people in northwest Australia. At the present time, the northern Nyangumarda (called Wanyarli by their southern neighbours), number less than 100. The southern Nyangumarda (called Ngulibardu by the northern Nyangumarda), number about 500. Nyangumarda is also spoken by approximately three hundred people of other Aboriginal groups as a second language.

Nyangumarda is one of some 160 languages in the Pama-Nyungan family. In Aboriginal times the Pama-Nyungan family embraced about seven-eighths of the Australian continent. Nyangumarda belongs, together with Garadjjarri (Karadjeri) and Mangarla, within the Marngu subgroup of the Nyungic branch of Pama-Nyungan (O'Grady 1966; O'Grady, Voegelin and Voegelin 1966).

Previous work on Nyangumarda stems from the 1930s. D. S. Davidson collected vocabularies of Nyangumarda and a number of other Western Australian languages. A. Capell (1940) surveyed the languages of north and northwest Australia. Since the 1950s Helmut and Gisela Petri have undertaken extensive ethnographic research in northwest Australia. For Nyangumarda they have compiled a dictionary in excess of 6,000 entries. Lloyd Penrice undertook the study of the language in the mid-1960s. In 1968 Father K. McKelson produced a large volume on northern Nyangumarda comprising a grammatical sketch, the diary of Mr Tommy Dodd (see below), topical vocabularies, and biblical stories. More recently an S.I.L. team comprising Mr and Mrs Brian Geytenbeek began research in the language. O'Grady has undertaken the study of Nyangumarda since 1949 and has contributed a number of publications: 1956, 1957, 1960a, 1960b, 1964, 1973 (with K. Mooney). O'Grady has studied Nyangumarda with some twenty different speakers of the language and would like to pay special tribute here to the late Mr Tommy Dodd, who was his first teacher. Hale (1968) reviews O'Grady (1964) and offers some important observations based on his own work on Australian languages.

We will be concerned in this paper primarily with the phonology of northern Nyangumarda as spoken at Wallal in the early 1950s. Section 1 takes up the phonemics and phonetics of Nyangumarda and the practical orthography which we employ in the remainder of the paper. Sections 2 and 3 treat verb and noun morphology. In section 4, we present the phonological rules which account for the extensive alternations exhibited within the verb and noun paradigms.

1. Underlying segments, phonetics, and orthography

Nyangumarda has thirteen underlying consonants and three underlying vowels, as given in figure 1.

p	t	tʲ	k		i	u
m	n	nʲ	ŋ		a	
	l	r	lʲ			
w		y				

Figure 1: Nyangumarda underlying segments

In terms of distinctive features, the sixteen underlying phonemes of Nyangumarda can be characterised (not minimally) as in figure 2.

		p	t	tʲ	k	m	n	nʲ	ŋ	l	r	lʲ	w	y	i	a	u
consonantal		+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-
vocalic		-	-	-	-	-	-	-	-	+	+	+	+	+	+	+	+
syllabic		-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+
coronal		-	+	+	-	+	+	-	-	+	+	+	-	-	-	-	-
labial		+	-	-	+	+	+	-	-	-	-	-	+	-	-	-	+
nasal		-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-
continuant		-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+
high		-	-	+	+	-	-	+	+	-	-	+	+	+	+	-	+
back		-	-	-	+	-	-	-	+	-	+	-	+	-	-	-	+
front		-	-	+	-	-	+	-	-	-	+	-	+	-	+	-	-

Figure 2: Distinctive feature values for Nyangumarda phonemes

The feature 'vocalic' is defined as: produced in such a way that the airstream through the oral cavity is essentially unimpeded.

We will use the digraph *ng* to represent the velar nasal /ŋ/. *Cj* represents a palatalised consonant. Hence, *tj* = /tʲ/, *nj* = /nʲ/, and *lj* = /lʲ/. For convenience we will use these digraphs for the citation of Nyangumarda forms rather than the special symbols given within diagonals.

The morpheme structure of Nyangumarda is relatively straightforward. All morphemes begin with a consonant and all consonants occur morpheme initially except *lj*. There are no roots which begin with a consonant cluster. Since there are no prefixes, this means that all words begin with a single consonant. So far as we are aware, there is only one productive suffix that begins with a consonant cluster other than a cluster of *r* plus consonant; this is the morpheme /+nta/ 'thee', apparently a truncated form of the independent pronoun *njuntu* 'thou'.

As morpheme finals, the consonants /n, nʲ, l, r, lʲ/ occur freely. The stops /p, t, tʲ, k/ occur infrequently in this position, the consonants /m, ŋ, w, y/ not at all.

Word-final consonant clusters are virtually limited to sequences of *r* + *Alveolar*, where *alveolar* means one of the set /t, n, l/. Final consonant clusters consist then of only two consonants and are generally described by the class:

$$r \begin{bmatrix} +\text{coronal} \\ -\text{high} \\ -\text{back} \end{bmatrix}$$

Note, however, the loan word *tirptip* 'kind of tree carving'. Even here the first consonant of the final cluster is *r*.

Medially, consonant clusters of up to three members occur. Clusters of three consonants are essentially a combination of a permissible final cluster and a permissible initial consonant. They are thus of the form *r-Alveolar-C₁*. The class *C₁* is, however, restricted to consonants which are not [+coronal +continuant]. That is /n, nʲ, l, r, lʲ/ do not belong to *C₁* and *C₁* consists of the set /p, t, tʲ, k, m, ŋ, w/. The medial clusters of three consonants are, then, of the form:

$$r \begin{bmatrix} +\text{coronal} \\ -\text{high} \\ -\text{back} \end{bmatrix} \sim \begin{bmatrix} +\text{coronal} \\ +\text{cont} \end{bmatrix}$$

Medial clusters of two consonants consist of (1) a non-high coronal resonant /r, n, l/ plus one of *C₁*; (2) a high coronal resonant /nʲ, lʲ/ plus a non-coronal; (3) *r* plus a following [+cor -high] consonant; (4) a continuant followed by a homorganic non-continuant. The two consonant medial sequences can be summarized as:

$$(1) \begin{bmatrix} +\text{cor} \\ +\text{cont} \\ -\text{high} \end{bmatrix} \sim \begin{bmatrix} +\text{cor} \\ +\text{cont} \end{bmatrix}; \quad (2) \begin{bmatrix} +\text{cor} \\ +\text{cont} \\ +\text{high} \end{bmatrix} [-\text{cor}];$$

$$(3) r \begin{bmatrix} +\text{cor} \\ -\text{high} \end{bmatrix}; \quad (4) \begin{bmatrix} +\text{cont} \\ \alpha\text{cor} \\ \beta\text{lab} \\ \gamma\text{high} \end{bmatrix} \begin{bmatrix} -\text{cont} \\ \alpha\text{cor} \\ \beta\text{lab} \\ \gamma\text{high} \end{bmatrix}$$

The two consonant medial clusters defined by (1) to (4) are given below. Those clusters given in parentheses are not attested but their absence seems accidental.

	(1)	(2)	(3)	(4)			
rp	np	lp	nʲp	lʲp	rr	mp	nʲtʲ
rt	nt	lt	nʲk	lʲk	rt	lt	lʲtʲ
rtʲ	ntʲ	ltʲ	nʲm	(lʲm)	rn	nt	ŋk
rk	nk	lk	(nʲŋ)	lʲŋ	rl	rt	
rm	nm	(lm)	(nʲw)	(lʲw)			
rŋ	nŋ	lŋ					
rw	(nw)	lw					

In groups (1) and (2) the *w* clusters might be excluded. But the existence of medial *rw* in *kurwalj* 'sky', of *lw* in *tjalwal* 'sister's husband' and of *rtw* in *purtwarninj* 'frog' seems to us to indicate that the lack of medial *w* clusters is not systematic. On the other hand, we have omitted the medial clusters /lʲt/ and /nʲt/ from all of the above sets, since we believe that these clusters are completely forbidden.

The vowels *a, i, u* are short. Phonetic long vowels occur rarely, primarily in onomatopoeia, and are interpreted as sequences of two like vowels. Typical syllable shapes are CV, CVC, and CVCC. It follows that clusters of unlike vowels do not occur. Our treatment of three-consonant sequences suggests a natural syllabification

$$\dots V r \text{ Alveolar} [\cdot] C_1 V \dots$$

where [·] indicates a syllable boundary. For two-consonant sequences, a

natural syllabification will give a syllable boundary between the two consonants:

...VC[.]CV...

The articulation of Nyangumarda is unusually rapid. This is possible because the structure of syllables is preponderantly CV, length contrasts are almost totally lacking, and there are no underlying fricatives contrasting with the stops.

There are a number of phonetic rules which determine the pronunciation of Nyangumarda utterances and which specify the phonetic realization of the underlying segments given in figure 1.

A primary accent is located on the first syllable of a word. Syllables after the first seem to have no discernable (secondary) accents.

The sequence *rr* is realized as a flap [ɾ], as in *ngurra* [ŋúɾɐ] 'camp'. Before an alveolar consonant, *r* is realised as a voiced continuant and the alveolar consonant is interpreted as a retroflexed consonant; for example *marni* [márni] 'markings', *karlu* [kárɻu] 'soft mud'. A single *r*, initially and intervocally, is phonetically a voiced continuant [r]. Before a non-alveolar consonant and word finally, *r* is trilled, [ɾ̃].

Stops are voiced in voiced surroundings. Examples are *mampu* [mámɸu] 'hair of the head', *kata* [káɸɐ] 'more, again', *katja* [káɸjɐ] 'far', *puka* [púɸɐ] 'rotten', *karta* [káɸɐ] 'sleep (n.)'. The stops are lenis and unaspirated. *p*, *tj*, and *k* (but not *t*) tend to become fricatives intervocally and following a liquid. Examples are *puka* [púɸɐ] (or [púɸɐ], as above) and *milpinj* [mílɸin] (or [mílɸin]) 'fingernail, toenail'.

Word initial alveolars are retroflexed. For example, *tarra* [tárɐ] 'seagull', *nurta* [núɾɐ] 'blunt, dull', *laka* [láɸɐ] or [láɸɐ] 'agape'.

Stops are glottalised when voicelessness follows. For example, *kartku* [káɾk'k'ɸu] 'river gum', *raljup* [rál'ɸɸ] 'whoosh!', *wurrarnatjanaku* [wúɾɐnɐɸ'ɐnɐk'ɸu] 'he/she told them (pl.)'. The glottalised stops are not strongly ejective, but the glottal closure is complete and quite audible. Nasals and laterals tend to be laryngealised before final voiceless vowels. For example *palama* [pálɐmɸ] (also with the final vowel deleted: [pálɐm]), 'that (near)', *pungkinjangu* [púŋɸin'ɐɸɸu] 'he/she/it is falling/fell on thee', *wurralitjipulu* [wúɾɐlɪɸ'ɪɸulɸu] 'you (dual) tell me!'

All voiced non-nasal consonants are devoiced: (1) phrase or sentence final, or (2) before a voiceless vowel. Nasals sometimes devoice in the latter environment. Examples are *píɾntil* [pírɸɪɪ] 'back, spine', *parir* [páɾɪɪ] 'hand', *yanapulu* [yánɐɸulɸu] 'they (dual) went', *yankulupiyi* [yánɸulɸubiyi] 'they (pl.) will go', *parntirniɾni* [párɸɪɪɾniɾni] 'I smell(ed) it'.

Phrase and sentence final high vowels, especially in words of three or more syllables, are rather consistently devoiced. In words of two syllables, a final high vowel is often devoiced. The low vowel *a* is less frequently devoiced in word final position. This rule applies before the rule which voices stops in voiced surroundings. The sentence final environment applies to a word cited in isolation, for example, *takipinti* [tágibɪnt'ɪ] 'a small ceremonial shield', *kaku* [káɸk'ɸu] 'deep'. The devoicing of vowels can occasionally extend to the penultimate syllable of the word, as in *kamarnapulu* [káɸmɐɾɸɐɸ'ɸulɸu] 'they (dual) called out'.

The vowel *a* is pronounced [ɔ] before *w* or *ng* as in *tjawa* [t'ɔwɐ] 'mouth' and *tjangu* [t'ɔŋɸu] 'tobacco'; *a* is pronounced as [a] when a palatal follows

or when it is in the second syllable of a word and the vowel of the first syllable is *i*. Examples of [a] are *partanj* [párɸan] 'child', *ngalji* [ŋál'ɸi] 'neck', *mirarnu* [mírarnu] 'knowledgeable'. We note here also the non-phonetic rule: *a* is fronted to [e] if the next morpheme begins with *y* as in *ya+na+yi* [yánɐyɪ] 'they (pl.) went'. In other environments *a* is pronounced [a] if accented and [ɐ] when unaccented. The vowel *i* is lax to [ɪ] except when it precedes a palatal consonant or is word final. The vowel *u* tends to be lax to [ʊ] except when word final. It is fronted to tense [ü] or lax [ū] when adjacent to a palatal consonant, as in *kalngunj* [káɸŋün] 'armpit'.

The rules just stated seem to us to exhaust the salient allophony of the underlying segments of northern Nyangumarda.

2. Verb morphology

The Nyangumarda verb is inflected with suffixes marking mood, aspect, person, and a category which we label 'purposive'. The three moods are the imperative, the expective, and the actual.

The imperative mood has both a positive and a negative (or admonitive) aspect and occurs in the positive only with second persons but occurs with all persons in the negative aspect.

The expective mood occurs with all persons. The simple expective mood is perhaps best termed a 'hortative' mood. The simple expective can be augmented with an additional formative to yield a future aspect.

The actual mood occurs with all persons. The aspects which occur in the actual mood include 'unrealised', 'completed', 'imperfect', 'desiderative', and 'remote intention'. The 'remote intention' aspect is used primarily by the Ngulibardu but is employed by some Wanyarli speakers.

The Nyangumarda personal pronoun suffixes show a distinction of three numbers and three persons, with an inclusive/exclusive contrast in the first person dual and plural. There is also a reflexive-reciprocal marker.

There are three major verb conjugations, designated temporarily as Conjugations I, II, and III, and three minor conjugations (limited to a combined total of five verb roots), designated as Conjugations IV, V, and VI.

In presenting the various Nyangumarda verb forms given below, we take the liberty of distinguishing at this stage of our presentation between internal morpheme boundaries (identified by pluses) and external morpheme boundaries (identified by sharps). The motivation for this distinction will become apparent in §4.

The simple imperative mood (all second person) can be exemplified by the following forms:

Conjugation	Singular	Dual	Plural
I	<i>ngalpi+yi</i>	<i>ngalpi+yi#pulu</i>	<i>ngalpa+yi</i>
II	<i>yurpa+la</i>	<i>yurpa+la#pulu</i>	<i>yurpa+la+yi</i>
	<i>wirri+li</i>	<i>wirri+li#pulu</i>	<i>wirri+la+yi</i>
	<i>kalku+lu</i>	<i>kalku+lu#pulu</i>	<i>kalku+la+yi</i>
III	<i>muwar+pi+li</i>	<i>muwar+pi+li#pulu</i>	<i>muwar+pi+la+yi</i>
IV	<i>ka+wa</i>	<i>ka+wa#pulu</i>	<i>ka+wa+yi</i>
V	<i>nga+la</i>	<i>nga+la#pulu</i>	<i>nga+la+yi</i>
VI	<i>ya+rra</i>	<i>ya+rra#pulu</i>	<i>ya+rra+yi</i>

The meaning of the roots are *ngalpi/a* 'enter', *yurpa* 'rub (trans.)', *wirri* 'put (trans.)', *kalku* 'care for (trans.)', *muwar+pi* 'speak', *ka* 'carry (trans.)', *nga* 'eat', and *ya* 'go'.

Negative imperative forms have the meaning 'so-and-so might happen (I hope it doesn't)'. The forms are:

Person (I)	Singular	Dual	Plural
1 inc	—	<i>ngalpa+li+li</i>	<i>ngalpi+yi+nji+li</i>
1 exc	<i>ngalpi+yi+rni+li</i>	<i>ngalpa+layi+li</i>	<i>ngalpa+yirni+li</i>
2	<i>ngalpi+yi+npi+li</i>	<i>ngalpi+yi#njumpulu+lu</i>	<i>ngalpi+yi#njurru+lu</i>
3	<i>ngalpi+yi+li</i>	<i>ngalpi+yi#pulu+lu</i>	<i>ngalpa+yi+li</i>
(II)			
1 inc	—	<i>yurpa+la+li+li</i>	<i>yurpa+li+nji+li</i>
1 exc	<i>yurpa+li+rni+li</i>	<i>yurpa+la#layi+li</i>	<i>yurpa+li+yirni+li</i>
2	<i>yurpa+li+npi+li</i>	<i>yurpa+la#njumpulu+lu</i>	<i>yurpa+la#njurru+lu</i>
3	<i>yurpa+li+li</i>	<i>yurpa+la#pulu+lu</i>	<i>yurpa+li+yi+li</i>
1 inc	—	<i>kalku+la+li+li</i>	<i>kalku+lu#nji+li</i>
1 exc	<i>kalku+lu+rnu+lu</i>	<i>kalku+la#layi+li</i>	<i>kalku+li+yirni+li</i>
2	<i>kalku+lu+npu+lu</i>	<i>kalku+lu#njumpulu+lu</i>	<i>kalku+lu#njurru+lu</i>
3	<i>kalku+lu+lu</i>	<i>kalku+lu#pulu+lu</i>	<i>kalku+li+yi+li</i>
(III)			
1 inc	—	<i>muwar+pi+la+li+li</i>	<i>muwar+pi+li+nji+li</i>
1 exc	<i>muwar+pi+li+rni+li</i>	<i>muwar+pi+li+layi+li</i>	<i>muwar+pi+li+yirni+li</i>
2	<i>muwar+pi+li+npi+li</i>	<i>muwar+pi+li#njumpulu+lu</i>	<i>muwar+pi+li#njurru+lu</i>
3	<i>muwar+pi+li+li</i>	<i>muwar+pi+li#pulu+lu</i>	<i>muwar+pi+li+yi+li</i>
(IV)			
1 inc	—	<i>ka+wa+li+li</i>	<i>ka+wa+nji+li</i>
1 exc	<i>ka+wa+rni+li</i>	<i>ka+wa+layi+li</i>	<i>ka+wa+yirni+li</i>
2	<i>ka+wa+npi+li</i>	<i>ka+wa#njumpulu+lu</i>	<i>ka+wa#njurru+lu</i>
3	<i>ka+wa+li</i>	<i>ka+wa#pulu+lu</i>	<i>ka+wa+yi+li</i>

The negative imperative forms for *nga* and *ya* are parallel to those for *ka* except that *nga* has *la* instead of *wa* and *ya* has *rra* instead of *wa* in all forms. The verbs *yurpa*, *ka*, *nga*, and *ya* have alternative first, second, and third person singular forms: *yurpa+la+rna+la*, *yurpa+la+npa+la*, *yurpa+la+la*; *ka+wa+rna+la*, *ka+wa+npa+la*, *ka+wa+la*; *nga+la+rna+la*, *nga+la+npa+la*, *nga+la+la*; *ya+rra+rna+la*, *ya+rra+npa+la*, *ya+rra+la*.

The simple expective mood (or hortative) has the meaning 'I wish it would

happen (and have every reason to expect that it will)'. Representative forms are:

Person	Singular	Dual	Plural
1 inc	—	<i>ngalp+u+li</i>	<i>ngalp+u+nji</i>
1 exc	<i>ngalp+u+rnu</i>	<i>ngalp+u+layi</i>	<i>ngalp+u+yirni</i>
2	<i>ngalp+u+n</i>	<i>ngalp+u#njumpulu</i>	<i>ngalp+u#njurru</i>
3	<i>ngalp+u+rru</i>	<i>ngalp+u#pulu</i>	<i>ngalp+u+wi</i>
1 inc	—	<i>yurpa+lku+li</i>	<i>yurpa+lku+nji</i>
1 exc	<i>yurpa+lku+rnu</i>	<i>yurpa+lku+layi</i>	<i>yurpa+lku+yirni</i>
2	<i>yurpa+lku+n</i>	<i>yurpa+lku#njumpulu</i>	<i>yurpa+lku#njurru</i>
3	<i>yurpa+lku+rru</i>	<i>yurpa+lku#pulu</i>	<i>yurpa+lku+wi</i>

Muwar+pi and *nga* have the same endings as *yurpa*; *ka* has *ngku* instead of *lku* and *ya* has *nku* instead of *lku*.

The complex expective mood (or future) has the forms:

1 inc	—	<i>ngalp+u+lupa+li</i>	<i>ngalp+u+lumi+nji</i>
1 exc	<i>ngalp+u+lumu+rnu</i>	<i>ngalp+u+lupi+layi</i>	<i>ngalp+u+lupi+yirni</i>
2	<i>ngalp+u+lumu+n</i>	<i>ngalp+u+lu#njumpulu</i>	<i>ngalp+u+lu#njurru</i>
3	<i>ngalp+u+rlij</i>	<i>ngalp+u+rlij#pulu</i>	<i>ngalp+u+lupi+yi</i>
1 inc	—	<i>yurpa+lapa+li</i>	<i>yurpa+lami+nji</i>
1 exc	<i>yurpa+lama+rna</i>	<i>yurpa+lapi+layi</i>	<i>yurpa+lapi+yirni</i>
2	<i>yurpa+lama+n</i>	<i>yurpa+lku+lu#njumpulu</i>	<i>yurpa+lku+lu#njurru</i>
3	<i>yurpa+lku+rlij</i>	<i>yurpa+lku+rlij#pulu</i>	<i>yurpa+lapi+yi</i>
1 inc	—	<i>wirri+lipa+li</i>	<i>wirri+limi+nji</i>
1 exc	<i>wirri+limi+rni</i>	<i>wirri+lipi+layi</i>	<i>wirri+lipi+yirni</i>
2	<i>wirri+limi+n</i>	<i>wirri+lku+lu#njumpulu</i>	<i>wirri+lku+lu#njurru</i>
3	<i>wirri+lku+rlij</i>	<i>wirri+lku+rlij#pulu</i>	<i>wirri+lipi+yi</i>
1 inc	—	<i>kalku+lupa+li</i>	<i>kalku+lumi+nji</i>
1 exc	<i>kalku+lumu+rnu</i>	<i>kalku+lupi+layi</i>	<i>kalku+lupi+yirni</i>
2	<i>kalku+lumu+n</i>	<i>kalku+lku+lu#njumpulu</i>	<i>kalku+lku+lu#njurru</i>
3	<i>kalku+lku+rlij</i>	<i>kalku+lku+rlij#pulu</i>	<i>kalku+lupi+yi</i>

Muwar+pi has the same endings in the future as *wirri*. *Ka* has *ngku* instead of the *u* of *ngalpi* (with the same endings); *nga* has *lku* instead of the *u* of *ngalpi*; *ya* has *nku* for the *u* of *ngalpi*.

The simple actual mood has the meaning 'recent past or present' for Conjugations I, II, and III. Conjugations IV, V, and VI have distinct 'recent

past' and 'present' actual forms. The forms for Conjugations I, II, and III are:

Person	Singular	Dual	Plural
1 inc	—	<i>ngalpi+nja+li</i>	<i>ngalpi+nji+nji</i>
1 exc	<i>ngalpi+nji+rni</i>	<i>ngalpi+nji+layi</i>	<i>ngalpi+nji+yirni</i>
2	<i>ngalpi+nji+n</i>	<i>ngalpi+nji#njumpulu</i>	<i>ngalpi+nji#njurru</i>
3	<i>ngalpi+nji+rri</i>	<i>ngalpi+nji#pulu</i>	<i>ngalpi+nji+yi</i>

The second dual and plural forms can be reduced to *ngalpi#njumpulu* and *ngalpi#njurru*, respectively.

Person	Singular	Dual	Plural
1 inc	—	<i>yurpa+rna+li</i>	<i>yurpa+rni+nji</i>
1 exc	<i>yurpa+rna+rna</i>	<i>yurpa+rni+layi</i>	<i>yurpa+rni+yirni</i>
2	<i>yurpa+rna+n</i>	<i>yurpa+rna#njumpulu</i>	<i>yurpa+rna#njurru</i>
3	<i>yurpa+rna+rna</i>	<i>yurpa+rna#pulu</i>	<i>yurpa+rni+yi</i>

For *yurpa+rna+rna*, the form *yurpa+rni+rri* is occasionally heard. *Yurpa+rna+yi* is frequently heard for *yurpa+rni+yi*.

Person	Singular	Dual	Plural
1 inc	—	<i>wirri+rna+li</i>	<i>wirri+rni+nji</i>
1 exc	<i>wirri+rni+rni</i>	<i>wirri+rni+layi</i>	<i>wirri+rni+yirni</i>
2	<i>wirri+rni+n</i>	<i>wirri+rni#njumpulu</i>	<i>wirri+rni#njurru</i>
3	<i>wirri+rni+rri</i>	<i>wirri+rni#pulu</i>	<i>wirri+rni+yi</i>

Person	Singular	Dual	Plural
1 inc	—	<i>kalku+rna+li</i>	<i>kalku+rni+nji</i>
1 exc	<i>kalku+rnu+rnu</i>	<i>kalku+rni+layi</i>	<i>kalku+rni+yirni</i>
2	<i>kalku+rnu+n</i>	<i>kalku+rnu#njumpulu</i>	<i>kalku+rnu#njurru</i>
3	<i>kalku+rnu+rnu</i>	<i>kalku+rnu#pulu</i>	<i>kalku+rni+yi</i>

For *muwar+pi*, the forms are parallel to the *wirri* forms but *rni* is replaced by *ni*. For *ka*, the forms in the meaning 'recent past' are parallel to those for *yurpa* but *nja* replaces *rna*. The recent past endings of *nga* are the same as those of *yurpa*. The recent past forms of *ya* are also parallel to those of *yurpa* but *na* replaces *rna*.

The present actual forms of *ka* are:

Person	Singular	Dual	Plural
1 inc	—	<i>ka+ngi+nja+li</i>	<i>ka+ngi+nji+nji</i>
1 exc	<i>ka+ngi+nji+rni</i>	<i>ka+ngi+nji+layi</i>	<i>ka+ngi+nji+yirni</i>
2	<i>ka+ngi+nji+n</i>	<i>ka+ngi+nji#njumpulu</i>	<i>ka+ngi+nji#njurru</i>
3	<i>ka+ngi+nji+rri</i>	<i>ka+ngi+nji#pulu</i>	<i>ka+ngi+nji+yi</i>

For *ka+ngi+nji+yi*, *ka+ngi+nja+yi* is also heard. The second person dual and plural forms can be shortened to *ka+ngi#njumpulu* and *ka+ngi#njurru*. For *nga*, *rni* replaces *ngi*; for *ya*, *ni* replaces *ngi*.

The unrealised aspect of the actual mood has such meanings as 'it was about to (but didn't), it should have (but didn't)', and also is used for negation with the negative particle *munu* preceding an unrealised actual form.

Person	Singular	Dual	Plural
1 inc	—	<i>ngalpi+ma+li</i>	<i>ngalpi+mi+nji</i>
1 exc	<i>ngalpi+mi+rni</i>	<i>ngalpi+mi+layi</i>	<i>ngalpi+mi+yirni</i>
2	<i>ngalpi+mi+n</i>	<i>ngalpi+mi#njumpulu</i>	<i>ngalpi+mi#njurru</i>
3	<i>ngalpi+mi+rri</i>	<i>ngalpi+mi#pulu</i>	<i>ngalpi+mi+yi</i>

Person	Singular	Dual	Plural
1 inc	—	<i>yurpa+rna+ma+li</i>	<i>yurpa+rna+mi+nji</i>
1 exc	<i>yurpa+rna+rna</i>	<i>yurpa+rna+mi+layi</i>	<i>yurpa+rna+mi+yirni</i>
2	<i>yurpa+rna+n</i>	<i>yurpa+rna+ma#njumpulu</i>	<i>yurpa+rna+ma#njurru</i>
3	<i>yurpa+rna+rna</i>	<i>yurpa+rna+ma#pulu</i>	<i>yurpa+rna+mi+yi</i>

The third plural form can also be *yurpa+rna+ma+yi*.

The forms of *wirri* and *muwar+pi* have the same endings as those of *ngalpi* with the addition of *rni* and *ni*, respectively, after the root. So, *wirri+rni+mi+rni*, etc., and *muwar+pi+ni+mi+rni*, etc.

The unrealised actual forms of *kalku* are:

Person	Singular	Dual	Plural
1 inc	—	<i>kalku+rnu+ma+li</i>	<i>kalku+rnu+mi+nji</i>
1 exc	<i>kalku+rnu+mu+rnu</i>	<i>kalku+rnu+mi+layi</i>	<i>kalku+rnu+mi+yirni</i>
2	<i>kalku+rnu+mu+n</i>	<i>kalku+rnu+mi#njumpulu</i>	<i>kalku+rnu+mi#njurru</i>
3	<i>kalku+rnu+mu+rnu</i>	<i>kalku+rnu+mu#pulu</i>	<i>kalku+rnu+mi+yi</i>

The third dual form can shorten to *kalku+rnu+m#pulu*. Note particularly that we have posited irregular internal sandhi in the second dual and second plural forms; an irregular + juncture seems to us to account (in part) for the occurrence of *mi* in these forms rather than the expected *mu*.

In the three minor conjugations the singular forms of the unrealised actual are: *ka+ngi+mi+rni/ka+nga+ma+rna*, *ka+ngi+mi+n/ka+nga+ma+n*, *ka+ngi+mi+rri/ka+nga+ma+rna*; *nga+rni+mi+rni/nga+rna+ma+rna*, etc.; *ya+ni+mi+rni/ya+na+ma+rna*, etc. The dual and plural forms are parallel to those of *ngalpi*: *ka+ngi+ma+li*, etc.; *nga+rni+ma+li*, etc.; *ya+ni+ma+li*, etc. The alternative singular forms with *i* seem to be due to paradigm pressure from the corresponding present actual forms. Note, then, *ka+ngi+mi+rni* beside *ka+ngi+nji+rni*, and so forth.

The remote aspect of the actual mood has the meaning 'completed in the distant past'. The remote actual forms of *ngalpi* are:

Person	Singular	Dual	Plural
1 inc	—	<i>ngalpi+nji+lpa+li</i>	<i>ngalpi+nji+lpi+nji</i>
1 exc	<i>ngalpi+nji+lpi+rni</i>	<i>ngalpi+nji+lpi+layi</i>	<i>ngalpi+nji+lpi+yirni</i>
2	<i>ngalpi+nji+lpi+n</i>	<i>ngalpi+nji+l#njumpulu</i>	<i>ngalpi+nji+l#njurru</i>
3	<i>ngalpi+nji+l#nga</i>	<i>ngalpi+nji+l#pulu</i>	<i>ngalpi+nji+lpi+yi</i>

All of the above *ngalpi* forms can also occur without the *nji*. Hence, *ngalpi+lpi+rni*, etc. Conjugation II verbs with final *i*, like *wirri* and Conjugation III verbs like *muwar+pi* have forms parallel to those of *ngalpi*: *wirri+rni+lpi+rni*, etc.; *muwar+pi+ni+lpi+rni*, etc.

The remote actual forms of *yurpa* are:

Person	Singular	Dual	Plural
1 inc	—	<i>yurpa+rna+lpa+li</i>	<i>yurpa+rna+lpi+nji</i>
1 exc	<i>yurpa+rna+lpa+rna</i>	<i>yurpa+rna+lpi+layi</i>	<i>yurpa+rna+lpi+yirni</i>
2	<i>yurpa+rna+lpa+n</i>	<i>yurpa+rna+l# njumpulu</i>	<i>yurpa+rna+l#njurru</i>
3	<i>yurpa+rna+l#nga</i>	<i>yurpa+rna+l#pulu</i>	<i>yurpa+rna+lpi+yi</i>

The remote actual forms of *kalku* are:

Person	Singular	Dual	Plural
1 inc	—	<i>kalku+rnu+lpa+li</i>	<i>kalku+rnu+lpi+nji</i>
1 exc	<i>kalku+rnu+lpu+rnu</i>	<i>kalku+rnu+lpi+layi</i>	<i>kalku+rnu+lpi+yirni</i>
2	<i>kalku+rnu+lpu+n</i>	<i>kalku+rnu+l# njumpulu</i>	<i>kalku+rnu+l#njurru</i>
3	<i>kalku+rnu+l#nga</i>	<i>kalku+rnu+l#pulu</i>	<i>kalku+rnu+lpi+yi</i>

The remote actual forms of the three minor conjugations are parallel to those of *yurpa*: *ka+nja+lpa+rna*, *ka+nja+lpa+n*, *ka+nja+l#nga*, etc.; *nga+rna+lpa+rna*, *nga+rna+lpa+n*, *nga+rna+l#nga*, etc.; *ya+na+lpa+rna*, *ya+na+lpa+n*, *ya+na+l#nga*, etc.

The unrealised remote actual forms have the meanings 'in the remote past it was about to (but didn't), in the remote past it should have (but didn't)' and is also used for negation with the negative particle for events or states that did not happen (in the remote past). In Conjugation I, *mi* replaces the *nji* of the remote actual forms. Thus, *ngalpi+mi+lpi+rni*, etc. In Conjugations II and III we have *yurpa+rna+ma+lpa+rna* etc. and *muwar+pi+ni+mi+lpi+rni*, etc., respectively. And in Conjugations IV, V, and VI, we have *ka+ngi+mi+lpi+rni*; *nga+rni+mi+lpi+rni*, *ya+ni+mi+lpi+rni*, respectively, and so forth.

To the forms of the unrealised actual paradigms can be added the internal suffix *+ngirri* ~ *+ngarra* ~ *+ngurru*. This is a 'conditional' suffix and has the meaning 'if'. *Ngirri* occurs after forms ending in *i*, *ngarra* after forms in *a*, and *ngurru* after forms in *u*. Examples are: *ngalpi+ma+li+ngirri* 'If you and I had entered . . .', *yurpa+rna+ma+l#nga+ngarra* 'If he had rubbed it (long ago) . . .', *kalku+rnu+mu+l#njurru+ngurru* 'If you (pl.) had cared for him/her/it (long ago) . . .'

The imperfect aspect of the actual mood has the meaning 'was/were in the process of'. The Conjugation I forms are:

Person	Singular	Dual	Plural
1 inc	—	<i>ngalpi+kinja+li</i>	<i>ngalpi+kinji+nji</i>
1 exc	<i>ngalpi+kinji+rni</i>	<i>ngalpi+kinji+layi</i>	<i>ngalpi+kinji+yirni</i>
2	<i>ngalpi+kinji+n</i>	<i>ngalpi+ki#njumpulu</i>	<i>ngalpi+ki#njurru</i>
3	<i>ngalpi+kinji+rri</i>	<i>ngalpi+kinji#pulu</i>	<i>ngalpi+kinji+yi</i>

Conjugation II, III, IV, V, and VI forms are parallel to those of *ngalpi*: *yurpa+rni+kinji+rni*, *yurpa+rni+kinji+n*, etc., *kalku+rni+kinji+rni*, etc.; *muwar+pi+ni+kinji+rni*, etc.; *ka+ngi+kinji+rni*, etc.; *nga+rni+kinji+rni*, etc.; *ya+ni+kinji+rni*, etc.

The desiderative aspect forms of the actual mood are used to express wishes which are unlikely to be fulfillable, at least in the immediate future. Conjugation I forms are exemplified by *ngalpi+nji+ki+rni*, *ngalpi+nji+ki+n*, *ngalpi+nji+ki+rri*, *ngalpi+nji+ka+li*, etc.; 'If only I could enter, . . . you could enter, . . . he/she/it could enter,' etc. In Conjugation II, we have *yurpa+rna+ka+rna*, etc.; *wirri+rni+ki+rni*, *wirri+rni+ki+n*, *wirri+rni+ki+rri*, *wirri+rni+ka+li*, etc.; *kalku+rnu+ku+rnu*, *kalku+rnu+ku+n*, *kalku+rnu+ku+rri*, *kalku+rnu+ka+li*, etc. In Conjugation III the desiderative (actual) forms are parallel to those of *wirri*: *muwar+pi+ni+ki+rni*, etc. And in the minor conjugations we have: *ka+ngi+nji+ki+rni*, etc. (IV); *nga+rni+nji+ki+rni*, etc. (V); and *ya+ni+nji+ki+rni*, etc. (VI).

The remote future forms of the actual mood have the meaning 'intend to do (at a remote future time)'. Examples of Conjugation I forms in the remote future are: *ngalpi+nja+ngku+lumu+rnu* and *ngalpi+nja+ngku+lumu+n*. For Conjugation II we have such forms as *yurpa+rna+ngku+lumu+rnu*, *wirri+rna+ngku+lumu+rnu*, and *kalku+rna+ngku+lumu+rnu*; and in Conjugation III, *muwar+pi+na+ngku+lumu+rnu*. No Conjugation IV, V, VI remote future forms have been elicited but we would predict *ka+ngi+nja+ngku+lumu+rnu* (IV), *nga+rni+nja+ngku+lumu+rnu* (V), and *ya+ni+nja+ngku+lumu+rnu* (VI).

To all of the verbal paradigms can be added a 'purposive' suffix. This suffix has the meaning 'for (the reason of)'. If indirect object suffixes are present (see below) the meaning is 'benefactive' (that is for the benefit of, to the disadvantage of). The simple actual purposive Conjugation I forms are:

Person	Singular	Dual	Plural
1 inc	—	<i>ngalpi+nji+l#a</i>	<i>ngalpi+nji+nj#a</i>
1 exc	<i>ngalpi+nji+rn#a</i>	<i>ngalpi+nji+lay#a</i>	<i>ngalpi+nji+yirn#a</i>
2	<i>ngalpi+nji+np#a</i>	<i>ngalpi+nji#njum- pul#a</i>	<i>ngalpi+nji#njurr#a</i>
3	<i>ngalpi+nj#a</i>	<i>ngalpi+nji#pul#a</i>	<i>ngalpi+nji+y#a</i>

The remote actual singular forms are: *ngalpi+nji+lpi+rn#a*, *ngalpi+nji+lpi+np#a*, and *ngalpi+nji+lp#a*.

The simple expective ('hortative') purposive forms for Conjugation I are in the singular: *ngalp+u+rn#a*, *ngalp+u+np#a*, and *ngalp+uw#a*; the third person plural form is *ngalp+u+y#a*. The complex expective ('future') purposive forms for Conjugation I are, in the singular: *ngalp+u+lumu+rn#a*, *ngalp+u+lumu+np#a*, *ngalp+u+rlnjp#a*. The first person dual forms are *ngalp+u+lupu+l#a* and *ngalp+u+lupi+lay#a*. The third person plural form is *ngalp+u+lupi+y#a*.

The desiderative purposive forms for Conjugation I, in the singular, are: *ngalpi+nji+ki+rn#a*, *ngalpi+nji+ki+np#a*, *ngalpi+nji+kaw#a*.

The other conjugations add nothing new to the verbal alternations: the overt marker *#a* is added to each of the forms; and if a vowel precedes, that vowel is deleted; but if a consonant precedes, a *p* appears between the consonant and *#a*. Examples are *ya+ni+nji+rn#a* 'I'm going for it', *ya+ni+nji+np#a* 'You (sing.) are going for it'.

All of the verbal forms given so far either have had an understood third person direct object or are intransitive. The direct object forms are:

Person	Singular	Dual	Plural
1 inc	—	##nga+li+nji	##nga+njtjurri+nji
1 exc	+n <i>ji</i>	##nga+l <i>ayi</i> +n <i>ji</i>	##nga+n <i>i</i> +n <i>ji</i>
2	+n <i>ta</i> ~ +n <i>ti</i> ~ +n <i>tu</i>	##n <i>jumpuli</i> +n <i>ji</i>	##n <i>jurri</i> +n <i>ji</i>
3	φ	##p <i>uli</i> +n <i>ji</i>	##t <i>jani</i> +n <i>ji</i>

The reflexive/reciprocal direct object form is +r*ni*+n*ji*. For all of these forms, n*ji* is n*j* before a vowel and the second singular form is n*t* before a vowel. The choice of n*ta*, n*ti*, n*tu* is covered in § 4.

The indirect object pronoun markers are:

Person	Singular	Dual	Plural
1 inc	—	##nga+li+ku	##nga+njtjurra+ku
1 exc	+t <i>ji</i>	##nga+l <i>ayi</i> +ku	##nga+n <i>a</i> +ku
2	+n <i>gu</i>	##n <i>jumpula</i> +ku	##n <i>jurra</i> +ku
3	+l <i>a</i> ~ +l <i>i</i> ~ +l <i>u</i>	##p <i>ula</i> +ku	##t <i>jana</i> +ku

The reflexive/reciprocal indirect object form is +r*na*+n*gu*. As for the other indirect object forms, t*ji* has a variant t*j* before a vowel and n*gu* has the variant n*g*. Similarly, the u of +k*u* deletes before a vowel and the a*s* of n*jumpula*, p*ula*, n*jtjurra*, and n*jurra* then become u.

The subject pronoun suffixes precede the object pronoun suffixes except that the first person singular precedes any second or third person pronoun and second person singular precedes the third person dual. For example, in subject-object order we have: . . . p*ulu*##nga+li+n*ji* . . . they (dual subject) —us (dual inclusive object). . . +l*i*##p*ula*+k*u* . . . we (dual inclusive subject) —to them (dual). For second person—first person, we have: . . . +n*ji*+n . . . thou—me, . . . +t*j*##u*mpulu* . . . you (dual) —to me, . . . t*ji*+n*p*##a . . . thou—for me. For second person singular—third person dual we have such pronoun suffix combinations as: . . . +n*gu*+p*ul*##a . . . they (dual) —for thee, and . . . +n*ta*##p*ulu* . . . they (dual)—thee.

An examination of the vowel and consonant alternations in the verbal paradigms shows that many of the suffixes have a large number of surface allomorphs. For the 'future' marker we find the following variations: l*apa*, l*ipa*, l*upa*, l*ama*, l*ima*, l*uma*, l*ipi*, l*upu*, l*imi*, l*umu*, l*api*, l*ami*, l*upi*, l*umi*, l*u*, r*linj*, and r*linjp*. These alternations are apparently rule governed and seem actually to be due to the interaction of a few fairly simple rules which we discuss in § 4.

The verbal morphology has also a number of derivational affixes. For example, the formative +p*i* of muwar+p*i* 'speak' is a verbaliser which is suffixed to the noun muwar 'language, talk'. The derivational affixes show alternations similar to those of the inflectional endings. Since the derivational endings show no peculiar alternations, we will not discuss them in this paper as our aim is to formulate phonological rules rather than to present the complete morphology of Nyangumarda.

3. Noun morphology

The noun suffixes of Nyangumarda are much fewer in number than the

verbal endings. Nouns are inflected, however, both for case and number. The overt cases are ergative, dative, allative, locative, and elative.

The ergative suffix is +l*u* after vowels and +t*ju* after consonants. The dative suffix is +k*u*. The allative suffix is +k*urnu* with cardinal directions and +k*arti* with other nouns. The locative suffix is +t*jirri* with cardinal directions, +t*ji* with other nouns that end in consonants, and +n*ga* ~ +n*gi* ~ +n*gu* with other nouns that end in a, i, u, respectively. The elative suffix is +n*gu* with cardinal directions and n*gurlu* with other nouns.

Other noun endings include the possessive form ##m*ili* ~ ##m*ila* and the 'resultive' suffix ##t*ja*. Both the possessive and resultive endings precede a case marker; the possessive ending precedes the resultive. The resultive ending has the meaning 'as a result of, due to, because of, from'.

The overt (productive) number suffixes are the dual and plural. The dual ending is +t*jirri* and the plural ending is +r*rangu*. The productive number suffixes follow case endings.

Among the lexical suffixes we note here ##t*artinj* 'proprietary', ##k*urlu* 'privative', and ##k*upanu* '-like'. Examples are yukurru##t*artinj* 'owning a dog', yukurru##k*urlu* 'lacking a dog, dogless', yukurru##k*upanu* 'dog-like'. There are also the emphatic suffixes ##r*la* ~ ##p*irla* and ##r*ti*, ~ ##p*irti* where the shorter alternants occur after vowels and the longer after consonants.

The following sentences illustrate the case endings (and some of the verbal endings). As Nyangumarda is an 'ergative language', there is no case ending for intransitive subjects.

- (1) yawarta ngalpi+n*ji*+r*ri*
'horse' 'enter'-actual-3rd subj.
'The horse is going/went inside'
- (2) t*jatil*+t*ju* yawarta yurpa+r*na*+r*ra*
'saddle'-erg. 'horse' 'rub'-actual-3rd subj.
'The saddle is rubbing/rubbed the horse'.
- (3) Paru+k*u* partarl kanjtji+rn##a larlka+k*u*
'spinifex'-dat. 'in vain' 'search'-actual-purposive 'dry'-dat.
'He searched in vain for some dry spinifex'.
- (4) Pala+karti ya+r*ra*+l*a* marngu+karti
'that (near)-allative 'go'-imp.-to him 'person'-allative
'Go to that person!'
- (5) Tjina warnku+n*gu* karir+ka+n*ja*+r*ra*
'foot' 'rock'-loc. 'slip'-verbaliser-past actual-3rd sing.
'His foot slipped on a rock.'
- (6) Tjimpu+n*gurlu* tama+r*ni*+y##a partanj+karrangu
'egg'-elative 'emerge'-actual-they(pl.)-purposive 'child'-pl.
'The young are emerging/emerged from the eggs.'
- (7) milja yurpa+rn+yurpa+r*na*+r*na*+r*ni*+n*ji*
'nose' 'rub'-actual-'rub'-actual-I-reflexive
'I keep on rubbing my nose.'

4. Phonological rules

In this section we establish underlying forms for the suffixes and stems given above in § 2 and § 3 and propose a set of phonological rules by which the varied surface forms can be derived.

The most important process in Nyangumarda phonology is Progressive Vowel Assimilation. Consider (a), (b), and (c).

(a)	(b)	(c)
<i>yurpa+lama+rna</i>	<i>wirri+limi+rni</i>	<i>kalku+lumu+rnu</i>
<i>yurpa+rna+rra</i>	<i>wirri+rni+rri</i>	<i>kalku+rnu+rru</i>
<i>yurpa+rna+ma+rna</i>	<i>wirri+rni+mi+rni</i>	<i>kalku+rnu+mu+rnu</i>
<i>ya+na+lpa+rna</i>	<i>wirri+rni+lpi+rni</i>	<i>kalku+rnu+lpu+rnu</i>
<i>ka+nja+lpa+rna</i>	<i>wirri+li+rni+li</i>	<i>kalku+lu+rnu+lu</i>
<i>nga+la+rna+la</i>		

In (a), (b), and (c) vowel assimilation starts with the last stem vowel and proceeds completely through each of the words. Consider, however, (d) to (i). The first inclusive dual suffix *+li* and the second person singular indirect object suffix *+ngu* are not affected by vowel assimilation. Moreover, neither are the vowels that precede *li* and *ngu*. The stem *kaku* means 'forget, not notice'; *wurra* means 'tell'.

(d)	(e)	(f)
<i>yurpa+lapa+li</i>	<i>wirri+lpa+li</i>	<i>kalku+lupa+li</i>
<i>yurpa+rna+li</i>	<i>wirri+rna+li</i>	<i>kalku+rna+li</i>
<i>yurpa+rna+ma+li</i>	<i>wirri+rni+ma+li</i>	<i>kalku+rnu+ma+li</i>
<i>ya+na+lpa+li</i>	<i>wirri+rni+lpa+li</i>	<i>kalku+rnu+lpa+li</i>
<i>ka+nja+lpa+li</i>	<i>wirri+rni+mi+lpa+li</i>	<i>kalku+rnu+mu+lpa+li</i>
<i>nga+rna+ma+li</i>		

(g)	(h)	(i)
<i>wurra+lama+ngu</i>	<i>wirri+lima+ngu</i>	<i>kaku+luma+ngu</i>
<i>wurra+rna+ngu</i>	<i>wirri+rna+ngu</i>	<i>kaku+rna+ngu</i>
<i>wurra+rna+ma+ngu</i>	<i>wirri+rni+ma+ngu</i>	<i>kaku+rnu+ma+ngu</i>
<i>wurra+rna+lpa+ngu</i>	<i>wirri+rni+lpa+ngu</i>	<i>kaku+rnu+lpa+ngu</i>
<i>wurra+rna+ma+lpa</i>	<i>wirri+rni+mi+lpa</i>	<i>kaku+rnu+mu+lpa</i>
<i>+ngu</i>	<i>+ngu</i>	<i>+ngu</i>

We take, then, the underlying forms of *li* and *ngu* to be */li/* and */ŋu/*, respectively. The underlying forms of the stems given in (a) to (i) are: */yurpa/*, */wirri/*, */kalku/*, */wurra/*, and */kaku/*. The underlying vowel of the affixes other than *li* and *ngu* given in (a) to (i) is simply *a*: */lapa/*, */rna/*, */rra/*, */ma/*, */na/*, */lpa/*, */nja/*, and */la/*. We will take up the alternation of *p* and *m* in *lapa* below and provide further analysis of certain of these affixes.

Our decision to treat *njumpulu*, *njurru*, etc., as external suffixes preceded by *#* stems partly from the fact that they do not block vowel assimilation. Compare *kalku+rnu+njumpulu* with *kalku+rna+li* and *wirri+rni+njumpulu* with *wirri+rna+li*.

Vowel assimilation never affects a vowel in a disyllabic stem. Hence, *wurra*, *mira* 'take from', *kaku*, *pirpa* 'shine', etc. In trisyllabic or longer stems,

however, vowel assimilation occurs. The underlying form */waljpila/* 'white man' (from Pidgin for 'white fellow') has the shape *waljpila* in isolation by vowel assimilation but is *waljpila+lu* in the ergative case and *waljpila+ku* in the dative case where assimilation is blocked because of the underlying *u* in the suffixes. The situation here is precisely like that in verbs—a 'buffer' vowel is left unassimilated if an underlying non-*a* vowel is encountered.

Vowel assimilation originates not only from a vowel in a stem but also from an affix vowel. The underlying shape of *pulu* ~ *pula* ~ *puli* is */pula/*. *Pula* occurs if *+ku* follows as in: *wurra+lama+rna+pula+ku* 'I'll tell them (dual)'. If *pula* is followed by *la*, however, assimilation is not blocked: *wurra+rna+pulu+lu*, */wurra+rna+pula+la/*, 'They (dual) tell/told him'.

Vowel assimilation has as its 'source' not only an *i* or *u* vowel but also a palatal(ized) consonant: *nj*, *tj*, *lj*, *y*. Consider (j) and (k):

(j)	(k)
<i>ngalpi+nji+lpi+rni</i>	<i>ka+ngi+nja+lu</i>
<i>yurpa+li+nji+li</i>	<i>yurpa+rna+ma+rra+ngarra</i>
<i>ka+ngi+nji+rni</i>	<i>wurra+lapi+ya+ngu</i>
<i>yurpa+rna+mi+nji+ngirri</i>	
<i>wurra+lapi+yi</i>	

From the forms in (k) we see that we have underlying */n^ya/*, */ya/*, and */ŋarra/*. The forms in (j) show two different processes—a regressive assimilation of *a* to *i* before a palatal, as in *ngalpi+nji+lpi+rni* (cf. *ngalpa+li+li* 'You and I had better not go in.'), and assimilation proceeding from a palatal consonant. The regressive assimilation is taken up below. The progressive vowel assimilation is just like the assimilation due to underlying *i* and *u* in that it is blocked if a non-*a* vowel follows in an internal affix. Compare *wurra+lapi+ya+ngu* with *wurra+lapi+yi* and *wurra+lapi+yi+li* 'They (pl.) will tell him'. Vowel assimilation due to a palatal consonant does not proceed, however, across consonants: *kulpu+rlinjpa+rna+ngu* 'It will return to itself/come back on itself (as line onto reel)'. We do not get *rlinjpa* because the *p* blocks vowel assimilation from the palatal *nj*. The *i* of *rlinjpa* does not cause assimilation either since it is due to regressive 'palatalization' of underlying *a*. The indirect object affix *#tjana+ku* shows that vowel assimilation does not proceed from *#C^y*.

We can formulate the rule of vowel assimilation as: Progressive Vowel Assimilation (PVA)

$$\left[\begin{array}{c} +\text{syllabic} \\ -\text{high} \end{array} \right] \rightarrow \left[\begin{array}{c} +\text{high} \\ \alpha \text{ front} \\ -\alpha \text{ labial} \end{array} \right] / \left[\begin{array}{c} +\text{high} \\ \alpha \text{ front} \\ -\alpha \text{ labial} \end{array} \right] C_0^2 \text{---} C_0^2 \sim \left[\begin{array}{c} +\text{high} \\ \beta \text{ front} \\ -\beta \text{ labial} \end{array} \right]$$

where (1) (the leftmost) $C_0^2 = \phi$ if $\left[\begin{array}{c} +\text{high} \\ \alpha \text{ front} \\ -\alpha \text{ labial} \end{array} \right]$ is $[-\text{voc}]$, and (2) $\left[\begin{array}{c} +\text{syll} \\ -\text{high} \end{array} \right]$

is neither the second vowel of a word nor in the environment $\#C\text{---}$. The notation C_0^2 in the statement of the rule means that from zero to two consonants may occur in each of the positions indicated. The segments which cause underlying *a* to assimilate are: *i*, *u*, *y*, *tj*, *lj*, *nj*, and *w*. *Lj* does not occur in the surface forms of affixes and *w* does not occur in the underlying forms of

affixes. The high consonants *k* and *ng* agree in frontness and labiality and neither cause nor block assimilation.

By convention, the environment of vowel assimilation cannot contain #, since it is not mentioned in the rule. The rule of progressive vowel assimilation applies iteratively from left to right. Iteration of rules in any language is guaranteed because any rule iterates if it can; that is all items in an input string are scanned (or examined) for possible rule application. The direction of scansion is predictable on the bases of the form of a rule and its effect. In the present case scansion is left to right because Nyangumarda vowel assimilation is self-feeding (that is creates outputs compatible with the structural description) and the environment is lefthanded (that is the obligatory part of the environment is to the left of the underline).

Hale (1968:177-78) suggests that the vowel which assimilates is underlying *i*, rather than the *a* which is proposed here. The principal difficulties we find with his suggestion are:

(1) A process whereby $i \rightarrow a/aC$ — seems highly unnatural. The vowel *a* is not known to have any particular assimilatory effect on either vowels or consonants. On the other hand, in many languages *a* is often subject to rules of fronting, backing, and/or raising from the assimilatory affects of both vowels and consonants.

(2) The statement of a dissimilation rule is made necessary if, for example, what we take to be $[pula]$ and $[n^yumpula]$ are assumed to be $[puli]$ and $[n^yumpuli]$. For the indirect object pronouns such putative forms as third person dual $[puli+ku]$ and second person dual $[n^yumpuli+ku]$ will have to undergo a (general) dissimilation rule $i \rightarrow a/$ —*Cu* to give surface $pula+ku$ and $njumpula+ku$. However, the first person dual inclusive form $nga+li+ku$ and the first dual exclusive form $nga+layi+ku$ will have to be exceptions to the dissimilation rule or else we will be forced to posit a morphologically irregular # before *ku* for both these forms. Similar difficulties arise with a number of other forms in the paradigms given in § 2. In contrast, taking the assimilatory vowel to be *a* allows us to posit underlying dual indirect object forms: $[ya+li+ku]$, $[ya+layi+ku]$, $[n^yumpula+ku]$, and $[pula+ku]$. These forms are not affected by progressive vowel assimilation, since they do not satisfy its structural description, and have surface forms identical to their underlying forms (low-level phonetic rules aside). In brief, our second objection to Hale's suggestion is that positing underlying *i* as the vowel which undergoes progressive assimilation seems to us to complicate both the statement of the morphology and the phonological rules of the language.

As we have already noted, the forms in (j) are evidence for a rule of regressive assimilation. Underlying *a* is fronted and raised to *i* when it is followed by a high front consonant. The rule can be formulated as:

Regressive Vowel Fronting (RVF)

$$\left[\begin{array}{c} \text{V} \\ -\text{high} \end{array} \right] \rightarrow \left[\begin{array}{c} +\text{high} \\ +\text{front} \end{array} \right] / \text{---} \left[\begin{array}{c} +\text{high} \\ +\text{front} \end{array} \right], \text{ where } \left[\begin{array}{c} \text{V} \\ -\text{high} \end{array} \right]$$

is neither the second vowel of a word nor in the environment #C—.

Regressive Vowel Fronting (RVF) must follow Progressive Vowel Assimilation (PVA) and PVA and RVF must be extrinsically ordered. Consider the

plural unrealized actual forms of *kalku*: $kalku+rnu+mi+nji$, $kalku+rnu+mi+yirni$, $kalku+rnu+mi+njuru$, $kalku+rnu+mi+yi$. Both PVA and RVF apply to these forms. If RVF precedes PVA we derive incorrect forms such as $*kalku+rna+mi+nji$, $*kalku+rna+mi+yi$, etc. A sample derivation is:

$$\begin{array}{l} /kalku+rna+ma+n^ya/ \\ kalku+rna+mi+n^ya \quad \text{RVF} \\ *kalku+rna+mi+n^yi \quad \text{PVA} \end{array}$$

Clearly, if RVF precedes PVA, the application of RVF establishes an *i*-vowel which blocks the application of PVA to the vowel immediately before this *i*-vowel. If PVA precedes RVF, however, no such difficulty is encountered:

$$\begin{array}{l} /kalku+rnu+ma+n^ya/ \\ \text{PVA } kalku+rna+ma+n^ya \\ \text{RVF } kalku+rnu+mi+n^yi \end{array}$$

Notice that PVA and RVF cannot apply simultaneously, for PVA is an iterative rule. Therefore, PVA and RVF are extrinsically ordered, and PVA applies before RVF.

If we take the formative *layi* to have *layi* as its underlying form, we will be unable to account for the appearance of *i* before *layi* in such forms as $kalku+ni+layi$, $yurpa+rni+layi$, $yurpa+lapi+layi$, and $kalku+lupi+layi$. Furthermore, we will be unable to account for the surface *a* of *layi* itself since we would predict *i* as a result of applying RVF. However, if we take *layi* to have the underlying form $[l^yi]$, the *layi* forms can be regularized. We need a rule which derives *layi* from $[l^yi]$. The rule is:

$$\begin{array}{l} \text{Epenthesis (EP)} \\ l^y \rightarrow lay/+ \text{---} \end{array}$$

That is, the insertion of an epenthetic vowel produces a sequence *lay* from underlying $[l^y]$ in a suffix. EP applies after RVF, since we have surface *a*, not *i* before *y*. Sequences such as $lapi+layi$ and $rni+layi$ are derived as follows:

$$\begin{array}{ll} /lapa+l^yi/ & /rna+l^yi/ \\ \text{RVF } lapi+l^yi & rni+l^yi \\ \text{EP } lapi+layi & rni+layi \end{array}$$

Forms such as $yurpa+la\#layi+li$ and $kalku+lu\#layi+li$ indicate that $[l^yi]$ is suffixed externally in Conjugation II negative imperative paradigms. In these paradigms *layi* does not block the application of PVA to a preceding vowel ($kalku+lu\#layi+li$) and does not front a preceding vowel to *i* ($yurpa+la\#layi+li$).

If we do not take *layi* to be underlying $[l^yi]$, but just underlying $[layi]$, then we are committed to rules such as (a) $V \rightarrow i/[+\text{labial}] \text{---} +layi$ and (b) $V \rightarrow i/n \text{---} +layi$. 'Rules' (a) and (b) would account for such sequences as $lapi+layi$, $lpi+layi$, $mi+layi$ and $rni+layi$. But neither 'rule' (a) nor 'rule' (b) has any intuitive appeal whatsoever as a reasonable and possible phono-

logical process. The 'brute force' (concrete?) solution that 'rules' (a) and (b) represent has therefore been rejected in favour of the more abstract solution with underlying /Pʲi/ and a rule of vowel epenthesis.

Keeping the two rules PVA and RVF in mind let us examine the Nyangumarda imperative and negative imperative forms. For the first conjugation verbs we find *yi* in imperative forms; second, third, and fifth conjugation verbs have /*la*/; conjugation III has *wa*; conjugation VI has *rra*. If we now compare the full range of verbal forms within a given conjugation we see that each conjugation is characterised by a conjugation marker. Conjugation I forms typically contain *y*; conjugation II forms have *l* or *r*; conjugation III forms have *l*; conjugation IV forms contain *ng* or *y*; conjugation V forms have *l* or *r*; and conjugation VI forms have *n*. The conjugation VI imperative forms suggest that the imperative marker is underlying /*ra*/ and that the conjugation marker *n* has become *r* before the *r* of the imperative marker. If so, then we can consider the simple imperative forms for all conjugations to have the underlying structure *Verb + Conjugation Marker + ra* and the negative imperative forms to have the underlying structure *Verb + Conjugation Marker + ra + Person Marker + la*. The formative /*la*/ is the negative imperative marker; there is no third person singular ending in the paradigm. The underlying forms for the imperative are, then:

Conjugation	Singular	Dual	Plural
I	<i>ngalpa+y+ra</i>	<i>ngalpa+y+ra#pula</i>	<i>ngalpa+y+ra+ya</i>
II	<i>yurpa+l+ra</i> <i>wirri+l+ra</i> <i>kalku+l+ra</i>	<i>yurpa+l+ra#pula</i> <i>wirri+l+ra#pula</i> <i>kalku+l+ra#pula</i>	<i>yurpa+l+ra+ya</i> <i>wirri+l+ra+ya</i> <i>kalku+l+ra+ya</i>
III	<i>muwar+pi+l+ra</i>	<i>muwar+pi+l+ra#pula</i>	<i>muwar+pi+l+ra+ya</i>
IV	<i>ka+ng+ra</i>	<i>ka+ng+ra#pula</i>	<i>ka+ng+ra+ya</i>
V	<i>nga+l+ra</i>	<i>nga+l+ra#pula</i>	<i>nga+l+ra+ya</i>
VI	<i>ya+n+ra</i>	<i>ya+n+ra#pula</i>	<i>ya+n+ra+ya</i>

To derive correct surface forms we require the following phonological rules:

- (1) *ra*-deletion
 $ra \rightarrow \phi / y + ___ (\#) [y, l, P]$
- (2) *y*-deletion
 $y \rightarrow \phi / ___ (\#) [y, l, P]$
- (3) *a*-raising
 $a \rightarrow i / [m, p] ___ + y + C$
- (4) *n*-assimilation
 $n \rightarrow r / ___ + r$
- (5) *r*-deletion
 $r \rightarrow \phi / [y, l] (\#) ___$
- (6) *w*-formation
 $\eta + r \rightarrow + w$

The derivations are:

- (1) /*ŋalpa+y+ra*/ /*ŋalpa+y+ra#pula*/ /*ŋalpa+y+ra+ya*/

- | | | | |
|-------|--------------------------|---|---|
| (1) | — | — | <i>ŋalpa+y+ya</i> |
| (2) | — | — | <i>ŋalpa+ya</i> |
| (3) | <i>ŋalpi+y+ra</i> | <i>ŋalpi+y+ra#pula</i> | — |
| (5) | <i>ŋalpi+y+a</i> | <i>ŋalpi+y+a#pula</i> | — |
| PVA | <i>ŋalpi+y+i</i> | <i>ŋalpi+y+i#pulu</i> | <i>ŋalpa+yi</i> |
| (II) | / <i>yurpa+l+ra</i> / | / <i>yurpa+l+ra#pula</i> / | / <i>yurpa+l+ra+ya</i> / |
| (5) | <i>yurpa+l+a</i> | <i>yurpa+l+a#pula</i> | <i>yurpa+l+a+ya</i> |
| PVA | — | <i>yurpa+l+a#pulu</i> | <i>yurpa+l+a+yi</i> |
| (5) | / <i>wirri+l+ra</i> / | / <i>wirri+l+ra#pula</i> / | / <i>wirri+l+ra+ya</i> / |
| (5) | <i>wirri+l+a</i> | <i>wirri+l+a#pula</i> | <i>wirri+l+a+ya</i> |
| PVA | <i>wirri+l+i</i> | <i>wirri+l+i#pulu</i> | <i>wirri+l+a+yi</i> |
| (5) | / <i>kalku+l+ra</i> / | / <i>kalku+l+ra#pula</i> / | / <i>kalku+l+ra+ya</i> / |
| (5) | <i>kalku+l+a</i> | <i>kalku+l+a#pula</i> | <i>kalku+l+a+ya</i> |
| PVA | <i>kalku+l+u</i> | <i>kalku+l+u#pulu</i> | <i>kalku+l+a+yi</i> |
| (III) | / <i>muwar+pi+l+ra</i> / | / <i>muwar+pi+l+ra</i>
<i>pula</i> / | / <i>muwar+pi+l+ra</i>
+ <i>ya</i> / |
| (5) | <i>muwar+pi+l+a</i> | <i>muwar+pi+l+a</i>
<i>pula</i> | <i>muwar+pi+l+a+ya</i> |
| PVA | <i>muwar+pi+l+i</i> | <i>muwar+pi+l+i</i>
<i>pulu</i> | <i>muwar+pi+l+a+yi</i> |
| (IV) | / <i>ka+ŋ+ra</i> / | / <i>ka+ŋ+ra#pula</i> / | / <i>ka+ŋ+ra+ya</i> / |
| (6) | <i>ka+wa</i> | <i>ka+wa#pula</i> | <i>ka+wa+ya</i> |
| PVA | — | <i>ka+wa#pulu</i> | <i>ka+wa+yi</i> |
| (V) | / <i>ŋa+l+ra</i> / | / <i>ŋa+l+ra#pula</i> / | / <i>ŋa+l+ra+ya</i> / |
| (5) | <i>ŋa+l+a</i> | <i>ŋa+l+a#pula</i> | <i>ŋa+l+ya</i> |
| PVA | — | <i>ŋa+l+a#pulu</i> | <i>ŋa+l+yi</i> |
| (VI) | / <i>ya+n+ra</i> / | / <i>ya+n+ra#pula</i> / | / <i>ya+n+ra+ya</i> / |
| (4) | <i>ya+r+ra</i> | <i>ya+r+ra#pula</i> | <i>ya+r+ra+ya</i> |
| PVA | — | <i>ya+r+ra#pulu</i> | <i>ya+r+ra+yi</i> |

We would expect RVF to apply to Conjugation II forms such as *yurpa+l+a+yi*, *wirri+l+a+yi*, *kalku+l+a+yi*, and *muwar+pi+l+a+yi* to derive the sequence *i+yi*; but it does not. There are a number of alternative solutions to this problem. Among these are (a) the imperative forms are subject to a redundancy rule and are [-RVF]; (b) the formative *ra* is external in the plural and the underlying pattern is *#ra#ya*. However, our understanding of the morphology of the imperative paradigms may simply be faulty and/or we may have incorrectly formulated RVF (or other rules). At present, we can merely note the somewhat unsatisfactory status of our knowledge by exempting these forms from RVF as in (a) or by positing external junctures as in (b).

Except then for the presence of additional + boundaries in some of these forms (due to a more complete analysis of certain formatives) and the failure of RVF to apply to Conjugation II plural forms, the rules presented here derive the imperative forms given in section 2.

The derivation of the Conjugation I negative imperative forms is as follows:

	Singular	Dual	Plural
1 inc		$/\eta\alpha\text{lp}\alpha+y+ra+li$ +la/	$/\eta\alpha\text{lp}\alpha+y+ra+n^y\alpha$ +la/
(1)		$\eta\alpha\text{lp}\alpha+y+li+la$	—
(2)		$\eta\alpha\text{lp}\alpha+li+la$	—
(3)		—	$\eta\alpha\text{lp}\alpha+y+ra+n^y\alpha+la$
(5)		—	$\eta\alpha\text{lp}\alpha+y+a+n^y\alpha+la$
PVA		$\eta\alpha\text{lp}\alpha+li+li$	$\eta\alpha\text{lp}\alpha+y+a+n^y\alpha+li$
RVF		—	$\eta\alpha\text{lp}\alpha+y+i+n^y\alpha+li$
1 exc	$/\eta\alpha\text{lp}\alpha+y+ra+rna$ +la/	$/\eta\alpha\text{lp}\alpha+y+ra+l^y\alpha$ +la/	$/\eta\alpha\text{lp}\alpha+y+ra+yirna$ +la/
(1)	—	$\eta\alpha\text{lp}\alpha+y+l^y\alpha+la$	$\eta\alpha\text{lp}\alpha+y+yirna+la$
(2)	—	$\eta\alpha\text{lp}\alpha+l^y\alpha+la$	$\eta\alpha\text{lp}\alpha+yirna+la$
(3)	$\eta\alpha\text{lp}\alpha+y+ra+rna+la$	—	—
(5)	$\eta\alpha\text{lp}\alpha+y+a+rna+la$	—	—
PVA	$\eta\alpha\text{lp}\alpha+y+i+rni+li$	$\eta\alpha\text{lp}\alpha+l^y\alpha+li$	$\eta\alpha\text{lp}\alpha+yirni+li$
EP	—	$\eta\alpha\text{lp}\alpha+l\alpha y\alpha+li$	—
2nd person			
	$/\eta\alpha\text{lp}\alpha+y+ra+n\alpha$ +la/	$/\eta\alpha\text{lp}\alpha+y+ra\#\#n^y\text{um-}$ $p\alpha\text{la}+la/$	$/\eta\alpha\text{lp}\alpha+y+ra\#\#n^y\text{urra}$ +la/
(3)	$\eta\alpha\text{lp}\alpha+y+ra+n\alpha$ +la	$\eta\alpha\text{lp}\alpha+y+ra\#\#n^y\text{um-}$ $p\alpha\text{la}+la$	$\eta\alpha\text{lp}\alpha+y+ra\#\#n^y\text{urra}$ +la
(5)	$\eta\alpha\text{lp}\alpha+y+a+n\alpha+la$	$\eta\alpha\text{lp}\alpha+y+a\#\#n^y\text{um-}$ $p\alpha\text{la}+la$	$\eta\alpha\text{lp}\alpha+y+a\#\#n^y\text{urra}$ +la
PVA	$\eta\alpha\text{lp}\alpha+y+i+n\pi\alpha+li$	$\eta\alpha\text{lp}\alpha+y+i\#\#n^y\text{um-}$ $p\alpha\text{lu}+lu$	$\eta\alpha\text{lp}\alpha+y+i\#\#n^y\text{urru}$ +lu
3rd person			
	$/\eta\alpha\text{lp}\alpha+y+ra+la/$	$/\eta\alpha\text{lp}\alpha+y+ra\#\#p\alpha\text{la}$ +la/	$/\eta\alpha\text{lp}\alpha+y+ra+y\alpha+la/$
(1)	—	—	$\eta\alpha\text{lp}\alpha+y+y\alpha+la$
(2)	—	—	$\eta\alpha\text{lp}\alpha+y\alpha+la$
(3)	$\eta\alpha\text{lp}\alpha+y+ra+la$	$\eta\alpha\text{lp}\alpha+y+ra\#\#p\alpha\text{la}$ +la	—
(5)	$\eta\alpha\text{lp}\alpha+y+a+la$	$\eta\alpha\text{lp}\alpha+y+a\#\#p\alpha\text{la}$ +la	—
PVA	$\eta\alpha\text{lp}\alpha+y+i+li$	$\eta\alpha\text{lp}\alpha+y+i\#\#p\alpha\text{lu}$ +lu	$\eta\alpha\text{lp}\alpha+y\alpha+li$

The alternative singular negative imperative forms of *yurpa*, *ka*, *nga*, and *ya*, which have the vowel *a* throughout the endings, are the forms we would expect on the basis of the rules we have suggested and on the basis of the

canonical underlying forms of the structure *Verb+Conjugation Marker+ra+Person Marker+la*. The singular negative imperative forms with *i* as the vowel of the endings are anomalous and indicate alternative basic affix shapes. The forms *yurpa+li+rni+li*, *yurpa+li+npi+li* and *yurpa+li+li* seem to contain $/ri/$ instead of $/ra/$. If so, then PVA will assimilate all following *as* to *i*. The forms *ka+wa+rni+li*, *ka+wa+npi+li*, *ka+wa+li* and the parallel forms of *nga* and *ya* require alternative person marker forms in *i* rather than *a*. In any event, these forms would seem to be due to paradigm pressure from Conjugation I and III verbs. Aside from these anomalous singular forms, all the other negative imperative forms are regularly derived by the rules (1) to (6), PVA, RVF, and EP.

Before we can account for the expective mood paradigm forms we need to consider a number of additional phonological and morphological rules.

For the second person forms we need to account for the alternation of *n* and *n\alpha* in the singular pronoun marker. The form *n\alpha* occurs in the negative imperative paradigm while *n* occurs in the expective mood paradigms. The form *n\alpha* occurs before a following internal consonant initial suffix. Before the purposive suffix, which has the surface shape $\#\#a$, we find the form *n\pi*. We shall show below that this manifestation of the second singular pronoun is also basically just *n\alpha*. A similar alternation is found in the remote actual paradigms where *l* alternates with what is basically *l\alpha*. The full form *l\alpha* occurs before the internal consonants *l*, *r*, *n* and the form *l* occurs before $\#\#C$ and word finally (that is before $\#\#\#$). Note also that the third singular (and dual) expective affix *rlinj* has an alternate form *rlinj\pi* before $\#\#a$. This affix seems to be underlying $/rlan^y\alpha/$ with the surface *i* due to RVF.

If we take the longer form of these affixes to be basic, then a rule which deletes *\alpha* before $\#\#C$ and $\#\#\#$ is all that is required. The environment $[C, \#\#]$ can be considered equivalent to 'not a vowel', that is to $\sim V$. The rule, then, is:

$$\begin{aligned} & Pa\text{-deletion (PAD)} \\ & \alpha \rightarrow \phi/[l, n, n^y] \text{---} \#\#[\sim V] \end{aligned}$$

We observed above that there is no third person singular ending in the negative imperative mood, nor is there a third singular ending in the complex expective mood. However, in the simple expective, simple actual, and unrealized actual forms a third person singular marker $/+rra/$ occurs and in third singular remote actual forms a $/\#\#\eta\alpha/$ suffix occurs. In addition, no third person singular marker is present in purposive forms. All of this suggests a morphological rule of the following sort: The third person singular affix is realised as $/\#\#\eta\alpha/$ if $/l\alpha/$ precedes and is realised as $/+rra/$ elsewhere, unless another affix follows or *rlanj\pi* precedes.

The simple expective paradigms are generally characterised by the formative *ku*, which appears just after the conjugation marker. But the Conjugation I paradigm has only *u* and also lacks an overt conjugation marker. This suggests to us that an underlying sequence $y+ku$ is reduced to *u* and that there is a phonological rule (or rules) to the effect that $y+k \rightarrow \phi/+$ —*u*. Let us term this rule *y+k-deletion* (YKD).

The simple expective third plural paradigm has *wi* instead of the usual *y\alpha* formative. This seems to be due to a phonological rule of 'glide adjustment' (GA) whereby $u+y\alpha$ becomes $u+wi$.

Glide Adjustment (GA)

$$y \rightarrow w/u + \text{---}i$$

The rule GA must follow PVA.

Lastly, we need to introduce the general rule of vowel elision (VE). When two vowels are adjacent, the first is deleted.

Vowel elision (VE)

$$V \rightarrow \phi / \text{---} (\#) V$$

We are now in a position to derive the simple expective mood verb forms. The Conjugation I simple expective singular forms and the third person plural form are derived as follows:

	<i>/ŋalpa+y+ku+rna/</i>	<i>/ŋalpa+y+ku+npa/</i>
YKD	<i>ŋalpa+u+rna</i>	<i>ŋalpa+u+npa</i>
VE	<i>ŋalp+u+rna</i>	<i>ŋalp+u+npa</i>
PAD	<i>_____</i>	<i>ŋalpu+n</i>
PVA	<i>ŋalp+u+rnu</i>	<i>_____</i>
	<i>/ŋalpa+y+ku+rna/</i>	<i>/ŋalpa+y+ku+ya/</i>
YKD	<i>ŋalpa+u+rna</i>	<i>ŋalpa+u+ya</i>
VE	<i>ŋalp+u+rna</i>	<i>ŋalp+u+ya</i>
PVA	<i>ŋalp+u+rnu</i>	<i>ŋalp+u+yi</i>
GA	<i>_____</i>	<i>ŋalp+u+wi</i>

The remaining Conjugation I simple expective forms are derived in an entirely parallel fashion. The forms for the other conjugations are also quite straightforwardly derived from base structures of the shape *V+Conjugation Marker+ku+Person Marker*.

The complex expective mood paradigm can be considered to be an elaboration of the simple expective paradigm. A general characteristic of the complex expective mood forms is the presence of the 'future' formative *lapa* between *ku* and the *Person Marker*. The third singular and third dual forms have, however, the form *rlij* for *lapa*. Whatever its historical origins may be, it seems that */rlan^ypa/* is presently a morphologically conditioned variant of *lapa* and, hence, must be specified by a morphological rule.

The underlying shape *lapa* is itself subject to a rule of nasal assimilation.

Nasal Assimilation (NA)

$$p \rightarrow m / +la \text{---} a + (C) [+nasal]$$

We thus have *ngalp+u+lumu+rnu* beside *ngalp+u+lupa+li*.

The underlying shape *lapa* is subject to (a suitably revised version of) *pa*-deletion. Let us term the revised rule *PAD'*.

PAD'

$$pa \rightarrow \phi / [l, n^y, n](a) \text{---} \# [\sim V]$$

The complex expective forms are subject also to a rule of *l+ku* deletion. In particular, *l+ku* is deleted when it stands before the formative *lapa*.

l+ku deletion (LKUD)

$$l+ku \rightarrow \phi / \text{---} +lapa,$$

where *ku* is not the second syllable of a word.

The condition on the application of LKUD insures that we do not delete the *l+ku* of the *nga+l+ku* paradigm. The LKUD rule must follow *PAD'*, since LKUD does not apply if *lapa* is shortened to *la*.

We are now in a position to derive the forms of the complex expective mood paradigms. Sample derivations from Conjugation I are:

	<i>/ŋalpa+y+ku+lapa+rna/</i>	<i>/ŋalpa+y+ku+lapa#n^yurra/</i>
YKD	<i>ŋalpa+u+lapa+rna</i>	<i>ŋalpa+u+lapa#n^yurra</i>
VE	<i>ŋalp+u+lapa+rna</i>	<i>ŋalp+u+lapa#n^yurra</i>
<i>PAD'</i>	<i>_____</i>	<i>ŋalp+u+la#n^yurra</i>
NA	<i>ŋalp+u+lama+rna</i>	<i>_____</i>
PVA	<i>ŋalp+u+lumu+rnu</i>	<i>ŋalp+u+lu#n^yurru</i>

Sample derivations from Conjugation II are:

	<i>/wirri+l+ku+lapa+npa/</i>	<i>/yurpa+l+ku+lapa+n^ya/</i>
<i>PAD'</i>	<i>wirri+l+ku+lapa+n</i>	<i>_____</i>
LKUD	<i>wirri+lapa+n</i>	<i>yurpa+lapa+nja</i>
NA	<i>wirri+lama+n</i>	<i>yurpa+lama+nja</i>
PVA	<i>wirri+limi+n</i>	<i>yurpa+lama+nji</i>
RVF	<i>_____</i>	<i>yurpa+lami+nji</i>

The simple actual mood paradigms have the general structure *Verb+Conjugation Marker+na+Person Marker*. For Conjugation I verbs a rule of metathesis applies to the Conjugation marker and the *na* actual mood formative.

y-metathesis (YMET)

$$y+n \rightarrow n^y$$

The *y*-metathesis rule must follow *a*-raising (rule 3).

For Conjugation II and V verbs the conjugation marker is *r*, rather than *l*, in the actual mood forms. Conjugation IV forms have *y* instead of *ng* as the conjugation marker. Conjugation III verbs seem to require a rule which deletes the expected *l* conjugation marker before *n*, while Conjugation VI verbs require that the expected *n* conjugation marker be deleted. A rule of alveolar deletion can be framed quite simply.

Alveolar-deletion (ALV)

$$[n, l] \rightarrow \phi / \text{---} +n$$

Derivations for simple actual mood forms can now be given.

	<i>/ŋalpa+y+na+rna/</i>	<i>/ka+y+na+rna/</i>
(3)	<i>ŋalpi+y+na+rna</i>	<i>_____</i>
YMET	<i>ŋalpi+n^ya+rna</i>	<i>ka+n^ya+rna</i>

PVA $\eta alpi + nji + rni$
 $[muwar + pi + l + na + rna]$ $[ya + n + na + rna]$

ALV $muwar + pi + na + rna$ $ya + na + rna$

PVA $muwar + pi + ni + rni$

PVA does not apply to $ka + nja + rna$ since the vowel *a* of *nja* is only the second vowel of the word and is, hence, too 'early' to be subject to PVA.

The alternative simple actual forms $ngalpi \# njumpulu$ and $ngalpi \# njurru$ beside the full forms $ngalpi + nji \# njumpulu$ and $ngalpi + nji \# njurru$ suggest a truncation rule.

Truncation

$nji \rightarrow \phi / \text{---} \# nji$

Truncation is optional for actual forms but is apparently obligatory for imperfect forms.

The distinctive present actual forms of Conjugation IV, V, and VI verbs require that we postulate some additional formative between the conjugation marker and the *na* actual mood marker. This formative is apparently *niy*. We suggest, then, that the present actual forms of *ka*, *nga*, and *ya* have the basic structures $ka + \eta + niy + na + \text{Person Marker}$, $nga + r + niy + na + \text{Person Marker}$ and $ya + n + niy + na + \text{Person Marker}$, respectively. The rule ALV already accounts for the simplification of the double *n* of the *ya* forms. We will need only a rule, say rule (7), which simplifies the cluster $[\eta + n]$ to $[\eta]$ to account for the forms of the present actual *ka* paradigm. This rule is quite reasonable as the language totally lacks *ngn* clusters. Rule (7) is: $n \rightarrow \phi / \eta + \text{---}$. Sample derivations for present actual forms are as follows:

	$[ka + \eta + niy + na$ $+ rra]$	$[nga + r + niy + na$ $+ rra]$	$[ya + n + niy + na$ $+ rra]$
(7)	$ka + \eta + iy + na + rra$	---	---
ALV	---	---	$ya + niy + na + rra$
YMET	$ka + \eta + i + n^y a + rra$	$nga + r + ni + n^y a + rra$	$ya + ni + n^y a + rra$
PVA	$ka + \eta + i + n^y i + rri$	$nga + r + ni + n^y i + rri$	$ya + ni + n^y i + rri$

The unrealised actual paradigms show a formative *ma* added after the *na* actual marker. The Conjugation I paradigm requires a rule (similar to LKUD) which deletes $y + na$. We can formulate this rule as follows.

$y + na$ deletion (YNAD)

$y + na \rightarrow \phi / \text{---} + ma$

A sample derivation is:

(3) $[\eta alpa + y + na + ma + rna]$
 $\eta alpi + y + na + ma + rna$
 YNAD $\eta alpi + ma + rna$
 PVA $\eta alpi + mi + rni$

The unrealised actual paradigms for Conjugations II and III require no additional phonological rules. Conjugations IV, V, and VI have a morpho-

logical irregularity; $[ni]$ is an alternative formative to $[na]$. If $[ni]$ is chosen, we have derivations such as:

(7) $[ka + \eta + ni + ma + rna]$ $[ya + n + ni + ma + ma]$
 $ka + \eta + i + ma + rna$
 ALV --- $ya + ni + ma + rna$
 PVA $ka + \eta + i + mi + rni$ $ya + ni + mi + rni$

The remote actual paradigms show *lpa* for the *ma* of the corresponding unrealised actual forms. The third person singular ending is $\#nga$. A sample derivation is:

(3) $[\eta alpa + y + na + lpa + \# \eta a]$
 $\eta alpi + y + na + lpa + \# \eta a$
 YMET $\eta alpi + n^y a + lpa + \# \eta a$
 PAD' $\eta alpi + n^y a + l + \# \eta a$
 PVA $\eta alpi + n^y i + l + \# \eta a$

The remote actual forms of Conjugation I can also occur without surface *nji*. That is, we have the optional rule: $y + na \rightarrow \phi / \text{---} + lpa$.

All of the remote actual forms are derived by the rules already considered and need no special comment.

The forms of the unrealised remote actual forms are also immediately derived by the rules already introduced. Note that forms such as $ngalpi + mi + lpi + rni$, from underlying $[\eta alpa + y + na + ma + lpa + rna]$, require the application of YNAD.

The imperfect actual mood paradigms have underlying forms of the structure *Verb + Conjugation Marker + ni + kin^ya + Person Marker*. To derive Conjugation I forms we need a rule which deletes $y + ni$.

$y + ni$ deletion (YNID)

$y + ni \rightarrow \phi / \text{---} + kin^y a$

A sample derivation for this paradigm is:

(3) $[\eta alpa + y + ni + kin^y a + rna]$
 $\eta alpi + y + ni + kin^y a + rna$
 YNID $\eta alpi + kin^y a + rna$
 PVA $\eta alpi + kin^y i + rni$

The desiderative aspect paradigms show the formative *ka* before the person markers. The minor conjugations show the addition of $[niy]$, as in the present actual paradigms, directly after the conjugation marker. The desiderative paradigms are all derived with the rules we have already considered. A sample derivation is:

(7) $[ka + \eta + niy + na + ka + rna]$
 $ka + \eta + iy + na + ka + rna$
 YMET $ka + \eta + i + n^y a + ka + rna$
 PVA $ka + \eta + i + n^y i + ki + rni$

The remote future paradigms show the formative $[\eta ku]$. A sample derivation is:

- (3) $|n\alpha lpa + y + na + \eta ku + lapa + rna|$
 $\eta alpi + y + na + \eta ku + lapa + rna$
 YMET $\eta alpi + n^y a + \eta ku + lapa + rna$
 NA $\eta alpi + n^y a + \eta ku + lama + rna$
 PVA $\eta alpi + n^y a + \eta ku + lumu + rnu$

The purposive forms have the overt marker #a. The applicability of PAD' before #a, as in $n\alpha lpi + \eta ji + lp \# a$, and the general lack of vowel initial suffixes causes us to believe that the purposive marker begins with a consonant in its underlying form. The appearance of a w in some third singular forms leads us to the conclusion that the underlying form of the purposive is #ra. We require two phonological rules.

Rule (8)

$$\phi \rightarrow w/kV \text{---} \#ra$$

Rule (8) must be ordered before YKD.

Rule (9)

$$r \rightarrow \phi/\# \text{---} a$$

Rule (9) must be ordered before VE and before PAD'.

Sample purposive derivations are:

- (8) $|n\alpha lpa + y + ku \# ra|$
 $\eta alpa + y + kuw \# ra$
 YKD $\eta alpa + uw \# ra$
 (9) $\eta alpa + uw \# a$
 VE $\eta alp + uw \# a$

- $|n\alpha lpa + y + na + n\alpha \# ra|$
 (3) $\eta alpi + y + na + n\alpha \# ra$
 YMET $\eta alpi + n^y a + n\alpha \# ra$
 (9) $\eta alpi + n^y a + n\alpha \# a$
 PAD' —
 VE $\eta alpi + n^y a + n\alpha \# a$
 PVA $\eta alpi + n^y i + n\alpha \# a$

- $|n\alpha lpi + y + na + ka \# ra|$
 (8) $\eta alpi + y + na + kaw \# ra$
 (3) $\eta alpi + y + na + kaw \# ra$
 YMET $\eta alpi + n^y a + kaw \# ra$
 (9) $\eta alpi + n^y a + kaw \# a$
 PVA $\eta alpi + n^y i + kaw \# a$

The derivation of all the remaining verb forms given in § 2 and of the noun forms discussed in § 3 do not require any rules other than those already introduced. In fact, the very extensive array of alternations found in Nyangumarda seem to us to be adequately accounted for by the rules we have given in this paper. However, our sketch of Nyangumarda phonology is incomplete, since we have not taken up the full range of forms which involve the purposive suffix and the direct and indirect object pronoun affixes.

Further morphological analysis will be required before we can attempt a more complete phonology. We feel that additional data will undoubtedly show that some of the rules given here are not correct, either *in toto* or in detail, but we believe that by and large they do provide a reasonably natural description of Nyangumarda phonology.

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4. The adjoined relative clause in Australia

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Introduction

In a large number of Australian languages, the principal responsibility for productive recursion in syntax is shouldered by a structure which I will refer to as the *adjoined relative clause*. It is typically marked as subordinate in some way, but its surface position with respect to the main clause is marginal rather than embedded—hence the locution ‘adjoined’. Typically, but not invariably, it is separated from the main clause by a pause. And it has been widely observed that, in languages which make extensive use of the adjoined relative, when the subordinate clause precedes the main clause, it is terminated with a characteristic falling-rising intonation and followed almost invariably by a pause; but when the main clause precedes the subordinate clause, the intonation over both clauses is more often falling, and the pause between them, if any, is brief.

The adjoined relative may be illustrated by the following sentence, from Walbiri of central Australia:

- (1) *ɲatjulu-lu φ-na yankiri pantu-ɲu, kutja-lpa ɲapa ɲa-ɲu.*
(I-erg AUX emu spear-past, COMP-AUX water drink-past)
‘I speared the emu which was/while it was drinking water.’

(For an elementary discussion of Walbiri surface syntax, particularly that pertaining to the internal constituency and surface positioning of the auxiliary, the Walbiri case system, verbal inflections, and word order, see Hale 1973. In the glossing of Walbiri sentences, I will leave the internal composition of the auxiliary unspecified, representing it simply as AUX.) The subordinate clause follows the main clause in this example—the comma indicates the division between the two clauses. Moreover, the relative clause is marked with what I will term the ‘referential’ complementiser /*kutja-*/ (glossed COMP) which is prefixed to the auxiliary of that clause. Sentence (1) can also be rendered as in (2), that is with the subordinate clause preposed:

- (2) *yankiri-li kutja-lpa ɲapa ɲa-ɲu, ɲatjulu-lu φ-na pantu-ɲu.*
(emu-erg COMP-AUX water drink-past, I-erg AUX spear-past)
‘The emu which was drinking water, I speared it.
While the emu was drinking water, I speared it.’

It can also be rendered by the somewhat preferred variant of (2) in which the main clause is initiated by the anaphoric element /*ɲula-*/:

- (3) *yankiri-li kutja-lpa ɲapa ɲa-ɲu, ɲula φ-na pantu-ɲu ɲatjulu-lu.*
‘The emu which was drinking water, that one I speared.
‘While the emu was drinking water, then I speared it.’

Sentences (1–3) are open to two distinct interpretations. Or perhaps one should rather say that the relative clause in these sentences can be used in two different ways. On the one hand, the relative clause may be used either to make more determinate or to supply additional information about an argument in the main clause (/yankiri/ ‘emu’, in this instance). I will refer to this use as the *NP-relative interpretation*. On the other hand, the relative clause may be used to specify the temporal setting of the event depicted in the main clause, or to make a subsidiary comment holding at the time specified in the main clause. I will refer to this as the *T-relative interpretation*. These two functions are widely assumed by the adjoined relative in Australian languages. In general, for Walbiri sentences of this type—and this is commonly the case elsewhere in Australia as well—the NP-relative interpretation is available when the main and subordinate clauses share an identical argument, and the T-relative interpretation is available when the two clauses make identical time reference. Both of these conditions are met in (1–3), so both interpretations are possible there. But in the following sentence (given in several variants), only the NP-relative interpretation is available, since the main and subordinate clauses share an argument while making distinct temporal references:

- (4) (a) *ɲatjulu-lu kapi-na wawiri pura-mi, kutja-npa pantu-ɲu ɲjuntulu-lu.*
(I-erg AUX kangaroo cook-nonpast, COMP-AUX spear-past you-erg)
‘I will cook the kangaroo you speared.’
(b) *ɲjuntulu-lu kutja-npa wawiri pantu-ɲu, ɲatjulu-lu kapi-na pura-mi.*
(c) *ɲjuntulu-lu kutja-npa wawiri pantu-ɲu, ɲula kapi-na pura-mi ɲatjulu-lu.*

And in (5), only the T-relative interpretation is available, since no arguments are shared:

- (5) (a) *ɲatjulu-lu lpa-na kali tjaɲtu-ɲu, kutja-φ-npa ya-nu-ɲu ɲjuntu.*
(I-erg AUX boomerang trim-past, COMP-AUX walk-past-hither you)
‘I was trimming a boomerang when you came up.’
(b) *kutja-φ-npa ya-nu-ɲu ɲjuntu, kali lpa-na tjaɲtu-ɲu*
(c) *kutja-φ-npa ya-nu-ɲu ɲjuntu, ɲula lpa-na kali tjaɲtu-ɲu ɲatjulu-lu.*

The adjoined relative structure is also widely used to specify a condition under which the predication embodied in the main clause could refer to an actual event, process, or state. I will refer to this as the *conditional interpretation*. It is appropriate when the main and subordinate clauses are uninstantiated predications—reflected formally in the modality system by future tense (/kapi-/ or /φ-/ auxiliary base in concert with the nonpast verbal inflection), potential mode (/katjika-/ auxiliary base in concert with the nonpast verbal inflection), or irrealis mode (/φ-/ , /lpa-/ , or /kapi-/ as auxiliary base in concert with the irrealis inflection in the verb). It is not clear to me whether the conditional in Walbiri should be regarded as distinct from the T-relative interpretation—both require an appropriate sequence of

modalities over the main and subordinate clauses. For the purposes of this discussion, I will adhere to the traditional nomenclature but will regard the conditional as a special case of the T-relative. In sentences like (6) below, in which the main and subordinate clauses are future (with /*kapi-* . . . nonpast/ in the former, and /*φ-* . . . nonpast/ in the latter), both temporal and conditional interpretations are possible; and since the two clauses share an argument, a NP-relative interpretation is also possible:

- (6) (a) *ɲatjulu-lu kapi-na maliki luwa-ni, katji-φ-ɲki yałki-ni njuntu.*
(I-erg AUX dog shoot-nonpast, COMP-AUX bite-nonpast you)
'I will shoot the dog, if/when it bites you.
I will shoot the dog that bites you/that is going to bite you.'
(b) *maliki-li katji-φ-ɲki yałki-ni njuntu, ɲatjulu-lu kapi-na luwa-ni.*
(c) *maliki-li katji-φ-ɲki yałki-ni njuntu, ɲula kapi-na luwa-ni ɲatjulu-lu.*

The sense commonly associated with the traditional term 'conditional' predominates when the dependent clause is in the irrealis mode. Sentence (7) is a present counterfactual (characterised by /*katjika-* . . . nonpast/ in the main clause, and /*lpa-* . . . irrealis/ in the subordinate):

- (7) (a) *puluku katjika pali-mi, katji-lpa ɲa-njtjala njampu.*
(bullock AUX die-nonpast, COMP-AUX eat irrealis this)
'The/a bullock would die if it ate this.'
(b) *puluku-lu katji-lpa ɲa-njtjala njampu, katjika pali-mi.*
(bullock-erg COMP-AUX eat-irrealis this, AUX die-nonpast)
(c) *puluku-lu katji-lpa ɲa-njtjala njampu, ɲula katjika pali-mi.*

(Since the two clauses share an argument, a NP-relative interpretation is also available for (7)—that is, 'A bullock that ate this would die.' This possibility extends to other conditionals as well). Sentence (8) is a past counterfactual (/*kapi-* . . . irrealis/ in the main clause, and /*φ-* . . . irrealis/ in the subordinate):

- (8) (a) *ɲatjulu-lu kapi-na luwa-kala wawiri, katji-φ-na mađa-kala makiti.*
(I-erg AUX shoot-irrealis kangaroo, COMP-AUX have-irrealis gun)
'I would have shot the kangaroo if I had had a gun.'
(b) *katji-φ-na mađa-kala makiti ɲatjulu-lu, kapi-na luwa-kala wawiri.*
(c) *katji-φ-na mađa-kala makiti ɲatjulu-lu, ɲula kapi-na luwa-kala wawiri.*

The reader will no doubt have noticed that the phonological shape of the complementiser varies in these sentences—it is /*kutja-*/ in (1–5), while in (6–8) it is /*katji-*/. The choice between them apparently depends upon the semantic notion 'instantiation'. If the subordinate clause is an instantiated predication, the appropriate complementiser is /*kutja-*/ (/ɲula-/ in the speech of some Walbiris); but if the predication in the subordinate clause is un-instantiated, the appropriate complementiser is /*katji-*/. For present purposes, I will regard these elements as variants of a single 'referential' complementiser, as distinct from the causal/purposive complementiser /*yuju-*/ (with variants /*yi-* ~ *yija-*/ in the speech of many), to be exemplified directly. (These

observations do not apply to all Walbiri dialects; however, the pattern described here is relatively popular.)

Another widespread use of the adjoined structure in Australian languages is the expression of a causal or purposive relation between predications. This is not a formal distinction in Walbiri—for many speakers, at least, both causal and purposive relatives are identically marked by the complementiser /*yuju-*/. The causal, or 'rational' sense is present when the temporal reference of the dependent clause is prior to that of the main clause (as in (9) below), and the purposive sense is present when the reverse temporal relation holds (as in (10)):

- (9) (a) *ɲatjulu-lu kapi-na maliki yalumpu paka-ni, yuju-φ kuđu njampu yałku-nu.*
(I-erg AUX dog that strike-nonpast, COMP-AUX child this bite-past)
'I am going to strike that dog, because it bit this child.'
(b) *maliki yalumpu-lu yuju-φ kuđu njampu yałku-nu, ɲatjulu-lu kapi-na paka-ni.*
(c) *maliki yalumpu-lu yuju-φ kuđu njampu yałku-nu, ɲula kapi-na paka-ni ɲatjulu-lu.*
- (10) (a) *ɲarka-tjara-lu ka-pala paluku paɲi-ni, yuju-φ-pala wawiri pura-mi.*
(man-dual-erg AUX trench dig-nonpast, COMP-AUX kangaroo cook nonpast)
'The two men are digging a cooking trench in order to cook the/a kangaroo.'
(b) *wawiri yuju-φ-pala ɲarka-tjara-lu pura-mi, paluku ka-pala paɲi-ni.*
(c) *wawiri yuju-φ-pala ɲarka-tjara-lu pura-mi, ɲula ka-pala paluku paɲi-ni.*

In the Walbiri examples cited so far, the adjoined relative clauses are in a finite form. Finite dependent clauses in Walbiri contain an auxiliary element which, in concert with the verbal inflections, marks a range of modal categories only slightly more restricted than the range of such categories observed in main clauses, which likewise employ auxiliaries in concert with verbal inflections. But Walbiri possesses a set of adjoined infinitive clauses as well. While the infinitive types are incapable of expressing the modal categories—since they lack the auxiliary, and since the verbal inflections are replaced by the single infinitive (or nominalising) ending /*-njtja* ~ *-ninjtja* ~ *-ninjtja*/ (the alternants depend on verbal conjugation)—they exhibit a system of complementisers which is somewhat richer than that involved in the formation of finite adjoined relatives. In infinitives, the complementiser is suffixed to the infinitive verb form.

One class of infinitive clauses closely paraphrases the finite T-relative. Thus, for example, sentence (1), in its T-relative interpretation, is closely paraphrased by (11):

- (11) *ɲatjulu-lu φ-na yankiri pantu-nu, ɲapa ɲa-ninjtja-kura.*
(I-erg AUX emu spear-past, water drink-infinitive-COMP)

I will refer to this type as the infinitive T-relative—in this type, the event or state depicted in the subordinate clause is understood as on-going, or in effect,

at the time referred to in the main clause. The infinitive clause typically follows the main clause in linear order (but see below for a certain exception to this). In the majority of cases, the subject of the infinitive is deleted under identity with a noun phrase in the main clause, and the complementiser which appears in the infinitive is determined by the grammatical function, within the main clause, of the noun phrase which controls the deletion. In sentence (11), the controller (that is /*yankiri*/ 'emu') is the object in the main clause. Accordingly, the complementiser which appears suffixed to the infinitive is /-*kura*/. This complementiser appears not only where the controller is in the absolutive (or nominative) case, as in (11), but also when the controller is a dative complement of the main-clause verb, as in the following:

- (12) *natju ka-na-ŋku maŋi-tjari-mi njuntu-ku, murumuru ŋuna-njtja-kura(-ku).*
(I AUX grief-inchoative-nonpast you-dat, sick lie-infinitive-COMP(-dat))
'I feel sorry for you while you are lying sick.'

(The complement clause may optionally agree with the controller in case here.) But if the controller is the subject in the main clause, the appropriate complementiser is /-*kara*/:

- (13) *ŋarka ka waŋka-mi, kaŋi tjaŋti-ninjtja-kara.*
(man AUX speak-nonpast, boomerang trim-infinitive-COMP)
'The man is speaking while trimming the boomerang.'

And if the controller is the subject of a transitive main clause, and is therefore marked for ergative case, then not only must the complementiser /-*kara*/ be used, but the clause must also be inflected for ergative case, in agreement with the controller:

- (14) *ŋarka-ŋku ka kaŋi tjaŋti-ŋi, njina-njtja-kara-ŋu.*
(man-erg AUX boomerang trim-nonpast, sit-infinitive-COMP-erg)
'The man is trimming the boomerang while sitting.'

There is an interesting exception to these assertions. When the controller is simultaneously subject and object—that is, when the main clause is a reflexive—the complementiser is /-*ŋkatjinta* ~ /-*latjinta*/:

- (15) *natjulu-ŋu φ-na-tju rampaŋ-patju-nu, kaŋi tjaŋti-ninjtja-latjinta.*
(I-erg AUXrefl accidentally-cut-past, boomerang trim-infinitive-COMP)
'I accidentally cut myself while trimming the boomerang.'

This complementiser is composite; the initial element /-*ŋka* ~ /-*la*/ is identical to the locative case. The composite also functions as a case ending, the comitative, in addition to its role as a complementiser.

When the controller is a dative not strictly subcategorised by the verb of the main clause—that is, a dative which is not a direct complement of the verb but, instead, designates an argument which is tangential to the event depicted in the main clause—the appropriate complementiser is /-*ŋkaŋi* ~ /-*laŋi*/ (another composite built upon the locative):

- (16) *kuḍu ka-la tjaḍa-ŋuna-mi kiḍa-njanu-ku, kaŋi tjaŋti-ninjtja-laŋi.*
(child AUX sleep-lie-nonpast father-own-dat, boomerang trim-infinitive-COMP)
'The child is sleeping while its father is trimming the boomerang.'¹

To my knowledge, sentences (11–16) represent the full range of cases in which a noun phrase in the main clause controls the deletion of the subject of an infinitive T-relative. Infinitive T-relatives which fail to undergo subject deletion, through a failure to meet one of the above control conditions, are somewhat rare in actual usage. Those which have been observed show the complementiser /-*puŋu*/:

- (17) *ŋalipa ka-lipa yutjuku-la njina-mi, ŋapa wanti-njtja-puŋu.*
(we AUX shelter-loc sit-nonpast, rain fall-infinitive-COMP)
'We (plural inclusive) (will) sit in the shelter while it rains.'

There also exists in Walbiri an infinitive type which tends, in its semantic force, toward the NP-relative. It is uniformly understood as perfective with respect to the temporal reference of the main clause—that is, it is temporally prior to the main clause—and it often implies a strong causal or rational connection between the events depicted in the two clauses. As in the case of the infinitive T-relative, so in this type, a noun phrase is deleted from the infinitive clause under the influence of a controller in the main clause. Moreover, the infinitive is inflected for case in agreement with the controller. The complementiser in this type is /-*wanu*/, regardless of the controller:

- (18) *natju ka-na-la kuḍu-ku maŋi-tjari-mi, wanti-njtja-wanu-ku.*
(I AUX child-dat grief-inchoative-nonpast, fall-infinitive-COMP-dat)
'I am sorry for the child that fell.'

In (18), the controller is a dative complement of the main clause verb, and the infinitive clause is accordingly inflected for dative case. The noun phrase from the infinitive clause was the subject there, but it is also possible to delete the object of a transitive infinitive clause. In such cases, there is fluctuation among Walbiri speakers as to the proper case inflection on the undeleted subject. Some speakers use the ergative, as is expected in transitive clauses, but others use instead the suffix /-*tjaŋka*/, an elative (elative of origin, primarily), close in meaning to the element /-*wanu*/, which has an elative usage in addition to its role as a complementiser:

- (19) *natju ka-na-la kuḍu-ku maŋi-tjari-mi, waŋa-tjaŋka yaŋki-ninjtja-wanu-ku.*
(I AUX child-dat grief-inchoative-nonpast, snake-elative bite-infinitive-COMP-dat)
'I am sorry for the child that was bitten by the snake.'

Purposive clauses of the type represented in (10) above also have infinitive counterparts. The infinitive purposive complementiser is /-*ku*/, identical in form to the dative case:

- (20) (a) *ɲarka-tjara-lu ka-pala paŋku paŋi-ɲi, wawiri pura-ɲtja-ku.*
 (man-dual-erg AUX trench dig-nonpast, kangaroo cook-infinitive-COMP)
 'The two men are digging a cooking trench in order to cook the kangaroo.'

The purposive complementiser may be extended by the elements */-ɲaŋti/* and */-puɖa/* to render, respectively, a prerequisite purposive and a desiderative:

- (20) (b) . . . , *wawiri pura-ɲtja-ku-ɲaŋti(-li).*
 (. . . , kangaroo cook-infinitive-COMP-prereq(-erg))
 ' . . . , as a prerequisite to cooking the kangaroo.'
 (c) . . . , *wawiri pura-ɲtja-ku-puɖa(-lu).*
 (. . . , kangaroo cook-infinitive-COMP-desid(-erg))
 ' . . . , with a desire to cook the kangaroo.'

The subject of the infinitive purposive is deleted under the influence of the subject of the main clause. If the latter is transitive, and its subject therefore ergative (as is the case in (20a-c)), the purposive clause may optionally inflect for ergative case as well (as indicated parenthetically in (20b-c)). When the ergative is suffixed directly to the complementiser, the latter appears as */-kura/*—thus, *[pura-ɲtja-kura-lu]* would be the case-marked form of the infinitive in (20a) above.

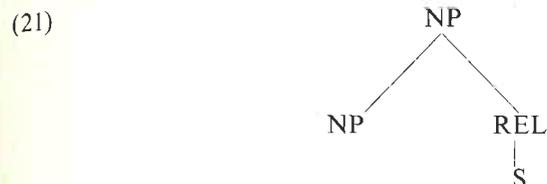
1. Toward a theory of the adjoined relative

Certain basic and rather superficial observations concerning the adjoined relative structure have been presented for Walbiri. Before presenting examples from another Australian language, I would like to discuss some of the theoretical issues which must be addressed in the further study of this construction. I do not pretend to have answers to any of the questions, but I am able to make a number of suggestions and observations which might serve as a focus for future research on the subject.

An issue of central importance in the investigation of the adjoined relative clause in Australia is the correspondence between its syntactic form and its semantic interpretation—particularly for the type which corresponds to the Walbiri finite adjoined relative marked with the referential complementiser */kutja-, katji-/*. I have asserted that, under the appropriate conditions of co-reference, these clauses are open to at least two distinct interpretations—one in which the dependent clause is construed with a noun phrase in the main clause (the NP-relative interpretation), and another in which the dependent clause is construed with the modality of the main clause (the T-relative interpretation).

The question of the semantic interpretation of the adjoined relative is, to be sure, a matter which will require long and intense study before the facts can hope to be adequately understood. But assuming for the present purposes that it is correct to distinguish between NP-relative and T-relative interpretations, it is natural to wonder whether or not there is a corresponding distinction at the deep-structure level of syntactic representation. One might propose, for example, that the NP-relative interpretation is associated with an abstract syntactic representation at which the relative clause is embedded

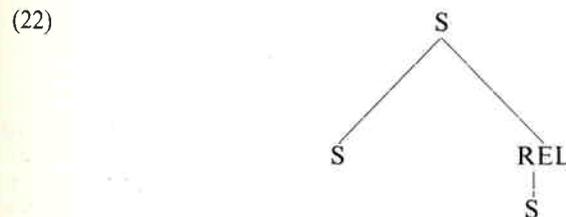
as a constituent of a complex noun phrase the head of which is the noun phrase with which the relative clause is construed. Under such a proposal, the NP-relative would be introduced in deep structure by means of a phrase structure rule expanding the phrase category NP. Let us assume, in line with this proposal, that the phrase structure component produces structures of approximately the following form:



(It is immaterial to this discussion whether the relative clause precedes or follows the head.) These structures would then be available for interpretation by semantic projection rules of the type proposed by Katz and Fodor (1963) for attribution in modifier-head constructions. The essential ingredient of this proposal is that the semantic reading of the relative clause would be associated with the head noun phrase by virtue of its deep-structure position. By contrast, the T-relative clause might be introduced by means of a phrase structure rule expanding the category S. We might assume, for example, that it is generated in the marginal position which it occupies in surface structures, in which case the semantic projection rules would, correctly, fail to associate it with a noun phrase.

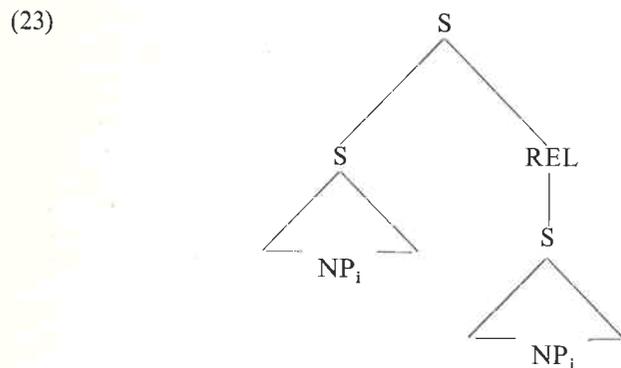
If NP-relatives are embedded under NP in deep structure, then their surface positioning must be effected by means of a transformational rule whose product is a derived structure identical in all essential respects to that associated with T-relatives. That is to say, at some early stage of derivation, NP-relatives become identical in form to T-relatives. I will refer to this proposal as the *extraction analysis* for NP-relatives.

Before commenting further on the extraction analysis, I would like to present an alternative conception of the derivation and interpretation of NP-relatives. I will refer to this alternative as the *adjunction analysis*. From a syntactic point of view, it is the null hypothesis, since it assumes that NP-relatives and T-relatives are entered in base structures in the same marginal—that is, adjoined—position which they occupy in surface structures. Moreover, under the adjunction analysis, NP-relatives and T-relatives are viewed as a single clausal category. For the purposes of this discussion, I will assume that the phrase structure component provides structures of the following form:



in which the relative clause (REL over S) and main clause (S to the left of REL) are descended from a common S-node. I do not wish to insist upon the details of this structure; rather I offer this as a provisional configuration which expresses the formal fact that the relative clause is *adjoined* to the main clause, rather than embedded within it—my intent is to reflect the prevailing surface structure observation that finite relative clauses, at least, are never flanked by material belonging to the main clause. I also do not wish to insist upon the linear ordering of the main and dependent clauses. I assume here, without further comment (but see below), that the basic order is S REL and that the alternative order REL S is derived by preposing.

If relative clauses of the Walbiri type are uniformly adjoined in deep structure, there is no configurational correlate to the semantic distinction between NP-relative and T-relative interpretations. I propose, therefore, that there is a semantic rule which associates the meaning of the subordinate clause with a main-clause noun phrase provided the latter is co-referential with a noun phrase in the subordinate clause. Thus, given a complex structure of the form



in which NP_i and NP_j are co-referential, the semantic interpretation of the sentence dominated by the REL-node is associated with NP_j by means of a semantic embedding rule.

Before proceeding, I feel that it is appropriate to digress momentarily with a caveat. Both the extraction analysis and the adjunction analysis, if the semantic embedding rule is taken as an integral part of the latter, imply that the distinction between the NP-relative and T-relative interpretations is a discrete and clear-cut one. Although I will continue to operate as if the distinction were discrete, it is important not to accept this as an established fact and to continue to regard the interpretation of adjoined relatives as a matter deserving of careful and intensive research. It may well turn out, for example, that the proper way to view the adjoined relative is quite different from what is implied by either of the two analyses formulated above. It is not inconceivable that the strictly grammatical responsibility of a general theory of Walbiri linguistic competence ends with the definition of well-formed adjoined clauses and that what I have been referring to as the 'interpretation' of adjoined relatives is really a matter of usage. Under this proposal, the syntax and morphology of Walbiri would concern themselves only with such

matters as the proper pairings of auxiliaries with verbal inflections, the choice of complementisers, the proper restriction of auxiliary choice under complementation (for example, to rule out such ill-formed combinations as */*katji-kapi-*/ (COMP-FUT), that is, with overt future auxiliary prefixed by a complementiser), and other strictly formal aspects of complex sentence construction; and the semantic component would concern itself with the interpretation of clauses and, perhaps, with the distinction between the causal/purposive relation characteristic of clauses using the complementiser /*yuju-*/ and a much more vague relation characteristic of clauses in /*kutja-*, /*katji-*/. The semantic component itself would not be concerned with the assignment of T-relative or NP-relative senses to relative clauses. These would not be distinct interpretations but rather conditions on usage. The relationship between form and usage might, under this proposal, take the form of statements of the following type: (1) a relative clause may be used to specify the reference of a main-clause noun phrase provided the latter is co-referential with a noun phrase in the relative clause; (2) a relative clause may be used to specify the temporal setting of the main clause provided the two clauses make identical temporal reference; and so on.

If this were the correct conception of the Walbiri relative clauses in /*kutja-*, /*katji-*/, it would not be surprising to find that the range of usages extended well beyond those subsumed under the simple T-relative/NP-relative classification—one might expect to find, for example, that any reasonable connection between the clauses would render a complex sentence acceptable, provided that the connection had some communicative value. And, for Walbiri at least, the use of relative clauses does in fact extend beyond the simple two-way classification. In sentence (24) below, for example, the subordinate clause is neither a T-relative nor a NP-relative; instead, it serves to provide a contrastive parallel to the proposition embodied in the main clause:

- (24) *kutja-ka-lu yuwali ŋanti-ni tjulpu panu-kari-li kankalu watiya-la, maŋa-ŋka ka-njanu tjinjtiwanu-lu ŋanti-ni yutjuku-padu.*
(COMP-AUX nest build-nonpast bird many-other-erg up tree-loc, spinifex-loc AUXrefl jinjiwarnu-erg build-nonpast shelter-diminutive)
'Whereas many other birds build a nest up in a tree, the jinjiwarnu (bird sp.) builds itself a small shelter in the spinifex grass.'

And in the following sentence, the relative clause specifies an enabling condition for the event projected in the main clause:

- (25) *njampu kutja-ka-na tjunma maða-ni ŋatjulu-lu, ŋula kapi-ŋa-tju ŋatjulu-lu-lku patji-ni.*
(this COMP-AUX knife have-nonpast I-erg, so AUXrefl I-erg-now/then cut-nonpast)
'I have this knife, so I'm going to cut myself now. Now that I have this knife, I'm going to cut myself.'

I have not made an exhaustive study of the communicative functions which relative clauses of this type can be made to fulfill in Walbiri, but in my data on actual Walbiri usage, as opposed to data obtained in the course of direct

grammatical eliciting, the T-relative and NP-relative senses account for only a part of the observed instances of the relative clause—and the structure is extremely frequent, particularly in the essay-like style which Walbiri speakers adopt in ethnoscience discourse, a style which predominates in my recorded material on usage. It is abundantly clear, in any event, that the acceptability of a relative clause does not depend upon its ability to receive a T-relative or NP-relative interpretation. To be sure, this does not eliminate the possibility that these are concrete and distinct notions, to be defined in the grammar of Walbiri and assigned by the grammar to sentences. Nor does it eliminate the possibility that the NP-relative interpretation is associated with a deep-structure configuration like (21). It does, however, bring into view the alternative possibility that, apart from the strictly formal morphological and syntactic conditions on well-formedness *within* clauses, the overall well-formedness of a complex sentence containing a relative clause is not determined by the grammar, but rather by a subset of the system of maxims which are presumably observed in the construction of felicitous discourse, involving such notions as 'relevance', 'informativeness', and the like—compare, for example, the Gricean principles of conversation (Grice 1967).

I would like now to return to a consideration of the extraction analysis vis-a-vis the adjunction analysis. It is a matter of considerable theoretical import to decide the issue of whether or not the grammar of Walbiri has a rule which extracts a relative clause from an embedded position to an adjoined position. Notice that if the extraction rule exists, it is obligatory (for the finite relative clause, at least), since it is universally true in Walbiri surface and shallow structures that a NP-relative clause and its would-be head never form a syntactic unit for the purposes of any well established rule of Walbiri syntax. Consider, for example, the rule which places the auxiliary in second position within the clause to which it belongs (referred to as Aux-Insertion in Hale, 1973). This rule positions the auxiliary after the first nonauxiliary immediate constituent of its clause, obligatorily if the auxiliary base is shorter than disyllabic and not combined with a complementiser, optionally otherwise. It accounts for the positioning of the auxiliary in

- (26) *maliki wiri-ŋki φ-tji yaŋku-nu ŋatju.*
(dog big-erg AUX bite-past me)
'The big dog bit me.'

and in

- (27) *maliki yali-li φ-tji yaŋku-nu ŋatju.*
(dog that-erg AUX bite-past me)
'That dog bit me.'

and for the alternative positionings in

- (28) (a) *kapi-lipa-tjana wawiri-patu luwa-ŋi ŋalipa-lu.*
(AUX kangaroo-pl shoot-nonpast we-erg)
(b) *wawiri-patu kapi-lipa-tjana luwa-ŋi ŋalipa-lu.*
(kangaroo-pl AUX shoot-nonpast we-erg)
'We (plural inclusive) are going to shoot the several kangaroos.'

The positioning of the auxiliary in (26) and (27) shows that a noun together with an adjective modifying it (*maliki wiri* 'dog big') or a noun together with

its determiner (*maliki yali* 'dog that') may form a single constituent of the sentence at the time the AUX-Insertion rule applies. But the same is not true of a noun phrase and a relative clause construed with it. Thus, while AUX-Insertion provides evidence for noun phrase constituency, it fails to give evidence that there exists a constituent NP consisting of a relative clause and its head (that is, a structure of the form represented by (21)). This is, of course, only negative evidence, showing merely that such a constituent does not exist at surface structure. But, in general, to my knowledge, there is no direct evidence that a complex noun phrase constituent exists at any level of syntactic representation. I will return presently to other considerations which, from a typological perspective, might be expected to provide evidence in favour of the extraction analysis. But first I wish to comment upon the theoretical interest which I perceive in relation to this issue.

Under the proposal that Walbiri distinguishes NP-relative from T-relative configurations in deep structure, there must exist a transformational rule of extraction which effects an absolute neutralisation of the two types. It is a serious question whether a synchronic grammar containing such a rule should be allowed in linguistic theory. It is not unreasonable to imagine that such a grammar would be impossible to learn in the process of language acquisition. The question is this: Is it possible to learn a syntactic rule which universally removes from surface structure all structural evidence of the underlying configurations to which it applies? If it is possible under certain conditions, what are those conditions? For example, is it possible to acquire such a rule only if it interacts with independently motivated rules in such a way that the latter provide surface evidence for the existence of the underlying structures to which the obligatory rule applies? That is to say, would an obligatory extraction rule, for instance, be learnable if some other rule— independently motivated and with an effect visible at surface structure— necessarily applied prior to extraction? And would such an extraction rule be otherwise unlearnable?

The question of learnability cannot, of course, be settled by an examination of a particular synchronic grammar. But it is quite conceivable that answers to this question will come from the study of language change, particularly within the framework developed by Kiparsky (for example, 1971, 1973). It may be possible to demonstrate, for example, that in the majority of cases in which a syntactic rule of the sort under discussion here becomes obligatory at a particular stage in the history of a language, subsequent stages undergo a grammatical reanalysis according to which the structural configuration formerly achieved by application of the rule is developed directly by rules of the base component, thereby eliminating any motivation for the transformational rule or for the underlying configuration to which it formerly applied. If this were the case, then we would have strong evidence in favour of the view that such rules must be disallowed, or at least evaluated as extremely costly, in synchronic grammars. It may turn out, of course, that the relevant type of grammatical reanalysis happens only when the obligatory rule in question precedes all other rules which might give surface evidence of the underlying structure to which it applies. In any event, the issue is an empirical one on which evidence from linguistic change has direct bearing.

While I have no firm evidence against the extraction analysis for Walbiri, it is called into question by considerations such as those outlined above. This

is not to say, however, that one could not find language-internal evidence against an extraction analysis. Further research on Walbiri itself might reveal data which would make the extraction analysis unworkable. Consider, for example, a sentence like

- (29) *maliki-li ka minitja watjilipi-nji, kutja-lpa-pala-njanu kulu-ŋku nja-ŋu.*
 (dog-erg AUX cat chase-nonpast, COMP-AUX recip anger-erg/inst look-past)
 ‘*The dog is chasing the cat, which were looking at one another angrily.’

I am not sure of the status of such sentences; but if sentence (29) proved to be fully grammatical, with a NP-relative interpretation in which the relative clause is simultaneously construed with the main-clause subject */maliki-li/* ‘dog-erg’ and the main-clause object */minitja/* ‘cat’, it could not be derived by means of an extraction rule alone—at least not under any straightforward formulation of that rule. But such a sentence would be consistent with the adjunction analysis, since the main and subordinate clauses are linked by NP-coreferentiality—the relative clause is presumably reduced from a subordinated version of */maliki-li manu minitja-lu lpa-pala-njanu kulu-ŋku nja-ŋu/*. ‘The dog and the cat were looking at one another angrily.’ In short, the study of NP-relative clauses with split antecedents might provide Walbiri-internal evidence against the extraction analysis. And there are undoubtedly other avenues of research which could be followed to settle the question for Walbiri, or for any language. The recursive capabilities of the two competing analyses might, for example, provide evidence bearing on the issue. Both analyses permit multiple subordinations and both analyses can account syntactically for the existence of sentences like

- (30) *kali φ-tji ma-ninjtji-nta yali, ŋula-ka maɖa-ŋi yapa-kari-li, ŋula-ka ŋura ŋalipa-njaŋu-la njina.*
 (boomerang AUX get-go-imperative that, COMP-AUX have-nonpast person-other-erg, COMP-AUX camp us-possessive-loc sit [-nonpast])
 ‘Go get me that boomerang that that other person who lives in our camp has.’

(This is from a speaker who uses */ŋula-/* in place of */kutja-/* for the instantiational referential complementiser.) But it might well turn out that a study of the full recursive capabilities of this structure, and the problem of construing a relative clause with a main-clause noun phrase in multiply subordinating sentences, will uncover evidence favouring one analysis over the other.

I would like now to turn to a consideration of a number of other processes involved in the formation of relative clauses in Walbiri—processes whose counterparts in other languages of the world are often associated with relative clauses of the embedded type. In part, I will be concerned with the question of how these relate to the validity of the extraction analysis (with largely negative results, as it happens), but primarily I will be concerned with providing a partial schedule of topics, so to speak, for the continued investigation of this structure in Australia.

1.1. Relativisation

An obvious question which suggests itself in relation to the issue of extraction versus adjunction is whether there exists a process of relativisation which distinguishes NP-relatives from T-relatives. And if there is such a process, does it necessarily apply within the domain of a structural configuration of the type proposed under the extraction analysis—that is, a structure of the type represented by (21) above? The question of relativisation is basically this: In NP-relative structures, what happens to the coreferential noun phrase in the subordinate clause?

For Walbiri, to my knowledge, the answer to this question is that there is no treatment accorded to coreferential noun phrases in NP-relatives which is distinct in any essential way from the treatment accorded to coreferential noun phrases in T-relatives, or other complex sentence types, for that matter. Wherever NP-coreferentiality occurs between the main and subordinate clauses, the second occurrence is either deleted, obligatorily in the case of infinitive clauses (see above), or else, in the case of finite clauses, the second occurrence may either delete or be ‘pronominalised’ (that is, represented in surface structure by a determiner, normally the ‘anaphoric’ determiner */ŋula/*); or the noun may even remain undeleted, with or without an accompanying (but not necessarily adjacent) determiner. Moreover, there is no special treatment of the coreferential noun phrase in the subordinate clause as distinct from that in the main clauses. The deletion or pronominalisation depends upon the linear order of the two clauses. The favoured pattern is that in which the *second* of two coreferential noun phrases is affected. Thus, if the main clause precedes the subordinate, then the coreferential noun phrase in the latter is affected, as in

- (31) *ŋatjulu-lu ka-ŋa-la makiti-ki wari-ŋi yaŋka-ku, kutja-φ-ŋa wawiri luwa-nu (ŋula-ŋku).*
 (I-erg AUX gun-dat seek-nonpast, that-dat COMP-AUX kangaroo shoot-past (it-inst))
 ‘I am looking for the gun that I shot the kangaroo with.’

(The favoured position of the anaphoric element in such cases is final, or near-final, within the subordinate clause.) If the subordinate clause precedes, then the coreferential noun phrase in the *main* clause is affected, as in

- (32) *makiti-li kutja-φ-npa njuntulu-lu wawiri luwa-ŋu yaŋka-ŋku, ŋula-ku ka-ŋa-la wari-ŋi.*
 (gun-inst COMP-AUX you-erg kangaroo shoot-past that-inst, it-dat AUX seek-nonpast)
 ‘That gun you shot the kangaroo with, I am looking for it.’

(In this ordering, the favoured position for the anaphoric determiner is initial within the main clause.) In the following sentence, the coreferential noun phrase in the second clause is represented fully by the determiner and the noun:

- (33) *yan̄ka kutja-φ-ŋa-tjana panu nja-ŋu wakuljari pili-ŋka, ŋula-ku kapi-ŋa-tjana tjan̄kaɖu-ya-ni ŋatju pili-kira wakuljari-ki.*
 (those COMP-AUX many see-past wallaby hill-loc, them-dat AUX against-go-nonpast I hill-dir wallaby-dat)
 'Those many wallabies which I saw in the hills, I will go to the hills after them.'

This sentence is particularly interesting, incidentally, because of the fact that there are two instances of NP-coreferentiality in it (*/pili/* 'hill' occurs in both clauses, and */wakuljari/* '(rock-)wallaby' occurs in both). And although the use of the anaphoric determiner */ŋula-ku/*, necessarily construed with */wakuljari-ki/* 'wallaby-dat', would normally strongly favour the NP-relative interpretation according to which the relative clause specifies the wallabies, the context in which the sentence was recorded—a dialogue concerning projected itineraries in a food-gathering expedition—makes it quite possible, even more likely, that the relative clause is being used to specify the hills. Be this as it may, sentences of this type—not uncommon in ordinary speech—demonstrate that deletion of the second of two coreferential noun phrases is not inevitable.

The treatment of coreferential noun phrases in NP-relative clauses is not distinct in any way known to me from the treatment of coreferential noun phrases in complex sentences of other types. And since the deletion and pronominalisation processes involved depend upon the surface linear order of the main and subordinate clauses, it is clear that they cannot apply before the hypothesised extraction rule—they cannot, therefore, be used to support the view that the configuration (21) exists at some underlying level of syntactic representation.

I do not mean to imply that problems concerned with coreferentiality, pronominalisation, and deletion are not worthy of study in their own right. There is much to be investigated in this area. For example, deletion of an entire noun phrase surely depends upon recoverability to some extent. At least it is rather clear from the data available that noun phrases in certain grammatical relations (for example, subject and object) delete more readily than others (for example, instrumentals, locatives, benefactives). Thus, pronominalisation (or retention) is favoured over deletion in sentences like (31), to a greater extent than in sentences like

- (34) *ŋatjulu-lu ka-ŋa-la makiti-ki wari-ŋi, kutja-φ-npa watjawatja-ma-nu njuntulu-lu.*
 (I-erg AUX gun-dat seek-nonpast, COMP-AUX loss-caus-past you-erg)
 'I am looking for the gun you lost.'

where deletion is much preferred. Likewise, in sentences like (35), retention and pronominalisation are favoured over deletion:

- (35) (a) *ŋura ka-ŋa-tju ŋu:lka-nji, yi-φ-ŋa ŋuna ŋura-ŋka.*
 (place AUX clear-nonpast, COMP-AUX lie[-nonpast] place-loc)
 (b) *ŋura ka-ŋa-tju ŋu:lka-nji, yi-φ-ŋa ŋuna ŋula-ŋka.*
 (place AUX clear-nonpast, COMP-AUX lie[-nonpast] it-loc)
 'I am clearing the place in order to lie down on it.'

(These are from a speaker who uses the purposive complementiser alternant */yi-/* rather than */yuuu-/*.)

It is interesting to note further that the well-formedness of complex sentences exhibiting NP-coreference does not depend upon NP-identity, but rather on the strictly semantic notion of coreference. Thus, sentences like (36), in which nominal coreference is manifested by a pair of synonyms, are acceptable and not particularly unusual:

- (36) *walpa-ŋku ka-ŋalpa tjuru wa:lwa:l-luwa-ni, kutja-ka payi wan̄ka.*
 (wind-erg AUX hair tossing-strike-nonpast, COMP-AUX wind speak [-nonpast])
 'The wind tosses our hair when it blows (lit. speaks).'

While the study of these matters is important, and perhaps crucial to a proper understanding of Walbiri linguistic competence, it seems to me unlikely at this point that it will contribute in any substantive way to the question of the underlying syntactic source of NP-relatives.

1.2. Case agreement

At an earlier point in this discussion, it was pointed out that an infinitive clause may agree in case with the main-clause noun phrase which controls the deletion of a coreferential noun phrase within the infinitive. This is illustrated by sentence (18), repeated here for convenience:

- (18) *ŋatju ka-ŋa-la kuɖu-ku mari-tjari-mi, wanti-ŋjtja-wanu-ku.*
 (I AUX child-dat grief-inchoative-nonpast, fall-infinitive-COMP-dat)
 'I am sorry for the child that fell.'

The fact of case-agreement might, on initial consideration, be taken as evidence in favour of an underlying structure in which the infinitive clause is embedded under the same NP-node as the nominal with which it agrees. It is known, for example, that when a noun phrase is dismembered by the permutation rules which account for the free word order so characteristic of Walbiri, each constituent of the noun phrase is separately marked for case. Thus, while in (26) the subject noun phrase */maliki wiŋi-ŋki/* 'dog big-erg' is, as a unit, marked for ergative case, the constituents of that noun phrase are separately marked for the ergative in alternative renditions of (26) in which the parts of the noun phrase are separated:

- (37) (a) *maliki-li φ-tji yaŋku-nu wiŋi-ŋki.*
 (dog-erg AUX bite-past big-erg)
 (b) *wiŋi-ŋki φ-tji yaŋku-nu maliki-li.*
 (big-erg AUX bite-past dog-erg)

I assume, speculatively, that this is accomplished by a rule of concord which marks each constituent of a noun phrase with an abstract case feature appropriate to the case category of the noun phrase as a whole. Whether the actual case ending appears once or repeatedly depends upon whether the noun phrase constituents, at the time the case features are given phonological shape, are dominated by a common NP-node—if they are, then the case will

be spelled out once, on the final constituent of the noun phrase; but if they are not, the case will be spelled out separately on each of the constituents. Whatever the details of concord may be, it is obvious that the case agreement in (18) would be an automatic consequence of the concord rule under the extraction analysis, provided the extraction rule followed concord. Concord would then be a rule giving surface evidence of an underlying complex noun phrase configuration.

Although it is not inconceivable that this is the correct analysis of sentences like (18), case agreement cannot be used as an argument in favour of the extraction analysis for NP-relatives in general, for the simple reason that it is not limited to infinitives like that in (18), the only type for which the NP-relative interpretation seems at all appropriate. It applies obligatorily in the case of T-relative infinitives employing the complementiser /-kara/, and it applies optionally in the case of purposives and complements in /-kura/. It appears, therefore, that case agreement is to be distinguished from case concord. I suggest that it is intimately linked with the obligatory coreferential noun phrase deletion characteristic of infinitive clauses. That is to say, case agreement is a surface manifestation of the control relation which holds between a noun phrase in the main clause and a noun phrase (obligatorily deleted) in the infinitive clause. And however the agreement is effected, it is defined over the control relation and not over the strictly structural relation of shared domination which is presumably involved in case concord. Viewed in this light, the phenomenon of case agreement is closely similar in nature to the phenomenon of complementiser choice (discussed above in connection with infinitives); this is also defined over the control relation.

If it is correct that case agreement is to be distinguished from case concord, and if, moreover, case agreement is to be defined in terms of control rather than in terms of shared domination, then there is no reason to expect it to be associated with NP-relatives to the exclusion of other subordinate clauses—and it is evidently not limited to NP-relatives in Walbiri. It cannot, therefore, be used to support the extraction analysis for NP-relatives; nor can it be used to support any analysis which posits a source for NP-relatives which is syntactically distinct from that of, say, T-relatives and purposives.

1.3. Attraction

The prevailing surface structure fact about Walbiri relative clauses is that they are marginal to, rather than integrated into, the main clause. This is entirely consistent with the adjunction analysis, which directly represents the marginality of the subordinate clause to the main clause by restricting recursion in the phrase structure component to the rule which expands the category S.

However, this prevailing surface structure marginality is fully true only in the case of finite relative clauses. Infinitive clauses, by contrast, have the ability to appear *within* the main clause and to permute with other constituents of it. Consider, for example, the following sentence:

- (38) *panka-njtja-kura* ϕ -*na* *wawiri luwa-nu natjulu-lu*.
(run-infinitive-COMP AUX kangaroo shoot-past I-erg)
'I shot the kangaroo while it was running.'

This is an acceptable alternative to:

- (39) *natjulu-lu* ϕ -*na* *wawiri luwa-nu, panka-njtja-kura*
(I-erg AUX kangaroo shoot-past, run-infinitive-COMP)

In (38), the infinitive clause is clearly a constituent of the main clause in surface structure, as evidenced by the positioning of the main-clause auxiliary—this auxiliary, having the null base / ϕ -/, must follow the first constituent of its own clause. Furthermore, the infinitive clause may permute to a medial position within the main clause, as in

- (40) *wawiri* ϕ -*na* *panka-njtja-kura luwa-nu natjulu-lu*.

This behaviour is observed with particular frequency when the infinitive clause consists, as it does in this instance, of a single word.

It is possible that this reflects an embedded source for infinitive relative clauses. But if so, the embedded source is not exclusive to NP-relatives, since all infinitive types can appear as surface structure constituents of the main clause—in fact, the infinitive in (38–40) belongs to the type which most closely approximates the T-relative in semantic interpretation. Also, the infinitive type which most closely approximates the NP-relative gives no evidence of being embedded under NP—nor does any other type. The degree of embedding which they exhibit is best characterised by saying that they may appear as integrated constituents of the main clause. In any event, there is little evidence one way or the other concerning the deep structure embeddedness of infinitive relative clauses. Since their surface structure position is either marginal to or internal to the main clause, it is possible, in the absence of decisive evidence, to propose at least two hypotheses concerning them: (1) the infinitive relative clause is embedded within the main clause in deep structure, and it may optionally extrapose, normally to the position following the main clause; (2) the infinitive, like the finite relative clause, is adjoined to the main clause in deep structure; but unlike its finite counterpart, the infinitive may move into the main clause, thereby becoming a constituent of that clause for the purposes of such elementary syntactic processes as AUX-Insertion and constituent permutation. I will refer to the process involved in the second of these alternatives as *attraction*.

I do not know whether a strong case can be made for deriving infinitive clauses from finite clauses by a process of auxiliary deletion—under appropriate conditions of modality sequencing between the main and subordinate clauses. But this seems a natural suggestion and, if it were the correct analysis of infinitives, it would follow that infinitives are of the same deep-structure status as finite relatives. To maintain this proposal, however, it will be necessary to account, in some natural way, for the fact that infinitives display a much more varied array of complementisers than do finite dependent clauses—although, by and large, for each general finite type there is a corresponding infinitive type.

There are many differences between finite relatives and infinitive relatives. The latter, unlike the former, obligatorily suffer deletion of a noun phrase under appropriate conditions of control; they may be marked for case in agreement with a controller in the main clause; and they may be integrated

into the main clause. But the most striking difference has to do with their clausal status. Finite dependent clauses are full sentences in all respects—they display all of the internal syntactic properties and capabilities characteristic of main clauses; and they are subordinate only by virtue of the complementiser, but even this is not enough to prevent them from appearing as independent clauses, *cum* complementiser—purposives in */yuyu- (yi ~ yiya-)/* are used independently to express a desire or a necessity (for example, */yi-lpa-na ya-ntala wilinji/* ‘I should go hunting; I would like to go hunting.’), and clauses in */kutja-/* (in the present tense) are used independently to render a presentational sense (for example, */yali kutja-ka kari-mi tjapanangka/* ‘There stands Japanangka.’). By contrast, infinitives, if they have a sentential origin, are severely reduced in structure. In their shallow syntactic behaviour, at least, they have the characteristics of nominals. This nominal character consists not only in the ability of infinitives to accept case inflection, but also in their ability to dismember and allow their erstwhile constituents to permute with the constituents of the main clause. As in the case of noun phrases, so in the case of infinitives, when dismemberment occurs, the endings which formerly marked the whole appear on each of the separated constituents. In this, the complementisers behave like case endings. Compare, for example, sentence (41a) and the alternative rendition (41b):

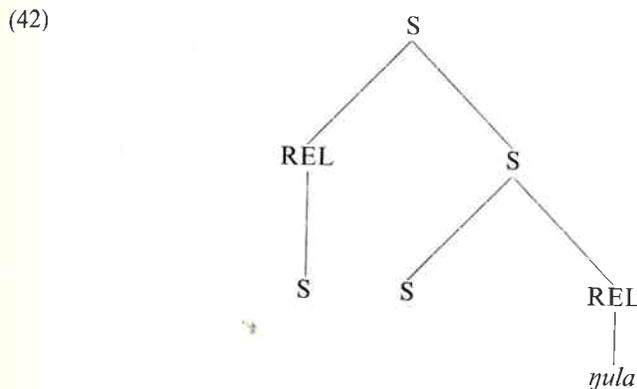
- (41) (a) *ɲarka ka-na ɲja-ɲji, kali tjanti-ɲinjtja-kura.*
 (man AUX see-nonpast, boomerang trim-infinitive-COMP)
 (b) *ɲarka ka-na kali-kira ɲja-ɲji tjanti-ɲinjtja-kura.*
 (man AUX boomerang-COMP see-nonpast trim-infinitive-COMP)
 ‘I see the man trimming the boomerang.’

Note that in (41b) the infinitive complementiser */-kura/* appears on each of the erstwhile constituents of the infinitive clause. This behaviour of infinitive complementisers is perhaps not surprising in view of the fact that many of them are identical in form to case endings (for example, */-kura/* ‘directional, T-relative’; */-ɲkatjinta ~ -latjinta/* ‘comitative, T-relative’; */-ku/* ‘dative, purposive’)—this is, in itself, an extremely intriguing phenomenon, deserving of attention; it is not limited to Walbiri.

It is my feeling that the ability of infinitives to attract into the main clause is intimately associated with their reduced status. Full sentences may not attract into the main clause, but structures which are less than a full sentence may. The possibility that attraction exists as a syntactic process in Walbiri is appealing from another standpoint. Recall that when a finite relative clause is preposed to the main clause, it is customary to initiate the main clause with the anaphoric element */ɲula/*. Now, in the case of NP-relatives, there is the distinct possibility that */ɲula/* is nothing other than the regular anaphoric determiner associated with retention (or partial retention—that is, pronominalisation) of the second of two coreferential noun phrases. But this does not account for its appearance in complex sentences for which the NP-relative interpretation is inappropriate (for example, T-relatives, conditionals, and purposives). The occurrence of */ɲula/* there must be accounted for in a different way. I would like to suggest the following. Preposed relative clauses, of all types, are derived from right-adjoined relatives by means of a transformational rule which positions them to the left of the main clause and

Chomsky-adjoins them to the top-most S-node. This might, incidentally, account for the prevailing tendency to pause between a preposed subordinate clause and the main clause since, after preposing, the former would be removed from the latter by two S-nodes. The preposing rule does not entirely eliminate the original right-adjoined relative clause; rather, it leaves a trace of it in the form of the anaphoric element */ɲula/* (which functions as a ‘sentence proform’, in this case). This element, being less than a sentence, subsequently attracts into the main clause—and, preferably, into a focused position within that clause; hence its favoured initial position. Attraction of */ɲula/* into the main clause is, so far as I can tell, obligatory.

The preposing rule postulated here operates on a structure of the form represented in (22) above to produce a derived structure of the following form:



Subsequently, */ɲula/* attracts into the main clause—that is, the clause immediately to its left—and assumes a focused position there.

There is independent motivation for the first step in this derivation—in particular, the leaving of a trace of an extracted constituent. Walbiri has a left-dislocation rule which extracts a noun phrase from a finite clause, leaving */ɲula/* behind. Apparently, a left-dislocated noun phrase is Chomsky-adjoined to the S-node—in any event, it is clearly removed from the sentence as evidenced both by pausing and by the fact that it is no longer a constituent of the sentence for the purposes of Aux-Insertion:

- (43) *ɲapiri yan̄ka, ɲula ka kari-mi wulpayi-ɭa.*
 (eucalyptus the, it AUX stand-nonpast creek-loc)
 ‘The river red gum, it grows in creeks.’

The second part of the derivation—that is, attraction of */ɲula/* into the main clause—is strictly associated with the suggested preposing rule, and its justification will depend upon the outcome of further research relating to the proposal as a whole.

My own interest in this proposal is considerably heightened by sentences like the following:

- (44) (a) *maliki kutja-φ wanti-tja, ɲula-kura φ-ɲa yaɖa-paka-ɲu ɲatjulu-ɭu.*

- (dog COMP-AUX fall-past, then-COMP AUX rep-strike-past I-erg)
 'When the dog fell, thereupon I struck it.'
- (b) *ɲatju kutja-φ-ɲa wanti-tja, ɲula-kura φ-tju maliki-li-lki yaɖa-pu-ɲu.*
 (I COMP-AUX fall-past, then-COMP AUX dog-erg-then rep-bite-past)
 'When I fell down, thereupon the dog bit me.'

These contain preposed T-relative clauses. Interestingly, the anaphoric trace, left behind by the preposing operation and subsequently attracted into the main clause, is inflected by precisely the same complementiser that would have appeared on the subordinate clause if it had been an infinitive—that is, the complementiser which appears when the object of the main clause controls the deletion of the subject of an infinitive T-relative. This is very suggestive. It suggests, in effect, that a record of the particular NP-coreferentiality holding between the main and subordinate clauses—including information concerning the grammatical relations which the coreferential noun phrases bear in their own clauses—is encoded in the relative clause, perhaps in the REL-node, or in the relative complementiser, and is, moreover, maintained in the trace left behind in the preposing process. The spelling out of the complementiser then follows a general rule that the case-like suffixal form is used whenever the appropriate 'record keeping' features are present in a category which is less than a full sentence—that is, not only infinitives, but anaphoric elements as well.

A great deal of work remains to be done on the relative clause in Walbiri. My purpose here has been merely to indicate some potentially fruitful topics for investigation. An important area which I have not touched upon in this discussion is the accessibility of a noun phrase to relativisation (cf. Keenan 1972, and other references to his work cited there). If the adjunction analysis is correct for Walbiri, then the accessibility question in Walbiri amounts to the following: In structure (23), under the NP-relative interpretation (assuming this to be a real notion), what grammatical functions and what structural positions may NP_j occupy? In Walbiri, there are no apparent limits on the grammatical functions of NP_j within the immediately subordinate clause, but I have not as yet been able to determine the total range of structural positions which NP_j may occupy, though I doubt that they differ in any essential way from the positions which any anaphoric element, construed with an antecedent in the main clause, may occupy.

2. Examples of the adjoined relative in Kaititj

I would like now to turn to a brief presentation of data on the relative clause from another Australian language. I have chosen the Arandic language Kaititj to do this. Although Kaititj is an eastern neighbour of Walbiri, and therefore geographically close to the latter, its relative clause differs in interesting ways, as does that of the Arandic languages generally.

Kaititj, like Walbiri, has a class of finite subordinate clauses which receive a NP-relative interpretation. These are especially marked by means of an enclitic complementiser */-ar/* (*/-al/* in the other Arandic languages) which attaches to the first constituent of the subordinate clause:

- (45) *agir atj ari-nk, atuyi-l-ar wi-nh.*
 (kangaroo I:erg see-pres, man-erg-COMP shoot-past)
 'I see the kangaroo that the man shot.'

(Arandic segmental phonology is quite complex and not particularly well understood; and I would like to make a few comments on the orthographic representations. The symbol */i/* represents a high to high-mid central vowel [*i ~ ə*], except morpheme-initially, where it is a high-mid front vowel. It tends to front and raise when adjacent to */y/*, and to round when adjacent to */w/*. Word-final vowels, omitted from the transcription, are predictable entirely—they are the high to high-mid central vowel when unstressed; but they are the low central vowel [*a*] when stressed. Stress is also predictable, appearing on the first post-consonantal vowel in the word. The symbol */g/* designates an unrounded dorso-velar glide, and the symbol */h/* is used as a diacritic to represent lamino-dental articulation. There also exists a series of nasals with stop-onset—these are represented by upper-case letters. Other symbols have their conventional Australianist values.)

The subordinate clause in (45) is presumably reduced from the following:

- (46) *atuyi-l agir wi-nh.*
 (man-erg kangaroo shoot-past)
 'The man shot the kangaroo.'

by deletion of */agir/* 'kangaroo' under identity with the object noun phrase in the main clause. Kaititj, and the other Arandic languages as well, differ rather strikingly from Walbiri in that finite relative clauses are inflected for case in agreement with the main-clause noun phrase with which they are construed. This is not apparent in (46), since the relevant main-clause noun phrase there, being an object, is in the absolutive and is, therefore, not overtly marked for case. But in (47) below, the main-clause noun phrase is in the dative case—in conformity with the case government of the main-clause verb */uNthu-/* 'to seek'—and the relative clause accordingly, is inflected for dative case. The case ending is suffixed directly to the finite verb:

- (47) *agiri-w ayiy uNthu-ran, atuyi-l-ar wi-nhi-w.*
 (kangaroo-dat I:nom seek-prog, man-erg-COMP shoot-past-dat).
 'I am looking for the kangaroo that the man shot.'

Further examples of case agreement are presented below:²

- (48) (a) *agiri-wal ayiy api-yir, ɲt-ar wi-nhiri-wal.*
 (kangaroo-dir I:nom walk-fut, you:erg-COMP shoot-past-dir)
 'I will go up to the kangaroo which you shot.'
- (b) *agiri-wal ɲ api-n, atj-ar ayNi-njiri-wal.*
 (kangaroo-dir you:nom walk-imperative, I:erg-COMP spear-past-dir)
 'You go up to the kangaroo I speared.'
- (c) *agiri-w ayiy uNthu-ran, atjar ayNi-nji-w.*
 (kangaroo-dat I:nom seek-prog, I:erg-COMP spear-past-dat)
 'I am looking for the kangaroo I speared.'

- (d) *ulakiyti-l ayiη anti-yan, atjiri-yi-l-ar atji-η katji-mpwari-nhi-l.*
(windbreak-loc I:nom sit prog, brother-my-erg-COMP me-obj
benefactive-make-past-loc)
'I am sitting in the windbreak that my brother made for me.'
- (e) *aṭuyi-thiy ayiη api-nhi-ηin, η-ar uNthu-yayni-thiy.*
(man-elative I:nom walk-past-hither, you:nom-COMP seek-past:
imperfective-elative)
'I have come from the man whom you were seeking.'
- (f) *aṭuyi-w ayiη uNthu-ran, ηki-η-ar alari-nhi-w.*
(man-dat I:nom seek-prog, you-obj-COMP hit-past-dat)
'I am looking for the man who hit you.'

Kaititj shares with Walbiri the option of preposing the relative clause, although it seems to be taken up somewhat less often in Kaititj than in Walbiri—in the case of the NP-relative at least. When the relative clause is preposed, the coreferential noun phrase remains undeleted in the subordinate clause, but its main-clause partner is represented by a determiner or by the anaphoric element /*riηh*/ (advanced to initial position in the main clause, as in Walbiri):

- (49) *alu-yi-l-ar atiy atj-nh, riηh atj alpiṛiyini-nk.*
(father-my-erg-COMP tree chop-past, it I:erg carry-pres)
'The tree that my father chopped down, I am carrying it.'

Although my data are not absolutely clear on the matter, sentences like (50) below suggest that case agreement is not contingent upon deletion of a noun phrase from the relative clause, as it is in the case of the Walbiri infinitive, since the preposed relative clause—from which no noun phrase has been deleted—shows case agreement:

- (50) *aṭuy anη-ar aNti-yani-l, anηi-l-aṭ atji-η wi-nhir.*
(man that-COMP stand-prog-erg, that-erg-emph me-obj shoot-past)
'That man who is standing (there), that one shot me.'

Perhaps the most interesting possibility suggested by the data from Kaititj relates to the phenomenon of attraction. Although this must be regarded as a matter in need of exacting research, the preliminary indications are that Kaititj allows a finite relative clause to attract into the main clause and, as a unit, to *replace* the main-clause noun phrase with which it is construed. Consider, for example, the following sentence:

- (51) *agir-ar ampwari-nhi-waḷ η api-n.*
(kangaroo-COMP die-past-dir you:nom go-imperative)
'Go up to the kangaroo that died.'

There are several things about (51) which are worthy of note. Firstly, unlike other complex sentences cited for Kaititj, (51) contains no intonational break, suggesting that the subordinate clause is integrated into the main clause. This integration is further evidenced by the position of the main-clause subject pronoun /*η*/ 'you-nom'—a singular subject pronoun often

becomes reduced in stress (and it is reduced in (51)); when they do, they behave as clitics and move to second position within their clause (not unlike the Kaititj complementiser /-ar/ and the Walbiri auxiliary), forming a prosodic unit with the first constituent of the clause. These singular pronouns normally undergo this process of cliticisation, and sentence (51) is evidently an instance. The pronouns typically remain initial within their clause only when augmented in some way, whether by emphatic stress or by the relative complementiser /-ar/ (cf. (48a, b, c) above). Secondly, the position of the complementiser /-ar/ in (51) indicates that the noun phrase /*agir*/ 'kangaroo' is a surface constituent of the subordinate clause, not the main clause—the main-clause coreferent is entirely absent from (51). And finally, the case category associated with the noun phrase /*agir*/, that is, absolutive (or nominative), also indicates that that noun phrase is a constituent of the subordinate clause—its absolutive marking follows from the fact that it is the subject of the subordinate verb, which is intransitive.

The following are additional examples of this apparent attraction of a relative clause into the position of the coreferential main-clause noun phrase:

- (52) (a) *aṭuy-ar aNti-yani-waḷ ayiη api-nk.*
(man-COMP stand-prog-dir I:nom go-pres)
'I am going up to the man who is standing (there).'
- (b) *aṭuy-ar aηki-rani-thiy ayiη api-nk.*
(man-COMP speak-prog-elative I:nom go-pres)
'I am walking away from the man who is speaking.'

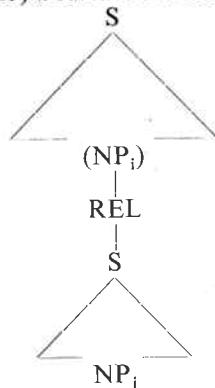
In (51) and (52), the coreferential noun phrase in the subordinate clause is the subject, and therefore initial in its clause. If the coreferential noun phrase is not the subject, it is apparently fronted, leaving the somewhat unusual surface ordering in which the complementiser /-ar/ appears to attach to the second constituent of the subordinate clause. It is quite possible that this apparent fronting is in fact raising, and that it brings the subordinate noun phrase out of its own clause—in which case the positioning of the complementiser would not be exceptional. The case marking in (53), however, clearly indicates the grammatical relation of the fronted noun phrase within the subordinate clause (that is, dative as opposed to the elative appropriate to its main-clause partner (see (48e))):

- (53) *aṭuyi-w (,) η-ar uNthu-yayni-thiy ayiη api-nhi-ηin.*
(man-dat (,) you:nom-COMP seek-past:imperf-elative I:nom walk-past-hither)
'I have come from the man whom you were seeking.'

(This example was recorded with a tentative pause, or an audible decrease in tempo, following the fronted noun phrase.) Other examples of this fronting, or raising, follow:

- (54) (a) *kayl ηṭ-ar irki-nhi-w ayiη itṛari-ran.*
(boomerang you:erg-COMP trim-past-dat I:nom crave-prog)
'I want the boomerang you trimmed.'
- (b) *kayl ηṭ-ar irki-nhi-l atj aNhiluṅk wi-with.*
(boomerang you:erg-COMP trim-past-inst I:erg emu hit-desiderative)
'I want to hit an emu with the boomerang you trimmed.'

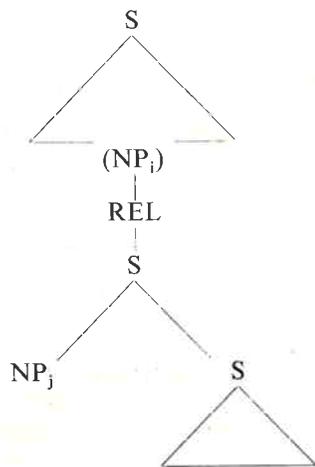
It seems natural to suggest that sentences like (51–2) are derived by means of a transformational rule, following case agreement, which attracts a right-adjoined relative clause into the main clause. Moreover, since the main-clause coreference partner does not actually appear in (51–2), it is possible that it is replaced by the relative clause. One might speculate along these lines, that Kaititj, like Walbiri, has underlying structures of the adjoined type represented in (23). But, unlike Walbiri, Kaititj not only inflects its finite clause for case in agreement with the main-clause noun phrase NP_i, but it also has the option of attracting the relative clause into the main clause to replace NP_i, thereby deriving from (23) a surface structure of the form (55)



According to this hypothesis, Kaititj possesses an embedded relative clause—at the surface structure level of syntactic representation, but not at deep structure.

To account for sentences like (53–4) as well, one might speculate further that, if NP_j—the coreferent in the subordinate clause—is a nonsubject, and therefore noninitial in its clause, it is extracted to the right and, perhaps, Chomsky-adjoined to the subordinate S-node. This extraction, or raising, would convert (55) to:

(56)



The details of such a proposal must, of course, await further research. It is not clear, for example, whether the attraction rule actually involves replacement of NP_i, for there are apparent instances of attraction in which NP_i, with its case marking appropriate to its role in the main clause, remains undeleted while NP_j is deleted from the subordinate clause:

- (57) *atjiri-yi-l-ar atji-ŋ katji-mpwari-nhi-wal ayiy alpi-nk, anjtju-wal.*
 (brother-my-erg-COMP I-obj benefactive-make-past-dir I:nom return-pres, shelter-dir)
 'I am returning to (that which) my brother made for me, to the shelter.'

But the status of this sentence, and others like it, is not clear. It is possible that the main part of (57) is simply indeterminate with respect to nominal reference i.e., that the nominal is unspecified and, therefore, not overtly represented) and that the apparent main-clause noun phrase *[anjtju-wal]* 'shelter-dir' is, in fact, merely appended to the sentence as a whole, as an afterthought, to supply specification. This is not an unusual practice in Australian usage, and the intonational break preceding *[anjtju-wal]* is consistent with this alternative interpretation.

In considering the details of the attraction proposal, it may prove relevant to study parentheticals as well. Sentences like (58a–b) below show the relative clause inserted in the position immediately following NP_i (that is, the main clause coreferent):

- (58) (a) *atuy withi-l-at, atji-ŋ-ar alari-nhi-l, ŋki-ŋ ari-mikitj.*
 (man the-erg₃-emph, me-obj-COMP hit-past-erg, you-obj see-admonitive)
 'The man, who hit me, is liable to see you.'
 (b) *atuy, atji-ŋ-ar alari-nh, ŋki-ŋ uNthu-ran.*
 (man, me-obj-COMP hit-past, you-obj seek-prog)
 'The man, who hit me, is looking for you.'

But parentheticals, unlike attracted clauses of the type represented by (51–2), are set off intonationally by clearly perceptible pausing.

In this brief discussion of Kaititj, I have restricted my attention to clauses receiving the NP-relative interpretation, since these are the most clearly relevant to the issues surrounding the adjunction analysis. It is clear that Kaititj presents a direct challenge to this conception of relatives, since it possesses both the adjoined and the embedded relative clause in surface structure. I have suggested that the clauses are underlyingly adjoined and derivatively embedded. Obviously, of course, there exists the alternative possibility that they are underlyingly embedded and derivatively adjoined. And a third possibility, certainly worth attention, is that both types exist at deep structure. If the embedded relative is basic in Kaititj, then, to account for sentences of the type represented by (51–2), there must be some provision for eliminating the head noun phrase, since it does not appear in surface structure. But this is not unprecedented—for a discussion of the 'headless' relative clause in Navajo, an American Indian language, see Platero (1973); and, for an alternative account of the phenomenon, see Hale and Platero (1974).

3. Concluding remarks

Although I cannot at this point give definitive arguments in support of the basicness of the adjoined relative in the two languages used to exemplify it in this paper, I have presented the adjunction analysis as a possibility which, I feel, deserves serious consideration.

It is my opinion that, historically at least, the adjoined relative takes priority over the embedded relative in Australia. It has been reported in languages as distinct from Walbiri and Kaititj as Lardil of Mornington Island in the Gulf of Carpentaria (see, for example, Klokeid 1973), the Northern Paman language Linngithig of Cape York Peninsula (see Hale 1966), and Mabuig of Torres Strait (see Klokeid 1970); and I have found it also in Ngarluma of the northwest coast, Warramunga of central Australia, and in Gurindji of northern central Australia.

I am encouraged, further, to speculate that the development of the embedded type, exemplified here by Kaititj, is intimately related to the phenomenon of attraction. The attraction rule itself, in my opinion, has entered the grammars of certain Australian languages for a reason. That is to say, it is functionally motivated.

If it is true that the NP-relative interpretation is achieved by means of an interpretive rule which embeds the semantic reading of an adjoined relative clause into NP_i in the main clause, where this noun phrase has a coreferential partner NP_j in the subordinate clause, then, subsequent to the interpretation rule, there exists a syntactic/semantic disparity in subordination—the relative clause is syntactically adjoined but semantically embedded. The attraction rule, I propose, exists precisely to eliminate this disparity. (See Hale 1971, for further discussion of this proposal.) If the attraction rule becomes obligatory at some stage in the historical development of a language, it does not seem unreasonable to imagine that a grammatical reanalysis takes place, giving rise to a deep-structure relative clause of the embedded type. I suspect that this is the genesis of the embedded relative clause in many languages of the world which indisputably possess it.

Acknowledgements

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Notes

1. There is some question as to whether a complement clause in */-ɲkaɲi ~ -jaɲi/* is necessarily construed with a dative NP in the main clause, as is the case in (16). There is an alternative in which the dependent clause is not construed with a NP in the main clause at all. In this alternative, the subject of the dependent clause remains undeleted but is inflected with the dative ending */-ku/*:

kuɖu ka tjaɖa-ɲuna-mi, kiɖa-ɲjanu-ku kaɭi tjaɲti-ɲiɲitja-ɭaɲi.
(child AUX sleep-lie-nonpast, father-own dat boomerang trim-
infinitive-COMP)

That the NP */kiɖa-ɲjanu-ku/* (father-own dat) is a constituent of the subordinate clause, rather than of the main clause, is evident not only from the intonational properties of this sentence but also from the fact that the dative NP in question fails to cause dative agreement in the main-clause auxiliary—compare (16), in which the main-clause auxiliary */ka-ɭa/* contains the third person singular dative pronominal element */-ɭa/*, in agreement with */kiɖa-ɲjanu-ku/*.

2. Apparently, case-agreement applies only when the subordinate clause shows verb-final word order. In an alternative rendering of (48c)—in which the subject, not the verb, is in final position—the subordinate clause does not show case agreement:

(48c) *agiri-w ayiɲ uNthu-ran, ayNi-nj-ar atj.*
(kangaroo-dat I:nom seek-prog, spear-past-COMP I:erg)

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5. Accusative marking in Duungidjawan (Waga-Waga)

S. A. Wurm

(1) Wagawaga is an almost extinct language formerly occupying a region extending to the north-west from the present-day Brisbane area as far as Gayndah on the Burnett River. The discussion given below is based on the southernmost of its three dialects, that is, Duungidjawan.

(2) Duungidjawan is somewhat unusual in being morphologically an ergative language for nouns and pronouns, and at the same time showing fairly extensive accusative marking with the help of the usual Australian accusative suffix *-na*.¹ This suffix has the allomorphic forms *-n^ya* with the first person singular personal pronoun, *-ŋa* with the third person singular pronoun and *min^ya* 'what' and *-ma* when added to words ending in *-m*, for example:

<i>d^yan-na</i>	man (accusative)
<i>ŋa-n^ya</i>	me
<i>d^yan-bam-ma</i>	two men (accusative)
<i>yo-ŋa</i>	him

In most Australian languages, the accusative suffix appears as *-ŋa ~ -n^ya*. Duungidjawan, in having *-na ~ -n^ya* (*~ -ŋa ~ -ma*) therefore seems to be somewhat unusual, though the form *-na* appears to be present in some other Australian languages such as southern members of the Mari subgroup of the Pama-Maric group of the Pama-Nyungan languages (for example Bidyara, Breen, 1973).

(3) A table of the personal pronouns and 'what' in the nominative, ergative and accusative forms is given for illustration:

	Nominative	Ergative	Accusative
1sg	<i>ŋai</i>	<i>ŋad^yu</i>	<i>ŋan^ya</i>
2sg	<i>ŋin</i>	(<i>ŋ</i>) <i>indu</i>	(<i>ŋ</i>) <i>ina</i>
3sg	<i>yo:(ru)</i>	<i>yo:(ru)ndu</i>	<i>yo:ŋa</i>
1dl	<i>ŋa:m</i>	<i>ŋa:mbu</i>	<i>ŋa:mma</i>
2dl	<i>ŋowa:m</i>	<i>ŋowa:mbu</i>	<i>ŋowa:mma</i>
3dl	<i>yowa:m</i>	<i>yowa:mbu</i>	<i>yowa:mma</i>
1pl	<i>ŋa:(me)</i>	<i>ŋa:(me)ndu</i>	<i>ŋa:(me)na</i>
2pl	<i>ŋuwe:(me)</i>	<i>ŋuwe:(me)ndu</i>	<i>ŋuwe:(me)na</i>
3pl	<i>yo:wa(ra)n</i>	<i>yo:wa(ra)ndu</i>	<i>yo:wa(ra)mna</i>
what	<i>min^ya</i>	<i>min^yandu</i>	<i>min^yaŋa</i>

(4) The accusative suffix is added to pronouns, and to nouns which denote human beings, including proper names, and some other animate beings such as dogs for instance. It also appears with a few other nouns such as *dadu* 'tree' and *guyum* 'fire, camp'. Examples:

bugin^y-du (*ŋ*)*i-na* *iya:-u*
 dog-erg. thou-acc. bite-future
 'the dog will bite you'

bugin^y-bam-bu *ŋa:m-ma* *iya:-i-n^yi*
 dog-dl-erg. we-two-acc. bite-past-complete
 'the two dogs bit us two'

ŋa-d^yu *ŋunam-ma* *n^ya-ŋi* *guyum-ba*
 I-erg. children-acc. see-past camp-loc.
 'I saw the children in the camp'

ŋa-d^yu *n^ya-ŋi* *Giyirbawa-na* *n^yuŋa:-mba*
 I-erg. see-past Giyirbawa-acc. front-loc.
 'I saw Giyirbawa in front'

ŋunam-bu *bugin^y-na* *bum-be:*
 children-erg. dog-acc. beat-pres.
 'children are beating the dog'

ŋa:m-bu *n^ya-ŋi* *guyum-ma*
 we-two-erg. see-past camp-acc.
 'we two saw the camp'

(5) Examples with nouns denoting other animate, and inanimate objects:

ŋa-d^yu bum-i *man goro:man d^yuyume*
 I-erg. kill-past this kangaroo yesterday
 'I killed this kangaroo yesterday'

d^yan man ninda-i *baran* *ma:n-gu-wa*
 man this stoop-past boomerang pick up-future-purpose
 'this man stooped to pick up the boomerang'

ŋa:-rin^y-du *buwa:-u* *gundu* *d^yend-i-n^yi* *d^yuyume*
 I-poss.-erg. father-erg. canoe steer-past-complete yesterday
 'my father steered the canoe yesterday'

(6) With nouns indicating body parts, the accusative suffix is added to the personal pronoun denoting the person to whom the body part belongs. The noun itself carries no suffix. Examples:

bugin^y-du *man ba-i* (*ŋ*)*i-na* *bi* *d^yuŋ-ba-wa*
 dog-erg. this come-past thou-acc. hand lick-intention-purpose
 'the dog came intending to lick your hand'

ŋa-n^ya mo: *giniŋ* *ba:ba-i* *gan guwe* *ŋai d^yambal*
 I-acc. that(person) arm hit(with spear)-past that result I pain
 'that man there hit my arm with a spear and now it hurts'

(7) The accusative suffix *-na* appears with the direct object. With verbs such as 'give', 'tell', 'show', 'turn towards', it is added to the indirect object. Examples:

(ŋ) *i-ndu wiye-ŋi guyur bugin^y-na*
 thou-erg. give-past food dog-acc.
 'you gave food to the dog'

ŋa-d^yu bin^ygu wiye-nge bugin^y yo-ŋa
 I-erg. tomorrow give-incomplete dog he-acc.
 'I'll give him a dog (sometime) tomorrow'

ŋa-n^ya mo: ya-i baran ŋa-n^ya wiye-wa
 I-acc. that(person) speak-past boomerang I-acc. give-purpose
 'he spoke to me (to tell me) that he would give me a boomerang'

ŋa-d^yu binan wa:-i yo:wa-na
 I-erg. ear turn they-acc.
 'I turned my ear towards them (i.e. I listened to them)'

(8) With the verbs listed above in (7), the possessive suffix *-gari* appears sometimes instead of the accusative suffix *-na* with the pronoun denoting the indirect object. Example:

ŋa-d^yu guŋ wiye-ŋi ŋin-gari
 I-erg. water give-past thou-poss.
 'I gave you water'

(9) Adjuncts constituting a noun phrase with a noun carrying the accusative suffix *-na* also have this suffix added to them. Examples:

(ŋ) *in-du bum-i-n^yi bugin^y-na ŋa:-rin^y-na*
 thou-erg. hit-past-complete dog-acc. I-poss.-acc.
 'you hit my dog'

(ŋ) *in-du wiye-ŋi guyur bugin^y-na ŋin-garin^y-na*
 thou-erg. give-past food dog-acc. thou-poss.-acc.
 'you gave your dog food'

na-d^yu d^yan-bam-ma bu:gubu-na n^ya-ŋi biya:yu-na
 I-erg. man-dl-acc. short-acc. see-past two-acc.
 'I saw the two short men'

ŋa:m-bu n^ya-ŋi yo-ŋa mura-n^yi-na
 we-two-erg. see-past he-acc. paint-complete-acc.
 'we saw him painted up'

ŋa-d^yu n^ya-ŋi bugin^y-na ŋin-garin^y-na iya-i-na
 I-erg. see-past dog-acc. thou-poss.-acc. bite-past-acc.

bugin^y-na ŋa:-rin^y-na
 dog-acc. I-poss.-acc.
 'I saw your dog bite my dog'

There are some restrictions to this. So, for instance, *man* 'this' and *gan* 'that' do not take *-na* as adjuncts. Example:

ŋa:m-bu wiye-ŋi guyur bugin^y-bam-ma biya:yu-na man
 we-two-erg. give-past food dog-dl.-acc. two-acc. this
 'we two gave food to these two dogs'

NOTE: Regarding relative clauses, it appears that any noun phrase in the matrix sentence can become referential with any noun phrase in the relative clause.

ŋad^yu ye-rere-nge d^yan-gu muyi-mba gan
 I go-cont.-incomplete man-dat. sunny-place-loc. that
man^yur-ne-nge-gu
 sleep-pres.-incomplete-dat.
 'I am going to the man who is asleep in that sunny spot'

d^yan-du gan gya:-ye-nge buwa:-waŋu goro:man
 man-erg. that speak-pres.-incomplete father-comit. kangaroo
bum-i-waŋu d^yuyume
 hit-past-comit. yesterday
 'that man is talking with (my) father who killed a kangaroo yesterday'

If the noun to which the relative clause refers has no suffix, it is mostly taken up by a personal pronoun.

d^yan-bam man^yur-ne-nge muyi-mba gan (yowa:m-bu)
 man-all sleep-pres.-incomplete sunny-place-loc. that they-two-erg.
goro:man bum-i budirgu d^yuyume
 kangaroo hit-past completely yesterday
 'the two men who are asleep in that sunny spot killed a kangaroo yesterday'

(10) With nouns to which the accusative suffix *-na* is not normally added, it appears with the last of the adjuncts added to them. Example:

ŋin-du n^ya-ni goro:man ŋa-d^yu bum-i-na
 thou-erg. see-past kangaroo I-erg. kill-past-acc.
 'you saw the kangaroo which I killed'

It appears that in this, the dual suffix *-bam* does not count as an adjunct, because the accusative suffix *-na* appears with it only if *-bam* is added to nouns which can potentially take *-na*. Examples:

ŋa-d^yu dadu-bam-ma n^ya-ŋi
 I-erg. tree-dl-acc. see-past
 'I saw the two trees'

but:

ŋa-d^yu *baran-bam* *n^ya-ŋi*
I-erg. boomerang-dl see-past
'I saw the two boomerangs'

If the two words *dadu* 'tree' and *guyum* 'fire, camp' mentioned in (4) are accompanied by an adjunct, *-na* is not added to them, only to the adjunct. Example:

ŋa-d^yu *n^ya-ŋi* *guyum* *biya:yu-na*
I-erg. see-past fire two-acc.
'I saw two fires'

With numerals such as *biya:yu* 'two', this is sometimes also found with nouns which can potentially take *-na*. Example:

ŋa-d^yu *n^ya-ŋi* *bugin^y-bam* *biya:yu-na*
I-erg. see-past dog-dl two-erg.
'I saw two dogs'

(11) The same phenomenon as mentioned above in (10) is found with nouns to which the accusative suffix *-na* can potentially be added, but which are indefinite in a given sentence. Example:

ŋa-d^yu *d^yan* *bu:gubu* *n^ya-ŋi* *gaŋu:-na*
I-erg. man short see-past one-acc.
'I saw one short man'

NOTE: The ergative suffix, which also functions as the instrumental marker, has the following allomorphs:

- ndu* after a final short vowel
- du* after final consonants except *-m*, *-r*, and *-ŋ*
- bu* after *-m*
- ru* after *-r*
- ŋu* after *-ŋ*
- wu* after a final long vowel
- d^yu* with the first person singular pronoun

Notes

1. The phonemes of Duungidjawa are as follows:

<i>b</i>	<i>d</i>	<i>d^y</i>	<i>g</i>	<i>i</i>	<i>u</i>
<i>m</i>	<i>n</i>	<i>n^y</i>	<i>ŋ</i>	<i>e</i>	<i>o</i> with <i>V</i> :
	<i>l</i>			<i>a</i>	
	<i>r</i>				

w *ŋ* *y*

Retroflexed consonants have been observed rarely, but their phonemic status is in doubt.

Stops and nasals are subject to gemination on the phonetic level. This phenomenon, though predictable, is subject to rules of great complexity.

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6. Hierarchy of features and ergativity

Michael Silverstein

0.1. Introductory

This paper deals with the type of grammatical system that for diverse reasons has been called 'ergative' in the literature, trying to elucidate one universal aspect of the structure, namely, the 'split' of case system. Data for all ergative languages show a distinction between at least two complementary configurations for indicating the grammatical function of the principal noun phrases in a sentence. In this area of grammar, traditionally called 'case-marking', we find one kind of two-way distinction usually called 'nominative-accusative', another two-way distinction which we can call 'ergative-absolutive' (or 'ergative-nominative'), and sometimes three-way distinctions which we can call 'objective-agentive-subjective' after Dixon's (1972:xxii, 128) O-A-S lettering system (especially useful for Australian languages).¹

'Ergative-absolutive' (or simply 'ergative') languages, by minimal definition, identify noun phrase constituents in normal active, declarative surface forms as follows: the object of a transitive verb and the subject of an intransitive are treated alike, and the subject of a transitive verb is treated differently from both of these. Contrast in (1) this ergative schema A with the schema B of 'nominative-accusative' (or simply 'accusative') languages, such as the Indo-European languages with which we, as speakers, are familiar.

- | | | |
|------------------|--|---|
| (1) A. Ergative: | Subject of transitive
(ergative) | Object of transitive
Subject of intransitive |
| B. Accusative: | Subject of transitive
Subject of intransitive | Object of transitive
(accusative) |

Typically, the unique treatment of one of the three principal noun phrases is in terms of a case-marking formative attached to at least the head noun of the noun phrase, called the 'ergative' case-marking in type A, the 'accusative' in type B, and I suggest that our terminology be standardised along these lines.² Note also that I neutrally say 'treated differently' because not all ergative languages have nominal case-marking at the surface. It is obvious, however, that such syntactic mechanisms as agreement of verbs with noun phrase adjuncts and affixation of pronominal formatives, as well as word order, all express the same kind of grammatical-semantic information, namely the syntactic relations between noun phrase and verb, which we may call 'case-relations'. So, in a transformational account, for example, the 'structural descriptions' of all these transformational processes are the same, while the formal 'structural changes' differ. We can equivalently speak of

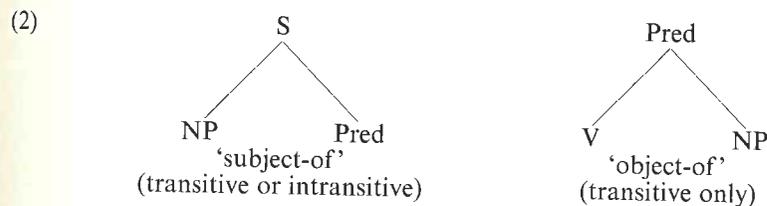
case-marking in all these systems, regardless of the actual surface manifestation.

In this paper, I want to bring out the fact that 'split' of case-marking is not random. At its most dramatic, it defines a hierarchy of what might be called 'inherent lexical content' of noun phrases, first and second person as well as third person. This hierarchy expresses the semantic naturalness for a lexically-specified noun phrase to function as agent of a true transitive verb, and inversely the naturalness of functioning as patient of such. The noun phrases at the top of the hierarchy manifest nominative-accusative case-marking, while those at the bottom manifest ergative-absolutive case-marking. Sometimes there is a middle ground which is a three-way system of O-A-S case-markings. We can define the hierarchy independent of the facts of split ergativity by our usual notions of surface-category markedness.

All ergative systems seem to show such split case-marking systems, minimally one of the 'lexical content' variety, but more often additional splits in independent *vs.* subordinate clauses, as in Ngaluma-Yintjipaŋti (Hale 1970:772) or Tsimshian (Boas 1911b:404), splits in present (-imperfective) *vs.* past(-perfective) tense(-aspect), as in Georgian or Pashto (Penzl 1955:98, 132-33), and so forth, in a non-random fashion. Some of these will emerge from a consideration of two extended examples below.

0.2. Importance to grammatical theory

Grammatical theorists who distinguish between surface and underlying form have been particularly concerned with ergative systems because of the question of universality of some underlying level of syntactic-semantic representation for languages. For this reason, a certain importance has attached to the question of whether or not a language is 'accusative' or 'ergative' at the underlying level of representation. Certainly, within any variant of the 'standard theory' (Chomsky 1972:66) or 'extended standard theory' (Chomsky 1972:134) of transformational grammar, the existence of an underlying 'ergative-absolutive' syntax would contradict the postulated universality of 'nominative-accusative' categorial distinctions at the level of the base component. The problem for the standard theory, which operates with a 'subject-of' (or 'nominative') case-relation and an 'object-of' (or 'accusative') case-relation, as shown in (2), is that there is no direct relationship between such underlying case-relations in normal active declarative structures and the actual ergative surface case-marking, as shown in (1A).



We might conclude, with the standard theory, that even the simplest active declarative of an ergative language does not manifest a direct relationship of surface case-marking and underlying case-relation, while the active declarative of an accusative language does. We can make the observation in

this theory that in accusative languages, after the passivisation transformation has applied, as in (3), the underlying object of the transitive appears in a surface case-form that looks like that of the subject of an intransitive verb, and the underlying subject of the transitive winds up in some surface instrumental phrase.

(3) Passivisation:

$s_{[NP[The\ boy]}]_{Pred}[v[hit]_{NP[the\ ball]]}] \Rightarrow$
 $s_{[NP[The\ ball]}]_{Pred}[be[hit]_{PP[by\ the\ boy]]}]$
 (cf. $s_{[NP[The\ ball]}]_{Pred}[roll]]$)

This division of case-marking in the passive sentences of accusative languages matches that of (1A) for the minimal ergative schema. Hence we might say that apparently ergative languages are really accusative languages with obligatory passive expression of transitive sentences.³ Kenneth Hale, in fact, has essentially proposed just such a schema, in keeping with the 'standard' theory. His article, *The passive and ergative in language change: the Australian case* (1970) resuscitates this old Schuchardt (1896)-Uhlenbeck (1901) theory, based principally on idealised typological data, rather than actual linguistic systems. He seems to claim that at least historically all ergative languages are accusative languages with obligatory passivisation transformation. Some languages (his type B-1) remain as this 'pseudo-ergative' type, where 'the ergative case is simply that of the agent of a passive', but not the 'surface subject in that sentence' (1970:764). Some languages (his type B-2, or 'passive ergative') have no passivisation rules after reanalysis of surface structures, but where underlying 'nominative NPs are subjects in both deep and surface structures' (1970:769), so that the 'subject-of' relation is preserved as in the standard theory. Some languages (his type B-3, or 'active ergative') reanalyse the 'subject-of' relation so that 'the subject of a non-transitive sentence is the *nominative NP* and the subject of a transitive sentence is the ergative NP' (1970:771).

There are difficulties of fact and presentation in Hale's argument (see Dixon 1972:136-37 for a few of them), which I will not dwell on here. But Hale's schema rightly focuses upon the systemic nature of ergative and accusative case-marking schemata, trying to explain (alas, incorrect) correlational facts from several areas of grammar, for example, the relationship between voice and case system. It is important also that Hale is disturbed by the fact that pronominal systems in particular are not compatible with his hypothesis, both by the fact that they are at least partly accusative, with distinct dative case that looks just like his putative proto-accusative case-form, and by the fact that they are morphologically ergative only where there is extensive cross-reference of noun phrases as the means of case-marking (1970:775-76), at the surface. In other words, what is most difficult to Hale's inherited approach becomes the focus of the discussion here. First, we must take the notion of 'surface subject', the keystone of his argument, as problematic rather than given. It will become apparent that 'surface-subject' is not a ready universal constant, but varies according to the interaction of underlying (propositional) case-relations of *adjunct* NPs and discourse-bound (sequential) reference-relations of *topic* NPs. (For all three of these levels,

Hale uses 'subject' as encouraged by the standard theory and its derivatives.) Second, we must observe the patterned surface case-marking distinctions of noun phrases in terms of their actually occurring formal features, which will show the importance of including first and second person pronouns in defining the total system. There is a distinction we will have to maintain between nominative-accusative vs. ergative-absolutive alternants, and ergative-absolutive vs. nominative-dative alternations, just as Hale perhaps suspected. And third, we must distinguish between types of reference relations expressed at the discourse vs. propositional levels, to understand the relationship between cross-reference, one from among several kinds of reference-maintaining mechanisms, and ergativity.

For, as is well-known, without any restrictive formal control over the power of postulated transformational rules based on given surface data, we can transform an arbitrary proposed underlying structure into an attested surface form. It is equally plausible, in other words, that without such control we might postulate that all languages are underlying ergative-absolutive systems, and use some obligatory 'anti-passivisation' to derive all accusative language structures (by reversing (3)), as Hans Vogt (1950) in essence observed *à propos* Georgian. We need hypotheses on the *function* of ergative systems at both levels, that of propositional semantics and that of discourse reference, in order to show what formal devices must be built into grammar. One such advocated here is the hierarchy in inherent lexical content of NPs and the generalisation of rule schemata that can be accomplished with features. We should ask what are the functions at these two levels of incontestably ergative case-marking systems, as stable linguistic surface types, which seem to have associated several recurrent properties: possessors and ergators (or apparent agents) are frequently identified at the surface at least (Eskimo, Chinook, Tsotsil, Quiche); non-ergators (or apparent patients) are incorporated into verb-complexes in the same way, whether they are in transitive or in intransitive structures (Iroquoian, Tsimshian, Wichita); mediopassives and reflexives are identical in syntax and sometimes in form (Dyirbal, Chinook, Bandjalang); the 'antipassive' forms an 'active intransitive'—in Sapir's (1922:150-51, 153-54) felicitous phrase—with the underlying agent of the transitive in nominative case (Chinook, Aleut), or it forms a nominative-dative schema for inflectional purposes (Dyirbal, Georgian). I cite these to indicate that there recur certain transformational relations associated with ergative case-marking, and that these are evidence for a functional significance to the ergative system and its associated splits in ergativity. The range of stable surface features is greater than voice-case correlations, as discussed by Hale, and this must be encompassed by linguistic theory.

0.3. Outline of argument

The argument here, concentrating on lexical hierarchy but attempting to deal with several other aspects of the problem as well, proceeds from the discussion of markedness theory as applied to feature specification of noun phrases of all types, necessary to setting up some notion of inherent lexical content independent of the case-marking systems. Using such notions as markedness relations and feature specification, we can then characterise the kinds of split ergative systems attested, in a formal typology based on the

conditioning factors for split and the resulting surface configurations. This leads to a detailed consideration of two such split ergative systems, that of Chinook (Columbia River, North America) and Dyrbal (Cairns Rain Forest, Australia), as two contrastive types of surface structures which manifest highly comparable functions of the ergative-absolutive *vs.* nominative-accusative systems.

Chinook shows transformational relations of 'plain' and 'inverse' transitive inflections, where the 'plain' inflection is accusative *vs.* ergative depending on a lexical split, and the 'inverse' inflection is dative-nominative. As it turns out, the transformation of 'inverse' into split ergative ~ accusative 'plain' inflection is also triggered by a lexical hierarchy, so there are two interlocking systems of alternations, both conditioned by lexical content. Chinookan surface structure is 'appositional', that is, every major constituent has cross-referencing pronominals showing the derived (but recoverable) grammatical function of any noun-phrase adjuncts. Hence at the discourse level only a system of co-reference anaphora by zero is necessary across propositional boundaries. But in complex sentences, for example, with embedded nominalisations, it turns out that 'antipassive' forms, with nominative-dative inflection, are regularly used. The antipassive inflectional system is reminiscent of the 'inverse' inflection of transitives, which provides the key to the underlying form.

Dyrbal, too, has two systems of alternations, one a lexical hierarchy in which nominative-accusative *vs.* ergative-absolutive are distinguished, and another which alternates in discourse, where non-initial clauses show a 'normal' nominative-dative inflection, with the alternation to ergative-nominative determined by the co-presence of an 'indirect object'. Dyrbal surface structure shows grammatical case inflection localised on the very noun phrase adjunct which enters into a construction. Hence, at the discourse level, where there is also zero anaphora for co-reference, a system of switch-reference is found which employs 'antipassive' forms of transitives, and special forms of intransitives, to signal switch of underlying grammatical function of the co-referent noun phrase, and the plain split system to signal no switch. The special switch-reference forms show nominative-dative case-marking (with the transformation noted above to ergative-nominative), while the plain system shows nominative-accusative ~ ergative-absolutive.

The patterns of the two languages in fact point to the common nominative-dative system of case-marking as the basic one, the functional balance of usage in structuring discourse as indeed similar in both languages, and the splits of ergativity patterned with respect to a lexical hierarchy.

I start, then (§ 1), with a characterisation of markedness relations among noun phrase types, and then illustrate the range of types of split systems of case-marking that can be characterised in terms of features expressing markedness relations. Then I outline the syntactic systems of Chinook (§ 2) and Dyrbal (§ 3), drawing out conclusions at both the syntactic and semantic levels that are important for theory (§ 4).

1.1. Types of noun phrases

We attempt here to illustrate a kind of maximal syntactic feature analysis of noun phrase types, to impose structure on the inherent lexical content that emerges from the facts of reference.⁴ Under such an analysis, there are

basically only two personal pronoun types, traditionally categories of 'first' and 'second' persons. These, we should note, are 'shifters' or indexical signs that both denote and index (or presuppose/create) the participants in the speech act.⁵ The traditional 'third person' of Indo-European morphology in some ways parallels these personal pronouns in form; however, its syntactic behaviour is entirely different. 'Third person' noun phrases are basically nominal, that is, they are basically lexical nouns, and in transformational terms we can say that languages have rules of several kinds for 'pronominalisation' under certain conditions, giving rise to anaphoric (co-referencing) and appositional (cross-referencing) surface units that preserve, to different degrees, lexical properties of the underlying nominal expressions. In Benveniste's terms, the 'third person' is a 'non-person', and the referent of the surface pronoun depends on the underlying nominal expression plus the pronominalisation rules of syntax.⁶

On the basis of the classical theory of markedness, which operates with surface distributions and formal properties, we can classify true pronouns and cross- or co-referencing forms by several cross-cutting features, as in (4).⁷

(4) Feature specification of noun phrases:

	A	B	*	C	D	E	F	G	H	I	J	K		
a. [+/- ego]	+	+	+	+	+	+	-	-	-	-	-	-	}	'person'
b. [+/- tu]	+	+	+	-	-	-	+	+	+	-	-	-		
c. [+/- plural]	+	+	-	+	+	-	+	+	-	+	+	-	}	'number'
d. [+/- restricted]	+	-	(+)	+	-	(+)	+	-	(+)	+	-	(+)		

- A. first person inclusive dual
- B. first person inclusive plural
- C. first person exclusive dual
- D. first person exclusive plural
- E. first person singular
- F. second person dual
- G. second person plural
- H. second person singular
- I. third person dual
- J. third person plural
- K. third person singular

This is a kind of theoretical maximum for systems with an inclusive *vs.* exclusive distinction of 'person' in lines a. and b., and a singular-dual-plural distinction of 'number' in lines c. and d. The letters over the columns are keyed to the standard names of the feature bundles. Thus, the column D, commonly called 'first person exclusive plural', is positively specified for the feature [ego]. This grammatical feature has a semantic interpretation (or is generated by) a rule indexing and denoting the speaker in a speech situation. It is negatively specified for the feature [tu], which means that it does not index and denote the hearer. These characterise the 'person' categories of the noun phrase. We find also that it is positively specified for [plural], meaning that it denotes more than the speaker (but, as opposed to column B, the other individual or individuals are not specified as hearer(s)). It is negatively specified for [restricted], meaning that the further individuals are not specified

as unique and finitely enumerable. By a residual rule, (5), that is standard in markedness theory (see Jakobson 1932, 1936), this is interpreted as (or codes) more than one other denotatum. The other columns are similarly to be read off.

(5) Rule of residual semantic interpretation (coding):

Let grammatical feature $[F_i]$ code semantic property A. Then $[+F_i]$ means 'A' while $[-F_i]$ is interpreted as failure to specify A, i.e., $[-F_i]$ means \sim 'A'. But, residually,

$$\sim 'A' \Rightarrow \sim \sim 'A',$$

i.e., $[-F_i]$ can be interpreted as the negative of A.

Some languages lack any surface paradigmatic distinction of columns A and B from columns C and D, and it is not clear that there are transformational relations which motivate the distinction as a necessary universal underlying one. If there are none such, then clearly features in rows a. and b. are not independent, as in our maximal distinction, but the expansion of b. depends on the negative value of a., and the positive of a. entails (redundantly) the negative of b., so that we get a system as in (6). This matches in relative positions the first two lines of (4), a three-way 'person' distinction being particularly widespread.

(6) Person system with features a. and b. linked:

	C	D	E	F	G	H	I	J	K
a.	+	+	+	-	-	-	-	-	-
b.	(-)	(-)	(-)	+	+	+	-	-	-

These three-way systems of person, in fact, have been analysed by using features $[+/-\text{participant}]$, to capture the distinction between 'participants' in the speech situation, first and second persons, and the third person, a 'non-participant' (by definition; not being speaker or hearer, but perhaps an 'audience' at best).⁸ Then $[+\text{participant}]$ is subdivided as $[+/-\text{ego}]$, so that ultimately $[+\text{part}, +\text{ego}]$ is 'first' person, $[+\text{part}, -\text{ego}]$ is 'second' person, and $[-\text{part}]$ is 'third' person. I prefer to see $[\text{participant}]$ as a derived notion, an abbreviation meaning either $[+\text{ego}]$ or $[+\text{tu}]$ (or both), that is, to include those categories with some positive specification for person, since that is how we must incorporate them into hierarchical rules.

In addition, there is the question of which of $[\text{ego}]$ or $[\text{tu}]$ is the higher of the person features, as will be raised by the facts of split ergative systems, some of which distinguish 'first person' ($[+\text{ego}]$) forms from all the rest, others which distinguish 'second person' ($[+\text{tu}]$) forms from all the rest. In effect, while $[+\text{ego}]$ presupposes the speaker and hence is a presupposing index, $[+\text{tu}]$ creates the hearer as referent and hence is relatively more performative. On the other hand, the whole set of forms for referring to the hearer which we deal with under the rubric of 'politeness' indicate that the 'polite second person' forms are the most highly marked ones if categorially distinct. (In fact, Quiche, a Mayan language of Guatemala, has split ergativity with second polite forms set off from all the rest.) Both of these presupposing and performative forces seem to be at work in hierarchisation.

Turning to the number categories, it should be noted that the dual category, including all columns of (4) with non-parenthesised positive specification for line d., is a subcategory of plural. (I do not take up trial forms, the relationship of which to duals is not clear at present.) This subcategorisation is expressed by having only one value of the $[\text{plural}]$ feature further subcategorised for the feature $[\text{restricted}]$. Thus, the feature possibilities are somewhat like those for the three-way 'person' distinctions shown in (6).⁹

We need a rule to explain the hole in the pattern that occurs in chart (4) at the third column, marked with an asterisk. Any noun phrase with double positive specification for features $[\text{ego}]$ and $[\text{tu}]$ must be $[+\text{plural}]$. We can indicate this by a rule such as (7).

(7) Person-number interaction:

$$[+\text{ego}, +\text{tu}] \Rightarrow [+ \text{plural}]$$

Thus there is a systematic interaction between the features of 'person', a. and b., and the features of 'number', c. by rule (7), and, in turn, d. by subcategorisation rules of the normal variety. So again we have a means of indicating the ranking of the features, for part of the system at least: a. and b. are higher ranked than c. and these are all higher-ranked than d.

It seems that the feature $[\text{restricted}]$ is redundantly specifiable as positive for the singular category, as I have indicated in (4) with parentheses in line d. of columns E, H, and K. This is on the basis of our residual rule (5), and unifies the dual and singular categories as 'countable' on the basis of their feature specifications. Every once in a while, we come upon a marginal agreement rule, such as those for suppletive verb stems in Chinook, that operates on the basis of this common countability of denotata that are either singular or dual, as opposed to true unrestricted plural. Singular and dual also seem to operate as a class in Gumbaynggir split ergativity, as outlined below (§ 1.4).

Now the heavy double verticle lines separating columns A through H from columns I through K are meant to indicate the distinction between 'personal' and 'non-personal' noun phrases. The last three bundles represent, then, those forms that arise by transformational mechanisms of anaphora. Noun phrases that index neither speaker nor hearer (hence rows a. and b. are negatively specified) are either nominal or pronominal, with the pronouns deriving such features as number by copying rules that are part of the transformational pronominalisation process. Note in particular that many other features of noun phrases are usually represented in pronominal forms of the 'third person', such as animacy, gender, countability (in a sense different from that of our $[\text{restricted}]$ feature), semantic shape class, and so forth. These latter features depend on the lexical coding of nouns (or simple noun phrases, if you wish), different for each language, and, in the classical theory of pronouns which I formulate here, enter the pronominal system by the fact that 'third person' forms stand for regular lexical nouns. The formal parallelisms of true personal pronouns or indices, and pronominal markers or anaphors, is seen at the surface level; frequently there is an extension of 'third person' features elsewhere in the paradigm, as we find commonly for gender. But in an underlying, semantically-relevant consideration, there are two distinct systems we are dealing with.

1.2. Neutralisation and implication

Thus, the formal basis for a classification of noun phrases as shown in (4) becomes all the more interesting. Our notions of markedness values, reflected here by the assignment of pluses and minuses, as well as by the hierarchical ranking of features, are based upon language-specific criteria of distribution and neutralisation and parallel formal elaboration (along the columns of (4)), as well as upon general implicational relationships that seem to hold universally (along the rows of (4)).

(8) Neutralisation (of gender) by person category:

	3rd	2nd	1st	Neutralisation distinguishes
Chinook } Russian } Dyirbal }	no	yes	yes	1st, 2nd person from 3rd
Tunica	no	no	yes	1st person from 2nd, 3rd

Observe in (8) that the 'third person' noun phrases, doubly negative in rows a. and b. in (4), show surface gender distinctions in many languages (for example, Chinook, Russian, Dyirbal), while the 'personal' forms do not. With respect to personal (first and second) vs. non-personal (third), then, features of gender are neutralised in the personal forms, the positively specified, marked members.¹⁰ Some languages (for example, Tunica) have gender distinctions overtly in both 'second' and 'third' persons, but not in 'first'. So 'first person' shows a neutralisation of features of gender by comparison with 'second' and 'third' persons.

(9) Distribution (of person categories) by syntactic type:

Grammatical category which takes pro-form:	Person categories	
	3rd	1st, 2nd
[—] _{NP}	yes	yes
[—] _S	yes	no
[—] _{Adj}	yes	no

On a second basis of classification, as in (9), 'third person' forms, representing anaphoric pronominalisations of many kinds of surface noun phrases, usually of sentences and sentential nominalisations as well as of adjectives, are more widely distributed than 'first' or 'second' persons in the syntactic surface structure. This can be determined simply by counting up privileges of occurrence of formal types. These two criteria within a language give evidence for marked and unmarked values of surface-coded semantic distinctions represented in the pronominal system.

(10) Unidirectional neutralisation:

$[F_j]$ neutralised with respect to $[F_j, F_k, \dots] \Rightarrow [F_j, F_k, \dots]$ never neutralised with respect to $[F_j]$.

At the same time, if the neutralisation of some feature with respect to all others is consistent and unidirectional as in (10), we define a hierarchy of features in terms of distribution, one feature always defining a subdivision of another. Thus note that taking together all our examples of neutralisation of

gender indicates that these features are not so widely distributed (in surface privileges of occurrence) as features of person. In rule (7) also we predict that number is not so widely distributed as person as a distinctive feature. Further, that for example Russian pronominal categories neutralise gender with respect to number, but never vice-versa, predicts that number is more widely distributed as a distinctive feature, and hierarchically prior.

On a cross-linguistic basis, now, we can give laws of implication that combine these two kinds of observations into general conditions on the elaboration of feature systems, just as in phonology. These are of two kinds. The first kind, as in (11), says that if a language uses distinctive feature $[F_j]$, then it uses feature $[F_i]$; an example of this is the relationship of 'dual' and 'plural' categories as expressed by the features [plural] and [restricted], $[F_i]$ and $[F_j]$ respectively. Thus, if a language distinguishes [+restricted] 'duals' from [-restricted] other numbers, then it always distinguishes [+plural] 'non-singulars' from [-plural] 'singulars'.

(11) Universal of hierarchisation of features:

Language L uses $[+/- F_j] \Rightarrow$ language L uses $[+/- F_i]$.

(12) Universal of markedness hierarchisation of features:

Language L uses $[+/- F_j]$ for $[\alpha F_k] \Rightarrow$ language L uses $[+/- F_i]$ for $[-\alpha F_k]$, where α is usually taken to be '+'.¹¹

The second kind of implication is a combination of general markedness conditions (by the criteria outlined above) with feature hierarchy, the conditional then being of the form (12), that if a language implements distinctive feature $[F_j]$ within the category defined by $[\alpha F_k]$, α being plus or minus, then it implements $[F_i]$ within the category $[-\alpha F_k]$. In general, α is taken to be 'plus', so that we have a general criterion that marked values will, in general, be less differentiated than unmarked ones, as is the case for 'person' categories being differentiated by 'gender'. In some cases, as for example the 'number' distinctions, this does not seem to be true. These apparent exceptions might be one way of motivating a set of distinct m = 'marked', u = 'unmarked' values for these features, which can then be transcribed contingently into pluses and minuses. I do not wish to take this up here, however (but see fn. 9).

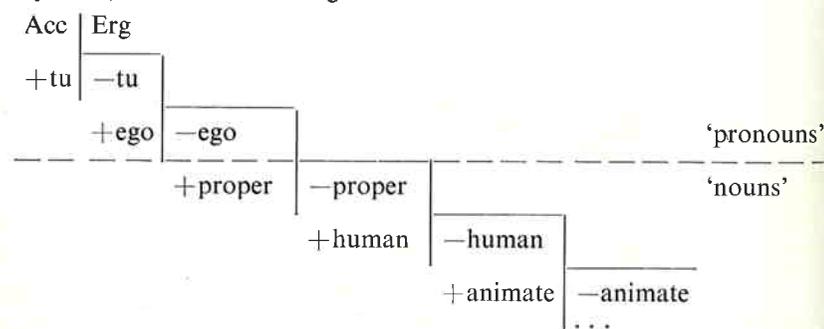
Notice that our schematic pronominal system of (4), on the basis of criteria of analysis that operate at the surface level, is nevertheless making systematic claims at the level of semantic naturalness. First there is the claim about ranking or hierarchy of features, then there are claims about marked and unmarked values of each of the features, and finally the implicit claims about indexical-referential and simple referential specificity. We would like to maintain that languages in general do show a relationship between surface morphological patterns and syntactic distributions on the one hand, semantic classes on the other hand. If our semantic representations are systematically related to, if not identical with, underlying forms, and these, in turn, are systematically related to surface patterns (assuming many constraints on transformational apparatus), we should in fact expect some recurrent relationships between semantic and surface levels. Historical changes in well-explored paradigms within Indo-European as well as elsewhere attest, for

example, to the constant vitality of the triply-unmarked 'third person singular' forms as semantically without positive specification, a referential zero form. This motivates constant reinterpretation of whatever surface forms are associated with third singular as real semantic zeroes, and the spread of third singular morphological material, made devoid of referential value, throughout the surface paradigm. No other explanation is acceptable. Only this explanation is theoretically adequate, since it shows the semantic basis for the change, and thus motivates it. In all these cases, the language is ironing out, as it were, the surface structures on the basis of semantic patterning, mediated by distribution. (See Kuryłowicz (1960) for the general theory and Watkins (1962, 1969) for extensive Indo-European exemplification.)

1.3. Hierarchy and split ergativity

The split ergative systems appear to be stable, recurrent types, which we can characterise using the framework just developed. If we take the notion 'case-marking' in its broadest sense, as the surface means of indicating case-relations of noun-phrase adjuncts, then split ergative systems show a split along the hierarchy of 'person' and 'number' features of the adjunct noun phrases. If an ergative system splits simply into two two-way case-marking schemes, then minimally either the [+ego] (or the [+tu]) forms are nominative-accusative, the rest ergative-absolutive. Next, the [+tu] (or, respectively, the [+ego]) forms are also nominative-accusative, the rest ergative-absolutive. Next, the pronouns, including the [-ego, -tu] anaphoric forms, all show accusative patterning, where such anaphoric pronominalisation usually applies to certain categories of nouns, proper personal nouns or animates. In each form of such simple binary two-way split subsystems, the rest of the noun phrases, below a certain point in a hierarchy, are ergative-absolutive. And so forth, as in (13). When we say $[F_i]$ forms, we mean sentences with this feature specification in the noun phrases.

- (13) Possibilities for simple lexical split of case-marking: two two-way subsystems, 'accusative' vs. 'ergative':



(Vertical lines mark successive divisions of accusative vs. ergative case-marking, only one in a given language)

For cases of simple, binary, two-way split ergativity, I want to maintain that, looking at this hierarchy of features of noun phrases, the lowest NPs

characterised by the features lexically distinctive of nouns, the highest ones 'person' features of surface pronominal paradigms, the following holds: If the noun phrases of a language have accusative case-marking at a certain plus-value of a feature $[F_i]$, and ergative case-marking for $[-F_i]$, then noun phrases are accusative for all features above $[F_i]$ in the hierarchy and ergative for all features below $[F_i]$ in the hierarchy. Curiously, it is not only accusative vs. ergative case-marking that operates in this fashion. For the principles of a lexical hierarchy being at the basis of a grammatical split in surface patterns are actually widespread.

This first kind of split gives a clear idea of the general form of the relations between hierarchical feature specification of noun phrases and functional surface grammatical systems. It is an interesting fact that such simple, binary, two-way splits usually are defined around some feature F_i from among those of 'person'. But there are several complications in the attested examples—the entire set of ergative languages—which lead to characterising the type just given as SIMPLE, LOCAL, BINARY, and uniformly TWO-WAY.¹¹ This typology can be elaborated upon by decomposing the form of the generalisation we just made.

Consider the fact that, by and large, it is the 'nominative' case of a nominative-accusative system, and the 'absolutive' case of an ergative-absolutive system, that are the unmarked, 'zero' citation forms, or forms for sentences with one NP, as well as for one of the adjuncts of a transitive. Thus, both the 'accusative' in the one system, the 'ergative' in the other, are marked, specific forms that signal the unique grammatical status of one of the adjunct NPs of a transitive verb. That is, there are really two distinct principles of case-marking hierarchy at work, each making its own independent statement about the naturalness (hence unmarked realisation) of NPs to serve in Agent or Patient grammatical function. As shown in (14), by using distinct subscripts, there is no logical necessity for the same feature $[F_k]$ to be the one controlling the agent hierarchy and the patient hierarchy. When the two fall together in one feature, the result is a BINARY, TWO-WAY split system, binary because there are two subsystems, two-way because each subsystem makes two case-marking distinctions at the surface.

- (14) Functional characterisation of case-marking splits:

- a. Agent hierarchy: $F_{i-n}, \dots, +F_i / -F_i, \dots, F_{i+m}, \dots, -NP$
BELOW $[+F_i]$, all NPs have *ergative* case-marking when functioning as transitive agent.
- b. Patient hierarchy: $F_{j-p}, \dots, +F_j / -F_j, \dots, F_{j+q}, \dots, -NP$
ABOVE $[-F_j]$, all NPs have *accusative* case-marking when functioning as transitive patient.

However, when the two crucial features of (14) do not coincide in the middle of the hierarchy, we have distinct but overlapping subsystems of case-markings. There are patterns that emerge. For example, it is a curious fact that the overlap always produces more case distinctions in the mid-to-lower range of the hierarchy than in the upper range. It is clearly a generalisation of great interest to the theory of markedness, since the formalism should guarantee that the less marked categories have the greater number of syntactic-morphological surface distinctions. Depending on the placement of the

features $[F_i]$ and $[F_j]$ in (14), then, we have many possibilities for additional types of systems, as shown in (15). The typology is keyed, where appropriate, to the traditional names for them.

(15) Some types of split case-marking systems (with reference to (14)):

1. F_i is NP (hence no $[+NP]$ gets ergative marking)
 F_j is NP (hence all $[+NP]$ get accusative marking)
 Simple, local, unary, two-way 'nominative-accusative' system.
2. F_i, F_j both not NP. $F_i > F_j$ (hence ergative marking overlaps with accusative marking in the mid-range of the NPs)
 Simple, local, ternary, 2-3-2 accusative-agentive-ergative system.
- *3. F_i, F_j both not NP. $F_j > F_i$ (hence accusative marking does not overlap with ergative marking in the mid-range of the NPs)
 Simple, local, ternary, 2-1-2 system [no examples found to my knowledge].
- *4. F_i is NP (hence no $[+NP]$ gets ergative marking)
 F_j not NP (hence some NPs have accusative marking)
 Simple, local, binary 1-2 nominative-accusative system with neutralisation.
5. F_i is not NP (hence some NPs get ergative marking)
 F_j is NP (hence all NPs get accusative marking)
 Simple, local, binary, 2-3 accusative-agentive system.
6. F_i unspecified (hence everything gets ergative marking)
 F_j is NP (hence everything gets accusative marking)
 Simple, local, unary, 3-way agentive system.
- *7. F_i is NP (hence no $[+NP]$ gets ergative marking)
 F_j unspecified (hence no NP gets accusative marking)
 Simple, local, unary 1-way system [impossible not to have means of agent-patient inflectional distinction].

We thus establish the distinctions among unary, binary, and ternary splits, depending on how many distinct case-marking schemata are associated with noun phrases, and among the two-way, 2-3-2, 2-3, etc. types of case-marking schemata by the number of surface case-distinctions. We should also deal with the first two modes of classification of split systems.

The adjective 'simple' is meant to indicate that ONE feature is involved in defining the hierarchy. This is opposed to 'complex' systems where more than one feature is defining, in particular to a combination of both person features, a. and b. in schema (4), and features of 'number', c. and d. In general, positive features for a complex of person-and-number specification will be operative for the Agentive hierarchy, while negative features will be operative for the Patientive hierarchy. It is a distinction that can best be seen by considering the geometric analogy to distinctive features, where certain areas of the n-dimensional space are defined by several features simultaneously. The claim is that the areas of any particular subsystem of case-marking will be adjacent one to another.

The adjective 'local' is to be opposed to the adjective 'global', where these are used in Chomsky's (1965) sense. The split systems that are 'local' have two distinct rules, as in (14) a. and b., each of which specifies the bifurcation of case-marking depending on the features found in ONE NP, the

Agent adjunct in a., the Patient adjunct in b. In this way, there are in effect at most two distinct case-marking systems which can co-occur in a single transitive sentence. On the other hand, if the split involves a contingency depending on two (or more) NPs of the sentence, referable to the 'global' level of the whole proposition, rather than the local level of one NP, then we must reformulate the rules of agentive and patientive hierarchy. The rules will have to state that the split in case-marking for both agent and patient is sensitive not only to the features of the NP in question, but also to the features of the NP which functions as its opposite member in the proposition. This is a distinct, but common type of transformational rule, which will be formulated below. In effect, such global case-marking splits collapse parts a. and b. of (14).

Complex, global case-marking systems are the most difficult to characterise. I take up the example of Chinookan, reminiscent of many in Australia, in detail in §§ 2.1-2.3. Complex, local case-marking systems operate with agent and patient hierarchies specified in terms of two independent principles of feature-specified markedness, one in the realm of 'person' and one in the realm of 'number' or other lexical content.

For the simple, local systems of (15), we can take number two, the simple, local, ternary, 2-3-2 accusative-agentive-ergative system as an example, to see how (14) is applied. In such a language, for some feature $[F_i]$ in the middle of the ranked series of features, (14a) specifies that below $[+F_i]$, that is, for all noun phrases characterised by $[-F_i]$ and lower, there is a distinct case-marking coding the propositional function A, agent of transitive. Similarly, (14b) specifies that above some $[-F_j]$, that is, for all noun phrases $[+F_j]$ and higher, there is a distinct case-marking coding the propositional function O, patient of transitive. The ergative rule proceeds from the bottom of the hierarchy of NP types, as it were; the accusative rule from the top. Specifying in (15.2) that $i > j$, that is, that feature $[F_i]$ is higher than $[F_j]$ in the ranking of features (yielding the characteristic hierarchy of noun phrase types), we insure that there is a region of overlap of at least one noun phrase type, including everything between $[-F_i]$ and $[+F_j]$. The other examples in (15) are to be analysed similarly.

Thus case-marking systems for indicating agents, patients, etc. can be referred to lexical hierarchy. These divide as simple *vs.* complex, depending on the number of defining features (from 'person' and 'number' categories); as local *vs.* global, depending on the one-NP or two-NP nature of the rule of split; as n-ary depending on the number of splits, reflecting the relative calibration of features along the hierarchy defining split; as p-way, or q-r-way, etc. depending on the contour of the total system that emerges, indicating the number and type of case-markings to which the traditional nomenclature applies. There are numerous 'holes' in the pattern, and these mean we have the opportunity for further constraint of the system as it is outlined here. What is important to see is the essentially semantic motivation for case-marking schemata. Some Australian examples of split systems of several different types follow.

1.4. Examples of split systems

Bandjalang, a language of the New South Wales-Queensland border, shows a complex, local, ternary, 2-3-2 accusative-agentive-ergative split system.

With three 'persons', two 'numbers', and masculine and feminine 'gender' in the singular third person, the pronominal paradigm has a two-way accusative system for [+ego, +plural] (the most highly marked pronoun), a three-way objective-agentive-subjective in all the rest of the pronouns, and all human nouns, and a two-way ergative inflection on all the rest of the nouns. Clearly a two-feature hierarchical ranking is operative here with one feature from each of the person and number categories defining the upper bound of the ergative case-marking (what appears as 'agentive' in the middle part of the hierarchy), while the lower bound of accusative case-marking (what appears as 'objective' in the middle part) are the [+human] lexical NPs. As shown in the display of this system at (16), [ego] ranks above [tu] in this system.

(16) Bandjalang split-system:

	A	B	C	D	E	F	G	H	I	
ego	+	+	-	-	-	-	-	-	-	A. first plural
tu	(-)	(-)	+	+	-	-	-	-	-	B. first singular
plur	+	-	+	-	+	-	-	-	-	C. second plural
fem						+	-			D. second singular
Pro					+	+	+	-	-	E. third plural
hum								+	-	F. third sg. feminine
	← ergative case-marking →								G. third sg. masculine	
	← accusative case-marking →								H. human nouns	
									I. other nouns (animates, etc.)	

In Dhirari, the split of case-marking has duals and plurals of all true pronouns nominative-accusative, while everything else of the pronominal and anaphoric systems shows three case-forms and, finally lexical noun phrases have two case-forms of ergative-absolutive pattern. As shown in (17), there is thus a complex, local, ternary, 2-3-2 split system, as in (15.2). The upper bound of a distinct ergative case is [+participant, -plural] (where [+part] means positive specification for any person feature), while the lower bound for a distinct accusative case is the lowermost non-lexical NP. This distinction between lexical and anaphoric or non-lexical 'third person' NPs should be expressible by the feature [Pro], in the usual transformational manner. The system as shown in (17) looks discontinuous, but that is due to the linear method of presentation.

(17) Dhirari split-system:

	A	B	C	D	E	F	G	H	I	J	K	L	M
ego	+	+	+	+	+	-	-	-	-	-	-	-	-
tu	+	+	-	-	-	+	+	+	-	-	-	-	-
plur	+	+	+	+	-	+	+	-	+	+	-	-	-
restr	+	-	+	-	(+)	+	-	(+)	+	-	(+)	(+)	
fem											+	-	
Pro									+	+	+	+	-
	← ergative case-marking →												
	← accusative case-marking →												

- A. inclusive dual
- B. inclusive plural
- C. exclusive dual
- D. exclusive plural
- E. first singular
- F. second dual
- G. second plural
- H. second singular
- I. third dual
- J. third plural
- K. third sg. feminine
- L. third sg. masculine
- M. lexical nouns

Aranda, according to Strehlow (1942-44 [1945]:74-76; 91-93), shows a system of noun phrases which includes pronouns of three persons and numbers,¹² and nouns which are subcategorised as human, animate, inanimate at least. The pronominal forms show nominative-accusative case distinctions, except for the first person singular, which has a three-way distinction. Apparently, this two-way accusative system goes part way through the nominal stems, the animates being partially so inflected; while the rest of these, along with the inanimates, have an ergative-absolutive distinction. As shown in (18), there appear to be two split systems in Aranda, each one operating on a distinct functional basis. The first split system is a complex, local, binary, 2-3 case-marking system for the true personal indexes, as in the configuration of (15.5), with first person singular the lowest in the hierarchy, and the unique true pronoun showing objective-agentive-subjective case-marking, all the higher ones showing nominative-accusative marking. The second split system involves the 'non-personal' noun phrases, of the third person. This is a complex, local, binary, 2-2 system, not in (15), with the anaphoric pronouns of the third person, used for some animates as well as humans, and the nouns they stand for showing nominative-accusative case-marking, then the anaphoric 'demonstratives' which are used for the rest of the animates and the inanimates showing a two-way A-O, S case-marking system, and finally the inanimate nouns also showing an ergative-absolutive system. The animate nouns must be subdivided further by some features which are unclear from Strehlow's description, as there is the distinction shown in (18) between those animates which pattern like human nouns with nominative-accusative case-marking, and those which pattern like the demonstratives for inanimates, with a three-way case-marking scheme. The schematisation here in (18) at least provides a basis for seeking further information on this.

(18) Aranda split-systems

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
tu	+	+	+	-	-	-	-	-	-	-	-	-	-	-
ego	-	-	-	+	+	+	-	-	-	-	-	-	-	-
plur	+	+	-	+	+	-	+	+	-	+	+	-		

obligatorily incorporated into the verb or other main constituent of a syntactic unit. These pronominal elements appear in apposition to lexical nouns for third person forms especially, and sometimes in apposition to emphatic external pronouns, but none of these external noun phrases has any case-marking independently showing its own syntactic function. The pronominal elements are characterised both by distinct arrangements in order-classes, and, within order-classes, by distinct forms. In the correlation—or regularity in lack of correlation—between order-class and pronominal form, we have data to interpret syntactically about the case relations of adjuncts and their configuration in a split-case system.

Chinookan shows a regular, or 'plain' transitive *vs.* intransitive verb schema, paralleled by a regular nominal one. I discuss these first, giving the global ergative case system for distinct shapes of pronominals. Then I will complicate this description with global order-class restrictions, which feed into global shape assignment, defining an 'inverse' nominative-dative transitive schema in verbs, and its equivalent in possessed nouns.

- (20) *i-kala ga-č-l-(a)š-l-u-√tada (i)l-šq^wa (i)š-gagilak* 'the man threw the water at the two women'
- (21) *ga-č-l-(a)š-l-u-√tada* 'he threw it at the two of them'
- (22) *ga-č-l-u-√tada i-kala (i)l-šq^wa* 'the man threw the water'
- (23) *ga-l-(a)š-l-(a)t-√ka (i)l-šq^wa (i)š-gagilak* 'the water came flying over to the two women'

A kind of maximal simple sentence form, with regular transitive verb, is shown in (20). Each of the three nouns in the sentence is provided with its obligatory number-gender prefix: *-kala* 'man' has singular masculine *i-*, cross-referenced in the verb by the third person singular masculine transitive subject pronominal *-č-*; *-šq^wa* 'water' has neuter-collective *(i)l-*, cross-referenced in the verb by the neuter-collective transitive object pronominal *-l-*; *-gagilak* 'woman' has dual *(i)š-*, cross-referenced in the verb by the third person dual indirect object pronominal *-š-* (with epenthetic *-a-* because of phonological cluster restrictions). The inflected verb stands alone in a fully pronominalised sentence such as (21), where anaphoric deletion has operated on lexical nouns, and the pronominals give only the person-number-gender of the agent-patient-indirect object. The initial morpheme of the verb is the tense prefix, here *ga-* for the 'remote past'; the *-l-* is the lexical postposition, giving the specifics of the indirect object relationship, here 'to, toward'; the *-u-* directional morpheme means 'motion away from'; finally *-√tada* the root is 'throw'. The minimal constituents of such a regular transitive sentence are subject and direct object, as in (22). The verb in an intransitive sentence, such as (23), regularly shows all the surface form classes of the transitive one save the transitive subject, with the same permissible pronominalisation and optional elements.

The nouns of Chinookan also show appositional inflection, with a minimum of one, and a maximum of two pronominal elements. The nouns may be used as predicates (some derived nouns always so). Hence the number-gender prefixes of nouns such as those in (20)–(23) can have a function akin to

subjects (S) of intransitive verbs; in fact first and second person pronominal prefixes also occur with nouns, as in (24) and (25). In regular nouns, a second pronominal form cross-referencing the possessor, can occur in position after that shown in (20)–(23). Thus (26) is a full possessive noun phrase, while (27) reflects anaphoric deletion of the possessor noun, the cross-referencing pronominal remaining.

(24) *n-sk'ulia* 'I, Coyote; I am Coyote'

(25) *mš-nadidanuit* 'you, Indians; you are all Indians'

(26) *i-štamx a-ia-knim* 'the chief's canoe'

(27) *a-ia-knim* 'his canoe'

In general then, we can see a parallelism in order classes in 'plain' verb and noun, as shown in (28).

(28) 'Plain' morphological schema of Chinookan inflection:

Noun:	(Pers-)numb-gend	(Possessive)
Verb: (Trans subj)	{Intrans subj}	(Indir. obj. + postpos)
	{Trans obj }	

The 'plain' transitive verb has an *ergative* morphological order-class, followed by a *nominative* (or, *absolute*), and an optional *dative* (or 'indirect object') with the following lexically-specific postposition. The intransitive verb has the second and third of these, and, in parallel fashion, the noun has a *nominative* (or *absolute*) order-class, serving usually as a number-gender prefix, and an optional *genitive* (or *dative* of possession). The parallelism is even more secure in syntactic terms, as will become apparent.

These morphological order-classes intersect with formal distinctions among cross-referencing pronominals. The forms of pronominals are displayed in (29), keyed by order-class. Where there are conditioned phonological variants, the morphophonemically basic alternant is listed first, separated by a slash, as also where there are syntactically-significant alternants, separated by commas. There are basically three distinct forms for pronominals: the fundamental one, serving as absolute (nominative) and dative; the second, regularly nominative shape plus *-a-*, serving as genitive; the third, regularly nominative shape plus *-k-*, serving as ergative. The impersonal serves only as ergative. The phonological alternants in the genitive, or possessive, of rows F and L are palatalisation variants ($k \sim \check{c}$),¹³ those of the nominative in row L are due to prevocalic vowel truncation ($a+u \rightarrow u$), and that of the dative in row J is an ancient, morphologically conditioned oddity.¹⁴ The other variations in forms, within order-classes, indicate the type of case-marking system. The two rows J and K, third person dual and plural, show an alternation between the nominative forms *-št-*, *-lk-*, used as intransitive subject (S) and *-š-*, *-t-*, used as transitive object (O). Hence for these two noun phrase types, there seems to be a locally-conditioned three-way case-marking schema for verbal cross-reference, accusative-dative (O), ergative (A), nominative (S), of little syntactic interest except as it fits precisely as we expect into the mid-range of the configuration of case-marking. The other variations are global, and require a consideration of person and number to explain.

(29) Wasco-Wishram Chinookan pronominals:

Morphol: Syntax:	Ergative A	Nominative, Dative S, (S)O(D), D	Genitive G
A incl du	<i>t(x)-k-</i>	<i>-tx-</i>	<i>-tx-a-</i>
B incl pl	<i>l(x̄)-k-</i>	<i>-l̄x-</i>	<i>-l̄x-a-</i>
C sec sg	<i>m-</i>	<i>-m̄-</i>	<i>-m̄i-</i>
D sec du	<i>mt-k-</i>	<i>-mt-</i>	<i>-mt-a-</i>
E sec pl	<i>mš-k-</i>	<i>-mš-</i>	<i>-mš-a-</i>
F excl sg	<i>n, φ-</i>	<i>-n-</i>	<i>-č/kV-</i>
G excl du	<i>nt-k-, q-</i>	<i>-nt-</i>	<i>-nt-a-</i>
H excl pl	<i>nš-k-, q-</i>	<i>-nš-</i>	<i>-nš-a-</i>
I thrd du	<i>št-k-</i>	<i>-št-, -š-</i>	<i>-št-a-</i>
J thrd pl	<i>t-k-</i>	<i>-tk-, -t-, /w-</i>	<i>-tk-a-</i>
K th col-neut	<i>ł-k-</i>	<i>-ł-</i>	<i>-ł-a-</i>
L thrd sg fem	<i>k-</i>	<i>-a/φ-</i>	<i>-č/k-a-</i>
M thrd sg msc	<i>č-</i>	<i>-i-</i>	<i>-i-a-</i>
N impersonal	<i>q-</i>		

The Chinookan noun phrase types include specifications for 'personal' vs. 'impersonal', and within 'personal' noun phrases, for inclusive, second, first and third persons. There is a regular distinction of singular, dual, and plural number in all persons, and the third person has a distinction of masculine, feminine, and neuter(-collective) gender, the last strongly intergrading with number categories.¹⁵ In (30), the feature specification of the noun phrase types is set out, with the columns corresponding to the rows in (29). It should be noted that the first feature is [tu], so that immediately after the inclusives, the second person forms are displayed. Also, within the number distinctions, it should be observed that for first and second person forms, the singular is given as the most highly-marked term ([+sg, +restr]), while for third person forms, it is the dual ([+plu, +restr]). In other words, there is a distinction of markedness polarity in the feature [plural ~ singular] for the participants ([+sg]) and non-participants ([+plu]), reflecting the distinction between indexical (pragmatic) categories and non-indexical (see fn. 9). It is interesting that in some languages the distinction between pragmatic and semantic markedness should be as directly expressed in syntactic phenomena as in Chinookan. For the duals and plurals of inclusive, second, and first person categories are much more regular in behaviour than the singulars.

(30) Feature specification of pronominals:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
a. definite	+	+	+	+	+	+	+	+	+	+	+	+	+	-
b. tu	+	+	+	+	+	-	-	-	-	-	-	-	-	-
c. ego	+	+	-	-	-	+	+	+	-	-	-	-	-	-
d. (sg (1, 2) pl (3))	-	-	+	-	-	+	-	-	-	-	-	-	-	-
e. restric	+	-	(+)	+	-	(+)	+	-	+	-	+	-	-	-
f. fem												+	-	

Returning to our formal display (29), we see that the unexpected forms

in the ergative order-class occur precisely in row C, the second person singular, and in rows F, G, H, the first person ('exclusive') categories.¹⁶ There is no formal distinction whatsoever by order-class in the second person singular *-m-*, which appears as such in all verbal order-classes. In the ergative order-class, the first person singular also shows no formal distinction when the object is third person, and the exclusive dual and plural have ergative *-k-*. But the alternants *φ-* (sg), *q-* (du, pl) occur just when the nominative or dative noun phrase adjunct is second person. Observe that the distinction of dual vs. plural is neutralised in the apparent ergative *q-*, as indeed is the distinction between the first person and 'impersonal' form, row N.¹⁷ When the second person noun phrase adjunct is an indirect object (D), then gender distinctions in direct object are neutralised (to [-fem]); when the second person noun phrase adjunct is a direct object (O), then a dummy morpheme *-i(a)-* appears in the ergative position if none other occurs (that is, for first singular agent (A), underlying *φ-*). Thus the transitive form (31) with third plural ergative (A) and second singular absolutive (O) corresponds not to (32)a., formed by analogy form-class by form-class, but to the ambiguous surface form (32)b., which has the *q-* 'impersonal' ergator in place of the first exclusive plural. Similarly, form (33) with third singular masculine ergative (A), third dual absolutive (O), and second dual indirect object (D), corresponds not to (34a.), as we would expect, but to (34b.), with zero expression of the ergative.

(31) *ga-tk-m-u-√lxama* 'they told thee'

(32) (a) ***ga-nšk-m-u-√lxama*

(b) *ga-q-m-u-√lxama* 'thou wert told; we/we two told thee'

(33) *ga-č-š-(a)mt-k-√q'itti-mita* 'he made it (-s-) rain on you two'

(34) (a) ***ga-n-š-(a)mt-k-√q'itti-mita*

(b) *ga-š-(a)mt-k-q'itti-mita* 'I made it rain on you two'

Summarising, then, the second singular shows no formal distinctions across order-classes, the first person singular has a special ergative form just where the object (O, D) is second person, and the second and first nonsingulars, as well as the third persons, always have a distinct ergative form. For the first person nonsingulars, this is regular for third person objects, and special for second person objects, giving a kind of impersonal-agent construction. In other words, in form, as opposed to order-class, we have a split-system of plain inflection, with GLOBAL assignment of shape, defining a hierarchy $2 > 1 > 3$, such that the most marked form that can figure in the schema, the second singular¹⁸ (under C in (29) and (30)) gives a one-way subsystem, the first singular (under F in (29) and (30)) gives a one- vs. two-way ergative-absolutive system contingent on the object (O, D), and the rest of the forms are two-way ergative-absolutive. Thus we formulate (35) to express this regular split of form.

As it is written, it is a set of ordered sub-parts forming a complex summary of the several kinds of formal case-markings encountered in different sections of the person-number hierarchy. It incorporates as one part the global *rule schema* in terms of a feature variable that runs over the first three features of

the ranked set in (30) in the order given. If F_i does not satisfy the conditions for the change, then we look at F_{i+1} . Functionally, the global case-marking rule is to be formulated for the singular, with an overlay of politeness marking in dual and plural exclusive.

(35) 'Plain' inflection case-marking:

- (a)
$$\left[\begin{array}{c} A \\ \alpha F_2 \\ < - > \alpha F_3 \\ < -sg > \end{array} \right] \Rightarrow \text{Erg}$$
- (b)
$$\begin{array}{cc} A, S & O, D \\ [-F_i] & [+F_i] \end{array} \quad (i = 1, 2, 3) \Rightarrow \text{Erg } O$$
- (c)
$$\begin{array}{c} O, D \\ [-F_i] \\ [-F_{i+1}] \end{array} \quad (i = 2) \Rightarrow \text{Nom}$$
- (d) $G \Rightarrow \text{Gen}$
- (e) $X \Rightarrow \text{Absol}$

2.2. Global order-class restrictions

Chinook, like many languages, has a restriction on surface forms which prohibits first or second person direct objects (O) from co-occurring in the same verb with indirect objects (D).¹⁹ So, in forms with three pronominal order classes, the absolutive (O) cannot be first or second person if there is a dative (D). Hence, for all three-slot verbs, there are systematic gaps for all these theoretical possibilities of inflection. Only third person direct objects (O) of transitives occur with indirect objects (D). Hence there is no way to say with a single Chinookan verb form such as (36) 'He is taking me for her'; a foreigner such as an inquiring linguist might very well produce such a form by analogical patterning.

(36) ***č-n-a-l-u-√i-amit* 'he is taking me for her'

But no such examples occur in any of the text collections in four dialects, and Wasco-Wishram informants, when badgered, will admit at most to knowing what one intends to say, presumably also filling in the 'hole' in the transitive surface pattern. It is clearly just ungrammatical. Since all would-be order-classes are filled independently in such analogically-predicted forms, there is no manipulation of inflectional apparatus possible to produce acceptable words coding such 'participant'-object A-O-D propositions.

In morphological terms, it should be observed, this is a restriction on possible absolutive or nominative order-class of transitive verbs occurring together with possible dative order-class. Were underlying grammatical functions identical with morphological order-classes, under an 'ergative' hypothesis, then exactly the same order-class restriction would apply to intransitive verb forms coding subject (S) and indirect object (D). In fact, there are many morphologically intransitive forms which show first or second person pronominals in apparent violation of this restriction. Thus, in (37), the first exclusive plural (H in (29) and (30)) is intransitive subject, while the third singular masculine (M in (29) and (30)) is indirect object, both showing 'absolutive' or 'nominative' form in their respective order-

classes. This parallels form (38) with third person pronominals, and form (39) with third singular masculine intransitive subject (S) and second singular indirect object (D). Interestingly, as shown in (40a), when there is first person intransitive subject and second person indirect object, exactly the same globally-determined shape of the first person is found as in the transitive inflection we saw above, as shown in (40b). Of course, with only two order-classes filled, it is indeterminate at the surface whether or not the verb has been, as it were, 'intransitivised'. Given (35), it is simpler for descriptive purposes to have a rule (41) which precedes that case-marking rule.

- (37) *ga-nš-i-gl-u-√ya* 'we (excl pl) went toward him'
- (38) *gal-a-i-gl-u-√ya* 'she went toward him'
- (39) *gal-i-m-gl-u-√ya* 'he went toward thee'
- (40) (a) ***ga-nt/nš-m-gl-u-√ya*
 (b) *ga-q-(a)m-gl-u-√ya* 'we (excl du or pl) went toward thee'
- (41)
$$\begin{array}{cccc} S & D & A & O \\ [-F_i] & [+F_i] & \Rightarrow & [-F_i] & [+F_i] \end{array} \quad (i = 1, 2)$$

But exactly the same restrictions as in 'plain' transitives apply to morphological nominative-dative order-class co-occurrences in certain apparently 'intransitive' constructions with fixed lexical postposition.²⁰ Thus, in such constructions, it is impossible to have first or second person nominative or absolutive and any indirect object. There was nothing to be done about such a restriction, recall, in the transitive inflectional schema, since all available surface positions are filled. For such apparent intransitive schemata, the transformational process of 'thematization' operates, creating 'theme verbs' in the late Walter Dyk's (1933) terminology. We can express this restriction as essentially akin to that on transitive A-O-D schemata if we recognise that these apparent intransitive verbs are really *inverse transitives* with a direct object (O) in nominative order-class and a kind of dativised agent ('D') in dative order class. (The sense in which they are inverses of the plain transitives will become apparent when we consider the derivation of antipassive schemas of inflection.)

- (42) *-√ta-* 'to stink, waft (odour)'
i-u-√ta-nan 'he stinks', his odour wafts'
- (43) *i-n-l-√ta* 'I smell him'

As an example, we can take the verb root *√-ta*, as in (42), with a continuative suffix *-nan*. This is basically an intransitive, with characteristic absolutive pronominal subject (S) *-i-*. From this root is formed the construction *-l-ta* as in (43), with postpositional element *-l-*. Here we have an apparent 'intransitive' construction still, with morphological nominative *-i-* and indirect object (dative) *-n-*, perhaps to be glossed structurally as 'he wafts towards me.'²¹ That such thematic constructions are distinct from the intransitive (S-D) construction examined above is shown by their systematically split paradigm, however, with morphologically transitive constructions for all

those combinations of expected first or second person nominative. What should appear as an 'intransitive' construction (44a) for the gloss 'he smells us' actually appears as a transitive construction (44b). Referring back to our pronominal chart in (30), we can formulate a general principle that when the expected nominative noun phrase of the sentence has plus specification for features in lines a., b., and c. of (30), and the indirect object (dative) has minus specification, then the postposition-plus-intransitive-stem combination is restructured as a surface transitive. So we formulate rule (45).

- (44) (a) ***nš-i-l-√ta*
 (b) *č-nš-l-√ta* 'he smells us (excl)'
- (45) Function:

	O	A
SD:	[+F _i]	[-F _i]
⇒ SC:	[-F _i]	[+F _i]

 (i = 1, 2, 3)
- Order-class:

Erg	Nom	Dat
-----	-----	-----

Note that for first and second person pronominals in both expected order-classes, nominative and dative, the occurring transitive construction is subject to the further case-marking schema (35b). So an expected inverse form (46a) is thematised by (45) to form (46b), but appears actually as (46c). Similarly, note that (47a) is thematised to form (47b) but appears as (47c), while (48a) is thematised to form (48b), which is formally identical to, but functionally the inverse of the non-occurring (47a). The thematised 'inverse' forms with ultimate special first person ergative pronominal shapes (representing A), as in (46b), thus merge with the results of first person intransitive subjects (S) with second person indirect objects (D), as in (40b), and with the 'plain' or regular transitives.

- (46) (a) ***m-nš-l-√la*
 (b) ***nšk-(a)m-l-√ta*
 (c) *q-(a)m-l-√ta* 'we (excl du or pl) smell thee'
- (47) (a) ***m-n-l-√ta*
 (b) ***n-m-l-√ta*
 (c) *i-(a)m-l-√ta* 'I smell thee'
- (48) (a) ***n-m-l-√ta*
 (b) *m-n-l-√ta* 'thou smellst me'

It is remarkable that for third person animate nominative and third person indirect object, there is a tendency among speakers to extend this restriction on plus-minus combinations to the features of number as well, so that an expected (49a) for the gloss 'he smells the two of them' appears as (49b). This splits the entire paradigm of such theme verbs into a regular minus-plus morphologically intransitive set and a restructured plus-minus morphologically transitive set.

- (49) (a) ***š-i-l-√ta*
 (b) *č-š-l-√ta* 'he smells the two of them'

The same process of thematisation seems to be at work in the nominal paradigm, where possessive schemata show a split between the nominative-dative (or genitive) order-class, as in (26), and ergative-nominative inflection. When the pronominal in nominative order-class is first or second person, with positive feature specification, the construction is thematised. Thus, where we would expect (50a), with first person nominative pronominal in apposition to the noun stem, and third dual possessor, we actually get (50b). Contrast (51), where thematisation need not operate. The fact that thematisation operates on such possessive schemata allows us to interpret possessed nouns as akin to inverse transitive verbs. That is, the nominative-possessive (genitive) pronominals are not parallel to true intransitives with indirect object (else we would have forms parallel to (37)), but to inverse schemes representing, in order, object (O) and dativised agent ('D').

- (50) (a) ***n-šta-xan*
 (b) *štk-n-a-xan* 'I, their (du) child' I am their (du) child'
- (51) *i-šta-xan* '(he,) their (du) child; he is their (du) child'

Indeed, the parallelism is striking even in formal terms, since in thematised possessives like (50b), for example, the pronominals are clearly of ergative and absolutive form- and order-classes, the characteristic *-a-* postfix of the possessive pronouns in (29) remaining, like the fixed postposition of inverse transitives. Thus we can interpret the possessive schema as a kind of functional nominative-dative ~ ergative-absolutive construction, like inverse transitives, with *-a-* the special postposition characterising the possessive relationship. The fact that in the 'plain' possessives the pronominal shapes of singular first, second, and third person feminine (C, F, and I in (29)), and third person plural (J in (29)) are somewhat irregular,²² justifies our calling this series a distinct 'genitive' form. But from a syntactic perspective it becomes obvious that the genitive is functionally a specialised adnominal *dative* case, and that the possessive schema is the expression of an inverse transitive relation with agent(A)-like noun phrase in dative case-relation, patient (O)-like noun phrase in nominative case-relation.²³ Observe that in thematised possessives, the regular ergative and absolutive pronominals are used, even where there are irregular genitives, for example, (52b) and (53c). In those [+plu] third persons, dual and plural, which make a distinction between the 'O' and 'S' functions, moreover, in the 'plain' possessive schema it is the O shape that appears in nominative order-class, rather than the S shape. Thus the formal indications are that the possessive schema is O-A (or O-'D') rather than S-D.

- (52) (a) ***n-ia-xan*
 (b) *č-n-a-xan* 'I, his child; I am his child'
- (53) (a) ***m-čə-xan*
 (b) ***n-m-a-xan*
 (c) *i-(a)m-a-xan* 'thou, my child; thou art my child'

2.3. Case markings

Taking together all these observations about the syntax underlying order-

class arrangements and pronominal shapes, we can develop a chart as in (54), showing the resulting system of marking case-relations. Up to now, I have been using the terms ergative, nominative, and dative (genitive) both for order-classes and for pronominal shapes, trying to distinguish between the two. Having examined the basic paradigmatic relations of these, however, we can speak in terms of *initial* and *non-initial* order-classes of the inflectional configuration, and assign pronominal shapes to these according to the underlying syntactic functions they represent, *after* the operation of the various restructurings. In (54), the pronominal shapes are labelled with the underlying functional designations they can represent in the order-class in which they appear, so that we are plotting surface shape in possible surface inflectional configurations against underlying syntactic function. The boxes are drawn about similar shapes, to duplicate essentially the information of (29), (54) Form and order-class of pronominals:

Pronominal	Initial	Non-initial		
		Second of 2	Second of 3	Third of 3
A. incl du	<i>t(x)k</i> A			
	<i>tx</i> S	<i>tx</i> O, D		<i>tx</i> D ₂
B. incl pl	<i>l(x)k</i> A			
	<i>lx</i> S	<i>lx</i> O, D		<i>lx</i> D ₂
C. sec sg	<i>m</i> A, S	<i>m</i> O, D		<i>m</i> D ₂
	<i>mtk</i> A			
D. sec du	<i>mt</i> S	<i>mt</i> O, D		<i>mt</i> D ₂
	<i>mšk</i> A			
E. sec pl	<i>mš</i> S	<i>mš</i> O, D		<i>mš</i> D ₂
	<i>φ</i> A, S, D ₁			
F ₁ fir sg	<i>n</i> A, S	<i>n</i> O, D		<i>n</i> D ₂
F ₂ „	<i>q</i> A, S, D ₁			
G ₁ fir du	<i>ntk</i> A			
G ₂ „	<i>nt</i> S	<i>nt</i> O, D		<i>nt</i> D ₂
	<i>q</i> A, S, D ₁			
H ₁ fir pl	<i>nšk</i> A			
H ₂ „	<i>nš</i> S	<i>nš</i> O, D		<i>nš</i> D ₂
	<i>šk</i> A <i>št</i> S			
I. thir du	<i>š</i> O	<i>š</i> O, D	<i>š</i> O	<i>š</i> D ₂
	<i>t-k</i> A <i>tk</i> S			
J. thir pl	<i>t</i> O	<i>t</i> O, D	<i>t</i> O	<i>w</i> D ₂
	<i>lk</i> A			
K. th col-n.	<i>l</i> S, O	<i>l</i> O, D	<i>l</i> O	<i>l</i> D ₂
	<i>k</i> A			
L. th sg f	<i>(a)</i> S, O	<i>(a)</i> O, D	<i>(a)</i> O	<i>(a)</i> D ₂
	<i>č</i> A			
M. th sg m	<i>i</i> S, O	<i>i</i> O, D	<i>i</i> O	<i>i</i> D ₂
	<i>q</i> A			
N. impers				

Thus, for the inclusive dual of row A, the shape *t(x)k-* in initial order-class uniquely represents the direct transitive agent, A, while the shape *-tx-*

in initial order-class uniquely represents the intransitive subject (S). For non-initial order-classes, the shape *-tx-* as second of two pronominals can represent either direct transitive object (O), inverse transitive 'agent' (D₁) or intransitive indirect object (D₂). As third of three pronominals, *-tx-* can represent only the transitive indirect object (D₂). The inclusive dual does not occur as second of three pronominals. In the other rows, the data are to be read off similarly. So in row G, the exclusive dual, the shape *q-* in first position represents function A, S, or D₁ when there is another adjunct that is second person ([+tu]); otherwise in initial position shape *nt-k-* represents direct transitive agent (A), while shape *nt-* represents intransitive subject (S). In non-initial position, shape *-nt-* represents transitive object (O) or indirect object (D) in second position of two, and it represents indirect object of transitive (D₂) in third position of three. It does not occur in second position of three.

The results encapsulated in the table permit us to make certain observations about case-marking in Chinookan. Taking the similar rows together, the shape-order configurations define several subsystems by lexical classes of the pronominals. Rows A, B (inclusive nonsingulars), and D, E (second nonsingulars) pattern alike, both being [+tu, -sg]. In rows G, H (exclusive nonsingulars), the pattern is the same just with additional adjunct of third person (rows G₂, H₂), never with additional second person adjunct. This pattern formally distinguishes A function from S function in the initial position, and distinguishes O (and D) function by order, occurring non-initially only, though not by form, from both A and S. These define an 'accusative' system by order, identifying A and S as possible initial pronominals, excluding O and D. This order system is overlain by an 'ergative' system formally, identifying S and O (and D) as simple pronominals, A as distinct pronominal with postfix *-k-*. Together, we may call this a three-way agentive form-order inflection.

Row C, the second singular, together with row F₂, the first singular with additional non-second adjunct, form a set ([+part, +sg], or [+F₁, +sg] *i* = 1, 2, 3) having a single form throughout, which serves as A or S initially, versus O(D) non-initially, that is, an accusative system by order over a neutral one by form, giving a two-way accusative form-order system.

Rows F₁, G₁, H₁ form the subsystem of (exclusive) first person with additional second person adjunct ([−tu, +ego] on [+tu, −ego]), and these show accusative patterning both by form and by order, identifying A and S (with D₁) as opposed to O (and D₂), though a special marked accusative system.

Rows I and J, the third person nonsingulars ([−tu, −ego, +pl]), form a subsystem which distinguishes every function, O, A, and S, in initial position, but excludes all but O (and D) in non-initial position; thus, a three-way formal distinction, two of the forms (A, S) restricted to initial position, is an agentive system of case-marking slightly different from that of the [+F₁, −sg] system. (In third person forms, the object (O) function is not excluded from initial position, and has distinct formal expression *vis-à-vis* A and S; in the other system, object (O) occurs only non-initially.)

Rows K, L, M, the nonplural third person forms ([−tu, −ego, −plu]), constitute a distinct inflectional system, in that A function is different from both S and O in form, while A and S (that is, all but O and D) are excluded from non-initial position.

facultatively in some oblique, adverbial case-marking. Some languages, such as Dyirbal, to be discussed below, permit expression of the transitive object, while other languages, like Chinookan, do not regularly permit expression of the object in predicating forms. The verb is an 'active intransitive', expressing agency but not indicating an object.

(56) *ga-č-t-u-√tina-x* 'he customarily killed them' (plur verb stem)

(57) *gal-i-k'i-√tina-x* 'he customarily killed (many)'; 'he was a hunter'

The formal expression of the antipassive is with a prefix *-k'i-* that regularly replaces the directional morpheme *-u-* in expected direct transitive constructions. Thus a direct transitive such as (56) is related to antipassivised form (57). It would seem that the transitive subject expressed by the ergative of (56) appears as a surface intransitive subject in nominative (or absolutive) case-form, and that the object is eliminated. Boas (1911a:591) in fact calls the antipassive morpheme an element which 'negates direction towards an object'. While it is true that no expression of the object is incorporated in forms such as (57), two lines of reasoning lead us to a reconstruction of what must be the antipassive configuration of transitive object and subject, (1) the behaviour of lexical indirect objects under antipassivisation, and (2) the formation of derived nominalisations of inherent or habitual agency.

When a direct transitive construction includes an indirect object there is an accompanying postpositional morpheme, of a set of seven or eight, such as *-l-* 'to, into' (the unmarked postpositional), *-gl-* 'toward, for', *-gl-* 'from', as exemplified above, for example, (20)–(21). The elimination of an indirect object (D_2)—distinct from O, A, or S—is formally expressed by morphological reflexivisation (mediopassivisation) of the postpositional element with preceding *-x-*. This is the element used for direct object reflexivisation (mediopassivisation), appearing after the pronominal, though for indirect reflexives it combines with the lexical postposition morphophonemically, *-x+l- → -xl-*, *-x+gl- → -xgl-*, *-x+gl- → x'l-*, etc. The transitive agent of such indirect reflexives appears in the dative (D_1) order-class, as is shown by the pair of forms (58) and (59). Notice that 59 is clearly an inverse transitive, since the form of the third plural morpheme, underlying *-t-* voiced to *-d-*, is uniquely transitive object (O) of row J of (54). Furthermore, where such inverse transitives violate the permissible sequence constraints, they are thematised, just as we would expect. So the transitive agent in such indirect reflexives (mediopassives) takes the D_1 form-order position, ousting any independent D_2 indirect object. And the antipassivised form corresponding to (58) is (60), with the elimination of the object, preserving only a single pronominal representing underlying transitive agent A.

(58) *ga-k-t-i-gl-u-√pčxa-lal* 'she was sewing them for him'

(59) *ga-d-a-xl-u-√pčxa-lal* 'she was sewing them for (herself)'

(60) *gal-a-xl-k'i-√pčxa-lal* 'she was sewing (sthg) for (smone)'

In both kinds of antipassives, then, those from two-adjunct direct predicates, and those from three-adjunct ones, there is a single overt cross-

reference. Those pronominal shapes which are distinct in regular 'plain' inflection for S and O functions (in chart (54) rows I, J), and for O and D functions (row J), indicate that the single pronominal of the antipassivised predicate corresponds to dative (D) inflection. With the evidence of forms such as (59) showing inverse transitive inflection, we should probably see this as specifically the D_1 or derived dativised agent inflection.

2.5. Nominalisation

The justification for seeing the antipassive as having derived D_1 inflection emerges from a consideration of derived nominalisations, which express habitual or inherent capacity for agency. These inalienably possessed nouns have a derived stem which consists of everything but the directional morphemes, built generally from a continuative or repetitive verb form. From an intransitive such as (61) we get derived noun (62). Observe that for such intransitives, the underlying intransitive subject (S) becomes the possessor (D_1 , or 'G') of the derived noun, and the first, obligatory order-class (O) is filled by the unmarked masculine singular dummy pronominal, *i-*.

(61) *ga-l-u-√g" a-lal* 'they (coll.) were flying about'

(62) *i-ia-ga-lal* 'they (who) fly about', 'the fliers-about', 'they always fly about' (predicatively)

For transitive verbs, derived nominals are formed from antipassive constructions, and the possessor of the derived noun is the underlying transitive agent (A). The first, obligatory form-class in nouns, however, is the underlying transitive patient (O), which, it will be recalled from (57), (60), appears nowhere in the predicating form of the antipassive. Compare forms (63) and (64), also derived from (56) and (59) respectively. It should be observed here that postpositions such as that in (64) all have special reflexive-mediopassive forms in derived nominals, regularly alternating with the verbal forms. Also, where the derived noun violates permitted pronominal arrangements for inverse transitives, it is thematised, as in (65), confirming the unexceptional nature of these nouns.

(63) *t-ia-k'i-dina-x* 'he (who) kills (many), 'the killer (hunter)', 'his game'

(64) *it-ka-xi-k'i-pčxa-lal* 'she (who) sews them', 'the sewer (f.) of them', 'her sewing'

(65) *č-n-a-xi-k'i-g"aug"au-mat* 'I (who) beat time for him', 'I, his time-beater', 'he has me for time-beater'

Now in comparing the treatment of underlying adjuncts in these derived nominals, we can see that both the underlying S and A pronominals emerge as dative (D_1) possessors (the latter thematised in some combinations to ergative), while the underlying O emerges as first-slot O number-gender, or second slot O in thematised forms equivalent morphologically to the verbal arrangement. That is to say, in passing from antipassivised to nominalised form, the underlying transitives have simply changed syntactic status, so that verbal D_1 becomes adnominal D_1 (=G). It is thus also seen to be a

feature of the predicating form of the antipassive that no morphological object (O) is regularly expressed, as Kuryłowicz's conditional universal provides. The antipassive nouns show the underlying form of the syntactic construction.

I have so far been speaking of these various noun phrases from the perspective of the inflectional apparatus developed up to § 2.3. In this way, we recognise the derived nominals as having an (O)-D₁ ~ A-O system of inflection, expressed in Nom-Dat- ~ Erg-Abs- order-classes. But note that within the 'inverse' system of antipassive nominalisations, underlying A and S function are treated alike in the derived D₁ (dative or genitive) form-order inflection, while underlying O is treated distinctly in the derived O (nominative) form-order inflection; in the thematised forms, there is a derived A (ergative) and derived O (nominative) form-order inflection. Thus, as shown in (66), we have a system where A and S are treated alike, while O is treated distinctly.

(66) Derived nominal system of case-marking:

	Nominative Initial order-class		Dative Second order-class			
A.	<i>t(x)k</i>	A	<i>tɣa</i>	O, A, S		
B.	<i>l(x)k</i>	A	<i>lɣa</i>	O, A, S		
C.	<i>m</i>	A	<i>ma</i>	O	<i>mi</i>	A, S
D.	<i>mtk</i>	A	<i>mta</i>	O, A, S		
E.	<i>mšk</i>	A	<i>mša</i>	O, A, S		
F.	<i>i(a)</i>	A	<i>na</i>	O	<i>č/kV</i>	A, S
G.	<i>q</i>	A	<i>nta</i>	O, A, S		
H.	<i>q</i>	A	<i>nša</i>	O, A, S		
I.	<i>šk</i>	A	<i>š</i>	O	<i>šta</i>	A, S
J.	<i>tk</i>	A	<i>t</i>	O	<i>tka</i>	A, S
K.	<i>ɬk</i>	A	<i>ɬ</i>	O	<i>ɬa</i>	A, S
L.	<i>k</i>	A	<i>(a)</i>	O	<i>č/ka</i>	A, S
M.	<i>č</i>	A	<i>i</i>	O	<i>ta</i>	A, S
N.	<i>q</i>	A				
	Ergative	Nominative		Dative		

Thus, we have a basic split ergative system in derived nominalisations, where the split, reflected in 'thematised' possessed forms, is triggered by [+F_i] (i = 1, 2, 3) underlying O adjunct, and results in preposing the A pronominal. Otherwise the system is 'nominative-accusative', where the 'nominative' is representing A and S, found in the dative order-class, and the 'accusative', representing O, is found in the nominative or absolutive order-class. The system split by order-class arrangements generates in this fashion three potential order-classes, as shown at the bottom of (66), to be identified with the three order-classes of the independent predicate presented in § 2.1 and § 2.2. The middle potential order-class is unified by underlying function, but split for surface relative position by complementary distribution over person features (1, 2 persons vs. 3). Inasmuch as only two adjacent order-classes of the three potential ones are filled, an order-class marking rule such as (67) suffices for the antipassive nominalisation system. In terms of pronominal shapes, for the two antipassive order-classes, we have contrast in first position for the 'third person' forms and contrast in second position for the first and second singular only. That is, in terms of form-order marking, there is a special third person A marking always, and a special first and second singular O marking always, to take the marked functions resulting from (67a). There is a special A form in first person only with second person O.

(67) Derived nominal case-marking:

Let (O, A), (S) represent propositional functions,

Let [X, Y] represent order-classes.

(a) (+F_i, -F_i) ⇒ [-F_i, +F_i] (i = 1, 2, 3)

(b) otherwise,

((x,)y) ⇒ [(X,)Y]

It is easy to see that the plain and inverse regular inflectional systems, as in (54)–(55), can be derived from the system of (66), including such restrictions as that on first and second person 'direct' objects with 'indirect' objects. If there is an object (O) in second position in the antipassive form, then no further dative or indirect object is permissible. This demonstrates what we suspect on grounds of antipassivisation alone, that the 'direct object' is really a kind of underlying dative—what we may call a *grammatical dative*—that excludes expression of another, *lexical dative* in the same verb. From the antipassive forms characterised by case-marking rules (67), we can further specify (68b) that all A and S pronominals are coded in the first position, the A or S form being identical with the A or S form still found in second position in the antipassive, except in the singular of all persons, where the form is identical with the O form, unless already specified by thematisation (so the parts of (68) are ordered). The 'inverse' transitives, it will be noted, undergo (68a) but not (68b), in other words, behave like antipassives of regular transitive verbs.

(68) Case-marking in general:

(a) = (67a)

(b) (, A/S) ⇒ [A/S,],

where formally [+sg] or [-pl] gets normal O form, otherwise A/S form.

2.6. The structure of discourse

In each Chinookan clause, there is a constant *cross-reference* within any syntactic unit, so that the functional relationships of noun phrases as adjuncts to other constituents are signalled in the pronominal schemata prefixed to surface verb and noun. Cross-reference mechanisms of this sort thus give derived syntactic information about noun phrase contributions to propositional reference. Taken together with the other grammatical information, they permit us to understand the propositional content of the clause; taken alone, however, they present merely the derived noun phrase adjunct relations.

In terms of discourse, however, the pronominals serve an additional function, namely that of maintaining discourse reference. Anaphoric *co-reference* over a stretch of discourse includes the set of devices which show that the identical referent is denoted by more than one adjunct in surface sequence. Frequently there are elaborate restrictions on what surface configuration noun phrases can be anaphorised by the various devices, for example, deletion, pronominalisation, etc. (see Ross, 1967). Of course first and second person pronominals automatically have this co-reference function, since their indexical nature always makes the discourse reference definite. Third person pronominals, in general, agree in number and gender with, and cross-reference, a lexical noun phrase elsewhere in the clause. So they serve this co-reference function additionally when anaphoric deletion of co-referent lexical noun phrase has taken place. Thus, forms such as (21) and (27) in § 2.1 stand as complete predications non-initially in discourse, the reference having been established in preceding discourse by forms such as (20) and (26) respectively, with full lexical noun phrases. Since pronominals also occur in distinct form-order classes for derived functions within the clause, these are also indicated for co-referent adjuncts in other clauses. The system of person-number-gender subdivisions of pronominals makes it unlikely that functionally correct co-reference will fail to be indicated,²⁴ except where precisely the same third person number-gender forms constitute the several adjuncts of clauses. In such cases, two syntactic means become important for indicating functionally-specific co-reference.

The first such mechanism is the implementation of discourse-bound deixis, equivalent to English *the former (that)* and *the latter (this)*, which take the point reached in the discourse itself as the focus for comparison of 'distance', nearer the point reached or further away. Wasco-Wishram third person demonstratives such as sg. masc. *yaxia* 'that way off', *yaxtau* 'this', and *yaxka* 'that unmarked', sg. fem. *axia*, etc. thus appear in certain cases to be topicalised disambiguators that serve as anaphoric co-reference elements taking the place of lexical noun phrases. Whether or not the derivation proceeds from a full noun phrase that includes the demonstrative is immaterial to this discussion. What is important is that the actual surface demonstrative, in characteristic surface positions for derived function (V-S/A-(O)-D ~ S/A-V-(O)-D ~ O-V-S/A-D, etc.), appears to be an 'independent' pronoun maintaining discourse reference over clause boundaries.

The second additional co-reference indicator is of more interest to us, in discussing the discourse reference of ergative systems, because antipassivisation seems to play a prominent role. Within complex sentences, in particular,

every language shows certain special, derived forms of subordinate clauses, be they relative clauses to head nouns in noun phrases, complements to head verbs as sentential objects, indirect discourse, etc., the anaphorically deleted nominal adjuncts of which bear specified functional relationships to some co-referent noun phrase in the independent clause. Thus, in English, complement clauses to a class of verbs including *want* are derived infinitive clauses. The derived surface nominative (derived 'subject') of such clauses is deleted under conditions of co-reference with the subject of the higher clause. Comparing examples (69) and (70), we can see that co-referent *vs.* non-co-referent derived subordinate clause subject is signalled by deletion *vs.* non-deletion of the entire noun phrase.

(69) The man_i wants him_j to go there.

(70) The man_i want [him_i] to go there.

(71) The man_i wants [him_j] to be taken there.

(72) The man_i wants [him_j] to take him_j there.

Adding (71) and (72) to our consideration shows that where the co-reference holds between two noun phrases in subject-(underlying) 'object' relationship, the subordinate clause is passivised so that the derived surface co-reference appears as subject-(derived) subject. We can say that deletion with no 'voice' change in complement clause signals underlying²⁵ subject-underlying subject co-reference, while deletion with complement passivisation signals underlying subject-underlying object co-reference. Infinitive clauses with and without anaphoric deletion of noun phrases (as distinct from overt 'pronominalisation'), with and without passivisation, thus serves what has aptly been termed the function of *switch reference* (Jacobson, 1967) in addition to *co-reference*. That is, these constructions serve to signal if a noun phrase *co-referent* with another in some specific surface configuration has the same or different underlying functional relationship in its own clause as the noun phrase with which it is co-referent has in its own respective clause.

Thus, cross-clause reference-maintaining signals can operate at two levels, the one being co-reference relations for certain derived positions of noun phrases, the other being 'same' or 'different' with respect to a given underlying propositional function of these noun phrases. The criteria of 'same' or 'different' here in terms of underlying propositional functions set up classes at the discourse level that are precisely analogous to the kinds of classes set up by case-marking systems at the propositional level of single clauses. The classes set up at these two levels define markedness relations, so that the switch-reference 'same' class has the same status as nominative in accusative systems, absolutive in ergative systems. In the case of English infinitive complements (73), 'same' is defined with respect to S, A, 'different' with respect to the residual functions of a set of possibilities for the second noun phrase, here O and D. So inter-clause reference is isomorphic to a nominative-accusative system of case-marking.

(73) English infinitive complement clauses:

Discourse NP features	Underlying functions	Surface clause features
non co-referential	(A)-A/S	obj pron or noun+infin active
non co-referential	(A)-O(/D)	obj pron or noun+infin passive
co-referential	(A)-A/S	no obj pron/noun+infin active
co-referential	(A)-O(/D)	no obj pron/noun+infin passive

In Chinookan, virtually all subordinate clauses are in full form, with finite verb inflected with pronominals for the several adjuncts. Such full clauses are regularly extraposed, that is they occur in discourse in sequence with independent clauses so that each clause retains an uninterrupted continuity in speech. Anaphoric deletion of co-referent lexical nouns does not in general interfere with maintaining discourse-reference relations, because the pronominals, plus (third person) demonstratives, keep the underlying syntactic relations plus co-reference relations straight. With this mechanism of pronominal incorporation, co-reference is generally permitted over all possible sequences of D, O, A, S in such finite-verbal complex sentences. We might conceive of this as the assimilation of complex sentences to the form of multi-sentence discourse.

Even most 'relative clauses' operate with this mechanism of pronominal cross-reference plus extraposition and anaphoric deletion of lexical nouns. Thus (74) and (75) correspond to English relative constructions. The quasi-adjectival form of the subordinate verb with continuative suffix (-x, -lal), should be especially noted.²⁶ Such relative clause formations, which intersect with clauses of contemporaneous predication ('when', 'while'), describe one of the nominal adjuncts to the main clause as actually engaged in some activity or state.

(74) *ga-č-a-gl-√gla-ya axia agagilak k-d-a-gl-k^wi-č-x id-unayax* 'he caught sight of the woman far off who/while, when she was pouring huckleberries out of it (the pail)'

(75) *t-u-√g^wa-lal it-c'inunks ga-tk-t-nš-gl-u-√qdi-g^wa-ya it-šq^wa* 'the birds (who were) flying around pointed out to us the water'

There is another class of relative clauses, which basically describe a referent as habitually doing something or being a particular way, because of inherent nature. We might call these relative clauses of *inherent quality*, as opposed to the clauses in (74) and (75), those of *actual quality*.²⁷ The descriptive predicate in these clauses is an antipassive nominalisation, with co-referent pronominal appearing in the 'dative' or 'ergative' form-order class.

(76) *agagilak it-ga-xi-k'i-k^wi-č-x idunayax* 'the woman who always pours out huckleberries'

(77) *itc'inunks i-ta-ga-lal(-max)* 'the birds who always fly about'

Thus (76) and (77) correspond to (74) and (75) as inherent quality clauses. Though the underlying function of the co-referent noun in the higher clause

is immaterial, only co-referent adjuncts of underlying A and S functions, coded in the antipassive dative (or ergative) order-class, are expressed by the subordinate clause. For other co-referent functions in the subordinate clause, namely O and D, we have to paraphrase using the finite relative clause plus such adverbs as *gwanisim* 'always', *we:t'awe:t'a* 'again and again' and so forth.²⁸ So the possibilities in Chinookan give a table such as (78), where the appearance of the deverbative nominalisation signals underlying A/S function of the co-referent noun in subordinate clause, as opposed to O(D).

(78) Chinookan habitual relatives:

Discourse NP features	Underlying functions	Surface clause features
co-referent	NP-A	antipassive deverbative
co-referent	NP-S	deverbative
co-referent	NP-O(/D)	finite relative+adverb

Thus the deverbative nominalisation at the level of single-proposition syntax treats the underlying A adjunct as derived D₁ in the antipassive form, along with underlying S, as shown in (66), and the system of restricted cross-propositional reference in complex sentences, using embedded clause nominalisations, focuses exclusively on co-reference relations with A or S in the embedded clause, as shown in (78).

3.1. Dyirbal plain split inflection

Having treated Chinookan at some length, I can in briefer compass turn to Dyirbal as a contrastive case both at the morphological and syntactic levels. In the Dyirbal dialect proper, we have a simple, local, binary, two-way split accusative-ergative system of case-marking, distinguishing first and second persons (participants) from third persons, accomplished by case-endings on nominal adjuncts.

Dyirbal is thus a 'case' language in the classical sense, with substantives, adjectives, and pronouns appearing as words independent of the verb, and having obligatory case desinences marking their functions in a sentence. Word order is 'free', but preferential patterns emerge, and in long discourse topicalisation relations give discourse order sequences. Lexical nouns have seven surface syntactic cases, the conditioned alternants of which are illustrated by examples in (79). The first four are the 'grammatical' cases, with many syntactic relations holding among themselves, while the last three are the familiar 'local' cases. Observe that in form, there is systematic syncretism between dative and allative desinence; these are syntactically distinguishable at the level of the full noun phrase, however, the dative only occurring in a full construction, like the other grammatical cases.

(79) Case allomorphy in Dyirbal:

	'man'	'woman'	'black bean'	'dilly bag'
'grammat'	abs <i>yaya</i>	<i>djugumbil</i>	<i>miranj</i>	<i>djawun</i>
	erg <i>yayanggu</i>	<i>djugumbiyu</i>	<i>miranjdju</i>	<i>djawundu</i>
	dat <i>yayagu</i>	<i>djugumbilgu</i>	<i>miranjgu</i>	<i>djawungu</i>
	gen <i>yayanu</i>	<i>djugumbilju</i>	<i>miranju</i>	<i>djawunu</i>

'local'	{loc	<i>yaŋaŋa</i>	<i>djugumbiya</i>	<i>miranjdja</i>	<i>djawunda</i>
	{all	<i>yaŋagu</i>	<i>djugumbilgu</i>	<i>miranjgu</i>	<i>djawungu</i>
	{abl	<i>yaŋaŋunu</i>	<i>djugumbilyunu</i>	<i>miranjŋunu</i>	<i>djawunŋunu</i>

Nouns are lexically distinguished by class, a kind of expanded gender classification that subsumes the classical grammatical gender distinctions of male vs. female, ultimately semantic at the core (Dixon, 1968; 1972: 306–12). Every common noun is accompanied in the four grammatical cases by a 'marker' which agrees in case and class (-gender) with the head noun, and codes as well the deictic indexes of the usual sort, 'there visible', 'here visible', 'not visible'. The first of these is the unmarked form, as seen in (80). Under rules of anaphoric pronominalisation, which delete repeated co-referent lexical nouns, these noun markers, in general the *bala-* (unmarked) forms, stand for the entire noun phrase in one of the grammatical cases. Thus, whether or not we should call them 'pronouns' in these circumstances is purely a terminological issue. They have the same morphological inflection when they constitute the entire surface noun phrase as they do when they accompany lexical nominals. The rule of 'pronominalisation' is basically like that of Chinookan, deletion under discourse co-reference.

- (80) [+non-visible] *ŋayi yaŋa/ŋalan djugumbil miyandanju* 'man/woman heard, not seen, is laughing'
 [-n.-v., +proximal] *yayi yaŋa/yalan djugumbil miyandanju* 'man/woman here is laughing'
 [-n.-v., -proximal] *bayi yaŋa/balan djugumbil miyandanju* 'man/woman (there) is laughing'

In (80) we saw third person noun phrases in absolutive case illustrating an intransitive sentence subject (S) case-relation. As an ergative language, Dyirbal uses this case-form for the patient (O) of a transitive, and the ergative case-form for the agent (A) of the transitive, as can be seen in (81). Here the transitive object *bayi yaŋa* 'man' is in the absolutive case, and the transitive agent *bangun djugumbiyu* 'woman' is in the ergative case. The verb *buŋan* ends in transitive aorist inflection *-n*, on stem *buŋal-*, rather than the intransitive aorist inflection *-nju* on stem *miyanday-* in (80).²⁹ Notice that the verb contains surface inflection only for transitivity and tense, not for person, number, etc. The case-relations of noun phrases are coded in the case-markings of the noun phrases themselves.

- (81) *bayi yaŋa bangun djugumbiyu buŋan* 'woman is looking at man'
 (82) *ŋadja/ŋinda miyandanju* 'I am/thou art laughing'
 (83) *ŋadja/ŋinda ŋinuna/ŋayguna buŋan* 'I/thou look(est) at thee/me'

Personal pronouns, which show a nominative-accusative case-marking system, occur in sentences with exactly the same verb forms as do nouns. In (82), first and second singular pronouns are exemplified in the nominative case for intransitive subject (S) and in (83) these pronouns occur in the nominative case for transitive agent (A) and the accusative case for transitive patient (O). Observe that where nominals and pronouns are mixed in a tran-

sitive sentence, we get the case-markings proper to each at the surface, as in (84a) and (84b). Here the first singular pronoun, shifting from agent (A) in (a) to patient (O) in (b), changes from nominative to accusative; 'third person' lexical noun, shifting from patient (O) in (a) to agent (A) in (b), changes from absolutive to ergative. From these examples, we should observe that the first or second person pronoun, regardless of case-form, tends to precede the third person noun phrase, but this is an issue of order preference independent of case-marking as such.

- (84) (a) *ŋadja bayi yaŋa buŋan* 'I am looking at the man'
 (b) *ŋayguna bangul yaŋagu buŋan* 'man is looking at me'

In terms of surface case-markings, there are six types of sentences to be distinguished, as shown in chart (85a). We can show surface case-markings in each of four transitive possibilities of underlying propositional adjunct configurations, implementing the major feature break in Dyirbal between 'participant' and 'non-participant' noun phrases. In the chart, for both first and second and third person noun phrases (represented as '+' and '-'), the underlying adjuncts A and O are distributed according to the transitive proposition type, (A, O) = (+, -), (-, +), etc., of which they form a part (rows I through IV), and according to the surface case-marking which characterises the adjunct (columns with desinence-type). Similarly, the last two rows show the desinential distributions of S-adjuncts in intransitive (one-adjunct) propositions. The order of listing is not random, as can be observed, but the non-randomness emerges only when we investigate the relationship between inherent lexical content of the noun phrases and the inflectional possibilities in sentences.

(85) Inflectional schema of Dyirbal:

		case-markings: erg nom abs acc		case-markings: erg nom/abs dat		
		A	O	(O)	A	O
I.	1/2 → 3 (+, -)					
II.	3 → 3 (-, -)	A	O	(O)	A	O
III.	2/1 → 1/2 (+, +)		A		A	O
IV.	3 → 1/2 (-, +)	A			A	O
V.	1/2 (+)		S		S	[S]
VI.	3 (-)		S		S	[S]
(a) 'plain'				(b) 'normal'		
				switch-reference: A : O/[S]		

For example, the chart codes the fact of complementary distribution of

nominative and absolutive case-markings over feature content of noun phrases, first and second person showing nominative but never absolutive, third person vice-versa. In particular, these two case-forms appear in rows V and VI to be conditioned only by the nature of the noun phrase, the propositional function remaining the same. So we can see that they are manifestations of the same, unmarked citation form of noun phrases. The other two cases, ergative and accusative, contrast always in two respects, in the following way. Whenever there is a 'plus'-NP in O function, it is accusative in form, whenever there is a 'minus'-NP in A function, it is ergative in form.

Thus, for the transitives, we can read the lines as showing progressively more elaborately marked propositions. I, first or second person acting on third, is coded with both adjuncts in the same zero case-form, nominative for agent, absolutive for patient. II, third person acting on third has agent 'displaced' as it were to ergative case. III, 'participant' acting on 'participant' has the patient 'displaced' to accusative case. IV, finally, third person acting on first or second has both the agent 'displaced' to ergative case and the patient 'displaced' to accusative case.

So the case-marking system here seems to express a notion of the 'naturalness' or unmarked character of the various noun phrases in different adjunct functions, particularly the transitive ones. It is most 'natural' in transitive constructions for first or second person to act on third, least 'natural' for third to act on first or second. Decomposed into constituent hierarchies, it is natural for third person to function as patient (O) and for first and second persons to function as agent (A), but not vice-versa. The marked cases, ergative and accusative, formally express the violations of these principles. So using a chart of noun phrase types such as (86), analogous to those above, we can see that the Dyirbal system of split case-marking makes a neat distinction into two disjoint sets, those that have accusative case-marking in O function, and those that have ergative case-marking in A function. This is accomplished by a set of ordered rules such as (87). In any rule of (87), the form depends on lexical content expressed by a single feature at a time, of only one of the two possible adjuncts. Hence it is a 'simple' and 'local' case-marking rule, to be distinguished from the 'complex' and 'global' ones of Chinookan (see (35), (67)–(68)). Further, the boundary of accusative case-marking along the series of noun phrase types in (86) is exactly the same as that of ergative case-marking, making the split binary and uniformly two-way.³⁰

(86) Dyirbal pronouns and nouns:

	A	B	C	D	E	F	G	H	I	
ego	+	+	+	–	–	–	–	–	–	A. first dual
tu	–	–	–	+	+	+	–	–	–	B. first plural
pl	+	+	–	+	+	–	+	+	–	C. first singular
restr	+	–	(+)	+	–	(+)	+	–	(+)	D. second dual
										E. second plural
										F. second singular
										G. third dual
										H. third plural
										I. third singular

(87) Dyirbal case-marking:

Let (+) represent adjunct with [+F_i], for i = 1, 2;

Let (–) represent others.

Then: for schema (O, A), (S),

functions	case-marking
(x, –)	⇒ [x, erg]
(+, y)	⇒ [acc, y]
()	⇒ [nom/abs]

3.2. 'Normal' inflection with -*ɲay*- verbs

Each 'plain' transitive clause seems to be associated with an alternate form called the '-*ɲay*- form' by Dixon (1972:65–67), from the characteristic 'voice'-like suffix on the verb stem. For sentences with third person agent (rows II and IV of (85a)), the -*ɲay*- alternant seems to be an antipassive form, the agent noun phrase occurring with absolutive case-marking, the patient noun phrase, if it occurs overtly, appearing in dative case. However, just as in Chinookan there is a principle of mutual exclusion between a lexical dative 'indirect object' (D₂) and the grammatical dative (D₁) resulting from antipassivisation. While in Chinookan the indirect object is eliminated from the cross-referencing inflection (§ 2.4), in Dyirbal an expected 'third person' grammatical dative that results from anti-passivisation obligatorily has ergative case-marking when there is a lexical indirect object coded in the dative case. This alternation of dative to ergative is otherwise optional. Thus (88) is the antipassive form of (81), with ergative case alternative *baɲgul yaɲaŋgu* or regular dative case *bagul yaɲagu* expressing the underlying patient (O) adjunct. The verb *buɲalɲanju* has suffix -*ɲay*- on the transitive stem and intransitive inflection -*nju* (cf. *miyandanju* in (80)). For transitive sentences with first or second person agent, which in the plain forms (rows I and III of (85a)) have nominative case-marking on agent, there are -*ɲay*- forms in which the agent still appears in nominative case, but the patient appears in dative case, with alternation to ergative if third person, under the given conditions. Thus for example we have (89) as the -*ɲay*- form of (83).

(88) *balan djugumbil bagul yaɲagu* (~*baɲgul yaɲaŋgu*) *buɲalɲanju* 'woman is looking at man'

(89) *ɲadja/ɲinda ɲinungu/ɲayungu buɲalɲanju* 'I/thou look(est) at thee/me'

So two principles seem to operate in these -*ɲay*- forms, which indicate that the 'antipassive' formation for third person agent is part of a larger system. First, all agents appear in these -*ɲay*- forms in nominative (or absolutive) case, and all patients appear at least in regular formation in dative case. Second, the alternation of dative to ergative for third person patients demonstrates the principle of mutual exclusion of 'grammatical' and 'lexical' dative. The rule we can write for this alternation, (90), has a form that is very much similar to the Chinookan rule for 'thematisation' of inverse verbs (as in (45) above). The parallelism of the 'inverse' and antipassive of Chinookan is repeated, with significant differences, in Dyirbal.

(90) Ergative alternation:

case-markings:	<i>erg</i>	<i>nom</i>	<i>dat</i> ₁	<i>dat</i> ₂	
SD:	X	[-F _{i,j}]	Y	V+ <i>ɲay-</i>	(i, j = 1, 2)
⇒ SC:	[-F _{i,j}]	X	Y	V+ <i>ɲay-</i>	

obligatory when Y ≠ φ, optional otherwise.

The *-ɲay-* forms, together with the intransitive forms that cannot have this suffix, thus form a system of inflection distinct from the 'plain' forms of (85a). I have indicated the patterning of these 'normal' forms in (85b), *normal* alluding to the parallelism of standardised form of equations, etc. with respect to orthogonals or fixed points of reference. Indeed, all of the adjuncts line up in columnar fashion in (85b), as distinct from the scattered inflectional possibilities of (85a). And the system of inflection, using nominative/absolute and dative case-markings, is typologically an 'accusative' one, where A and S functions are coded by the first case-form, and O function is coded by the second, subject to the ergative alternation of (90).

This is exactly the same general pattern as in Chinookan (§ 2.5), except that there the A/S function was coded by the dative form-order class, and the O function by the nominative form-order class, with the global split-ergative rule (67b) overlaid, a rule which is reminiscent of the ergative alternation (90) in part. It can also be observed that formally the split-ergative system displayed in (85a) can be derived from the uniform normal forms of (85b) by application of (87), taking account of inherent lexical content. Other than this contrast of case-forms, the only difference between the two systems of inflection in (85) is in the appearance of *-ɲay-* on the transitive verbs, and hence we must explore the function of this apparent 'voice' suffix in the system of Dyirbal, that is, we must examine the occurrence of clauses containing derived *-ɲay-* forms of verbs and accompanying 'normal' inflection on noun phrases.

3.3. Switch-reference system of discourse

As Dixon noted, the *-ɲay-* constructions normally occur non-initially in discourse, as demanded by certain co-reference sequences (1972: 79-81). They give structure to 'topic chains'. More particularly, these forms occur in clauses where some underlying noun phrase adjunct is co-referential with a noun phrase in another, preceding clause, and the underlying function of the noun phrases 'switches' from S to A or from O to A. If this switch does not occur in sequence, so that co-referent S/O-S/O noun phrases are involved, no suffix appears and no normal inflection, but rather plain inflection, in both clauses.

As I mentioned in § 3.1, co-reference anaphora in the third person is expressed by zero, that is, by deletion of the noun phrase head. For certain forms of anaphora, defined over a domain of types of relations between clauses (see § 2.6) there is a possible total deletion of the second, co-referent noun phrase, encompassing all 'persons'. In Dyirbal, the domain of operation is very wide, including most kinds of relations between clauses up to general sequential conjunction, which is handled more loosely in the form of discourse in many languages.³¹ For example, in (91) we have a purposive construction, with the second clause in nominalised purposive form, the verb *babel-ɲay-gu* showing the dative case-ending *-gu*. The underlying agent

(A) of the second clause ('I') is co-referential with the underlying patient (O) of the first clause. Only the first token of the co-referent noun phrase actually occurs, in accusative case-form (of plain inflection), and the co-referent second example is deleted. The deletion, obligatory for *-ɲay-* constructions, is indicated in (91) by brackets around the underlying agent of the subordinate clause. The verb of the second clause signals the sequential switch from underlying O to underlying A with the suffix *-ɲay-*. In terms of normal forms of clauses, it can be seen that (92a) would be the normal form of the first clause, and (92b) the normal form of the second. With respect to the normal inflectional system, the appearance of the switch-reference marker signals change from would-be dative to would-be nominative of the co-referent noun phrase; of course the first clause appears in plain rather than normal form, and the second token of the noun phrase is deleted from the second.

(91) *ɲayguna bangul yaɲaŋgu mundan/[ɲadja] bagum miranɲgu babel-ɲay+gu*
'man took me/ (for) [me] to scrape black beans'

(92) (a) *ɲaygungu bayi yaɲa mundalɲanɲu*
 [dat] [nom]

(b) *ɲadja bagum miranɲgu babelɲanɲu*
 [nom] [dat]

(93) *balan djugumbil yanu/[balan djugumbil] bagum miranɲgu babelɲanɲu*
'woman went/and [woman] scraped beans'

Similarly, (93) is made up of two basically conjoined clauses of sequential value, showing co-referent underlying adjuncts which switch function from S to A. The verb of the second clause (or conjoined sentence) has *-ɲay-* and finite aorist desinence *-ɲu*. Observe that the first clause is intransitive with S adjunct. In the normal form, as in row VI of (85b), this takes nominative (absolute) case-marking, but for purposes of switch-reference, it is classed together with underlying O function. That is, the switch reference system with *-ɲay-* vs. *-φ-* for 'different' vs. 'same' underlying function of co-referent noun phrase operates on an *ergative principle*, though the normal form case-marking system itself operates on an *accusative principle*.

That this analysis is correct is shown by Dixon's other 'topic chain' construction, with verbal suffix *-ɲura*.³² Where co-referent noun phrase did not switch function across clauses, then the plain inflection and no voice change occurs in both, let us recall. Where co-referent noun phrase switches from S or O to A, we have *-ɲay-* in the second clause, and normal inflection. In the remaining cases, where co-referent noun phrases switch from A in the first clause to S or O in the second, the second clause appears in surface form with plain inflection and verbal suffix *-ɲura*, the co-referent noun phrase being optionally, though characteristically, deleted (indicated in (94) by brackets enclosed in parentheses). This suffix has another, probably historically prior function, and differs from *-ɲay-*, the historical antipassive voice suffix, both in taking plain inflection on the noun phrases, and in not taking further tense inflection on the verb. Note for example (94), with first clause which would appear in normal form as (95). The agent is normal-nominative, and hence the switch-reference marked by *-ɲura* in the second clause is to the subject of

the intransitive (S), which for discourse purposes functions like a normal-dative (O). With the strictly accusative case-marking system of the normal schema of inflection, however, the intransitive subject (S) would appear with nominative case-marking. In all such cases of switch in clause sequence from normal nominative A to normal nominative S or normal dative O, the *-ɲura* marker is used on the second clause.

(94) *ɲadja bala yugu madan*/(*ɲadja*)*waynjdɲijura* 'I threw stick and I went uphill'

(95) *ɲadja bagu yugu madalɲanju*
[nom] [dat]

The markers *-ɲay-* and *-ɲura*, then, are discourse markers that show the switch of underlying function of co-referential noun phrases. So we can develop a table such as (96) for Dyirbal, analogous to (78) for the Chinookan forms that incorporated an antipassive. Observe that the *-ɲura* suffix indicates switch from A function to S/O, the *-ɲay-* suffix switch from S/O to A, and no verbal suffix indicates no switch. (For cross-clause co-reference of A with A noun phrase, both clauses can appear in *-ɲay-* normal form, with the second noun phrase of the pair deleted. Alternatively, the *-ɲay-* normal derived form of the second clause, with co-referent NP in derived nominative/absolute 'S' form, can be further suffixed with *-ɲura*—the implications, both synchronic and diachronic, need not be dwelt on here.)

(96) Switch-reference constructions of Dyirbal:

reference relations	functions	formal features of inflection	
		clause 1	clause 2
co-refer	A-A	normal+ <i>-ɲay-</i>	normal+ <i>-ɲay-</i> ; co-ref NP deleted
co-refer	A-S/O	plain	normal+ <i>-ɲay-</i> + <i>-ɲura</i> ; ,, (optionally)
co-refer	S/O-A	plain	normal+ <i>-ɲay-</i> ,,
co-refer	S/O-S/O	plain	plain; ,,
non-co-r	NP-NP	NO CLAUSAL CONJUNCTION WITH DELETION	

There is a difference between the two kinds of systems in these two languages. In Chinookan, the function of the noun phrase in the matrix clause, or the first noun phrase, was unrestricted, so that the construction types with antipassives, namely the habitual relatives, *restricted* the noun phrase possibilities D, O, A, S which could appear with co-referential deletion in the second clause, allowing from this set of underlying functions only A and S. In Dyirbal, on the other hand, the switch-reference system across clauses specifies the *relative function* of the two noun phrases involved in co-reference relation.

3.4. Relative clauses and possessive phrases

The Dyirbal system of maintaining discourse reference, however, begins to look very much like the Chinookan one in relative clauses, where the NP functions that can enter into co-reference relations are restricted to what-

ever can be in derived nominative case. The co-referent noun phrase is deleted from the embedded clause, along with the finite verb inflection, and a suffix *-ɲu-* is added to the verb. The case-function of the noun phrase modified by the relative clause (the head noun) ranges over every possibility except allative and ablative. Some examples appear in (97) through (99).

(97) *balan djugumbil* [*ɲadja buɾa-ɲu*] *njinanju* 'the woman [whom I am watching] is sitting down'

(98) *bayi yaɾa baɲgun djugumbiyu* [*waynjdji-ɲu*+]*ru buɾan* '[as she was going uphill] woman saw man'

(99) *ɲadja njinanju yuguɲga* [*yaɾaɲgu nudi-ɲu*+]*ra* 'I am sitting on the tree [that the man felled]'

(100) *ɲadja balan djugumbil buɾan* 'I am watching woman'

(101) *balan djugumbil waynjdjin* 'woman is going uphill'

(102) *bala yugu baɲgul yaɾaɲgu nudin* 'man felled tree'

In (97) the relative clause is formed with underlying subordinate clause (100), where the co-referent noun phrase is transitive object (O). The verb of the relativised clause ends just with *-ɲu*, that is, *-ɲu+ϕ*, agreeing with the absolute case of *balan djugumbil*, which functions as intransitive subject (S) in the main clause. In (98), the relative clause is from the intransitive clause (101), where co-referent noun phrase is intransitive subject (S), and the relative clause in *-ɲu+ru* agrees with the ergative inflection of *baɲgun djugumbiyu* in the higher clause. In (99), the relative clause is from (102), where co-referent noun is transitive object (O), and the relative clause in *-ɲu+ra* agrees with the locative inflection of *yugu-ɲga*.

When the underlying transitive subject (A) of the relative clause is co-referent with the head noun, the relative clause appears in normal form with *-ɲay-* suffixed to the verb stem. So examples (103) and (104) both contain relative clauses in which *-ɲay-* is suffixed to the verb stem *djihwal-*, preceding the relative clause marker *-ɲu-*, and the morpheme for case-agreement with the co-referent noun phrase head, nominative (cf. *balan djugumbil*) in (103), and ergative (cf. *baɲgul yaɾaɲgu*) in (104). The object (O) in both relative clauses appears in normal dative form, with *-gu* suffix, though apparently the ergative form (*baɲgul njaɲɲagaɲgu*) is optionally permitted.

(103) *balan djugumbil* [*baɲgul njaɲɲagaɲgu djihwal-ɲa-ɲu*] *baɲgul yaɾaɲgu buɾan* 'man saw woman [who kicked child]'

(104) *balan djugumbil baɲgul yaɾaɲgu* [*baɲgul njaɲɲagaɲgu djihwal-ɲa-ɲu*+]*ru buɾan* 'man [who kicked child] saw woman'

In this use the *-ɲay-* is not functioning as part of a switch reference system, since it tells us nothing about the relations of 'same' or 'different' of underlying case-relations of two co-referent noun phrases. Rather, it is indicating that A, as opposed to S, O, etc., is co-referent with the head noun. Relative clauses being limited to derived nominative/absolute case-forms of the embedded co-referent noun phrase, only configurations which can be so

transformed can serve as relative clauses. The antipassive 'normal' form of a relative clause thus signals co-reference of the deleted noun phrase and at the same time indicates the underlying A function of only the deleted noun phrase.

The case-marking schema of the transformed antipassive or normal form would be nominative-dative (~nom-erg) for underlying A-O adjuncts, it is important to note. Recalling in general that normal forms have a uniform 'accusative' case-marking in terms of nominative and dative surface cases, for the relative clauses in (97) and (99) the co-referential deleted noun phrases would be in *dative* case in normal form, while in (98) the deleted element would be in *nominative* case. So, in terms of normal forms, the *-ŋay-* marker on the antipassivised verbs distinguishes those normal-nominatives which represent A function from all other normal case-forms. So the *ergative* principle of co-reference for relative clauses is maintained, just as the principle of switch-reference was ergative in formal class distinctions over clauses.

Turning to possessive phrases, which have traditionally been interpreted as a kind of reduced relative clause, we can see that the construction marker on lexical noun possessors is *-ŋu-*, of exactly the same shape as the verbal suffix in relative clauses. Thus (105) (a) and (b) are predicating forms, which overlap with absolutive case-forms of the noun phrases. Contrastively, (106) shows a sentence incorporating possessed noun phrase in ergative case-form. The possessor here has its characteristic genitive marking *-ŋu-* followed by an element *-(ŋj)djin-* and finally the ergative desinence *-du* agreeing with the case of the (possessed) head of the noun phrase.³³

- (105) (a) *ŋaygu balan guda* 'the dog is mine; it is my dog'; 'my dog [abs case]'
 (b) *balan guda baŋgul yaŋaŋu* 'it is the man's dog'; 'the man's dog [abs case]'
- (106) *balan djugumbil baŋgun gudaŋgu [baŋgul-djin+]_{du} [yaŋa-ŋu-ŋjdjin]_{du} badjan* '[man's] dog bit woman'

Under the hypothesis that possessives and relative clauses are similar, we want to ask what is the configuration of adjunct functions that underlies such phrases. Clearly, there has been deletion of a noun phrase co-referent with the possessed, the head of the dominating noun phrase. Since there is no *-ŋay-* marker in the possessive phrase, in the underlying possessive relation the possessed must function as underlying S or O adjunct, and the possessor must function as some other kind of adjunct. On the basis of several lines of reasoning, I would conclude that the possessor is in underlying or normal grammatical dative case relation, and the surface 'genitive' case is the special form for *adnominal dative*, just as the surface 'accusative' case has turned out to be a special form for *adverbial dative* (in going from normal to plain inflection). More particularly, I conclude that the possessive schema is a kind of two-place schema of underlying relations exactly as we found in Chinookan, the distinction between the two systems being in the case-relations. In Chinookan we discovered possessives had an 'inverse' transitive schema of O-D₁ configuration; here it would seem the schema is S-D₁, as shown in the surface configuration of (105).

There is an alternative possibility for the underlying function of the

possessor, given the relativisation hypothesis, namely that it be A, agent-like. But in these circumstances, with true transitive A possessor and O possessed, there seems to be a comitative adjective used, as in (107) and (108). The first constitutes a full sentence, contrasting with (105a), while (108) shows ergative case-inflection on noun and adjective both. Notice that the *-bila-* construction is not formally relativised with *-ŋu-*, since it is adjectival. The possessive relation seems to be at the semantic core of this construction (Dixon, 1972:71, 108), with various unclear entailments of actual accompaniment expressed apparently by the discourse sequence incorporating such phrases (cf. Dixon, 1972:222-23 and paper 18 in this volume).

(107) *ŋadja guda-bila* 'I have a dog'; 'I, (being) with dog'

(108) *ŋayguna baŋgul yaŋaŋgu [guda-bila+]_{gu} balgan* 'man [with dog] hit me'

4.1. Lexical splits and ergative structure

From the two extended examples presented here, it can be seen that the typology of lexical splits such as those in § 1.3-1.4 is a fact of the surface case-marking structure. This typology can be given a first approximation to grammatical systematicity by formulating the rules for case-marking in the basic, active declarative forms. The case-marking rule of Chinookan (35) assigned order-class and form to cross-referencing pronominals, and on this basis there were two kinds of splits. One was 'complex' and 'local', in the sense that third person nonsingulars (two features here) have a distinct ergative and a distinct accusative case-form. The other was 'complex' and 'global' in the sense that in the singular there is a special ergative mark whenever the patient has a positive specification for a person feature occurring in the ordered hierarchy and the agent has a negative specification. In Dyrbal, contrastively, the lexical split is much neater in the plain forms, in that the rules for case-marking, (87), are 'simple' and 'local', depending on the specification of person feature in the hierarchy for the given noun phrase receiving case-inflection.

We can assemble the universal hierarchy of features from the set of language-specific examples such as those presented here. While it is true that the exact place along the sequence of noun phrase types generated by the feature hierarchy, at which any given language splits its accusative-agentive-ergative subsystems, is not fixed by the machinery proposed here, the *form* of the split(s) is determined. The more highly marked noun phrases (in the sense of feature specification) will always show an accusative case-marking if less highly-marked ones do, as defined by one or more features jointly ('simple' vs. 'complex' conditioning). Inversely, the less highly marked noun phrases have ergative case-marking if the more highly-marked ones do. There is a possibility, realised for example in Chinookan (and in the Giramay dialect of Dyrbal, cf. fn. 30), that the two case-marking schemata will overlap, giving a three-case middle ground. But it is in the formal treatment of one or both of the two adjuncts (O, A) of the *transitive* predicate that the characterisation of the system lies. The appearance of a distinct S case is, it can be seen, a residual phenomenon.

Among the languages we have examined to different degrees, there seem to be examples of splits at almost every expected point along the sequence of

noun phrase types. But surface case-marking typologies such as those of § 1.4 must be carefully related to the rules of the grammatical system, lest the true nature of the split systems be missed. For Bandjalang in (16) and Dhirari in (17), for example, there are splits which distinguish the lowest-ranking noun phrase types, non-human nouns, and all lexical nouns, respectively, as having ergative-absolutive system. 'Third person' pronouns, the anaphoric co-reference markers, seem to pattern with higher-ranked noun phrases. But we must examine the rules of anaphora to determine the status of the third person pronominal forms. In several other cases (for example, Western Desert, Guugu-Yimidhir) where pronouns—including anaphoric markers—are reported with one case-marking system and nouns with another, it turns out that only human proper nouns or their like are represented by overt pronouns, the other noun phrases being simply deleted under conditions of co-reference. In turn, such restrictions can depend on syntactically unmarked underlying propositional functions (for example, restrictions in Chinookan on O occurring with lexical D), so that the whole surface ergative pattern, while fitting neatly into the expected hierarchy, is a kind of epiphenomenon.

For this reason, it is necessary to investigate the syntactic rules which induce the apparent ergative structure, both on the level of propositional function, where adjuncts receive case-marking, and on the level of discourse, where noun phrases have privileges of co-reference limited by function. It seems clear that the first kind of rule is always sensitive to inherent lexical content, and that the second kind of rule (exemplified by anaphoric pronominalisation or by switch-reference) may be sensitive to it. Thus the case-marking rules, those of the first kind, are always to be formulated as *rule schemata*, where ranked features themselves are variables down or up the scale of which we must read, to test propositional adjuncts for applicability of accusativity/ergativity in their case-marking. The equivalent of such *rule schemata* have been recognised for certain phenomena such as Algonquian (North America) 'direct' vs. 'inverse' verb inflection (see Bloomfield, 1946), but it requires the broader perspective of a universal hierarchy of lexical content of noun phrases to show the true general nature of the facts. Algonquian languages become another example of simple global two-way ergative-accusative case-marking accomplished by morphological machinery in the surface verb. We must re-evaluate a number of such examples in the light of feature hierarchy.

For the second level of structure, that of cross-clause maintenance of reference relations, two principles are at work. One is the surface-function (derived) privileges of occurrence of noun phrases subject to anaphoric processes, which, as we saw in Chinookan and Dyirbal, are highly restricted. Another is the distinction mentioned just above, on types of anaphoric processes based on lexical content. Since co-reference or switch-reference devices always operate on lexically-comparable noun-phrases (for example, both third person singular, etc.), such rules will always be equivalent to local case-marking, rather than global. They form an overlay on the fundamental case-marking rules, and introduce an additional layer of classification of underlying adjuncts by ergative vs. accusative principles. Hence we can have languages with split-ergative case-marking at the propositional level with accusative co-reference rules for various multiple-clause constructions in

discourse, as in Chinookan. It is an interesting open question as to the existence of the inverse phenomenon, the answer to which will take us vastly further in understanding ergativity.

4.2. 'Normal' forms with nominative-dative inflection

In both of the examples presented, there is regularity of patterning in that the lexically-split ergative schema of inflection alternates with two kinds of accusative systems. One of these is the regular formally nominative-accusative system of plain inflection that constitutes the rest of the paradigms defined over noun phrase content, whether locally or globally. The other, however, is a system functionally 'accusative' in configuration, distinguishing A and S from O in case-marking, but the particular case-markings in terms of which this 'accusative' distinction is marked are formally *nominative (absolutive)* and *dative*. This *grammatical dative* in Chinookan is the case of the underlying A/S adjunct, while in Dyirbal it is the case of the underlying O adjunct.

In both languages, there is a rule which strictly separates the grammatical dative from datives of indirect object, either by excluding the possibility of indirect object dative with this inflectional scheme (Chinookan), or by transforming the grammatical dative into an ergative (Dyirbal) when a lexical dative co-occurs.³⁴ The functional relations of this derived nominative-dative construction are then contrastive in the two languages, and the rules of dative 'bumping' as well. In Chinookan, the underlying A/S becomes formally derived dative, and the indirect object is 'bumped'; in Dyirbal, the underlying O becomes formally derived dative, and it is itself 'bumped' into ergative case if there is an indirect object dative in the same clause. This does not seem to be a chance correlation. In those languages, such as Georgian, where the nominative-dative vs. split ergative systems alternate along such dimensions as tense-aspect, the distinction between grammatical and lexical dative must play a different role.

In the two languages examined here, however, the nominative-dative schema was uniquely associated with the antipassive form of transitive constructions, which have a privileged status among the systems of propositional representation as a kind of basic form from which all the others, for example, plain, inverse, etc., could be derived. The fact of cross-linguistic compatibility of the formal schemes of inflection, being the nominative and dative case-representations, combined with the fact that the rest of the inflectional apparatus can be derived from the normal forms with split-ergative case-marking rules, makes this schema a candidate for a true universal basic form of propositional representation. Thus note that the direct and inverse transitives of Chinookan are derivable, by the fact that the antipassive forms are inverse constructions. (Contrast Dyirbal, where the antipassives are direct constructions.)

In a sense, the antipassive forms of these ergative languages, together with the equivalent intransitive construction that together make up the 'normal' inflections, reduce propositions to isomorphic uniformity, independent of the actual split ergative case system of the plain forms, so that by knowing (1) number of adjuncts in a proposition, (2) whether the proposition is direct or inverse—semantically linked classes, no doubt, (3) inherent lexical content of the adjunct noun phrases, all the inflectional possibilities are determined. The case-marking rules operate in terms of these three semantic factors as

primary. The 'normal' systems of nominative-dative inflection thus give a window on the primitives of syntactic structure.

4.3. Syntactic hierarchies of case and co-reference

From these primitives, we can draw out further conclusions about syntactic universals in the form of hierarchies of the very case configurations and clause sequences permitting co-reference relations.

If nominative and grammatical dative are the most elementary of case-markings, in the 'normal' forms of propositions, then the regularities of elaboration of case systems in the various 'plain' inflectional schemata, based on the syntactic rules for deriving these constructions, themselves may be seen to form a universal hierarchy. For example, the 'genitive' case in both Chinookan and Dyirbal was derived from a *dative* form in normal inflection, as a specifically adnominal dative. Thus for case systems in general, we would predict that the existence of a distinct adnominal genitive case implies the existence of a grammatical dative case. Similarly, a distinct 'accusative' case is in plain inflection derived from a normal nominative (absolute) in Chinookan, from a normal dative in Dyirbal, by rules of split ergativity. Hence the existence of an accusative case distinct from all others implies the existence of nominative/absolute and dative. Again, the existence of a distinct ergative implies the existence of a nominative/absolute and the existence of a dative. So we can develop a typology of elaboration of case systems, something as in (109).

(109) Case hierarchies:

Abs/Nom: Dat₁ ⇐ Acc ⇐ Erg ⇐ Gen propositional functions
 (· ·)
 Dat₂ ⇐ Inst ⇐ Loc ⇐ ... adverbial and propositional functions

Indeed, such a typology represents a summary of universal laws of syntactic structure in that case elaborations from the minimal dyad depend on functional rules. Just as in the feature hierarchies, languages vary in the cut-off point of case elaboration, but the distinct cases they have follow inclusion relations by areas of referential content. If there is a distinct case-marking to represent 'plain' propositional (referential) function 'Y', then there will be a distinct case for functions 'X', 'Z', etc. So case-marking systems are solving, as it were, several problems in semantic hierarchy: they represent referential adjuncts in propositions sensitive to inherent lexical content.

Similarly, of course, we can elaborate on the differences we saw for co-reference relations across clauses, where a case-like classification of functional possibilities operates. The criterion of elaboration in case systems *per se* is distinct surface case-treatment for certain propositional functions. The analogous criterion at the discourse level is distinct co-reference treatment for certain kinds of clause linkage. As we saw, in split ergative systems, there is a certain kind of clause-sequencing relationship which requires nominalised, antipassivised 'normal' forms to express permissible co-reference relations between noun phrases, with anaphoric deletion. The possible propositional functions of the co-referent noun phrase in the second (or embedded) clause were fixed, or severely reduced, in both languages, in the most marked type,

Chinookan 'habitual' relative clauses, Dyirbal relative clauses (see §§ 2.6, 3.4). In Chinookan, all other kinds of clauses are conjoined at the surface, extraposed so that they are in sequence and so that they appear in full finite inflectional form. As I characterised the structure in § 2.6, Chinookan assimilates most logical subordination of various kinds to sequential discourse, co-reference simply being marked by deletion of noun phrases. Dyirbal, however, has a switch-reference system that operates over stretches of otherwise simple conjoined clauses, depending on co-reference relations. Besides the relative constructions in nominalised form, there are nominalised purposive constructions (as in (91)) and various other clause types which are nominalised, formally embedded at the surface, and marked with case-endings, agreeing with some underlying co-referent noun phrase. To a much greater extent, Dyirbal assimilates much of discourse to the forms of subordinate clause constructions, especially nominalisations.

The point here is that by looking at the mechanisms for surface expression of co-referentiality in clause relations, there are distinct mechanisms of increasing formal complexity, marking the surface result as quite different from ordinary 'plain' inflection, as we move along a hierarchy of *clause-logical relations*. So again we have an implicational hierarchy of form (110), proposed on the basis of generalisation from many languages, including these ergative ones. If a language uses a special form for co-reference relations over a logical connexion at a certain point, it will use at least that mechanism for everything above, and possibly even more elaborate formal distinctions.

(110) Logical-relations of clauses (with co-referent NPs):

↑	Ergative languages	↑	possessive
↑	↑	↑	habitual actor
↑	↑	↑	habitual agent
↑	↑	↑	relative clause (making definite reference)
↑	↑	↑	purposive complement (dative infinitive)
↑	↑	↑	desire complement
↑	↑	↑	indirect discourse complement
↑	↑	↑	temporal adverbial clause
↑	↑	↑	if—then
↑	↑	↑	disjunction
↑	↑	↑	conjunction
↑	↑	↑	clause sequence (sequitur)
↑	↑	↑	clause sequence (non-sequitur)

In terms of the split ergative systems we see here, as we move up this hierarchy it becomes more and more the case that a language will suspend the lexical hierarchy for split ergative, use antipassivised forms of transitives in nominative-dative 'normal' forms, and nominalise with a possessive or equivalent schema. Where, along the hierarchy, a language makes its syntactic distinction between 'embedding' as it were, and 'discourse' is not specified,

but the universal proposed ranking of clause connexions means that this split must be consistent with the others.

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The unpublished sources of data are as follows: Chinook, Wasco-Wishram dialect, from my own field data, gathered in the 1966-73 field seasons with the varied support of the National Science Foundation (through the Graduate Fellowship Program), the Phillips Fund of the American Philosophical Society, the Society of Fellows, Harvard University, and the Department of Anthropology, University of Chicago, to all of which I am most grateful; Bandjalang, from a lecture by Terry Crowley at ANU, September, 1974; Dhirari, from a lecture by Peter Austin at ANU, September, 1974; Quiche (Mayan) from a seminar presentation by Thomas Smith-Stark at Chicago, May, 1974; Eskimo, partly from a seminar presentation by Tony Woodbury at Chicago, May, 1974; Georgian, partly from a seminar presentation by Dee Holisky at Chicago, May, 1974; Aranda, partly from a seminar presentation by Alan Rumsey at Chicago, June, 1974; Gumbayngir, partly from a seminar presentation by Diana Eades at ANU, April 1975 (communicated privately by R. M. W. Dixon).

Notes

1. I deal with such three-way case-marking systems marginally in this paper, having selected for principal consideration two two-way split ergative systems. They provide further evidence, however, for the approach adopted here, and I give sketchy indications on their description.
2. Eskimologists, for example, use the term 'relative' for the Eskimo-Aleut ergative case. Recently, with the interest in semantic-case grammar, some have called this the 'agentive' semantic relation (Fillmore 1968; Chafe 1970), but note that this idealised underlying level of 'semantic' structure is not the same as a case indication in overt syntactic form. In Australian linguistics, there is a tradition associated with Capell (1956, 1962) and others of calling the ergative case-marking on nouns and pronouns the 'operative' or 'instrumental' case.
3. Fillmore (1968:57-60), in discussing topicalisation, gives references, both vague and specific, to some of these kinds of arguments, but within the framework of 'case'-grammar. Since his underlying forms include verbs with adjuncts that are marked for semantic 'case', he must have a rule of preferential 'subjectivalisation' or 'primary topicalisation', which gives the simple declarative active-voice surface forms (among others). On the other hand, he sees ergative languages, 'described as only capable of

expressing transitive sentences passively', as really 'lacking the grammatical process of primary topicalisation' (1968:58), that is, of 'subjectivalisation', which begs the issue of just what such an anglo-centric view of 'subject' in so-called 'surface structure' really means. Since 'primary topicalisation for English involves position and number concord' (1968:57), that is, case-marking in our sense, ergative languages are not to be distinguished on these grounds—indeed, they all show case-marking. Fillmore's definition of primary vs. secondary topicalisation depends on the controversial universality of the way in which surface 'subjects' are distinct from 'topics'. The point to be developed below is that discourse and propositional levels sometimes interact differently in ergative languages, not that the two levels are indistinct.

4. It would be necessary to give an extensive theoretical discussion of principles of markedness to justify fully a feature analysis of noun phrases. But see the several papers of E. Benveniste on 'pronouns' and 'person' reprinted in his *Problèmes de linguistique générale* (1966) for a clear exposition of this line of reasoning. These are fully in the spirit of the feature analysis of the Prague sort, from which all our notions of markedness ultimately derive.
5. This formulation follows the pragmatic analysis of C. S. Peirce, and of Roman Jakobson. See my paper 'Roman Jakobson et l'anthropologie sociale' to appear in *L'Arc* (1975a), and my paper 'Shifters, linguistic categories, and cultural description' to appear in *Meaning in cultural anthropology*, ed. by K. Basso and H. Selby (1975b).
6. Postal's (1966) analysis of all English surface pronominal forms as appositive constructions in underlying form, partially criticised by Delorme and Dougherty (1972) on syntactic grounds, does much violence to the distinction between indexical personal pronouns and anaphoric devices. So also do attempts at a 'performative' or 'hypersentence' analysis of the deep structures of sentences that conflate patterns of surface anaphoric (discourse bound) and non-anaphoric (speech situation bound) pronominal forms. Though peripheral to the present discussion, it is an interesting illustration of the fact that we can easily refuse to benefit from a great deal of previous work because it is couched in terms we can dismiss on the basis of current theoretical concerns.
7. This display deals only with 'person' and 'number', the categorial groupings always represented in the short pronominal NPs. Clearly, for those systems which also represent gender, and other lexical features of anaphoric 'third person' forms, there is a continuation of feature marking below the several germane to this section. Chinook and Dyrbal, treated below, show just such further NP features.
8. These pragmatic facts must be treated from the social anthropological point of view, and I gloss over the problems in this formulation. Much interesting material on the interaction of linguistic categories and 'cultural pragmatics' can be given on this subject, moreover.
9. It is obvious that while the general form of asymmetric, subdivided categories is common to both these tripartite schemes, the case of 'person' features, which are indexicals, shows the relatively unmarked [-ego] form further subcategorised by the [+/-tu] feature, as is expected by the theory of markedness, while the case of 'number' features,

which are not indexicals, shows the marked [+plural] form further sub-categorised by the [+/-restricted] feature. Perhaps this latter situation led McCawley (1968:568-69) to speculate that there were arguments for the marked, rather than unmarked, nature of the traditional 'singular' category.

On the other hand, it is clear that notions of markedness are not the same for indexical and non-indexical referring categories. In terms of referential specificity, the indexicals 'inclusive dual', 'first person singular', and 'second person singular' are more highly marked semantically than 'exclusive dual' and 'exclusive plural'. The implementation of 'number' distinctions for these indexical categories—the [+plural] feature, for example, usually indicating that there are specifically 'more than one' of the object referred to—is semantically incorrect, as Benveniste points out, but one of those economies of structure universally found in languages. Indexical 'plurals' derive from summing individuals in the speech situation, with or without other referents. The plurality is thus not of identical referents, but such a derived, counted-up plurality that masquerades as true plural.

Thus, if we eliminate the indexical first and second persons, we are still left with the problem of markedness in the so-called 'third person' number categories, and to solve the problem adequately one might wish to introduce either of two notions: either (1) to distinguish between [m/u F_i] for all features, as distinct from [+/-F_i], as in the proposal of Chomsky and Halle (1968:ch. 9) for phonology, or (2) to note that the features themselves are a universal inventory of oppositions from which each language, subject to systemic constraints, chooses which member of the opposition is marked, which unmarked (cf. Friedrich 1974; Silverstein 1974:§ 7.1). The second proposal strikes me as better for both syntax and phonology, and can be incorporated into a hierarchisation schema like the one here. Following on my discussion of tense-aspect systems in the paper just cited, I suspect that there are [+plural]-dominant systems and [+restricted]-dominant systems, and the apparent markedness relations of the categories (not, note, of the features) differ depending on which schema defines them.

10. Since, as Bill Darden has reminded me, the verb in Russian agrees in gender of the underlying referent of a singular nominative NP serving as subject in *all* persons, we need some underlying specification of this for all singulars; however, the tests for markedness operate with surface categories, which I deal with here.
11. This typology, and indeed the discussion of this section, owes a great deal to the criticism of my Canberra lectures (September, 1974) by David Nash, who may still not be satisfied with this response to his doubt.
12. I disregard the distinct pronominal forms based on moiety and section which function as subdivisions of the categories analysed here.
13. See Sapir (1926) for the historical interpretation, as well as for the (slightly inaccurate) historical derivation of the ergative masculine and feminine from *i-k-, *a-k-.
14. For the historical antecedents of this and all other alternations in form, see my paper 'Person, number, gender in Chinook, syntactic rule and

6. morphological analogy', presented at the 1973 A.A.A. and L.S.A. meetings.
15. See Silverstein (1972) for a presentation somewhat different in style and conclusions.
16. The masculine and feminine of rows L and M are historically (and perhaps morphophonemically) regular; see fnn. 13, 14.
17. Hence the source of the formation, in a 'second person polite' construction, is probably patent, the speaker showing deference by avoiding mention of himself (and others) as agents with respect to the hearer. Such impersonalisation in deference behaviour is, of course, widespread, frequently manifested by switch of 'second' to 'third' person pronominal forms for polite reference to the hearer (see Benveniste 1966 [1971], Silverstein 1975b and refs. there).
18. The inclusive forms (under A and B) cannot technically figure here, since they are positively specified for both [tu] and [ego]. Hence any inclusive-A-on-second-O/D would be in reflexive form, with which Wasco-Wishram deals in an entirely distinct manner. Actually, when pressed, informants assimilate these doubly-marked inclusives to the hierarchy, permitting regular *ga-lk-n-u-√q'mit* 'we (incl) saw me [in a mirror]' and *ga-q-m-u-q'mit* 'we (incl) saw thee', just as we might expect.
19. This is true of the agentive language Takelma (Sapir 1922) as well as of Algonquian languages (Goddard 1967), where a whole conjugation type is created, the 'pseudo transitive animates', to obviate the difficulty.
20. Characteristically, these verbal constructions exclude the directional morpheme *-u-* 'distad' from between postpositional and verb root, though the marked member of the directional opposition, *-t-* 'proximad' does occur, as in regular indirect object constructions.
21. Compare Yiddish, *Es shtinkt mir . . .* and many other parallels in Indo-European languages.
22. From the historical perspective, these irregularities are important evidence about earlier inflectional layers in Chinookan. *-k/čV-* and *-mi-* were formed by analogy with **-wi-* 'third person dative' in the earliest layer that allowed only one pronominal prefix. *-k/ča-* and *-tka-* demonstrate that the ergative pronominal is directly related to the dative of possession and antipassivisation. For these, and other points, see my paper referred to at fn. 14.
23. Essentially this conclusion was reached by Calvert Watkins about earliest Indo-European in a brilliant article, 'Remarks on the Genitive' (1967). See also W. S. Allen (1964).
24. Jeffrey Heath, in a recently published paper (1975), develops in explicit manner the interdependence between coding of lexical information in pronouns and discourse-reference maintenance. In addition to this co-reference function, however, languages have to have some mechanism for indicating the sequence of underlying propositional functions of noun phrase adjuncts, and it is in this second area, which overlaps entirely with anaphoric co-reference in Chinookan, that Dyrbal differs greatly in formal expression.
25. I use this terminology, compatible with the 'standard' transformational theory (see §0.2) even though the notions of underlying and surface (or

- derived 'subjects' and 'objects' are ultimately to be defined in terms of the primitives developed in the more inclusive theory here presented. Observe that the discussion at this point is unaffected by argumentation about what is the real 'underlying' level, though the point of view developed here ultimately rejects the notions of the 'standard' theory.
26. For plural co-referent adjuncts, in fact, these forms with intransitive surface inflection can take the regular nominal plural suffix *-maχ*, especially when preposed to the modified noun. Were we to quibble over terminology, perhaps we should call these forms strict 'relatives', with— from the English point of view—unambiguous translation equivalents.
 27. The parallelism of Benveniste's (1948:esp. 62) two kinds of nouns of action/agency in proto-Indo-European and several of the earlier daughter languages should be pointed out. Cf. my remarks in Silverstein (1972: 391–92, esp. fn. 33) and Silverstein (1974:S78–9, esp. fn. 62). We can add that sociologically this corresponds to the distinction between ascribed and achieved status.
 28. Actually, there are a great many nouns of obvious etymology in anti-passive nominalisations, the very historical specialisation of which as lexical items (some with obligatory possessive, some with optional) demonstrates the rigidity of the *syntactic* rule of cross-clause reference possibilities.
 29. As Dixon (1972:54–55) points out, the split of the *-l-* stem *vs.* *-y-* stem inflectional systems correlates very highly with transitive *vs.* intransitive stems, and thus can the semantico-referential core of the formal distinction be interpreted. An interesting study of the exceptional cases could be undertaken to seek parallels to the formally-intransitive split 'inverse' transitives and apparent transitives of bodily states (for example, *Walu g-n-u-√x-t* 'Hunger [fem sg] acts on me') in Chinookan and other languages.
 30. The Giramay dialect of Dyirbal has a 2–3–2 system of case-marking, with first and second singular showing a distinct ergative case, as well as nominative and accusative. This is accomplished by having a 'complex' local rule for ergative, the simple rule for accusative in the patient hierarchy remaining the same. See Dixon (1972:50, 243–46). The historical interpretation of this divergence is an interesting study in itself, given a semantic theory of hierarchy.
 31. The contrast with Chinookan is striking, where essentially only a specialised relative clause type manifests such structuring. Compare also English, where certain complement clauses and purpose constructions, relatives, etc., have special co-reference constructions, but discourse generally has anaphoric pronominalisation.
 32. Dixon prefers to see these *-ɲura* constructions as 'linking together two topic chains', thus defining possible discourse topic as having uniquely S or O function in underlying propositional form. This point of view, like those cited in §0.2, pre-judges the relationship between surface 'subject' and discourse topic, seeing in derived nominative-case noun phrases both functions. I seek to avoid such a pre-judgment here.
 33. Apparently (Dixon 1972:106) the possessive construction does not iterate, with multiply-modified genitive noun phrases such as ***-ɲu-njdjin-(ɲ)u-njdjin-(ɲ)u-...*, for self-embedded genitive constructions.

Rather, multiply-embedded possession is expressed by an *ordered* sequence of plain genitives, each with appropriate inflection.

34. W. S. Allen, in 'Transitivity and possession' (1964) essentially stumbles over the universal here, not interpreting its significance but rather compiling many more fascinating examples with languages of the Caucasus and Indian subcontinent.

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7. Substantival hierarchies:

addendum to Silverstein

Jeffrey Heath

0. Abstract

In paper 6, 'Hierarchy of Features and Ergativity', Michael Silverstein has provided us with the formal and conceptual apparatus for dealing with a wide variety of morphosyntactic problems involving the notion of substantival hierarchical partitions. Since Australian languages seem to have more than their fair share of hierarchical phenomena, it behoves those of us investigating these languages in the field or library to assess or reassess our data in the light of this theoretical breakthrough, and to describe the new twists, extensions, and perhaps counterexamples which may crop up. The present paper is offered in this spirit.¹

It has two parts. In the first, I describe the split case system of Ritharngu, and comment on the split systems of the Dyirbal group. In the second and longer part, I describe the direct/inverse patterning of pronominal prefixes in Nunggubuyu and Ngandi and outline their historical connection to prefix systems in other Australian languages.

1. Ritharngu and Dyirbal

Ritharngu is the southernmost of the Yuulngu languages of northeast Arnhem Land. Although there are no bound pronominal affixes attached to verbs, the independent pronouns indicating the subject, direct object, and indirect object are normally attached as enclitics to the first major constituent of the clause. Some reduction occurs in enclisis; for example, the first singular Nominative pronoun is *ɲara* when genuinely independent, usually *ra* as an enclitic. Enclitics for the major case categories are normally used even when they cross-reference an independent NP in the same clause.

The basic case system for independent and enclitic pronouns is accusative. That is, there is a *-φ* Nominative suffix for transitive and intransitive subject, and an Accusative suffix *-ɲa/-na/-ña* for direct object.

Examples:

(1.1) *ɲa:-wala+ɲu-na+(ɲa)ra-φ*
see-Past 2Sg-Acc 1Sg-Nom
'I saw you (Sg).'

(1.2) *wa:ni-ña+(ɲa)ra-φ*
go-Past 1Sg-Nom
'I went'.

Low-ranking third person categories (inanimate and 'lower' animate, see

below) take the regular 3Sg Nominative pronoun *ɲay(i)-φ*, but instead of 3Sg Accusative (*ɲi-ña*) they take *φ*. Thus (1.3) could have either a high-ranking or low-ranking third person as subject, but the two types are distinguishable when they function as direct objects as in (1.4) and (1.5):

(1.3) *wa:ni-ña+ɲay(i)-φ*
go-Past 3Sg-Nom
'He/it went'.

(1.4) *ɲa:-wala+(ɲi-ña)+(ɲa)ra-φ*
see-Past 3Sg-Acc 1Sg-Nom
'I saw him'. (high-ranking)

(1.5) *ɲa:-wala+φ+(ɲa)ra-φ*
see-Past 3SgAcc 1Sg-Nom
'I saw it'. (low-ranking)

The split between high- and low-ranking third person is intermediate between the human/nonhuman and animate/inanimate splits. High-ranking third person includes humans, but also certain large or intelligent animals such as kangaroos and dogs. Low-ranking third person includes inanimates, but also animate beings of small size or lacking human-like intelligence and personality qualities, for example, fish and insects.

The accusative system is found only with pronouns. Many nouns have an ergative system, with Ergative *-du/-y* contrasting with Nominative *-φ*; the latter case is used for object and intransitive subject. Note that the Nominative has a different meaning in the pronominal accusative system than it has here in the nominal ergative system.

Other nouns have the 'doubly-marked' system, where Nominative *-φ* is restricted to intransitive subject function and where both transitive functions are marked by nonzero suffixes, Ergative *-du/-y* and Accusative *-ɲa*.² The choice between the ergative and doubly-marked case systems appears to correlate exactly with the distinction between high- and low-ranking third person pronouns. Thus *ɲiɲ?* 'woman' and *garčambal* 'antelope kangaroo' take the doubly-marked system, while *guya* 'fish' and *warɲambal* 'stone spear' take the ergative system.

Examples:

(1.6) *ɲa:-wala+(ɲi-ña)+ɲay(i)-φ garčambal-ɲa guya-du*
see-Past 3Sg-Acc 3Sg-Nom kangaroo-Acc fish-Erg
'The fish saw the kangaroo'.

(1.7) *ɲa:-wala+φ+ɲay(i)-φ warɲambal-φ ɲiɲ?-du*
see-Past 3SgAcc3Sg-Nom spear-Nom woman-Erg
'The woman saw the spear.'

The examples show that both high- and low-ranking nouns take Ergative *-du*, but only high-ranking nouns take Accusative *-ɲa*. Note that nouns and the pronominal enclitics which cross-reference them do not always agree in case. For example, in both (1.6) and (1.7) the Nominative enclitic *ɲay(i)-φ* cross-references an Ergative noun.

Demonstratives appear to fluctuate between the doubly-marked and ergative systems (that is, the two nominal rather than pronominal systems), and the choice does not correlate entirely with reference to high- or low-ranking categories. More fieldwork is necessary to elucidate details.

In summary, we have the following overtly distinguishable hierarchical equivalence classes:

- (1.8) X₁: pronouns (accusative)
 X₂: human and 'higher' animate nouns (doubly-marked)
 X₃: demonstratives (doubly-marked or ergative)
 X₄: inanimate and 'lower' animate nouns (ergative)

The Dyirbal situation is similarly complex. Though sometimes considered to show only a single split, between first and second person pronouns and all other substantives, in fact Dyirbal proper has four distinct equivalence classes. There are also some variations in this respect among the dialects in the Dyirbal group.³

In the Dyirbal and Mamu dialects, first and second person pronouns have accusative morphology. Aside from the usual irregularities, there is basically a Nominative suffix *-φ* for intransitive and transitive subjects, and an Accusative suffix *-na/-na* for transitive object. The human interrogative pronoun has a doubly-marked system: Nominative *wana*, Ergative *wandu*, and Accusative *wanuna*. Most nouns, including all nonhuman ones, have the ergative system with *-φ* Nominative for intransitive subject and transitive object, and various nonzero Ergative allomorphs like *-gu* and *-du* for transitive subject. However, personal names and some other human nouns can optionally take Accusative *-na* instead of Nominative *-φ* in transitive object (but not intransitive subject) function, so these nouns fluctuate between a doubly-marked and an ergative system. Actually, this *-na* is really *-na-φ* with a general Oblique suffix *-na-* followed by Nominative *-φ*. The evidence for this is that *-na-* is optionally used before the Dative and Locative case suffixes as well. Nevertheless, the optional use of *-na-φ* instead of *-φ* in the transitive object function distinguishes this function from that of intransitive subject, which never takes Oblique *-na-*.

Third person 'pronouns' are really articles which are normally attached to following nouns. When the noun is deleted (this being the equivalent in Dyirbal of English Pronominalisation) the article can stay behind, functioning much like an English third person pronoun. These articles appear to show the same case marking as the following noun, or the noun which would have been following were it not deleted. Therefore articles appear to have the same case system as nouns rather than first and second person pronouns. However, there is no indication from Dixon that articles can take Oblique *-na-* (for example, Accusative allomorph *-na-φ*) even when the following noun does, so we must assume that articles stick to the ergative system characteristic of most nouns. The equivalence classes of Dyirbal and Mamu are therefore these:

- (1.9) X₁: first and second person pronouns (accusative)
 X₂: human interrogative pronoun (doubly-marked)

X₃: personal names and some other human nouns (doubly-marked or ergative)

X₄: inanimate and some human nouns, and articles (ergative)

The Giramay dialect, however, shows some variations on this pattern. To begin with, the first singular and second singular pronouns show a special Nominative ending *-ba* for intransitive subject only, so the forms which are etymologically identical to the Dyirbal and Mamu Nominative (applying in these two dialects to intransitive and transitive subject), first singular *nada* and second singular *ninda*, are restricted to transitive subject function in Giramay and must therefore be relabelled as Ergative. These two pronominal categories have the doubly-marked system. For other first and second person pronouns we find the accusative system with no distinction between Nominative and Ergative cases.

Another difference is that Giramay does not show a special Accusative form for the human interrogative pronoun 'who?'. The form *wanuna*, which resembles Dyirbal and Mamu *wanuna* restricted to transitive object function, is also used for intransitive subject function in Giramay. The Ergative form is *wandu* as in the other two dialects. The interrogative pronoun therefore has the ergative system.

Since Dixon does not make any comments to the contrary, we can assume that Accusative *-na-φ* can be optionally used with personal names and some other human nouns, as in the Dyirbal dialect. The equivalence classes for Giramay are therefore these:

- (1.10) X₁: nonsingular first and second person pronouns (accusative)
 X₂: singular first and second person pronouns (doubly-marked)
 X₃: personal names and some other human nouns (doubly-marked or ergative)
 X₄: nonhuman and some nonpersonal human nouns, human interrogative pronoun and articles (ergative)

The splits found in Ritharngu, Dyirbal/Mamu, and Giramay generally conform to those considered natural by Silverstein. Significant points are these: (a) the split in Ritharngu mid-way between the two classic gender splits, human/nonhuman and animate/inanimate; (b) the importance of the singular/plural opposition for the hierarchy in Giramay.

It is also interesting to note that third person pronouns are treated somewhat differently in Ritharngu than they are in Dyirbal/Mamu/Giramay. I would suggest that this can be motivated in terms of the different formal characteristics of the third person pronouns in these languages. In Ritharngu, third person pronouns pattern syntactically like first and second person pronouns; all have independent and enclitic forms, all are obligatory as subject-markers and usually as object-markers, etc. It is therefore natural that third person pronouns go along with other pronouns in case marking. On the other hand, in the Dyirbal group the third person 'pronouns', as noted above, are basically articles which appear to be obligatorily preposed to independent nouns. Since they are normally juxtaposed to nouns it is not very surprising that they agree with them in case marking. Whether this kind of correlation would hold for a large sample of languages I cannot say, but it would be worth trying to find out.

2. Direct/inverse pronominal complexes

Some languages of Australia and North America have tightly-structured combinations of bound subject- and object-marking pronominals which are based on a hierarchical partition of pronominal categories. The present section is intended to elucidate the structure of such systems and to clarify the historical origin of the systems found in Nunggubuyu and Ngandi, two prefixing languages of eastern Arnhem Land.

In the Algonquian family of North America, combinations with subject higher-ranking than object are called *direct*, while those with the opposite relationship are called *inverse*. Direct combinations are relatively simple morphologically. Inverse combinations are essentially like direct combinations morphologically except that a special Inverse morpheme **-ekw-* is added. The hierarchy is this (with X_1 highest-ranking):

- (2.1) X_1 : first and second person
 X_2 : third person animate proximate
 X_3 : third person animate obviative
 X_4 : third person inanimate

The term *proximate* has no reference to deixis. Rather, it is the morphological category assigned to the syntactically primary third person animate NP in a clause. If there is only one third animate NP, it is proximate. If there are two or more such NPs, one is chosen as proximate—usually the one which occurs first (leftmost) in the clause. All other third animate NPs in the clause are *obviative*. (Sometimes there is also a *surboviative* distinct from obviative, but we will disregard this here.)

An example of a direct combination is 1Sg \rightarrow 3Inan (first singular subject on third inanimate object). In the corresponding inverse combination, 3Inan \rightarrow 1Sg, the Inverse morpheme **-ekw-* is added.

From this description we can see that **-ekw-* in the 3Inan \rightarrow 1Sg combination indicates two things:

- (a) the higher-ranking element (here 1Sg) is the transitive object, and
 (b) the lower-ranking element (3Inan) is the transitive subject. It is thus simultaneously an Ergative affix linked to the 1Sg morpheme and an Accusative affix linked to the 3Inan morpheme. It is further restricted to occurring only when the pronominal content of the transitive subject/object pair is the reverse of the 'unmarked' subject/object relationship of the two pronominals in question; 3Inan \rightarrow 1Sg is semantically less natural, and statistically less common, than 1Sg \rightarrow 3Inan.

In effect, then, the direct/inverse system of Algonquian is a special instance of what Silverstein calls *global* hierarchical splits. That is, one cannot assign case-marking morphemes to either major NP (subject, object) in a transitive clause until the hierarchical status of both major NPs is known.

As I use the term, the true direct/inverse system as found in Algonquian can occur only when the subject- and object-markers are bound to each other, or jointly bound to some other element such as a verb. A global system applied to morphologically autonomous nouns and pronouns would not be quite the same, since a nonzero case morpheme added to the object could be clearly identified as Accusative (rather than Ergative) even if there are global restrictions on its use, and similarly a case morpheme attached to the subject

could only be interpreted as Ergative. In Algonquian, one cannot tell whether **-ekw-* is Accusative or Ergative.

However, a system with global hierarchical restrictions on an Accusative or Ergative morpheme (or both), such that the morpheme(s) can be used only in inverse combinations, would closely approximate a true direct/inverse system. In Silverstein's presentation of Dalabon, for example, we find Ergative *-yi* only in certain subject-object combinations, mostly inverse. Suppose for the sake of the argument that *-yi* is added to transitive subjects (nouns and independent pronouns) only in inverse combinations. Then we could imagine a series of simple developments which would convert this system into an Algonquian-like direct/inverse system.

First, *-yi* becomes restricted to independent pronouns and in particular is no longer used with nouns. This could be accomplished by developing a distinct Ergative allomorph for nouns, or by allowing nouns to drop the Ergative entirely. Secondly, subject and object independent pronouns, with case suffix zero or *-yi* (the latter only for transitive subject in inverse combinations) become cliticised and eventually affixed to verbs. The new pronominal prefixes which result from this replace the old, inherited pronominal prefixes. For example, 'You saw me', which in attested Dalabon is 2Sg-*yi*#1Sg#Prf-saw, where Prf is the inherited 2Sg \rightarrow 1Sg prefix, becomes 2Sg-*yi*-1Sg-saw in this hypothetical new language. Here, since *-yi* is used only in inverse combinations, and since it is attached jointly to the subject- and object-markers (2Sg, 1Sg), we can no longer tell whether it is Ergative or Accusative, so we must relabel it the Inverse morpheme.

This is an example of how an originally Ergative morpheme can become an Inverse element. As will be shown below, the Nunggubuyu Inverse morpheme is an old Accusative affix. It is likely that Algonquian **-ekw-* ultimately reflects either an Ergative or an Accusative morpheme, but without additional comparative evidence we can only guess.

These considerations will provide some background for the descriptive and comparative analyses of Australian morphological systems which follow. However, there is one additional terminological problem which ought to be resolved first. As I understand it, for Algonquianists the term 'direct' applies to those combinations where the subject is in X_i and the object in X_j such that $i < j$ (the subject outranks the object) or $i = j$ (the subject and object are hierarchically equivalent). It is important, however, to distinguish these two kinds of direct combinations. I will refer to the type with $i = j$ as *equipollent* combinations; Algonquian examples are 1Sg \rightarrow 2Sg ($X_1 \rightarrow X_1$) and 3Inan \rightarrow 3Inan ($X_4 \rightarrow X_4$). The term *direct* will be restricted to cases where $i < j$, for example, Algonquian 1Sg \rightarrow 3Inan.

This terminological distinction is of little importance in Algonquian, because no $X_2 \rightarrow X_2$ combinations occur (there can be only one proximate NP, aside from underlying structures restructured by Reflexivisation), and since $X_3 \rightarrow X_3$ combinations are impossible or rare. However, in the Australian languages I will deal with, the equipollent combinations are more numerous, and in many respects are structurally unlike direct combinations, although they share with them the absence of an Inverse morpheme.

Nunggubuyu is spoken in southeast Arnhem Land. It has pronominal prefixes marking the pronominal category of subject and object, attached to the verb. Aside from a rather substantial array of first, second, and human

third person pronominal categories, there are also six nonhuman noun classes (*NA*, *NGARRA*, *ANA_{wu}*, *ANA_φ*, *MANA*, *WARRA*). Each nonhuman noun is assigned to one of these classes on an essentially arbitrary, nonsemantic basis.

Excluding these nonhuman classes for the moment, the hierarchy reflected in the Nunggubuyu direct/inverse system is as follows:

- (2.2) X_1 : first and second persons
 X_2 : third person human plural (3Pl)
 X_3 : third person human singular (3MSg, 3FSg)

Since nonhuman classes do not distinguish number (at least in the pronominal prefixes we are dealing with), the labels 3Pl, 3MSg, and 3FSg are to be interpreted as human categories only.

We would expect that all six nonhuman classes would either go into X_3 or would form a final equivalence set X_4 . In fact, however, three nonhuman classes are in X_4 , two are in X_3 , and one is in X_2 . This is a result of the fact that certain nonhuman classes have morphological affinities to the human classes in X_2 and X_3 . These affinities, manifested by showing the same noun-class prefixes with independent nouns (in one of the two series of such noun-class prefixes), and the same or similar morphemes in pronominal prefixes added to verbs are as follows:

- (2.3) *WARRA* ~ 3Pl
NA ~ 3MSg
NGARRA ~ 3FSg

For example, 3Pl and *WARRA* independent nouns take prefix *wara-*, *NA* and 3MSg nouns take prefix *na-*, and *NGARRA* and 3FSg nouns take *ɲara-*. It is possible to distinguish the nonhuman classes from the human categories, since the former also show a special Punctual prefix series (*WARRA wa-*, *NA yi-*, *NGARRA yi-*) which does not occur with human nouns, and there are other minor differences. We do not therefore have complete morphological identity between *WARRA* and 3Pl, for example, but there is a substantial morphological affiliation and this has implications for the hierarchy. The following principle sums the situation up:

- (2.4) If a nonhuman class C is morphologically affiliated with a human category in equivalence class X_i , then C is also in X_i .

The revised Nunggubuyu hierarchy is this:

- (2.5) X_1 : first and second persons
 X_2 : 3Pl; *WARRA*
 X_3 : 3MSg; 3FSg; *NA*; *NGARRA*
 X_4 : *ANA_{wu}*; *ANA_φ*; *MANA*

The three nonhuman classes which have no affinity to human categories form the lowest-ranking equivalence class X_4 .

It would appear that this is a counterexample to Silverstein's universal

theory, since from the latter we expect human nouns to always outrank or equal nonhuman nouns, whereas here we find that nonhuman *WARRA* nouns outrank human 3MSg and 3FSg categories. However, this is only a counterexample if we take Silverstein's paper as making absolute claims which can never be violated. In the present instance we have a conflict between the universal tendencies described by Silverstein and the language-specific principle (2.4), and it is the latter which overrides the former. From this kind of data it follows that we must interpret Silverstein's paper as making claims which apply universally in the absence of conflicting language-specific principles. In other words, Silverstein's universal hierarchy may be jostled a bit in the course of being fitted into the morphological grid of particular languages.

The hierarchy is reflected both in the ordering of the subject- and object-markers and in the rule inserting the Inverse morpheme /^a-N-/ (unspecified nasal, with ablaut of preceding unspecified vowel or *u*-vowel, but not *i*-vowel, to an *a*-vowel). In those cases where the subject-marker and object-marker are in different X-sets, the higher-ranking pronominal comes first (leftmost) and the other follows. Thus an X_1 element like 1Sg *ɲa-* always precedes an X_4 element like *ANA_{wu} /-w₁u-/*: 1Sg → *ANA_{wu} ɲawu-*, *ANA_{wu} → 1Sg ɲaygu-* /*ɲa^a-N-w₁u-/*.

In the equipollent combinations, where both pronominals are in the same X-set, the result is often an unanalysable portmanteau (for example, *φ-* for all X_4 → X_4 combinations), or a difficult and opaque combination which can be segmented and analysed only at a highly abstract level far beyond the limits of 'psychological reality'.

Inverse /^a-N-/ is inserted between the subject- and object-markers in inverse combinations. Examples:

- (2.6) a. 3Pl → 1Sg *ɲambi-* /*ɲa^a-N-w₂i-/* vs. 1Sg → 3Pl *ɲara-* /*ɲa-w₂V-ra-/*
 (1Sg /*ɲa-/*, 3Pl /*-w₂V-/* or /*-w₂V-rV-/*).
 b. 3MSg → 3Pl *wani-* /*w₂V^a-N-ni-/* vs. 3Pl → 3MSg *wunu-* /*w₂V-nu-/*
 (3MSg marked overtly only by the masculine morpheme /*-nV-/*).
 c. *ANA_{wu} → 3MSg niygu-* /*ni^a-N-w₁u-/* vs. 3MSg → *ANA_{wu} niwu-*
 /*ni-w₁u-/*.

The Ngandi language is spoken in an area geographically contiguous to the Nunggubuyu-speaking region. In Ngandi we find a rather similar direct/inverse system, but the Inverse morpheme is /*-gu₃-/*, which should be distinguished from IPlExcl allomorph /*gu₁-/* and nonhuman *GU*-class morpheme /*-gu₂-/*. Inverse /*-gu₃-/* is more restricted than Nunggubuyu /^a-N-/ , since it is incompatible with certain following morphemes and is therefore absent from several combinations where we might expect it to occur. In fact the only morphemes before which it can occur are /*-ni-/* (3MSg and nonhuman *NI*-class), /*-na-/* (3FSg and nonhuman *NA*-class), and /*-(r)a-/* (nonhuman *A*-class).

On the other hand, the ordering hierarchy is more complete and more clearcut than in Nunggubuyu:

- (2.7) X_1 : first person exclusive } first person inclusive
 X_2 : second person }

- X_3 : 3PI
 X_4 : 3MSg; 3FSg; *NI*; *NA*
 X_5 : *A*; *MA*
 X_6 : *GU*

As in Nunggubuyu, number-specified categories like 3PI are human, while categories designated by the class-prefix written in capitals are nonhuman. The low rank of the *GU* class can be explained in that it is dominated by abstractives, toponyms, body parts, flora terms, and the like, whereas both the *A* and *MA* classes have higher proportions of animate nouns. The *NI* and *NA* classes have morphological affiliations to the 3MSg and 3FSg categories, respectively, and are assimilated to the hierarchical status of the latter by the same principle which operates in Nunggubuyu. Ngandi has no nonhuman classes corresponding to the Nunggubuyu *WARRA* class.

The higher-ranking pronominal comes first in both direct and inverse combinations, again as in Nunggubuyu. In equipollent combinations we find subject-object order in the case of X_5 , object-subject order in X_3 and in the one analysable X_4 equipollent combination (3FSg/*NA* \rightarrow 3MSg/*NI*). $X_6 \rightarrow X_6$ is ambivalent in this respect, while remaining $X_4 \rightarrow X_4$ combinations show portmanteau ϕ . $X_1 \rightarrow X_1$ and $X_2 \rightarrow X_2$ types are impossible.

As noted earlier, Inverse */gu₃/* can occur only before X_4 morphemes and the X_5 morpheme for the *A* class. Therefore it cannot occur in $X_2 \rightarrow X_1$ combinations, for example, and consequently we have possible ambiguity between these and the corresponding direct combinations $X_1 \rightarrow X_2$. This ambiguity is in most cases resolved by the *ad hoc* device of using different allomorphs for certain pronominals depending on case (transitive subject vs. object). For example, the 1PIExcl \rightarrow 2PI combination is *gura* */gu₁-r-na/* with 1PIExcl */gu₁/*, while 2PI \rightarrow 1PIExcl is *nana* */na-r-na/* with 1PIExcl allomorph */na/*.

Although */gu₃/* cannot occur on the surface in some combinations which we would like to consider inverse on grounds of semantics and ordering relations, for example, $X_3 \rightarrow X_1$ and $X_6 \rightarrow X_1$, it is possible to explain this as due either to an *ad hoc* morphological restriction on */gu₃/* or to a rule actually deleting */gu₃/* from such combinations. In the latter analysis we can posit a level where */gu₃/* has been added in all inverse combinations, and it is only a low-level morphological deletion rule which results in the skewed surface distribution of */gu₃/*. Even in the former analysis where */gu₃/* is never present in such combinations as $X_3 \rightarrow X_1$, we can still speak of an inclusive concept of inverse combinations, and formulate the rule inserting */gu₃/* as follows: add */gu₃/* between object-and subject-marker in all inverse combinations (condition: */gu₃/* cannot directly precede such-and-such morphemes). Thus beneath the surface skewing we can conceive of a sharper underlying direct/inverse patterning.

One fact which might appear puzzling at first is that */gu₃/* shows up in 'equipollent' $A \rightarrow A$ and $MA \rightarrow A$ combinations, both of which take the surface form *agura* */a-gu₃-ra/* after a morphological rule neutralising initial *MA* with *A* markers. This is not so surprising however, when we recall from Silverstein's treatment of Dalabon that the global rules determining the distribution of ergative *-yi* treat inanimate-on-inanimate like inverse combinations. Ngandi, though not Nunggubuyu, does the same, so we can say

that */gu₃/* is added to all inverse combinations and to all $X_5/X_6 \rightarrow X_5/X_6$ combinations, subject to the morphological compatibility conditions mentioned several times earlier; $A \rightarrow A$ and $MA \rightarrow A$ are the only $X_5/X_6 \rightarrow X_5/X_6$ combinations where */gu₃/* is compatible with the following morpheme.

The next question is the historical origin of the Nunggubuyu and Ngandi systems. It is obvious from the fact that */^a-N-/* is used in Nunggubuyu while noncognate */gu₃/* is used in Ngandi for the Inverse morpheme that the historical connection between the two systems is somewhat remote. Nevertheless, I will claim that a proto-system can be partly reconstructed containing the seeds of both the Nunggubuyu and Ngandi systems. Furthermore, it is possible to connect */^a-N-/* and */gu₃/* with two ancient Australian morphemes — Accusative **-n(a)* and Dative **-gu*. By developing these correlations I believe that it will be possible to undertake a detailed comparative and structural analysis of the pronominal-prefix systems found in most languages in Arnhem Land and the Kimberleys, and to therefore clarify the genetic relationships among these languages.

In the present paper I will confine myself to a discussion of data from Ngarinyin in the Kimberleys, the Mara-Alawic group (Warndarang, Mara, Alawa) in the Roper River area, and Gunwinggu in eastern Arnhem Land. Comparison of these data will enable us to define the broader comparative problem, make some initial correlations, and account for the development of the Nunggubuyu and Ngandi direct/inverse systems.

The Ngarinyin transitive pronominal prefixes are shown in Table 1.⁴ The object-marker is always first, so that all the forms in each vertical column begin with the same element, except that a special 1Sg allomorph *ja-* is used in the 2Sg \rightarrow 1Sg and a special 3PI allomorph *a-* is used in the 3Sg \rightarrow 3PI form. In the 1/2 \rightarrow 3 forms there is an overt subject-marker following the object-marker, for example, 1Sg *-n-* in 1Sg \rightarrow 3PI *bu-n-*. However, in the remaining combinations the subject-marker is reduced to either zero or a basically plural morpheme *-d-*, which is related to Plural *-r-* found in the 1PI \rightarrow 3 and 3PI \rightarrow 3Sg forms (*-d-* is used after nasals and occasionally after vowels, while *-r-* is only used after vowels). In some cases singular and plural subject-markers are neutralised, so that 2PI \rightarrow 1PIExcl and 2Sg \rightarrow 1PIExcl are both *na-d-*.

The main point of interest is the use of the morpheme *-n-*, which can be taken as Accusative. As can be seen, *-n-* tends to be restricted to what would be inverse combinations in Nunggubuyu or Ngandi. Suppose we adopt the following hierarchy for Ngarinyin:

- (2.8) X_1 : first and second persons
 X_2 : 3PI (human)
 X_3 : 3Sg (including 3 nonhuman)

Recognising that 2PI \rightarrow 3Sg(class 2) *ni-n-* represents four class-specified combinations, we have the following figures: *-n-* occurs in seven inverse combinations, seven equipollent, and five direct. The five direct combinations have 2PI subject, and it is possible to reinterpret the *-n-* here as a 2PI morpheme which happens to be homophonous to Accusative *-n-*. Although the usual 2PI morpheme in Ngarinyin is *gu-* (augmented as *gu-d-*, *gu-r-*, etc., with

Table 1: Ngarinyin transitive prefixes

subject	object	1PIIncl	1PIExcl	2PI	1Sg	2Sg	3PI	3Sg (class 2)
1PIIncl							<i>ba-r-</i>	<i>ña-r-</i>
1PIExcl							<i>ba-ñi-r-</i>	<i>ña-ñi-r-</i>
2PI			<i>gu-n-d-</i>			<i>ñi-n-d-</i>	<i>bu-n-</i>	<i>ñi-n-</i>
1Sg				<i>gu-n-d-</i>		<i>ñi-n-</i>	<i>bu-ŋ-</i>	<i>ñu-ŋ-</i>
2Sg		<i>ña-d-</i>			<i>ja-n-</i>		<i>bi-ñj-</i>	<i>ñi-ñj-</i>
3PI		<i>ña-d-</i>	<i>gu-n-d-</i>	<i>ja-n-d-</i>	<i>ñi-n-d-</i>		<i>bu-n-d-</i>	<i>ñi-r-</i>
3Sg		<i>ña-d-</i>	<i>gu-n-d-</i>	<i>ja-n-</i>	<i>ñi-n-</i>		<i>a-n-d-</i>	<i>ñ-</i>

a Plural morpheme), we find 2PI Dative suffix *-nu-ru-gu* with second person *-nu-* (cf. 2Sg Dative suffix *-nu*), and there is abundant comparative evidence that **-nV-* is an archaic 2PI morpheme alongside **-gu-*: Nunggubuyu *-nV-* (*nu-*, *-na-*), Ngandi *-na-*, Warndarang *nu-/yu-/wu-* (*wu-* may reflect **gu-*). **-gu-* survives in Alawa *wu-*, and is perhaps related to 1PIExcl *gu₁-* in Ngandi and *ga-* in Gunwinggu as a result of various reinterpretations (Ngandi *gu₁-* occurs only in the 1PIExcl → 2PI combination).

If we distinguish Ngarinyin 2PI *-n-* from Accusative *-n-*, then the latter occurs in no direct combinations. As a result, while the Ngarinyin system is not a true direct/inverse one, it approaches the structure of such systems in Nunggubuyu and Ngandi. The chief differences are that Ngarinyin *-n-* occurs in numerous equipollent as well as inverse combinations, and that its use is less rigorously aligned with the direct/inverse contrast (for example, it is missing from 3 → 1PI inverse combinations).

It is interesting to speculate on the origin of the Ngarinyin system, and specifically on the historical processes which have resulted in the attested distribution of *-n-*. On the one hand, we could approach the problem on the basis of Silverstein's typological theories, which among other things allow global split systems. A system where an Accusative morpheme like Ngarinyin *-n-* can be restricted to inverse and equipollent combinations is a natural typological possibility, and could arise spontaneously out of a proto-system where **-n-* was used with all object-marking pronominals.

On the other hand, we could hypothesise that the present distribution of *-n-* in Ngarinyin has been primarily determined by phonological phenomena. Since several first and second person subject-markers begin with nasals (minimally 1PIExcl, 1Sg, and 2PI), in a number of important direct combinations (1PIExcl → 3, etc.) an Accusative **-n-* at an earlier period might have been deleted by phonological processes, so that 1PIExcl → 3PI *ba-ñi-r-* might reflect **ba-n-ñi-r-* as well as **ba-ñi-r-*. It is possible that for example, 2Sg → 3PI *bi-ñj-* reflects something like **bi-n-j-* with Accusative **-n-*, although at this point I am not prepared to insist on such an interpretation. At any rate, if one can account for the absence of *-n-* on the surface in a large number of direct combinations by such phonological arguments, then one can imagine analogical loss of **-n-* in the remaining direct combinations such as 1PIIncl → 3 and perhaps 3PI → 3Sg.

Before leaving Ngarinyin, note the special set of Dative pronominals shown in Table 2. These are suffixes, so they are not attached morphologically to the pronominal prefixes of Table 1. Note that in Table 2 there is a Dative morpheme *-gu*, but it occurs only in the first and second plural forms, which

consist of a person-marker plus Plural *-ru-* (related to Plural *-r-* and *-d-* in Table 1) plus *-gu*. The remaining forms are rather irregular.

Table 2: Ngarinyin dative suffixes

1Sg	<i>-ra</i> , <i>-gara</i>	1PIExcl	<i>-ña-ru-gu</i>
2Sg	<i>-nu</i>	1PIIncl	<i>-ja-ru-gu</i>
3Sg	<i>-nanga</i>	2PI	<i>-nu-ru-gu</i>
		3PI	<i>-ndu</i>

In Alawa, spoken just south of the Roper River in southeastern Arnhem Land (hence much closer geographically to Nunggubuyu and Ngandi than to Ngarinyin), we find both Accusative **-n-* and Dative **-gu-* in pronominal prefixes.⁵ However, the two morphemes are no longer distinguished as Accusative to Dative. Only one object can be indicated; in general, if there is both a (semantic) direct object and a (semantic) indirect object in a clause, the object-marker in the prefix added to the verb will cross-reference the indirect object. Since Alawa verb complexes typically consist of uninflected main verbs followed by one of several inflected auxiliaries, different auxiliaries can be used to specify the precise semantic role function of the object-marker in the pronominal prefix.

As a consequence, *-n-* and *-gu-* are now allomorphs of a morpheme which can be called Oblique—it is sometimes semantically Accusative, at other times semantically Dative, depending on the morphosyntactic environment. The allomorph *-n-* occurs after vowels, while *-gu-* occurs after Dual and Plural morphemes (*-l-*, *-r-*, hereafter abbreviated as L). The paradigm of transitive prefixes is shown in Table 3. This paradigm is supplemented by means of suffixes which function primarily to distinguish 3MSg from 3FSg subject- and object-markers, which are not distinguished in the prefixes, except in 3Sg → 3Sg combinations. The suffixes, which resemble human noun-class markers found in nearby languages, are probably a relatively recent overlay on a historically basic prefix system.

The order of elements in the prefixes works on a hierarchical basis, as in Nunggubuyu and Ngandi but unlike Ngarinyin. For example, both in 3PI → 1PIIncl and 1PIIncl → 3PI the initial morpheme is 1PIIncl *ñu-*. The basic hierarchical split in the ordering rule is between first and second persons on the one hand and 3PI on the other; since the 3Sg pronominal is usually zero we are unable to order it relative to the other pronominals, but the Alawa situation is consistent with a hierarchy of the type (2.8), which is valid for Ngarinyin and with modifications for Nunggubuyu and Ngandi.

One crucial structural characteristic of the paradigms in Table 3 is that the 1PIIncl, 1PIExcl, and 2PI pronominals include the Plural morpheme *-L-* when they function as subject-markers, and lack it when they function as object-markers. The use of Plural *-L-* in subject-markers can be seen most clearly in forms with 3Sg object, for example, 1PIIncl → 3Sg *ñu-L-*. In the case of 3PI object there may appear to be no *-L-* in the subject-marker (the *-L-*s which do occur are best taken as belonging to the 3PI object-marker), but there is no reason why we cannot set up base forms like 1PIIncl → 3PI */ñu-L-L-gu-*, where the initial */-L-* belongs with 1PIIncl */ñu-* and is subsequently deleted by a straightforward cluster-simplification rule.

The absence of Plural *-L-* in 1PIIncl, 1PIExcl, and 2PI object-markers can

Table 3: Alawa pronominal prefixes

subject	oblique 1PIIncl	1PIExcl	2PI	1DUIncl	1Sg	2Sg	3PI	3Sg
1PIIncl 1PIExcl			<i>ŋu-L-gu-</i>			<i>a-ni-</i>	<i>ñu-L-gu-</i> <i>ŋu-L-gu-</i>	<i>ñu-L-</i> <i>ŋu-L-</i>
2PI		<i>ñu-n-u-L-</i>			<i>ju-L-u-L-</i>		<i>wu-L-gu-</i>	<i>wu-L</i>
1DUIncl 1Sg			<i>ŋu-L-gu-</i>			<i>ña-</i>	<i>ñu-L-gu-</i> <i>a-L-</i>	<i>ña-</i> <i>a-L-</i>
2Sg 3PI	<i>ñu-n-</i> <i>ŋu-n-u-L-</i>	<i>ñu-n-</i> <i>ŋu-n-u-L-</i>	<i>wu-n-bu-L</i>	<i>ñu-n-u-L-</i>	<i>ji-</i> <i>ŋu-L-u-L-</i>	<i>ña-bu-L-</i>	<i>wu-L-gu-</i> <i>yi-n-bi-L-</i>	<i>yi-</i> <i>yi-L-</i>
3Sg	<i>ñu-n-</i>	<i>ŋu-n-</i>	<i>wu-n-</i>	<i>ña-</i>	<i>a-n-</i>	<i>gu-</i>	<i>yi-n-</i>	<i>a-(3MSg → 3Sg)</i> <i>arga-(3FSg → 3MSg)</i> <i>ŋanu-(3FSg → 3FSg)</i>

be seen clearly in forms with 3Sg subject, for example, 3Sg → 1PIIncl *ñu-n-* (not **ñu-l-gu-* or the like). This is generally true of combinations with 3PI subject as well, for example, 3PI → 1PIIncl *ñu-n-u-L-* (not **ñu-L-gu-(u)-L-*)—here the final *-L-* belongs to the 3PI subject-marker.

Curiously, it appears that we get Plural *-L-* with the 1Sg object-markers in 2PI → 1Sg *ju-L-u-L-* and 3PI → 1Sg *ŋu-L-u-L-*. However, I would argue on comparative and internal structural grounds that the initial *-L-* here really represents Accusative **-n-* which has been assimilated to the liquid in the following syllable by an irregular but nevertheless plausible phonological process. That is, I take 2Sg → 1Sg *ji-* as a simplification of earlier **jV-n-* (cf. Ngarinyin 2Sg → 1Sg *ja-n-*) with Oblique **-n-* following a suppletive 1Sg morpheme, and 2PI → 1Sg *ju-L-u-L-* as reflecting **jV-n-(w)u-L-*. In other words, *ju-L-u-L-* is to *ji-* as 2PI → 1PIExcl *ñu-n-u-L-* is to 2Sg → 1PIExcl *ñu-n-*. Similarly, I would claim that 3PI → 1Sg *ŋu-L-u-L-* reflects **jV-n-(b)u-L-* (1Sg-Accusative-3PI-PI).

The point that *-L-* is used in first and second person plural subject- but not object-markers also applies to the 3PI pronominal with one modification. The maximal form of this pronominal is *yi-L-* initially, as in 3PI → 3Sg *yi-L-* with zero object-marker, and *-(b)u-L-* or *-(b)i-L-* noninitially, as in 3PI → 1PIIncl *ñu-n-u-L-*. This full form occurs whenever the 3PI pronominal is subject-marker, so that we find it in all forms in the penultimate horizontal row in Table 3. As object-marker, however, we get *yi-n-* without *-L-* in the 3PI → 3PI combination *yi-n-bi-L-* and the 3Sg → 3PI combination *yi-n-*. However, in 1/2 → 3PI combinations the 3PI morpheme *yi-/-(b)u-/-(b)i-* disappears, and in this situation the Plural morpheme *-L-* remains. Thus 2Sg → 3PI *wu-L-gu-* (second person *wu-*, Plural *-L-* representing the 3PI object-marker, Oblique *-gu-*).

As noted earlier, the Oblique allomorph *-gu-* is used after Plural *-L-*, and the allomorph *-n-* otherwise (that is, postvocally). There is nothing in this allomorphic distribution to suggest that either allomorph would be associated specifically with either direct or inverse combinations. However, in view of the restrictions on Plural *-L-* noted in the preceding paragraphs, there is a *de facto* association of *-n-* with inverse combinations and of *-gu-* with direct combinations. Thus we find *-n-* in the majority of 3 → 1/2 combinations and in no 1/2 → 3 ones, while *-gu-* occurs in nearly all 1/2 → 3PI combinations and in no 3 → 1/2 ones. Both *-n-* and *-gu-* occur with some equipollent combinations.

In general, my view is that the Alawa system is rather archaic, and that a proto-system along these lines is a suitable basis for deriving the attested systems of pronominal prefixes in other Arnhem Land languages like Gunwinggu, Nunggubuyu, Ngandi, Ngalkbon, etc. (not to mention Warndarang and Mara, which are subgrouped with Alawa). In particular, the occurrence of **-n-* and **-gu-* as allomorphs of an Oblique morpheme added to object-markers in transitive combinations is an important ingredient in the reconstructed proto-system. In some languages, like Warndarang and Mara, **-n-* has disappeared but **-gu-* remains (in Warndarang it becomes *-ŋu-* for reasons unknown). Note that in Alawa itself **-n-* is missing from certain combinations, such as 3Sg → 1DUIncl *ña-*, where we might expect it.

On the other hand, there are languages where **-gu-* is lost while **-n-* remains. Such a language is Gunwinggu, where we find such combinations

as 3Sg \rightarrow 1Sg *ŋa-n-* vs. 1Sg \rightarrow 3Sg *ŋa-*.⁶ Since the *-n-* occurs in such direct combinations as 1Sg \rightarrow 3Pl *ŋa-be-n-* (1sg-3Pl-Oblique), there is no strong direct/inverse patterning. The only hint of such patterning is the fact that *-n-* cannot be added to the zero 3Sg pronominal, so that in direct combinations with 3Sg object the *-n-* is missing whereas it occurs in the corresponding inverse combinations.

By comparing the Alawa (and 'Proto-Arnhem-Land') *-n-/gu-* allomorphic alternation with the Ngarinyin forms, we can arrive at an initial hypothesis about the origin of the former. Suppose that Proto-Arnhem-Land originally had two distinct sets of transitive prefixes, one Nominative/Accusative and the other Nominative/Dative. In the former there was an Accusative morpheme **-n-* in at least a large number of combinations. In the latter type, there was a Dative morpheme **-gu-* used only following Plural **-L-*, the remaining Dative pronominals being irregular (this is the attested Ngarinyin system, it will be recalled). What may have happened is that the two paradigms were squashed together, forming a single subject/object transitive type containing pieces of both former paradigms. The irregular singular Dative object-markers were eliminated in favour of Accusative ones, but on the other hand plural Dative object-markers with **-gu-* survived, eliminating the corresponding Accusative object-markers. The retention of **-gu-* rather than of **-n-* in these plural object-markers may have been due to a combination of morphological and phonological factors. Perhaps the addition of **-n-* to Plural **-L-* created phonological problems (especially since the following verb stem normally began in a consonant), so forms with **-gu-* prevailed.

With such a reconstruction for Proto-Arnhem-Land it is not very difficult to see how the Nunggubuyu and Ngandi systems developed. Basically, both of these are systems where the tendency toward direct/inverse patterning has been crystallised and institutionalised. Whereas in Alawa and Ngarinyin there is only a general association of *-n-* with inverse combinations, in Nunggubuyu this association becomes rigorous—the Inverse morpheme occurs in all inverse combinations, and in no equipollent or direct combinations.

The development of **-n-* into Nunggubuyu Inverse *['^a-N-]* should cause no conceptual problems in the light of the inverse patterning of *-n-* in Alawa and Ngarinyin. However, the development of **-gu-* into Ngandi Inverse *-gu₃-* does present difficulties, since if anything Alawa *-gu-* patterns as a direct morpheme. Despite this, I feel it is possible to correlate the Ngandi and Alawa morphemes and to motivate at least the broad lines of the Ngandi developments.

The first step is to explain why **-n-* did not become the Ngandi Inverse morpheme. This explanation must be phonological in nature. Whereas Alawa does not have noun-class morphemes in its transitive prefixes, and Ngarinyin has them only in initial object-markers, in Ngandi and Nunggubuyu we find them in both subject- and object-markers, and usually noninitially. At present the most likely hypothesis is that the noun-class morphemes have penetrated into verbal morphology at a relatively recent date in the development of these languages.

As it happens, several noun-class morphemes begin in nasals: Nunggubuyu and Ngandi *-ni-/nu-* (masculine), Nunggubuyu *-ŋi-/ŋu-* and Ngandi *-nā-* (feminine), Nunggubuyu and Ngandi *-ma-* (one of the larger nonhuman

classes). Since Nunggubuyu Inverse *['^a-N-]* often has no surface phonological effect following cluster-contraction rules, we get instances of ambiguity like direct 1Sg \rightarrow MANA class *ŋama- /ŋa-ma-|* vs. inverse MANA \rightarrow 1Sg *ŋama- /ŋa^a-N-ma-|*. In other instances the direct and inverse combinations are distinguished only by *ad hoc* allomorphic alternations.

Although Nunggubuyu has tolerated the phonological evanescence of *['^a-N-]*, Ngandi has eliminated it and promoted **-gu-* to be the new Inverse morpheme. This was really the only possibility left, since **-n-* and **-gu-* were the only case-marking, relational, nonpronominal morphemes in the pronominal prefix complex.

Even though Alawa shows *-gu-* only in direct (and some equipollent) combinations, it is possible to conceive of a proto-language where **-gu-* occurred in a substantial number of inverse combinations. The basic rule ending in Plural *-L-*, and it is the idiosyncracies in the distribution of this latter morpheme which account for the association of *-gu-* with direct combinations. If we can envisage a proto-system underlying Ngandi and different distributional possibilities, it would immediately follow that **-gu-* had a different distribution than Alawa *-gu-* has.

Perhaps the key combination in this respect is 3Sg \rightarrow 3Pl. Alawa has *yi-n-* without *-gu-*, but only because 3Pl *yi-* is not followed by Plural *-L-*. If *-L-* were present we would have gotten **yi-L-gu-*, with Oblique allomorph *-n-*.

Suppose then that in the proto-language behind Ngandi and Nunggubuyu the 3Sg \rightarrow 3Pl combination was **ba-r-gu-* (3Pl-Pl-Oblique). At this stage there was no overt 3Sg pronominal. With the introduction of nonzero *nou.-* class markers we would end up with a series of combinations like 3MSg \rightarrow 3Pl **ba-r-gu-ni-*, which is in fact the attested combination in Ngandi. Since such forms are semantically inverse, there would no longer be any association of **-gu-* with direct combinations. There is no evidence in Ngandi or Nunggubuyu that the 1/2 \rightarrow 3Pl direct combinations contained **-gu-* as they do in Alawa; Nunggubuyu *ŋara- /ŋa-w₂V-ra-|* and Ngandi *ŋabara- /ŋa-ba-ra-|* for 1Sg \rightarrow 3Pl both reflect **ŋa-ba-ra-* (1Sg-3Pl-Pl) without **-gu-*. Therefore it is possible that in the relevant proto-language **-gu-* did not occur in any direct combinations. This being the case, **-gu-* in the 3Sg \rightarrow 3Pl combination could easily be reinterpreted as an Inverse morpheme, and could then have spread to other semantically inverse combinations as **-n-* was being phased out. The spread may have been in two stages—first **-gu-* extended into 3Sg \rightarrow 1/2Pl combinations, then into 3Sg \rightarrow 1/2Sg combinations.

I will not attempt a detailed explanation of the other idiosyncracies of Inverse *-gu₃-* in Ngandi—its incompatibility with following class-markers *-gu₂-* and *-ma-*, and its occurrence in the equipollent *A \rightarrow A* and *MA \rightarrow A* combinations. The solution to the first of these problems may involve haplology (**-gu₃-gu₂-* becoming **-gu-*) and perhaps analogy (*-ma-* instead of **-gu₃-ma-* because of *-gu-* instead of **-gu₃-gu₂-*), though the details are somewhat messy.

I wish to end this discussion by making one further general point which may be of value in describing direct/inverse systems or systems approaching

them in structure (for example, Alawa, Gunwinggu, perhaps Ngarinyin). This concerns the status of the ϕ - portmanteau transitive prefix, which shows up in Nunggubuyu as nonhuman \rightarrow nonhuman (ϕ -way 'It hit it'), in Ngandi as human 3Sg \rightarrow 3Sg except 3MSg \rightarrow 3MSg (ϕ -bo:m 'She/He hit her', 'She hit him'), and in Gunwinggu as 1Sg \rightarrow 2 except 1Sg \rightarrow 2Du (ϕ -bom 'I hit you'). The problem is explaining why ϕ - shows up in such radically different functions in the three languages.

On the basis of markedness theory, we expect to find ϕ - in the least marked, most common transitive combinations—namely, 3Sg \rightarrow 3Sg in indicative clauses (and 2Sg \rightarrow 3Sg in imperatives). This is reasonably consistent with the Nunggubuyu and Ngandi situations, but is violently inconsistent with the Gunwinggu use of ϕ - in the semantically highly marked 1Sg \rightarrow 2 combinations.

I would suggest, however, that in all three languages ϕ - is used in structurally equivalent positions, and for essentially the same reasons. This is because in all three instances ϕ - represents a semantically and morphologically equipollent combination. In such combinations, there is characteristically competition between the subject- and object-marking pronominals for a particular slot in the prefix complex. Because of this competition neither pronominal may succeed in occupying the slot, with the consequence that a portmanteau morpheme must be used. It is a general feature of Nunggubuyu in particular, and to some extent of other languages in the area, that equipollent combinations are portmanteaus or at best opaque, semi-analysable combinations, whereas direct and inverse combinations are morphologically transparent. Since ϕ - is the classic portmanteau, and the only portmanteau which can be spontaneously created, it is not surprising to find it as an equipollent prefix in various languages.

I would go beyond this and suggest that we can partially explain why Gunwinggu, rather than Nunggubuyu or Ngandi, uses ϕ - in the 1Sg \rightarrow 2 function rather than 3Sg \rightarrow 3Sg. This is because the 3Sg object-marker in the 1/2 \rightarrow 3Sg combinations is zero in Gunwinggu (for example, 1Sg \rightarrow 3Sg η a-, cf. 1Sg intransitive prefix η a-), but nonzero in Nunggubuyu and Ngandi where class-marked morphemes are used (for example, Nunggubuyu η a-ma- 1Sg \rightarrow MANA).

If we assume that the 1Sg and 2 pronominals compete for a single slot and therefore cannot co-occur on the surface, we have three possibilities for the 1Sg \rightarrow 2 combinations:

- (a) use the 1Sg morpheme only;
- (b) use the 2 morpheme(s) only; or
- (c) replace both with a portmanteau.

Since Gunwinggu has inherited no nonzero portmanteau for this combination, option (c) in effect means using ϕ -, which can be spontaneously created at any time.

If option (a) is used, we will get 1Sg \rightarrow 2 η a- in Gunwinggu, and this will be homophonous with 1Sg \rightarrow 3Sg η a- (note that this is because the 3Sg object-marker is zero). This option is used only for the 1Sg \rightarrow 2Du combination, but not for the more important 1Sg \rightarrow 2Sg and 1Sg \rightarrow 2Pl combinations. Option (b) will result in similar homophony between the 1Sg \rightarrow 2 and 2 \rightarrow 3Sg combinations, and is not used in Gunwinggu (though it is in Warndarang and to some extent in Nunggubuyu). Only option (c) avoids this type of

ambiguity, and we find ϕ - in the 1Sg \rightarrow 2Sg and 1Sg \rightarrow 2Pl combinations in Gunwinggu.

It is possible that before the origin of this ϕ - 1Sg \rightarrow 2 prefix there was a * ϕ - prefix for 3Sg \rightarrow 3Sg. If so, the latter has been reshaped as a nonzero prefix to avoid homophony with the 1Sg \rightarrow 2 prefix. In attested Gunwinggu we find 3Sg \rightarrow 3Sg (*ga*)bi-, with *ga*- only in the Nonpast (it occurs in this tense in all 3 intransitive and 3 \rightarrow 3 prefixes). The morpheme *-bi-* is probably a reinterpreted form of the old 3Pl morpheme *-bV- found in many languages (Nunggubuyu, Ngarinyin, etc.).

I am certainly not claiming that we can predict exactly where the ϕ - will show up, or indeed whether it will turn up, in the pronominal-prefix paradigm. I am saying, however, that the use of ϕ - in such systems is far from random, and that by analysing the general structure of particular systems we can pinpoint the two or three combinations which are most likely to show up as a ϕ - portmanteau.

There need be no historical connection at all between Nunggubuyu ϕ -, Ngandi ϕ -, and Gunwinggu ϕ -. As I have insisted, there is an internal structural motivation for the creation of such a morpheme in the prefix systems of all three languages, and ϕ - could have been created independently in them.

Notes

1. In view of the fact that Silverstein's paper is being published in this volume (in recently revised form), my paper has been rewritten as an addendum to it instead of a summary and explication; the previously distributed version of my paper was of the latter type.
Data from Nunggubuyu, Ngandi, Ritharngu, Warndarang, and Mara are from my own field notes. My field work has been supported by the Australian Institute of Aboriginal Studies.
2. What I call the doubly-marked system is what Silverstein calls the 'agentive' or 'O-A-S' system. I object to the term 'agentive' as a label for this system since this label would be more naturally applied to systems like that of Choctaw and some Siouan languages in North America where there is an Agentive case covering transitive subject and semantically agentive intransitive subject (for example, subject of 'to go'), contrasted with a Patientive case covering transitive object and semantically nonagentive intransitive subject (for example, subject of 'to be sick'). The label 'O-A-S' is similarly unsatisfactory, since Dixon's lettering system using symbols O, A, and S for the major transitive and intransitive functions are not as yet in common use outside of Australia, and since they are of questionable value anyway. In particular, the label S, which Dixon restricts to intransitive subject, is likely to lead to confusion. I think the term doubly-marked is more explanatory and more generally suitable.
3. For the Dyirbal/Mamu/Giramay data cf. Dixon (1972: 42-51, 53, 202-203).
4. Data from Coate and Oates (1970), especially pages 31 and 94. In Table 18.D.2 the 3Sg \rightarrow 2Sg combination was inadvertently omitted; this form has been recovered from other tables and commentary. I have retranscribed the Ngarinyin forms, using *b*, *d*, *j*, *g* for the stops (for example, I write *jan-* instead of *djan-*), and *ñ* for the 'palato-dental' nasal.
5. Data from Sharpe (1972, Chapter Nine). I have retranscribed the forms using the conventions described in note 4.

6. Data from Oates (1964), especially pages 119–20. My interpretation of certain morphemes differs from that given by Oates (pages 44–45). I regard *gan-* as IPI *ga-* plus Accusative *-n-*, rather than as a second and third person subject-marker. I regard *-di-* as a postnasal form of Plural *-ri-* rather than as a pronominal morpheme. And so forth.

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8. Nominal hierarchies in Yukulta

Patrick McConvell

I offer this paper in order to point out what seems to me a striking manifestation of the hierarchical principle as formulated by Silverstein (paper 6 above) and Heath (paper 7), in Yukulta, a language of the Gulf of Carpentaria. The original research on which this paper is based is entirely the work of Sandra Keen, presented in her valuable M.A. dissertation (1972).

The feature system for nominals used here is presented below (the distinction between dual and plural is not included as it is not relevant to the present discussion):

(1)	Non-singular	I	II
1st. dual and plural inclusive	+	+	+
1st. dual and plural exclusive	+	+	—
2nd. dual and plural	+	—	+
3rd. dual and plural	+	—	—
1st. singular	—	+	—
2nd. singular	—	—	+
3rd. singular	—	—	—

This feature system will now be used to analyse some facts of Yukulta grammar. Yukulta, in common with most Australian languages, has two classes of verbs which take objects. The first is what I shall call 'transitive', for which the object is assigned unmarked nominative case, and the subject is assigned the ergative case. A complex containing a tense marker and subject and object clitics is suffixed to the initial constituent of the sentence. Where the verb is transitive, the tense marker and clitics have special transitive forms and the complex also bears a 'transitivity marker' (*ka* or its allomorphs). For the second class, which I shall call 'middle', it is the subject which is unmarked nominative, and the object is marked dative (Keen's 'benefactive').¹ In the Yukulta pronominal clitic system there is a four-way case distinction:

- ergative, marking transitive subject;
- accusative, for transitive object;
- nominative, for intransitive and middle subject; and
- oblique in agreement with other cases, including dative marking middle object.

In addition to this, transitive verbs may take on the appearance of middle verbs as a result of two different kinds of circumstances. That is, the transitive

properties of the clitic complex are lost, the subject NP which would normally be ergative becomes nominative, and the object NP takes dative case. I am speaking of this phenomenon as if it were a transformational rule, perhaps to be equated with 'anti-passive'; others might wish to argue that the process is operating in the opposite direction; that a kind of passive rule is involved. For my part I suspect that neither approach would be correct. For the moment however I intend to leave these issues to one side and to concentrate on the conditions under which this alternation takes place.

The first condition is that transitive shifts to middle where the tense of the simple S is non-past irrealis, for example:

- (2) transitive
tajka + ya + ka + ri kunawuna palaṭa
 man erg tr pres child nom hit
 'The man is hitting the child.'
- (3) middle (in this example negation produces irrealis tense)
walira + ŋka tajka + ra kunawuna + ŋṭa palaṭa
 neg intr pres man nom child dat hit
 'The man is not hitting the child.'

What mainly concerns us here is the second type of condition, namely that transitive also shifts to middle where:

- (a) the subject NP is third person and the object NP first or second person; and
 (b) where the subject NP is second person and the object NP first person plural or dual.

For example:

- (a) (4) transitive
palaṭa + ŋa + npu + ŋa + nti
 hit 1st. erg 2nd/3rd tr fut
 sing pl acc
 'I will hit them or you mob.'
- (5) middle
taṭin + ta tjati + pa + l + iṅka ŋumpan + tji kuritja
 that nom lot nom 2nd obl 3rd pl past you dat see
 sing intr sing
 'That lot saw you.'
- (b) (6) transitive
palmpiya + nk + i + ka + nti kuritja
 tomorrow 1st sing 2nd sing tr fut tr see
 acc erg
 'Tomorrow you will see me.'
- (7) middle
palmpiya + ŋalawa + yin + iṅki kuritja
 tomorrow 1st excl 2nd sing fut intr see
 pl obl nom
 'Tomorrow you will see us.'

There is therefore the following hierarchy of persons:

- (8) i. 1st non-singular $\begin{bmatrix} +ns \\ +I \end{bmatrix}$
 ii. 2nd $\begin{bmatrix} +II \\ -I \end{bmatrix}$, 1st singular $\begin{bmatrix} -ns \\ +I \\ -II \end{bmatrix}$
 iii. 3rd $\begin{bmatrix} -I \\ -II \end{bmatrix}$

Where the subject is higher than or equal to the object in the hierarchy, it is assigned the marked ergative case; but where the subject is lower in the hierarchy, it is assigned the unmarked nominative case and it is the object which takes the marked dative case.

As Silverstein has shown, nominal hierarchies in different languages give different weight to different features. The hierarchy (8) is no exception to this; moreover it cannot be derived by simply adding up the 'plus' (marked) values of one set of features for each type of nominal, and placing such nominals in ascending order in the hierarchy accordingly. In this case the instruction to count 'plus' values and divide the nominal categories into sets such that set a > set b > set c, etc., does not apply simultaneously for all relevant features (here $\pm ns$, $\pm I$, $\pm II$) but applies first taking into consideration only a subset of the features, then again using a different subset of the features, and operating on the lower-ranked, least-marked subset into which the nominals have been divided by the first rule. In this procedure, both conjunctions and disjunctions of features are used, that is respectively $\begin{bmatrix} +ns \\ +I \end{bmatrix}$,

which separates 1st non-singular from all other nominals, and $\begin{bmatrix} [+I] \\ [+II] \end{bmatrix}$, which is equivalent to [+participant]. (8) can be derived in the following way: in the first instance $\begin{bmatrix} +ns \\ +I \end{bmatrix}$ divides 1st non-singular nominals from the rest, placing the former higher on the hierarchy than the latter. Following this, the remainder is subdivided by the features $\begin{bmatrix} [I] \\ [II] \end{bmatrix}$, by which those with either the value [+I] or [+II] are placed above the third person nominals with negative values for both features. If the second rule had applied first, 1st inclusive pronouns would have been incorrectly differentiated from 1st exclusive pronouns by having two positive values $\begin{bmatrix} +I \\ +II \end{bmatrix}$. Thus given the ordering (9), (8) can be derived.

- (9) i. $\begin{bmatrix} ns \\ I \end{bmatrix}$ ii. $\begin{bmatrix} [I] \\ [II] \end{bmatrix}$

It is interesting to compare this phenomenon of middle shift with the ordering of pronominal clitics in Yukulta. The ordering principle is that 1st

person precedes 2nd person precedes 3rd person, except where the subject is second singular and the object third non-singular, when the latter precedes the former, as in (11) and (12):

(11) +*rgu* + *yi*
3rd dual acc 2nd sing erg

(12) +*npu* + *yi*
3rd plur acc 2nd sing erg

If we now assume that clitic ordering is determined by a nominal hierarchy, in which top-to-bottom in the hierarchy converts to left-to-right ordering in the clitic complex, we might infer that in terms of this hierarchy second singular and third non-singular are on the same level. We can then say that the object clitic precedes the subject clitic where the former is higher than or equal with the latter in the hierarchy. So we arrive at the following hierarchy, which is different from that which determines the middle shift:

- (13) i. 1st [+I]
ii. 2nd non-singular $\begin{bmatrix} +ns \\ +II \end{bmatrix}$
iii. 2nd singular $\begin{bmatrix} -ns \\ +II \end{bmatrix}$, 3rd non-singular $\begin{bmatrix} +ns \\ -II \end{bmatrix}$
iv. 3rd singular $\begin{bmatrix} -ns \\ -II \end{bmatrix}$

Apart from accounting for attested data, this hierarchy also predicts that a non-singular clitic will precede a singular clitic where both are third person. Unfortunately there is only one doubtful example of a third singular subject clitic which is not zero, and I have been unable to find an example of it co-occurring with a non-singular object in Keen's work.

Assuming that (13) is correct, it is clear that, although different from (8), it can be derived in a similar way from the same set of features. In this case the [+I] nominals must first be placed above the [-I] nominals; after this the [-I] elements are arranged by counting the plus values of the features [ns] and [II], producing a three-way division into those with two positive values, those with one, and those with none. So the order of application of features for clitic ordering, parallel to (9) for middle shift is (14):

- (14) i. [I] ii. $\begin{bmatrix} ns \\ II \end{bmatrix}$

Incidentally, in the accusative the distinction between second and third person clitics is neutralised, as in example (4). Here too [\pm I] is the primary feature, and [\pm II] is ignored. Some of the ambiguities which might arise from this are avoided by the fact that the middle shift operates in cases where there is a third person subject and second person direct object.

It seems then that within one language there may be more than one nominal hierarchy, and that each hierarchy may be formed by more than one opera-

tion, each operation using different sets of features. What is shared by all hierarchical processes, for Yukulta at least, is that all the operations forming each hierarchy follow the same ordering principle discussed above, and that the features involved are all drawn from the same small set. Since the hierarchies are determined by ordered pairs of subsets of these features, it would be a simplification to remove the nominal hierarchies themselves from the grammar, and to use the feature-sets directly as conditions on ordered case assignment and clitic-ordering rules.

In Yukulta, one of the functions of dative case can be shown to be that of unmarked peripheral (right-hand extra-VP) case. For instance extraposed (peripheral) relational complements in which the subject NP is present and which are presumably therefore not subject to the pruning of S, are marked dative as a whole. On the other hand, those in which the subject, whether of a transitive, intransitive or middle verb, is deleted by coreference with an NP in the matrix S agree in case with the coreferential NP in the matrix S. One might therefore consider the shift from transitive to middle on the basis of tense or pronoun combinations as resulting from a group of transformations which move the object NP outside VP. However where such a shift has taken place it is still possible to have two NPs marked dative: the original 'direct object' and a further NP which is in a more clearly benefactive relationship or a complement which has been assigned dative case because of its peripheral position. It is impossible therefore to regard the original object as having filled the peripheral slot, since this slot is already filled. It must be concluded that dative is the surface realisation of two different sets of features:

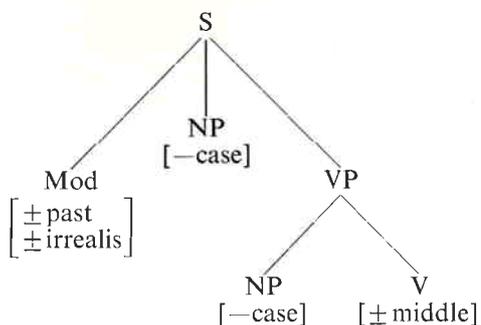
- (a) $\left[+VP \begin{bmatrix} \text{---} \end{bmatrix} VP \right]$ and $[-\text{case}]$;
(b) $\left[+ \begin{bmatrix} VP \text{---} \\ S \end{bmatrix} \right]$ and $[-\text{case}]$;

where + and - case represent marked and unmarked cases respectively.

This opens up the possibility that some, if not all, inherently 'middle' verbs take type (a) datives that is, intra-VP objects. This has the apparently unfortunate consequence that the distinction between transitive and middle verbs cannot be made in the same way as the distinction between transitive and intransitive verbs, by the categorial information $VP[NP\text{---}]_{VP}$. This is unfortunate because middle verbs do behave syntactically in a similar way to intransitives. Instead a feature [\pm middle] or possibly a combination of certain semantic features marked in the lexical entries of verbs will determine the choice of unmarked nominative or marked dative case for their objects. This is likely because inherently middle verbs in Yukulta can be accompanied by two NPs in dative case as can normally transitive verbs which have undergone the middle shift.

Having established this, we can say that the case-assignment rules (16) apply to a given structure (15). Rules i. to v. apply in order since each applies only where the previous rules have not applied, that is where the NP in question is still $[-\text{case}]$.

(15)



- (16) i. the feature [+middle] on V causes the feature [-case] on the object NP to change to [+case];
 ii. the feature combination $\begin{bmatrix} -\text{past} \\ +\text{irrealis} \end{bmatrix}$ on Mod effects the same change;
 iii. the object NP changes to +case if that NP is $\begin{bmatrix} +\text{ns} \\ +\text{I} \end{bmatrix}$;
 iv. the object NP changes to [+case] if the object NP is [+I] or [+II] and the subject NP is $\begin{bmatrix} -\text{I} \\ -\text{II} \end{bmatrix}$;
 v. the subject NP changes to [+case] if the object NP is still [-case];
 vi. $\begin{bmatrix} +\text{VP} [\text{---}] \text{VP} \\ +\text{case} \end{bmatrix} \rightarrow$ dative
 vii. $\begin{bmatrix} +\text{s} [\text{---} \text{VP}] \text{s} \\ +\text{case} \end{bmatrix} \rightarrow$ ergative
 viii. [-case] \rightarrow nominative

Rules i. to iv. all effect the same change (17) but with differing conditions. Rather than stating the SD and SC fully for each rule, it would be a saving in the grammar if the name of the rule could stand for the schema (17).

(17) Object case assignment

SD:	Mod	NP	VP	$\begin{bmatrix} \text{NP} \\ [-\text{case}] \end{bmatrix}$	$\begin{bmatrix} \text{V} \\ \end{bmatrix}$	VP
	1	2	3	4	4	
SC:	1	2	3	4		
			$\begin{bmatrix} +\text{case} \end{bmatrix}$			

The rules iii. and iv., with which we are primarily concerned, can now be stated as in (18):

- (18) O.C.A. (iii): Condition: 3 is $\begin{bmatrix} +\text{ns} \\ +\text{I} \end{bmatrix}$

O.C.A. (iv): Condition: $3 > 2 \begin{bmatrix} [\text{I}] \\ [\text{II}] \end{bmatrix}$

O.C.A. (iii) is now stated as a local rule, in the sense used in Silverstein (this volume), that is it is dependent on the object NP alone having a positive value for the features involved. O.C.A. (iv) on the other hand is a global rule, in Silverstein's sense, in which $>$ is interpreted by a general convention as 'has more positive values with respect to the features which follow than'.

It is possible that clitic ordering which follows hierarchical principles *c* be similarly handled by a set of ordered rules. For instance in Yukulta the CLITIC ATTACHMENT rule would attach pronominal elements agreeing with the subject and object to the left of the Modal constituent in the order subject-object. Following this rule would be two further rules which reorder the clitics, set out in (20), for which the generalised schema would be (19):

- (19) Clitic ordering
 SD: Pro + Pro + Mod
 1 2 3
 SC: 2 1 3
- (20) C.O. (i) Condition: 2 is [+I]
 C.O. (ii) Conditions: (a) 1 is [-I]
 (b) $2 \geq 1 \begin{bmatrix} \text{ns} \\ \text{II} \end{bmatrix}$

Note that again the first rule is of the local type, and the second of a global type. Unfortunately it is necessary to add condition (a) to rule (ii) so that (ii) only applies where (i) has not applied, whereas in the CASE ASSIGNMENT rules this is guaranteed by the change in the case feature brought about by the rules. In any event, the above is only intended to give a rough idea of the appearance of such rules, not to capture accurately the full facts of Yukulta clitics.

Returning to case assignment, it might be possible to further simplify the rules by reference to the universals implied by Silverstein (paper 6) in the following way. Instead of the structurally based designations of subject and object (2 and 3 respectively in (17)) which are of dubious value in languages like Yukulta in which it is difficult to determine underlying word order, we substitute the functional terms agent and patient in the structural description. Following Silverstein's proposal, the assignment of marked (+) case to the patient, whether this is spelled out as accusative or dative, is dependent on the patient having [+F_i] in local rules, and having [+F_j] where the agent has [-F_j] in global rules. In both cases, the assignment of marked case is dependent on the patient being in the upper range of the hierarchy in contrast to ergative marking on the agent which is dependent on the agent being in the lower range of the hierarchy, in languages where this occurs as an independent case-assignment rule. So the following universal conventions could be tentatively proposed, (21) for local marking and (22) for global marking.²

- (21) [F_i] to be interpreted as [+F_i] in the context:
 [-case] \rightarrow [+case] patient
 [F_i]

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Topic A:

The derivational affix 'having'

9. Rapporteur's introduction

R.M.W. Dixon

NOTE: this paper is published exactly as it was circulated to potential contributors — together with sample papers in Yidinj and Dyirbal (numbers 12 and 18 below) — in December 1973, as a specification of this topic.

Most (or all?) Australian languages have an affix which derives an adjectival stem from a noun, and can roughly be glossed 'having'. In some languages this affix is identical or similar in form to a verbal affix, whose functions usually include 'reflexive'.

Papers are invited dealing with the form and function of the 'having' nominal affix in individual languages; and its relationship (if any) to a 'reflexive'-type verbal affix.

The following format is suggested.

A-1. Nominal affix

A-1a. Form

The phonological form of the affix, listing allomorphic variants and conditioning.

Note that in many languages the affix appears to be a reflex of *D_ir- or *D_jri (where D_i is realised as a lamino-dental stop in languages having two laminal series, and as a simple laminal stop otherwise). The affix often occurs in language or tribal names for example, Guugu-Yimidhir, Gugu-Yalandji and Wiradhuri.

A-1b. Grammatical function

To what forms can the affix be added—noun root, adjective root, pronouns, or etc? Does a 'having' form function syntactically like an adjective (in some ways, or in all ways)?

Does a 'having' form decline, that is, does it take all the case inflections open to an (underived) adjective or noun? Is the declension regular?

A-1c. Semantic function

Languages vary greatly in the width of usage of the 'having' affix. It can be used to express:

1. Human agent at rest, with/accompanied by X
 - (a) holding something inanimate, for example 'The man is standing *with a spear*'.
 - (b) in the company of human(s) for example 'The boy is sitting down *with the man/men*'.
2. Human agent moving, with/accompanied by X
 - (a) holding something inanimate (that does not assist his movement) for example 'The man is running *with a boomerang*'.
 - (b) holding something inanimate (that may be helping his locomotion) for example 'The old man is climbing the hill *with a walking stick*'.
 - (c) in the company of human(s) for example 'The man is coming here *with his wife*'.

3. Human agent using an instrument to perform some action. There is a considerable semantic range here according as (amongst other things) the instrument is used on a human, animate or inanimate object, and the effect it has on the object. The extremes may be represented by:
 - (a) 'The man *used a club* to hit the stranger.'
 - (b) 'The woman *used a smooth stone* to grind the food.'
4. Describing characteristics of a place, etc. for example 'The camp site *has many flat stones*' or 'The river *has many fish*'.
5. Describing a time or season, for example 'We'll go hunting *in the moon-light*' or 'We'll move to the coast *in the wintertime*'.
6. Describing a state. Some Australian languages appear to have abstract nouns for 'hunger', 'thirst', 'sickness', etc. and may say, literally, 'I am *with hunger*' and so on. 'Ease' and 'wanting' may also be expressed through the 'having' affix—literally 'with ease' and 'with desire'.

7. Describing fear—of a person or thing, etc., for example
 - (a) 'Don't go there, *for fear of the old man!*'
 - (b) 'Keep away *from the fire!*'

Please deal with the above semantic functions in turn—if the 'having' suffix is used in a particular way in the language you are dealing with, then give an example sentence, with morpheme-by-morpheme gloss. If any of the above functions are not dealt with by comitative, state briefly the case (or other grammatical means) employed.

Please list any further semantic functions, not covered by the above list, of the affix.

A-2. Verbal affix

If there is a verbal affix that appears to have formal (and also, if possible, functional) similarities to nominal 'having', then please describe its form and (morphological/syntactic/semantic) functions.

If it appears that a verbal affix may—in terms of form and function—be related to the 'reflexive'-type affix *-*Diri*, then please describe its properties (even if the nominal affix in this language does *not* appear to be related to *-*Diri*).

Sample papers dealing with the 'having' affix in Dyirbal and Yidinj are attached. It will obviously make comparison and discussion easier if your papers follow this format as closely as possible. However, please do include any other data or ideas which appear to be relevant to a general discussion of the 'having' affix in Australian languages, and its origin and development.

10. Walmadjari

Joyce Hudson

Walmadjari,¹ from Western Australia, has a nominal affix which can usually be glossed 'having'.

A-1. Nominal affix

A-1a. Form

The form is *-tjaṭi* with the final vowel changing in some dialects to *-tjaṭu*. When followed by a suffix beginning with the consonant *l*, the morpheme has the form *-tjawu* producing *mana-tjawu-lu* 'with a stick' though the full form *mana-tjaṭi-lu* is also heard.

A-1b. Grammatical function

The suffix *-tjaṭi* can be affixed to nouns, demonstratives, descriptives, modifiers, directionals and negatives. Examples of *-tjaṭi* affixed to a:

noun
kuyi-tjaṭi *maṇa yani*
 meat-having-nom I went
 'I went with meat.'

demonstrative
njanaṭi-tjaṭi *kuyi-tjaṭi* *maṇa yani*
 that-having-nom meat-having-nom I went
 'I went with that meat.'

descriptive
kuyi-tjaṭi *pukař-tjaṭi* *maṇa yani*
 meat-having-nom cooked-having-nom I went
 'I went with cooked meat.'

modifier
palipinja maṇa njikitkařa-tjaṭi
 found I limpingly-having-nom
 'I found the one with the limp.'

tikiř-tjaṭi *pa wuljutjařinja*
 return-having-nom he well-became-then
 'When he returned, he got well.'

directional
tjumyinja patjal puřkuwaṇṭi-lu kałampal-tjaṭi-lu mangala-tjaṭi-lu
 showed they-him old men-erg west-having-erg mangala-having-erg
 'The old men from the west who speak Mangarla showed it to him.'

negative
miyi-naṭjita-tjaṭi *maṇa yani*
 food-nothing-having-nom I went
 'I went without food.'

It generally functions syntactically as a descriptive but sometimes is more like a noun.

lik-tjaṭi 'bird (species)
lik-having

tjilpiṭi-tjaṭi 'snake (generic)
intestine-having

It can be inflected for all cases as nouns and descriptives. Among other things it can be verbalised.

mimi-tjaṭi-tjaṛinja *mana*
sickness-having-became I
'I became sick.'

A-1c. Semantic function

It can be used to express:

- (1) Human agent at rest, holding something inanimate

ṅuṭi-tjaṭi *mana kiṛaṇana*
coolamon-having-nom I am sitting
'I am sitting with (holding) the coolamon.'

njanja patja ṅanpayi-lu mana-tjaṭi-lu
saw he-me man-erg stick-with-erg
'The man with a stick saw me.'

- (2) (a) Human agent moving, with (unhelpful) inanimate

kaḷi-tjaṭi *mana yani*
boomerang-having-nom I went
'I went with a boomerang.'

- (b) Human agent moving, with (helpful) inanimate

ṅuṭi-tjaṭi *mana yani*
car-having-nom I went
'I went in a car.'

- (c) Human agent moving, in company with humans

kaṭu-tjaṭi *pa piṛiyani*
wife-having-nom he came
'He came with his wife.'

piyiṅ-tjaṭi *pa piṛiyani patja-tjaṭi*
person-having-nom he came many-having-nom
'He came with many people.'

- (3) Human agent using an instrument to perform some action on a human, animate or inanimate object.

manin *pa pinja kaḷi-tjaṭi-lu*
woman-nom he hit boomerang-having-erg
'He hit the woman with a boomerang.'

kuyi *pa lani tjinal-tjaṭi-lu*
animal-nom he speared spear-having-erg
'He speared the animal with the spear.'

miyi *pa luwani pamaṛ-tjaṭi-lu*
food-nom she ground stone-having-erg
'She ground the food with the stone.'

- (4) Describing characteristics of a place

ṅuṛa ṅjanaṭi pa pamaṛ-tjaṭi
camp that it stone-having
'That camp is a rocky place.'

- (5) Describing time

karuwaṛa-tjaṭi *patji yipani puṛaṅu-la kankaṅumaṛaṅu-la*
afternoon-having he-me sent sun-loc up-loc
'He sent me in the afternoon when the sun was still high.'

- (6) Describing a state

mimi-tjaṭi *palu ṅuninj*
sickness-having-nom they are
'They are sick.'

maṛanjan-tjaṭi *mana*
hunger-having I
'I am hungry.'

Describing characteristics

waṅkatjuṅka-tjaṭi *pa ṅanpayi ṅjanaṭi*
waṅkatjuṅka-having he man that
'That man speaks the Wangkatjuṅka language.'

Normally *-tjaṭi* is not suffixed to inalienable possessions as in

kunjaṛ *pa pinja ṅanpayi-lu kuṛapa-lu*
dog-nom he hit man-erg hand-erg
'The man hit the dog with his hand.'

However, when describing the characteristics of a person, *-tjaṭi* can be used, with inalienable possession as follows

munta-tjaṭi 'pregnant woman'
stomach-having

miljilji-tjaṭi 'intelligent'
brain-having

pina-tjaṭi 'wise, knowing'
ear-having

Functions on the check-list not realised by *-tjaṭi* are: (1b) at rest in company of humans. The accessory case is used for this.

ṅanpayi-la mananjanta kiṛaṇana
man-acc I-him am sitting
'I am sitting with the man.'

Note: the accessory case is also preferred for function listed (2c), motion in company of humans.

piṛiyani manjananṅula piyiṅwanṅi-la
came he-them men-acc
'He came with the men.'

(7) Describing fear

The suffixes *-lamaŋa* and *-kaŋaŋa* are used to describe fear.

rayin maŋa kaŋinjani ŋanpayi-lamaŋa

afraid I was standing man-fear

'I was afraid because of the man.'

patjanu-lamaŋa palu tuŋapinja

bite-fear they arose

'They flew away for fear of being bitten (eaten).'

A-2. Verbal affix

No verbal affix has been found which is in any way similar to *-tjaŋi*. Reflexive is shown in the verbal auxiliary by the suffix *-njanu* and the verb is not affected.

Note

1. The spelling of this language name following the AIAS spelling convention is Walmadjari. Its reference number in Oates and Oates *A revised linguistic survey of Australia* (1970), is 59.7b.

Walmatjari is spoken in the southern Kimberley area of Western Australia. The Walmatjari people in the main live on cattle stations and in towns along the Fitzroy River though some are to be found as far east as Balgo Hills Mission and as far west as La Grange Mission. The material for this paper was collected at Fitzroy Crossing between 1967 and 1974 by the author and Eirlys Richards of the Summer Institute of Linguistics.

11. Kuuku Yaʔu

D. A. Thompson

Kuuku Yaʔu is a dialect spoken at the Lockhart River Aboriginal Community on the east coast of Cape York Peninsula, Queensland.

A-1. Nominal affix**A-1a. Form**

Four forms are discussed:

the Comitative marker *-pinta*
nominal affixes *-ñinta*, *-tji* *-ñu*.

A-1b. Grammatical function

-pinta is a phrase marker which designates the aspect 'by means of' as well as 'accompanied by'. This latter aspect especially can be glossed 'having'.

-ñinta can be added to verb stems to form noun roots which may then be inflected as a regular noun.

-tji can be added to nouns or adverbs to form noun roots.

-ñu can be added to verb stems to form noun roots.

11. KUUKU YAʔU**A-1c. Semantic function**

-pinta with meaning 'by means of'

ʔilpiinaya taŋupinta

return-NONF-I canoe-COM

'I returned by canoe.'

But one example uses *-tji* (see also (9) below)

tjiŋpu Billy Daniels ʔilpiin yaramanatji kalnkani

old man Billy Daniels return-NONF horse-tji overland

'Old Billy Daniels returned overland by horse.'

-pinta can also be used in this example. *-tji* appears to be a less used alternative.

-pinta meaning 'accompanied by' or 'having' occurs in examples (1) and (2)

- (1) (a) At rest with inanimate object
pama paaʔalpimana kalkapinta
man stands-PRES.HAB spear-COM
'The man is standing with a spear.'
- (b) At rest with humans (locative marker is used for 'alongside')
wayimu ŋuŋku niinan kaaʔipinta
woman over there sits-NONF baby-COM
'The woman is sitting over there with a baby.'
- (2) (a) Motion with unhelpful inanimate
pama waaŋaŋiŋa yuli mukanpinta
man runs-PRES.HAB woomera big-COM
'The man is running with a big woomera.'
- (b) Motion with helpful inanimate
tjiŋpu maaya piŋkalpaŋka katjinpinta
old man hill climbs-PRES.HAB stick-COM
'The old man is climbing the hill with a walking stick.'
- (c) Motion in human company
pama ŋiʔi kalman kulntapinta
man here come-NONF wife-COM
'The man came here with his wife.'
- (3) Instrumental. The Instrumental case marker is generally used:
{ $-ʔV$ }
{ $\sim -Vlu$ } where *V* is the stem final vowel.
- However a weak instrumental has been obtained using *-pinta*.
Peter *kaama piŋkan mayipinta*
Peter mouth fill-NONF bread-COM
'Peter filled his mouth with bread.'
- (4) Characteristic of a place—a Possessive Declarative clause is generally used but *-pinta* can occur when there are no modifiers.
ʔatapa puŋan mukamukan
river fish plenty
'The river has plenty of fish.'
- cf. *ʔatapa puŋanpinta*
river fish-COM
'The river has fish.'

- and: *puṅan mukamukan ʔatapajuṅ*
fish plenty river-LOC.
'There are plenty of fish in the river.'
- (5) Time/season. A *-ma* suffix is used. This appears to have a durational meaning.
ḡana wuuḡkaana maliḡkanajuṅ tawʔima
we-excl. camp-NONF beach-LOC dry season-*ma*
'We camp at the beach in the dry season.'
- (6) Abstract state. While there appear to be abstract stems they are used only in a verbalised form, otherwise a Purposive construction is used.
ḡayu ʔuulimana
I hungry-VBL-NONF
'I am hungry.'
- ḡayu maamaku makana*
I water-PURP dead-NONF
'I am thirsty.'
- pinta* can be used in a few instances to form noun roots:
wiini *pinta* 'policeman' derived from: *wiini* 'flash decoration'
katjin *pinta* 'female' ,, ,, *katjin* 'yamstick'
ḡampapinta 'councillor' ,, ,, *ḡampa* 'no/not'
- (7) Fear. An Ablative construction is used.
ḡampula kuḡitja ḡuḡaanmunu
we-incl. hide-FUT him-ABL
'We will hide from him.'
- ḡayu winiimana kuʔaakumunu*
I frightened-PRES.CONT dog-ABL
'I am frightened of the dog.'

The Ablative or Source marker is used both for a locative source and for a causative source.

Locative source:

ḡayu wuulama kalmaala ḡuḡku ḡiʔumunu Putjiwutjimunu
I long time ago used to come over there other side-ABL Putjiwutji-ABL
'A long time ago I used to come from over there on the other side, from Putjiwutji.'

Causative source:

ḡiʔi ḡaatji kuyumunu wuḡtjauḡitja wuʔuluḡaḡka
this place more-ABL young boys bad-CAUS-PRES.CONT
'This place is getting spoilt from too many young boys.'

- (8) Examples of *-ḡinta* forming noun roots from verb stems.

Future verb

maʔpitja 'make' — *maʔupiḡinta* 'builder'
puyaḡa 'jump' — *puyaḡinta* 'jumper'
kuutjaka 'look' — *kuutjaḡinta* 'watcher'
waḡaka 'go/run' — *waḡiḡinta* 'runner'

- (9) Nominal affix *-tji*:
Frequently used in place names that are derived from a characteristic feature.
- | | | |
|---------------|----------------------------------|-----------------|
| <i>mapaju</i> | 'grass type' — <i>mapajuḡtji</i> | place name |
| <i>talka</i> | 'tree type' — <i>talkaḡtji</i> | place name |
| <i>mukuy</i> | 'grass type' — <i>mukuyḡtji</i> | Cape Sidmouth |
| <i>ḡilti</i> | 'fruit type' — <i>ḡiltiḡtji</i> | name of a creek |

Also in reference to people:

<i>kaawḡy</i>	'south east' — <i>kaawḡtji</i>	'people from south east region'
<i>kuḡkaḡ</i>	'north east' — <i>kuḡkaḡtji</i>	'people from north east region'
<i>kani</i>	'high/inland' — <i>kanitji</i>	'inlanders'

Also:

<i>paalaku</i>	'last' — <i>paalakutji</i>	'last one'
<i>ḡukaapi</i>	'first' — <i>ḡukaapitji</i>	'first one'
<i>tjuʔutji</i>	'small'	} — <i>kuʔuntji</i> 'old woman'
<i>kuʔun</i>	'eye'	

- (10) Nominal affix *-ḡu*:

Used with verb stems to form dialect or group names.

yankuḡa 'eat' — *yankuḡu* 'Yankuḡa speakers'
kuutjaḡa 'look' — *kuutjaḡu* 'Kuutjaḡa speakers'

Also expressing an ability

piipi ḡuḡaḡkulu pitaḡitjaḡka kalka wayiḡuku
father his-ERG know-CAUSE-PRES.CONT spear throw-NOM-PURP
'His father is teaching him spear throwing.'
ḡayu pitaḡitji tukulu matjiḡuku
I know turtle catch-NOM-PURP
'I know how to catch turtles.'

A-2. Verbal affix

The affix *-mi* derives a reflexive verb stem

ḡulu ḡaʔimina
he hit-REFLEX-NONF
'He hit himself.'

The affix *-ni* derives a reciprocal verb stem

ḡali ḡaʔinina
we two hit-RECIP-NONF
'We hit each other.'

Yidinj was spoken just south of Cairns, North Queensland; Gungay and Madjay were probably other dialects of the same language.

Yidinj has both nominal and verbal affixes that probably derive from *-*Djiri*-. (Note: predictable vowel length is omitted throughout this paper to avoid unnecessary complication.)

A-1. Nominal affix

A-1a. Form

The affix has underlying form:

- yi* following a vowel
- dji* following a consonant

Note (a): With a stem that has an even number of syllables, and ends in a vowel, the affix effectively has the form *-:y*, for example, *bama* 'person', *bama:y* 'with a person'. This is a particular instance of a general 'syllable reduction rule' in Yidinj; it can be shown that the underlying form is *bama:yi*. Since sequences *-iy-* and *-i:y-* are not permitted at the end of a syllable in Yidinj, the affix is effectively just *-:* with a stem that has an even number of syllables and ends in *i*, for example, *djugi* 'tree', *djugi:* 'with a tree'.

With vowel-final stems that have an odd number of syllables there is no reduction, for example, *gudaga* 'dog', *gudagayi* 'with a dog'.

Note (b): With a stem ending in *-y*, the affix is *ndji* with loss of stem-final *y*, for example, *gumay* 'fishing line', *gumanjdji* 'with a fishing line'.

A-1b. Grammatical function

-dji/-yi can be affixed to nouns, adjectives, demonstratives and pronouns. It is added to the root of a noun or adjective, to (basically) the genitive form of a pronoun or a demonstrative with human reference, and to the locative form of a demonstrative with non-human reference.

A *-dji/-yi* form functions exactly like an adjective, and takes the full range of nominal inflections (these are added to the 'unreduced form'—thus *bama-yi-ŋgu* 'man-HAVING-ERG' as against *bama:y* 'man-HAVING-NOM').

A-1c. Semantic function

Nominal *-dji/-yi* in Yidinj can be used in the following cases:

- (1) (a) At rest, with inanimate object
ŋayu djana:nj djiwa: bigunuyi
 I-SUBJ stand-PAST fighting-ground-LOC shield-HAVING-NOM
 'I stood in the fighting-ground with my shield.'
- (1) (b) At rest, in company of human(s)
ŋayu njanŋ wagaldji
 I-SUBJ sit/stay-PRES/FUT wife-HAVING-NOM
 'I stay with (my) wife.'
- (2) (a) Motion, with (unhelpful) inanimate
ŋayu wanaldji galin
 I-SUBJ boomerang-HAVING-NOM go-PRES/FUT
 'I'll go out with a boomerang.'

- (b) Motion, with (helpful) inanimate
ŋayu gana guwa galina mandi: djubu:y
 I-SUBJ TRY west go-PURPOSIVE hand-LOC walking stick-HAVING-NOM
 'I tried to go west (i.e. uphill) with (the help of) a stick in my hand.'

- (c) Motion, in human company
bama bangilan wardjanda gada:nj bama:y
 person-NOM 'name'-NOM canoe-LOC come-PAST person-HAVING-NOM
 'Bangilan came in a canoe with (many) men.'

- (3) (b) Weak instrumental
ŋanjdji gubu:m muganjdji yungal
 we-SUBJ black pine-NOM grinding stone-HAVING-NOM grind-PRES/FUT
 'We're grinding black pine nut, using a grinding stone.'

- (4) Characteristics of place
bulmba djira:y
 camping place-NOM twig-HAVING-NOM
 'There are (lots of) twigs in (this) place.'

- (5) Time/season
ŋanjdji gindanuyi burgin
 we-SUBJ MOON-HAVING-NOM go walkabout-PRES/FUT
 'We (could) go walkabout by moonlight.'

- (6) Denoting a state

- (i) *ŋayudi murandji*
 I-SUBJ-INTENSIFIER sickness-HAVING-NOM
 'I myself, am sick.'

- (ii) *njundu munduyingu djugi gunda*
 you-SUBJ ease-HAVING-ERG tree-NOM cut-IMPERATIVE
 'You (can) cut that tree easily!'

Note also that in this region a tribal name involves the addition of *-dji/-yi* to the language name, for example, Yidinjdji, Gunganjdji; this method of naming is also used for the more northerly tribes speaking dialects of Dyirbal—for example, Ngadjan language, Ngadjandji tribe.

This covers the full range of semantic functions of the nominal affix *-dji/-yi* in Yidinj.

Functions on the check-list not realised by *-dji/-yi* are:

- (3a) 'strong instrumental' must involve the instrumental case inflection (in Yidinj, identical in form to locative).
- (7) there is a special 'fear' inflection that involves the addition of *-da* to an (unreduced) 'having' form—for example, *ŋamayida* 'for fear of the person', *gudagayida* 'for fear of the dog'.

Note: There is an alternative affix *-mudjay* that appears to be used as a stylistic variant of *-dji/-yi*; it has identical syntactic and semantic possibilities.

A-2. Verbal affix

Yidinj has a verbal derivational affix, with constant form *-:dji*. Its functions include:

- (a) forming a reflexive from a transitive verb
ɲayu baga:djinju
 I-SUBJ spear-:dji-PAST
 'I speared myself (on purpose).'
- (b) effectively marking an 'anti-passive' construction.

In a straightforward transitive sentence, subject is in ergative case and object in nominative case; the verb just has a tense inflection. In an anti-passive construction, subject is in nominative, object in dative (normally, if human) or locative (normally, if non-human) case, and the verb has the affix *-:dji* plus a tense ending. For example:

bunja wagudjangu bundjan
 woman-NOM man-ERG hit-PRES/FUT
 'The man is hitting the woman.'
wagudja bunjanda bundja:djin
 man-NOM woman-DAT hit-:dji-PRES/FUT
 'The man is hitting the woman.'

The syntax of *-:dji* is not fully understood (and the above comments should be regarded as quite tentative); for instance, there appear to be instances where *-:dji* added to a transitive root produces a further transitive stem, and instances where *-:dji* can be added to an intransitive root (the result also being intransitive).

At this stage of the analysis of Yidinj no connection—other than similarity of form—can be seen between nominal *-dji/-yi* and verbal *-:dji*

13. Warungu

Tasaku Tsunoda

Warungu, once spoken in the upper Herbert River area of north Queensland, has a nominal affix that is related to **Dir(i)* and verbal affixes that are possibly related to **Dir(i)*.¹

Outline of Warungu morphology and syntax

A few points of Warungu morphology and syntax which are relevant to the writer's papers in this volume are given.

Declension

The nouns, adjectives, demonstratives and the interrogative word 'what' have an ABSOLUTE-ERGATIVE declension, while (personal) pronouns, on the whole, have a NOMINATIVE-ACCUSATIVE declension. The interrogative word 'who' has a three way system—ergative, absolute/nominative and accusative. The ergative and INSTRUMENTAL cases have almost identical allomorphs, but there is syntactic evidence to distinguish the two cases. See (11) and (12). (The term 'absolute' is used, for instance, in Bogoras (1922) and Klimov (1973).)

Conjugation

Warungu has three classes of verbs. Class 1 is characterised by *l*, class 2 by *ɲ*,

and class 3 by *ɸ*—see their non-future tense 2 and potential mood forms. All the verbs of classes 2 and 3 are intransitive, while (except for those formed by the affixation of verb forming affixes) most of the verbs of class 1 are transitive.

As predicates of simple sentences or predicates of the main clauses of complex sentences, INTENTIONALS express their subjects' intention. Intentionals 1 and 2 have another function—either to extend simple sentences or to use them as predicates of the subordinate clauses of complex sentences. Here, they do not express their subjects' intention, but express events or actions in some way related to the events or actions described by the predicates of the simple sentences or those of the main clauses, for example, purpose or consequence. Intentionals with this second function are called PARTICIPLES.

Table 1: Conjugation

	Class 1	Class 2	Class 3
	'stab'	'sit'	'call out'
non-future 2	<i>baba-l</i>	<i>ɲina-y</i>	<i>gawali-ɸ</i>
potential	<i>baba-lga</i>	<i>ɲina-ɲyga</i>	<i>gawali-ɲga</i>
intentional 1	<i>baba-lgu</i>	<i>ɲina-yal</i>	<i>gawali-yal</i>
intentional 2		<i>ɲina-yalgu</i>	
intentional 3			
participle 1	<i>baba-ɲu</i>		<i>gawali-ɲu</i>
participle 2		T <i>ɲina-ndi*</i>	<i>gawali-ndi</i>
participle 3		<i>ɲina-ndira</i>	

* Most of the examples in the writer's papers were either given by the informant or coined by the writer and checked with the informant. Those marked with T were coined by the writer on the basis of attested examples.

-lgu and *-ɲu* generally occur with transitive verbs, while *-yal* and *-ndi* generally occur with intransitive verbs.

gali constructions

With the affixation of a verbal affix *-gali* to a transitive verb stem, a transitive sentence such as (1) is transformed into (2):

- (1) *bama-ɲgu gamu-ɸ biɖa-n*
 man-ERG water-ABS drink-NON-FUTURE 1
 'A man is drinking water.'

- (2) *bama-ɸ gamu-ɲgu biɖa-gali-n*
 man-ABS water-ERG drink-gali-NF1 As (1).

Here, the subject is transformed from the ergative into the absolute and the object from the absolute into the ergative. We have another type of *gali* transformation:

- (3) T *bama-ɲgu gamu-ɸ ɲayga-n*
 man-ERG water-ABS search-NF1
 'A man is looking for water.'

A proprietive form can be verbalised:

- (6) *dulay-φ waga-n waga-n ηara ηara manga-yi-bi-n*
 tree-ABS rise-NF1 high, up flower-PROP-*bi*-NF1
 'The tree grew taller and taller, and bore flowers.'
 (*bi* is the intransitive verb forming affix.)

A-1c. Semantic function

A proprietive form can be used in the following ways:

A. Human agent at rest

(a) holding something inanimate

- (7) *wurunbaya-yi-φ dana-gara-n nula*
 coolamon-PROP-ABS stand-*gara*-NF1 he-NOM-Si
 'He is standing with a coolamon.'

(The verbal affix *-gara* often means 'here and there' or 'repeatedly'—see (31). It seems to be, however, rather redundant in (7) and also (8).)

(b) in the company of human(s)

- (8) *yinda warηu-yi-φ nina-gara-n*
 you1-NOM-Si woman-PROP-ABS sit-*gara*-NF1
 'You are sitting with a woman.'

B. Human agent moving

:a) holding something (unhelpful) inanimate

- (9) *ηaya gulmi yani-φ gamu-yi-φ*
 I-NOM-Si back come-NF3 water-PROP-ABS
 'I came back with water, (that is) I brought back water.'

(b) holding something (helpful) inanimate

No suitable example is available, although this usage might be possible.

(c) in the company of human(s)

- (10) *yanana-φ gurηgal-φ nilamu-yi-φ yani-φ*
 mother-ABS husband-PROP-ABS new-PROP-ABS go-NF3
 'Mother went away with a new husband.'

C. Human agent using an instrument

In transitive sentences, *gali* constructions with reflexive meaning, reciprocal sentences and reflexive sentences (both of which are derived from transitive sentences), the instrumental case is used to mark instruments.

- (11) *bama-ηgu gamu-ηgu gandu-φ baba-n*
 man-ERG water-INST dog-ABS wash-NF1
 'A man washed a dog with water.'

- (12) *gamu-ηgu bama-φ baba-gali-n*
 water-INST man-ABS wash-*gali*-NF1
 'A man washed himself with water.'

While the subject is transformed from the ergative into the absolute here (and also in reflexive and reciprocal sentences), the instrumental case remains unchanged. On this basis, the ergative and instrumental cases are distinguished. (Cf. Dixon 1972:42, 94.)

Now, in the first type of *gali* constructions exemplified by (2), any word in the ergative/instrumental case form is regarded as an object, not as an

instrument. That is, the instrumental case cannot mark an instrument here. Therefore, some other means should be resorted to for marking one. Proprietary forms are often used for this purpose.

- (13) *ηaya bangay-qi-φ baba-gali-yal*
 I-NOM-Si spear-PROP-ABS stab-*gali*-INT (*bangay*:ABS)
 'I will stab with a spear.'

Constructions involving instrumental verbs can also be used to mark instruments. See (47) below and Tsunoda, paper 62.

D. Characteristics of a place

- (14) *baynan-qi-φ dundul-di-φ yaru-φ yamba-φ*
 kangaroo rat-PROP-ABS pademelon-PROP-ABS this-ABS camp-ABS
yuyi-yi-φ
 kangaroo-PROP-ABS

'There live (many) kangaroo rats, pademelons and kangaroos in this camp.'

E. Time or season

Locative is used.

F. Describing state

- (15) *muran-qi-φ nula wuna-n*
 illness-PROP-ABS she-NOM-Si lie-NF1
 'She is lying ill.'

No example of 'ease' could be found. A few adjectives such as *guli* 'angry', *wahyga* 'eager, fond, wanting' and *bulba* 'in love' are generally used in the proprietive forms (for example, *guli-yi*) unless they are used with derivational allixes (for example, *gulibi* intransitive verb 'be(come) angry') or unless they are used in idiom-like expressions (for example, *guli waga* 'get angry' and *bulba wuna* 'be in love', *wuna* 'lie'). Compare:

- (16) *nula guli-yi-φ*
 he-NOM-Si angry-PROP-ABS
 'He is angry.'
- (17) *ηaya guli-φ waga-n*
 I-NOM-Si angry-ABS rise-NF1
 'I got angry.'

Other examples include (9) in Tsunoda, paper 62 in this volume and:

- (18) *wahyga-yi-du nula manda-φ guyba-n yinu*
 fond-PROP-ERG she-NOM-St food-ABS give-NF1 you1-GEN
 'She, who is fond (of you), gave you food.'

There are some adjectives that are generally used without, but occasionally used with, the proprietive affix. Thus:

- (19) *ηana nandu-φ*
 we3-NOM-Si ignorant-ABS
 'We do not know.'
- (20) *ηaya nandu-yi-φ*
 I-NOM-Si ignorant-PROP-ABS
 'I do not know.'

In either case, the meaning of the proprietive affix is not known.

G. Fear

Locative is used.

Other functions include:

H. Object of 'giving'

A verb of 'giving' *guyba* can have three constructions: (i) 'gift' is in the absolute and receiver in the dative—for example, (19) in Tsunoda, paper 62; (ii) gift in the absolute and receiver in the genitive, for example, (18); and (iii) gift in the instrumental and receiver in the absolute. Thus:

- (21) T *bama-ηgu maŋda-ηgu ɾayi-φ guyba-n*
man-ERG food-INST girl-ABS give-NFL

'A man presented a girl with food.' (A man gave food to a girl.)

In a *gali* construction, 'gift' is marked by the proprietive and receiver by the dative:

- (22) T *bama-φ maŋda-yi-φ ɾayi-wu guyba-gali-yal*
man-ABS food-PROP-ABS girl-DAT give-gali-INT

'A man will give food to a girl.'

Note the parallelism between instrumental in transitive sentences and proprietive in *gali* constructions in (11)–(13), and (21)–(22).

I. Body parts and body secretions

It is quite normal that a person should have a particular body part or secretion. Therefore, it is not necessary to say that a person has such a part or secretion. The proprietive forms of such nouns are specifically used:

(i) to express that something is unusual/abnormal/wrong with it. Thus:

bulu-yi 'belly-PROP': satisfied with food, having diarrhoea, wanting to go to toilet, pregnant

guna-yi 'faeces-PROP': (rarely) having faeces inside, (generally) having diarrhoea

- (23) *ηaya ηina-n bulu-yi-φ*
I-NOM-Si sit-NFL
'I am sitting, satisfied with food.'

- (24) *ηuna-φ bama-φ guna-yi-φ*
that-ABS man-ABS
'That man has diarrhoea.'

(ii) or, to express that someone has something which a normal person does not have or something which *not everyone* has:

- (25) *ηaya didi-yi-φ*
I-NOM-Si sore-PROP-ABS
'I have a sore.'

The reduplication of a proprietive form indicates that the situation is even worse:

- (26) *yinda buɟi-yi-φ buɟi-yi-φ*
youI-NOM-Si fart-PROP-ABS
'You are farting too much, a lot.'

(iii) or, to express explicitly something about it:

- (27) [If I had two penises, I would look for two women, but:]
ηaya ηungul-ɟi-φ ɟumbi-yi-φ
I-NOM-Si one-PROP-ABS penis-PROP-ABS
'I have only *one* penis.'

J. Means

Proprietive forms can mark (more or less abstract) means:

- (28) *wardan-ɟi-φ ηaya guyaynal yani-yal*
boat-PROP-ABS I-NOM-Si across, over go-INT2
'I am going across (from Palm Island to the mainland) by boat.'

- (29) *dayari-yi-du bama-ηgu gayɟi-n*
horse-PROP-ERG man-ERG carry-NFL
'Men on horseback are driving (cattle).'

- (30) *ηaya buŋguru-yi-φ dana-n*
I-NOM-Si knees-PROP-ABS stand-NFL
'I knelt down.'

- (31) *namba-gara-n ηilamu-yi-φ gama-yi-φ*
dance-about-NFL new-PROP-ABS Gama-PROP-ABS
'(They) were dancing about to the new Gama dance.'

In (30) and (31) the locative can also be used.

K. Having something inanimate

In most instances they mean 'having . . . , holding . . .' as we saw above. However, *maŋda-yi* 'food-PROP' can mean 'satisfied with food' as well as 'having food'.

- (32) *ηula maŋda-yi-φ ηina-n*
she-NOM-Si sit-NFL
'She is sitting, satisfied with food.'

gugu-yi 'language, speech-PROP' can mean 'talking' as well as '(Someone) has such and such a language'.

- (33) *ηula gugu-yi-φ gugu-yi-φ*
he-NOM-Si
'He is busy talking.'

L. In human company

In most instances they mean 'having . . . , together with . . .'. However, *galbin-ɟi* 'baby/child-PROP' can mean 'pregnant' as well as 'having or with a baby/child'. Note that *ɟulbun-ɟi* 'married person-PROP' means 'married (person)' again.

- (34) *ηaya galbin-ɟi-φ*
'I am pregnant.'

- (35) *ηaygu maɟuwargi-φ ηuna-φ ɟulbun-ɟi-φ*
I-GEN friend-ABS that-ABS
'That friend of mine is (a) married (person).'

M. Inanimate or non-human object having inanimate, non-human or human object or being

- (36) [A man speared a kangaroo and:]
ηula bangay-ɟi-φ wadali-φ
it-NOM-Si spear-PROP-ABS run-NF2
'It (the kangaroo) ran away with the spear in it.'

- (37) *barawu-φ gayɟi-n gamu-yi-φ*
billy-ABS carry-NFL water-PROP-ABS
'(I) carried a billy can with water in it.'

- (38) [You are sitting on a tree and laughing at me on the ground, so:]
ηaya ɟulay-φ yaru-φ gunma-lgu yinuŋu-n-ɟi-φ
I-NOM-St tree-ABS this-ABS cut-INT1 youI-PROP-ABS
'I will cut down this tree which has you on it, I will cut down this tree with you on it.'

N. Place, tribe or language names

- ɟalugan*, *ɟalugan-ɟi* :both 'Tiger Mountain'
yirgay 'a language in the north', *yirgay-ɟi* 'people of the north'
It is not certain whether this *-ɟi* is a proprietive affix.

A-1d. Catalyst

A form *-yi* is also used as a catalytic affix. It is affixed to the genitive forms of singular personal pronouns, and (probably) to both the nominative and genitive forms of other personal pronouns. To these *-yi* forms, the locative or dative ending is further affixed. Thus:

Table 3

	<i>yinu</i> 'you1-GEN'	<i>yura</i> 'you3-NOM'	<i>yuraju</i> 'you3-GEN'
locative dative	<i>yinu-yi-da</i> <i>yinu-yi-d-gu</i>	T <i>yura-yi-da</i> <i>yura-yi-d-gu</i>	<i>yuraju-yi-da</i> <i>yuraju-yi-d-gu*</i>

* Here, in the dative the thematic consonant *d* always seems to intervene. Note that with the 'proprietary' affix, *l* can also intervene and that *d* and *l* are optional.

(39) *ɲaygu-yi-da yamba-ɲga ɲali bira-wa-n*
I-GEN-yi-LOC camp-LOC we2-NOM-Si talk-RECIPROCAL-NF1
'We talked (with each other) in my camp.'

(40) *ɲaya yani-φ yamba-wu yinu-yi-d-gu*
I-NOM-Si go-NF3 camp-DAT you1-GEN-yi-d-DAT
'I went to your camp.'

Here, *-yi* as a catalyst does not mean 'having . . .'. Those words with the catalyst *-yi* are used to qualify only one word *yamba* 'camp', but not any other word (as far as the present corpus is concerned).

Since the catalyst *-yi* and the proprietary *-di/-yi* show very similar and irregular declensions, they are probably cognate.

Dyirbal has a similar catalytic affix *-din* (Dixon 1972:105-106). Thus:

	Dyirbal	Warungu
'my'	<i>ɲaygu</i>	<i>ɲaygu</i>
'my'	<i>ɲayguɲinda</i>	<i>ɲayguɲida</i>

Narrinyeri had a similar catalytic affix *-yin* (Taplin (1880), quoted by Dixon (1972)). The three catalytic affixes *-yi* (Warungu), *-din* (Dyirbal) and *-yin* (Narrinyeri) might be historically related. If so, we could postulate the following changes:

*-*Dir* → *-din* → *-yin*
↓
*-*yir*
↓
-yi

A-1e. Other nominal affixes

There are quite a few nominal affixes that are similar in form to the proprietary affixes in other languages, but it is not known whether they are historically related. They are *-bara*, *-baɲa*, *-bari*, *-baya*, *-ɲari*, *-giɲi*, *-maɲa*, etc., for example:

walwa 'bad', *walwa-ɲari* 'bad'
ɲuɲara 'urine', *ɲuɲara-bari* 'wet with urine all over'

A-2. Verbal affix

A-2a. *-(l)di*

-di is found in the stative aspect *-ldi*, which expresses state, habit or inclination. Only four intransitive verbs (of class 1, characterised by *l*, see 'Conjugation' above) take *-ldi*. They are *ɲagu* 'feel sorry', *ɲuɲga* 'be embarrassed', *wamba* 'fear' and *gubi* 'whistle'.

(41) *ɲaya wamba-ldi*
'I am frightened.'

As these four intransitive verbs do not take any conjugational ending other than the stative *-ldi* and non-future tense 2 *-l*, it might be that their non-future 2 forms are in fact nominalised verbs and that the *-ldi* forms are their proprietary forms.

-ldi is found with future meaning as well (with only one example):

(42) *ɲaygu gayana-ɲgu gambi-φ manda-ldi*
I-GEN father-ERG clothes-ABS send-ldi
'My father will send clothes.'

A-2b. *-ndi* and *-ndira*

-di is also found in two participle endings, participle 2 *-ndi* ~ *-ɲdi* and participle 3 *-ndira* ~ *-ɲdira*. (There seems to be a free variation between *n* and *ɲ* in both endings. In notation, we shall use *n* for convenience.)

Generally intransitive verbs (irrespective of their class membership) and only a few transitive verbs (all, of class 1) take the participle 2 ending. Participle 2 is used either to extend a simple sentence or as the subordinate-clause predicate in a complex sentence. Thereby, it indicates an event that is anterior to or simultaneous with the event that is described by the predicate of the simple sentence or by the main-clause predicate of the complex sentence. It thus often expresses reason/clause or condition to the following event.

(43) *muɲugaya-φ ɲaya ɲaga-n wuna-ndi*
crab-ABS I-NOM-St see-NF1 lie-PART2
'I saw a crab lying.'

(44) *guwuy-φ yani-ndi ɲaya wambali-n*
ghost-ABS come-PART2 I-NOM-Si fear-NF1
'As a ghost came, I was scared.'

Participle 3 is found only with three intransitive verbs; two from class 2, *wuna* 'lie' and *ɲina* 'sit', and an irregular verb *yani* 'go/come'. It is used as the subordinate-clause predicate of a complex sentence to indicate an event that is simultaneous with the event described by the main-clause predicate. It can be translated as 'while . . .'.

(45) *ɲaya ɲinandira yinda maguli-ya*
I-NOM-Si sit-PART3 you1-NOM-Si work-IMPERATIVE
'You work while I am sitting.'

'Etymologically, *-ndi* might be *-n* (non-future tense 1) and *-di* (proprietary?). *-ndira* might be *-n-Dir-da*. (*n* is non-future tense 1, and *da* is locative. In Warungu, time is marked by the locative.) If so, they would have changed as follows:

*-n-dir → -n-dj
 ↓
 *-n-dir-da
 ↓
 -n-dir-a

Synchronically, in present-day Warungu the stem final *r* is generally deleted after the locative *-da* is affixed. However, in a few particular words *d* is deleted, not *r*, that is, in effect only *a* is affixed, as in the postulated diachronic changes above.

A-2c. Reflexive verbs

A reflexive verb can be formed by the affixation of *-li* to a transitive verb root. A *gali* verb can also be used in the reflexive sense—see (5).

A-2d. Comitative verbs

A comitative verb, formed by the affixation of *-yi* to an intransitive verb root, is transitive, and, it means 'do . . . with . . . , do . . . , by . . . , etc.'.

- (46) *yaru-φ-gul gambi-φ ŋaya ŋina-yi-n*
 this-ABS-only clothes-ABS I-NOM-St sit-yi-NFI
 'I am sitting with only these clothes on.'

A-2e. Instrumental verbs

An instrumental verb, formed by the affixation of *-yi* to a transitive verb root, means 'do . . . by means of . . .'. The instrument for the action is in the absolute and the patient of the action is in the dative.

- (47) *bama-ŋu bilgu-φ gajdi-n maŋda-wu gunba-yi-lgu*
 man-ERG knife-ABS carry-NFI food-DAT cut-yi-PART
 'A man carried a knife to cut food with.'

Instrumental verbs are also discussed in Tsunoda, paper 62.

This comitative and instrumental affix *-yi* is, both in form and meaning, not dissimilar to the proprietive **-Dir(i)*. They might be historically related.

Note

1. This paper is largely repeated from the writer's M.A. thesis (Tsunoda 1974a). The writer is most grateful to Mr Alf Palmer (Djinbilŋgay), the informant for the work, and to the Australian Institute of Aboriginal Studies, who financed two field trips and supported the analysis. Thanks are also due to B. J. Blake, Claus Jehne, Richard Reisner, Gillian White and Irene Worotnicki, who in various ways helped the writer with this paper.

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14. Gugu-Badhun and the Flinders Island language

Peter Sutton

Gugu-Badhun was one of the dialects spoken at the head of the Burdekin River to the west of Ingham, north Queensland. Two partial speakers remain. It is mutually intelligible with Warungu.

The Flinders Island Language (also known as Biyalgeyi = Aba Yalgayi, the name of the Stanley Island clan) was spoken by seven clans inhabiting the Flinders Island Group, Cape Melville, Bathurst Bay and Bathurst Heads, on the eastern coast of Cape York Peninsula. Like their south-eastern neighbours (speakers of the Barrow Point Language, sometimes known by clan-names such as Almura, Malthenmungu = Ama Althenmungu and Gambiilmugu), these people have no particular name for their language. It is sometimes identified by referring to the speaker's own particular clan, or by the name of the Flinders Island Group (Wurriyima). Three very old but competent speakers remain.

A-1a. Form

Gugu-Badhun: *-yi* ~ *-dji*
 -yi in environment /-V—/
 -dji in environment /-C—/

Note that this language has two contrasting laminal stops *d̪* and *dj* but that only *dj* can precede *i*.

Additional forms with related functions and restricted distribution are *-bara*, *-bara*, *-bari*, *-mbari*, *-wari*, *-dari* and *-biri* (see section 4).

Flinders Island Language:

-(y)i(lbo)
 -yi(lbo) in environment /-V—/
 -i(lbo) in environment /-C—/

(An apparent exception to the rule is *oŋela*+PROP → *oŋelilbo* 'ear-having' but final *-a* of *oŋela* 'ear' is elsewhere subject to idiosyncratic deletion, for example, *oŋel wamba* 'ear lobes', *oŋel ŋara* 'skin below ears', *oŋel waka* 'hair inside ears'.)

The *-(y)ilbo* form is relatively unrestricted. The *-(y)i* form is found only in clan names and a few adjectives.

A-1b. Grammatical function

Gugu-Badhun: The proprietive forms adjectives from nouns and adjectives (the latter cases being akin to English 'red:reddish', 'fat:fatty'). Some plural pronouns have *-dji* optionally suffixed to the stem, even though all end in vowels, and this affix may or may not be related to the proprietive (these pronouns remain pronouns when *-dji* is added). Singular pronouns which are the object of accompaniment take the form Genitive Stem+Locative (for example, I'll come *with you sg.*).

Flinders Island Language: The proprietive forms adjectives from nouns and adjectives. No declined forms have yet been obtained.

A-1c. Semantic function

- (1) (a) At rest with inanimate object

Gugu-Badhun: (in this case the object is animate but non-human)

ɖambal-dji warŋu-φ ɲina-y ɲani-ɲga
snake-PROP woman-NOM sit-NONPAST ground-LOC
'The woman is sitting on the ground with a snake.'

Flinders Island Language:

ɬowal-ilbo ina-n
club-PROP sit-PAST

'They waited with clubs [expecting an attacker].'

- (2) (a) Motion with (non-assisting) non-human company

Gugu-Badhun:

gamu-yi yani-n yugan-φ
water-PROP go-PAST cloud-NOM
'It's been raining.'

Flinders Island Language:

(inanimate company)

alɲgiɾ-φ waltji-yilbo unga-y-lo
woman-NOM bag-PROP come-NONPAST-3SgSub
'A woman is coming with a bag.'

(animate company)

alɲgiɾ-φ unga-y-lo woɖa-yilbo
dog-PROP

'A woman is coming with a dog.'

- (b) Movement assisted by accompanying object

Gugu-Badhun: —

Flinders Island Language: Evidence is lacking, but the translation given for 'He walks using a stick' was:

aamba-φ yiik-waŋa apa-l ulo
ground-NOM stick-INST poke-NONPAST 3SgSub

- (c) Human agent moving, in the company of humans

Gugu-Badhun:

bama-φ yani-n warŋu-yi gandu-yi
person-NOM go-PAST woman-PROP dog-PROP
'A man came with a woman and a dog.'

Flinders Island Language:

alɲgiɾ-φ unga-y oɖul-ilbo
woman-NOM come-NONPAST husband-PROP
'A woman is coming with her husband.'

- (3) Human agent using an instrument

Gugu-Badhun: Both instrumental and 'having' functions are served by the restricted affix *-mbari* when suffixed to *ɲani* 'what' (that is, *ɲanimbari* can mean either 'using what?' or 'how many/much?'). Most instrumental constructions involve an affix which is identical with ergative, but note the following case:

question: *ɲani-mbari yinda djiŋga-l-baru*

what-PROP 2SgSub chop-NONPAST-? (function undetermined)
'What do you use for chopping wood?'

answer: *yaru-giya yaru bari-yi*
here-INTENS here stone-PROP
'[We use] these stones here.'

Flinders Island Language: A few nouns out of many hundreds take *-ɲi* in Ergative/Locative/Instrumental cases. This affix may be related to *-(y)i*. The dozen or so other ERG/LOC/INST forms all end in *-a*. Place names frequently consist of proprietive constructions, and the names Mipalɲi and Wobolɲi, although now unanalysable, may be of this sort. Note that *akala* 'boat' and *adala* 'bailer shell' both delete final *-a* when adding *-ɲi*: *akalɲi, adalɲi*.

- (4) Characteristics of a place or thing

This is the commonest application of the proprietive in both languages.

Gugu-Badhun:

gamu-φ balgi-yi
water-NOM pebble-PROP
'hailstones'

restricted proprietives:

-bara used optionally with the dimensional adjectives:

<i>gagal</i> 'big'	<i>gagabara</i>
<i>ɲandjal</i> 'heavy'	<i>ɲandjabara</i>
<i>wungal</i> 'long'	<i>wungabara</i>

-bara

usually found in species, clan or place-names:
wumbun 'woomera' Wumbunbara (place associated with
myth about making a woomera)

Warungu-speaking clan Gububara
scavenger hawk *waɖubara*

-bari added optionally to *guli* 'angry'; note that Warungu has *guliyi*

-mbari see (3)

-wari used optionally with the adjectives:

yangi 'sharp' *yangiwari*
rangil 'thin and flat' *rangiwari*

-dari used optionally with *walwa* 'bad'

-biri found in some species names, for example:

gayga 'stinking, rotten' *gaygabiri* 'bee' sp.

-biɾi used optionally with *wamay* 'good' (preceded by epenthetic *-n-*), and used to indicate quantity in the case of:
guyɲgur 'flying fox' *guyɲgubiri* 'mob of flying foxes'

and possibly also in:
galbin 'child' *galbiṛi* 'children'

Flinders Island Language:

a: aṛ-φ yadan mini; aṛaṛ-φ ŋaṭun waṛawi, walin-ilbo
 house-NOM 3PIGen good 1SgGen bad hole-PROP
 'Their houses are good; my house is no good, it's got holes.'

yiiku-φ apa-yilbo
 tree-NOM outrigger pontoon-PROP
 'helicopter'

Clan names: Clans can be referred to by at least three equivalent presentiations of the same information. These take the forms:

people+place-PROP e.g. *Aba Ṭalpiṛ-i*
 people+place-ABLATIVE *Aba Ṭalpiṛ-iya*
 (people) place-WAṚA (*Aba*) *Alpiṛ-waṛa*

(The initial-consonant-dropping in the last example is not relevant to the discussion, but is a normal process in the language.) The form of the proprietive is always *-(y)i* in clan-names. The suffix *-waṛa* is undoubtedly cognate with the functionally similar *-bara* of many other north-east Australian languages.

- (5) Describing a time or season
 Gugu-Badhun: The adding of proprietive *-yi* is optional with:
garbala tomorrow
ṇila today, now, recent time
djidabara dawn (note that locative of 'dawn' in Warungu is *djida-da*; hence *-bara* may be a fossilised proprietive in Gugu-Badhun)

Flinders Island Language: The ERG/LOC/INST forms are used.

- (6) Describing a bodily state
 Gugu-Badhun: Adjectives denoting the more 'inalienable' bodily states (for example, hungry, thirsty, itchy) occur either as simple stems or as intransitively verbalised stems plus tense. Other bodily states may be denoted by, as in the following cases, noun stems plus the proprietive:

gilṇaṛa-yi ṇaya bulbu-yi gaḍa-φ
 phlegm-PROP 1SgSub grey hair-PROP head-NOM
 'I've got a cold.' '[He's] grey-headed.'

Flinders Island Language:
aba-φ ṇakan-i ulo iṅga-yi ṇayu
 person-NOM belly-PROP 3SgSub hunger-PROP 1SgSub
 'She's pregnant.' 'I'm hungry.'

A-2. Verbal affix

Gugu-Badhun: Reflexive *-li-* and reciprocal *-wa-* are formally similar to proprietive affixes in other languages, but not to those which are common in Gugu-Badhun itself.

Flinders Island Language: Reflexive-reciprocal verbal affix *-yi-* is apparently related to proprietive *-(y)i(lbo)*. A particle meaning 'one's own' often occurs

in reflexive constructions (another particle with reflexive/reciprocal functions, *opan*, also occurs). This particle has formal similarity to some others elsewhere:

where:	Flinders Island Language	<i>malayi</i>
one's own	Warungu	<i>waṛayi</i>
one's own	Aranda	<i>waṛa</i>
one's own	Yir-Yoront	<i>-(w)ar(l)</i>
only		

Note final *-yi* in the first two cases.

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15. Bāgandji

L. A. Hercus

The Bāgandji dialects were once spoken over most of the Darling River basin of western New South Wales. The following comments are based on the Southern Bāgandji dialect from the Pooncarie area and on the Guṇu dialect (G.).

A-1. Nominal affix

A-1a. Form

The following affixes are used: *-dja* and *-malga-dja* 'having'

A-1b. Grammatical function

-malga-dja can only be affixed to nouns. *-dja* can be affixed to nouns and to a whole noun-phrase ending in a noun—this latter is the preferred usage. Both affixes are added directly to the stem of the noun.

Nouns and noun-phrases followed by *-dja* and *-malga-dja* function like adjectives and bound person-markers can be affixed to them. No declensional forms have been found; this is in accordance with the limited semantic function of these affixes.

A-1c. Semantic function

-dja is similar in function to the Arabana-Wangaṇuṇu affix 'having', but it is more restricted: it denotes 'having a certain characteristic, possession, condition or relationship'. It is used mainly in equational sentences (examples (i) to (iv)) and more rarely with verbs implying 'at rest' (v). Examples:

- (i) *ṇāḍa balda-dja*
 not shame-having
 'He is completely shameless.'
- (ii) *ṇidja murba-dja -āba*
 one child-having-I 1 sg INTRANS
 'I've got one child.'
- (iii) *ḍaḍu-migi-dja -āba*
 head-pain-having-I 1 sg INTRANS
 'I've got a head-ache.'

- (iv) *ɲularɟi ɟaɟu-bulgi-dja*
 much head-hair -having
 'He's got a lot of hair.' (G)
- (v) *ɲandi-miɟi-dja -ɲiŋg-amba*
 tooth-pain-having-sit -you 2 sg INTRANS
 'You'll get a tooth-ache.'

The following are examples of the (optional) use of *-malga-dja*:

- ɲaunɟu-malga-dja* OR *ɲaunɟu-dja*
 wife -having 'married'
- janda-malga-dja-āba* OR *janda -dja -āba*
 'stone'-having-I 1 sg INTRANS

'I've got money.'

The affix *-dja* (*-malga-dja*) does not have any of the other semantic functions ('accompanied by', etc.) which are characteristic of the affix 'having' in other languages.

A-2. Verbal affix

The verbal affix *-ɟiri* can be used in Bāgandji to form a reflexive. *-ɟiri* is added immediately to the root or root + modal marker, and it is followed by the tense and person markers:

- ɲabalɟirajiga*
ɲaba-l -ɟir -a -iga
 lock-MODAL-REFL-PRES-3 pl
 'They lock themselves up (in fear).'

- ɲugaɟiridjāba*
ɲuga-ɟiri -dj -āba
 cut -REFL-PAST-I 1 sg INTRANS
 'I cut myself.'

The incorporated object pronoun can be used, but it is rare and confined to the third person.

- ɲugaɟiridjina*
ɲuga-ɟiri -dj -i -na
 cut -REFL-PAST-3 sg-3 sg OBJ
 'He cut himself.'

Further details of the use of *-ɟiri* remain to be investigated, but one thing is clear: there does not appear to be any connection between the reflexive affix *-ɟiri* and the affix 'having' in Bāgandji.

Additional notes

Maljaŋaba

Maljaŋaba, which belongs to the Yali language group, was once spoken immediately to the west of Bāgandji. The Maljaŋaba affix 'having' was *-wiɟa* (from *-wi-ɟa* ?) which was probably cognate with Bāgandji *-dja*.

Yaralde

The Yaralde people of the lower Murray were once near neighbours of the

southernmost groups of Bāgandji. The Yaralde affix 'having' was *-wadjeri*. This is of interest as it probably contains the suffix **-ɟiri*; there is however no verbal affix *-ɟiri* in Yaralde.

16. Wangaybuwan

Tamsin Donaldson

Wangaybuwan was spoken in the dry country between the Lachlan and the Darling, around Ivanhoe in western New South Wales. Its remaining speakers are widely scattered.

Wangaybuwan has a nominal affix *-buwan* 'having' (in contrast with *-ɟalaba*: 'not having', which has the same syntactic possibilities); and a verbal affix with reflexive function, *-ɟjili*. There is also a 'residual' local case-inflection *-ɟi* (related to **-ɟir*?).

A-1. Nominal affix

A-1a. Form

The form *-buwan* (phonetically *-bɔ:n*) is constant. Suffix-initial *ɟ* as in *-ɟalaba*: is realised as *ɟj* after *i*(:) or *y*, and as *ɟ* elsewhere.

A-1b. Grammatical function

-buwan can be affixed to nouns, adjectives and verbs (and—metalinguistically—to the negative particle, to form the language/tribal name; see A-1c/8). It cannot be affixed to first or second person pronouns, demonstratives or proper nouns, since it cannot mark a definite NP. It is added to the root of nouns, adjectives and verbs.

A *-buwan* form takes the full range of nominal inflections. It functions exactly like an adjective except that in isolation it constitutes a complete sentence; for example:

- (1) *ɟigubuwān* (emu-bush-HAVING) 'There is/are emu-bush(es).'
 A non-derived adjective, such as *girabaɟay* 'red' cannot stand alone as a sentence. It must function like the noun *ɟigu* in (1) and itself have *-buwan* added to it (thereby acquiring a referent), for example:
 (2) *girabaɟaybuwan* (red-HAVING) 'There is/are red one(s).'

A-1c. Semantic function

1. At rest with inanimate object

- (3) *mayi gugurbuwān wayaŋa ɟa:y*
 person-NOM stick-HAVING-NOM stand-PRES towards speaker
 'The person is standing with a stick, facing (us).'

At rest in the company of human(s)

- (4) *ga:ɟi:mbuwān: winja*
 sister-HAVING-3rd-NOM sit/stay-PRES
 'She is stopping with a sister.'

2. Motion with (unhelpful) inanimate

- (5) *ḡigarbila:mbuwandu badalbunayaga*
porcupine-HAVING-NOM-I-SUBJ come-BACK-IRREALIS
'I might come back with a porcupine.'

Motion with (helpful) inanimate

- (6) *yarur yanawayga:ḡa ḡi:nbaybuwan*
slow-NOM go/walk-PROGRESS-A LITTLE-PRES walking-stick-HAVING-NOM
'Slow(ly he) walks along a little with a walking-stick.'

Motion, in human company

- (7) *buraydjulbulabuwandu baḡiyi*
child-SMALL-TWO-HAVING-I-SUBJ come-PAST
'I came with two little kids.'

3. Using an instrument

Except in existential or attributive sentences (for example, (1), (12)), where a *-buwan* form functions as a predicate, *-buwan* forms always qualify or represent an NP, taking the case inflection appropriate to the NP's role in the sentence. Sentence (6) mean that *yarur* 'the slow (person)' is in possession of a walking-stick—which (we infer from the context) he uses to help him walk (and maybe for other purposes). A translation of (6) which replaces 'with a walking-stick' by 'using a walking stick' simply narrows down the notion 'having' to a kind of 'having' justified by the context.

An English transitive sentence with 'use' has different implications. 'The man used a club to hit the stranger' tells us, not about the man and what he possessed, but about what was used by him to perform a particular act of hitting. In Wangaybuwan such explicit indication of an NP as instrument always requires the instrumental case-inflection (formally identical with the ergative), for example:

- (8) *mayiḡu yura:bad bumiyi guguru*
person-ERG rabbit-NOM hit-PAST stick-INTR
'Person hit rabbit, with stick.'

Compare the following sentence with the same lexical content, but including a *-buwan* form:

- (9) *gugurbuwandu mayiḡu yura:bad bumiyi*
stick-HAVING-ERG person-ERG rabbit-NOM hit-PAST
'Person with stick hit rabbit.'

In (9) the stick was *available* to the person, but there is no justification for a translation which includes the inference that it was with the stick that the act was performed. Or compare the following:

- (10) *mayiḡu yura:bad bumiyi gugurbuwan*
person-ERG rabbit-NOM hit-PAST stick-HAVING
'Person hit rabbit with stick.'

For this sentence to make sense we have to envisage a rabbit 'having' a stick—perhaps tangled in its fur. The following sentence contains a less bizarre example of a *-buwan* form in the nominative case, qualifying the object of a transitive verb;

- (11) *ḡamaganu: yura:bad wiriḡdja yula:ymbuwan*
ash-LOC-your rabbit-NOM cook-IMP skin-HAVING-NOM
'Cook your rabbit in the ashes with (its) skin (on).'

4. Characteristics of places, people, etc. (alienable and inalienable)

The mere presence of a characteristic is marked with *-buwan*, and its absence with *-ḡalaba:*, for example:

- (12) *murū winḡdjabuwan*
road-NOM mud-HAVING
'The road (is) muddy.'

- (13) *waray bangal/ miḡḡaḡalaba:*
bad-NOM terrain-NOM burrow-NOT HAVING
'Bad country! Got no burrows.'

The same applies to body parts. An informant described a freak at a show as having been born *gula:mbuwangaliy buyudalaba:* (trunk-HAVING-ONLY lower leg-NOT HAVING) 'having just the trunk and not the legs'. But when a place, object or person is in some way *remarkable* for a characteristic, suffixes are used which include some extra information, in addition to meaning 'having'. These suffixes function grammatically like *-buwan*. They are:

-bil 'having a lot of' If a place has *many* stones, it will be described as *ḡaḡulbil* (stone-HAVING A LOT OF). The spirit *wanda:* 'ugly one' is *wuran ba:mirbil* (hair long-HAVING A LOT OF).

-gir 'made unpleasant by having' This is attached to substances which are intrinsically or in the context unpleasant or deleterious, for example, *mil mulagir* 'eye made unpleasant by having pus', that is, 'very mattery eye'; *muwanḡir ḡiḡa:* 'meat spoiled (for eating) with fur'.

Some synchronically monomorphemic forms appear to originate in attributive descriptions formed with a 'having' suffix. *ḡarga:mbuwan* means 'pregnant', but informants are unable to give a meaning for *ḡarga:ḡigarbila:* is the preferred alternative to *wandayali* 'echidna'; *ḡigar* means 'spike' but *-bila:* is not productive (c.f. Wergaḡa *jula-wil* 'bristle-having' in paper 20, and Alawa *mamaḡwaḡ* 'with spikes' in paper 22).

5. Time/season

Events are located at a time or season by putting the appropriate noun in the locative case, for example:

- (14) *ḡaḡu manabiyaga ḡagara*
I-SUBJ hunt-IRREALIS winter-LOC
'I shall/might hunt in the winter.'

Since it is the temporary presence of certain phenomena in the environment that distinguishes one season from another, existential sentences with *-buwan* forms can be used to indicate seasons, for example:

- (15) *ḡuna:mbuwan ḡana:ra:, yuḡiḡa:ḡu ḡabuga: ḡamumaya*
grass-seed-HAVING-NOM be-ING mallee-hen-ERG egg-NOM lay-PRES
'When there is grass-seed (literally: there being grass-seed), the mallee-hen lays (her) eggs.'

6. Describing a state

The majority of states—whether physical (hunger, sickness, etc.) or emotional (joy, fear, fondness, etc.)—are expressed by means of adjectives or intransitive verbs. Adjectives describing states, like expressions of time or season, appear in the locative when they supply adverbial comment, for example:

- (16) *bunduga mirgaḍi guruyaga wanda:*
 full-LOC cave-INTERIOR enter-IRREALIS ugly-NOM
 'The ugly one (i.e. *ḍuwi* 'hairy man') will go into his cave in a state of
 repletion (after making a meal of you).'

There are a few abstract nouns referring to states which take *-buwan* or
ḍalaba:, for example *bigari* 'strength';

- (17) *bigaribuwandu wi: gagiyi*
 strength-HAVING-ERG firewood-NOM chop-PAST
 'With strength (she) chopped the firewood.'

An English speaker would prefer 'she cut the wood easily' to describe the same
 event, though the two sentences are not literally equivalent.

-buwan is also affixed to nouns referring to physical afflictions, for example:

- (18) *ḡaḍu gindja:lbuan*
 I-SUBJ diarrhoea-HAVING-NOM
 'I've got diarrhoea.'

All verbs and predicate adjectives describing states can take complements
 which indicate the cause of the state. The complement NP is marked either
 with *-ḍi* 'because of' or *-ḡinda* 'for want of'. Compare:

- (19) *ḡaḍu girambiya bagindi*
 I-SUBJ sick-PRES boil-BECAUSE OF

and

- (20) *ḡaḍu girambiya baginbuwan.*

Both can be translated 'I am sick with boils'. But in (19) the sickness is
 explicitly attributed to the boils. In (20) the sickness and the boils are co-
 incidental. A causal connection can only be inferred. Likewise compare:

- (21) *ḡali baluyaga gali:ḡinda*
 we two-INC-SUBJ die-IRREALIS water-FOR WANT OF

and

- (22) *ḡali baluyaga gali:nḍjalaba:*

Both can be translated 'We'll die without water'. But in (21) lack of water is
 seen as the cause of death. In (22) two people without water are likely to die;
 two grammatically independent facts—though few who hear the sentence will
 fail to *infer* a causal connection between them.

'Wanting', expressed in some languages through the 'having' affix, is
 expressed in Wangaybuwan through the addition of *-ḡinda* to what is desired,
 for example:

- (23) *ḡaḍu gali:-ḡinda*
 I-SUBJ water-FOR WANT OF
 'I want water.'

- (24) *ḡaḍu gali: ḡa:rungiriḡinda*
 I-SUBJ water-NOM drink-PURPOSIVE-FOR WANT OF
 'I want to drink water.'

(For the purposive affix see paper 66, 2.4.)

There is formal similarity between *-ḍi* and 'having' affixes in some other
 languages, including neighbouring Wiraḍuri (see 8.). Because of this and the
 closeness of the semantic relationship between *-buwan* and *-ḍi* in examples
 (19) and (20), a list of the variant forms and other functions of *-ḍi* is included
 under A-3.

(For another instance of a form with *-buwan* being closely related in

meaning to a form with *-ḍi*, compare (5) and (7) with (28) in paper 66,
 Wangaybuwan.)

7. 'For fear of'

-buwan cannot be used to mean 'for fear of'.

- (25) *gara: yana: ḍu:rbuwan*
 NEG-IMP go-IMP man-having

means

'Don't go with (a) man.'

But notice:

- (26) *gara: yana: | ḍu:rbuwan*
 'Don't go! There is (a) man.'

-buwan in (26) forms an existential sentence. But the juxtaposition of the two
 sentences of (26) *implies* the same sort of cautionary message that is made
 explicit in English in 'Don't go there for fear of the old man.'

There is no suffix which means 'for fear of' when attached to nominals.
 But where what is feared is not the very existence of a person, thing, etc., but
 the possibility of some action or event, there *is* an appropriate suffix, *-wa:dji*
 (with constant form). *-wa:dji* is attached to the complement-verb stem in
 sentences like:

- (27) *ḡidjalwa:djidjan ḡura: wamaḡa*
 rain(verb)-FOR FEAR OF-EXPRESSLY camp-NOM build-PRES

'(He) is setting up camp expressly for fear of (it) raining' (i.e. lest(it)
 rain).

(for *-ḍan* 'expressly' see paper, 66 2.4)

-wa:dji is used to indicate an action or event, the possibility of whose
 occurrence either (a) motivates the action of the main verb, as in (27); or
 (b) gives rise to a state of apprehension. Verbs and predicate adjectives may
 take complements in *-wa:dji*, in addition to the possibilities they share with
 all verbs and adjectives describing states (noted under A-1c 6.), for example:

- (28) *giyaḡḡaḡadu gaḡawa:dji*
 fear(intr.)-PRES-I-SUBJ bite-PASSIVE-FOR FEAR OF

'I am afraid { for fear of
 because of the possibility of } getting bitten.'

The translation 'for fear of' is clumsily pleonastic for this sentence. 'Because
 of the possibility of' is a more accurate translation, which renders *any*
 occurrence of *-wa:dji*.

It is tempting to see *-wa:dji* as having originally consisted of two
 morphemes; *-wa:*, an affix deriving a verbal complement 'possibility of
 VERB-ing'; plus *-dji*, a form of *-ḍi* 'because of'. This view would involve
 hypothesising (1) that affix-initial *-ḍ* in *-ḍi* was originally *dji*; (2) that at the
 point when *-dji* became *-ḍi* *-wa:dji* was already being interpreted mono-
 morphemically (because *-wa:* appeared exclusively in syntactic frames requiring
 the 'because of' suffix)—and therefore escaped becoming *-wa:ḍi*.

Such an interpretation, if supported, would suggest that the formal
 similarity was once greater than it now is between *-ḍi* 'because of' and
-ḍjili, the reflexive verbal affix (A-2).

Further semantic functions not on checklist

8. Formation of proper names

In this region the name for both language and tribe is often formed by the

addition of the 'having' suffix of the language concerned to its negative particle; Wangay-buwan, Wayil-wan, Wira-ḍuri. Place names are often formed with *-buwan* in Wangaybuwan—sometimes added to a noun denoting a geographical feature, sometimes to some other root whose meaning (when it has one known to my informants) is usually concerned with reproduction or excretion. Personal nick-names are sometimes formed with *-buwan*, describing people in terms of the clothes they habitually wear, for example, *ḍububuwan* 'The one) with a hat' or 'Hatty'.

9. Possessing a faculty

A verb-root followed by *-buwan* or *-ḍalaba*: refers to the ability to perform the action involved (or to experience the state). *giyaṅḍayḍjalaba*: means 'fearless/unable to fear'.

(29) *yanaybuwana*: *baluṅguwaṅila*
go/walk-HAVING-NOM-3rd-NOM die-SYMPATHY-PAST-THEN

means 'Then he walked right up until he died' (more literally 'Then he died, poor fellow, with the ability to walk'. The person concerned was cured in middle age of long-standing lameness.)

A-2. Verbal affix

Wangaybuwan has a verbal derivational affix with constant form *-djili*. It is the only affix in which an initial laminal stop is not realised according to the rule stated in A-1a. It is always realised as *ḍj*, irrespective of the preceding vowel.

The affix derives a reflexive from a transitive verb, for example:

(30) *ḥaḍu bumadḍilinji*
I-SUBJ hit-REFLEX-PAST
'I hit myself.'

A-3. Other Data: Case-Inflection *-ḍi*

A-3a. Form

After consonants we do not find the forms of *-ḍi* predicted by the general rule for the realisation of suffix-initial *-ḍi* (see A-1a). Instead of *baginḍi*, *garulḍi*, *gugurḍi*, we find *bagindi*, *garuli*, *guguri*. The initial stop of *-ḍi* is subject to the same variations after consonants as is the initial stop of two other case-inflections—ergative/instrumental *-gu* and locative *-ga*; after *n* these stops are homorganic, and after laterals they are dropped.

A-3b. Grammatical function

-ḍi is attached to the root of nouns, adjectives and demonstratives; to the accusative/genitive form of first and second person pronouns; and to verbs nominalised by the addition of *-ḥa:ra*: 'ing'.

-ḍi functions as a case-inflection.

A-3-c. Semantic function

1. Orientational

-ḍi is a 'residual' local case. It indicates all orientational functions except allative (indicated by *-gu*, with constant form) and locative (*-ga*). The system is as follows:

	Exterior	Interior
Rest	<i>-ga</i> 'at'	<i>-ḍi</i> 'in'
Motion to	<i>-gu</i> 'to'	<i>-ḍi</i> 'into'
Motion from	<i>-ḍi</i> 'from/across'	<i>-ḍi</i> 'out of/through'

(There is an example of *-ḍi* used orientationally at (16).)

2. Origin

In sentences where the verb indicates a transfer or transaction the original position or owner of the object transferred is marked with *-ḍi*, for example:

(31) *ḥidjila: mayinḍji wilba:r mamiyi*
this-FROM-HERE person-FROM cart/sulky-NOM take-PAST
'(I) bought (i.e. took) a sulky from this fellow here.'

The part of the body where contact originates when one person/animal is seized by another is also marked by *-ḍi*, for example:

(32) *gu:ga:runi: gaḍiyila buyuḍi*
tree-goanna-ERG-3rd-VISIBLE-NOM bite/catch-PAST-THEN leg-FROM
'The goanna caught it by the leg.'

In sentences where the verb indicates that something is made or transformed, its origin, that is what it is made out of, or changed into its present state from, is marked with *-ḍi*, for example:

(33) *dumba:ḥḍi muwaḥḍi miyi ḥaru*
sheep-FROM body-hair-FROM make-PAST bag-NOM
'(We) made bags out of wool'

3. Cause of state

This is discussed, with examples, under A-1c (6).

4. Reason for action

(34) *girambiyabaḥani: yingala:ḍidjuni: waḥay girmiyila*
sick-PRES-ASSERTED GUESS- same-BECAUSE-OF-I- NEG wake-PAST-
3rd-VISIBLE-NOM SUBJ-3rd-VIS-NOM THEN
'He seems to be sick. That's why I didn't wake him then.'

5. Perceptual error

In a sentence describing a (rectified) perceptual mistake, the earlier, wrong, interpretation is marked with *-ḍi*, for example:

(35) *ḍibi:nḍjidjuna: winaḥaḥi*
bird-FROM-I-SUBJ-him think-PAST
'I thought he was a bird.'

(36) *yara:manḍu ḥa:ḥi yuwaḥa:ra: bugaḍi*
horse-NOM-I-SUBJ see-PAST lie-ING rotten/dead-FROM
'I saw a horse lying down and thought it was dead.'

6. Standard of comparison

(37) *ba:mirdulna: ḥaḍi:dji gaḥa*
tall-LITTLE-3rd-NOM I-ACC/GEN-FROM be-PRES
'He is a little taller than me.'

In all its non-orientational uses, *-ḍi* introduces an NP which has a (logically) prior existence to the rest of the sentence and in some sense explains it. This explanatory function of *-ḍi* is related to its ablative orientational function via a spatial/temporal/logical analogy; movement from one point to another through space resembles movement from one situation, identity or state to another through time, which in turn is like one circum-

stance being the precondition of another, giving rise to it and retrospectively explaining it.

-buwan introduces an NP which either has an independent existence or gives us coincidental information about another NP. The syntax of *-buwan* never allows a *-buwan* form an explicitly explanatory role in a sentence. But context often suggests explanatory inferences from sentences in which *-buwan* appears.

What can we infer from these facts about how a form associated with the 'having' function in many languages comes to be present in the case-system of Wangaybuwan? And why *-buwan* (and Wayilwan *-wan*)?

17. Gumbaynggir

Diana Eades

Gumbaynggir was spoken on the north coast of New South Wales between Grafton and Nambucca Heads. Only a few speakers remain today. The information for this paper comes from fieldwork, mainly with one informant, by Terry Crowley in 1973 and myself in 1974; and also from Smythe's grammar of Gumbaynggir published in 1948 and two stories in manuscript form recorded by G. Laves in 1929. Unfortunately these sources do not provide many instances of the 'having' affix. Although it is clear that further examples would be needed for a complete study, there is sufficient information for the following observations to be made.

A-1. Nominal affix

A-1a. Form *-gari*

On the basis of the available information, it seems that this form has no alternants. However, it should be pointed out that in Gumbaynggir the distinction found elsewhere in the language between /r/ and /l/ appears to be neutralised word-medially between all vowels except *i(:)-* and *i(:)-*. So, this form could equally well be written *-gali*, as it is written by Laves.

A-1b. Grammatical function

All the examples show *-gari* suffixed to a noun root. Examples with pronoun and adjective are so far lacking. However, there are two examples in Laves of a noun suffixed with *-gari* being verbalised with the intransitive verbaliser *-wa*. This seems to indicate that a noun inflected with *-gari* follows the normal pattern of nouns inflected for case.

It is also unfortunate that all the examples have the noun with *-gari* in either intransitive subject or transitive object function. These cases are marked by *-φ* inflection and hence it follows that we have no way of knowing whether this 'having' form declines.

A-1c. Semantic function

The *-gari* suffix is not widely used. The locative case occurs in many instances in Gumbaynggir where the 'having' affix is used in other languages.

0. Human attribute

(a) inalienable *-gari* (rarely)

The only examples with the *-gari* suffix here are:

<i>nu:bigari</i>	'having a moustache'
<i>bulu:ngari</i>	'pregnant (literally having a stomach)'
<i>widirgari</i>	'having flesh'
<i>muyagari</i>	'having breath'

But elsewhere, as for example 'having hair', the possessive case is used.

(b) alienable ?

No examples available.

1. Human agent at rest, with/accompanied by X

(a) holding something inanimate *-gari* for example:

<i>ni:gadu</i>	<i>na:waj</i>	<i>dunuy</i>	<i>bulu:ngalgari</i>
man-ERG	see-PAST	child-OBJ	fish-HAVING-OBJ

'The man saw the child holding the fish.'

(b) in the company of human(s) *-locative* for example:

<i>gula:gundi</i>	<i>nu:ganga</i>	<i>dagandi</i>	<i>yaraŋ</i>	<i>ŋadi:ŋumbala</i>
her(POSS)	mother-SUB	stand-PRES	DEM	brother-in-law-LOC

'Her mother is standing there with her brother-in-law.'

2. Human agent moving, with/accompanied by X

(a) holding something inanimate (that does not assist his movement) *-gari* for example:

<i>ni:gar</i>	<i>ya:ban</i>	<i>du:wagari</i>
man-SUB	come-PRES	boomerang-HAVING-SUB

'The man with a boomerang is coming' or 'The man is coming with a boomerang.'

(b) holding something inanimate (that may be helping his locomotion) ?

No examples available.

(c) in the company of human(s) *-gari* for example:

<i>ŋami</i>	<i>ya:ban</i>	<i>gula:gundi</i>	<i>da:ŋbargari</i>
woman-SUB	come-PRES	her(POS)	husband-HAVING-SUBJ

'The woman is coming with her husband.'

3. Human agent using an instrument *-instrumental* (=ergative)

4. Describing characteristics of a place *a verbless sentence with intr. subj. noun phrase*

(Note: Evidence from my fieldwork would negate Smythe's claim (1948:72) that *-gari* is used 'if the intention is to convey the idea of great quantities', for example, of fish in a creek, water in a hole. However on the basis of a few examples from my fieldwork and a few examples from Smythe, it is impossible to be certain.)

<i>uma:ga</i>	<i>ya:m</i>	<i>ŋaru:nga</i>	<i>bulu:ngal</i>
plenty-SUBJ	DEM	river-LOC	fish-SUBJ

'This river has many fish.'

5. Describing a time or season *-locative* for example:

<i>gula:na</i>	<i>baguri</i>	<i>ŋunmada</i>
he-SUBJ	sleep-PRES	night-LOC

'He sleeps at night.'

6. Describing a state adjective + verbaliser
 7. Describing fear -locative for example:
ɲami wambiq buɣa:la
 woman-SUB fear-PAST noises-LOC
 'The woman was afraid of noises.'

A-2. Verbal affix

The reflexive in Gumbaynggir is not marked by a special affix. The reflexive simply occurs where the ergative and object noun phrases in a sentence are both singular and have identical reference. For example:

gula:du bu:rwaŋ gula:na magayu
 he-ERG paint-PAST him-OBJ red paint-INST
 'He painted himself with red paint.'

Sometimes the informant would render a sentence such as the above with *gula:du bu:rwaŋ gula:naw magayu*.

The addition of the semi-vowel /w/ on the object pronoun in a reflexive sentence appears to be a kind of emphatic and is optional. The reciprocal in Gumbaynggir is interesting because it is overtly marked on one verb only. This is the verb *bu(m)* to hit, which is probably semantically the 'most reciprocal' verb. It is a transitive verb but the addition of the reciprocal marker *-iri* has an intransitivising effect. (It should be pointed out that this verb is one of the irregular verbs, hence the form *bumiri*, and it appears to have no tense marking when this suffix is used.) For example:

ɣaraŋ bulari bumiri
 DEMO 3dualSUBJ fight-RECIP
 'These two were fighting.'

With any other verb there is no formal change to convey reciprocal meaning. However, I think we can assume in the underlying structure a significant syntactic change which was possibly earlier marked by a verbal inflection, probably *-iri*. The motivation for this is that unlike the reflexive which has ergative and object NPs, the reciprocal has only one, intransitive subject, NP. That is, the verb in a reciprocal sentence is intransitive. (Note: reciprocal sentences frequently contain the uninflected particle *galagala*, which is the reduplicated form of 'again'.)

ɣaraŋ ni:gar bulari ɟagaɟi galagala ɲayagi
 DEMO man-SUBJ 2-number stand-PRES RECIP look at-PRES
 'Those two men are standing and looking at each other.'

It seems quite possible that the *-iri* suffix is a remnant of the suggested proto-reflexive-type-affix **-Ḍiri*.

Is this *-iri* suffix related to *-gari*?

How do we explain the development from **-Ḍiri* to *-gari*?

Discussion on origin and development of 'having' suffix

(i) **Some facts for comparison** (from a few east coast languages)

'Having' suffix is *-gari* in Gumbaynggir
 -(ga)ray in Dyangadi (Holmer)
 -giri in Wargamay (Dixon forthcoming)
 shortened to *-gi* in Nyawaygi (Dixon forthcoming)

Wargamay *-giri* has the semantic function of 2(a) and 6 above, as well as 0(a). Dyangadi *-(ga)ray* has the semantic functions of at least 1(a), 1(b) and 2(a) above. Here it should be pointed out that the Dyangadi form is in fact *-garay ~ -daray ~ -ray*. Holmer suggests (1966:87-88) that the underlying 'having' suffix is *-ray* which is added to the locative when the stem ends in a consonant. (Hence *-ga-ray*; *-da-ray*.) But Holmer says that in this language, this combination of two suffixes (locative+having) seems to be in the process of re-analysis as a single 'having' suffix, *-daray ~ -garay*.

(ii) ***-Ḍiri?**

It is fairly obvious that all of the forms for the 'having' suffix above are related to the *-Ḍiri* or *-Ḍari* forms in so many other languages. Apart from the semantic and syntactic parallels, there is a well-attested phonological correspondence. Dixon (forthcoming) points out that 'in many languages of eastern Australia can be found cognate pairs involving a correspondence between *-gi* and *-dji*'. (Here we must remember that the symbol *Ḍ* implies *d* in a single laminal language.)

Does the relationship between the forms shown above (i) and *-Ḍiri* imply a historical development from *-Ḍiri* to *-giri*?

Such a consonant change (*Ḍ* → *g*) implies a change in the initial syllable from homorganic to non-homorganic stop plus vowel. This is not very plausible nor is it linguistically well-motivated.

(iii) ***-giri?**

If the proto-form was **-giri*, the following developments could be well-motivated.

**-giri* to *-Ḍiri* would be the change affecting many languages, and it is a change to a homorganic initial syllable. The back consonant /*g*/ plus front vowel /*i*/ would have changed to the front consonant /*Ḍ*/ plus front vowel /*i*/. This change is not only plausible, but it is phonologically most likely in the development of a language.

**-giri* to *-gari* is also a change away from the back consonant plus front vowel syllable. Here the vowel instead of the consonant would have changed. The change is from the maximally contrasting pair /*g+i*/ to the back consonant plus unmarked vowel /*g+a*/.

Possibly the development of the Dyangadi form was as follows:

**-giri* → *-gari* (as explained above)
-gari → *-ri* (shortening)
 -ri → *-ray* (vowel change)
-ray → $\begin{cases} -ga-ray \\ -da-ray \end{cases}$ (addition of locative as discussed in (i))

(iv) ***-ri?**

It is possible that the proto-form was simply **-ri*, and Holmer's explanation for the development of the *-garay* and *-daray* forms in Dyangadi could be relevant for the development of the suffix throughout Australian languages. Perhaps it has been generally re-analysed as [case+*-ri*].

This suggestion would explain more easily the reflexes of the verbal affix found in Gumbaynggir (see A-2 above) and Dyirbal (see Dixon 1972:89). These are two examples of languages where the related verbal affix appears to be underlying *-ri*.

However this process could easily be explained as shortening. Furthermore this analysis would create problems with languages such as Guugu-Yimidhir (Dixon personal communication) and Yidinj, where the verbal affix appears to be derived from the initial syllable of *-Ḑiri* and not the final syllable. (See paper 12 in this volume, Yidinj verbal affix is *:-dji*.)

(v) Summary

On the basis of the facts briefly presented here, I suggest that the proto-Australian 'having' suffix was **-giri* and that in many languages this non-homorganic initial syllable caused the change to *-Ḑiri*. In other languages it was the vowel and not the consonant which changed and this has produced such forms as Gumbaynggir *-gari*.

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18. Dyrbal

R.M.W. Dixon

Dyrbal is spoken around Innisfail and Tully, immediately to the south of Yidinj. It is very different from Yidinj, having a quite dissimilar grammar and only some 25 per cent vocabulary in common.

Dyrbal has a nominal affix *-bila/-ba* 'having' (this does not appear to be related to **-Ḑiri*); the semantic range of this affix is very restricted by comparison with, for instance, nominal *-dji/-yi* in Yidinj. There is a verbal affix (with reflexive function) *-(yi)ri*, that may be related to **-Ḑiri*.

Since a fullish account of Dyrbal grammar has been published, the account below is in parts highly abbreviated. Page references are to *The Dyrbal language of North Queensland* (C.U.P. 1972).

A-1. Nominal affix

A-1a. Form

The affix is *-ba* in the Mamu and Ngadjan dialects, and *-bila* in the Djirbal and Giramay dialects.

A-1b. Grammatical function

-bila/-ba can be affixed to nouns and adjectives and (following *-nja*) to noun markers. A *-bila/-ba* form functions exactly like an adjective and takes the full range of nominal inflections (p. 222, etc.).

A-1c. Semantic function

The affix has a relatively restricted semantic function, covering:

1 (a) At rest, with inanimate object
bayi *yaya* *djananju* *yugubila*
 THERE I-NOM man-NOM stand-PRES/PAST stick-HAVING-NOM
 'A man is standing there with a stick.'

(b) At rest, in company of human(s)
balan *djugumbil* *njinanju* *djadjabila*
 THERE II-NOM woman-NOM sit-PRES/PAST child-HAVING-NOM
 'The woman there is sitting with a child.'

2 (a) Motion, with (unhelpful) inanimate, for example (534) p. 222.

(c) Motion, in company of human(s), for example (537) p. 222.
-bila/-ba can also be used in sentences describing some physical affliction (for example 'cramp', 'a wart', 'a bad cold') in cases where the language has a noun for the affliction, for example:

ḡadja *djirambaḡba*
 I-SUBJ cramp-HAVING-NOM
 'I've got cramp.'

After *The Dyrbal Language* had been completed, the writer began work on Yidinj, and discovered the wide semantic range of its 'having' affix. Further checking produced some interesting informant comments on the literal Dyrbal translations of what are grammatical sentences in Yidinj.

Functions (5)—time/season—and (7)—fear—can only be expressed in Dyrbal through the locative case (pp. 237/8). When the informant was asked

**ḡali* *waymbanj* *gagalumbila*
 we two-SUBJ go walkabout-FUT MOON-HAVING-NOM

'We two will go walkabout in the moonlight'

he said it could only mean 'we'll be carrying the moon'.

A sentence such as

ḡadja *yanu* *djubalbila*
 I-SUBJ go-PRES/PAST walking stick-HAVING-NOM
 'I went with a walking stick.'

could only mean that I was carrying the stick along (function (2a)), not that I was using it to assist my passage.

All instruments, from (3a) to (3b), must involve the instrumental inflection (which is identical in form with ergative); but see (542) on page 223 for a sentence where a noun plus *-ba* 'having' is used to describe someone threatening (but not affecting) someone else with an instrument.

-bila/-ba could be used in function (4)—describing the characteristics of a place—but the preferred construction is for the place name to be in locative inflection, and the 'descriptive' noun in nominative.

Dyrbal appears to have adjectives 'hungry', etc., rather than abstract nouns such as 'hunger'. *-bila/-ba* could not be used in functions like (6)—the adjective would either appear simply in nominative case, or else with an intransitive verbalising suffix.

A-2. Verbal affix

There is a verbal derivational affix with the forms (page 89):

in the Djirbal dialect: *-yiriy-* ~ *-riy-* ~ *-máriy-* ~ *-(m)báriy-*
 in other dialects: *-riy-* ~ *-máriy-* ~ *(m)báriy-*

The affix always derives an intransitive verbal stem, with either true reflexive or else 'false reflexive' (a type of 'anti-passive') meaning—see pp. 89–92, etc.

19. Muruwari

Lynette Oates

General introduction (to papers 19, 41 and 65)

Muruwari was spoken over a wide area of north-western New South Wales and southern Queensland. It spread along the Culgoa River from about where North Bourke stands today, to the Birrie River, then into Queensland along parts of the Paroo and Warrego Rivers. The Muruwari were thus once a large tribe with numerous speakers, but today it is virtually extinct and already too late to discover with any degree of certainty many of the finer points of grammatical structure. The language that remains shows numerous evidences of linguistic disintegration.

These papers on Muruwari case are based on just one week's field work with two part Muruwari speakers (one reasonably fluent), some early manuscripts, notably that of R. H. Mathews (1903), and the preliminary analysis of some of the language tapes recorded by Jimmy Barker. The latter learnt the dialect as a boy, mostly from his mother and some of the old men. But he had not spoken it for 50 years, till, in his old age (1968 to his death in 1972), he recorded alone, on tape, what he could remember of Muruwari language and customs. He recalled a remarkable amount, particularly in the area of semantics, and one legend, *Giyān, the Moon Man*, it being the only full text available. Inevitably, some of the data appears conflicting, particularly in the area of case suffixes, where the similarity of case endings, together with what appears to be a linguistic idiosyncrasy—free fluctuation between homorganic nasal-stop clusters with either component, adds to the problem of accurate analysis. Only what appears to be indisputably accurate in the data or synchronically accurate in the light of common Australian characteristics has been included in these papers. Even so, comments must be considered tentative till all available data is assessed. The orthography used is still tentative. Decisions relating to the status of some consonants, and the interpretation of vowel sequences, vowel length and high front off and on glides have yet to be finalised. The phonemes tentatively postulated are *b, d, ḍ, ḍ̄, dj, g, m, ŋ, n, ŋ, nj, ŋ, r, ṛ, ṛ(?) , l, l̄, lj(?) , w, y, a, i, u* and vowel length (:).

Since the above was written, most of the Jimmy Barker material in these papers has been checked with Mrs Emily Horneville. Where there is minor disagreement between the two, this has been indicated by the informant's initials (JB or EH) following the text. Where there is major disagreement, Mrs Horneville's data has been recorded in a footnote.

Symbols and abbreviations

?	unattested gloss or query on accuracy of data
/	alternate form or meaning
ABL	ablative case
ALL	allative case
CL	verb conjugation class marker (tentative analysis)
CONT	continuative aspect
DAT	dative
du	dual
ERG	ergative
EH	Emily Horneville data
EQUAL	equaliser
FUT	future tense
IM	imperfective aspect (unattested)
IMP	imperative mood
INST	instrumental
JB	Jimmy Barker data
LOC	locative
NP	noun phrase
PER	perfective aspect (unattested)
pl	plural
POSS	possessive
PRES	present tense
PROG	progressive movement (tentative gloss)
PURP	purposive
QN	interrogative marker
REFL	reflexive
sg	singular
SUB	subordinate clause marker

A-1. Nominal affix

A-1a. Form

The phonological form of the Muruwari affix 'having' is

-yida/-yiṛa following a vowel

-bida/-biṛa following a consonant¹

No pattern has been detected governing the occurrence of the alternate forms except that *d* and *ṛ* appear to freely fluctuate inter-vocalically. There is some suggestion of consonant harmony—that the proximity of another *ṛ* may account for the occurrence of -yiṛa/-biṛa rather than the more frequently occurring -yida/-bida.

ḍiṛa-yiṛa bagul (JB only)²

teeth-having stone 'sharp stone'

dugu-yida

belly-having 'pregnant'

buliḷi-yida widji

maggot-having meat 'maggoty meat'

miṛinj diyil-biṛa (JB)/diyil-biṛa miṛi:nj (EH)

star tail-having 'comet'

nurum-bida (JB only)³
knobs-having 'spider's web gossamer'

A-1b. Grammatical function

The 'having' affix expresses a type of accompaniment of something either animate or inanimate to the action of the verb. It is usually translated *with* and may be termed comitative case. Affixation occurs on nouns (most frequently), adjectives and pronouns. In an NP only one constituent is suffixed. As illustrated above, the *-yida/-bida* suffix may be used to form an adjective or a complex noun. In a sentence, the comitative case, if used with the verb 'to be' functions adjectivally, otherwise it functions as an extension of the verb. The form does not decline. In the data, it is closely linked with the instrumental case where the area of meaning frequently overlaps; so much so that at times the suffixes are used inter-changeably, as *guliya-yida* 'spear-having' and *guliya-ŋgu* 'spear'-INST in *Giyān the Moon Man* legend. (This is doubtless an example of the breaking down of structural niceties.)

A-1c. Semantic function

The general scope of the *-yida/-bida* suffix embraces three general areas:
of an actor with humans;
of an actor with an inanimate object taken along for the purpose of being used, or one that has been used in some action;
used with the verb 'to be', it expresses the thought of being with or without some human necessity or skill

Within the above, the following range of semantic possibilities has been found:

1. Human agent moving accompanied by X
expressing inactive accompaniment

- (1) *mayinj ŋa:ra⁴ balga:bu maŋi-yida*
man-NOM come-PAST-3sg boomerang-HAVING
'A man came with a boomerang.'

expressing an active accompaniment

- (2) *yanmiyu: maŋan-bida*
go-PROG-1sg stick-HAVING
'I'm going with a stick (with which to beat the children).'

- (3) *guḍa:ra ŋa:gi:ra maŋan-bi:ra*
child-NOM play-PRES-3pl stick-HAVING
'The children are playing with sticks.'

- (4) *giyan ŋa:ra ḍa:da ŋa:ra ḍawi:nj-bi:ra maragu buga*
moon-NOM big tomahawk-HAVING hand-POSS his
(or *ḍa:da-bida ḍawi:nj*
big-HAVING tomahawk)

gaḍunja bu:biya: mu:ŋinda (JB)

quickly jump-PAST-3sg bark-LOC

'Giyān, with the big tomahawk in his hand, quickly jumped on the bark (using it to hit people on the head).'

expressing human accompaniment

- (5) *yanmina: nuwa-yida* (*nu:wa-yida*)
go-PROG-that one? wife-HAVING

'A man and his wife are walking along together.'

- (6) *giyandu ŋa:nga: digu muginj bu:ral ŋa:ra ḍangiṅḍi:ragu:*
moon-ERG ask-PAST-3sg young woman-NOM dual run-IM-PURP
numbu-yida (JB)
him-OBJ-HAVING

'The moon asked the two young men to run away with him.'

- (7) *ŋa:ndu ŋa:ra njindu-yida* (JB); *yindu-yida* (EH)
who? 2sg-HAVING
'Who is with you?'

- (8) *ŋu:ra ya:ḡḡi:ra: mayinjgalga:-yida* (JB)
there talk-IM-3sg person-pl-HAVING
'There he talked with the people.'

2. Human agent using an instrument to perform an action

- (9) *gula ŋa:ra ḍu: bandarayu gaḍi-yida* (JB)⁶
kangaroo-NOM many kill-PAST-1sg poison-HAVING
'I killed many kangaroos with poison.'

- (10) *di:ri-yida guṅḡidabu* (JB)⁶
sand-HAVING cover-TR IMP-3sg OBJ
'Cover it with sand!'

The following JB example involving the use of language also falls in this category. (Note: EH uses instrumental only in relation to language.)

- (11) *bi:ri:ra muruwa:ri-yida bi:ri:ra ya:ndibu*
good Muruwari-HAVING good talk-PRES-3sg
yindibu (JB)/(*muruwa:ri-ŋgu* (EH))
be-PRES-3sg
'He is talking Muruwari well.'

3. Describing the characteristics of a place, thing or person

- (12) *yu:fu:n yindibu ḍu: ḍuḍu-yida*
road-NOM be-PRES-3sg much dust-HAVING
'The road is very dusty.'

- (13) (*du:*) *mili:nj-bi:ra ŋaba; ṅaḍu wala ḍalgu:yu*
much mud-HAVING water-NOM; I-SUBJ NEG drink-FUT-1sg
'The water is muddy; I won't drink it.'

- (14) *gaṅdu-yida yindibu gunbaḍa*
hollow-HAVING be-PRES-3sg log-NOM
'The log is hollow.'

- (15) *ya:ra:nj-bi:ra guwinj* (*gu:nj*)
beard-HAVING white man-NOM
'The white man with the (long) beard.'

See similar semantic coverage under instrumental.

4. Describing or denoting a state or skill. This construction has only been observed to occur with the verb 'to be'.

- (16) *ya: gadi, wala bagul-bida yindiyu*
Oh uncle, NEG money-HAVING be-PRES-1sg
'Oh uncle, I have no money!'

- (17) *ma:ŋinj ŋa:ra ṅundiba:⁷ yinda: guliya-yida maŋi-ŋgu ŋa:ra*
good CONJ clever be-PAST-3sg spear-HAVING boomerang-INST
guruguru-ŋgu maŋan
all-INST weapon-NOM

'He was good and clever with spear, boomerang and all weapons.'

(Note the occurrence of both the 'having' and instrumental suffixes indicating the close structural and semantic link.)

5. An inanimate object accompanied by X. In the case cited, the inanimate object and X are both inactive.

- (18) *giyaṅ-du ga:ŋda: munda buga muṛinj-bida*
 MOON-ERG take-PAST-3sg net bag his-POSS bark-HAVING
yagiya: (JB only)
 cut-PAST-3sg

'The moon took his bag with the bark he had cut.'

The abessive case, 'without' or 'lacking', is *-gil/-dil*; *-dil* occurs following laterals and *-gil* elsewhere.

- (19) *balaynj yindiyu: bagul-dil*
 nothing be-PRES-1sg money-lacking
 'I have no money.' (Compare (16) above)
- (20) *balaynj yindibu biyan-gil, manduwi:-gil balaynj*
 nothing be-PRES-3sg clothes-lacking shoes-lacking nothing
 'He has no clothes, no shoes, nothing, nothing.'

Note that in the examples above, *balaynj* 'nothing' appears to be necessary with the abessive case suffix.

A-2. Verbal affix

From the JB material it appears that the Muruwari verbal affix which has a formal similarity to the nominal 'having', is the pronominal suffix *-yda/-da/-ṛa*; (possibly *-yida/-yiṛa* also) 3pl 'they'. (The factors conditioning the occurrence of the various allomorphs have not been determined.) This is not so clear from the EH data, so the following evidence is not conclusive.

- (21) *mugadinj ba:ŋgiyi-da*
 women swim-PRES-3pl
 'The women are swimming.'
- (22) *miṛi:nj ganda balgandīṛi-yiṛa* (JB)
 star high come-PRES IM-3pl
 'The stars are ascending.'
- (23) *bala:ŋga ṇa:ga-yda ḡana buṇa* (JB)
 plain-LOC see-PAST-3pl they-SUBJ him-OBJ
 'They saw him on the open plain.'

Summary

The Muruwari affix 'having' functions very similarly to the Yidinj sample and to most other languages presented at the seminar. Formally it is closest to Yidinj and Gugu-Badhun (*-yi* following a vowel, *-dji* following a consonant); and to Warungu *-yi/-di*, and so also possibly derives from *-Ḋiri (though this leaves the consonantal change from *-d/dji* to *-bi* unaccounted for).

Notes

- Some examples exist in the JB data of *-bida* following a vowel, as *gandu ḡiṅgalgu-bida* (high knee-POSS-HAVING) 'with knees high'; and *ḡa:da-bida* (big-HAVING) 'with bigness.'
- EH disagrees with this form. She would express 'sharp stones' as

darambulu bagulu (sharp stone-INST); *bagul dira bagul* (stone teeth stone) means to EH 'stony country'.

- EH did not recognise this form. She expressed 'spider's web' *gambigambigu maḡambiṛi* (spider-POSS web).
- ṇaṛa* has not been fully analysed and is not usually glossed. It is used extensively by JB but very seldom by EH; it could be a stylistic or dialect difference between them. In the JB data it functions like a definite article and occurs with nouns, locatives and demonstratives. It also occurs as a conjunction, conjoining sentences, words and phrases, and may act as an equator in adjectival equational sentences.
- EH expresses 'Who (came) with you two?' *ṇa:nu-yida nula* (who-HAVING you-du).
- EH uses the instrumental in both *gaḡi-ŋgu* (poison-INST), sentence (9), and *diri-ŋgu* (sand-INST), sentence (10).
- EH does not recognise *ṇundiba*: 'clever'.

20. Kulin

L.A. Hercus

The derivational affix 'having' also existed in the Western Kulin language of Victoria: this has been corroborated by recent work on Maḡimaḡi.

A-1. Nominal affix

A-1a. Form

Wergaia, Wembawemba and Maḡimaḡi	<i>-wil</i>
Maḡimaḡi (preferred form after vowels)	<i>-bil</i>
probable Wudjbalug and Woiwuru form	<i>-mil, -mɛl</i>

A-1b. Grammatical function

-wil can be affixed to the base of nouns and more rarely adjectives (examples (i)-(ii)) to form descriptive adjectives indicating inalienable possession ((ii)-(iv)). These adjectives are used as names of people and especially as nicknames which have become the standard names of animals. Sometimes, as is inevitable on account of our imperfect knowledge of the Kulin languages, the first morpheme is no longer intelligible, for example

- gun-wil* 'snake', Wudjbalug *gunmil*; *djul-wil* (Wergaia) 'musk-duck'.
 (i) *djuruy-wil* 'emu' ('long creature'), (Wergaia)
 long-having
 (ii) *ḡala-bil* 'red-coloured' (Maḡimaḡi)
 red-having
 (iii) *ḡalgila-bil* 'prickly' (Maḡimaḡi)
 prickle-having
 (iv) *galgu-wil* 'bony' (Wergaia)
 bone-having

- (v) *lia-wil* 'pointed waddy', 'mosquito' (Wergaia)
tooth-having
jula-wil 'echidna' (Wergaia)
bristle-having
lib-lib-wil 'Murray crayfish' (Wembawemba)
spike-spike having
dadag-wil 'one armed man' (a mythological being) (Maḍimaḍi)
arm-having
wiḡan-wil 'bird' (Wembawemba)
feather-having

There are very many similar names. As these names serve as ordinary nouns and proper nouns, the normal declensional affixes can be added to *-wil*, for example,

bund-in *gun-wil-u* 'a snake bit (him)'
bite-PAST SNAKE-AG

A-1c. Semantic function

-wil/-bil has only one semantic function, it indicates 'having a certain characteristic' and it is used in the formation of single lexical items.

Note: If the above interpretation of the affix *-wil/-bil* is correct there is at least a superficial formal resemblance to the Dyirbal affix *-bila*.

A-2. Verbal affix

There is a verbal affix *-djera*, Maḍimaḍi *-dera*, which functions as a reciprocal in the Kulin languages (*The Languages of Victoria: A Late Survey*, Pts I and II, Australian Institute of Aboriginal Studies, Canberra 1969, pp. 71, 136 and 177).

21. Warluwara and Bularnu

J.G. Breen

Introduction

Warluwara and Bularnu are two closely related languages of the Georgina River, spoken in the area south of the Barkly Tableland where the river crosses the Queensland-Northern Territory border. Their relationships with one another and with neighbouring languages have been discussed by Breen,¹ who has also described the Warluwara language.²

A-1a. Form

The affix 'having' in Warluwara is basically *-wara*, but shorter forms are more common. *-wara* is confined to stems with final *i*, *u* or *aa*, and stems ending in the dual formative *-wiya*. The forms *-aa* and *-ara* may be used with any stem, with the probable exception of those ending in *aa*. The forms *-ya* and *-wa* are confined to stems with final *i* and *u*, respectively, while *-ra* has been noted rarely with final *i* or *u*.

The form *-a* may be used with stem-final *i* or *u*. Note that if a suffix begins

with a vowel, this vowel replaces the final vowel of the stem to which it is added; this rule applies also to Bularnu. Thus, if a stem ends in *a*, there can be no distinction between the forms *-ra* and *-ara*.

Apart from the restrictions noted in the previous paragraph, the choice of allomorph appears to be quite free except that there is a preference for a shorter form if the stem is longer than two syllables or when it occurs in the early part of a sentence. *ḡuwaḡiwarā*, *ḡuwaḡiya*, *ḡuwaḡaa* and *ḡuwaḡa*³ all occur in the corpus (*ḡuwaḡi* 'boomerang') and there are a number of less striking examples of the same phenomenon.

The affix 'having' in Bularnu is *-anyi*. However, there is another affix, *-liwa*, which is used for some of the functions which *-wara* fulfils in Warluwara, and which may be cognate with the Warluwara affix.⁴

A-1b. Grammatical function

The affixes described above can be added only to noun stems or genitive pronouns (there is no class of adjectives in either language; descriptive terms may be either nouns or verbs). A stem containing the 'having' affix may decline as a noun. Examples of such inflected or derived forms are not frequent and it is unlikely that either corpus contains examples of all possible combinations, but there is little doubt that they could be used. Some examples are given:

(W1) *ḡuluḡu ḡana waḡana wuguwarayi waḡiba*
sand I dig-PAST water-HAVING-PURP hole
'I dug a hole for water.'

(B1) *muḡu yuguwa ḡumarāḡa ḡabanyigi*
hand he-REFL chop-PAST tomahawk-ERG
'He chopped his hand with a tomahawk.'

(The root from which *ḡabanyi* is derived is not known. The cognate Warluwara form is *ḡambaa*.)

(W2) *madyaaga yiwa walawalara*
gum tree-LOC that goanna-HAVING
'There's a goanna on the gum tree.'
(The root from which *madyaa* is derived is not known.)

(W3) *madyaawara yiwa yaraga ḡala*
gum tree-HAVING that river-LOC there
'There are gum trees along that river.'
(This is an example of a double addition of the 'having' suffix to a root. The suffix is used first to derive the name *madyaa*, and then to relate this word to the rest of the sentence.)

A-1c. Semantic function

(ia) Human agent at rest, holding something inanimate

There are no appropriate examples in the Warluwara corpus in which the agent is specified as being at rest and holding something inanimate, except where a verb such as *ḡuryumayiḡa* 'hold-PRES' is used. However, it is not doubted that a Warluwara equivalent of a structure such as (B2) is possible. Some examples of sentences where the agent can be assumed to be at rest and having an object in his possession (if not necessarily holding it) are also given.

(B2) *garidyara witpiranyi maṭayi yina*
stand-PRES stick-HAVING hit-PURP you(ACC)
'He's standing there with a stick (to hit you).'

(W4) *ḍayila maṛa madyu*
spear-HAVING this/here bad
'This spear is no good.'

(W5) *ḍuwaḷi mugaa yiba*
boomerang good-HAVING you
'That's a good boomerang you've got.'

(B3) *wayi yiba ḥabuṇanyi*
QUESTION you eye-HAVING
'Have you got any bullets?'

Note also the following example in which *nyima* is marked with the having affix but is the object of the verb.

(W6) *baḍa yiba nyima ḥaṇaṇa*
big you fish-HAVING get-PAST
'Was it a big fish you got?'

(ib) Human agent at rest, in the company of human(s)
Warluwara and Bularnu normally use the locative case in these circumstances, for example:

(B4) *yararaga ḥaṇa yiwara*
white man-LOC I sit-PRES
'I'm sitting with the white man.'

However, the having affix is used in a case such as 'the woman is sitting with (i.e. nursing) the baby' (see (B5)). Note also the example (W7) in which the company is animate but not human (i.e. intermediate between (ia) and (ib)).

(B5) *gaṛalanyi gunyiganyi, giriḥulu iwara*
child-HAVING small-HAVING, woman sit-PRES
'The woman is sitting with the baby.'

(W7) *ḥaṇa nyinaḍi maṛaga, warawuḷa ḥaḍaṇuwa*
I sit-GERUND here-LOC, dog my-HAVING
'I've been sitting here, with my dog.'

(iia) Human agent moving, holding something inanimate that does not assist his movement

The 'having' affix is used.

(W8) *ḍayila yiwa ḥandaṇami, ḍuwaḷiya,*
spear-HAVING he go-PAST-to here, boomerang-HAVING,
mayanaṛaa . . .
shield-HAVING
'He came with his spear, his boomerang, his shield . . .'

(B6) *witpiranyi ḥaṇa bagimi maṭayi yibalaga*
stick-HAVING I go-POT hit-PURP you(du)-ACC
'I might come with a stick and belt you (two).'

Note the following examples which represent variants of this type; the agent is bringing something intangible

(B7) *yidyalanyi baganaḍi*
word-HAVING go-PAST-to here
'He came with a message.'

(B8) *yidyali laṛiṇa ḥaṇa gulanyi bagayaḍi*
word hear-PAST I fight-HAVING go-PURP-to here
'I heard that he was going to come here and belt me.'

(iib) Human agent moving, holding something inanimate that may be helping his locomotion

The two examples below do not illustrate any real difference between the two languages, but rather two different ways in which such a sentence can be translated.

(B9) *witpiranyi bagana yaruku*
stick-HAVING go-PAST old man
'The old man walked with a stick.'

(W9) *yiwa buḷya ḥadamaḍa dyaṇṭidyanaṭiga*
that old man go-PRES walking stick-INST
'The old man walks with a stick.'

(iic) Human agent moving in the company of humans
Warluwara has a type of locative suffix used to denote '(motion) with', '(motion or location) along' and '(motion) across', described under the name 'Comitative' by Breen (1971, Thesis, pp. 65-66).

(W10) *maṛagaḷa ḥaṇa ḍawagaḷa ḥadayaḍi*
this-COM I man-COM go-PRES
'I'm going with this man.'

Bularnu uses the locative.

(B10) *bagara ḥaṇa laḷaga*
go-PRES I elder brother-LOC
'I'm going with my brother.'

Note, however, the following example, in which the woman is taken, rather than simply accompanying.

(B11) *yuguwaraṇa yiwa giriḥulanyi*
run-PAST he woman-HAVING
'He ran away with a woman.'

(iii) Human agent using an instrument
Neither language normally uses the 'having' affix to mark an instrument. See paper 38. Note, however, the following examples:

(B12) *bagana ḥaṇa ḍawunulu yaramananyi*
go-PAST I town-ALL horse-HAVING
'I went to town on horseback.'

(B13) *waramaḍi yuguṇa maṇalanyi*
look-GERUND him-PURP fire-HAVING
'We were looking for him with a light.'

(iv) Describing characteristics of a place

The 'having' affix is used. Note the difference between examples (W11) and (W12), with *-wara* affixed to the trees in one case and the geographical feature in the other. I have no explanation for this, but note that the place is marked in (W11).

(W11) *madyaawara yiwa yaraga gaḷa*
gum tree-HAVING that river-LOC there
'There are gum trees along that river.'

- (W12) *yiwa buwaliwara galilbi ηulba*
that ridge-HAVING gidgea many
'There are a lot of gidgeas on that ridge.'
- (B14) *yapayi muđu ηana ηabarina butkanyi witpiranyi*
camp then I sleep-PAST, many-HAVING tree-HAVING
'I camped at a place with a lot of trees.'

In the next example a temporary characteristic of the place is described.

- (W13) *gana mara yabana wuguwara*
not here fall-PAST water-HAVING
'It hasn't rained here.'

At this stage it is appropriate to include the use of this affix for describing characteristics of a person or thing, and in particular for deriving the name of the person or thing from the name of the characteristic.

- (W14) *qinđaa gala*
fat-HAVING meat
'Fatty meat.'
- (B15) *galyi ηana yanana yinya, ηana yanana dawurunanyi*
not I see-PAST him, I see-PAST beard-HAVING
'That's not the man I saw; the man I saw had a beard.'
- (W15) *quwanaa* 'doctor' from *quwana* 'snake'
- (B16) *quwananyi* 'doctor' from *quwani* 'snake'
- (W16) *dyidaa* 'species of melon' from *dyida* 'seed'
- (W17) *nulaa* 'splitjack (*Capparis lasiantha*)', a plant very attractive to ants, from *nula* 'ant'.

(W18) *ηamaa*, a name used for two plants with milky sap, from *ηama* 'milk'

(B17) *yidapanyi* 'policeman' from *yidapa* 'one who ties' or 'instrument for tying' (in this case 'handcuffs'), from *yida* 'to tie'

There are a number of other words which obviously have been derived in this way, although in some cases the root is not known (see examples (B1) and (W2)).

(v) Describing a time or season

The locative is normally used, for example:

- (W19) *warawula ηađanu dyuwalaga marađurina*
dog my night-LOC die-PAST
'My dog died last night.'

However, note the following example:

- (W20) *ηunađagari ηana yidyiraga, dawiriwara*
sleep-HAB-PAST I Urandangie-LOC small-HAVING
'I used to camp at Urandangie when I was young.'

(vi) Describing a state

The affix 'having' may be added to an abstract noun denoting a state, sometimes as an alternative to a verbal form; see examples (W21) and (W22).

- (W21) *ganađaraa ηana*
hunger-HAVING I
'I'm hungry.'
- (W22) *ganađariyidya ηana*
hunger-BECOME-PRES I
'I'm hungry.'

21. WARLUWARA AND BULARNU

- (B18) *guηugunanyi ηana*
phlegm-HAVING I
'I've got a cold.'
- (W23) *malaraa marađurina*
thirst-HAVING die-PAST
'He perished (i.e. died of thirst).'

(vii) Describing fear

A causal suffix, *-mađu* in both languages, is used.

(viii) Other functions

The functions described above represent the full range of the Bularnu suffix *-anyi*. However, the Warluwara 'having' suffix has some additional uses, which generally correspond to the functions of the Bularnu suffix *-liwa*. For some of these uses the term 'having' does not seem suitable, and the suffix can sometimes be translated as 'there is' with the sense of 'belonging to that person, thing or place' as in examples (W2) and (W3) above (the latter being, however, classifiable under function (iv)). Other examples are given below.

- (B19) *mađuliwa*
bad-HAVING
'He's no good' (or better, perhaps, 'There's a bad one').
- (B20) *bađkaruliwa yiwa katunula wamugaga*
centipede-HAVING that underneath bark-LOC
'There's a centipede under the bark.'
- (B21) *ηani bilityiliwa*
who fast-HAVING
'Who's the fastest?'
- (B22) *yaramanaliwa mađu*
horse-HAVING bad
'That horse is no good.'
- (W24) *ηana mugaηa mugaηa, dyirađalaa*
I EMPHATIC good-HAVING, spear-AGENT-HAVING
'I'm a good hunter (lit. spearer).'
- (W25) *mampunu yiwa ηamara, ηama mampunu điyiwarā madyu*
good that milk-HAVING, milk good, tea-HAVING bad
'I like milk better than tea.'
- (W26) *bunydyurapaηawara*
emu-LACKING-HAVING
'There are no emus (there).'

The 'having' affix is frequently used in association with a genitive in a verbless sentence which expresses the concept 'A belongs to B', the sentence being of the form 'A-having B-of'.

- (W27) *ηađanu yiwa gařaliwara*
my that child-HAVING
'That's my child.'
- (W28) *ηařaba yiwa warawuřara bađara*
who-GEN that dog-HAVING big-HAVING
'Who does that big dog belong to?'
- (W29) *bađababa wuma dawababa yiwa ηudyanařa*
big-GEN his man-GEN that wife-HAVING
'That big man's wife.'

(B23) *yaramanaliwa yuguma*
horse-HAVING his

'That horse belongs to him.'

There are two examples in the Warluwara corpus of this suffix being used to draw attention to an inalienably possessed object (a body part). Example (B22) may be of the same type.

(W30) *yiba nanda bamaraa*
you go(IMPER.) foot-HAVING

'You've got a foot to go' (or, to put it in context, 'You can't have any of my water, you've got feet, you go and get some for yourself').

(W31) *yibala marganaa guwaḍiyaga*
you(du) hand-HAVING COOK-PURP-EMPH

'You've got hands to cook it.'

(B24) *nana yilaḍa yiniliwa*
I Iadha name-HAVING

'My name is Iadha.'

A final unexplained use, not rare in Bularnu, is illustrated in the next three examples, in which *-liwa* follows the ergative suffix. There is at least one Warluwara sentence (W32) which could possibly (but doubtfully) be interpreted in this way (see Breen, Thesis, p. 230–31 for the preferred interpretation).

(B25) *yakuluguliwa maḥana gutyiya wadamara, ...*
one-ERG-HAVING kill-PAST two kangaroo

'One man killed two kangaroos, ...'

(B26) *warayigiliwa yinya ḍaripaṇa*
dog-ERG-HAVING him bite-PAST

'The dog bit him.'

(B27) *ganyidyara nana yiwa ganarigiliwa*
weigh down-PRES me that stone-ERG-HAVING

'That stone is too heavy for me.'

(W32) *nayaraṇa nyinaṇamana ... yiwa yaḥwigau*
us (du, excl) sit-CAUSE-PAST ... that old woman-ERG

namaga maṇamaḥaga

mother-ERG-(HAVING?) this-GEN-ERG-(HAVING?)

'That old woman, the mother of this fellow, left us behind ...'

Verbal Affixes

The potential suffix ('might') in Warluwara is *-aa* ~ *-ṭaa* ~ *-tyaa* and the possibility that this is related to the 'having' affix was considered (Breen, Thesis, pp. 132–33); it seems possible that the potential is formed by adding this affix to a nominalised form of the verb. For example,

(W33) *ḍanmaḍaa yiwa*
bite-POF he

'He might bite',

would perhaps be more accurately translated as 'he has the capability of biting'. However, this idea is not supported by the Bularnu evidence; the Bularnu potential suffix *-imi* does not seem to be related to the 'having' suffix.

The conjunctive affix in Warluwara has the form *-wa* (when past tense *-na* follows) ~ *-wara* (other cases). It is usually added to the second verb in a

sentence and can be translated 'and', but may be used with the only verb of a sentence, in which case it can be translated 'again' (Breen, Thesis, pp. 121–24).

(W34) *nana nandana maḍiwaṇa nana yinya, ḍuwana*
I go-PAST kill-CONJ-PAST I him, snake

'I went and killed a snake.'

(W35) *nana yanḍiwaṇa*
I see-CONJ-PAST

'I saw it again.'

Bularnu has no verbal affixes similar in form to either of its 'having' affixes.

Notes

1. 'Aboriginal Languages of Western Queensland', *Linguistic Communications* 5, 1971: 1–88. My work in these and other languages, some of the fruits of which are reported in this and other papers in this volume, has been supported by grants of salary and field expenses and other help from the Australian Institute of Aboriginal Studies. Monash University has provided office accommodation and other assistance.

2. *A Description of the Waluwara Language*, M.A. Thesis, Monash University, 1971: For some comparison with Bularnu and Wagaya see Chapter 5, pp. 268–79. The affix 'having' is described on pp. 170–73.

The main informants in Warluwara have been Mrs Ida Toby and her brother, Mr Fred Age. The main Bularnu informants have been Mr Didgeroo Jack, who died recently, and Mrs Mabel Karkadoo (pronounced [ka:gədi]).

3. The spelling system for Warluwara has been changed from that used previously so that it will correspond more closely with that used for Bularnu. Note that Bularnu has a voiced-voiceless stop opposition in intervocalic position and possibly in consonant clusters, while Warluwara has this opposition only in homorganic nasal-stop clusters.

4. For further discussion of this point see paper 73.

22. Alawa

M.C. Sharpe

A-0. Introduction

Alawa was spoken south of the Roper River in the Northern Territory, in the area of Nutwood Downs, Hodgson Downs, and Tanumbirini stations. The language is still known, but is used infrequently. Older speakers with a full knowledge of the language would now be very few. Data from which this study has been extracted were obtained in field trips in 1966 to 1968 whilst a research fellow with the AIAS and a member of the Summer Institute of Linguistics. A few items have been checked since by tape and correspondence.

There are three nominal affixes relevant to this topic, and a verb reflexive suffix. One nominal affix *-wandī* and the verb reflexive suffix *-ndV* appear to contain reflexes of proto form **-diŋ* or **-diŋi*.¹ The two inalienable quality nominal suffixes for 'having' and 'not having' could be reflexes of a proto

*-*gaŋi*. It is worth noting here that the stem for 'two' is *waŋini* (*yīŋ-waŋini* DUAL-two 'two').

A-1. Nominal Affix

A-1a. Form

- (i) *-wandi* 'with' (alienable accompaniment—the affix most like those discussed in other papers in form and function)
 (ii) *-waŋ* 'with' (inalienable quality) (the most productive and interesting suffix)
 (iii) *-wanda* 'without' (inalienable quality—converse of *-waŋ*)

A-1b. Grammatical function

-wandi may occur on nouns and emphatic pronouns (emphatic pronouns are the set of pronouns used (i) for topic of equational clauses, (ii) to agree with verb pronominal affixes—both subject and referent, or (iii) for emphasis).

-waŋ can be suffixed to substantives (both nouns and adjectives) but not to pronouns or demonstratives; the resultant word is an adjective often used idiomatically as a noun.

-wanda appears to have the same distribution and grammatical function as *-waŋ*. It also occurs in the compound suffix *-maŋdawanda* which may occur on verb particles (see A-1c.4(iii) below). *-waŋ* declines for case as do substantives; evidence for declension of *-wanda* is lacking, and *-wandi* does not decline. Table 1 compares the declension of *-waŋ* with some other declensions; it agrees exactly with that for *wuŋgulaŋ* 'old man', a word which could well be contracted from *wuŋgul* 'grey hair' and the *-waŋ* suffix, although no other such contractions have been found.

A-1c. Semantic function

0. Humans, animals, etc., with some attribute

See A-1c.4(i) for *-waŋ* usages. There is only one example of attribute indicated by *-wandi*.

(*wuŋwayar*) *ɖawaŋda niba rugalaŋa, muŋɖi-wandi rugalaŋa*
 (type of crayfish) beard him long hand-WITH long
 '(The big crayfish) his jaws are long, his claws also are long.'

1. Human agent at rest with/accompanied by X

(a) Holding something inanimate. No clear examples, *-wandi* probably used.

(b) In the company of humans

... *nanigud ŋabulu yaɖa-yaɖaɖa-yi yamu-yamu-wandi*
 goat milk REDUP-child-PURP REDUP-adult-WITH
 '... goat's milk for children, and adults also.'

2. Human agent moving with/accompanied by X

(a) Holding unhelpful inanimate

bili ŋa-yima-n wiŋmuŋ-wandi
 enter I-go-PAST wire-WITH
 'I went in with a spear (to the cave-hole to spear an echidna).'

(b) With helpful inanimate. Ergative (instrumental) used

n-aŋa ruw-iŋ
 he-go-PRES stick-ERG
 'He walks with a stick.'

(c) In the company of humans/animals

guy ɸ-e-ŋi yilula-wandi
 hunt he-be-PRES they-WITH
 'He is hunting, the others also' (or 'with the others').
 ... *bili bili yil-neɖi-wun-nu*
 enter enter they-go in mob-PAST-it
 '... they all went in with the animals.'

3. Human agent using an instrument to perform some action. Ergative case is used.

yaŋ g-a-ŋada-n-na wiŋmu-ndu.
 hit ɸ-he-do-PAST-it wire-ERG
 'He killed it with a spear.'
wagu yil-be-li ŋgudar-iŋ
 rub they-do-PRES stone-ERG
 'They rub it with stones.'

4. Describing characteristics of a person, animal, thing or place. *-waŋ* and *-wanda* used.

(i) *-waŋ* indicates that the object to which the derived adjective applies has in it the quality indicated by the stem in an inalienable manner. Sometimes the derived adjective is used idiomatically as a noun.

(a) Human being with attribute

ŋalal-waŋ
 body-HAVING
 'big bodied, fat'

(b) Animal (or automotive object) with attribute

ŋɖuma-waŋ
 fat-HAVING
 'fat, good' (of animal, not of man—rude when applied to man)
mundul-waŋ
 louse-HAVING

'eagle' (non-idiomatic words *yiwangula* and *diwanguwangu*)
mamaŋ-waŋ
 spike-HAVING

'echidna' (non-idiomatic word *mululbiŋi*)
maru-waŋ
 wing-HAVING

'flying fox', 'aeroplane'
na-yima-n maru-waŋ-a
 he-go-PAST wing-HAVING-ERG

'He went by plane.'
biŋiŋ ɖil-ŋede-ŋu-nu maru-waŋ-ɖa
 clean they-do-PRES-it wing-HAVING-PURP

'They are cleaning (the airstrip) for the plane.'
ŋɖiguŋ-waŋ
 tail-HAVING

'helicopter'

(c) Place with attribute

ŋgudaru-waŋ
 stone-HAVING
 'stony, pebbly'

nul-uḍa-la ḡgulma law, wulbul-wař
 we-go-PAST gully across billabong-HAVING
 'We crossed a gully with lots of pools.'
ḡyayi lim ḡa-ḡḡ-iri mal gada daḡaḡaḡa-wař
 not dive I-go SUBJ PRES because REL crocodile-HAVING
 'I didn't dive (there) because there were crocodiles.'

(ii) *-wanda* is the converse of *-wař*

wenedunuga ḡḡuma-wanda
 bad fat-NOT HAVING
 '(The meat is) poor, and thin.'
yamiḡi-wanda
 big-NOT HAVING
 'not big'

garayaḡa, ḡḡunduḡa-wanda
 clean dust-NOT HAVING
 '... clean, without dust'

ḡuḡ ḡ-ḡ-e-nu bedi-mandi, wuḡu-wanda
 watch ḡ-he-do PRES-it up none honey-NOT HAVING
 'They look up (the tree) but there is nothing, no sugarbag.'

(iii) *-wanda* also occurs in the complex nominalising suffix *-maḡḡawanda*, which occurs on verb particles (*-maḡḡa* occurs alone, but not on verb particles which have been found with *-maḡḡawanda*).

yay-maḡḡawanda
 hit-STATIVNEG
 'unkillable'

ḡa-ḡuḡ-maḡḡawanda niba
 I-watch-STATIVNEG him
 'I didn't look at/see that person.'

5. Describing time or season

These suffixes are not used. Locative case (identical with ergative for singular non-gender-marked substantives) is used to describe a time if there is not an appropriate time word available. A suffix homophonous with the purposive suffix is used on some season words.²

wunař-iř dina ḡul-a-la-ḡa
 sun-LOC dinner we-eat-PAST-it
 'We ate dinner at noon.'

yaya ḡul-i ḡidm-iř
 sleep we-be-PAST night-LOC
 'We slept at night.'

yangul-da OR *miḡal-da*
 ?-PURP rain-PURP
 'rainy season'

maguř-da
 ?-PURP
 'cold season'

6. Describing a state

These suffixes are not used for describing a state, except as shown in 4. above. Verb particles exist for 'hungry', 'thirsty', 'sick', etc. The verb particle for 'wanting' *ḡiḡaya* also occurs preceding adjectives for 'good' and 'bad' in clauses to express 'happy' and 'sad'.

7. Describing fear

These suffixes are not used. My main informant would not allow, but other informants volunteered, a purposive case use.

yagul ḡ-e-ni yayḡan-da
 fear I-be-PRES snake-PURP
 'I am afraid of the snake.'

ḡyayi ḡa-ḡḡ-iri mal gada yagul ḡ-a-ḡa yayḡan-da
 not I-go-SUBJ-PRES because REL fear I-be-PAST snake-PURP
 'I didn't go because I was afraid of snakes.'

Unquestionably, 'for fear of' can be indicated using a transitive construction, in which the frightened being is the ergative subject and the fear-inducing item the object. A verb prefix indicating motion towards is used on the auxiliary verb.

yadaḡ-iř yagul ḡ-aři-ga-ḡa-n-na yayḡan
 child-ERG fear he-to-do-PUNCT-PAST-it snake
 'The child is afraid of the snake.'

A-2. Verbal affix

Alawa has a verbal suffix indicating reflexive or reciprocal action for plural numbers; it takes the form *-ḡḡi* for present tenses and *-ḡḡa* for past tenses (note the non-homorganic nasal-stop cluster).³ No future tense plural forms have been found. The reflexive suffix is always followed by another suffix (most of these are of similar form as other tense affixes) in which the vowels are usually */i/* for non-past and */a/* for past tenses. Singular numbers lack the reflexive suffix; here the person and reflexivity are indicated unambiguously by a pronominal prefix. Table 2 shows reflexives with tense affixes, and for comparison, the non-reflexive tense affixes. A suggested morpheme boundary between the reflexive and tense suffixes is shown by hyphen.

Some verbs are only found in reflexive form.

gaya an-uřgami nda biḡbař ḡaba
 feel I SELF-AUX-FUT CONJ throat me
 'I will feel my throat.'

manbař ḡun-a-nda
 cut he SELF-DO-PAST
 'He was cutting himself'

Other verbs can be transitive or reflexive.

yil-lilmi yay ḡil-ḡada-n-na ḡiřimbu
 PLUR-man hit they-do-PAST-it kangaroo
 'The men killed a kangaroo.'

yil-lilmi yay ḡil-ḡada-ḡaḡaḡa ḡguruguru yiluḡa ruw-iř
 PLUR-man hit they-do-REFL-PAST head them stick-ERG
 'The men were hitting themselves on the head with sticks.'

yil-lilmi ḡaḡ yil-a-ḡḡini
 PLUR-man speak they-do-REFL-PRES
 'The men are talking to each other.'

mař ař-muda-ya-ḡuřu
 carry I-give-PAST-her
 'I made her carry it.'

Table 1: Case inflection of substantives with last vowel /a/

nominative	ergative	allative	ablative
-war	-wara	-warawur	-warayunu
wurɣular	wurɣulara	wurɣularawur	wurɣularayunu
irregular substantives ending in ... a	... ara	(forms not yet found)	
regular substantives ending in ... a	... iŋ	... iŋu	... iŋyunu
substantives ending in ... ar	... andat	... andawur	... andayunu

† Note the similarity in form between *-wanda* and the regular ergative inflection of substantives ending in /ar/.

Table 2: Comparison of reflexive tense affixes with other tense affixes

tense-aspect-mood	reflexives with tense affixes	tense affixes
past punct indic	-nda-na (not yet found)	-wunt
fut cts indic	-ndi-ŋiŋ	-n
fut subj	-ndi-ŋiŋ	-ndVŋ
pres cts subj	-nda-na -nda-ŋaŋa	-ndiri
past cts indic	-ndi-ŋiŋ	-la
pres cts indic	-ndi-ni -ndi-ŋi	-li
pres punct subj	-ndi-ŋaŋa	-ŋa
		-ŋi

† Does not occur with monoreferential stems—see paper 88.

‡ /V/ is a vowel harmonising with the vowel of the preceding syllable.

Reference

Sharpe, M. C. 1972. *Alawa Phonology and Grammar*. Canberra: Australian Institute of Aboriginal Studies.

23. Arabana-Wangganguru

L.A. Hercus

Arabana and Wanggangurr (Wangḡuḡu) are dialects of the same language. Arabana was spoken to the west of Lake Eyre, and Wangḡuḡu in the Simpson Desert and on the lower Diamantina. Examples are from Arabana, unless followed by (W). All general comments are applicable to both dialects.

A-1. Nominal affix

A-1a. Form

The following affixes are used:

-buḡu 'having'

and (with kinship terms only)

-maḡa 'accompanied by'

A-1b. Grammatical function

-buḡu can be affixed only to nouns (i) and to certain noun phrases (noun + adjective) (ii). It is added immediately to the nominal base, or base + number marker (iii), no declensional affix can precede buḡu.

- (i) *djalba-buḡu ḡigaḡa*
food -having return-PRES
'He is coming back with some food.'
- (ii) *djalba ḡuga -buḡu ḡigaḡa*
Food much-having return-PRES
'He is coming back with a lot of food.'

Notes

1. /ɾ/ indicates an alveolar flap or trill, /r/ a retroflexed alveolar continuant. Following the usual convention, and contrary to that used in *Alawa Phonology and Grammar*, the series /b, d, g/ etc. are used here to symbolise the series of devoiced stops.
2. Purposive suffix has the allomorph -yi after vowels. There are no examples of this 'season' suffix after vowels in the data to confirm whether it is the purposive suffix.
3. Unsuccessful attempts were made to elicit contrastive forms for reflexive and reciprocal in plural numbers. Roper Creole distinguishes reflexives and reciprocals, and the apparent absence of contrast in Alawa is suspicious.

(iii) *madla-bula -buŕu qigaŋura*
dog -DUAL-having return-CONT

'He was walking back with his two dogs.'

Note: There is a rare fixed locution *ala-buŕu*, which is used mainly in traditional recitation. This locution is noteworthy in that *-buŕu* is added to an independent adjective (that is, an adjective not necessarily forming part of a more extended noun-phrase), moreover the sense of 'having' is not transparent:

ala 'real, proper, true, living'
ala-buŕu 'unique, only'

as in

(iv) *maldja biqaru, arimba-guŋa qaŋdi ŋigi; ala-buŕu!*
not kill-IMPV us-two-of-POS grandson here; only one!
'Don't kill him, he is our grandson, the only one we have!'

-buŕu (and *-maŋa*) function like adjectives, but declensional forms are extremely rare except in semantic function (4), where the locative is found occasionally, and the allative and ablative more rarely. Thus a speaker—anticipating the worst on a camping expedition—has been heard making the general statement:

(v) *wadŋu (ŋa) murumba-buŕuŋa malga gudaiwalugu wayaŋda* (W)
ground-LOC burr -having-LOC not camp-T* PURP wish-PRES
'I don't want to camp overnight in a place that's full of burrs.'
(T* = Transitory aspect)

but what in fact is much more common is the specific statement, as he has a particularly unpleasant place in mind:

(vi) *wadŋu garu murumba-buŕu, malga gudaiwalugu wayaŋda* (W)
ground there burr -having not camp-T* PURP wish-PRES
'That place is full of burrs, I don't want to camp (here) overnight.'

This scarcity of declensional forms in the case of the affix 'having' is linked with the paratactic structure characteristic of Arabana-Waŋgaŋuŕu discourse.

A-1c. Semantic function

(1a) and (2a) The affix *-buŕu* can be used to describe a human at rest or moving with/accompanied by an object or animal that does *not* assist his movement or other actions (see examples (i)–(iii) above).

(1b) and (2c) *-buŕu* indicates that a person is associated with another person in a dominating or proprietary sense, for example, *ŋuba-buŕu* 'having a wife', 'married', it also indicates that a person is accompanied by a general class of person:

(vii) *yadninga-mabu-buŕu baŋaŋda*
youth -mob -having travel-PRES
'He travels accompanied by a crowd of young warriors.'

(3) *-buŕu* can *never* be used to indicate 'accompanied by a person who is in any real or classificatory relationship'. This is expressed by *-maŋa*. Thus:

ŋuba-buŕu 'having a wife, married'
ŋuba-maŋa 'accompanied by his wife'

Some of these combinations with *-maŋa* are highly specialised, for example *muyuru-maŋa* 'two people, who from the point of view of a third person are of

the opposite moiety and alternate generation level' such as Ego's father accompanied by Ego's father's brother or sister.

Although *-maŋa* is an adjectival affix, this usage is not very different from that of neighbouring languages (Adnjamaŋaŋa, Guyani and also Bāgandji) where there are collective nouns indicating people in particular relationships to one another, for example, 'married couple'.

(4) *-buŕu* can refer to the characteristics of a place (examples (v) and (vi)); and

(5) it can refer to a state, but only rarely, in the expression *wadla-buŕu* 'hunger having'. This semantic function is generally fulfilled by the use of *waya-* 'to wish', for example, *wadlara wayaŋda* 'to be hungry', *qadlara wayaŋda* 'to be frightened'.

(6) The most common use of *-buŕu* is in the sense of 'full of', 'owning', as in *ŋala maŋi-buŕu* 'a fat person'
man fat -full
wadni-buŕu 'owning many corroborees'
song owning
This usage is very flexible and has been adapted to all kinds of modern conditions:

ŋala gubula-buŕu 'a drunken person'
man grog -full
guŋa maga-buŕu 'boiling water'
water fire -full
wanga -buŕu 'full of words' (referring to a recorded tape)
language-full

There is no verbal affix that has any connection with *-buŕu*.

Additional notes

1. *-qabu* in Waŋgaŋuŕu
A stem-forming affix *-qabu* 'having', 'having a lot of' occurs in Waŋgaŋuŕu only. It is used with a few nouns only alternating with *-buŕu* and it is perhaps slightly more emphatic:

maŋi-qabu 'fat', 'grossly fat'
fat -having
qiri -qabu 'bold', 'looking for a fight', 'cheeky'
boldness-having

It is probable that this affix *-qabu* is cognate with *'-tappa'* which occurs once in C. W. Schürmann's *Parnkalla Language*. A vocabulary of the Parnkalla language spoken by the natives inhabiting the Western shores of Spencer's Gulf . . . (1844), 1962 edition: *marni tappa*.

2. *-buŕu* in Guyani

The affix *-buŕu* 'having' is found in Guyani with semantic functions similar to those that it has in Arabana-Waŋgaŋuŕu, for example:

ŋarinja baŋu -buŕu birandugunji
we-two meat-having return-PAST
pron. Ser 9

'We two, father and son, have come back with the meat.'
(Guyani was once spoken immediately to the south of Arabana.)

General remarks

Comparison between the languages studied in papers 15, 20 and 23 shows a gradation from the fairly wide semantic functions of the affix 'having' in Arabana-Wanḡaṅuṅu to the atrophied and restricted use of *-wil*, *-bil* in the Victorian languages. Reflexives based on **-ḡiri* occur in Bāḡandji and in the Kulin languages, but nowhere, throughout the area, is there any evidence of an immediate and direct link between the affix 'having' and any verbal derivational affix.

24. Biri

Tony Beale

Biri was spoken along the Bowen River and Lower Burdekin River, north-east Queensland.

A-1. Nominal affix

A-1a. Phonological form

-bari (no known variants).

A-1b. Grammatical function

-bari can only be suffixed to the noun root or the adjective root.

1. *-bari* is used most commonly with the noun root to denote some modification of either subject or object.

- (1) *ḡula ḡaga-li wura ganda-bari*
he see-PAST 1stO spear-HAVING
'He saw the kangaroo with the spear in it.'
- (2) *ḡuḡami bama ḡandari-ḡa-la ganda-bari*
that man stand-PRES-3sS spear-HAVING
'That man's standing with a spear.'

2. *-bari* with adjective root

- (3) *ḡaya ḡaḡḡiri-bari*
I hungry-HAVING
'I'm hungry.'

When ADJ+*-bari* is a constituent of an NP embedded in a VP, the head noun of the embedded NP is deleted.

- (4) *ḡaya banḡu-la-ya guli-bari*
I hit-PAST-1stO cheeky-HAVING
'I hit the cheeky chap.'
- (5) *ḡuḡami bama yanmira-ḡa-la muga-bari ḡaga-lba-ḡa-la*
that man laugh at-PRES-3sS blind-HAVING see-CONT-PRES-3sS
mabu-bari
unfortunate-HAVING

'That man is laughing at the blind chap while watching the poor fellow.'

Data collected indicates that *-bari* is not declined for case. However this is not a definitive statement.

A-1c. Semantic function

1(a). At rest with inanimate object

- (6) *bama ḡandari-ḡa-la ganda-bari*
man stand-PRES-3sS spear-HAVING
'The man is standing with a spear.'

Note

- (7) *bama ḡandari-ḡa-la ganda-ḡgu*
man stand-PRES-3sS spear-INSTRUMENTAL
'The man is using a spear to stand up.'
- (8) *bama ḡandari-ḡa-la ḡḡagu, ganda ḡandari-ḡa-la ḡḡagu*
man stand-PRES-3sS there spear stand-PRES-3sS there
'The man is standing there beside a spear in the ground.'

It is clear here that *-bari* presupposes a state of dependence of the spear on the man, or possession of the spear by the man. No sense is allowed where the spear plays an active role.

1(b). In motion with inanimate object

- (9) *ḡuḡami bama waga wan^danda-ḡa-la ḡabiḡḡara-bari*
that man run move-PRES-3sS boomerang-HAVING
'That man is running with a boomerang.'

This presupposes that the man is holding the boomerang.

- (10) *migulu yani-l-ḡana manḡa-bari*
white man go-PAST-3plS food-HAVING
'The white men brought food.'

1(c). In motion with human company

- (11) *ḡuḡami bama yani-ḡa-la briḡuna-bari*
that man go-PRES-3sS wife-HAVING
'That man is bringing his wife.'

The literal translation of 'the man is coming with his wife' is

- (12) *bama yani-ḡa-la ḡḡagu, briḡuna yani-ḡa-la ḡḡagu*
man go-PRES-3sS here wife go-PRES-3sS here
'The man is coming here and his wife is coming here.'

2. Manner

- (13) *ḡuḡami yalu ḡana-ḡa-la bama-bari*
that boy sit-PRES-3sS men-HAVING
'That boy is sitting in the same way that men sit.'

(13) is contrasted with (14) and (15).

- (14) *ḡuḡami yalu ḡana-ḡa-la bama-ḡamu*
that boy sit-PRES-3sS man-RESEMBLATIVE
'That boy sits in a way that makes him look like a man.'

- (15) *ḡuḡami yalu dana-ḡa-la bama-ḡga*
that boy sit-PRES-3sS man-LOC
'That boy is sitting with the men.'

- (16) *ḡuḡamiḡgu yaluḡgu warga-li waḡal bama-bari*
that-ERG boy-ERG throw-PAST boomerang man-HAVING
'That boy threw the boomerang the same way that men throw boomerangs.'

- (17) *ḡuḡamiḡgu yaluḡgu warga-li waḡal bama-ḡamu*
that-ERG boy-ERG throw-PAST boomerang man-RESEMBL
'When that boy threw the boomerang he looked like a man throwing a boomerang.'

3. Season/time

- (18) *ɲali yani-ɲa-li burguri-bari bud'igu*
we 2-INCL go-FUT-we 2 moon-HAVING bush-ALL
'We 2 will go to the bush by the moonlight.'
- (19) *ɲana wuna-la-na gud'aya-ɲga buɖari-bari*
we pl. live-PAST-we pl. coast-LOC winter-HAVING
'We all lived at the coast in winter.'
- (20) *ɲali yani-ɲa-li gaynmira-bari*
we 2-INCL go-FUT-we 2 sun-HAVING
'We 2 will go in the daytime.'

4. State

- (21) *ɲaya gangiri-bari*
I hungry-HAVING
'I feel hungry.'
- (22) *ɲaya buɖari-bari*
I cold-HAVING
'I feel cold.'
- (23) *ɲaya banɖu-la-ya guli-bari*
I hit-PAST-I cheeky-HAVING
'I hit the cheeky chap.'

Functions on checklist not realised by *-bari*

1(b). Human agent at rest in company of humans

- (24) *yalu ɖana-ɲa-la bama-ɲga*
boy sit-PRES-3sS man-LOC
'The boy is sitting with the men.'

2(b). Human agent moving holding something inanimate

This occurs but the inanimate object may not be used as a locomotive aid. To express this sense the INSTR. case is used.

3. *-bari* cannot be used to express any notion of instrumentality. The INSTR. case is used for this.

4. *-bari* cannot describe the characteristics of a place.

- (25) *ɖalgari wina gamu-ɲga*
many fish water-LOC
'The creek has many fish.'

6. *-bari* cannot be used to describe a state such as 'ease' or 'difficulty', although it can be used to express states of 'thirst', 'cold' and other sensations. It is not known how states such as 'ease' and 'difficulty' are expressed in Biri other than the use of 'good' and 'bad'.

- (26) *nula yaga-li-la bari binbi*
he climb-PAST-3sS rock-LOC good
'He climbed the hill well.'

7. *-bari* cannot be used to express 'fear'. This is done by use of the ABLATIVE case.

- (27) *ɖana iɖara-l-ɖana yu:n'd^yi-ɖamu*
they-pl scared-PAST-they-pl ghosts-ABL
'They were all scared of ghosts.'

A-2. Verbal affix

-bari itself does not occur as a verbal affix. However both the reflexive and an anti-passive construction are formed by *-li*.

- (28) *ɲaya wad^yi-mpi-li-la-ya*
I wash-REPET-REFL-PAST-I
'I washed myself.'
- (29) *gɯɲami wandi ɲagali-li-la binbi*
that dog see-ANTI PASS-PAST-3sS good
'That dog looked happy.'

25. Yir Yorond

B. Alpher

0. Introduction

The Yir Yorond ['YY'] language (spoken in the area around the mouths of the Mitchell River in Cape York Peninsula)¹ has a construction consisting of the postposition *lon* 'with' and a noun phrase. Such constructions, *lon*-phrases, can function syntactically and semantically in various ways. The syntactic functions of *lon*-phrases, in part of their range of uses, are almost precisely congruent with the functions of adjectives. The phonological form and morphology of *lon* and the syntax and meaning of constructions in which it occurs are explored below.

1. Phonological form

lon typically bears secondary stress and follows a form with primary stress: *ɖum lɔn* 'with firewood'. It differs in this regard from the typical inflectional or derivational suffix, which is unstressed: *ɖuma* 'fire (ergative)', *ɖumuy* 'hot'; it differs in the same regard from the second syllable of a monomorphemic disyllable: *kiɖa* 'story', *pinar* 'coolamon, boat'. A sequence of a form followed by *lon* is exempt from the canonical-form requirement on words that the only sequences of vowels in adjacent syllables are identical vowels (*u . . . u*, etc.) or *a* after *u* or *i* (or *shwa* after any vowel). In both of these respects, *lon* resembles the privative postposition *komər* and the causal postposition *ɲorəm*, and certain other forms like enclitic pronouns (*pám òlo* 'man . . . he') and verbs (*míɲ pùɲ* 'ate meat', *míɲ pànɲ* 'meat eater'). (Stress is written below through §3.1, where the internal syntax of the *lon*-construction is discussed, and not in forms cited in later sections.)

lon does, moreover, occur at times with primary stress: *ɖum lɔn* and *ɖum lɔn* (and, in some contexts, *ɖum lòn*) are also possible pronunciations of 'with firewood'.

The *l* of *lon*, furthermore, does not fuse with a preceding *n* or *r*, as does the *l* of a true suffix: with *-l* 'nonpast', *wanl* 'tells' alternates freely with

wann, and *karl* 'sees' with *karr*; with *-l-on* 'causative (imperative)', *ʔánlón* 'cause to stand' alternates freely with *ʔánnón*. This does not take place when *l* begins a new word, or the second member of a compound noun (*man lúá* '[unidentified] internal organ'), or a verb root following a prefix (*luṇən* 'runs' in *pérluṇən* 'flows all over', *-lam* in *kunlam* 'dug out (as yams)'). Other respects in which *lon* is unlike an affix are discussed below in §3.1.

2. Morphology

lon is a nominative case-form; it can be marked for other cases: ergative and dative *lono* (because a *lon*-construction agrees in case with some noun phrase). The form of case-marking, addition of a thematic vowel (here *o*), is the same as that typically used with large numbers of common nouns with a monosyllabic nominative: *poq* 'knee', ergative and dative *poqo*. Such forms are reflexes of Proto-Paman forms with suffixes **-ŋku* ergative, **-ŋka* locative, **-ku* dative, as in **puṅku-ŋku* 'knee (erg)', but no cognate of *lon* is recorded outside of Yir Dhangedl, YY's sister-dialect.²

3. Syntax

3.1. Internal to the *lon*-construction. A favourite word-order for YY noun phrases is noun followed by demonstrative: *ʔúm áwɾ* 'that firewood'. *lon* will typically follow the noun: *ʔúm lòn áwɾ* 'with that firewood', but it can follow the demonstrative: *ʔúm áwɾ lòn*. Either way, *lon* is typically the only element in the *lon*-construction to bear a mark of case, since demonstratives are never inflected, and *lon*-constructions occur as constituents (the last) of noun phrases, and the last inflectible form in a noun phrase usually (but not always) bears the only case-ending: the ergative of *pám káŋʔ!* 'a big man' is *pám káŋʔnan*, and that of *pám ʔúm lòn* 'a man with firewood' is *pám ʔúm lòn*.

Note that, as exemplified above, *lon* can be postposed to a demonstrative. Demonstratives take no derivational or inflectional suffixes, and *lon* is thus unlike such suffixes in this regard.

lon has an 'also' sense (§3.2.4.), and in this sense is added not only to nouns and demonstratives (*áwɾ lòn* 'also there') but also to adverbials (*parkáwɾ lòn* 'also eastwards') and pronouns (*òlo lòn* 'he too') and nouns with inflectional endings (*miṇ lálpan lòn* 'also for wallaby'; the nominative of 'wallaby' is *miṇ lálpm*).

In one instance, the dependent-clause-marking enclitic *-ŋ* precedes *lon*: *òloṇ lòn* 'when he too . . .'. *ŋ* is recorded (rarely) between the members of a compound noun (*yuməŋ páɾ* 'when . . . bamboo spear'), but otherwise does not occur within a word. Reminiscent of this situation is the usual placement of the enclitic dependent-clause-marker *-el* between a verb and its associated pronominal enclitics: *móyéliy* 'when I swam'; perhaps this usage sheds some light on the borderline nature of *lon* between word and affix.

lon is also recorded after hesitations: *miṇ ʔópor ʔ lòn* . . . 'also brown snakes': in one such instance, it is recorded after a full pause. These are, of course, 'mistakes', but such 'mistakes' are never recorded with true affixes.

3.2. Syntax external to the *lon*-construction: predication, restrictive attribution, nonrestrictive modification, and 'also'.

3.2.1. Predication. A *lon*-construction can comprise the predicate of a verbless clause:

(1) *ŋoyo kow keywər lon*
I mucus with
'I have a cold.'

(2) *kam loniy*
blood with-I
'I have blood all over me.'

Forms of several other categories can occur as predicates in such constructions; one such category is that of adjectives:

(3) *ŋoyo puŋqariyər*
I hungry
'I'm hungry.'

3.2.2. Restrictive attribution. A restrictive attribute is a constituent of a noun phrase and is semantically attributive to its noun head; it can usually be paraphrased in English with a restrictive relative clause. Such is *kalq lon* 'with a spear' in

(1) *miṇ lálpm kalq lon ŋaṭan*
wallaby spear with my
'The wallaby with a spear in it is mine.'

—paraphrasable as 'The wallaby that has a spear in it . . .'. The use of the adjective *kaŋʔ!* 'big' as a restrictive attribute to *poɣ* 'humpy' seems parallel, as in

(2) *poɣ kaŋʔ! wellon*
humpy big build-imp
'Build a big humpy!'

Both the adjective and the *lon*-construction in these examples limit the range of denotation of the head noun.

A workable hypothesis of the constituent-structure of YY noun phrases is as follows: nouns and determiners (pronouns and demonstratives) occur in apposition with each other: *pam oɬo* 'person thou' = 'thou', *pam iy* 'person that' = 'that person'. Adjectives occur as restrictive attributes to the noun, (or nonrestrictive attributes to the noun-plus-determiner noun phrase; see §3.2.3), but there is no evidence of a syntactic kind for the existence of an adjective-plus-noun constituent: *pam kaŋʔ! iy* 'that big man', and *pam kaŋʔ! olo* 'the big man, he' are evidently tripartite. The adjective can occur with no noun head: *kaŋʔ! olo* 'the big one, he'. Adjectives in a noun phrase with a determiner seem usually to be restrictive attributes, notwithstanding the definiteness of reference usually contributed by the determiner; the following textlet contains examples:

(3) *pam, piṭi powənləl*
man, accidentally hit-pv-p-he
'A man was hit by accident.

murn yeyépaɬ win³iy. ŋul olowɾ powənl
club slippery threw-I. then that one hit-pv-p
'I threw a slippery club, and he got hit.

ŋoy yoq lalp an kaɾ yiw a,
I stick hard this not got emph
'I surely didn't get this hard stick,

yoqo, ŋan powəɾə ŋuṇəŋ.
stick-erg, DC hit-irr him
'where I would have hit him with the stick.

- ɲul awr yoq, yeyépəlt awr yuwəlawiy,*
then that stick, slippery that got-I, (e)
'But I went and got that stick, that slippery one,
ɲul yeyépəlt yaw. pam yirar powənl, piti.
then slippery went. man one-sel hit-pv-p, accidentally (f)
'Then the slippery one went. Another man got hit, accidentally.'

A nonrestrictive reading for *lalp* 'hard' in (3c) seems forced ('I didn't get this stick, which is hard'), especially as the dependent clause that follows, (3d), functions to identify the stick further, and is appropriately rendered as an English restrictive relative clause ('with which stick I would have hit him'). The same seems to be true of *yeyépəlt awr* 'that slippery one' in (3e); the textlet in general is a disclaimer of responsibility (hence the use of the passive) and the slipperiness is crucial to the disclaimer. Only the *yeyépəlt* 'slippery' of (3f) is subject to a (barely) plausible other reading, that of a manner adverbial ('then [it] went in a slippery manner').

lon-constructions with restrictive sense in structures parallel to those illustrated above for adjectives include

- (4) *ɲolo mel kay lon iywəl kur yaw*
he glasses with there-hither north came
'The Bishop of Carpentaria came down from the north.'
(5) *miɲ wərməl puy, pirm kamkamuw lono, miɲal puy*
watersnake-erg bit, belly yellow with-erg, snake-erg bit
'A watersnake bit [her], the one with the yellow belly; a snake bit [her].'
(6) *paɾ poq kolpkoləɬ lon, miɲ koqərəɬ wənl uɲəɲ*
head black with, tigersnake call it
'The one with a black head, [they] call it *miɲ koqərəɬ*.'

3.2.3. Nonrestrictive modification. A nonrestrictive *lon*-construction adds additional qualifications to an already-identified referent of a noun phrase (the *antecedent* of the *lon*-construction). The antecedent can be a pronoun, as in (1) below, and the nonrestrictive *lon* phrase is in this regard unlike a restrictive one. A nonrestrictive *lon* phrase or adjective is construed as modifying a complete noun-plus-determiner noun phrase (although, when the nonrestrictive modifier is not separated from its antecedent, there is no evidence of a syntactic sort that the antecedent is a constituent—cf. (3) below, in which *yoɾ kam lon awr* 'with those bloody hands' is apparently tripartite. Examples:

- (1) *ɲul miɲ lon ɬall ɲeyən*
then meat with returned we:pl:excl
'Then we returned with meat.'

The English rendering of such a construction is sometimes best with an adverbial 'with' phrase, as above, or sometimes with a nonrestrictive relative clause ('we, who had meat'), or sometimes as a conjoined clause ('we returned, and we had meat'). In general, however, there is a distinct, manner adverbial' flavour to these constructions.

Nonrestrictive *lon*-constructions can occur in the same position with respect to their antecedent as a restrictive one with respect to its head; the following is an example with no expressed antecedent:

- (2) *kay lon awr wəɬəɲ*
axe with that go-gp
'[They] used to go along carrying that [stone] axe.'

In the following example, the antecedent is *yoɾ . . . awr* 'those hands'; together with the *lon* phrase it forms a noun-phrase used adverbially (a 'part' of the subject):

- (3) *puy yawwəɲəl, yoɾ kam lon awr, kana*
go-gp-he, hand blood with that, finish
'Puy he went away, with those bloody hands.'

Examples in which the antecedents are objects:

- (4) *kay kilpirl trrt luɲənl uɲəɲ*
axe-handle inserts to it
kay kilpirl lon piɾil! uɲəɲ
axe-handle with keeps it
'[He] puts the handle into the axe-head, *trrt*.
[He] keeps the axe, with the handle.'
(5) *miɲ muɬəl, miɲ lalpm aɲan iy wunəɲ*
meat bits, wallaby his there lay.
miɲ muɬəl lonarl, wunt uɲəɲ ɬəɾpɸ
meat bits with-sel, thumped him
'Bits of his wallaby were lying about. He zapped [with a boomerang] him *ɬəɾpɸ*, even with the chunks of meat all around.'

The adverbial feeling of such *lon*-constructions is sometimes very strong:

- (6) *miɲ kunq lonarl waw yirəɲəl*
meat raw with-sel might talked-he
'He must have been talk while the meat was raw.'

Examples of adjectives used as nonrestrictive modifiers:

- (7) *kay poɬ olo yoɾar liɬəliɬəl, yoɾ ɬirpaɲan*
billycans he always is dropping, hands trembling-erg
'He, with his trembling hands, is always dropping billycans.'
(8) *lerən uɲəɲ peqer kir oyo woryəɾ*
child him small saw I long ago
'I saw that child long ago when he was small.'
(9) *ɲolo ɲiy wəɲɲuwəɾ wəɲariy*
he there sick is going
'He is going around sick.'
(10) *a ɬannaronnawiyuɲəɲ, mel pənuwəɾ. ɲull ɲer kól ɬaɲəl*
emph awakened-I-him sleepy then-he angry arose-he
'I woke him up sleepy. Then he got up angry.'
(11) *məl kun wərt' kir ɲiɲəl*
pitiable saw me-he
'He was sorry for me.'

There is no clear line between adjectives in such uses and adjectives predicated of a noun phrase with a predicative verb, like 'stand':

- (12) *ɬawəl an, ɲar yóɾ! ɬullum*
dillybag this, empty stands
'This dillybag is empty.'

It is possible to regard such predications as instances of constructions with nonrestrictive modifiers, in which the specific semantic contribution of the verb is de-emphasised to a point where its predicative function becomes salient. Examples like (9) above, which contains a general verb of going, would seem to constitute intermediate cases.

Predications like (12) (at least; probably all examples with nominative nonrestrictive modifiers) are appropriate answers to questions with the

interrogative manner adverbial *waruwər* 'how?' in the position of non-restrictive modifier:

- (13) *ɬawəl awr, waruwər ɬullun*
dillybag that, how stands
'How is that dillybag?'

To the extent that nominative nonrestrictive modifiers appropriately answer questions in *waruwər*, they are plausibly classed as adverbials.

A subset of adjectives, those of quantity, do not appear to modify in a way that can be called either restrictive or nonrestrictive. Thus, while *mapuwəl* 'no, none' (as in *may mapuwəl* 'no food') limits the reference of *may* 'food' in a radical way, it seems to have no identifying function. Others, like *koyər* 'two', *wap* 'some', and *yamar* 'many' (as in *pam yamar* 'many men') do not ever appear to be used restrictively ('there are two groups of men; the many went north, and the few went south'); yet a nonrestrictive reading seems forced ('men came here, who are many'). The same is apparently true of *kanɬ!* 'much (of a mass noun) [big, of a count noun]'; compare its sense in

- (8) *yirp kant! ɬonɬor wurən*
rain much yesterday rained
'Much rain fell yesterday.'

with the restrictive sense of *kolpkoləl* 'black' in

- (9) *yirp awr pal kolpkoləl wal*
cloud there hither black goes
'A black cloud is coming our way.'

Thus, despite the fact that adjectives of quantity occur as predicates in verbless clauses (*pam iy yamar* 'those men are many'), they are not entirely parallel to other adjectives and *lon*-constructions. It is consistent with these facts that adjectives of quantity are appropriate answers to questions in the interrogative *warwaryər* 'how many?': Q. *kawan warwaryər puy oɬo*. 'How much water [beer] did you drink?' A. *kanɬ! puyiy*. 'I drank much.'

3.2.4. 'Also' phrases. The antecedent of a nonrestrictive *lon*-construction can be of the same nature as the accompanying person or thing:

- (1) *pam pal yawəl, wartɬuwər lon*
man hither came-he, woman with
'A man came, accompanied by a woman.'

When the antecedent is the subject of certain intransitive verbs (like *yaw* 'go'), another reading is equally as true as the nonrestrictive accompaniment one: 'A man came, and also a woman' for (1). From some such point of departure as this, *lon*-constructions are extended to contexts in which an 'also' reading has different implications from a nonrestrictive-accompaniment one:

- (2) *kuɬuwəl mor payəluw, leren lon uyən*
dog-erg body bite-went, child also him
'The dog bit and killed him and a child.'

The context in which (2) occurred makes the 'also' reading the preferred one, but (2) in isolation could just as well mean 'The dog bit and killed him, who was accompanied by a child not bitten.' The 'also' construction functions then as a kind of co-ordination, in which the co-ordinated things are somehow closely associated in time or space, and in which pronominal agreement (*uyən* 'him', singular, in (2)) is with the antecedent only.

For many such examples an 'accompaniment' reading is forced or impossible:

- (3) *pam ɬamayr, kewr mar ɬuɬərən, pam wimiyr lon, pam kewr maɬ*
mother, sister's daughter, mother-in-law also, daughter
lon, ɬolowarl piɬlən
also, he-sel was keeping

'He alone was keeping [in marriage] his mother, niece, also mother-in-law, also daughter.'

Such are the examples in which the antecedent and *lon*-construction count as adverbials:

- (4) *ɬul ɔylt poyənuw, wəɬar yiruw ɬinnwalən, priyst yiruw*
then there soon-DC, whiteman one-DC stay-came, priest one-DC
ɬinnwalən, lar yir lon, lar pɪram kanam lon, poyən lon, ɬoq
stay-came time one also, year last also, soon also, here
ɬinnwalən
stay-came

'Then by-and-by another white man came to stay there; another priest came to stay; and another time; last year too; and soon after that; [they] came to stay here.'

- (5) *paɬiwər parkúwəl parkúr ɬoq lon kawər an lon*
southwards westwards northwards here also east here also
pəwələn
killed

'[He] was killing [them] to the south, west, north, here too, here in the east too.'

Note that, as in (5), 'also' constructions account for many (but not all) of the places where *lon* follows a determiner. Another indicator of the slightly lesser degree of closeness with which *lon* is joined in an 'also' construction is that all recorded instances of *lon* postposed to a noun marked for a non-nominative case are (apparently) of this type:

- (6) *mula ɬaw moməl, wiqi lon*
white-erg emph-DC rubs, red-erg also
'[He] rubs [it] with white paint, and also with red.'

- (7) *pam wəpəɬən walɬay, oqələm lon*
men some-DC are going, here-abl also

'Where some men are still going, from here too.'

Note, however, that it is possible for an 'also' *lon* to carry a case ending, rather than the noun to which it is postposed, as in (13) below. Another indicator of looseness of joining is the postposition of *lon* 'also' to a pronoun, as in

- (8) *oloɬ lon, iywəl kawər ɬarən olo*
he-DC also, there-hither east threw he

'He too, he threw [boomerangs] from there in the east.'

The last example illustrates one common use of the 'also' *lon*, the reciprocal one, which presupposes a similar action by another party. Another example is

- (9) *ɬoto lon, pam kiɬ pam yupəl*
thou also, 'bastard'

'You're a bastard yourself.'

Parallelism is not always strict in 'also' constructions; in the following, a set of directions is opposed to *pam* 'people' and *wəɬar* 'white men':

- (10) *pam iy pal waŋar lon loŋməll, mišəŋŋəŋ olowŋ,*
 people there hither whiteman also gathered, mission-dat that,
anəl kowəl lon, noməntən, paləl loŋməll anəl kur
 here-hither down also, Normanton, hither gathered, here-hither
lon, tərzdij aylənd, paləl loŋməll...
 also, Thursday Isl., hither gathered...
 'People gathered in from there, white men too, to that mission, also here
 from below, Normanton; also here from the north, T.I., they
 gathered in...'

The antecedent, perhaps lost track of back in the discourse, can go with a different verb, as in the following two examples:

- (11) A. *palpaŋ awŋəŋ toŋələŋ*
 maggots those-DC were falling
 'Where those maggots were falling.'
 B. *palpaŋ awŋəŋ payləŋəl*
 maggots those ate-he
 'He was eating those maggots.'
 A. *melaym ŋoŋəm awŋ*
 fork from that
 'From that [body in the] tree-fork.'
 B. *melaym ŋoŋəm iy pal*
 fork from there hither
 'Down from there in the tree-fork.'
tak payləŋəl
 was eating-he
 'Tak he was eating them.'
 A. *yimən lon pulləŋ*
 grease also dripped
 'Grease was dripping too.'
- (12) *miŋa lar yirəŋololn, miŋ[?] miŋ lalpaŋ, miŋ[?] popoŋ[?] lon,*
 animals-erg place speak-cause, wallabies-erg, brown snakes also,
miŋ[?]manpirl lon walŋay
 taipans also are going
 'Animals are taking the place over; wallabies... brown snakes too,
 taipans too are going around.'

Note, in the last example, that, after all the hesitations, the transitivity of the verb used changes. In the next example, *lon* 'also', which belongs semantically with the (nominative) subject, is transferred to an ergative noun phrase used as a locative:

- (13) A. *pam ŋum kuwən lon pilin iyŋən, maninl parkowəl*
 widows too they those-DC sank downwards
 B. *ŋoyltarl*
 there-sel
 A. *ŋoyltarl, pen kiŋ lono, maninl*
 there-sel, camp too-erg, sank
 A. 'Where those widows too sank downwards [to their totemic site].'
 B. 'At that same place [as their husband].'
 A. 'Also at the camp, that same place, they too sank down.'

As many of the above examples show, 'also' *lon*-phrases are well-suited for the expression of afterthoughts. A *lon*-phrase that does not express an after-

thought signals the speaker's expectation that the hearer would not have anticipated the inclusion of the conjunct marked with *lon* in the activity. Such an example is the *lon*-phrase within the first intonational contour (everything up to the first comma) of (10).

If the following is properly regarded as an 'also' *lon*-construction in an extended sense, it is surely one of the furthest extensions:

- (14) *miŋ lalpan lon ninəŋiy*
 wallaby-dat also was staying-I
 'I was staying for very much wallaby.'

The speaker had previously described a very successful hunt in which he had speared many wallabies (and nothing else) and cooked them all; NP-dative *miŋ-* 'to sit/stay for NP' is an idiom for 'to busy oneself eating NP'.

4. Semantic function

The semantic functions of 'also' *lon*-constructions are those of the noun phrases and adverbials with which they are 'conjoined'; see §3.2.4 for examples. There are some obvious constraints on the semantics of 'accompaniment' *lon*-constructions (§3.2.1 (3)): no instrumental or motion usages with predications, [apparently] no whole/part usages with non-restrictive modifiers. With such constraints borne in mind, semantic functions are described below, in the order of the checklist:

4.1. Human at rest, accompanied by X:

- (a) holding something inanimate:
- (i) *woyŋəl lon iy tullun*
 nulla with there is standing
 '[He] is standing there with a nullanulla.'
- (ii) *woryərl ŋer kol lonəŋ ŋeyən*
 long ago anger with-DC we:pl:excl
 'Where long ago we used to have fierce rages.'
- (b) *lon*-phrases designating a human at rest in the company of humans are not recorded (though I suspect that if the human is a baby in its mother's arms it can be so described). Rather, a reciprocal-like construction is used, in which an ergative noun phrase (in locative function) designates the persons in their accompanying role and a nominative (subject) noun phrase designates them in their role as the persons accompanied. Thus, to this question:

- (i) *lonor, woŋol ŋinəŋ uwəl*
 together, who-erg sat ye 2
 'With whom were you (singular) sitting?'

the following are suitable answers:

- (ii) *ŋoyo lilq ŋinəŋ*
 I alone sat
 'I was sitting alone.'
- (iii) *koyənən ŋinəŋ ŋem*
 two-erg sat we 2 excl
 'Two of us were sitting together.'

4.2. Human, moving, accompanied by X:

- (a) holding something inanimate (that does not assist movement):

yoq lon ɬalləl
tobacco with returned he
'He came back with tobacco.'

(b) holding something inanimate (that may be assisting movement); N.B. the word 'holding' is out of place, at least for these examples:

(i) *yarəmən lon oyo ɲoylt yawərən*
horse with I there went
'I went there by horse.'

A nonrestrictive *lon*-construction is the normal way of naming the means of locomotion when a verb of motion is used, since instrumentals do not normally occur with intransitive verbs. Hence such expressions as *motaka lon* 'by car'. There are, however, means of locomotion normally named by a noun phrase in ergative inflection: *treynəl* 'by train', *miŋ puɬ lono* 'by plane' (here the *lon*, of *miŋ puɬ lon* 'airplane', is irrelevant to the matter under discussion). It is probable, however, that these are to be read as locatives: 'on a train', etc.; these are vehicles on which the passengers can get up and walk around.

The object moved need not be human or even animate; it is possible to speak of a fish moving *ɬinpl lon* 'by means of fins', where there is no doubt that fins are considered indispensable to movement: *ɬinpl mapuwələn, karuw walən* 'if [it] had no fins, it couldn't go'. Where the intransitive verb of motion is put into a causative construction, the *lon*-instrumental is still used (whether obligatorily or not I cannot say):

(ii) *kay poɬ way lon yawronnəŋiy*
billycan wire with go-cause-will-I
'I want to take the billycan along by means of the wire [handle that I'm putting in].'

(c) in company of human(s): see §3.2.4 example (1).

4.3. *lon*-constructions representing an instrument used by a human agent to perform an action (at rest) are not recorded, with one systematic set of exceptions: the name of a language spoken, as in

yir ɬutʷəm lon yirarəl
YY with speaks-he
'He is speaking Yir Dhudjm.'

Such a usage is undoubtedly related to predications like *ɲolo yir ɬutʷəm lon* 'he speaks Yir Dhudjm' and is encouraged by the restrictions on co-occurrence of instrumentals and intransitive verbs. Nonetheless, instrumentals do occur with verbs of speaking (*ɲelql yir-* 'to speak with the tongue')—though not nearly with the freedom with which they can so occur in the closely related Gogo Bera, in which one says *kokəpərənʷimp yik-* 'speak in Gogo Bera (ergative)'.

4.4. *lon*-constructions are frequently used of characteristic parts of an entity: *lar wanʷtʷuw yamar lon* 'a place with many yams', *pam paɾ poɬ kaŋɬ! lon* 'a man with a big head'; or of characteristic alienable parts: *pam mel kay lon* 'a man with glasses', *pam yor kay lon* 'policeman = man with handcuffs'. A *lon*-construction which predicates a part of a whole, like *miŋ an puɬ kaŋɬ! lon* 'this bird has big wings' has a near-paraphrase in which the part is named by a bare noun phrase (*miŋ an puɬ kaŋɬ!* 'this bird has big wings') (and both can be paraphrased with similar constructions using the predicative verb *ɲin-* 'sit, be' or *ɬan-* 'stand, be'). The negation of a *lon*-construction is made with the privative postposition *komər*, as in *miŋ an puɬ komər* 'this bird has

no wings'; the corresponding negation of a whole-part construction without *lon* is with the adjective *mapuwəl* 'no, none' (*miŋ an puɬ mapuwəl* 'this bird has no wings'). Where the characteristic is alienable, however, a *lon*-predication (*ɲolo ɬərət lon* 'he wears pants', or 'he has pants on (now)') is paraphrasable (very distantly) by a predication using a possessive: *ɬərət awɾ ɲaŋan* 'those pants are his', negatable with postposed *kar* 'not': *ɬərət awɾ ɲaŋan kar* 'those pants aren't his'. It would seem that the *lon*-construction is not a true paraphrase either of the whole-part or alienable-possessive predication, but that its essence lies instead in 'characteristicness' ('he wears pants') or 'accoutrement' ('he has pants on (now)'). The *lon*-construction also designates a totem with regard to the person or social group whose totem it is: *warq lon* 'having grass as a totem'; the nearest paraphrase with a 'possessive' construction designates the totem as the 'possessor' and the 'name' as the thing 'possessed': *ɲawɾ warqa* 'name belong grass'. Recall also the use, mentioned above, of a *lon*-construction to designate the language a person speaks: *ɲolo yirq yoront lon* 'he speaks YY'. 'Characteristic' *lon*-constructions are used frequently in statements of descriptive identification:

yirq yamar lonən, miŋ kunuŋ
speech much with-DC, yellow crane
'The one that screeches a lot is the yellow crane.'

and in definitions:

man katʷ kaŋɬ! lon, man katʷ puw
neck big with,
'*man katʷ puw* means "having a big neck".'

4.5. *lon*-constructions designating time or season are not recorded.

4.6. *lon*-constructions are regularly used to designate certain states of the body:

kanpa, kana pinpəŋəmələŋ, yoron, pin ɬil lonəl
before, finish forget-gp, now, ear hole with-he
'Before, he always used to forget; now he doesn't forget (= his ears are open).'
Other states so named are *mor waŋɬ lon* 'sick = with sickness', *kow keywər lon* 'having a cold = with mucus', and *kun ɬolp lon* 'having diarrhoea = with muddy faeces'; compare with the last the 'characteristic' use of *kun ɬolp lon* 'able to produce diarrhoea', in

purtʷuwər, ala pay. kun ɬolp lon olowrən
dry, don't eat. that-DC
'Don't eat dry [sugarbag]. That stuff gives you diarrhoea.'

pinqariyər 'hungry' and *ɲer manuwar* 'thirsty' are, on the other hand, derived adjectives. It is not obvious to me whether such expressions as *mel ɬotəm lon* 'having sand in the eyes' (used more frequently than an expression with 'eye' in ergative inflection and locative function) are to be reckoned among these 'state' ones; the line (if any) between them and others like *kam lon* 'bloody', as in the definition *walp, kam lon* 'walp means "bloody"', is a thin one.

4.7. *lon*-expressions designating a thing feared are not recorded (the ablative with suffixed *-m* or the causal with postposed *ɲorəm* is used).

5. Conclusions

The various (non-'also') uses of *lon*-constructions seem to be related. Thus, in

(1) I go swim now, cross ? *ko? fut^{am} lon yujəŋwal*
 oops YY with swim-go

'... oops, in Yir Thutjum it [the word] is *yujəŋwal*.'

fut^{am} lon is used as a restrictive attribute, and the fact that it can be so used is undoubtedly related to the fact that *lon*-constructions designating the language spoken also occur as nonrestrictive modifiers and as predicates (§4.3(4)). Does the similar behaviour of adjectives reflect a membership of adjectives and *lon*-constructions in a single grammatical category? Evidence presented above (§1(3)) indicates that they are quite similar, although a difference worth mentioning is the relatively free occurrence of adjectives as adverbials, which do not necessarily name a quality of an entity designated by any noun phrase in the sentence.³

(2) *ŋul olowr lalp kumpilirl*
 then that hard pulls

'Then [one] pulls that one [barbed spear] out with difficulty.'

Another parallel to the *lon*-construction is the substantive noun. Compare the predicative use of the noun *leren* 'child' in *olo leren* 'he is a child' with its appositive (nonrestrictive modifying) use in *leren wu ŋoyo* 'I went as a child', and these with the restrictive use of the noun *wajar* 'white man' in *pam wajar iy* 'that white man'. Note, however, that adjectives and *lon*-constructions are not recorded as subjects (parallel to *leren* in *leren wu* 'the child went', unless the construction exemplified in (1) above and the headless attributes mentioned in §3.2.2 be construed in this way). And, in another regard, substantives are like adjectives and unlike *lon*-phrases; with (2) above compare *lar ŋumuy waləŋ ŋeyən* 'we were going along in hot weather', in which the noun phrase *lar ŋumuy* 'hot weather' is not understood as a modifier, restrictive or nonrestrictive, of another noun phrase. On balance, at any rate, the forms most closely parallel to *lon*-constructions are adjectives.

But a *lon*-phrase is not a derived adjective. This is so in a trivial sense because it is not a word, but it is also evident from the behaviour of adjectives and *lon*-phrases with the intensifier *mor* 'very': *kaŋŋ! mor* 'very big', but *ŋaməl kaŋŋ! mor lon* 'having very big feet';⁴ *mor* does not intensify an entire *lon*-phrase, but only a word within it. By contrast, the suffix *-l* (evidently continuing earlier **tⁱ*) derives true adjectives: *kow* 'nose', *kowəl* 'nasal', *kowəl mor* 'very nasal'.

Notes

1. The fieldwork on which this paper is based was carried out in 1966-67 with the support of National Institute of Mental Health grant MH-12699 (attached to fellowship 4-FI-MH-21, 874-05) and the Australian Institute of Aboriginal Studies (which supplied tapes). The Summer Institute of Linguistics Concordance Project, through the University of Oklahoma Computer Laboratory, prepared a concordance of my materials, without which I would not have been able to prepare this paper before the deadline.

In the first draft of this paper I claimed that adjectives did not occur as nonrestrictive modifiers to pronoun heads. K. Hale in his comments suggested ways in which they might plausibly so occur, and in June 1974 I was able to confirm that this usage was common, with the help of Mr Jack Bruno of Kowanyama, north Queensland, and an emergency grant from the Australian Institute of Aboriginal Studies.

Yir Yorond sounds recorded in the transcription used here are the bilabials *p*, *m*, and *w*, the lamino-interdentals *ʃ*, *ʒ*, and *ʎ*, the apico-alveolars *t*, *n*, *l*, and *r*, the apico-postalveolars *ʈ*, *ɳ*, *ʎ*, and *r*, the lamino-alveopalatals *ɸ*, *n^h*, and *y*, and the dorso-postvelars *k* and *ŋ*; the glottal catch *q* is represented differently from the glottal catch of hesitation ?. Vowels are *i*, *e*, *a*, *o*, *u*, and *ə* (shwa).

Abbreviations used are YY 'Yir Yorond' (= Yir Dhudjm), erg 'ergative', dat 'dative', abl 'ablative', pl 'plural', excl 'exclusive', MMBd 'mother's mother's brother's daughter' (= mother-in-law), imp 'imperative', pv 'passive voice', p 'past perfective tense', gp 'general (perfective and imperfective) past tense', irr 'irrealis', DC 'dependent clause marker', sel 'selective' ('just'), emph, 'emphatic particle'.

2. Such a cognate would probably sound like *tu*; in view of the stress pattern of *lon*, it is quite possible that such a cognate would be a verb (say, 'have, hold, keep'). The prototype of the *lon*-construction could well have been an agentive nominal of the type *miŋ pan*- 'meat eater', in which the verb *pa(y)*- 'eat' is marked with the participial suffix *-n*. The latter is probably to be reconstructed for the common ancestor of YY and Umpila as **ni*, and it is possible that it is continued in the *-n* of *lon*. The replacement of the **i* by *o* in the ergative form *lono* would not be without parallel; several nouns have thematic vowels which echo their stressed vowel and have replaced a thematic vowel that does not: *may* 'vegetable food' < Proto-Paman **mayi* has the ergative case-form *maya*. If this speculative history is correct, the present method of case-marking of *lon* evidences its loss of participial status, since participials mark the ergative with *-an*.

The YY reflex of **tⁱ* is evidently *-l*, as in YY *ŋerəl*, Yir-Dhangedl *ŋekərəŋ* 'pregnant (= belly having)'. It is conceivable that it was replaced as a productive element by *lən* (Yir-Dhangedl *ón*) because it was homophonous with the ergative suffix *-l* (Yir-Dhangedl *-t*) from an earlier **ŋtV*. But there are Australian languages in which the ergative and 'having, with' suffixes are homophonous; and in Gogo Bera the productive 'having, with' element has become (y)uŋkó, while the relevant ergative suffix has remained *-ŋt*, thus not falling together with any reflex of **tⁱ*.

3. YY has adverbials (not recorded elsewhere in noun uses) that agree in case with the subject noun-phrase, like *mormór* 'really, directly' in *pamər mormórarl wal uŋəŋ* 'go straight to it!' and *mormórəltar kallwaly uŋəŋ* 'I'm really going to spear him!'. Note that these too do not name a property of the subject.

4. *mor* also intensifies substantives: *wart^yuwr mor* 'a real woman (not, for example, one in a dream)', *kawən mor* 'real water (i.e. fresh, not salt)'. I have, in this paper, sidestepped the questions raised by the lack of formal differences between adjectives and substantives, but it may be correct to regard an adjective in isolation, like *kaŋŋ!* 'a big one', not as an attribute to a zero head but as itself the head of a noun phrase.

mor, in the meaning 'body', is also used as a substantive: *mor oyo wart^y* 'I am tired (*wart^y* 'no good') in the body'.

E. Vászolyi

1. Wunambal used to be spoken in the north-western Kimberleys of Western Australia, north of the Prince Regent River as far as the Mitchell River and Lawley River. Some twenty adult speakers of this prefixing, noun-classifying language can nowadays be found at Kalumburu Mission (the northernmost settlement in Western Australia) where they represent a minority amongst the linguistically closely related Gunin and Gambera speakers (indeed, the two latter and Wunambal can be recognised as dialects of the same, never-named, language). Another fraction of the once vigorous tribe, some ten families, live at Mowanjum Mission (near Derby, Western Australia) along with a Wurora and Ngarinjin majority which, in turn, would speak Wunambal as a second language.

2. Wunambal (as well as Gunin and Gambera) has a frequently used adnominal derivational suffix which can roughly be glossed 'having'. The same bound morpheme has, however, not been found in the realm of verbs.

2.1. The form of the affix is invariably *-gude* with no allomorph whatsoever.

2.2. The grammatical function of the affix is varied.

2.2.1. Morphologically, it can directly follow a noun stem or pronoun or demonstrative (no evidence has been found that it would also be attachable to adjectives):

le:wa 'dog' > *le:wagude* 'one having/with a dog, doggy'

binja 'this (person)' > *binjagude* 'together with this (person)'

na: 'thou' > *na:gude* 'with thee'

2.2.2. Another derivative suffix may precede the affix under examination:

(i) *yirgal* 'rope, chain' + *ɲari* 'supplied with'

yirgalɲari 'policeman'

(ii) *yirgalɲarigude* 'having a policeman with; accompanying/accompanied by a policeman'

2.2.3. Personal-possessive suffixes may also be inserted between the stem and the affix:

(i) *djiya-* 'father' + *nu* 'thy' + *gude* > *djiyanugude* 'with thy father'

(ii) *djiya* + *ɲu* 'his/her' + *gude* > *djiyanugude* 'with his/her father'

2.2.4. Case suffixes and dual/trial markers may follow the affix under discussion:

(i) *mari* 'penis' + *gude* > *marigude* 'male'

(ii) *marigude* + *gu* 'Lative' > *marigudegu* 'to the male'

(iii) *marigude* + *yaja* 'Ablative' > *marigudeyaja* 'from a male'

(iv) *marigude* + *miya* 'Dual' > *marigudemiya* 'two males'

2.2.5. Emphatic particles or modifying affixes may also follow the affix being discussed (for example, *-li* 'lo; voici/voila'; *-eri* 'just, only'; *-njale* 'again, also'). Thus:

le:wa + *gude* + *njale* > *le:wagudenjale* 'also the one having a dog'

2.2.6. Syntactically, the 'having' form functions as an adjective (and/or predicate):

(i) *buru* 'strength' + *gude* > *burugude* 'strong'

(ii) *bindjin burugude* 'a strong man' or 'the man is strong'

2.3. The semantic scope of *-gude* is fairly wide.

2.3.1. It is frequently used to refer to an animate agent, either at rest or moving, with/accompanied by something or somebody. Thus:

(i) *ma:ba dar-bumeri mi:lagude*

old-man stand-PAST-FREQ spear-having

'The old man kept standing [there] having his spear [with him].'

(ii) *na:mbajugude ada-baŋga*

wife-his-with sit-he-PRES

'He is sitting in the company of his wife.'

(iii) *a:mbagude djo:li-burme breni gundi-gundi*

kangaroo-with return-they-PAST they husbands

'The husbands returned with a kangaroo.'

(iv) *waŋda-biyaŋgeri na:mba-ɲu-gude-li*

wander-he-PAST-FREQ wife-his-with-EMPHAT

'He wandered about with his wife.'

(v) *ada-burama a:mbagude djama gala*

stay-they-PRES roo-having much there

'They are staying there having a lot of kangaroo meat.'

2.3.2. The affix is used with reference to the characteristics or state of a person or thing. Thus:

(i) *wadjbala bogala djagaragude wonay gadjin*

whitefella that long-hair-having woman like

'That white man has long hair like a woman.'

(ii) *giɾa gala arugude*

camp that rocky

'That is a rocky camping site.'

(iii) *bini marayagude*

he pain-having

'He is sick.'

3. Wunambal has an instrumental-comitative case suffix (inflection) *-njane* 'with', too, which phonologically, morphologically and syntactically clearly differs from the derivative 'having' affix. Semantically, however, there are instances of interference or overlap between them. Compare the following examples:

(i) *na:mbajugude ada-biyindimiya*

wife-his-having stay-they-PAST-DUAL

'He and his wife [he having his wife with him] stayed [there].'

(ii) *na:mbajunjane ada-biyindimiya*

wife-his-INST/COMIT stay-they-PAST-DUAL

'He stayed [there] with his wife.'

None the less the two affixes are, of course, not identical or interchangeable. Compare the following two examples:

(i) *mi:lagude banbunenuɲu*

spear-having he-kill-PAST-it

'He, having a spear, killed it.'

(ii) *mi:lanjane banbunenuɲu*

spear-INST he-kill-PAST-it

'He killed it with a spear.'

In the first sentence, *mi:lagude* is an adjective and subject which can perhaps best be glossed 'spear-having-one'. In the other sentence, *mi:lanjane* is a declined noun (instrumental case) and adverb which can conveniently be glossed 'with a spear'.

4. In some instances there is also a semantic overlap or interference between the 'having' affix *-gude* and another derivative affix, viz. *-yari*. The latter one has a wide and varied semantic scope and occurs both in the nominal and the verbal spheres very frequently. *Inter alia*, it derives adjectives and/or nouns from noun stems and the derivatives can best, however clumsily, be glossed 'pertaining to/connected or supplied with'—therefore 'having'. One of the above examples, *yirgalhari* 'policeman' can again be referred to here (from *yirgal* 'rope/chain' plus *-yari* 'supplied with/having'; the word is clearly a grim memento of the past with policemen chaining up arrested Aborigines). Further examples:

- dimbihari* 'stingray' < *dinbi* 'stingray's spike'
djandihari 'waddy/club' < *djandi* 'finger-grooves on a handle'
garihari 'fierce warrior/vicious person' < *garir* 'spite malevolence'
madihari 'tearful/crying' < *madir* 'tear'
njamahari 'centipede' < *njama* 'insect's foot'

Despite a slight semantic interference, however, morphological and syntactic rules keep the two derivative affixes clearly apart. See the following examples:

- (i) *djandihari djandigude*
 waddy fingergroove-having
 'A waddy has fingergrooves [on the handle].'
 (ii) *bini djandiharigude*
 he waddy-having
 'He has a waddy/He is armed with a waddy.'

In some cases, however, one of the above affixes is regarded by native speakers as inapplicable whereas the other is said to be perfectly grammatical. Thus, *garihari* 'vicious person' from *garir* 'malevolence, spite' is accepted but **garigude* is not.

5. It may perhaps be of interest to mention in passing that quite a few (or perhaps most or all?) Finno-Ugrian and Uralo-Altai languages show up one or more derivative affixes, phonologically absolutely different from the above (and often from each other, too) but strikingly reminiscent of, or simply identical with, the syntactic and semantic functions of *-gude* in Wunambal. This holds good for a Hungarian *-S*, Finnish *-VA*, Zyryan *-A/SA*, Vogul *-PA* and a number of others. The translation of a Wunambal form with *-gude* into English (or other Indo-European languages) may be, and often is, troublesome and clumsy whereas exact structural/semantic equivalents can be found in Finno-Ugrian or Uralo-Altai. A few examples from Hungarian:

- (i) *dárda* 'spear' + *S* > *dárdás* 'spear-having'
 (cf. Wunambal *mi:lagude* 'idem')
 (ii) *kutya* 'dog' + *S* > *kutyás* 'dog-having'
 (cf. Wunambal *le:wagude* 'idem')
 (iii) *haj* 'hair of the head' + *S* > *hajas* '-haired'
 (cf. Wunambal *djagaragude* 'idem')

Another point of interest is that Finno-Ugrian and Uralo-Altai languages also show a contrast, and sometimes an interference, between a derivative 'having' affix and a clearly different instrumental-comitative case suffix (and some of these languages have more than one derivative affix which can roughly be glossed 'having' while others have, in addition to this, developed distinctly different case suffixes for the instrumental and comitative, respectively). Compare the following data:

- (i) Hungarian
kutya 'dog' + *S* > *kutyás* 'dog-having, doggy'
kutya + *VAL Instr/Comit* > *kutyával* 'dog-with'
kutya + *STUL AffixAccomp* > *kutyástul* 'dog-together'
 (ii) Zyryan
pon 'dog' + *SA* > *ponsa* 'dog-having'
pon + *EN Instr* > *ponjen* 'dog-with'
pon + *KED Comit* > *ponked* 'dog-together'

Examination of a sizeable corpus of the various 'having' affixes in Aboriginal Australia compared with other language groups and families might perhaps result in valuable typological conclusions.

27. Ritharngu

Jeffrey Heath

A-1. Ritharngu is a Yuulngu language of north-eastern Arnhem Land. The regular 'having' suffix is *-miri*, which undergoes no allomorphic variation. The privative element *-miriw*, which sometimes becomes *-murū* by low-level assimilation, and the dual element *-bulal* can occur in similar constructions. More research would almost certainly show that *baru^oŋu* 'many', perhaps in the shortened form *-baru^o*, can also occur in this type of construction.¹

The reflexive-reciprocal suffix added to verbs is *-mi-*, which becomes *-mi-na* or *-mi-ña* in the past and *-mi-ri* in both present and potential. An example: *bu-ŋa-mi-* 'to hit self or each other' from root *bu-*. Note the increment between root and *-mi-*; this increment takes the form *-Na-* or *-N-*, where *N* is a coronal nasal (*n*, *ŋ*, or *ñ*), depending on the verb class. This increment is usually identical to either the present or past tense suffix of the verb class in question. More interestingly, the increment is also used before nominal case suffixes such as ablative *-ŋuru^o*, and here we can only take the increment as a nominalising suffix: *bu-ŋa-ŋuru^o* 'from the fighting'. Although the synchronic situation is a little messy due to assorted irregularities, it seems reasonable to guess that forms like *bu-ŋa-mi-* are etymologically nominalised verbs plus a suffix *-mi-*. If we take present-potential *-mi-ri* as the most archaic paradigmatic form, and past tense *-mi-na/-mi-ña* and so forth as secondary, there is no reason for not correlating this *-mi-ri* with 'having' *-miri*. That is, 'having fighting' could be used as a predicate nominal, and 'They (are) having fighting' could mean 'They are engaged in fighting', with subsequent specialisation as a reflexive-reciprocal form.

Also of historical interest is the inchoative verbaliser *-ti-*, added mostly to nominal (including most 'adjectival') stems: *mu:kuy* 'dead body, devil',

mu:kuy-ti- 'to die'. Some stems occur only with *-ti-* and cannot be used as nouns. The paradigm of *-ti-* resembles that of *-mi-*, differing only in minor details. Note in particular present-tense *-ti-ri*. It is entirely possible that *-ti-* has undergone changes similar to those undergone by *-mi-*. A nonverbal (adjectival?) element **-tiri* would have been added to nominal and some stative verbal roots; this could have been used as a predicate noun or adjective; eventually it became reinterpreted as a verbal form with consequent adoption of a verbal paradigm, hence past-tense *-ti-na/-ti-na*, etc. If so, *-ti(-ri)* may well be the continuation of PA **-Ḍiri*.

A-2. We will hereafter deal only with true 'having' constructions in the languages. The suffixes *-miri*, *-bulal*, and *-miriw* can be added to noun stems, but not to deictics or pronouns. The derivative is nominal in function and morphology and therefore may be pluralised or marked for case. A few specialised forms function as adverbs (in the context of Ritharngu morphology, these can be considered nouns).

Privative *-miriw* can also be added to nominalised verbs with increment *-Na-* to form a nonfinite imperative of the 'No smoking' type.

A-3. Only an incomplete sketch of the semantic functions of 'having' forms can be given here. The important point to be made is that 'having' forms are nominal derivatives, rather than case forms as such. For example, *wa:ŋa-miri* 'camp-having' is best translated 'married man' rather than something like 'with a camp'. In other words, 'having' forms do not normally function as instrumental or comitative adverbs and so forth. The instrumental is expressed by adding the case suffix *-ḍu/-y* to a noun. Comitative can be expressed by means of a verbal compounding element *baŋa-*:²

- (1) *baŋa -wani-ña ra gaḍayka?*
comit go past I harpoon
'I went with the harpoon.'

When 'having' forms appear to function as instrumental or other adverbials, the Ritharngu construction is best segmented into two distinct predications, one with the 'having' form functioning as predicative noun:

- (2) *guyara?-miri ŋay, la -na ña ŋay*
spear having he spear past him he
'Having a spear, he speared him.'

This type is at best a 'pseudo-instrumental' construction; the true instrumental form of *guyara?* would be *guyara?-ḍu*.

The usual 'having' suffix *-miri* can be replaced by *-bulal* and *-miriw* in these senses: *wa:ŋa-bulal* 'camp-two' (that is, 'having two wives'), *wa:ŋa-miriw* 'unmarried'. Forms in *-bulal* are distinct from duals: *wa:ŋa-mañji?* 'two camps'.

Privative *-miriw* forms a negative imperative or prohibitive when added to a verb with *-Na-* increment: *yutḍu-na-miriw* 'No running!'. This type of prohibitive usually does not include second person subject markers. There is another type of prohibitive with potential verb, second person pronominals, and negative *yaka*:

- (3) *yaka ŋi: yutḍu-ru*
neg you(sg) run pot
'Don't run!'

Although the increment used before prohibitive *-miriw* is always *-Na-*

rather than *-N-*, while reflexive-reciprocal *-mi(-ri)* takes either *-Na-* or *-N-* depending on the verb class, it is quite possible that the two originally reflect a single 'having' construction built on verb stems, and that the *-mi(-ri)* and *-miriw* forms have since undergone semantic and morphological developments which tend to disguise their original structural identity.

The suffix *-miri* also shows up in a few more or less frozen constructions. It is presumably present in the now unsegmentable *ripurumiri* 'afternoon, yesterday'. It also occurs in expressions meaning 'X times' along with an initial element *malk-* and a quantifying stem: *malk-bayumiri* 'many times'.

Notes

1. I seem to recall hearing an example of this type, but I cannot find it in my notes at present.
2. We should also mention that *-bata-*, in the form *-bata-ŋu* with a basically adjectival ending, is found in an occasional compound in a sense not far removed from that of 'having'. The best example I have is *ḍij?-bata-ŋu* 'husband'. This contains the root *ḍij?* 'woman, wife'. The expression *ḍij?-bata-ŋu* is used in the sense of the true or proper husband, and is opposed to words denoting the usurper or stealer of the wife. The sense is distinct from that of **ḍin?-miri* 'having a wife', if the latter form exists at all.

28. Murinjpata

Michael Walsh

Murinjpata is a multiple-classifying, prefixing language, spoken mainly at Port Keats in the north-west of the Northern Territory.

A-1. Nominal Affix

A-1a. Form

The form has one allomorph: */-ma/*.

A-1b. Grammatical function

/-ma/ is suffixed to noun-classifiers (NC:):

paljun ma-kaḍu-ma

woman NEG-NC: person-'having'

'woman not having man (i.e. spinster)'

and to nouns:

paljun ma-nayga wakal-ma

woman NEG-NC: 'thing' child-'having'

'childless/barren woman'

'Having' forms take the full range of nominal inflections (viz. ERGATIVE, INSTRUMENTAL, NOMINATIVE and DATIVE).

A-1c. Semantic function

1. Human agent at rest, with/accompanied by X
 - (a) holding something inanimate
Murinjpatha uses a separate verb 'have'
kaḍu paŋu tamul kaḍin kaɪim
NC: person that spear 3sg.have 3sg.stand
'That man is standing with a spear.'
 - (b) in the company of humans
A locative preposition may be used, or, the mutual activity is expressed in the verb as shown:
kaḍu-kigayyi kem ŋaɪa kaḍu-ŋalandar
NC: person-young man 3sg.sit LOCATIVE NC: person-old man
'The boy is sitting down with the old man.'
- OR *kaḍu-kigayyi (yi) kaḍu-ŋalandar kem-ninda*
NC: person-young man and NC: person-old man 3sit-DUAL MASC
'The boy is sitting down with the old man.'
2. Human agent moving, with/accompanied by X
 - (a) holding something inanimate (that does not assist his movement).
The construction is analogous to 1(a):
kaḍu paŋu tamul kaḍin w-uɪan
NC: person that spear 3sg.have 3sg.not visible to speaker-move
'That man is coming with a spear.'
 - (b) holding something inanimate (that may be helping his locomotion).
The INSTRUMENTAL suffix is used. Note: all nominals (nouns or noun-classifiers) are in the unmarked, NOMINATIVE case, /-ɸ/, unless otherwise stated:
kaḍu-pule paŋir wuɪanmaḍawit̩ tayi-winadaɸ-te
NC: person-very old man- hill 3sg.climb stick-walking-INSTR
'The very old man is climbing the hill with a walking-stick.'
 - (c) in the company of human(s).
A sentence like 'The man is coming here with his wife' is transposed in Murinjpatha into 'The man and his wife are coming here together'.
kaḍu-nugaŋ (yi) puɪima-nukumu wuɪan-ŋinda kaŋi
NC: person-husband and wife-3sg.masc. 3move-DUAL FEM here
'Man and his wife are coming here.'
3. Human agent using an instrument to perform some action. This function is handled by the INSTRUMENTAL case inflection. 'Axe' would take the INSTRUMENTAL case in 'The man hit his wife with an axe' or 'The man used an axe to chop wood'.
4. Describing the characteristics of a place. Typically, in Murinjpatha the place is put into a locative expression while the attribute may be made the subject of an existential expression or, of some typical activity of the attribute.
Thus a sentence like 'The camp site has many flat stones' is remoulded to become: 'Many flat stones (are) in the camp site' while 'The river has many fish' becomes 'Many fish (are)/swim in the river.'
5. The time or season word does not occur with the suffix /-ma/.
6. Murinjpatha has a variety of ways of denoting states. Stative adjectives (rather than abstract nouns) or impersonal verbs, wherein the person

undergoing the state is cross-referenced into the verb in direct object form, are used, or, the English expression is remoulded as shown in the examples:

I'm hungry	becomes	1sg. hungry
		1sg. have NEG-food
		1sg. want food
I'm thirsty	becomes	3sg. 'thirsts' 1sg. water-DATIVE
I'm sick	becomes	1sg. sit sick

7. /-ma/ is not used to describe fear of a person or a thing. Such expressions occur in Murinjpatha as follows:

- (a) *maḍa tuɪu-wa paŋu kaḍu-pule yiḍa*
NEG 2sg.move-EMPH there NC: person-old man BECAUSE
'Don't go there for fear of the old man.'
- (b) *pataŋu tuɪu-nu waja tuŋgu*
beware 2sg.move-FUT away fire
'Keep away from the fire.'

In summary, the derivational affix, /-ma/, has none of the semantic functions listed above. However it does have three other functions which might be translated as:

- (a) larger/more well endowed with, than the norm
- (b) sore
- (c) habitually associated with

Of these (c) is the most common; (a) and (b) are restricted to body parts.

Examples:

- (i) *kaḍu ŋi-ma*
NC: person penis-'having'

In terms of (a), (i) is translated as: 'boy having (relatively) large penis' but not as '*man having (relatively) large penis'. This seems to be because it is predictable for the man's penis to be relatively large but not so the boy's; in addition, to suggest that a man is disproportionate in this respect is highly derogatory so that it is assumed the latter interpretation is avoided for taboo reasons.

(a) appears to have the additional meaning of 'increasing in size, budding, or, burgeoning'. This helps to explain the readings allowed in (i), and, in (ii) and (iii) below.

In terms of (b), (i) is translated as: 'boy/man having sore penis' and in terms of (c) as: 'man habitually associated with penis, [that is] man who performs circumcision in initiation ceremonies'.

- (ii) *kaḍu paŋun ŋapulu-ma*
NC: person woman breasts-'having'
'woman with *large/sore breasts'
- (iii) *kaḍu maḍinbuyyi ŋapulu-ma*
NC: person girl breasts-'having'
'girl having large/sore breasts'

Other body parts allow only one reading for /-ma/:

- (iv) *kaḍu ŋimu-ma*
NC: person nose-'having'
'person with keen sense of smell'
'*person with sore nose'

- (v) *kaḍu pingal-ma*
 NC: person knees-'having'
 'person with sore knees'
 '*person having knees larger than the norm'
 /-ma/, in sense (c), may occur with persons:
- (vi) *kaḍu tamul-ma*
 NC: person spear-'having'
 'man habitually associated with a spear [for example] good huntsman'
- (vii) *kaḍu piḷa-ma*
 NC: person picture-'having'
 'man habitually associated with pictures [for example] photographer'
- and with two things:
- (viii) *naḍi niṭi-ma*
 NC: thing arm-'having'
 'thing habitually associated with arm [that is] shirt'
- (ix) *naḍi lawali-ma*
 NC: thing upper leg-'having'
 'thing associated habitually with upper leg [that is] trousers'

A-2. Verbal affix

There does not appear to be any verbal affix showing either formal or functional similarities to nominal having.

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29. Proprietary markers and kinship terms

J.G. Breen

Many languages have what, for want of a better name, I am calling 'kin proprietary' noun stem formatives.¹ Typically, a language has one or both of two types: third person kin proprietary and non-singular kin proprietary. Occasionally there is a second person and rarely a first person kin proprietary.

The third person proprietary suffix is added to a kinship term X appearing in a phrase to denote that the person referred to is in the relationship denoted by X to, that is, is called X by, another person specified in another phrase (which may be in the same or a preceding sentence). Probably—although I have no evidence on this point—the other person need not be specified at all but may simply be known from the context.

The non-singular kin proprietary is added to a kinship term X to denote that there are two or more people involved, one of whom is in the relationship X to the other(s), the other(s) not being separately specified.

The second and first person kin proprietary affixes denote that the person referred to is in the relationship X to the person(s) spoken to, or to the speaker(s), respectively.

These suffixes may be illustrated by examples from Pitta-Pitta which has third person, second person and non-singular kin proprietary suffixes, the last being also the normal proprietary.

- (1) *wajiwarāna ḡuluka piṭika*
 y.br.-3kp-acc. he-op-there hit-past
 'He hit his (younger) brother.'
- (2) *piyakāḡalu yapiriwaralu ḡukaya kuntiyinu*
 daughter-acc-? father-3kp-op take-pres house-alla
 'The father is taking his daughter to town.'
- Note that in a sentence of this type -wara can be affixed to either or both of the kinship terms.
- (3) *puni ṭanaka piṭimaliya ḡari ḡiṭimaru*
 all they(plu)-there hit- recip-pres now e.br.-prop
 'All the brothers are fighting now.'
- (4) *ḡiṭimaru pulaka ḡaḡkaya*
 e.br.-prop they(du)-there sit-pres
 'The two brothers are sitting together.'
- (5) *ḡapiṭimaru pulaka*
 father-prop they(du)-there
 'Those two are father and son.'
- (6) *miṅa ḡuwaka kanyinimala*
 what? he-there dau's child-2kp
 'Is that your grandson?'
- (7) *ḡiṭimalaṅa piṭika ḡuluka*
 e.br-2kp-acc hit-past he-op-there
 'He belted your brother.'

Note the contrast between

- (8) *kanyiniwara ḡanytya*
 mo's mo-3kp I
 'I'm his grandmother.'

and

- (9) *kanyinimaru ḡali*
 mo's mo/fa's ch-prop we(du)
 'We're grandmother and grandson.'

Note also the contrast with (10), in which the 'proprietor' is not involved in any direct way in any action or state described by the sentence.

- (10) *ḡiṭi pulaka ḡanyari ḡaḡkaya*
 e.br they(du)-there my sit-pres
 'My two (elder) brothers are sitting there.'

This sentence could, however, use a first person kin proprietary suffix if the language had one.

The second person proprietary is not obligatory;

- (11) *ḡiṭi pulaka yinkari ḡaḡkaya*
 e.br they(du)there your sit-pres
 'Your two brothers are sitting there.'

is quite acceptable. However, the third person proprietary may be obligatory: it occurs redundantly in some cases, for example:

- (12) *kupakupaja ŋiŋiwara*
old man-gen e.br-3kp
'The old man's brother.'

Note that third person kin proprietary is not simply a third person equivalent of first and second person kin proprietives; it refers to a 'proprietor' who is specified somewhere outside the phrase in which it occurs. (Example (12) is considered as comprising two phrases.)

Some languages are like Pitta-Pitta in using the proprietary also as a non-singular kin proprietary but have no other kin proprietary affixes. For example, some of the languages of the Mari Group; the example is taken from the south-westernmost member, Marganj, in which the suffix is *-bari*.

- (13) *bula bamabari balgaraani*
they(du) brother-prop hit- recip-contin-pres
'The two brothers are fighting.'

However, some at least of these languages have suffixes used only with kinship terms and whose function is not known to present-day informants; for example the root *ɖagu* in Bidjara means 'elder brother' but *ɖagunu* and especially *ɖagunydyila* are more common. These suffixes may be former kin proprietary affixes; note the similarity between *-nydyila* (one of several allomorphs, others including *-yila*, *-dyila*, *-riyila*, *-diyila*, *-dila*) and the non-singular kin-proprietary suffix *-nydyir* of Mayagulan (Bandjil Sub-group of Mari Group).

Mayagulan seems to be unusual in having separate affixes for proprietary, third person kin proprietary and non-singular kin proprietary. The two kin proprietary affixes, *-mir* and *-nydyir* respectively, are illustrated below, example (14) being from the Ngawun dialect.

- (14) *imbamiriŋgi ɖurginu dyalaru gamuŋgu*
mother-3kp-op wash-past baby water-op
'The mother washed the baby.'
- (15) *dana guluminydyir bunydyambiŋu*
they(pl) sister-nskp hit- recip-pres
'All the sisters are fighting.'

Another such language is Wanyi,² but in this case there is a dual, not non-singular, kin proprietary; for the plural the normal plural marker is used. The affixes are *-ŋanydya* and *-gula* (third person and dual, respectively).

Some languages use the same suffix for both third person and non-singular kin proprietives. This is the case in Gog-Nar (examples (16) and (17)) and probably in Yalarnnga and Kalkatungu.

- (16) *ŋiŋimaraŋk* 'his father'
father-kp
- (17) *muŋók maraŋk purəm kanaŋk karim pilaŋ*
elder brother kp there now fight-pres they(du)
'The two brothers are fighting.'

Wagaya uses *-ŋəŋdu* (masc)/*-ŋəŋdi* (non masc) in both functions, but the further affix *-gəra* may be used in the non-singular, and the dual or plural suffixes, as appropriate, may also be added (whether or not *-gəra* is used).

- (18) *dyirəwəni:bulu irdyadəg lələŋəŋdan*
spear-past-that spear-op e.br.-kp-abl
'He speared that fellow on account of his brother.'
- (19) *gəwəwəlaŋ iməl gunəndiy mimi:məŋəŋdu*
child-op-me this-op call-pres mother's father-kp
'This kid calls me grandfather.'
- (20) *lələŋəŋdawiy*
e.br.-kp-du
'Two brothers' or 'brother and sister' (if the brother is the elder)
- (21) *mimi:məŋəŋdəgərawiy*
mo.fa-kp-non sg.-du
'We're grandfather and grandson (or granddaughter).'

There is an allomorph *-ŋu* of the plural which occurs only after *-gəra*; however the normal plural suffix *-(a)wəl* may also be used with *-gəra*. Note also that the word *dyiməru* (masc)/*dyimər* (non-masc) 'mate, friend' acts as a kinship term with regard to the kin proprietary.

- (22) *dyimərəŋdəgəraŋugany bəŋgar*
mate-kp-non sg-plu-away go-along
'All the mates are going away together.'
- (23) *dyimərəgərawiy* 'Two mates'
mate-non sg-du

The situation in Wagaya is further complicated by the fact that some kinship terms use different allomorphs of the kin proprietary, some of these allomorphs differ in function and may be detached from the stem only in certain special cases, the stems of some kinship terms seem to include a fossilised former kin proprietary suffix and some of the kinship terms in the last group do not combine with the present kin proprietary suffix. Thus we have *ɖunuygu* (masc)/*ɖunuygi* (non-masc) 'younger sibling' combines with *-ɖu/-ɖi* to give *ɖunuyguɖu* (masc)/*ɖunuyguɖi* (not **ɖunuygiɖi*) (non-masc) 'his/her younger sibling'. *wəriŋədu/wəriŋədi* also 'younger sibling' seems to have a stem *wəru/wəri*, but this occurs only in the words *wəriŋyuwiy* 'both (my) younger siblings' and *wəriŋəwul* 'all (my) younger siblings'. *uguɖu* and *ŋulipɖu* both mean 'father' and it appears that neither can combine with a kin proprietary suffix nor lose the final syllable. On the other hand *guɖuɖu* 'father's father', which also seems to contain a fossilised former allomorph of the kin proprietary, does combine with *-ŋəŋdu*. Other kinship terms which do combine with *-ŋəŋdu* include *mimi:mu* 'mother's father', *ŋini:mu* 'son' and *bubabu* 'mother's brother' and in these cases it seems possible that the last syllable is a relic of a kin proprietary suffix and that a rule of consonant harmony may have operated.

Wagaya also has some terms for pairs of kin; thus *imaɖəwiy* means 'father and son', *ubarəwiy* means 'married couple' and *ubarəwəl* 'married couples'. There may be other such collective terms.

Warluwara and Bularnu have a suffix *-mugara* which is used as a non-singular kin proprietary; there is no third person kin proprietary. *-mugara* may have originated as a compound suffix; *-gəra* is probably cognate with Wagaya *-gəra* and *-mu* may be cognate with *ŋəŋdu*. Bularnu also has a second person kin proprietary *-ida* which is obviously a bound form pronoun;

ida is the purposive form of the second person singular pronoun and *idam* the genitive.

- (24) *yibalana lalanida yanatayi*
 you(du)-acc e.br.-nom-2kp see-purp
 '(I) will see you and your brother?'

It is not yet clear whether *-mugara* could be used in the equivalent sentence in Warluwara; *-nan̄du* would certainly be used in Wagaya as shown by the following sentence (where it appears as *-ḡə-*).

- (25) *mulumulumalan unbar, ibala dununḡuḡəgaraya!*
 tidy up-fut-I house, you(du)-voc y.sibling-kp-nom sg-du-op
ḡambəl maḡu:lidy ḡuḡəl ḡuḡəl ləbələbi
 we(plu, incl) together-plu-op throw-fut throw-fut things
 'I'm going to tidy up the house; you and your sister can help me throw out the rubbish.'

Andegerebinha is typical of Arandic languages in that it has first, second and third person forms of kinship terms, the affixes being basically *-adya*, *-angwa* and *-ayəgwa* respectively. However, the third person affix does not correspond to the third person kin proprietary affix in other languages but is simply parallel to the first and second person forms. Thus *madya* means 'my mother', *man̄gwa* 'your mother' and *mayəgwa* 'some third person's mother'. There is no non-singular kin proprietary affix. However, there is a system of non-singular pronouns in which some account is taken of the relationships between the persons involved. This has been described by Hale (unpublished paper: 'Language and Kinship in Australia'); there are three contrasting sets of pronouns involving alternate generation levels and an opposition between agnate and non-agnate. The former opposition is neutralised where the persons denoted are non-agnate to each other. The unmarked form of the pronoun is used where the persons denoted are agnate and differing in generation level by an even number (which may be zero), for example, *mbula* 'you two (e.g. brothers, or a man and his father's father)'. The marked forms denote agnate and differing in generation level by an odd number, for example, *mbulaga* 'you two (e.g. father and son)', and non-agnate, for example, *mbulan̄ḡa* 'you two (e.g. man and wife, uncle—i.e. mother's brother—and nephew)'.
 Hale has suggested (unpublished discussion at this symposium) that 'having' or proprietary affixes may be derived from earlier forms of the numeral 'two'. The phonological form of some proprietary affixes supports this theory. The phonological form of some kin proprietary affixes also strongly suggests that they have been derived from the same source. In fact, Gugadj has a kin proprietary affix *-tyira* which is possibly derived from the proto-form for 'two', **kutyara* or **kutyiri*, and which seems to be confined to the dual in its function. This is the only kin proprietary affix in the language and its use requires further investigation. Examples are

- (26) *kaḡiltyira* 'two sisters'
 e.sis-dkp

and

- (27) *pulyira* 'father and son'
 father-dkp

Other kin proprietary affixes which may be cognate with Gugadj *-tyira*

are Mayagulan *-nydyir* (non-sg), Bidjara *-nydyila* and other forms (meaning unknown), Yalarnnga *-(y)anytya* and Kalkatungu *-(y)inytyi* (possibly third person and non-sg), Wanyi *-ḡanydyā* (third person) and Gudandji *-ḡulanydyi* (first part, *-gula*, may be related to the Wanyi dual kin proprietary *-gula* and possibly also the Ngamini dual formative *-guli*).

It will have been noted that a number of other kin proprietary suffixes show evidence of a shared source, possibly **mara*, whose meaning can only be guessed at this stage. These include Pitta-Pitta *-mala* (second person) and possibly *-maru* (proprietary), Yandruwantha *-mara* (second person), Ngamini *-māra* (non-sg), Arabana *-mara* (third person) (Hercus, this symposium), Gog-Nar *-maran̄k* (third person and non-sg), Mayagulan *-mir* (third person), possibly Warluwara and Bularnu *-mu* in *-mugara* and conceivably Wagaya *-ḡan̄du-ḡan̄ḡi*.

We have given evidence that some kin proprietary affixes may be derived from a proto-form for 'two'. Evidence that kin proprietary affixes have in the past been generalised to become proprietives, combinable with all nouns, would therefore provide further support for Hale's theory.

The Gog-Nar corpus contains one example of combination of *-maran̄k* with a noun other than a kinship term; this is *kalkmaran̄k*, 'with a spear'. This seems to have the same meaning as *kalkwóləm* which also occurs in the corpus, *-wóləm* being the normal proprietary suffix. Even if *kalkmaran̄k* is a mistake on the part of the informant, it still provides evidence that such a generalisation could take place.

In Ngamini there is a non-singular kin proprietary suffix *-māra*, as in

- (28) *pulaya wapayi ḡarpimāra*
 they(du)-here go-pres father-nskp
 'The father and son are walking together.'

The concept 'having', expressed in most languages by a proprietary suffix, is expressed in Ngamini by a verb 'to have' *ḡamaka*, derived from the verb *ḡama* 'to sit' with the causative suffix *-ka*.

- (29) *ḡaḡi ḡapala ḡamakayi, yuḡa wayiḡa*
 I water-emph have-pres, tucker cook-purp
 'I've got water for cooking.'

This is used even in a sentence like

- (30) *ḡulukatu parkuna ḡamakayi naḡara*
 he-op-there two have-pres y.br
 'He's got two brothers.'

However, *-māra* can combine with one word which, in other languages, frequently combines with the proprietary suffix—'nothing'. In Ngamini this is *wan̄ku*, and it functions also as a privative suffix.

- (31) *wan̄kumāra ḡanyi ḡamana warayi*
 nothing-prop I sit-past
 'I had nothing.'

Stronger evidence is provided by Yandruwandha, in which the non-singular kin proprietary has expanded to take on also a comitative and proprietary function (although we must not disregard the possibility that it was an early comitative that expanded). In examples (32) to (35) we have a purely proprietary suffix, *-minydyi*, semantically a converse of the privative *-pani*. Like

the proprietive in most languages (or *ɲamaka* in Ngamini as in example (30)) it is combinable with kinship terms.

- (32) *malkaminydyi* 'striped'
mark-prop
- (33) *ɲuyaminydyi* 'well built', 'good looking'
good appearance-having
- (34) *muruwaminydyi ɲala yini*
child-prop now you
'You've got a baby now.'
- (35) *paŋga ɲutyaru ɲipaminydyi*
young man he-there spouse-prop
'That young man is married.' (*ɲipa* is a kinship term)

In examples (36) to (41) we have an affix *-ɲurru* whose function, as we go through the examples, seems to go from kin proprietive through comitative to proprietive (but it differs from *-minydyi* in not referring to inalienable possession when it functions as a proprietive).

- (36) *ɲipaɲurru* 'married couple'
spouse-nskp
- (37) *ɲuɲuɲurru pula ɲirriɲana*
e.br.-nskp they(du) fight-past
'The two brothers were fighting.'
- (38) *ɲipaɲurru ɲunu ɲawaɲana*
spouse-com he go-past
'He went there with his wife.'
- (39) *pandiɲurru ɲunu ɲawaɲana*
dog-com he go-past
'He went with his dog.'
- (40) *ɲarraɲitaɲurru ɲirri kaɲa ɲunu ɲawaɲana*
shield-prop fight maybe he go-past
'He took his shield; he might expect trouble.'
- (41) *maɲa ɲaɲu paɲɲala paɲɲaɲurru*
hand I hold-pres sand-prop
'I've got a handful of sand.'

Yandruwandha also has first and second person kin proprietive suffixes.

While this paper may provide evidence for the derivation of some proprietive affixes from an earlier 'two', it seems equally to provide evidence that not all proprietive affixes arose in this way. The presence in a language of two or more proprietive affixes, quite different in phonological form, shows that other sources for proprietives must also be considered. The fact that some proprietive affixes have also comitative functions (for example, in Yandruwandha, also in some of the languages discussed in this symposium, although in most of these cases, including Yandruwandha, there seems to be some doubt whether the function is really comitative, in the sense of both parties being of equal status with respect to the action) suggests that some proprietive affixes may have originated through shift of functions of an earlier comitative (which, in its turn, may be derived from a locative, as in Warluwaru, see Topic B). This possibility should be further investigated.

Notes

1. This paper has been written in the field and I have had access only to the papers of this Conference and some of my own notes on western Queensland and other languages. Study of other published material would no doubt provide much further information.
2. I am not certain that my informant's language is Wanyi and not Garawa. However, they are closely related.

30. The 'having' affix and other morphemes in fifty Australian languages

Peter Sutton

We discuss fifty Australian languages whose 'having' affix (proprietive) and other morphemes show formal similarities to each other. These forms are sorted into a small number of categories based on possible cognateness.

Until the relevant information can be systematically compared among a larger number of Australian languages it will probably not be possible to form a clear picture of the semantic/syntactic relationships which have linked proprietive, reflexive, reciprocal, verbalising and other morphemes. What these links show us about the articulation of various parts of the grammar of a language at a single point in time is even more interesting than what they reflect of diachronic developments.

The lists of forms which follow this preliminary discussion were grouped together on the basis of formal similarity and the possession of a grammatical function which fell within the following rather broad range (it was felt preferable to include too much in the way of 'possibilities' rather than too little):

proprietive ('having' affix)	(PROP)
emphatic pronoun/one's own	(EMPH PRON/ONE'S OWN)
conjunction	(CONJ)
general emphatic	(EMPH)
dual	(DU)
plural	(PL)
reflexive	(REFL)
reciprocal	(RECIP)
transitive/intransitive	(TR/INTR VSR)
verbaliser	
causative/transitiviser of intransitive verbs	(CAUS/TRSR OF INTR VBS)
verbal comitative/instrumentive	(VB COM/VB INST)
antipassive	(ANTIPASSIVE)

A small number of forms with other functions were included for interest (for example, general obliques *-ga* in Wemba-Wemba and Gunwin-gu).

Non-Australian languages which show similar formal links between these areas of grammar might be investigated and found to be illuminating by comparison. Discussion of Latvian, Fijian and English follows.

Latvian

Reflexive also functions as reciprocal and as intransiviser of transitive verbs: verbal comitative ('while coming') is formally identical with verbal emphatic ('whatever may come'). It is of interest that Latvian, as English, has a single case-marker both for transitive and intransitive subject, and for instrumental and propriative (in the latter case, English has, for example, 'he cut it with a knife' and 'he came here with a knife'). Latvian instrumental/propriative may also have a locative function where the relevant NP is plural and there is a preposition:

<i>kresls</i>	chair-NOM	'the chair'
<i>krēslos</i>	chairs-LOC	'in the chairs'
<i>uz krēsliem</i>	on chairs-INST/PROP	'on the chairs'

In Australian languages, 'transitive instrumental' is most frequently identified with either ergative or locative case, and 'intransitive instrumental' (that is, the propriative) with reflexive, reciprocal, intransitive verbaliser or something else. A comparison with languages like Latvian and English suggests that where verb transitivity affects case-marking of grammatical subjects, it also tends to affect the affixation of 'instruments' in a parallel fashion (using 'instrument' to refer loosely to something associated with an action without being either actor or goal). Reflexive/reciprocal verbs are normally intransitive in Australian languages. If we postulate an underlying dummy intransitive verb for propriative constructions, we can say that the underlying link between morphemes for propriative, reflexive, reciprocal, intransitive verbaliser, etc., is verb intransitivity. If we remove verb transitivity as a determining factor in the marking of sentential subjects, we also remove a distinction between instrumental (agent of transitive subject) and propriative (agent of intransitive subject). For example, Dyirbal² has comitative and instrumentive verbal complexes which entail nominative marking on both intransitive and transitive instruments, and a single affix (-mal ~ -m(b)al) is added to the verb. In an instrumentive verbal complex the transitive object is marked dative. Note that the verbal comitative/instrumental is identical with the transitiviser of intransitive verbs.

Fijian³

The instrumentive form of an intransitive verb entails the use of a transitiviser:

<i>au sa ḍambe</i>	'I climb'
<i>au sa ḍambeta na βale</i>	'I climb (on) the house'
<i>au sa ḍambetaka na matau</i>	'I climb with an axe'

English

Transitive and intransitive instruments are identified with accusative in English:

He hit <i>him</i>	accusative
I went <i>with him</i>	intransitive instrument (accompaniment)
He had a knife <i>with him</i>	intransitive instrument (possession)
I've caught rabbits <i>with him</i>	transitive instrument
(i.e. using a ferret)	

The identification of propriative and instrumental in English can be shown

by equivalences between 'with'-constructions and 'having'-constructions, and their ability to signal reflexive and reciprocal as well as both transitive and intransitive action (English 'have' is a dummy verb of the sort postulated above as being part of underlying structure for Australian languages, except that 'have' is pseudo-transitive while the other is intransitive all the way). See the following examples:

basically transitive

- (a) I bashed/dug/hit; I *had* a bash/dig/hit; I began *with* a bash/dig/hit
 (b) I washed/shaved/scratched (± myself): (*reflexive*)
 I *had* a wash/shave/scratch;
 I began *with* a wash/shave/scratch
 (c) We fought/argued/chatted (± (with) each other): (*reciprocal*)
 We *had* a fight/argument/chat;
 We began *with* a fight/argument/chat

basically intransitive

- (d) I walked/swam/fell:
 I *had* a walk/swim/fall;
 I began *with* a walk/swim/fall

List of possible cognates

It is noticeable that propriative affixes in Australian languages show reasonably high cognation, while privative affixes do not. This may derive from the apparent relationship of the former to basic areas of syntax such as verb transitivity.

While many of the following tentative cognates are disyllabic, partial cognateness between disyllables is usually in terms of monosyllables of the shape CV. Certain CV+CV combinations clearly occur more often than others, for example, **ḍi*+**ri* and **ḍa*+**ri*, and **wa*+**ra* and *(*m*)(*b*)*a*+*ri*. The major CV candidates for a list of proto-forms are:

- **yi* ~ **ḍi* (alternation probably depends on stem ending)
- **ri* (commonly a flap or trill or lateral, also *r*)
- *(*m*)(*b*)*a*⁴ (alternation often depends on stem ending)
- **wa*
- **ga*
- **ra* (commonly a flap or trill)
- **ḍa*

Note that **ri* and **ra* do not normally occur as the first CV of a disyllabic affix.

For purposes of brief tabulation and quick comparison I have oversimplified the definitions and functions of most of the morphemes in the following list, have regularised spellings (using the 'voiced' consonant series, etc.) and several times shown syllable structures in the more usual way (for example, writing *-dayil* instead of *-dail*). Some cognate forms are uncommon in the language concerned and have been included, while the more usual forms, if apparently non-cognate, have been excluded.

The consonants of Australian languages can be grouped into three categories: laminals, peripherals (*b*, *g*, *m*, *w*, etc.) and apicals. Diachronic changes and synchronic morphophonemics establish the validity of these

basic divisions. Phonological changes usually operate within these categories, not across them. That is, we often have changes such as **q* > **dj* > **y* and **b* > **w*, or **q* > **l* and **g* > **ɣ*, but changes from laminal to apical are rare, for example. Cases of **ɲ* > **ɳ* and **dj* > **g* are not so rare (at least when preceding **i*). The articulator tends to remain constant, the place and manner may change more easily.

The order of the lists below is:

A. Laminal + V

- (1) *-yi* ~ *-dji* ~ *-ɖi* ~ *-li*
 (2) *-ya* ~ *-dja* ~ *-ɖa* ~ *-nja*

B. Peripheral + V

- (1) *-wi* ~ *-bi* ~ *-gi* ~ *-mi*
 (2) *-wa* ~ *-ba* ~ *-ga* ~ *-ma*

C. Apical + V

- (1) *-ri* ~ *-ɾi* ~ *-ɽi* ~ *-di* ~ *-ɖi* ~ *-li* ~ *-ɭi*
 (2) *-ra* ~ *-ɾa* ~ *-ɽa* ~ *-da* ~ *-ɖa* ~ *-la* ~ *-la*

A (1) laminal + i

Wemba-Wemba	PROP (restricted)	<i>-dayil</i>
Wemba-Wemba	RECIP	<i>-djera</i>
Dhan-gadi	PROP	<i>-ray</i>
Dhan-gadi	VERBAL NOUN	<i>-baɖay</i>
Gidabal	VB COM (accompn)	PROP + <i>-ye/-ya</i>
Gidabal	VB COM (simult)	<i>-dje/-i</i>
Bidjara	PROP	<i>-bayi</i>
Gugu-Badhun	PROP	<i>-yi/-dji</i>
Warungu	PROP	<i>-yi/-dji</i>
Warungu	CATALYTIC	<i>-yi</i>
Warungu	STATIVE/PARTICIPIAL	<i>-ldji</i>
Warungu	ONE'S OWN	<i>warayi</i>
Dyirbal	REFL (<i>-l</i> FOOT)	<i>-riy/-yiriy</i>
Dyirbal	RESIDUAL PL	<i>-rdji</i>
Dyirbal	CATALYTIC	<i>-djin</i>
Dyirbal	INTENSIFIER ⁵	<i>-djilu/-dju</i>
Yir-Yoront	PROP	<i>-y(ə)</i>
Yir-Yoront	RESIDUAL PROP	<i>-l⁶</i>
Flinders Is. Language	PROP	<i>-(y)i/-(y)ilbo</i>
Flinders Is. Language	REFL/RECIP	<i>-yi</i>
Flinders Is. Language	ONE'S OWN	<i>malayi</i>
Yugulda	REFL (<i>-q</i> >)	<i>-dj</i>
Yugulda	RECIP	<i>-ndjud/-(n)ɖud</i>
Alyawarra	CONJ	<i>-aɖina</i>
Alyawarra	CAUS	<i>-iqiga</i>
Warlpiri	EMPH	<i>-dju/-dji</i>
Thargari	INST NOUN FORMATIVES	<i>-adjl/-rdjl/-djl/-adja</i>
Gupabuyngu	INTR VSR	<i>-ɖiri</i>
Djambarbuyngu	INTR VSR	<i>-ɖir</i>

Riratjingu	INTR VSR	<i>-yi/-dji</i>
Gunbalang	REFL	<i>-yi</i>
Gunbalang	EMPH PRON	<i>-dji</i>
Gunwin-gu	'maker of'	<i>-yi</i>
Yiwadja	RECIP	<i>-ndjilin</i>
Ngarinyin	REFL	<i>-yi/-re</i>
Yanyuwa	PROP	<i>-(w)idji/-(n)bidji</i>
Yanyuwa	REFERENT	<i>-yi</i>
Yanyuwa	DIRECTIVE/ACCESSORY	<i>-ndji</i>
Alawa	REFL	<i>-ndji/-ndja</i>
Alawa	PROP (alienable)	<i>-wandji</i>
Djingili	2SG REFL	<i>-ɳandjig-</i>
Rembarnga	PROP	<i>-yi</i>
Djaabugay	RECIP	<i>-djiri</i>
Kuuku-Ya ⁹ u	RESIDUAL PROP	<i>-dji</i>
Yidip	PROP	<i>-yi/-dji</i>
Yidip	REFL, ANTIPASSIVE	<i>:-dji</i>
Baagandji	REFL	<i>-ɖiri</i>
Wangaybuwan	REFL	<i>-djili</i>
Murawari	PROP	<i>-yida/-bida</i>
E. Bidha-Bidha	PL	<i>-bidjiri/-bari</i>
E. Bidha-Bidha	DU	<i>-djila/-bargula</i>
W. Bidha-Bidha	DU, PL	<i>-djila, -dji</i>

A (2) laminal + a

Gugu-Badhun	PROP (restricted)	<i>-ɖari</i>
Warungu	DUAL	<i>-djaran</i>
W. Bidha-Bidha	PROP	<i>-ɖa</i>
Galgadungu	PROP	<i>-yan</i>
Galgadungu	INTR VSR	<i>-(ɖ)adi</i>
Warluwara	VB NOMINALISER	<i>-ɖa/-ɖja/-ɖi/-dji</i>
Pitjantjatjara	PROP	<i>-ɖjara</i>
Warlpiri	PROP	<i>-ɖjanga</i>
Thargari	VB COM	<i>-(ini)ya</i>
Thargari	RECIP (intr.)	<i>-yari</i>
Thargari	INST N FRMTV	<i>-ddji/-rdji/-dji/-adja</i>
Alawa	REFL	<i>-ndji/-ndja</i>
Maranunggu	PROP	<i>-widja</i>
Walmadjari	PROP	<i>-ɖaɖi</i>
Wangganguru	PROP (restricted)	<i>-ɖabu</i>
Baagandji	PROP	<i>-(malga)dja</i>
Wunambal	INST	<i>-ɳjane</i>
Malak-Malak	PROP	<i>-yen</i>

B. Peripheral + V

B (1) peripheral + i

<i>-wi</i> <i>-bi</i> <i>-gi</i> <i>-mi</i>		
Maranunggu	PROP	<i>-widja</i>
Yanyuwa	PROP	<i>-(w)idji/-(n)bidji</i>
Yanyuwa	PL	<i>-biri</i>

Gugu-Badhun	PL (residual PROP?)	- <i>bi</i> ri
E. Bidha-Bidha	PL	- <i>bid</i> jiri
Alyawarra	PROP	- <i>agi</i> da
Warlpiri	PROP	- <i>gulu</i> /- <i>gili</i>
Gupabuyngu	PROP	- <i>miri</i>
Gupabuyngu	REFL/RECIP	- <i>miri</i>
Gunwin-gu	INTR VSR	- <i>minj</i> /- <i>men</i>

B (2) peripheral + a

- <i>wa</i> - - <i>ba</i> - - <i>ga</i> - - <i>ma</i> -		
Gugu-Badhun	RECIP	- <i>wa</i>
Warungu	ONE'S OWN	<i>wa</i> rayi
Gog-Nar	PROP	<i>wol</i> am
Yir-Yoront	PROP	- <i>w</i> (<i>ər</i>)
Yir-Yoront	ONLY	-(<i>w</i>) <i>ar</i> (<i>l</i>)
Yir-Yoront	RECIP	-(<i>r</i>) <i>uw</i>
Flinders Is. Language	PROP (clans)	- <i>wa</i> ra
Galgadungu	PROP	- <i>wara</i>
Warluwara	PROP	-(<i>w</i>) <i>a</i> (<i>r</i>) <i>a</i>
Warluwara	REFL PRON	-(<i>w</i>) <i>a</i> (< - <i>ba</i>)
Warluwara	CONJ	- <i>wa</i> (<i>ra</i>)
Ararnda	ONE'S OWN	<i>wa</i> ra
Thargari	PROP (allomorph)	- <i>wari</i>
Gunbalang	PROP (?)	- <i>ware</i> (<i>n</i>)
Alawa	PROP (inalienable)	- <i>war</i>
Alawa	PROP (alienable)	- <i>wand</i> ji
Gunwin-gu	SELF	<i>wali</i>

Gidabal	PROP	- <i>ba</i> :
Bidjara	PROP	- <i>bari</i>
Gugu-Badhun	PROP (residual)	- <i>bara</i>
Gugu-Badhun	PROP (clans)	- <i>bara</i>
Gugu-Badhun	PROP (restricted)	- <i>bari</i> /- <i>mbari</i>
Dyirbal	PROP	- <i>ba</i>
Dyirbal	REFL (- <i>y</i> stems)	- <i>bariy</i> /- <i>mbariy</i> /- <i>mariy</i>
Dyirbal	RECIP	REDUP + - <i>bariy</i> /- <i>nbariy</i>
Dyirbal	PL (residual)	- <i>nba</i>
E. Bidha-Bidha	DU	- <i>bargula</i> /- <i>djila</i>
E. Bidha-Bidha	PL	- <i>bari</i> /- <i>bidjiri</i>
W. Bidha-Bidha	PROP	- <i>da</i> /- <i>bari</i>
Warluwara	REFL PRON	- <i>ba</i>
Ararnda	CONJ	<i>ba</i>
Warlpiri	PROP	- <i>banda</i>
Garadjari	PROP	- <i>bari</i>
Thargari	PROP	- <i>bari</i> /- <i>wari</i>
Thargari	RECIP	- <i>dbari</i> /- <i>rbari</i>
Rembarnga	PROP	<i>ba</i> dda-
Rembarnga	DU	- <i>bara</i>
Biri	PROP	- <i>bari</i>

Wemba-Wemba	GEN OBLIQUE	-(<i>g</i>) <i>a</i>
Gugu-Badhun	TR VSR	- <i>ŋa</i>
Warungu	ANTIPASSIVE	- <i>gali</i>
Warluwara	PROP (restricted)	- <i>gala</i>
Warluwara	CONJ ADVERB	<i>gara</i>
Yugulda	PROP	- <i>gulu</i>
Ararnda	PROP	- <i>gada</i>
Adnyamathanha	REFL	-(<i>ŋ</i>) <i>gari</i>
Warlpiri	PROP	- <i>gulu</i> /- <i>gili</i>
Gunwin-gu	GEN OBLIQUE	- <i>ga</i>
Ngarinyin	PROP	- <i>gude</i>
Gumbaynggir	PROP	- <i>gari</i>
Wunambal	PROP ₁	- <i>gude</i>
Wunambal	PROP ₂	- <i>ŋari</i>
Dhan-gadi	CAUS	- <i>m</i> (<i>b</i>) <i>a</i>
Gidabal	CAUS	- <i>ma</i>
Bidjara	CAUS	- <i>ma</i>
Dyirbal	VB COM/VB INST	- <i>mal</i> /- <i>m</i> (<i>b</i>) <i>al</i>
Dyirbal	TR VSR	- <i>mal</i> /- <i>m</i> (<i>b</i>) <i>al</i>
Dyirbal	REFL (- <i>y</i> root)	- <i>mariy</i> /- <i>bariy</i> /- <i>mbariy</i>
Gog-Nar	PROP	<i>maran</i> g
Flinders Is. Language	ONE'S OWN	<i>malayi</i>
E. Bidha-Bidha	PROP	- <i>maru</i>
E. Bidha-Bidha	REFL/RECIP	- <i>mali</i>
W. Bidha-Bidha	REFL/RECIP	- <i>mari</i>
Warluwara	TR VSR	- <i>ma</i>
Adnyamathanha	TR VSR (nouns)	- <i>ma</i> /- <i>ba</i>
Gunwin-gu	REFL PRONS	- <i>man</i> /- <i>ŋan</i>
Rembarnga	REFL/RECIP	- <i>madda</i>
Murinbada	PROP	- <i>ma</i>
Murinbada	CONJ (but)	<i>ma</i>
Wangganguru	ACCOMPANITIVE	- <i>mara</i>

C. Apical + V

Those listed below are only the Apical + V combinations which have not already been given above, that is, which do not occur as part of bisyllabic or polysyllabic morphemes.

C (1) apical + i

- <i>ri</i> - - <i>ri</i> - - <i>ri</i> - - <i>di</i> - - <i>di</i> - - <i>li</i> - - <i>li</i> -		
Dhan-gadi	REFL	- <i>i</i> , - <i>r</i> /- <i>di</i>
Dyirbal	REFL (- <i>l</i> root)	- <i>riy</i> /- <i>yiriy</i>
Yir-Yoront	PROP	- <i>ər</i> /- <i>y</i> (<i>ər</i>)/- <i>w</i> (<i>ər</i>)
Warluwara	INTR VSR	- <i>ri</i>
Adnyamathanha	INTRINSITIVISER	- <i>ri</i> /- <i>i</i>
Adnyamathanha	PL (intransitives)	- <i>ri</i>
Adnyamathanha	RELATIVE CLAUSE	- <i>ri</i>
Pitjantjatjara	INTR VSR	-(<i>a</i>) <i>ri</i>
Thargari	INTR VSR	- <i>ri</i>

Gunwin-gu	REFL/RECIP	-re/-ri
Dalabon	REFL	-re/-ri/-ri
Ngarinyin	REFL/RECIP	-re/-yi
Yanyuwa	DU	-ri
Alawa	REFL	-ri/-ranja/-rinja/-rir(i)
Wagaya	INTR VSR	-(a)ri
Warungu	VB COM	-ri
Alyawarra	INTR VSR	-ir
Alyawarra	PL	-ir
Adnyamathanha	RECIP	TRANSITIVISER + -ri
Bidjara	CAUS	-di/-di
Galgadungu	REFL/RECIP	-di
Galgadungu	TR VSR	-(n)dii
Bidjara	REFL	-li
Gugu-Badhun	REFL	-li
Alyawarra	TR VSR	-il
Ararnda	REFL	-la/-li
Yiwadja	CONJ	-il/-li/-ilda
Yanyuwa	PL	-li
Biri	REFL, ANTIPASSIVE	-li

C (2) apical + a

Almost all of the CVs of this class are to be found as part of a CVCV structure, frequently one where the first CV consists of Peripheral + a. For this reason they have not been listed separately.

Sources

Sources include published and unpublished data held in the AIAS library by the following people:

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Notes

1. Latvian data from T. B. Lazdina, *Teach Yourself Latvian*, London 1966.
2. See R. M. W. Dixon, *The Dyirbal Language of North Queensland*, Cambridge 1972, pp. 93ff.
3. Data from A. Capell, *Beginning Linguistics*, Sydney 1966, p. 142.
4. i.e. *ma ~ *ba ~ *mba.
5. This form also disambiguates true/false reflexives.
6. For example, *yerəŋ* 'pregnant' > *yer* 'belly' (Alpher, private communication).

31. Rapporteur's summary

R.M.W. Dixon

Although no startling conclusions are possible, it may be worthwhile drawing together some of the recurrent patterns from the detailed data presented by contributors to this topic.

Functions of the nominal affix

The introductory paper (9) should have begun the list of semantic functions with:

0. Characteristics of a person

(a) physical characteristics, for example, having cicatrices, being pregnant.

(b) possessing something, for example, having a wife/dog/spear.

These involve equational sentences, without any surface verb (the word involving the 'having' affix thus constitutes the whole 'comment'). Exemplifying from Yidinj:

(1) *yiju wuḡun njumbuldji*

THIS boy-NOM beard-HAVING-NOM
'This teenage boy has a beard.'

(2) *ḡayu gala:y daguldji*

I-SUBJ spear-HAVING-NOM three-HAVING-NOM
'I have three spears.'

This is in fact the most obvious and most frequent use of the 'having' affix (which may constitute an excuse for my having inadvertently omitted it from paper 9!); thus Hercus reports that the affix *-wil ~ -bil ~ -mil* in the so-called Kulin language has only one semantic function, the indication of 'having a certain characteristic' (paper 20).

Examination of the papers shows that the semantic range of the 'having' affix is much wider in some languages than in others. We can attempt to set up a hierarchy of semantic functions to explain and motivate these differences. It is useful first to group the semantic functions into three types:

A. ATTRIBUTES ('having'-forms used predominantly as predicates in equational-type sentences, as (1)–(2) above).

0. Of a person

(a) physical characteristics (he has a moustache).

(b) alienable possession (she has a yamstick).

4. Of a place (the place has water)

6. Of a person—mental or corporeal state (eager, jealous, hungry, etc.)

B. ACCOMPANIMENT ('having'-forms with a basically adjectival function within an NP)

2. (a) person in motion, with (non-helpful) inanimate

1. (a) person at rest, with inanimate

2. (c) person in motion, with human(s)

1. (b) person at rest, with human(s)

2. (b) person in motion, with (helpful) inanimate (instrument)

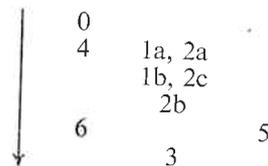
3. Person doing something to someone/thing, with instrument

C. TEMPORAL ('having'-forms used effectively as temporal adverbs)

5. Time or season

The senses are arranged in 'order of likelihood' in each of groups A and B. Thus, under A, we may just get sense 0 (as in Kulin and Bāgandji), or 0 and 4 (as in Wajaybuwan and Dyrbal) or 0 and 4 and 6 (as in Warluwara, Walmadjari and Yidinj).

One can try to establish some relativity between the three hierarchies, arranging them in a single vertical array so that for any language a single horizontal line can be drawn, with the 'having' affix covering all senses above the line and none of those below it:



This satisfies most of the semantic data in the papers for topic A. There is one main exception: the 'having' affix in Warluwara (paper 21) covers senses 0, 4, 6, 1a, 2a but *not* 1b, 2c, etc. (here a slant line would be needed).

Note that no language described in these papers uses the 'having' affix to convey 'fear' (sense 7 in paper 9).

Forms of the nominal affix

The nominal affixes in papers 12–14 (and also those in Guugu-Yimidhir, Gugu-Yalandji and Djaabugay) are clearly related, as reflexes of an original **-ḡir*. It may be that *-wadjeri* in Yaralde (paper 15), *-ḡuri* or *-ḡari* (the first vowel can not reliably be reconstructed from the written sources) in Wiradhuḡari, and *-ḡja* in Bāgandji (paper 15) could be genetically related to *-ḡir*, then suggesting an original **-ḡiri* or even **-waḡiri*. All of these languages are in the east, a long way from Walmadjari (10); yet the semantic range of *-ḡjaḡi* in Walmadjari equals that of Yidinj and the forms show some similarity.

There is, as Diana Eades (17) mentions, a 'having' affix with the form *-giri* in Wargamay and *-gi* in Nyawaygi, languages spoken around Ingham, north Queensland (to the south of Dyrbal and east of Warungu/Gugu-Badhun). There are probably enough examples of a *g—dj ~ ḡ* correspondence to suggest that this is the result of a regular phonological change:

1. Wargamay *-giri*

Nyawaygi *-gi*

'having' affix

2. Wargamay *giba*

Nyawaygi *gibagiba*

'liver'

3. Wargamay, Nyawaygi *ḡaygi*

Dyrbal *ḡagi*

'mother's father'

Warungu *-ḡi(r)*

Guugu-Yimidhir *-ḡir*

'having' affix

Warungu and Dyrbal *ḡiba*

Guugu-Yimidhir *ḡiba*

'liver'

Warungu *ḡaḡi*

Guugu-Yimidhir *ḡaḡi*

'mother's father'

4. Nyawaygi *-gi*

past/perfect inflection on a conjugation consisting just of *nja:-* 'see', *wu-* 'give' and *nji:-* 'sit'

(*-gi* is generalised in Wargamay to be perfect inflection on the open intransitive conjugation.)

Guugu-Yimidhir *-ḏi*

past inflection on a conjugation consisting just of *ḏa:-* 'see' and *wu-* 'give'

[Peter Sutton also suggests (private communication) that the alternation along the east coast between forms *ḡin-* ~ *ḡun-* and *ḡin-* ~ *ḡun-* for second person singular pronouns may tie in with the *g—ḏ* correspondence.]

This suggests that *-gi(ri)* should be related to **-ḏiri*. As Eades points out, a change *-giri* > *-ḏiri* (with the initial stop being assimilated to the following vowel) is more plausible than *-ḏiri* > *-giri*; and Gumbayngir *-gari* could then be brought in through a change *-giri* > *-gari*. Alternatively we could, on the basis of Yarlalde *-wadjeri* and Alawa *-wandji* (paper 22), suggest an original **-gadji*, which could then yield *-gari* by contraction. Plainly we are at present able to do little more than make random suggestions, which have varying degrees of plausibility, about correspondences of affixes between odd sets of the two hundred or so Australian languages. Definitive reconstruction will have to await—and proceed in terms of—a genetic subgrouping of these languages (justified on some criteria other than lexicostatistics!), and must involve *systematic* correspondences at every level.

Ken Hale mentioned, in discussion at the conference, that the 'having' affix in a number of western languages (for example, Pitjantjatjara *-djara*) must be a development from lexical *gudjara* 'two'. And this could have—as Hale tentatively suggested—given rise to some or all of the *-ḏiri* ~ *-giri* ~ *-gari* forms mentioned above. It is certainly an idea worth detailed investigation.

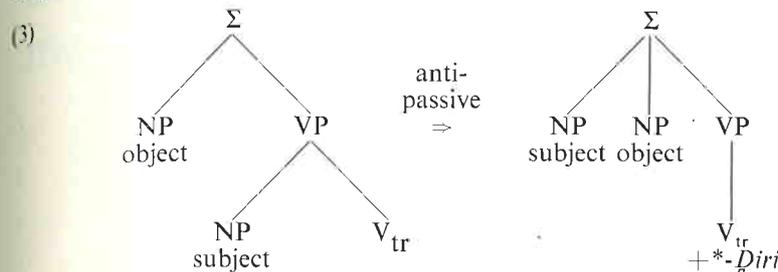
There is a further group of forms for the 'having' affix that are close enough to bear listing: Dyirbal *-bila* (paper 18), Muruwari *-bida* (19), Waṅaybuwan *-bil* 'having a lot of' and also *-bila* in the one form *ḡigarbila* (16) and Kulin *-wil* ~ *-bil* ~ *-mil* (20). It may be significant that most of these forms have a far narrower range of semantic functions than most of the *-ḏiri* forms.

Forms of the reflexive-type affix

There are a fair number of languages with a verbal affix that may be a development from **-ḏiri*; in each case this serves to derive an intransitive from a transitive verbal stem (with a 'reflexive' and/or 'reciprocal' and/or 'anti-passive' type effect). Thus we have *-djera* in Kulin (20), *-yiri* ~ *-ri* in Dyirbal (18), *-:dji* in Yidinj (12), *-yi* in the Flinders Island Language (14), *-ndji* ~ *-ndja* in Alawa (22), *-djili* in Waṅaybuwan (16) and *-li* in Gugu-Badhun/Warungu (13–14). To these can be added further examples from the literature—see Peter Sutton's survey (30) and note reflexive *-ḏari* in Dhirali (Peter Austin, private communication).

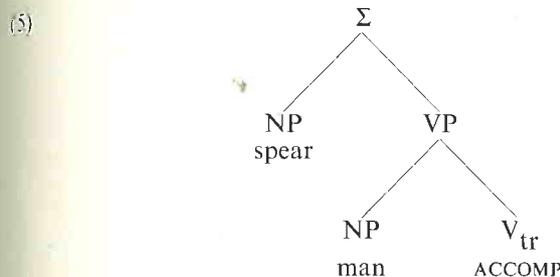
It remains to investigate whether the similarity between the nominal 'having' *-ḏiri*, and verbal reflexive-type *-ḏiri* is a reflection of some rea-

syntactic connection, or is merely coincidental. This is a topic about which it is fascinating to speculate, but difficult to draw sure conclusions. For instance we could take the verbal affix as prior, and (working in terms of a nominative-ergative deep structure, as justified for Dyirbal in my *Dyirbal Language*, pp. 128–35) say that **-ḏiri* marks the verb in a sentence where the transitive subject is fronted to be 'topic' for instance:

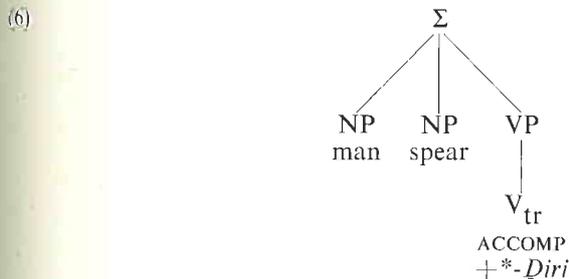


Suppose now that the 'having' affix relates to a dummy verb ACCOMP in deep structure (roughly translatable as 'is accompanied by'). Thus

(4) man spear-'having'
has underlying structure:



Now, to get 'man' into unmarked nominative case in surface structure, the anti-passive must be applied to (5), yielding:



What more natural now than that the marker **-ḏiri* should transfer to the noun 'spear', and the dummy verb ACCOMP then delete, yielding (4).

Many, no doubt equally acceptable, explanations of this type could be put forward. But we can only proceed through detailed justification *in individual languages* for syntactic explanations of this (or other) sorts; and by then attempting syntactic reconstruction through painstaking comparison of the syntaxes of present-day languages. To attempt to 'jump' to some general explanation of the connection between verbal and nominal *-Diri-*—whether of the type sketched above, or of some other type—is quite illicit.

Topic B: Ergative, locative and instrumental case inflections

32. Rapporteur's introduction

R.M.W. Dixon

NOTE: This paper is being published in the exact form in which it was circulated to potential contributors—together with paper 33 on Yidinj—in December 1973.

B-1. Ergative

The great majority of Australian languages have a case inflection that marks a noun or adjective as subject of a transitive sentence—this is most commonly called 'ergative' (although the term 'agentive' has also been used).

There are normally a number of allomorphic variants of this case in each individual language; but, overall, there are remarkable formal similarities from language to language. The most common allomorphs are:

-*du* following a consonant

-*lu* or -*ɲgu* following a vowel

Post-consonantal -*du* typically assimilates in place of articulation to a preceding nasal or *y*.

The criterion for using -*lu* or -*ɲgu* varies from language to language. For instance, in Waljbiri -*ɲgu* occurs on disyllabic nominals ending in a vowel, and -*lu* (a variant of -*lu*) on those of three syllables or more. In Pitjantjatjara vowel-final proper nouns take -*lu* whilst common nouns require -*ɲgu*.

Functionally, ergative must be used on human or other animate nouns (and their modifying adjectives, etc.) acting as transitive subject. In most languages inanimate nouns *can* also occur as transitive subject (although they are not all that frequently found in this function) and then take the ergative inflection (for example, 'the sun is burning me', 'the wind is blowing the trees', etc.).

B-2. Locative

Most languages that have an ergative case inflection (all of whose allomorphs normally end in -*u*) have another case inflection which is formally identical to ergative except that it ends in -*a*, rather than -*u*; the most common function is 'locative'.

'Locative' almost always exactly repeats the allomorphic conditioning of ergative—that is, -*da* (with assimilation) after a consonant, and -*la* ~ -*ɲga* after a vowel. (Specific examples of the congruence between ergative and locative are quoted in Dixon, *Dyirbal Language*, pp. 9–11).

In most languages the prime function of the inflection we are calling 'locative' is to indicate 'rest at a place'—that is, 'at, in, on, etc.'. In some languages (for example, Gubabuyŋu, for non-human nouns), locative case can also cover the meaning 'motion to'; in others (for example, Walmadjari, Yanyula) it can also be used in the sense 'having' (see Topic A of this seminar); in still others (for example, Gumbayŋgir, Dieri, Dyirbal) it can imply 'fear'. (When locative does not have these further functions and a language has separate inflections for allative, 'having' and 'fear', it is not uncommon for some or all of these to be based on—that is, involve an addition to—the locative inflection.)

There are Australian languages in which the case which differs from ergative simply by having final *-a* in place of *-u* does not include the sense 'motion at rest'. Thus in Wemba-Wemba (Hercus, *Languages of Victoria*, pp. 46-48) the case has a wide range of functions that includes 'motion towards' but not 'motion at rest'. (It may be that Hercus's name for this case in Wemba-Wemba, 'general oblique', would be more suitable than 'locative' as the general comparative label.)

In some languages 'locative' has further syntactic functions. For instance, A. Capell points out that in the North Kimberley languages the 'deep subject' is given locative inflection within a passive sentence.

B-3. Instrumental

Australian languages characteristically have an inflection which marks instrumental nouns—normally in transitive, but sometimes also in intransitive sentences (for example, 'He hit her *with a club*', 'He looked for the money *with a torch*', 'He shaved *with a razor*', 'He walked *with a walking stick*').

Most commonly instrumental inflection coincides in form with ergative. In a minority of languages it instead coincides with locative. Only a very few languages (Djirjili is the only clear example known to the writer) have an instrumental inflection that is distinct from both ergative and locative.

Aims

The purpose of this part of the seminar is to assemble information on the instrumental inflection in as many Australian languages as possible, and the forms and functions of the cases to which it is related. It may be possible to shed some light on the absorbing question of *why* instrumental should be formally identical with ergative in some languages and with locative in others, and on the possibly interrelated question of *why* there should be such general formal congruence between the syntactic case, ergative, and the local case, locative.

Papers are invited on languages in which there is some interesting data on instrumentals: languages in which instrumental coincides with locative, languages in which instrumental is distinct from ergative and locative, and languages in which instrumental coincides with ergative and there is some unusual (syntactic or other) data that may be of interest for a general discussion of instrumentals in Australia.

[Most languages in which ergative and instrumental coincide in form, and in which there is no special syntactic data, are unlikely to be of much interest for a general discussion of instrumentals. Dyirbal is of this type: one can give an account of the ergative, and the corresponding locative, allomorphs, note that there is also congruence between verbal inflections in relative clauses to ergative and locative NPs, and mention that locative has a wide range of functions and that ergative and instrumental can be distinguished at the 'deep syntactic' level (Dixon, *Dyirbal Language*, pp. 42, 99, 237-9, 94). But in all this Dyirbal is very like scores of other 'typical' Australian languages.]

Instructions

Papers on this topic should deal with the inflections in turn: ERGATIVE—form (full specification of allomorphs, and their conditioning where known); function (including information as to whether ergative can go onto a noun with inanimate reference, functioning as transitive subject). LOCATIVE—form (with particular discussion of any differences from ergative); full specification of functions (illustrating by examples with interlinear gloss). INSTRUMENTAL—statement of form and function (including a discussion of which body part nouns can take instrumental inflection—for example, 'hand', 'foot', 'teeth', 'eye'. An indication of which types of verbs can take an instrumental NP. Specification of the behaviour of an instrumental NP under reflexive, anti-passive or other transformations.

Discussion should, if possible, be confined to inflections on (proper and common) nouns and adjectives (and possibly also demonstratives if these add to the data in an interesting and relevant way). The inflection of pronouns is a complex topic and should be regarded as outside the scope of this part of the seminar.

A model contribution is attached; this concerns Yidinj, a language in which instrumental coincides with locative.

33. Yidinj

R.M.W. Dixon

Yidinj, from north-east Queensland, is notable in that, onto nominals ending in a vowel, ergative is *-ŋgu* and locative *-la* (there is one noun only with underlying ergative inflection *-lu*, but no trace can be found in the language of a locative *-ŋga*).

The appearance and disappearance of vowel length in all the examples below can be explained by a general phonological rule, that is not stated here.

B-1. Ergative

Form

The basic allomorphs are:

-ŋgu following a vowel

-du following a consonant

Trisyllabic (and, generally, odd-syllabled) stems ending in a vowel simply take *-ŋgu*, for example *guda:ga* 'dog', ergative *gudagan̄gu*. However, vowel-final stems with an even number of syllables show surface inflection *-:ŋ*, for example *bunja* 'woman', ergative *bunja:ŋ*, *ŋman̄gara* 'whale', ergative *ŋman̄gara:ŋ*. There is evidence that the underlying form in such cases is *-ŋgu*, with the final *-gu* being dropped by a general phonological rule of the language.

bama 'person' is an exception in that its ergative form is *bama:l*; the hypothesis that this is derived from an underlying *bama-lu* receives support from Dja:bugay, Yidinj's northerly neighbour and close genetic relation, which does have ergative *bamalu*.

Ergative inflection is simply *-du*, following a lateral or rhotic. Stem-final lateral is always retained before the inflection, for example *guygal* 'bandicoot', ergative *guyga:ldu*; *gadu:gal* 'snail', ergative *gadugaldu*. Stem-final *r* or *ɻ* is dropped from a disyllabic root but can be retained with a trisyllabic root, for example *gugar* 'guana', ergative *guga:du*; *gunja:mbur* 'butterfly', ergative *gunjamburdu*.

-du assimilates (to a homorganic stop, plus *-u*) following a nasal, for example *mudjam* 'mother', ergative *mudja:mbu*; *binjdjin* 'hornet', ergative *binjdji:ndu*; *ɲubi:rbinj* 'leech', ergative *ɲubirbinjdju*.

With stems ending in *-y* the ergative inflection is *-dju* or *-ɲdju* (the presence of *-ɲj-* may be determined by the phonological characteristics of the stem); stem-final *y* can either be retained or dropped, at will.

All stems ending in long non-front vowels (*-a:* or *-u:*) take ergative *-ɲj*, as would be expected; for example, *bidju:* 'eaglehawk', ergative *bidju:ɲj*. However, stems ending in *-i:* form the ergative by adding *-(ɲj)dju*, for example *galbi:* 'catfish', ergative *galbi:ɲjdju*; this suggests an underlying form ending in *-y* (or some abstract representation of *-y*) for such roots. In addition, two of the trisyllabic roots ending in *-i* take ergative *-ɲjdju*, for example *guri:li* 'wallaby', ergative *gurilinjdju* (note that in Yidinj a final vowel can be long only in forms with an even number of syllables).

Function

The ergative inflection is obligatory on every noun and adjective in an NP which functions as transitive subject. The head noun of such an NP is normally animate, but can be inanimate, for example:

- (1) *buja:ndu mayi guban*
 SUN-ERG fruit-NOM ripen-PRES/FUT
 'The sun ripens the fruit.'
- (2) *ɲanjanj djira:ndu bala mandja:ɲj*
 I-OBJ tiredness-ERG lower leg-NOM fill-PAST
 'Tiredness filled my calves (i.e. my legs felt tired).'

B-2. Locative

Form

Leaving aside 'reduced forms' (comparable to ergative *-:ɲj*), the allomorphs of locative are:

- la* following a vowel
- da* following a consonant

Stems with an odd number of syllables that end in a vowel simply take *-la*, for example *gudagala*. By the regular reduction rule we would expect locative to be *-:l* on even-syllabled stems ending in a vowel; in fact it is simple *-:l*. Thus *bulmba* 'camp', locative *bulmba:* and *bama* 'person', locative *bama:*.

There are just two or three stems which are irregular in that locative is *-:l*, for example *djugi* 'tree', locative *djugi:l*.

With stems ending in a nasal, lateral or rhotic, locative is identical to ergative, except for the final vowel, for example *wardjan* 'canoe', locative *wardja:nda*; *muygal* 'trap', locative *muyga:l*; *dubur* 'stomach', locative *dubu:da*.

With stems ending in *-y*, locative inflection is *-ɲjdja*, with the *y* either retained or dropped at will. Note that *-ɲj-* is always included for a locative, whereas it is sometimes included and sometimes omitted in the case of ergative.

Stems ending in long non-front vowels have zero realisation of locative case; thus *yawu:* 'grass' is root, nominative and locative form. Stems ending in *-i:* or *-i*, that have ergative *-(ɲj)dju*, have a corresponding locative inflection, *-ɲjdja*.

Function

This inflection marks both locative ('rest at a place') and allative ('motion towards') functions:

- (3) *ɲayu ɲjina:ɲj bulmba:*
 I-SUBJ sit-PAST camp-LOC
 'I sat in the camp.'
- (4) *ɲayu galiɲ bulmba:*
 I-SUBJ go-PRES/FUT camp-LOC
 'I'm going to the camp.'

The inflection has a pretty concrete 'local' meaning. For instance, locative case might appear at first blush to be being used metaphorically in:

- (5) *ɲanjdji yingu ɲjina:ɲj yuru:n /gadjagimba:l*
 we-SUBJ here-LOC live-PAST long time ago white man-WITHOUT-LOC
 'We lived here a long time ago, when there were no white men.'

But *-gimbal* 'without' (the opposite of *-dji/-yi* 'having') serves to derive an adjectival stem; and here *gadjagimbal* is merely a modifier in a locative NP with deictic *yingu* (and an implied head noun 'place'). The NP is, literally, 'at this (place) without white men'.

Care must be taken to distinguish locative inflection (*-la ~ -da*) from dative (*-nda*) and purposive (*-gu*); it would be beyond the scope of this paper to go into the contrastive functions of these three cases.

B-3. Instrumental

Form

In phonological shape, instrumental exactly coincides with locative.

Function

Instrumental marks a weapon or tool used to perform a task. It can also be used for the material out of which something is made:

- (6) *dugur balga:l djirga:da*
 house-NOM make-PAST blady grass-INSTR
 'This house is made of blady grass.'
- (7) *ɲanjdji gambi dugal gidja:da biba:*
 we-SUBJ clothes-NOM buy/get-PRES/FUT mark-INSTR paper-INSTR
 'We buy clothes with money.'

gidjaj biba (literally 'paper with marks (drawn on)') is used to refer to paper money.

Nouns referring to body parts can freely occur with instrumental inflection (thus: 'hand', 'foot', 'head', 'teeth', 'eye').

Transformations

First note that, like many other Australian languages, Yidinj has a nominative-accusative paradigm for pronouns, and a nominative-ergative one for nouns. Thus we get

function	'I'	'man'
intransitive subject	<i>ŋayu</i>	<i>wagu:dja</i>
transitive subject	<i>ŋayu</i>	<i>wagudjangu</i>
transitive object	<i>ŋanjanj</i>	<i>wagu:dja</i>

It is thus possible, by comparing the nominal and pronominal possibilities for any NP, uniquely to determine its function.

Reflexive—Statement

Yidinj has a verbal affix *-:dji* whose main function is to indicate 'reflexive'. Consider two normal transitive sentences (one with a noun as subject, and the other a pronoun):

(8) *bunja wagudjangu gunda:l banga:lda*
 woman-NOM man-ERG cut-PAST axe-INSTR
 'The man cut the woman with an axe.'

(9) *ŋayu bunja gunda:l banga:lda*
 I-SUBJ woman-NOM cut-PAST axe-INSTR
 'I cut the woman with an axe.'

There are two kinds of reflexive construction derived from (8)–(9); both involve the reflexive verb stem *gunda:dji-*.

The first is exemplified in (10)–(11):

(10) *wagudja banga:lda gunda:djinju*
 man-NOM axe-INSTR cut-:dji-PAST
 'The man cut himself with an axe, on purpose.'

(11) *ŋayu banga:lda gunda:djinju*
 I-SUBJ axe-INSTR cut-:dji-PAST
 'I cut myself with an axe, on purpose.'

Here the 'actor' NP is in inflection appropriate to intransitive subject function while the instrumental NP maintains its instrumental inflection.

The second kind of reflexive can be exemplified:

(12) *wagu:dja banga:ldu gunda:djinju*
 man-NOM axe-ERG cut-:dji-PAST
 'The man cut himself on an axe, accidentally.'

(13) *ŋanjanj banga:ldu gunda:djinju*
 I-OBJ axe-ERG cut-:dji-PAST
 'I cut myself on an axe, accidentally.'

Here the 'actor' NP is in inflection appropriate to transitive object function, and the instrumental NP occurs in ergative inflection (normally reserved for transitive subjects).

Sentences such as (10)–(11) imply that the actor did something to himself deliberately and on purpose. On the other hand (12)–(13) imply that he did something to himself accidentally—in these examples, it could have been by accidentally nicking his leg whilst swinging the axe back in cutting a tree, or else by accidentally standing on the axe.

The contrast between the two types of 'reflexives' can be brought out with the compound verb *gidjar-gunda-l-* 'paint (in pattern)'; this involves the noun

gidjar 'mark' and verb *gunda-l-* 'cut'. Corresponding to (11) we can have the acceptable Yidinj sentence:

(14) *ŋayu gidjar-gunda:djinju*
 I-SUBJ mark cut-:dji-PAST
 'I painted myself (on purpose).'

However,

(15) **ŋanjanj gidjar-gunda:djinju*
 I-OBJ mark cut-:dji-PAST
 'I painted myself (accidentally).'

was judged quite unacceptable by informants, since it is impossible to get painted accidentally (if a pot of paint were spilled on one, it could not fall into an accepted pattern).

Note that (as in (14)–(15)) an instrumental NP can be omitted. Thus both (10) and (12) could be abbreviated to

(16) *wagudja gunda:djinju*
 'The man cut himself.'

a sentence that is ambiguous between the two different senses in (10) and (12). In the case of a pronominal actor, the shortened forms would be:

(17) *ŋayu gunda:djinju*
 'I cut myself on purpose.'

(18) *ŋanjanj gunda:djinju*
 'I cut myself accidentally.'

thus preserving the semantic distinction through the contrastive forms of the pronouns.

Reflexive—Discussion

Australian languages almost all have instrumental inflection formally identical to either ergative or locative. It is a reasonable hypothesis that in an ancestor language instrumental coincided with *one* of these two cases—the original pattern of identity would be preserved in some modern languages but would have shifted in others.

Suppose that instrumental originally coincided with what we have been calling locative (although the original function of this case may have been less squarely local) as in present-day Yidinj. We have seen how, in Yidinj, an instrumental NP can take on ergative inflection, under certain highly specific syntactic conditions. This might be suggestive of the way in which the 'norm' realisation of instrumental function switched from locative to ergative case.

These remarks are, at the present stage of our understanding of the comparative syntax of Australian languages, very much in the nature of speculation. What is needed now is detailed description of other languages that have an accidental/on-purpose distinction of reflexives (or else some other categorisation of reflexives), and of languages in which instrumental coincides with locative. It is likely that the origin and development of the instrumental will be inferrable, once sufficient data in a variety of languages has been assembled.

Anti-passive transformation

The other main function of the *-:dji* affix in Yidinj is to mark an 'anti-passive' construction. For instance, from:

- (19) *guri:li bama:l baga:l*
 wallaby-NOM person-ERG spear-PAST
 'The man speared the wallaby.'

can be derived:

- (20) *bama gurilinjda baga:djinju*
 person-NOM wallaby-LOC spear-:dji-PAST
 'The man speared the wallaby.'

Transitive subject, which is in ergative case in (19), is in nominative in the anti-passive construction (20). Transitive object, normally taking nominative case, takes dative (-*nda*) or locative inflection within an anti-passive (note that human objects most frequently take dative, and non-human objects locative).

Now, (19) can be extended by an instrumental NP:

- (21) *guri:li bama:l baga:l gala:*
 wallaby-NOM person-ERG spear-PAST spear-INSTR
 'The man speared the wallaby with a spear.'

and this is maintained in the same form in the corresponding anti-passive:

- (22) *bama gurilinjda baga:djinju gala:*
 'The man speared the wallaby with a spear.'

(22) thus involves one NP in locative inflection, and another NP in instrumental inflection (the two being formally identical).

It might be argued that just one case should be recognised in Yidinj, with realisation *-la* ~ *-da*, covering locative, allative and instrumental functions. Our distinction between locative (/allative) case and instrumental case can be justified as follows: (i) instrumental inflection can be replaced by ergative in an 'accidental' construction such as (12)–(13), whereas locative can never be; (ii) a sentence in Yidinj cannot involve two NPs which have the same case marking—if we had a single locative/instrumental case, (22) would constitute an exception to this rule.

However, although there does appear to be a clear syntactic distinction between locative and instrumental cases in Yidinj, their ranges of meaning do approach one another, and in just a few cases it can be hard to determine, on purely semantic grounds, which case is represented (there remains residual doubt in the case of (6) above, for instance).

34. Dja:bugay

Kenneth Hale

In this paper, I follow the format used by R. M. W. Dixon in his corresponding paper on Yidinj. I also use the same orthography as he in order to facilitate comparison. Dja:bugay was spoken on the Barron River immediately to the north of Yidinj and is probably closely genetically related to it.

B-1. Ergative

Form

Vowel-final stems, except /*bama*/ 'person', take the ending /-*ɲgu*/:

- gura:-ɲgu* 'dog-ERG'
biɲi-ɲgu 'fire-ERG'
gurina-ɲgu 'porcupine-ERG'
guyuru-ɲgu 'wind-ERG'
murini-ɲgu 'ashes-ERG'

As in Yidinj, /*bama*/ 'person' takes the ending /-*lu*/:

- bama-lu* 'person-ERG'

Stems in final /*n*/ take /-*du*/:

- djulbin-du* 'tree-ERG'
yaraman-du 'horse-ERG'

Stems in final /*l*/ take /-*ndu*/:

- njiwul-ndu* 'one-ERG'
dayal-ndu 'boy-ERG'
bangal-ndu 'big-ERG'

Stems in final /*r*/ take /-*u*/:

- dugir-u* 'live-ERG, alive-ERG'

And stems in final /*y*/ drop this and take /-*njdju*/:

- bibu:-njdju* 'small (*bibu:y*)-ERG'
djaru-njdju 'bird (*djaruy*)-ERG'

There are also stems which, on the surface at least, show final /*m*/—these extend this final to /*mu*/ and take /-*ɲgu*/:

- bigumu-ɲgu* 'fingernail (*bigum*)-ERG'

Function

The ergative inflection appears on the constituents of a NP functioning as the subject of a transitive sentence:

- (1) *bama-lu minja baga-nj*
 person-ERG meat/animal spear-PAST
 'The person speared the animal.'
- (2) *gura:-ɲgu ɲanja baya-nj*
 dog-ERG me bite-PAST
 'The dog bit me.'
- (3) *bama-lu njiwul-ndu ɲanja du:-nj*
 man-ERG one-ERG me hit-PAST
 'One man hit me.'

- (4) *bama-lu ŋanja bangal-ndu du:-nj*
 man-ERG me big-ERG hit-PAST
 'The big man hit me.'

The ergative is also used, albeit rarely, on body-part nominals functioning as instrument in transitive sentences:

- (5) *bama-lu ŋanja mara-ŋgu du:-nj*
 man-ERG me hand-ERG hit-PAST
 'The man hit me with his hand.'

Normally, the instrumental function is fulfilled by an inflection identical to the locative—even on body-part nominals (see below). However, it is not unusual in Australia for the body-part instrumental to be identical to the ergative while other instrumentals coincide with the locative—Pitjantjatjara of the Western Desert exhibits this usage.

B-2. Locative

Form

Disyllabic vowel-final stems normally take the ending /-:/ (i.e., lengthening of the final vowel):

- bulmba-:* 'country-LOC'
bana-: 'water-LOC'
biri-: 'fire-LOC'

But at least one disyllabic vowel-final takes /-:la/:

- minja-:la* 'meat/animal-LOC'

Vowel-final stems of greater length than two morae normally take /-la/:

- djina-:la* 'foot-LOC'
djumburu-la 'road-LOC'
mirimbi-la 'Stoney Creek-LOC'
yuburi-la '#15 Tunnel-LOC'
murini-la 'ashes-LOC'

Consonant-final stems take an ending whose consonantism is identical to that of the ergative; its vowel, however, is /a/:

- djulbin-da* 'tree-LOC'
burŋan-da 'ground-LOC'
bangal-nda 'big-LOC'
wanjal-nda 'boomerang-LOC'
dugir-a 'live/alive-LOC'
mula-njdja 'hole (*mula*)-LOC'
gimu-njdja 'Cairns (*gimuy*)-LOC'

However, stems ending in /m/ extend this to /mu/ and take /-nda/ (not /-la/):

- bigumu-nda* 'fingernail (*bigum*)-LOC'

Function

This inflection functions as a locative and as an allative:

- (6) *gudji ŋunba-njdja wuna-ŋ*
 he Kuranda-LOC lie-PRES
 'He is living at Kuranda (*ŋunba*).'
 (7) *ŋawu gimu-njdja gali-na ŋuma*
 I Cairns-LOC go-FUT tomorrow
 'I will go to Cairns tomorrow.'

- (8) *ŋjura mula-njdja wamba-φ*
 you hole-LOC put-IMP
 'You put it in the hole.'
 (9) *ŋawu mula-njdja wanda-nj*
 I hole-LOC fall-PAST
 'I fell into the hole.'
 (10) *ŋawu gali-ŋ bunda-:*
 I go-PRES mountain-LOC
 'I am going to the mountain.'
 (11) *bama djumburu-la djana-ŋ*
 man road-LOC stand-PRES
 'The man is standing on the road.'

B-3. Instrumental

Form

The instrumental is identical in shape to the locative.

Function

The instrumental inflection has the function suggested by its name, as illustrated in the following sentences:

- (12) *bama-lu gulu ŋabari-l bulnjan-da*
 man-ERG spear coat-PRES gum-INST
 'The man is coating the spear with grasstree-gum.'
 (13) *bama-lu ŋanja bana-: djilŋga-nj*
 man-ERG me water-INST splash-PAST
 'The man splashed me with water.'
 (14) *gudja-ŋgu ŋanja gulu-: baga-nj*
 that-ERG me spear-INST spear-PAST
 'That one speared me with a spear.'
 (15) *yaraman-du ŋanja djina-:la baga-nj*
 horse-ERG me foot-INST kick/spear-PAST
 'The horse kicked me with its foot.'
 (16) *gura: djalba-yi-ŋ njawil-nda*
 dog lick-REFL-PRES tongue-INST
 'The dog is licking itself with its tongue.'
 (17) *bama bagal-njdjiri-ŋ gulu-:*
 person spear-RECIP-PRES spear-INST
 'The men are spearing each other with spears.'
 (18) *gudja-ŋgu ŋanja biwur-a baga-nj*
 that-ERG me singleprong-INST spear-PAST
 'That one speared me with a single-pronged spear.'

Discussion

Like Yidinj, Dja:bugay employs a nominative-accusative case system for pronouns (first and second person), and a nominative-ergative system for nouns. Thus:

	'I'	'you'	'dog'	'person'
intransitive subject	<i>ŋawu(ŋgu)</i>	<i>ŋjura</i>	<i>gura:</i>	<i>bama</i>
transitive subject	<i>ŋawu(ŋgu)</i>	<i>ŋjura</i>	<i>gura-:ŋgu</i>	<i>bama-lu</i>
transitive object	<i>ŋanja</i>	<i>ŋjura-nj</i>	<i>gura:</i>	<i>bama</i>

(The ending /-ŋgu/ on the first person singular subject pronoun, doubtless

the ergative etymologically, is now completely devoid of function and meaning—the forms /*ɲawu/* and /*ɲawuŋgu/* alternate with complete freedom, irrespective of ergativity.)

As in Yidinj, the subject of a reflexive is in the nominative, not the ergative (see (16) above)—this extends also to the reciprocal (see (17) above). The reflexive and reciprocal verb-formatives are, respectively, /-*yi-/* and /-*ɲɟjiri-/*. The ending /-*yi-/* also renders a medio-passive, as in:

- (19) *ɲayan gura: baga-yi-nj*
 my dog spear-PASS/REFL-PAST
 'My dog got speared.'

Compare this with

- (20) *bama-lu ɲayan gura: baga-nj*
 man-ERG my dog spear-PAST
 'The man speared my dog.'

The PASS/REFL formative /-*yi-/* also has another use, as illustrated in the following sentences:

- (21) *ɲanja gulu-ɲgu baga-yi-nj*
 me spear-ERG spear/stick-PASS/REFL-PAST
 'I got stuck by the spear; the spear stuck me.'
- (22) *ɲanja waymbil-ndu guni-yi-nj*
 me axe-ERG cut-PASS/REFL-PAST
 'I got cut by the axe; the axe cut me.'

Dixon suggests, in his discussion of the corresponding usage in Yidinj, that these are related transformationally to reflexive sentences with instrumentals:

- (23) *ɲawu(ɲgu) gulu-: baga-yi-nj*
 I spear-INST spear-PASS/REFL-PAST
 'I speared myself with a spear.'
- (24) *ɲawu(ɲgu) waymbil-nda guni-yi-nj*
 I axe-INST cut-PASS/REFL-PAST
 'I cut myself with an axe.'

He points out that (21)–(22) render an 'accidental-reflexive' while (23)–(24) render a 'deliberate' reflexive. This certainly fits with such sentences as the following:

- (25) *ɲawu(ɲgu) wayal giba-nj; ɲanja mara-wala*
 I boomerang scrape-PAST; me hand-then
guni-yi-nj
 cut-PASS/REFL-PAST
 'I was scraping a boomerang and cut my hand.'

However, my understanding of this phenomenon, from a general examination of the Dja:bugay material, is somewhat different. While certain sentences exhibiting the form represented by (21)–(22) certainly allow 'accidental reflexive' interpretations, there are also sentences of this form which could not be derived from a reflexive—that is, there is no reasonable reflexive-cum-instrumental source for them. Consider, for example, the sentence

- (26) *bana-ɲgu ɲanja du:-yi-nj, gara-ya wawu*
 rain-ERG me hit-PASS/REFL-PAST, come-REL outside
bunda-malim
 mountain-ELATIVE

'I was hit (i.e., rained on) by the rain as I was outside coming from the mountain.'

Here, the rain can in no way be considered an instrument or tool. (The verbal ending /-*ya/* in the subordinate clause is the T-relative formative.) And consider also the sentence

- (27) *muɲaymuɲa-ɲɟju ɲanja baga-yi-nj*
 fern-ERG me stick-PASS/REFL-PAST
 'The tassel-fern stuck me; I got stuck by the tassel-fern.'

in which the tassel-fern is understood not as an instrument but rather as an inert plant capable of piercing only when an animal or person comes into contact with it.

My own understanding of this is the following: the PASS/REFL form may be used where the ergatively marked subject of a transitive sentence is not semantically an *agent*—that is, where it refers to an entity which is not the instigator of the event or process depicted by the sentence. It can apparently also be used when the 'aboutness focus' of the sentence is on the object rather than on the subject. This latter may be the case in

- (28) *gurina-ɲgu ɲanja baga-yi-nj*
 porcupine-ERG me stick-PASS/REFL-PAST
 'I got stuck by the porcupine.'

And this may also be what is involved in the following reference to being born:

- (29) *ɲayamu-ɲgu ɲama-ɲgu ɲanja wamba-yi-nj muri:ba-la*
 my-ERG mother-ERG me put-PASS/REFL-PAST Mareeba-LOC
 'My mother gave birth to me at Mareeba.'

Be this as it may, it is evident that the use of the PASS/REFL forms in this way cannot always be related to a reflexive of the type represented by (23)–(24)—at least not in Dja:bugay. Much work remains to be done, however, to determine the precise function of this usage. A proper account of the form will have to accommodate the fact that if the transitive verb involved refers to a process which is, in some (as yet only intuitively understood) sense, characteristic of an entity denoted by an inanimate ergative subject, the PASS/REFL form is typically not employed:

- (30) *biri-ɲgu (milmun-du, mumiri-ɲgu) ɲanja ganda-nj*
 fire-ERG (spark-ERG, ashes-ERG) me burn-PAST
 'The fire (spark, ashes) burned me.'

Apparently, fire, sparks, and ashes may function semantically as 'agents' in combination with the verb /*ganda-/* 'to burn'. Moreover, there seems to be some variability in the use of the PASS/REFL form in transitive sentences where the appropriate conditions of semantic agency obtain. My principal consultant on Dja:bugay, Mr Gilbert Martin, used it frequently; but Mr George Martin, with whom I consulted briefly, did not use it at all in the material he gave me. This difference also manifested itself in the use of the verb /*daba-/* 'to throw, trip'. With non-agentive transitive subjects, Mr Gilbert Martin used the form /*daba-nba-/* (with /-*nba-/*, perhaps, a suppletive alternant of /-*yi-/* (?)):

- (31) *djulbin-du ɲanja daba-nba-nj*
 stick-ERG me trip-nba-PAST
 'The stick tripped me.'

But Mr George Martin used the unextended form:

- (32) *djulbin-du ŋanja daba-nj*
stick-ERG me trip-PAST

Dja:bugay shares with Yidinj an additional use of the PASS/REFL formative /-yi/-—this is what Dixon refers to as the ‘anti-passive’. Thus, beside sentences like

- (33) *bama-lu wajaŋ giba-nj*
man-ERG boomerang scrape-PAST
‘The man scraped the boomerang.’

in which the subject is in the ergative and the object is in the nominative, there are also sentences of the form

- (34) *bama wajaŋ-nda giba-yi-nj*
man boomerang-LOC scrape-PASS/REFL-PAST
‘The man scraped the boomerang.’

in which the subject is in the nominative, the object in the locative, and the verb in the PASS/REFL form. This form was recorded primarily in the T-relative clause, particularly where the subject was deleted under the control of an object noun phrase in the main clause. Consider, for example:

- (35) *gudji gara-nj, ŋanja ŋundala-gara-nj, wajaŋ-nda*
that come-PAST, me see-come-PAST, boomerang-LOC
giba-yi-ya
scrape-PASS/REFL-REL

‘He came along and saw me while I was scraping the boomerang.’

- (36) *gudji gara-nj, ŋanja wadari-nj, guni-yi-ya djulbin-da*
that come-PAST, me find-PAST, cut-PASS/REFL-REL tree-LOC
‘He came along and found me cutting the tree.’

Compare these with the following, in which the subject of the subordinate clause has not been deleted:

- (37) *gudji gara-nj, ŋawungu minja wayi-ya biri-:*
that come-PAST, I meat cook-REL fire-LOC
‘He came along while I was cooking meat in the fire.’

As in Yidinj, so also in Dja:bugay, the anti-passive gives rise to multiple occurrences of the locative:

- (38) *balabiŋa, bana-: buga-yi-ŋ minja-:la*
crane, water-LOC eat-PASS/REFL-PRES meat/fish-LOC
‘The crane (*sp.*), it eats fish in the water.’

The anti-passive in Dja:bugay is in need of intensive study. My own data are extremely limited—in fact, I found examples of it in my material only upon a re-examination stimulated by Dixon’s paper.

Acknowledgement

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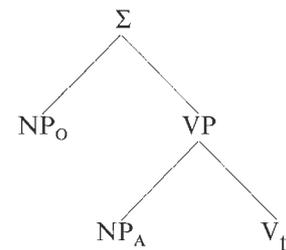
I wish to express my deep gratitude to Mr Gilbert Martin (Bada-Djaygul, gurabana moiety) with whom I worked at Monamona Mission, north Queensland, and to Mr George Martin (Badjibadji) with whom I worked briefly at Yarrabah Settlement. I met both men in 1960. I am extremely grateful to them for sharing their knowledge with me.

35. More on Yidinj

R.M.W. Dixon

Hale’s thought-provoking discussion of Dja:bugay has prompted me to undertake a thorough examination of the behaviour of the verbal derivational affix *-dji* in Yidinj.¹

A transitive sentence in Yidinj can be assigned the deep structure



(using O, A and S to denote transitive object, transitive subject and intransitive subject functions respectively). There are syntactic arguments showing that a ‘nominative-ergative’ deep structure of this type is appropriate for Yidinj. Thus, a relative clause will normally have an NP coreferential with an NP in the main clause—and these coreferential NPs must be in S or O function (marked by nominative case) in each clause. NP_O or NP_S is the ‘topic’ or ‘pivot’ for various syntactic transformations and is, by convention, the leftmost NP directly dominated by Σ.

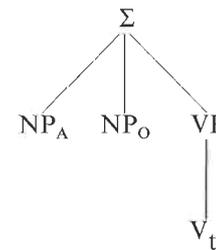
Now a normal transitive sentence—(19) in paper 33 is a typical example—has an NP_A that:

- (i) is distinct from the topic NP, and
- (ii) has volitional control over
- (iii) a single completed or anticipated action.

Any sentence that deviates from this ‘norm’ will have its verb marked by affix *-:dji*.

Thus *-:dji* can indicate:

- (a) an anti-passive surface structure—here NP_A is moved to be the leftmost NP dominated by Σ and so *becomes* the topic:



Now NP_A takes nominative case and NP_O either locative, if non-human, or dative, if human (although the choice of locative or dative is not strictly a

yes/no matter, and must properly be described in terms of a nominal hierarchy—see the comment at page 8 in paper 1). (20) in paper 33 is an example of an anti-passive.

(b) a true reflexive (indicating that someone did something to himself on purpose)—here NP_A is *referentially identical* to NP_O. NP_A is deleted and deep NP_O then takes inflection appropriate to an intransitive subject. See (10)–(11), (14), (16)–(17) in paper 33.

(c) that NP_A is non-animate, and thus could not have volitional control over the action. This covers examples (12)–(13), (18) in paper 33, and also the Dja:bugay sentences (21)–(22), (25)–(26) from paper 34.

Note that there are a small number of verbs—*ganda*- ‘burn’ in Dja:bugay (and in Dyirbal) and *guba*- ‘burn’ in Yidinj—which *only* take inanimate NP_{AS} (‘fire’ or a hyponym); they constitute a small class of exceptions, and are not marked by *-:dji* when (ii) is not satisfied.

(d) NP_A may be human, but may achieve some result by chance—for example, he may notice something that he wanted, when (or where) he was not really looking for it. Then (ii) is not satisfied and the sentence—still transitive, as in (c)—will be marked by verbal *-:dji*.

(e) if the action referred to by a verb is ‘continuous’, extending into the past and future, so that it cannot be viewed as a (prospective or retrospective) whole from the vantage point of the present, then (iii) will not be met and the verb may be marked by *-:dji*. Case (e)—but not (a)–(d)—may involve intransitive, as well as transitive, sentences.

-:dji thus has, in terms of contemporary linguistic theory, surprisingly diversified uses. In (a)–(b) it marks the syntactic derivation of an intransitive from a transitive sentence, whereas in (c)–(e) it appears to have no direct syntactic effect. In (b)–(e) it carries different types of semantic implication, whereas in (a) there is no real semantic effect (a transitive sentence and its anti-passive in Yidinj differ no more in ‘meaning’ than do an active and its passive in English). A full discussion of this affix, with detailed exemplification, is in my forthcoming *Grammar of Yidinj*.

It now seems that only ‘purposeful reflexives’—such as (10)–(11) in paper 33—should properly be termed ‘reflexives’. Sentences such as (12)–(13) are sometimes translated by an English reflexive and it was probably because of this (and the fact that they also involve verbal *-:dji*) that I had classified them as an (accidental) type of reflexive in Yidinj; I was here making unwarranted transfer of an English category into Yidinj, rather than trying to analyse the Yidinj data in its own terms. In fact, (12)–(13) are normal transitive sentences with the *-:dji* marking the semantic fact of an inanimate subject; and sentences falling under (c) above would not always be translated into English by a reflexive (as Hale shows with his example (26)). Compare with Walsh’s discussion of ‘reflexives’ in Murinjpatá (paper 49).

While this discussion has added considerably to our understanding of Yidinj and Dja:bugay it has not really helped solve the main ‘problem’ under this topic—why does instrumental coincide with ergative in some languages and with locative in others? I originally suggested that (12)–(13) involved an ‘instrumental’ in ergative case and should somehow be derived from (8)–(9) or (10)–(11) which involve a normal ‘locative’ instrumental. It now appears that (12)–(13) are simple transitive sentences with a non-human subject, which there is no justification for relating—at the syntactic level—to an

instrumental. Yidinj and Dja:bugay are simply languages in which the locative case is used to mark instrumental function; they can also have a non-animate noun in ergative case, as transitive subject (as can languages in which instrumental function is shown by ergative case). The red herring for these two languages was the affix *-:dji* (in Yidinj), *-yi* (in Dja:bugay) which serves to mark both a reflexive construction, and a non-controlling subject in a transitive sentence, among other things.

Note

1. This paper was not precirculated, but is a write-up of discussion, at the conference, on papers 33 and 34. It was slightly revised in the light of further field work December 1974/January 1975.

36. Kuuku Ya?u

D. A. Thompson

Kuuku Ya?u is a dialect spoken at the Lockhart River Aboriginal Community on the east coast of Cape York Peninsula, Queensland.

B-1. Ergative

Form

Following a consonant: *-lu*

Following a vowel: $\left\{ \begin{array}{l} -Vlu \\ -\gamma V \end{array} \right\}$ where *V* is the stem-final vowel.

The latter variants appear to be simply alternates, although there is a tendency to favour the glottalised form except with persons who are usually marked by *-lu*.

Function

The ergative inflection functions as an optional marker of the subject of a transitive verb. The last item of a noun phrase may be inflected with the marker. The noun head is usually animate but may also be inanimate. With pronouns a nominative-accusative paradigm occurs.

In common speech the ergative marker is frequently omitted but the agentive subject is kept clear by the obvious meaning or by word order by which the subject always occurs first, so that:

- (1) *ku?aaka ?ira pa?ana*
dog snake bite-NONF
can only mean: ‘The dog bit the snake.’
- (2) *ŋa?a $\left\{ \begin{array}{l} piipiilu \\ piipi?i \end{array} \right\} pu?an kalmanana$*
my father-ERG fish come-CAUS-NONF
‘My father brought the fish.’
- (3) *ku?aaka mukana?a piiwu pa?ana*
dog big-ERG wallaby bite-NONF
‘A big dog bit the wallaby.’

- (4) $\left\{ \begin{array}{l} \text{yuku}^{\text{u}} \\ \text{yukuulu} \end{array} \right\} \text{ku}^{\text{a}}\text{aka } \text{ɬa}^{\text{in}}$
 tree-ERG dog hit-NONF
 'A tree hit the dog.'

B-2. Locative (Positional)

Forms

-*lu* with a demonstrative reference.

or $\left\{ \begin{array}{l} \text{-} \eta\text{una} \\ \text{-} V\text{la} \end{array} \right\}$ where *V* is the stem-final vowel.

-*ηuna* may be reduced to -*ηun* or -*ηu*.

-*lu* and -*la* may be reduced to -*l*.

Function

The form -*lu* is restricted to use with demonstrative words and constructions, particularly the three demonstratives indicating degrees of distance, viz. *ɬi*^{ʔi} 'this', *ηa*^{ʔa} 'that', and *ηujku* 'that (further)'.
 (5) cf. *ηi*^{ʔi} *yu*^{ʔa} 'this house'; *ni*^{ʔi} *ilu* *yu*^{ʔa} 'this house here'

(6) *dinghylu tanjiina ηujkuunalu*

dinghy-LOC broken over that way-LOC

'Over that way where the dinghy is broken.'

(7) *ηulu ηujku puŋkana yuku kaɬaalu paaʔalpimana*
 he over there fell down-NONF tree dead-LOC stands-PRES. HAB
 'He fell down over there where that dead tree stands.'

(8) *ηulu piiwu ɬaʔina airstripjun kaayina kulam paʔam*
 he wallaby kill-NONF airstrip-LOC near road two
kalmaanalu
 come-NONF-LOC

'He killed the wallaby near the airstrip where the two roads join.'

It is notable that in Lockhart Aboriginal English a form *lu* is used for all positional references as in:

'He leava shirt there *lu* road.'

$\left\{ \begin{array}{l} \text{-} \text{nuna} \\ \text{-} V\text{la} \end{array} \right\}$ are used for positional references and the last item of a phrase is marked.

(9) *palŋtanamu wanana kulamuηun*
 shirt-POSS leave-NONF road-LOC
 'He left his shirt on the road.'

(10) *ηulu niinin kaayin yuku ʔuŋkuula*
 he sit-NONF beside tree tall-LOC
 'He sat beside the tall tree.'

The locative is distinguished from the motional inflection -*ma*, the allative -*ku* and the source or ablative -*munu*.

B-3. Instrumental

Form

Identical to the ergative.

$\left\{ \begin{array}{l} \text{-} V\text{lu} \\ \text{-} ʔV \end{array} \right\}$ where *V* is the stem-final vowel.

Function

The instrumental marker is used optionally to mark an instrument which is used to cause an action. The last item of an instrumental NP is marked.

- (11) *ηayu miŋa muuŋana tawura kiɬariilu*
 I meat cut-NONF knife sharp-INS
 'I cut the meat with a sharp knife.'

The instrumental marker may be omitted when the instrument follows the subject:

- (12) *ηayu tawura miŋa muuŋana*
 I knife meat cut-NONF
 'I cut the meat with a knife.'

Body parts can be marked with the instrumental case.

- (13) *Johnlu pulŋtunu ɬaʔin $\left\{ \begin{array}{l} \text{ma}^{\text{a}}\text{alu} \\ \text{ma}^{\text{a}}\text{a} \end{array} \right\}$*
 John-ERG boy hit-NONF hand-INS
 'John hit the boy with his hand.'

The instrumental is distinguished from the comitative in which case the comitative marker -*pinta* is used.

- (14) *Peter kaama piiŋkan mayipinta*
 Peter mouth fill-NONF bread-COM
 'Peter filled his mouth with bread.'

37. Warluwara and Bularnu

J. G. Breen

Warluwara and Bularnu are two closely related languages of the Georgina River, spoken in the area south of the Barkly Tableland where the river crosses the Queensland-Northern Territory border.

B-1. Ergative

The ergative suffix is -*gu* in Warluwara; it may be lengthened to -*gagu* in accordance with a rule applying to most nominal inflectional suffixes of the form C_1V , by which they become C_1aC_1V . The purpose of this rule seems to be to allow a more aesthetically acceptable stress pattern.

In Bularnu the suffix is -*gu* ~ -*gi*; -*gu* is added to a stem ending in *a* or *u* and -*gi* to a stem ending in *i* (all stems end in a vowel).

The ergative suffix is obligatory for any noun or demonstrative (in the nominative, genitive or ablative case) or genitive pronoun which acts as subject or part of the subject phrase of a transitive verb. In the case of a genitive noun or genitive pronoun the suffix -*la* is almost always added before the ergative (or any other inflectional) suffix, and the genitive suffix -*ba* on a noun becomes -*ma* (optionally for Warluwara). The noun need not be animate, nor need it initiate any activity or state (see example (W3)).

- (W1) *yindajulagu ηaŋa warawulagu ɬanmaŋa*
 your-ERG me dog-ERG bite-PAST
 'Your dog bit me.'

- (B1) *bumaḡagu ḡaḡa yidyilydara*
sun-ERG me burn-PRES
'The sun is making me hot.'
- (W2) *gaḡilbugu yanu ḡulbagu yinya ḡaaraḡa*
gidgea-ERG they many-ERG him block-PAST
'All the gidgeas (trees) blocked him.'
- (W3) *ganyiyidya maragu ḡaḡa, buḡlugudugu*
weigh on-PRES this-ERG me, heavy-ERG
'This is too heavy for me (to carry).'
- (B2) *laridyi ḡaliḡa gatunḡulaḡuluḡu*
listen-GER we (DU, INCL)-ACC inside-ABL-ERG
'She has been listening to us from inside.'

An unusual use of the ergative suffix in Warluwara, which has not been noted in Bularnu, is in association with a noun stem formative known as the 'subject formative'. This formative, *-ra*, is added to a normalis noun stem (which itself is derived from a verb stem) to form a noun stem whose function is to qualify the subject of a verb. In all cases, whether the verb concerned is transitive or not, the suffix *-gu* is added to this noun.¹

- (W4) *yaḡaḡaragu yiba maḡana*
see-SUBJ-ERG you hit-PAST
'Did you mean to hit (him)?' (i.e. 'Did you, seeing him, hit him?')
- (W5) *ḡunayiḡa yiwa nyinaḡaragu*
sleep-PRES he sit-SUBJ-ERG
'He is sitting down asleep.'

Another possible example of an anomalous use of *-gu* is illustrated in (W6); it may be, however, that *manugu* is simply an allomorph of *maḡu*.²

- (W6) *ḡadamaḡa ḡali maḡugu miyi*
go-OPT we (DU, INCL) slow-ERG(?) CONJUNCTION(?)
'We'll walk along slowly.'

B-2. Locative

The locative suffix is *-ga* in Warluwara and Bularnu; in the former it may be lengthened to *-gaga*.

The functions marked include location (at, on, under, alongside, etc., sometimes expressed with the aid of an adverb), accompaniment (when not in motion; this includes '(talking) to'), location in time and duration.

- (W7) *ḡuwana yiwa ganḡunḡula wadaga*
snake that inside stone-LOC
'The snake is under the rock.'
- (W8) *gudyaga wirilaga ḡaḡa nyinaḡa, wunḡarambaga*
two-LOC year-LOC I sit-PAST, Carandotta-LOC
'I stayed at Carandotta for two years.'
- (B3) *badunḡulu bagaḡaḡi dyuwalaga*
devil go-PAST-to here night-LOC
'The devil came up here last night.'

- (B4) *ḡabaridyi ḡaḡa yilagaga yaḡiyala, galyi wigalila*
sleep-IMPERF I river-LOC before, not flood-EMPH
yukuwaraḡa, ḡulibiḡaraguga
run-PAST water-lacking-LOC
'I was camping at the river before, when the floodwater wasn't running and there was no water there.'
- (W9) *ḡuḡa yiwa dyibariyiḡa ḡura, nyinayiḡa buḡyaga*
there he sing-PRES song, sit-PRES old man-LOC
'He is over there singing with the old men.'
- (W10) *dyaḡmariyiḡa yiwa dyimaragaga*
talk-PRES he friend-LOC
'He is talking to his friend.'

Warluwara has another suffix, the comitative *-gaḡa*, probably derived from the locative and fulfilling some functions which, in Bularnu, are fulfilled by the locative. The same suffix fulfils all locative functions on pronouns in both languages; it is not used on nouns in Bularnu. Basically, it defines the location of some person or thing which is also in motion ('with') or is so extended that it can be used as a basis for describing the location ('along' or 'across'). Motion is not always involved (see (W14) and (W15)) but the principle remains the same.

- (W11) *maḡagaḡa ḡaḡa ḡawagaḡa ḡadayiḡa*
this-COM I man-COM go-PRES
'I'm going with this man.'
- (W12) *gilagila yawiḡigaḡa yiwa ḡadamaḡa*
galah sky-COM he go-PRES
'The galah is flying along (in the sky).'
- (W13) *yaragaḡa yiwa bagaḡa, gudulaḡu*
river-COM he jump-PAST, other side
'He jumped across the creek.'
- (W14) *yiwa yahvigala yaḡaḡi*
he shoulder-COM look-GERUND
'He was looking over his shoulder.'
- (W15) *maḡa ḡaḡala bantugaḡa wuguwara*
here me-COM waist-COM water-HAVING
'The water is up to my waist' ('along my waist' in the informant's translation).

The locative seems to be a permissible replacement for the comitative in at least some circumstances, if the following sentence is correct.

- (W16) *bingaga wugu wurariyiḡa*
gully-LOC water run-PRES
'The water is running in the gully.'

Some other unpredictable uses of the locative are illustrated in the next three examples.

- (B5) *wayi wuru yidyamaridyayi bulanuga*
QUESTION you(PL) speak-PURP Bularnu-LOC
'Does anyone here speak Bularnu?'
- (B6) *ḡulibimaḡu yiwa bagaḡa yarabaḡaga*
water-from he go-PAST, way-other-LOC
'He went in the wrong direction, away from the water.'

- (W17) *niḡaga wula ḡuliriṇa*
jealousy-LOC they(DU) fight-PAST
'They fought out of jealousy.'

B-3. Instrumental

Neither Warluwara nor Bularnu has a separate instrumental case suffix; Warluwara uses the locative and Bularnu uses the ergative. Any function for which Warluwara uses the locative and Bularnu the ergative will therefore be regarded as instrumental.³

Instrumental, as so defined, marks the instrument by means of which an action is performed or the material of which something is made. An instrument need not be inanimate; see example (W21). An instrumental phrase is uncommon but possible in an intransitive sentence; see (B9) and (W22).

- (W18) *ṇaṇa yina dyiraḡiyi maṛaga walḡaraga*
I you spear-PURP this-LOC sharp-LOC
'I'll spear you with this sharp (spear).'
- (B7) *lalamalaḡu ṇaṇa maṭaṇa, margigiliwa*
elder brother-GEN-ERG I kill-PAST, gun-ERG-HAVING
'I killed it with my brother's gun.'
- (W19) *yalwiga yiwa ḡaṇayiḡa ḡaraliwara*
shoulder-LOC he carry-PRES child-HAVING
'She's carrying her baby on her shoulder.'
- (B8) *ḡarali laḡaḡaraḡi budugu*
child carry-PRES-to here back-ERG
'She's carrying the baby on her back.'
- (W20) *ḡunma ḡarinyamayḡa, balawalaga*
humpy stand-CAUSE-PRES, bark-LOC
'We're making a humpy out of bushes.'
- (B9) *ṇara ḡarinyamaṇa, wiliṇigi ḡuwala*
humpy stand-CAUSE-PAST, bush-ERG only
'I made a humpy out of bushes.'
- (W21) *ḡaḡali yanu warawuḡaga maḡaraṇa*
carney they dog-LOC kill-while going-PAST
'They killed carneys (lizards) with the dog while they were travelling.'
- (B10) *ḡuluwaridyara yiwa, ḡalyi yiwa yidyamaridyara, muḡugu*
be quiet-PRES he, not he speak-PRES, hand-ERG
yidyamaridyara
speak-PRES
'He's quiet (i.e. dumb), he can't talk, he talks with his hands.'
- (W22) *yallaga waramaḡi*
light-LOC look-GERUND
'(We) were looking (for him) with a torch.'⁴
(The equivalent Bularnu sentence used a 'having' affix.)

The boundary between the semantic range of locative and instrumental is difficult to define, and is probably somewhat fluid. Thus one rides on (locative) a horse (or alternatively 'horse-having') in Bularnu, but one sends cattle to market by (instrumental) train. One washes with (instrumental) water but bathes in (locative) the water. One stirs honey up with (instrumental) water to make a drink, but one cooks a damper in (locative) the fire. It appears that one may travel on foot or 'with foot'.

B-4. Reflexive

Reflexive and reciprocal are marked in Warluwara and Bularnu not by any affix to the verb but by a reflexive/reciprocal form of pronoun. This replaces any subject or object pronoun in the corresponding transitive sentence or is added if the subject and object in the transitive sentence are nouns. An instrumental noun phrase is not affected.

- (B11) *irwiligi ṇaṭawa lumarana*
fingernail-ERG I (REFLEX) hurt-PAST
'I cut myself with my fingernail.'

Notes

1. Compare the similar usage in Wagaya in which the masculine form of the ergative is affixed to a nominalised form of the verb (with ligative intervening) whether the verb is transitive or not.
2. Compare some of the languages of the Karnic Group (south of Warluwara) in which the ergative or a homophonous suffix is used to derive adjectives from abstract nouns, as (Yandruwandha examples):
mawali 'hungry' from *mawa* 'hunger'
murali 'thirsty' from *mura* 'thirst'
kinyili 'dishonesty' from *kinyi* 'dishonesty'
yabali 'frightened' from *yaba* 'fear'
3. This convention is dependent on the underlying forms, i.e. the speakers' conceptions, being the same in both languages (as R. M. W. Dixon pointed out in the discussion of this paper). Since Warluwara and Bularnu are close genetic relatives (as shown by the great similarity between their morphologies, as well as lexical correspondences) it seems reasonable to assume that 'ergative', 'locative' and 'instrumental' have the same (or almost the same) semantic range in the two languages.
4. This verb is regarded as intransitive, not middle. It is doubted whether there is any class of middle verbs in these languages; it may be that any intransitive verb can take an indirect object in the purposive case (e.g. as in 'to go for water') and verbs which usually take such an object can occur without it. For example, *warama* 'to look (for)' also means 'to look about', 'to have a look around'. *ḡura* 'to like (with purposive object)' frequently occurs in its imperative form with the meaning 'come on!'.

Wangkumara belongs to the Karnic Group which comprises about ten languages occupying a large area in south-west and far west Queensland, north-east South Australia and north-west New South Wales. Wangkumara itself was spoken in the far south-west of Queensland.¹ In most of these languages the locative inflection is not related to the ergative inflection in any regular way. Thus Ngamini has operative (ergative/instrumental) *-nu*, locative *-mu*; Yandruwantha has *-li* and *-yi*; Yaluyandi *-li* and *-mu*; Pitta-Pitta (Bidha-Bidha) *-lu* and *-ina*; Wangga-Yudjuru *-ru* and *-na*.² An exception is Badjiri with *-lu* and *-la*.

Wangkumara differs from the other members of the group in that it has two noun classes, one comprising masculine singular nouns and the other masculine plural (plural being marked by a separate word, not by a suffix) and non-masculine. Duality can be marked by a suffix (optional) and this may form a third class; however, little is known about it at this stage. Noun class is marked for nominative (optionally), accusative, and operative but not for other cases. The suffixes marking nominative, accusative and operative are bound forms of the the third person singular pronouns, which have masculine and non-masculine forms. The masculine forms are used with the masculine singular class and the non-masculine forms with the other. The ablative suffix for both noun classes is the same as the non-masculine-singular form of the operative. Table 1 gives the forms for these suffixes.

Table 1: Partial nominal paradigm

	Pronouns		Masculine Singular	Nouns Other	Dual
	Third person singular Masculine	Feminine			
Nominative	<i>ɲia</i>	<i>ɲani</i>	<i>-ia</i>	<i>-ɲani, -ani, -ni</i>	ϕ
Accusative	<i>ɲiɲa</i>	<i>ɲaɲa</i>	<i>-iɲa, -ɲa</i>	<i>-ɲaɲa, -aɲa</i>	<i>-ɲa</i>
Operative	<i>ɲulu</i>	<i>ɲanrru</i> ³	<i>-ulu, -lu</i>	<i>-anrru, -nrru</i>	<i>-ɲu</i>
Locative	<i>ɲuɲala</i>	<i>ɲaɲala</i>	<i>-laɲa</i>	<i>-laɲa</i>	<i>-ɲala</i>
Ablative	(none)	(none)	<i>-anrru</i>	<i>-anrru</i>	—
			<i>-nrru</i>	<i>-nrru</i>	

The functions Ergative, Locative and Instrumental will now be considered in a little more detail.

B-1. Ergative

The subject of a transitive verb is marked by the operative suffix which has the following forms:

-ulu, used with masculine singular nouns; with nouns of three or more syllables the first vowel of the suffix replaces a final *a* of the stem. Thus

ɲanidyulu from *ɲanidya* 'father', *wariwulu* from *wariwa* 'child', *kanaulu* from *kana* 'man', *ɲiɲulu* from *ɲiɲi* 'dog', *kaɲikaɲulu* from *kaɲikaɲi* 'snake'.

-lu, possibly used only with *wara* 'who?', and then, presumably, only if a masculine singular agent is assumed.

-anrru, used with non-masculine-singular nouns of two syllables or with stem-final *i* or *u*, as *walgaanrru* from *walga* 'woman', *kugaɲarianrru* from *kugaɲari* 'wind', *mukuanrru* from *muku* 'bone', *ɲiɲianrru* from *ɲiɲi* 'dog' (here assumed to be either female or plural).

-nrru, used with non-masculine-singular nouns of more than two syllables with stem-final *a*, as *ɲamadyanrru* from *ɲamadya* 'mother', *kilambaɲanrru* from *kilambaɲa* 'galah'.

-ɲu, used with nouns marked for dual, and following the dual suffix *-ula*, as in *ɲiɲiulaɲu* from *ɲiɲiula* 'two dogs'.

Some examples follow:

- (1) *kanaulu kalkaɲa ɲiɲiɲaɲa*
man-OP hit-PAST dog-ACC (fem)
'The man hit the bitch.'
- (2) *kaɲaanrru buka ɲaɲa kalkaɲa*
man-OP many me hit-PAST
'A mob of men belted me.'
- (3) *makurranrru ɲaɲa kabilibaɲa*
tree-OP me block-PAST
'The trees blocked me.'

Note (example (3)) that the subject of a transitive verb need not be animate.

B-2. Locative

The locative suffix has two forms:

-laɲa is used in almost all cases, occasionally followed by the masculine singular form of the accusative suffix, *-ɲiɲa*. The function of the latter suffix in such cases is not known.

-ɲala is used with dual nouns, for example *kukaɲiulaɲala* 'between the two hills' and also with at least one other word—the place name *mirrulu* 'Naryilco'. The *l* as the final consonant of the stem may condition this allomorph.

The locative suffix marks location in space and time, and accompaniment. There is one example (8) of its use to denote 'because of', but the causal *-a*(ɲ)uɲa is normally used for that purpose.

- (4) *kulaɲanyi ɲanyi mirruluɲala*
sit-FAR PAST I Naryilco-LOC
'I used to live at Naryilco.'
- (5) *nadyiigala ɲanyi ɲakalaɲa*
see-REFL-PRES I water-LOC
'I can see myself in the water.'
- (6) *ɲawulaɲaɲiɲa ɲanyi walpawagaɲa*
night-LOC-ACC I wake-at night-PAST
'I woke up during the night.'
- (7) *yaɲɲaɲa ɲiaguɲu murrkadyalaɲa*
go-PAST he-there younger brother-LOC
'He went away with his brother.'

- (8) *ḡawarkagaḡa ḡanrra ḡuḡalaguru pampunurrulaja*
 afraid-PRES we (PL, INCL) that-LOC-there hawk-LOC
 'We're frightened of that hawk.'

B-3. Instrumental

The instrumental is marked by the non-masculine-singular forms of the operative suffix; a masculine singular instrument may not be impossible but no examples have been obtained. An instrumental phrase may occur in an intransitive sentence; since the reflexive marker *-ii* (see example (5)) and the reciprocal marker *-nyala* (example (12)) convert a transitive verb into an intransitive verb, this statement refers also to reflexive and reciprocal sentences.

The instrumental marks the instrument of an action or the material of which something is made. There is at least one case (example (14)) where it denotes possession ('having') but this is normally marked by the suffix *-batu*.

- (9) *wariwanrru buka ḡaḡa yaḡaḡa yanrraanrru*
 child-OP many me hit-PAST stone-OP
 'The kids hit me with stones.'
- (10) *kuliḡaḡa ḡaḡu ḡurubaḡa makurranrru*
 humpy-ACC I make-PAST tree-OP
 'I made a humpy out of bushes.'
- (11) *paluḡa ḡia, kunkukunkuanrru*
 die-PAST he, cold-OP
 'He died of the flu.'
- (12) *kaḡaula bula pandinyalagaḡa pakaranyianrru*
 man-DU they (DU) hit-RECIP-PRES boomerang-OP
 'Those two men are fighting with boomerangs.'
- (13) *karrukarru ḡiaguru yaḡtagaḡa makurranrru*
 old man he-there walk-PRES stick-OP
 'That old man walks with a stick.'
- (14) *kaḡia yaḡtaḡaga pakaranyianrru, maḡianrru kandigandianrru*
 man-NOM go-PAST-? boomerang-OP, spear-OP axe-OP
 'That man came here with his spears and his boomerang and his axe.'

Notes

- Breen discusses the location of Wangkumara and its relationships with other languages of the area in 'Aboriginal Languages of Western Queensland', *Linguistic Communications* 5, 1971, pp. 1-88, especially pp. 12, 27. It is the modern form of the language that is discussed in this paper. My main informants have been Mrs Lorna Dixon and Mr George Harrison of Bourke, and I am grateful for their help and friendliness.
- The two last named languages are unusual in several respects: the operative-nominative distinction is lost in what we have imprecisely called the future tense; there is an obligatory accusative suffix for nouns; the suffix which differs from the (non-future) operative in having final *a* instead of final *u* is not a locative marker but a causal ('because of'). These languages have been described by Blake and Breen, 'The Pitta-Pitta Dialects', *Linguistic Communications* 4, Monash University, Melbourne, 1971. See especially pp. 86-92, 99-100, 103.

3. *rr* represents an alveolar trill, *r* an alveolar flap and *ʀ* a retroflexed glide. Note that Wangkumara has a contrast between voiced and voiceless stops. The full extent of this contrast has not yet been determined; it may be confined to intervocalic position and consonant clusters.

39. Bidjara

J. G. Breen

Bidjara, spoken in south-east central Queensland, has an operative suffix, used for both agent and instrument. The forms are *-ḡu* with vowel-final stems, *-du* with final *n*, *-ḡu* with final *ny* which becomes *ḡ*, and *u* with final *d*, *r* and *l*. The locative differs only in having *a* instead of *u*.

An unusual feature is that the operative may be used on a place name where the nominative (unmarked) would be expected. Kinship terms—or at least some of them—have three stem forms, two of which follow a nominative-ergative system and one a nominative-accusative system (as do the pronouns).

The locative suffix specifies location only in respect to a movable object or in time. It also indicates accompaniment. Location in respect to a fixed object or place is marked by the purposive *-gu*.

For further details and examples see pp. 39, 53-63, 66, 82 of J. G. Breen, 'Bidjara and Gungabula: grammar and vocabulary', *Linguistic Communications* 8, Monash University, Melbourne, 1973, and also pp. 2-5 of a Supplement to the above.

B-5. Reflexive

Wagaya forms reflexive and reciprocal sentences in the same way as do Warluwara and Bularnu—by using reflexive pronouns. The transitivity of the verb is not affected. A reflexive sentence may include an instrumental construction.

- (16) *irwəldəgəqəb nəŋgərəŋiy*
 nail-OP-myself cut-PAST
 'I cut myself with my fingernail.'
 (17) *ugiyał yalib mandiy*
 (E) many-OP they-self hit-PRES
 'They're all fighting.'

Notes

1. My main informant for the Eastern dialect was Didgeroo Jack, who died about the time this paper was written. Some material was also obtained from Mrs Mabel Karkadoo (pronounced [ka:gədi]). The informant for the Western dialect is Willy Clegg, better known as Avon Willy. I am grateful to these people for their help; the first and last named in particular have been enthusiastic and hard-working.
2. The verb *ma*, normally 'to hit, to kill' is used sometimes with the general meaning 'to affect adversely', the more specific meaning being inferrable from the nature of the subject, for example, *wərałaŋ maŋiy* 'The dog bit me'.

41. Muruwari

Lynette Oates

For an introductory note on case inflections in Muruwari (which was spoken in north-western New South Wales and southern Queensland) see Paper 19 above.

The ergative, locative and instrumental cases are closely tied in Muruwari, having similar phonological shape, but differing functions. In many respects they parallel the cases in Yidinj.

B-1. Ergative

Form

The basic allomorphs are those found over a wide area:

- ŋgu* following a vowel;
- du* following an alveolar consonant or a retroflexed nasal;
- dju* following an alveo-palatal consonant;
- u* following a lateral (and possibly also a rhotic).

This is what probably once obtained, but in some of the JB material there is a tendency to use *-du* after all consonants.

- guḍaṛa-ŋgu* 'child'-ERG
mayinj-dju/-du 'person'-ERG
gaŋ-du 'snake'-ERG
gundał-u/-du 'dog'-ERG

Function

(A) Most typically ergative is used with animate nouns (including personified natural objects in legends, as the moon), proper nouns and pronouns acting as subject of a transitive verb. In the data, pronoun transitive subjects are optionally suffixed.

- (1) *guḍaṛa-ŋgu bagul gawariyiṛa*
 child-ERG stone-NOM throw-PRES-3pl
 'The children are throwing stones.'
 (2) *ŋaṛa gidju gula-ŋgu di:ŋ biliya: (JB)*
 small kangaroo-ERG hole-NOM dig-PAST-3sg
 'The small kangaroo dug a hole.'
 (3) *wala ŋuda: wala ḍaṛiyiṛa guyu-ŋgu*
 NEG catch-PAST NEG bite-PRES-3sg fish-ERG
 'I didn't catch any fish; they won't bite.' (Lit. 'The fish are not biting so I didn't catch any'.)
 (4) *ḍu: ŋuṛunj-dju gabun ŋa:ŋjidibu (JB)/na:nda: (EH)*
 much emu-ERG egg-NOM lay-PRES-3sg /lay-PAST-3sg
 'The emu lays a lot of eggs.'

(B) Inanimate nouns relating to natural forces take an ergative transitive subject (like the Yidinj example quoted) in the JB data, but EH requires an object for the use of ergative with natural forces.

- (5) *ḍuṛi-ŋgu ŋaṛa bambuŋga (JB)¹*
 sun-ERG head-LOC
 'The sun is overhead.'
 (6) *waŋinj-dju baŋḍibu; walaŋaṛa ŋiyagu wa:nda (JB)²*
 lightning-ERG hit-PRES-3sg; NEG sit-IMP tree-LOC
 'Lightning is striking; don't sit under a tree.'
 (7) *yaṛga-ŋgu bumbiya:bu (JB)²*
 wind-ERG blow-PAST-3sg
 'The wind blew him.'

(C) Proper nouns that are the subject of a transitive sentence also take the ergative.

- (8) *rosi ŋayanani baŋḍibu mari-ŋgu*
 Rosy-NOM she-her? hit-PRES-3sg Mary-ERG
 'Mary is beating Rosy.'
 (9) *yimi-ŋgu ŋawa:³ ŋaŋu ŋu:*
 Jimmy-ERG give-PAST me-OBJ this
 'Jimmy gave me this.'

(D) Ergative may be suffixed to a pronoun in a non-predicate utterance to imply the action of a transitive predicate in the JB data. Similar elliptical sentences are found with other case suffixes.

- (10) *walaŋaṛa ŋaḍu-ŋgu¹ (JB only)*
 NEG I-SUBJ-ERG
 'It wasn't me', meaning 'I did not (kill the man)' in answer to such a question as 'Who did it?'

B-2. Locative⁴

Form

The form is the common Australian locative paralleling the ergative with the vowel *a* replacing the ergative *u*, but with fluctuating homorganic nasal-stop components in the *-nga* form.

-nga (with *-ga*, and less frequently, *-ya* fluctuating) following a vowel

-da following consonants except alveo-palatals

-dja following alveo-palatals

-a following retroflexion

nama-nga 'on the breast'

breast-LOC

sidni-nga/-ga 'in Sydney'

Sydney-LOC

ba:da/-a 'in a bottle'

bottle-LOC

gununj-dja 'on the coals'

coals-LOC

Function

This is to pin-point the location of the action at a stationary place, expressing a locative idea at clause level.

Meaning

The general area of meaning covers *rest at, in, on* or *by a place*. Quite frequently it occurs with verbs that imply the actor is at rest, as *niya-* 'sit', *dina-* 'stand', *ya:n-* 'talk'. It is usually suffixed to nouns to form a locative noun, but it may also occur with adverbial and question particles to specify a location.

- (1) *di'a-nga na'a mayinj* (JB only)⁵

where-LOC man-NOM

'Where is the man?'

yalu-nga⁵ nu'a-nga di'ga (*yalu* EH)⁵

there-LOC camp-LOC my

'Over there at my camp.'

The following specific kinds of location are expressed by this suffix:

- (A) *On* a physical feature

- (2) *bandara na'a ma'dan may-nga*

long stick-NOM ground-LOC

'(There is) a long stick on the ground.'

- (B) *In* or *into* a particular location or thing

- (3) *balaynj niya'nda:bu mi'di-nga*

alone live-PAST-3sg bush-LOC

'He lived alone in the bush.'

- (4) *na'du na'a ba:ngiygu:yu: naba-nga*

I-SUBJ swim-PRES-PURP-1sg water-LOC

'I'm going for a swim in the water.'

- (5) *gulamuga wa:n-da*

climb-IMP tree-LOC

'Climb up into the tree!'

- (C) *In* or *on* parts of the body

- (6) *du'ri na'a mi:l-da banga* (JB)

sun-NOM eye-LOC your-POSS

'The sun (is) in your eyes.'

JB forms locatives like *behind* and *overhead* by suffixing *-nga* to the semantically pertinent body part to form a prepositional locative: *bi'a-nga* ('back'-LOC) 'behind'; *bambu-nga* ('head'-LOC) 'overhead'.

- (D) About time—suffixed to time noun roots

- (7) *yu'inj-dja* 'at night'

night-LOC

ba'dala-nga 'in the morning'

morning-LOC

madja gayila-nga (JB only) 'a long time ago'

far past time-LOC

- (E) About natural phenomena

ga'da-nga (JB only) 'in the dark'

black-LOC

du'ri-nga 'in the sun'

sun-LOC

- (F) Concerning intangible or non-concrete things

gura-nga (JB only) 'in a straight line'

straight-LOC

- (G) To the place where a person or object is at rest

- (8) *na'du ga:nggu:yu gubi-nga guda'ra*

I-SUBJ take-FUT-1sg doctor-LOC one child-NOM

'I will take the child to the doctor('s place).'

- (9) *dangibu muginj-dja buga*

run-PRES-3sg woman-LOC his

'He is running to his wife.'

- (10) *giyan-du na'a balga:bu wi:nga* (JB)

moon-ERG come-PAST-3sg fire-LOC

'He came to (where) the fire (was burning).'

Note that in the three above sentences the verb expresses movement to a place.

The locative suffix is the only noun suffix yet discovered in the data where both the adjective and noun of an NP are suffixed—a fact which raises the query whether this did not also occur with the other cases.

- (11) *mu'riya: da:da-nga naba-nga*

drown-PAST-3sg big-LOC water-LOC

'He was drowned in deep water in the big river.'

- (12) *mulgu-yu: gununj-dja bida'ra-nga*

cook-PURP-1sg coals-LOC good-LOC

'I'm going to cook on the hot coals.'

- (13) *ga'da-nga yu'inj-dja*

black-LOC night-LOC

'In/into the dark/(darkness of) night.'

B-3. Instrumental

Form

Muruwari instrumental has similar phonological shape to ergative.

- <i>ngu/-gu</i>	following a vowel
- <i>dju</i>	following alveo-palatal consonants
- <i>u</i>	following laterals
- <i>du</i>	following other consonants
<i>guliya-ngu</i>	'with spears'
<i>bundi-ngu</i>	'with fighting sticks'
<i>nyuru-ngu</i>	'with nulla-nullas'
<i>dawinj-dju</i>	'with tomahawk'
<i>bagul-u</i>	'with stones'
<i>maḡan-du</i>	'with a stick'

Function

The function describes the instrument or agent of an action. Examples reveal much overlap with the comitative 'having' affix, revealing language breakdown, occasioned no doubt in this instance by the fact that both cases are covered by the English *with*. An adjectival function occurs when the instrumental is suffixed to nouns to describe the characteristics of a place or thing, very similar to the way *-yida/-bida* functions.

<i>mili:nj-dju</i>	<i>ḡaḡa</i>	<i>ḡaba</i>	'muddy water'
mud-INST		water-NOM	

Meaning

The following areas of meaning, some of them overlapping with the 'having' affix, have been found. Most characteristically instrumental is suffixed to nouns which may be used as weapons or tools, or natural objects used as instruments or agents in performing an action.

(A) Inanimate instruments used to perform an action by a human agent.

- (1) *ḡaḡu guliya-ngu biḡgayu mayinj ḡaḡa*
I-SUBJ spear-INST pierce-PAST-1sg man-NOM
'I stabbed a man with a spear.'
- (2) *dawinj-dju buga bandara:*
tomahawk-INST his-POSS hit-PAST-3sg
'He hit it with his tomahawk.'
- (3) *njindu ḡaḡa maḡan-du bandi yindu*
you-SUBJ stick-INST hit-? 2sg
'You are to hit with a stick.'
- (4) *ḡaḡaḡangu bandina bagul-u*
boy-ERG hit-PRES-me? stones-INST
'The boy pelted me with stones.'

(B) Something animate or inanimate as a means of locomotion.

- (5) *wadḡindu ḡaḡa ḡaiḡu yanmibu yara:man-du*
white woman-ERG away-from go-PRES-PROG-3sg horse-INST
'The white woman is riding away on her horse.'

(C) Natural phenomena acting as agent

- (6) *buḡbulaynj-dju ya:ndibu* (JB only)
whirlwind-INST speak-PRES-3sg
'He (God) speaks in (by means of) the whirlwind.'

- (7) *baḡibaḡigu:ndu ḡununj-dju* (JB)
burn-PURP-2sg coals-INST
'You will get burnt with the hot coals.'

In an elliptical sentence, instrumental may assume a predicate function, either as a passive transform of a transitive sentence as in (8), or as a substitute for a transitive verb as in (9).

- (8) *ḡaḡu ḡaḡa ḡundaḡ-du ḡiḡa-ḡgu ḡaḡa*⁶
I-SUBJ dog-INST/AGENT teeth-INST
'I was bitten by a dog.'
- (9) *ḡaḡangu ḡaḡa ḡuḡunj mi:l-du ḡaḡa ḡaḡuwḡu*
there-LOC emu-NOM eye-INST I-ERG
'I saw some emus out there.'

(D) Speech as an instrument

- (10) *ḡa:milḡandu muruwaḡi-ḡgu ya:ḡgu:ndu*
return-SUB-2sg Muruwari-INST speak-FUT-2sg
'When you return home you will be able to speak in (with) Muruwari.'

Notes

1. EH would not use ergative in these places. In sentence (5) 'The sun is overhead', she expresses: *ḡandaynji duḡi yimmibu yala* (high-? sun-NOM be-PROG-3sg far distance). For sentence (11) she gave: *walaḡaḡa bandaḡayu: ḡaḡu ḡundaḡ* (NEG hit-PAST-1sg I-SUBJ dog-NOM) 'I didn't kill the dog.'
2. In sentences (6) and (7) EH insisted on an object when using the ergative as follows: *wajinj-dju bandaḡaḡayu maḡan* (lightning-ERG hit-PAST-? limb of tree-NOM) 'The lightning struck the tree'; *yu:ḡan ḡa:ḡgimiyu yaḡga-ḡgu* (cloud-NOM blow-PROG-? wind-ERG) 'The wind blew the clouds across the sky'.
3. EH expresses 'give me' *wandaḡa: ḡaḡa*
4. The locative suffixes in JB's material are very unclear and contradictory since both the *-a* and *-u* allomorph series are used to express locative case (*-ḡga* and *-ḡgu*; *-da* and *-du*, etc.). It now seems certain that this was due to memory lapse and the fact he recorded the language in a linguistic vacuum. Mrs Horneville consistently uses the *-a* series.
5. EH would not use the locative suffix with locative nouns in these sentences. In sentence (1) 'Where is the man?' she disagrees strenuously with JB. Her form is *ḡiḡay mayinj yanda:* (where man-NOM go-PAST-3sg) 'Where has the man gone?'
6. EH is not happy with this elliptical sentence but wants to add *yida: ḡaḡa* (bite-PAST-3sg me) 'he bit me'.

This note is effectively a query concerning the interpretation of body-part nouns with the ergative/instrumental case inflection in Wangaybuwan, a language of western New South Wales.

Forms

Ergative and instrumental coincide: the forms are: *-gu* after a vowel, *-du* after *y* (which is dropped), *-du* after *n*, *-u* after *l*, *r*. Locative is formally identical to ergative/instrumental except that it ends in *-a*, not *-u*.

Functions (in a transitive sentence)

Ergative marks the agent of a transitive sentence. An NP in agent function must be *active*; either animate or, if inanimate, in motion, so that it is directly responsible for the effect it produces (for example a rolling stone, a falling branch).

Instrumental marks an intrinsically inert object controlled by an agent in order to produce an effect.

- (1) *mayiŋgu duru: bumiyi gaṛulu*
 person-ERG snake-NOM hit-PAST stone-INST
 'Person hit snake with stone.'

Locative marks an intrinsically inert object which participates in the action without the agent manipulating it.

- (2) *mayiŋgu duru: bumiyi gaṛula*
 stone-LOC
 'Person hit snake against stone.'

Parts of the body share a person's identity in so far as they are inalienable from that person. This whole/part relation is marked in Wangaybuwan by apposition. Example (3) shows a body part in the ergative case in apposition to the agent of a sentence where there can be no instrumental NP since 'put in' is a transitive verb that does not produce an effect on its object.

- (3) *mayiŋgu bulagarbugu dina:ŋgu guraḡiyi maguḡi*
 person-ERG two-ALL-ERG foot-ERG enter-PAST one-INTERIOR
ḡara:ḡi
 thigh/leg-INTERIOR

'Person put both feet into one (trouser) leg.'

A part noun does not have to be juxtaposed to the noun to which it is in apposition, for example:

- (4) *ḡaḡu girambiya maṛa*
 I-SUBJ unwell-PRES hand-NOM

'My hand hurts (i.e. I am in pain, the pain is localised in my hand).'

In a transitive sentence with a verb which affects the object, a body part carrying the ergative/instrumental inflection both shares the identity of the

agent NP and is at the same time something which can be controlled by the agent in order to produce an effect on the object, for example:

- (5) *mayiŋgu bumiyi miri maṛagu*
 person-ERG hit-PAST dog-NOM hand-ERG/INST

If the following principles apply in a language (as they do in Wangaybuwan):

- (a) Ergative and instrumental coincide;
 (b) Inalienable possession is shown by apposition;
 (c) Apposition involves carrying the same inflections as the head noun, but not necessarily juxtaposition to it

then this question arises: is a body-part noun carrying the ergative/instrumental inflection in a sentence like (5) to be interpreted as being in the ergative case (in apposition) or in the instrumental case?

There are three transformations which render transitive sentences intransitive in Wangaybuwan; reflexive, reciprocal, and agentless passive. Though the agentless passive transformation requires that there be no agent NP, that is, no potential controller of an instrument, an instrumental NP may be present to indicate an inert object accidentally responsible for the event indicated by the verb, as in:

- (6) *mayi bumaḡi guguru*
 person-NOM hit-INTR-PAST stick-INST

This is equivalent to English 'Person got hit by a stick', or the accidental reflexive 'Person hit self on stick'.

Body parts appear in reflexive sentences:

- (7) *mayi bumadjilinji maṛa*
 person-NOM hit-REFLEX-PAST hand-NOM

'Person hit self on hand/person hit own hand.'

- (8) *mayi bumadjilinji maṛagu*
 hand-INST

'Person hit self with hand.'

(The function represented in (6)–(8) by *mayi* would be represented by first or second person pronouns of the form used for intransitive subject and agent, for example, *ḡaḡu* 'I'.)

Body parts appear likewise in reciprocal sentences in both nominative and instrumental case. A body part may also appear as an instrument in an agentless passive sentence like:

- (9) *miri bumaḡi maṛagu*
 dog-NOM hit-INTR-PAST hand-INST

'Dog got hit by hand/hit self on hand.'

Example (9) gives no clue as to the identity of the hand's owner. It can only be used to describe a situation where the hand is not actively controlled. An informant suggested that (9) could be used of a dog tripping over a drunk person's hand (or else over a disembodied hand).

It appears that wherever a sentence with a body part instrumental makes reference to an agent, the agent is indicated as the possessor of the body part instrument in a built-in way by the grammar, either through the formal coincidence of ergative and instrumental case inflections (in transitive sentences), or through the identity relations specified in intransitive sentences derived from transitive ones (reflexive, reciprocal). Sentences like (9), the only type of sentence in which body parts appear as instruments without

agents controlling them, are also the only type of sentence in which the possessor of the body part cannot be identified.

There are several transitive verbs which can *only* take body parts as instruments, for example:

- buḍarba-y (wili:ṅgu)* 'kiss (with lips)'
ṅa:-y (milu) 'see (with eyes)'
ṅaḍa-l (ḍala:ṅḍu) 'taste (with tongue)'
niya-l (ṅandalu) 'speak (with mouth)'.

Though these can occur in reflexive or reciprocal form, none of them can undergo the agentless passive transformation.

If these observations are correct, then *mayagu* in (5) is in the instrumental case, although it is anatomically possessed by the ergative *mayiṅgu*.

43. Southern Bāgandji

L. A. Hercus

B-1. Ergative

It happens to people who no longer have a thorough recollection of their language that they occasionally omit the ergative marker. But this is not the correct explanation for the situation in Bāgandji (originally spoken over most of the Darling River basin); even a perfect speaker, now deceased, made very sparing use of the suffix *-wa* (quoted by R. H. Mathews *Bulletin et Mémoires de la Société d'Anthropologie de Paris* Series V.5, p. 135, as the standard form for the ergative).

Among the very few examples of the use of *-wa* is the following:

- (1) *munimuniwa ṅabadigāi* 'The police will lock me up.'
muni-muni-wa ṅaba -d -iga -ai
 police -by lock up-will-they -me
 ERG FUT-3pl SUBJ-1sg OBJ

The ergative is usually not marked:

- (2) *munimuni ṅabadjigāṅa* 'The police locked him up.'
muni-muni ṅaba -dj -iga -āṅa
 police lock up-they-him PAST-3pl SUBJ-3sg OBJ
- (3) *gali badirunḡa* 'The dog bites them.'
gali badi-r -unḡa
 dog bite -them
 PRES-3pl OBJ

The ergative can be optionally expressed by the bound forms of the ergative of the demonstrative pronouns, *-ṅuru* and *-ḍuru*. Very frequently these bound forms are followed by the emphatic particle—*aḍiṅa*. Thus the following variants have been recorded corresponding to sentences (2) and (3):

- (4) *munimuni-ṅuru ṅabadjigāna* 'These policemen locked him up.'
 police -this-by lock up-PAST-they-him
 DEM ERG
- (5) *gali-ḍuru badirunḡa* 'That dog bites them.'
 dog-that-by bite-them
 DEM ERG

This lax usage is probably linked with the importance of subject and object incorporation in South Bāgandji. Except in elicited sentences, the type of clause 'the man hit the woman', 'the dog bit the man' is most unusual: the protagonists are usually part of the general topic and already known or at least one of them is further specified, hence the preference for 'that dog bit the man' or 'that man took my flagon'. If the agents are unknown, the third person plural subject (incorporated) is used:

- (6) *wadudjiga gargiai* 'They took my flagon.'
wadu-dj -iga gargi -ai
 take -they flagon-mine
 PAST 3pl SUBJ 1sg POS

B-2. Locative

The locative is formed with the affix *-na*. It only has the function of conveying 'rest at a place or time', it never conveys the allative.

- (7) *bidjana ṅiṅgāba budjina* 'I am sitting outside in the heat of the sun.'
 outside-in sit-I heat-in sun.'
 LOC 1sg INTR LOC

The sphere of the locative is slightly wider than might be expected; it sometimes conveys the notion of 'with regard to', 'with', 'in company with':

- (8) *muya waḍu iḍuna wimbaraina* 'I had a row with my daughter.' (Guṅu)
muya waḍu iḍu -na wimbara -ai -na
 row I-PAST this-with daughter-my-with
 VB * DEM-LOC POS LOC

(* The past tense form of the first person pronoun in Guṅu)

- (9) *garu maḷina bariḍu* 'She is going with another man.'
 other man-with goes
 LOC 3sg
- (10) *balgadjinduana garu ṅauṅuna ṅimanḡuaḍu*
balga-dj-indu-ana garu ṅauṅuna ṅima-ṅu -aḍu
 Hit you -him other woman-with sleep- -he
 2sg -3sg LOC PLUP* 3sg
 SUBJ OBJ SUBJ

'You hit him because he had slept with another woman.'

(* Pluperfect or explanatory past)

In the following sentence it might be possible to interpret *-na* as the instrumental marker, but the locative is more plausible:

- (11) *ṅidja ḍina-buduna ḍigaldjāba*
ṅidja ḍina-budu-na ḍiga -l -dj -āba
 one foot-boot-with return -did -I
 LOC CONT PAST 1sg SUBJ
- 'I came back with only one boot.'

B-3. Instrumental

Form

The instrumental affix *-na* is identical with the locative. The instrumental marks the means or instrument by which an action is performed.

- (12) *nabaḍuṇa guldana* 'I'm fixing it (the humpy) up with grass.'
naba-aḍu -aṇa gulda-na
 shut I it grass-with
 1sg 3sg INST
 SUBJ OBJ
- (13) *balgaḍuama wiḍuna* 'I'll hit you with a green switch.'
balga-adu -ama wiḍu -na
 hit -I -you switch-with
 hit 1sg 2sg INST
 SUBJ OBJ

B-4. Genitive

The genitive is identical in form with the locative and instrumental. It is used for alienable and inalienable possession:

- (14) *muni-muni-na gira -na* 'In gaol.'
 police of place-in
 GEN LOC
- (15) *wimbadja-na buṅga -na* 'In an Aborigine's humpy.'
 man -of humpy-in
 GEN LOC

but it can be omitted in a general description:

- wimbadja buṅga -na* 'In an Aboriginal humpy.'
 man humpy-in
 LOC

Transformations

The differences between nominal and pronominal declension are particularly marked in Bāgandji and this aids in determining the function of noun-phrases.

Nouns: Lax ergative-nominative distinction; genitive, locative and instrumental identical.

Pronouns: Ergative, nominative and accusative distinction in singular; genitive and accusative identical.

Further work needs to be done on the case system in Bāgandji, and there are still a number of obscurities which have been omitted from this sketch.

44. Yuulngu

Bernhard Schebeck

Introduction

The group of dialects called here collectively *yūlu* (Yuulngu), spoken in the most north-eastern corner of Arnhem Land, has also been referred to as the group of dialects or languages of the people called 'Murngin', or 'Wulamba', or 'Miwoit', 'Miwatj' and so on.¹ Although I will, in the present paper, refer to several dialects and dialect-groups when discussing morphological variation, the examples—if not indicated otherwise—will be drawn from dialects of the Ṭaṇu sub-group, mainly from the two dialects of Njayimil (eastern Arnhem Bay country, now at Yirrkala and at Elcho Island)

and Rirat² (Yirrkala area). What is to be said in the present paper does in no way seem affected by the minor dialect-differences which, however, are not fully assessed so far. Moreover I have some reason to suggest that the general syntactic pattern, described in the present paper with regard to the problem indicated in the topic, is identical for the whole dialect group, although more detailed investigation into other sub-groups still has to check on this.²

In the present paper I shall stick to the phonemicisation³ in which the glottal stop is interpreted as a syllable-feature, marked by the grave accent '̀', appearing above the vowel of the syllable at the end of which the glottal stop is realised phonetically. Hence:

$$\begin{aligned} /c\grave{v}/ &\rightarrow [cv?] \\ /c\grave{v}c/ &\rightarrow [cvc?] \\ /c\grave{v}cc/ &\rightarrow [cvcc?] \end{aligned}^3$$

Moreover I interpret the opposition between stops, realised as 'lenis' vs. 'fortis' or as 'voiced' vs. 'voiceless', as an opposition between simple and geminated stops. This opposition is relevant only intervocally or between *l, ɭ, r, ʀ, w, y* and a vowel. The simple stops are realised, in the Ṭaṇu dialects and others (but not in Kuppapuyṇu and some other Ṭuwala and Ṭuwal dialects and others), as follows:

$$\begin{aligned} \left\{ \begin{array}{l} /l/ \\ /l^y/ \end{array} \right\} &\rightarrow [y]; \quad \left\{ \begin{array}{l} /p/ \\ /k/ \end{array} \right\} &\rightarrow [w]; \\ /t/ &\rightarrow [d]^4 \end{aligned}$$

B-1. Ergative

Form

The basic form of the ERG. suffix, occurring in all dialects, is *-ṭu* with its morphophonemic allomorphs. These are:

-ṭu if following a stop;

-ḍu if following a nasal (voicing); after *l, ɭ, r, ʀ, w, y* in Ṭiyakkuy;

-yu in all other dialects if following *l, ɭ, r, ʀ, w, y*; in Nṇaṇu, Ṭaṇu and T^yaṇu also after vowels; this allomorph was not recorded in Ṭiyakkuy;

-y in Ṭuwala, Ṭuwal, Ṭayi and Ṭiyakkuy if following a vowel; this allomorph was not recorded in Nṇaṇu, Ṭaṇu and T^yaṇu.⁵

In Nṇaṇu⁶ the following allomorphs have, moreover, been recorded; the Nṇaṇu dialects are not studied sufficiently as yet, as to allow the formulation even of tentative morphophonemic rules:

-t^yu/-d^yu—this palatalised form has been recorded, for example, in:

- (1) *miyalk-t^yu* 'woman-ERG.'
 woman-ERG.

it would, however, seem that this allomorph appears regularly after palatalised consonants:

- (2) *riṇ^y-d^yu* 'shark-ERG.'
 shark-ERG.

-lu—although this allomorph seems to appear so far only in a few (always +HUM.?) examples ending into *-u*, I do not as yet assume that all nouns ending in *-u* take this suffix:

- (3) *kuṇu-lu* 'father-ERG.'
 father-ERG₂

-li—this suffix seems to occur only with nouns ending in *-a*, with the morphophonemic rule *-a* → *-i*:⁷

(4) *wāwi-li* 'older brother-ERG.'

wāwa-ERG₃

-ri—also this suffix seems to occur only with nouns ending in *-a*, also involving the morphophonemic rule *-a* → *-i*:

(5) *rat³ri-ri* 'child-ERG.'

rat³a-ERG₄

No *-HUM*. noun ending in *-i* has been recorded, so that it remains uncertain if the general rule yielding *-yu* after vowels should include *-i* or not in *Naṅu*.

It will be noticed that no allomorph has been recorded within the *Yūluṅu* group, which could be traced back to a presumed form **-ŋku*. See, however, the discussion of the residual suffix *-ŋu* further below.⁸

Function

The ERG. suffix is obligatorily added on every NP which functions as transitive subject or 'agent'. The head noun of such an NP is normally +AN., but may apparently also be *-AN*.⁹

(6) *t³i-ŋa-ŋ yuṭṭa-Ṭu yūl-ŋu-Ṭu taykka-Ŋa pū-ya-n*

this=obl.-ERG₅ young-ERG. man-ERG. woman-ACC. hit-Afs.-Afv.

'This young man hit woman.'¹⁰

(7) *wilmūr-Ṭu yūl-ŋu-Ŋa tarp=pu-wa-n*

fish=spear-ERG. man-ACC. spear-Afv.

'Fish-spear speared man.'⁹

It is important to point out here that the 'agent' may also be marked differently; these markings involve a series of transformations, which are discussed further below.¹¹

B-2. Locative

Form

The 'normal' LOC. suffix has no allomorphs; it has the following form:

ŋura in *Tuwala*;

ŋur in *Tuwal* and *Tāyi*;

-ŋara in *Tiyakkuy*;

-ŋa in *Naṅu*, *Taṅu* and *T³aṅu*

In *Naṅu* there is, moreover, a suffix *-la* found in a few examples:

(8) *ŋari-la* 'in the camp'

camp-LOC₃

This example would be in *Taṅu*:

(9) *ŋayi-ŋa* 'in the camp'

camp-LOC.

and in *Tuwala*, *Tuwal* and *Tāyi*:

(10) *wāŋa-ŋur(a)* 'in the camp'

camp-LOC.

for which particular instance I also recorded a residual LOC. suffix *-ya*, involving the morphophonemic change *-a* → *-i*:

(11) *wāŋi-ya* 'in the camp'

camp-LOC₄

The 'residual' LOC. suffix *-la* is doubtlessly to be rediscovered in the *Taṅu* and *T³aṅu* LOC. forms of the demonstrative pronouns, such as in *t³i-ŋa-l/ t³i-ŋa-la-ŋ(a)* 'here' (the 'long' form adding also the 'normal' LOC. suffix); note also, in the same two dialect sub-groups, *ŋa-la(-ŋa)* 'where?'. The same suffix is doubtlessly found in *pa=la* 'movement away from the speaker' (*pa=* being interpreted as the far-distant deixis), which is shortened to *lā* in *Tāyi*. The suffix, finally, is presumably contained in the suffix *-ka=la*, given below as a dialectal form of the LOC. for +HUM. nouns.

It is uncertain if the suffix *-ya* is to be rediscovered in a shortened form in the presumably compound suffix *-Pu=y*, to be mentioned directly. The suffix *-Ta*, occurring to my knowledge only in *ŋā-ṭṭa* 'when?' (in all dialects; cf. *ŋā* 'what?'), might be directly related to the residual LOC. suffix *-ya*, but the *Riṭtarṅu* form *ŋā-ṭṭaṅ* 'when?' (*-ṭṭaṅ* being, according to J. Heath also 'added to verbs in "while"-clause') might be used as an argument against this idea (provided that *-ṭṭaṅ* can be proven not to be an old compound morpheme).

The most common of all 'residual' LOC. suffixes is the suffix *-ra*, which occurs in all dialects, although not always in the same function: it is likely that this suffix is contained in the 'normal' LOC. suffix of the *Tuwala*, *Tuwal*, *Tāyi* and *Tiyakkuy* dialects. While this suffix appears in *Naṅu* in the *DIRECTIVE* ('movement to(wards)') for +HUM. nouns, it appears in *Taṅu* and *T³aṅu* in the LOC. for +HUM. nouns ('COMITATIVE'), for which the remaining dialects have a suffix containing *-la*, as already mentioned above.¹²

The following forms are used for marking this LOC. for +HUM. nouns:

-Ka=la in *Tuwala* and *Tiyakkuy*;

-Ka=l in *Tuwal* and *Tāyi*;

-Ku=li in *Naṅu*;¹³

-Ku=ra in *Taṅu* and *T³aṅu*.

The suffix *-Pu=y* appears in all dialects.¹⁴ It is voiced to *-bu=y* after nasals in all dialects, after consonants other than stops as well as after vowels in *Naṅu*.¹⁵ The rule *-Pu=y* → *-wu=y* applies in all other dialects after *l, l, r, r, w, y* and after vowels. The combination *-Ku+Pu=y* is shortened into *-Ku=y* (e.g. *t³i-ŋa-Ku=y* 'this-REL₂') by what appears to be a contraction rule (*-uwu* → [*u*]), applied after the lenition rule given above.

All dialects mark the 'emphatical' forms of the personal pronoun, used also as reflexive pronoun, by the suffix *-Pu=y* or *-Pi*; in *Taṅu* and *T³aṅu* the form *-Pa=y* occurs besides the form *-Pi*.¹⁶

Function

In all dialects the 'normal' LOC. marks a stative 'in, at, on' for *-HUM*. nouns (leaving apparently some room of indeterminacy for +AN. nouns):

(12) *yūl-ŋu-φ n³ina-n palā-ŋa*

man-NOM. sit-Afv. house-LOC.

'Man sat/was in house.'

As already mentioned above, there is a special suffix with this function for +HUM. nouns:

(13) *yūl-ŋu-φ n³ina-n taykka-Ku=ra*

man-NOM. sit-Afv. woman-LOC₂

'Man sat near woman.'¹⁷

The 'normal' LOC. occurs in a transitive sentence only if the action,

denoted by the transitive verb, is located 'in, at, on' the place denoted by the noun to which the LOC. suffix is added:

- (14) *yūl=ηu-Ṭu taykka-Na pū-ya-n palā-ηa*
man-ERG. woman-ACC. hit-Afs.-Afv. house-LOC.
'Man hit woman in house.'

In other words, both the agent and the object must 'be in, at, on' the place. This means that, for example, the sentence (18) may be derived only from (17) and (15) and (16), but neither from (17) and (15) only, nor from (17) and (16) only.¹⁸

- (15) *yūl=ηu-φ n³ina-n ṭarppa-ηa*
man-NOM. sit-Afv. tree-LOC.
'Man sat/was on tree.'
- (16) *warakkān-φ n³ina-n ṭarppa-ηa*
meat-NOM. sit-Afv. tree-LOC.
'Bird sat/was on tree.'
- (17) *yūl=ηu-Ṭu warakkān-Na ṇā-ηal*
man-ERG. meat-ACC. see-Afv.
'Man saw bird.'
- (18) *yūl=ηu-Ṭu warakkān-Na ṇā-ηal ṭarppa-ηa*
man-ERG. meat-ACC. see-Afv. tree-LOC.
'Man saw bird on tree.'

The 'normal' LOC. may also express 'cause'¹⁹

- (19) *yūl=ηu-φ matakkarit³-Ṭi-n malikkū-ηa ṭā=wu-ηa*
man-NOM. angry-Inc.-Afv. bad-LOC. story-LOC.
'Man got angry because of bad news.'

The suffix *-Pu=y* is perhaps the most difficult suffix in the language, and it has as yet been impossible to establish all its functions by formulating clear rules. If added to place names, it may be said to function as a sort of 'absolute locative'; in other cases it is transformed out of an underlying LOC.²⁰

- (20) *ṭa=ηu-φ ṇayi-φ yākkū-φ ṇūlun-Pu=y-φ*
this-NOM. place-NOM. name-NOM. N.=loc.-REL.-NOM.
'This place is called Nhulunbuy.'
- (21) *yūl=ηu-Ṭu ṇayi-Na kaṭ=Ṭa-n ṇūlun-Pu=y-Na yākkū-Na*
man-ERG. place-ACC. hold-Afv. N.=loc.-REL.-ACC. name-ACC.
'Man reached placed named Nhulunbuy.'²¹
- (22) *yūl=ηu-φ ṇut=Ṭa-n t³i=ṇa-l ṇayi-ηa*
man-NOM. grow-Afv. this=obl.-LOC₃ place-LOC. Nom.=>
'Man grew up in this country.'
- (23) *yūl=ηu-φ ṇut=Ṭa-n-ta-φ t³i=ṇa-Ku-Pu=y ṇayi-Pu=y*
man-NOM. grow-Nom.-NOM. this=obl.-G.=D.-REL. place-REL.
'Man grown up in this country.'

Place names usually do not take a suffix when the action or the event stated in the sentence, takes place there; although a sentence like (25)* may be heard nowadays, it is considered to be incorrect:²²

- (24) *yūl=ηu-φ n³ina-n ṇūlun*
man-NOM. sit-Afv. N.=loc.
'man was in Nhulunbuy'
- (25)* *yūl=ηu-φ n³ina-n ṇūlun-ηa*
man-NOM. sit-Afv. N.=loc.-LOC.

The most common suffix of the verbal noun is some variant of a suffix

-Na=ra.²³ The fact that in certain dialects *=ra* may optionally be dropped in certain uses and the fact that Ṭāyi and Ṭʼaṇu apparently have only these 'short' forms supports the idea that the suffix *-Na=ra* is compound. One may now ask the question if *=ra* may be related to the 'residual' LOC. suffix *-ra* mentioned above. The idea might seem far-fetched. However, it may be suggested that the 'perfective' or 'accomplished' meaning of the verbal noun (see example (26)) may be redefined as being 'non-process' or, in other words, 'non-dynamic':

- (26) *ṭa=ηu-φ ruppiya-φ mana=ηi-Na=ra-φ*
this-NOM. money-NOM. steal-Nom.-NOM.
'This money is stolen.'

The feature 'non-dynamic' may, however, be 'cancelled', particularly when the G.=D. suffix *-Ku* (in a 'purposive function' mainly) is added. To 'restitute' the 'perfective' or 'non-dynamic' meaning of the verbal noun, the suffix *-Pu=y*, having been given also as a specialised LOC., is added:

- (27) *yūl=ηu-φ t³āl taykka-Ku=ru ruppiya-Ku mana=ηi-Na=ra-Ku*
man-NOM. want woman-EX₂ money-G.=D. steal-Nom.-G.=D.
(a) 'Man wants to steal woman's money.'
(b) 'Man wants money to be stolen by woman.'²⁴
- (28) *yūl=ηu-φ t³āl taykka-Ku=ru ruppiya-Ku mana=ηi-Na=ra-Pu=y-Ku*
man-NOM. want woman-EX₂ money-G.=D. steal-Nom.-REL.-G.=D.
(a) 'Man wants woman's money which has been stolen.'
(b) 'Man wants money stolen by woman.'

If the idea to identify the suffix *=ra* in the verbal noun with the 'residual' LOC. suffix, is correct, the question arises of how to analyse the suffix *-n=ta*, appearing as the morpheme forming verbal nouns of certain verb classes in Ṭaṇu and in Ṭʼaṇu? Although it is impossible so far, to demonstrate any derivation otherwise than by an *ad hoc* rule, it seems at first sight possible that any one of the three 'residual' LOC. suffixes *-ra*, *-la* or *-ṭa*, mentioned above, be assimilated to the alveolar nasal.¹²

B-3. Instrumental

Form

The 'normal' INS. is marked by the suffix *-Ṭu*; this means that ERG. and INS. are normally not distinguished morphologically. The suffix *-Pu=y*, for which a LOC. function has been mentioned above, may also be used as an INS.

In certain examples the 'meaning' of a suffix which I have labelled TR(ansgressive)—indicating 'movement through'—may approach that of an INS. The forms of this suffix are:

- Kuru* in Ṭuwala and in Ṭiyakkuy;
- Kur* in Ṭuwal and in Ṭāyi;
- muru* in Naṇu, in Ṭaṇu, and in Ṭʼaṇu.

Function

The 'normal' INS. marks a tool used to perform a task. It may be used also with body parts. In certain examples the suffix renders something which approaches a 'causal meaning':

- (29) *yül=ηu-Ṭu taykka-Na ḷarp=pu-wa-n wilmür-Ṭu*
man-ERG. woman-ACC. spear-Afv. fish=spear-INS.
'Man speared woman with fish-spear.'
- (30) *yül=ηu-φ ηaru=ηa-n nukku-Ṭu*
man-NOM. go-Afv. foot-INS.
'Man went on foot.'

- (31) *yül=ηu-φ ririk-Ṭu-n kuya-Ṭu parppà-Ṭu nūkka-na=ra-Ṭu*
man-NOM. sick-Afs.-Afv. fish-INS. rotten-INS. eat-Nom.-INS.
'Man became sick because of eating rotten fish.'

- (32) *yül=ηu-φ rakkun^y-Ṭi-n riri-Ṭu*
man-NOM. dead-Inc.-Afv. sickness-INS.
'Man died through/because of sickness.'

The last example may also be rendered by employing the suffix *-Pu=y* instead of the suffix *-Ṭu*; no clear difference in meaning has been noted so far between these two examples (32) and (33):

- (33) *yül=ηu-φ rakkun^y-Ṭi-n riri-Pu=y*
man-NOM. dead-Inc.-Afv. sickness-REL.
'Man died through/because of sickness.'

Also in a sentence of type (31) the suffix *-Ṭu* may be replaced by the suffix *-Pu=y*; however, the verbal noun may not take this suffix and simply drops the INS. suffix:

- (34) *yül=ηu-φ ririk-Ṭu-n kuya-Pu=y parppà-Pu=y nūkka-na=ra-φ*
man-NOM. sick-Afs.-Afv. fish-REL. rotten-REL. eat-Nom.-NOM.
'Man became sick because of eating rotten fish.'

but not:

- (35)**yül=ηu-φ ririk-Ṭu-n kuya-Pu=y parppà-Pu=y nūkka-na=ra-Pu=y*
man-NOM. sick-Afs.-Afv. fish-REL. rotten-REL. eat-Nom.-REL.

It finally is important to mention that in a transitive sentence such as (29), the INS. *-Ṭu* may not be rendered by the REL. *-Pu=y*. However, if such a sentence is nominalised, the INS. *-Ṭu* is obligatorily replaced by the REL. suffix *-Pu=y*. Hence:

- (36)**yül=ηu-Ṭu taykka-Na ḷarp=pu-wa-n wilmür-Pu=y*
man-ERG. woman-ACC. spear-Afv. fish=spear-REL.

- (37)**taykka-φ ḷarp=pu-na=ra-φ yül=ηu-Ku=η wilmür-Ṭu*
woman-NOM. spear-Nom.-NOM. man-ABL. fish=spear-INS.

- (38) *taykka-φ ḷarp=pu-na=ra-φ yül=ηu-Ku=η wilmür-Pu=y*
woman-NOM. spear-Nom.-NOM. man-ABL. fish=spear-REL.
'Woman [is/was] speared by man with fish-spear.'

It is as yet unclear how these facts have to be accounted for in a grammar of the language. However, if these examples are correct, and if it is correct to generalise them into a rule, one is tempted to interpret sentences (34) and (38) as 'true' nominal sentences. The rule, then, would have to state that an INS. is marked by the REL. suffix *-Pu=y* in a nominal sentence, by the suffix *-Ṭu* in a transitive sentence, and by either suffix in an intransitive sentence.²⁵ However, this rule fails in examples of the following type, where the suffix *-Ṭu* may not be replaced by *-Pu=y* in intransitive sentences:

- (39) *yül=ηu-φ ririk-Ṭu-n kuyiṅâr-Ṭu*
man-NOM. sick-Afs.-Afv. cold-INS.
'Man became sick through/because of cold.'

- (40) *taykka-φ t^yawar-Ṭu-n pit^y=t^ya-n=ta-Ṭu liṅku-Ṭu ḡaṭṭa-Ṭu*
woman-NOM. tired-Afs.-Afv. always-INS food-INS.
piyarṭ=ta-n=ta-Ṭu
cook-Nom.-INS.

'Woman is tired because of cooking food all the time.'²⁶

but not:

- (41)**yül=ηu-φ ririk-Ṭu-n kuyiṅâr-Pu=y*
man-NOM. sick-Afs.-Afv. cold-REL.

- (42)**taykka-φ t^yawar-Ṭu-n pit^y=t^ya-n=ta-Pu=y liṅku-Pu=y ḡaṭṭa-Pu=y*
woman-NOM. tired-Afs.-Afv. always-REL. food-REL.
piyarṭ=ta-n=ta-φ
cook-Nom.-NOM.

After the examples collected so far, it still remains, however, that the suffix *-Pu=y* may not mark an instrumental in a transitive sentence; on the other hand, the interpretation of nominalised transitive sentences as 'true nominal sentences' suggests an adjectivising function for the suffix *-Pu=y* even when marking an instrumental.²⁷

Both the suffix *-Ṭu* and the suffix *-Pu=y* may indicate time:

- (43) *yül=ηu-φ ηaru=ηa-n walu-Ṭu*
man-NOM. go-Afv. day-INS.

'Man went at day-time.'

- (44) *yül=ηu-φ ηaru=ηa-n walu-Pu=y*
man-NOM. go-Afv. day-REL.

'Man went at day time.'

An example of the TR. approaching an INS. function is the following one:

- (45) *taykka-φ wāṅa-n yül=ηu-muru ṭā=ruk-muru*
woman-NOM. speak-Afv. man-TR. word-TR.
'Woman spoke in native language.'

B-4. Transformations

For advancing any further in our investigation, it is necessary to deal first with four types of transformation occurring in the language.

A. The first type is called 'ABL.-transformation'. It comes close to what may be considered to be a 'passive' transformation. It applies typically to transitive sentences: the agent NP is transformed, taking a suffix which I call ABL(ative), the object NP is transformed, taking the NOM(inative), and the verb is nominalised, taking also the NOM. Hence:

NP_1 -ERG. + NP_2 -ACC. + VP_1 ABL. ⇒

NP_2 -NOM. + VP_1 -NOM.-NOM. + NP_1 -ABL.-NOM.²⁸

As may be seen from this rule, I interpret the ABL. construction as a 'true' nominal sentence (or noun phrase) which, therefore, may take other case-endings. The justification for adding NOM. to ABL. lies, then, in the fact that the ABL. belongs to those case-suffixes which undergo morphological changes when a given case is added to the NP of which it is part.

Forms

The ABL. suffix has the following forms:

-*Ku=ηu* in Ṭuwala, Ṭiyakkuy and Ṭaṅu;

-*Ku=η* in Ṭuwal, Ṭāyi, Ṭaṅu and Ṭ^yaṅu.

Without entering any details of the AGR(ement) rules,²⁹ I give here the 'oblique' forms of the ABL. recorded so far in Ṭaṅṅu:

- Ku=ru
- Ku=ra
- Ku=l
- Ku=ru=ŋ
- Ku=ru=y

Discussion of forms

It is assumed that all these suffixes are compound suffixes. The first syllable is identified with the G.=D. suffix -Ku. The other suffixes, with the exception of -l (which is considered to be a shortened form of the normal DIR. suffix -li) may be called 'residual' suffixes.³⁰

The suffix -ŋu—which may be said to exhibit a vowel-alternance -u/a, supposed to be wide-spread in Australia (cf. Dixon 1972), with the Ṭaṅṅu-Ṭaṅṅu LOC. suffix -ŋa—is interesting because of a variety of occurrences: it doubtlessly occurs in the word *yūl=ŋu* 'human being; Aboriginal' (lit. 'someone, somebody'; cf. *yūl* 'who?; someone'), after which the whole group is named; it also seems to occur in certain demonstrative pronouns ('rectus stem'), such as *ŋa=ŋu*, *ṭa=ŋu*, *tʰa=ŋu* 'this', after which the three dialect sub-groups are named. One would think that it had a nominalising function, although it may derive nouns from nouns (for example, *maṛi* 'trouble' → *maṛi-ŋu* 'trouble-maker'; cf. also *tʰampat* 'being good in finding game' → *tʰampat-ŋu* 'spearman' (technical term for turtle-hunting especially)). It is here where one has probably to place its use in the compound suffix -Pu=y-ŋu 'people of/from';³¹ this, on the other side, could suggest a function as an old 'partitive'. The only 'productive' function today is the rendering of a G.=D. with place names, provided they have the 'absolute LOC.' suffix -Pu=y. Hence:

- (46) *yūl=ŋu-φ tʰāl yirkkala-Ku* 'Man likes Yirrkala.'
man-NOM. want N.=loc.-G.=D.
- (47) *yūl=ŋu-φ tʰāl yirkkala-Pu=y-ŋu* 'Man likes Yirrkala.'
man-NOM. want N.=loc.-REL.-ŋu
- (48)**yūl=ŋu-φ tʰāl yirkkala-ŋu*
man-NOM. want N.=loc.-ŋu

Compare this to:

- (49) *yūl=ŋu-φ tʰāl yirkkala-Pu=y-Ku* [sc. *yūl=ŋu-Ku/minʰtʰi-Ku*]
man-NOM. want N.=loc.-REL.-G.=D. [man-G.=D./painting-G.=D.]
'Man likes Yirrkalian [sc. men/paintings].'
- (50) *yūl=ŋu-φ tʰāl yirkkala-Pu=y-ŋu-Ku*
man-NOM. want N.=loc.-REL.-ŋu-G.=D.
'Man likes Yirrkalians.'

It may be mentioned here that -ŋu appears as a G.=D. in certain pronominal forms, such as the Ṭuwala-Ṭuwala-Ṭāyi-Ṭiyakkuy form *ŋan-ŋu* 'he-G.=D.', which is *ŋan-Ku* 'he-G.=D.' in Ṭaṅṅu-Ṭaṅṅu-Ṭaṅṅu.

It finally must be pointed out that the suffix -ŋu, shortened into -ŋ, appears in most dialects to mark the ERG.-INS. of demonstrative pronouns.

It is as yet unclear how one may account simply and revealingly for the fact that the same suffix should mark a G.=D. and an agent—if not by relating the two uses to underlying uses of 'nominaliser' or as adjectiviser respec-

tively?³² These facts have been mentioned here at some length, because they might turn out to be relevant for defining some aspects of the ABL.-syntax with more precision than seems possible at present.

While the first three of the oblique cases of the ABL. -Ku=ŋ conform to the rule -ABL.+K. ⇒ -K. (where -K. denotes 'case'), the suffix -Ku=ru appears also where -K. is not the EX.:

- (51) *yūl=ŋu-Ṭu ruppiya-Na mana=ŋi-n* ABL. ⇒
man-ERG. money-ACC. steal-Afv.
'Man stole money.'
- (52) *ruppiya-φ mana=ŋi-Na=ra-φ yūl=ŋu-Ku=ŋ-φ*
money-NOM. steal-Nom.-NOM. man-ABL.-NOM.
'Money stolen by man.'
G.=D. ⇒
- (53) *taykka-φ tʰāl yūl=ŋu-Ku=ru mana=ŋi-Na=ra-Pu=y-Ku*
woman-NOM. want man-EX₂ steal-Nom.-REL.-G.=D.
ruppiya-Ku
money-G.=D.
'Woman wants money stolen by man.'
INS. ⇒
- (54) *taykka-Ṭu ŋaṭṭa-Na mā-ya-n yūl=ŋu-Ku=ru*
woman-ERG. food-ACC. take-Afs.-Afv. man-EX₂
mana=ŋi-Na=ra-Pu=y-Ṭu ruppiya-Ṭu
steal-Nom.-REL.-INS. money-INS.
'Woman took/bought food with money stolen by man.'³³

B. The second type may be called '-Ku-transformation'. This type also resembles a passive transformation. In this -Ku-construction, the verb is transformed into a verbal noun to which the suffix -mi is added;³⁴ this gives to it a 'habitualis-potentialis' meaning. The object NP takes the NOM., the agent NP takes the G.=D. suffix -Ku:

- (55) *yūl=ŋu-Ṭu ṭa=ŋu-Na kuya-Na nūkka-MOD.* -Ku ⇒
man-ERG. this-ACC. fish-ACC. eat-MOD.
'Man usually eats/may eat this fish.'
- (56) *ṭa=ŋu-φ kuya-φ nūkka-na=ra-mi yūl=ŋu-Ku*
this-NOM. fish-NOM. eat-Nom.-mi-NOM. man-G.=D.
'This fish may be/is usually eaten by man';
'This fish is edible to man.'

C. The third type of transformation is the 'R.-transformation'. Such a R(eflexive-reciprocal) construction is always treated as an intransitive construction, in that the 'agent' is in the NOM. case; however, a R.-construction may have an NP in the ACC. case; moreover, intransitive sentences with an 'indirect object' might form a reciprocal (but apparently not a reflexive), although 'pure' intransitive verbs may not. These are the reasons why I suggest that the NOM. NP in an R.-construction is transformed out of an (indirect or direct) object, while the agent of the underlying construction is deleted. An R.-construction in Yūlŋu is, therefore, defined as a construction with agent deletion, different from a 'normal' intransitive construction, which it appears to be on the surface.³⁵ The verb form resembles the 'habitual-potential verbal noun', mentioned above: the verb-classes, in which the verbal noun is formed with the suffix -Na=ra,

add the suffix *-mi* to that suffix; the verb-classes which form the verbal noun with the suffix *-n=ta*, drop the final *=ta* before adding *mi*. Hence:

- | | Reflexive-reciprocal | 'habitual-potential verbal noun' | |
|-------|---|----------------------------------|-------|
| | <i>-Na=ra-mi</i> | <i>-Na=ra-mi</i> | |
| | <i>-n-mi</i> | <i>-n=ta-mi</i> | |
| (57) | <i>yūl=ŋu-Ṭu yūl=ŋu-Na ṅā-ma</i> | 'Man saw man.' | R. ⇒ |
| | man-ERG. man-ACC. see-Afv. | | |
| (58) | <i>yūl=ŋu-φ ṅā-na=ra-mi-n</i> | 'Man saw himself.' | |
| | man-NOM. see-Nom.-mi-Afv. | | |
| (59) | <i>yūl=ŋuφ-Para-φ ṅā-na=ra-mi-n</i> | 'Men saw each other.' | |
| | man-NOM.pl.-NOM. see-Nom.-mi-Afv. | | |
| (60) | <i>yūl=ŋu-Ṭu ṭā=wu-Na rakka-ra-n yūl=ŋu-Ku</i> | | R. ⇒ |
| | man-ERG. story-ACC. tell-Afs.-Afv. man-G.=D. | 'Man told story to man.' | |
| (61) | <i>yūl=ŋu-φ-Para-φ ṭā=wu-Na rakka-ra-na=ra-mi-n</i> | | |
| | man-NOM.-pl.-NOM. story-ACC. tell-Afs.-Nom.-mi-Afv. | 'Men told each other stories.' | |
| (62) | <i>taykka-φ ṅāt'=Ṭi-n taykka-Ku</i> | 'Woman cried for woman.' | R. ⇒ |
| | woman-NOM. cry-Afv. woman-G.=D. | | |
| (63) | <i>taykka-φ-Para-φ ṅāt'=Ṭi-Na=ra-mi-n</i> | 'Women cried together.' | |
| | woman-NOM.pl.-NOM. cry-Nom.-mi-Afv. | | |
| (64) | <i>yūl=ŋu-φ n'ina-n</i> | 'Man was sitting.' | *R. ⇒ |
| | man-NOM. sit-Afv. | | |
| (65)* | <i>yūl=ŋu-φ-Para-φ n'ina-na=ra-mi-n</i> | | |
| | man-NOM.pl.-NOM. sit-Nom.-mi-Afv. | | |

D. The fourth type of transformation is the *CAUS.-transformation*. As I shall give only Ṭaju examples in what follows, it is sufficient to indicate here the CAUS(ative) suffixes used in these dialects. These are, after the verb-class:

- ma*—this is the CAUS. suffix of the large *-Ṭu* verb-class;
 - Ku*—this is the CAUS. suffix deriving transitive verbs from nouns, particularly adjectives.
 - Na=ra-mi-ŋka*—it may be seen that the CAUS. suffix is really *-ŋka*, which is added to a form being identical with the verbal noun+suffix *-mi* mentioned above. There are, however, reasons to think that *-ŋka* is added to a R.-form of the verb.³⁶
- | | | | |
|------|---|--------------------------------|---------|
| (66) | <i>ṭarppa-φ pak-ṭu-wa-n</i> | 'Tree broke.' | CAUS. ⇒ |
| | tree-NOM. break-Afs.-Afv. | | |
| (67) | <i>yūl=ŋu-Ṭu ṭarppa-Na pak-ṭu-ma-n</i> | 'Man broke tree.' | |
| | man-ERG. tree-ACC. break-Afs.-CAUS-Afv. | | |
| (68) | <i>taykka-φ rakkuṅ'-Ṭi-n</i> | 'Woman died.' | CAUS. ⇒ |
| | woman-NOM. dead-Inc.-Afv. | | |
| (69) | <i>yūl=ŋu-Ṭu taykka-Na rakkuṅ'-Ku-wa-n</i> | 'Man killed woman.' | |
| | man-ERG. woman-ACC. dead-CAUS ₂ -Afv. | | |
| (70) | <i>yūtṭu-φ n'ina-n</i> | 'Child was sitting.' | CAUS. ⇒ |
| | child-NOM. sit-Afv. | | |
| (71) | <i>taykka-Ṭu yūtṭu-Na n'ina-na=ra-mi-ŋka-n</i> | | |
| | woman-ERG. child-ACC. sit-Nom.-mi-CAUS ₃ -Afv. | 'Woman made child sit (down).' | |

It must be pointed out that transitive verbs usually do not form a CAUS. I have recorded only one clear example of a CAUS. formed from a transitive verb, but it is as yet difficult to assess the importance of this example in view of the general rejection of CAUS. formed from transitive sentences:

- (72) *pi-la-ŋ ṅan-φ yakka ṅā-Na ṅuru=ṭ'ira-ra-ra*
 MOD. he-NOM. Neg. me-ACC. annoy-Afs.-Afv. CAUS. ⇒
 'He should not have made difficulties for me.'
- (73) *ŋa-ya-φ ṅun-Na ṅuru=ṭ'ira-ra-na=ra-mi-ŋka-na-m*
 I-NOM. you-ACC. annoy-Afs.-Nom.-mi-CAUS₃-Afv.
 'I made you make difficulties [sc. for somebody].'³⁷

B-5. ERG.-INS. and locational cases

In the present section I shall point out a few of the more complex relations which seem to exist between a range of cases, especially the locational cases and the ERG.-INS. I am so far unable to formulate these cross-relationships into a neat system of formal rules, and I cannot go beyond a descriptive treatment which, moreover, is still haunted by disagreement between informants on several points. I have included some new information, and this is the reason why there are several deviations from the first version of this paper presented to the conference. However, I do not consider that cross-checking has as yet been sufficient so as to definitely exclude some of the examples denied by other informants. Some of the examples rejected more recently will be given in a note, while in other cases, the rejection will be indicated in a note. This uncertainty on the one side shows that we are here on a 'very deep level'; on the other hand it is one more reason for not formalising any more the grammar of the language as known so far.

A. Justification for distinguishing between ERG. and INS.

In spite of the formal identity of the ERG. marker and the 'normal' INS. marker, there are serious reasons to keep these two cases distinct. Some of these reasons have already been mentioned in the preceding sections; but for convenience I review all the evidence available so far:

(i) An INS., but not an ERG., may figure in an intransitive sentence:

- (74) *yūl=ŋu-φ ṅaru=ŋa-n nakku-Ṭu*
 man-NOM. go-Afv. boat-INS.
 'Man went by boat.'³⁸

The interpretation of R.-constructions proposed above suggests that some transitive sentences lack an ERG. We, therefore, come to the conclusion that both transitive and (some) intransitive sentences may have an INS., while only transitive, but never intransitive sentences, may have an ERG. NP.³⁹

(ii) An INS., but not an underlying ERG., is preserved under an R.-transformation; as pointed out above, the ERG. NP is obligatorily deleted:

- (75) *yūl=ŋu-Ṭu yūl=ŋu-Na pū-ya-n ṭarppa-Ṭu*
 man-ERG. man-ACC. hit-Afs.-Afv. tree-INS. R. ⇒
 'Man hit man with stick.'

- (76) *yūl=ŋu-φ-Para-φ pū-ya-n-mi-n ṭarppa-Ṭu*
 man-NOM.-pl.-NOM. hit-Afs.-n-mi-Afv. tree-INS.
 'Men hit each other with sticks.'⁴⁰

(iii) When a transitive sentence is nominalised, the ERG. is transformed into the ABL., while the INS. in a nominalised sentence is transformed into the REL.:⁴¹

(77) *yül=ηu-Ṭu taykka-Na ṭarp=pu-wa-n wiłmür-Ṭu*
man-ERG. woman-ACC. spear-Afv. fish=spear-INS. ABL. ⇒
'Man speared woman with fish-spear.'

(78) *taykka-φ ṭarp=pu-na=ra-φ yül=ηu-Ku=η-φ wiłmür-Pu=y-φ*
woman-NOM. spear-Nom.-NOM. man-ABL.-NOM. fish=spear-REL.-NOM.
'Woman speared by man with fish-spear.'

but not:

(79) **taykka-φ ṭarp=pu-na=ra-φ yül=ηu-Ṭu*
woman-NOM. spear-Nom.-NOM. man.-ERG.

(80) **taykka-φ ṭarp=pu-na=ra-φ wiłmür-Ṭu*
woman-NOM. spear-Nom.-NOM. fish=spear-INS.

(81) **taykka-φ ṭarp=pu-na=ra-φ yül=ηu-Pu=y-φ*
woman-NOM. spear-Nom.-NOM. man-REL.-NOM.

(82) **taykka-φ ṭarp=pu-na=ra-φ wiłmür-Ku=η-φ*
woman-NOM. spear-Nom.-NOM. fish=spear-ABL.-NOM.

(iv) As a clear consequence of the foregoing rule, the AGR(ement) rules operating on underlying ERG. and INS. respectively in embedded nominalised sentences are different. Without going into any details about the AGR. rules involved, the next example is given. This also shows that sentences of type (78) are best considered as 'true' NPs in the NOM. case, susceptible of taking any other case ending. In the following example the NP given in example (78) above is put into the G.=D. case:⁴²

(83) *yüṭṭu-φ ηaru=ηa-n taykka-Ku ṭarp=pu-na=ra-Pu=y-Ku yül=ηu-Ku=ru*
child-NOM. go-Afv. woman-G.=D. spear-Nom.-REL.-G.=D. man-EX₂
wiłmür-Pu=y-Ku ṇā-na=ra-Ku
fish=spear-REL.-G.=D. see-Nom.-G.=D.
'Child went to see woman speared by man with fish-spear.'

B. Locational cases and transitivity

Although it has so far not been possible to verify the Fillmoreian hypothesis of the uniqueness of a 'deep locative case'⁴³ in Yülnu, it is possible to propose a workable interpretation, where LOC. is accepted only in intransitive sentences. The relationship between various locational cases and transitivity is relevant to our problem.

Forms

As already mentioned several times, we must distinguish between suffixes for +HUM. nouns and suffixes for -HUM. nouns. For what follows, we still need the forms for DIR(ective)—indicating 'movement to(wards)'—and for EX(essive)—indicating 'movement (away) from':

	-HUM.:	+HUM.:	
DIR.:	-li=li	-Ka=la	in Ṭuwala;
	-li=l	-Ka=l	in Ṭuwal and Ṭàyi;
	-li	-Ka=la	in Ṭiyakkuy;
	-(ti=)li	-Ka=ra	in N̄aṇu (-li only after vowels);
	-li	-Ku=l	in Ṭaṇu and T'ṇu;

EX.:	-ηu=ru	-Ka=la-ηu-ηu=ru	in Ṭuwala;
	-ηu=r	-Ka=la-ηu-ηu=r	in Ṭuwal and Ṭàyi;
	-ηa=ra	-Ka=la-(ηu-)ηu=ru	in Ṭiyakkuy;
	-ηu=ru	-Ku=ru	in N̄aṇu, Ṭaṇu and T'ṇu.

Function

DIR. and EX. appear typically with 'verbs of movement', describing 'movement to(wards)' or 'movement (away) from' a place, an object or a person:

(84) *yül=ηu-φ tit²-Ṭu-wa-n raṇi-ηu=ru ηayi-li*
man-NOM. return-Afs.-Afv. beach-EX. camp-DIR.
'Man returned to camp/home from beach.'

(85) *yüṭṭu-φ ηaru=ηa-n taykka-Ku=ru yül=ηu-Ku=l*
child-NOM. go-Afv. woman-EX₂ man-DIR₂
'Child went from woman to man.'

It has been mentioned above, that it is possible to interpret the facts in a way so that only intransitive sentences contain a LOC. This interpretation is founded on a set of rules, the following of which are relevant for our study:

(i) A LOC. is transformed into a DIR. under a CAUS. transformation. As far as can be assessed so far, this rule is general:⁴⁴

(86) *yüṭṭu-φ yakku-ya-n miṇṭala-ηa* CAUS. ⇒
child-NOM. sleep-Afs.-Afv. bed-LOC.
'Child slept in bed.'

(87) *yül=ηu-Ṭu yüṭṭu-Na yakkur-Ku-wa-n miṇṭala-li*
man-ERG. child-ACC. sleep-CAUS₂-Afv. bed-DIR.
'Man put child to sleep in(to) bed.'

(ii) The second rule is related to the first rule. It has been stated above, that a LOC. appears in a transitive sentence only if the agent *and* the object 'are in, at, on' a place. Hence, sentence (18) is derivable only from sentences (17) and (15) *and* (16). However, when only the object 'is in, at, on' the place, the LOC. of the underlying intransitive sentence must be transformed into the DIR.; when only the agent 'is in, at, on' the place, the underlying LOC. must be transformed into the EX. Hence, sentence (88) is derived from the sentences (17) and (16) (but not (15)), and sentence (89) is derived from the sentences (17) and (15) (but not (16)):

(88) *yül=ηu-Ṭu warakkàn-Na ṇā-ηal ṭarppa-li*
man-ERG. meat-ACC. see-Afv. tree-DIR.
'Man saw bird on tree.'

(89) *yül=ηu-Ṭu warakkàn-Na ṇā-ηal ṭarppa-ηu=ru*
man-ERG. meat-ACC. see-Afv. tree-EX.
'Man saw bird from tree.'

(iii) A DIR., obtained by applying one of the two preceding rules, is reconverted into a LOC. when the sentence is nominalised:⁴⁵

(90) *yüṭṭu-φ yakkur-Ku-na=ra-φ yül=ηu-Ku=η-φ miṇṭala-ηa*
child-NOM. sleep-CAUS₂-Nom.-NOM. man-ABL.-NOM. bed-LOC.
'Child put to sleep by man in(to) bed.'

(91) *warakkàn-φ ṇā-na=ra-φ yül=ηu-Ku=η-φ ṭarppa-ηa*
meat-NOM. see-Nom.-NOM. man-ABL.-NOM. tree-LOC.
'Bird seen on tree by man.'

but not:

(92)**yūttu-φ yakkur-Ku-na=ra-φ yūl=ηu-Ku=η-φ miṅtala-li*
child-NOM. sleep-CAUS₂-NOM.-NOM. man-ABL.-NOM. bed-DIR.

(93)**warakkàn-φ ḡā-na=ra-φ yūl=ηu-Ku=η-φ ṭarppa-li*
meat-NOM. sec-NOM.-NOM. man-ABL.-NOM. tree-DIR.

(iv) The set of rules just discussed does not allow for any further extension: DIR. and EX. are preserved under a CAUS.-transformation:⁴⁶

(94) *yūttu-φ tit^y-Tu-wa-n ḡayi-li ṣaṅi-ηu=ru* CAUS. ⇒
child-NOM. return-Afs.-Afv. camp-DIR. beach-EX.
'Child returned from beach to camp/home.'

(95) *yūl=ηu-Tu yūttu-Na tit^y-Tu-ma-n ḡayi-li ṣaṅi-ηu=ru*
man-ERG. child-ACC. return-Afs.-CAUS.-Afv. camp-DIR. beach-EX.
'Man returned child from beach to camp/home.'

It is important to point out that, conformingly to a previous rule, sentence (95) is ambiguous, in that the location of the agent is irrelevant: Accordingly, the CAUS. 'return' might mean here, after the context, 'bring back', 'send back', 'call back', or 'order to bring/send/call back', and so on. This treatment of directionals occurs typically with what is commonly called 'verbs of movement', which are so far the most serious obstacle to any attempt to verify the Fillmoreian hypothesis about the uniqueness of a 'deep L. case' in Yūlḡu.

(v) Akin to the treatment of 'verbs of movement' is the following example, where however one might suggest that the transitive sentence underlies the intransitive sentence, in spite of the opposite morphological evidence (after which the transitive sentence is derived from the intransitive sentence by way of a CAUS. transformation.⁴⁷ If this view is accepted, the intransitive sentence with a DIR. (97) resembles an 'impersonal passive':⁴⁸

(96) *yūl=ηu-Tu paper-Na mām-Tu-ma-n wall-li*
man-ERG. paper-ACC. stick-Afs. CAUS.-Afv. wall-DIR. ⇒
'Man stuck paper on wall.'

(97) *paper-φ mām-Tu-n wall-li*
paper-NOM. stick-Afs.-Afv. wall-DIR
'Paper [is/was] stuck/sticks on wall.'

but not:

(98)**paper-φ mām-Tu-n wall-ηa*
paper-NOM. stick-Afs.-Afv. wall-LOC.

(vi) Finally, it is mentioned that an intransitive sentence with a TR. NP may undergo the ABL.-transformation, whereby the TR. 'behaves like' an ACC.—in that it is transformed into NOM.—and the NOM. 'behaves like' an ERG.—in that it is transformed into ABL.:

(99) *yūl=ηu-φ ḡaru=ηa-n ṭukka-muru* ABL. ⇒
man-NOM. go-Afv. road-TR.
'Man passed through/over road.'

(100) *ṭukka-φ ḡaru=ηa-na=ra-φ yūl=ηu-Ku=η-φ*
road-NOM. go-Nom.-NOM. man-ABL.-NOM.
'Road passed through/over by man.'

Similarly, a —AN. NOM. 'behaves like' an INS. in the same example:

(101) *motocar-φ ḡaru=ηa-n ṭukka-muru* NOM. ⇒
car-NOM. go-Afv. road-TR.
'Car passed through/over road.'

(102) *ṭukka-φ ḡaru=ηa-na=ra-φ motocar-Pu=y-φ*
road-NOM. go-Nom.-NOM. car-REL.-NOM.
'Road passed through/over by man.'

This is so far an isolated example and not clearly understood as yet; so far no similar example has been recorded involving any other locational case. In the following example, finally, the TR. again may be said to 'behave like' an ACC.:

(103) *motocar-φ ḡaru=ηa-MOD tilt^yi-muru* G.=D. ⇒
car-NOM. go-MOD. bush-TR.
'Car go through bush.'

(104) *motocar-φ tilt^yi-Ku ḡaru=ηa-na=ra-Ku*
car-NOM. bush-G.=D. go-Nom.-G.=D.
'Car for going through bush.'

but not:

(105)**motocar-φ tilt^yi-muru ḡaru=ηa-na=ra-Ku*
car-NOM. bush-TR. go-Nom.-G.=D.

C. G. =D and transitivity

While the G.=D. may be underlain by an ERG., some AGREEMENT rules in certain transformations treat G.=D. and ACC. alike:

(i) It has been mentioned above, that in the so-called *-Ku-transformation* the ERG. of the underlying transitive sentence is transformed into a G.=D. (see examples (55)/(56) above).

(ii) It has been suggested above, that in an R.-transformation, ACC. as well as G.=D. may be transformed into NOM., while the underlying agents are deleted (see examples (57)–(63)).

(iii) In the above list of compound cases it was indicated that *-Ku+ -Ku* may yield either *-Ku* or *-Ku=ru*. It would seem that the latter rule applies for POSS., the former rule for 'indirect objects' in certain constructions. In other words, a 'dative' *-Ku* may be said to 'behave like' an ACC. with respect to this AGR. rule:⁴⁹

(106) *yūl=ηu-Ku-φ ṭarppa-φ* G.=D. ⇒
man-G.=D.-NOM. tree-NOM.
'Man's tree/stick.'

(107) *ṭaykka-φ t^yāl yūl=ηu-Ku=ru ṭarppa-Ku*
woman-NOM want man-EX₂ tree-G.=D.
'Woman wants man's tree/stick.'

but:

(108) *yūl=ηu-φ ṣanka-n yūttu-Ku* G.=D. ⇒
man-NOM. seek-Afv. child-G.=D.
'Man looked for child.'

(109) *yūl=ηu-φ t^yāl yūttu-Ku ṣanka-na=ra-Ku*
man-NOM. want child-G.=D. seek-Nom.-G.=D.
'Man wants to look for child.'

but not:

(110)**ṭaykka-φ t^yāl yūl=ηu-Ku ṭarppa-Ku*
woman-NOM. want man-G.=D. tree-G.=D.

(111)**yūl=ηu-φ t^yāl yūttu-Ku=ru ṣanka-na=ra-Ku*
man-NOM. want child-EX₂ seek-Nom.-G.=D.

D. LOC and other cases

It has been stated above, that the Fillmoreian doctrine of the uniqueness of a deep L. case has not been verified in Yülŋu—mainly because of the ‘verbs of movement’—although it was proposed that only intransitive sentences be recognised as containing a ‘deep LOC.’ This has revealed a deep link between DIR. and transitivity. For convenience I once more review the essential links between LOC. and other cases:

(i) It was shown above, that a LOC. is transformed into a DIR. under a CAUS. transformation, provided that the subject of the intransitive sentence—becoming the object of the transitive sentence—be located ‘in, at, on’ the thing or place, or ‘at, near’ the person. This was shown in the pair of examples (86)/(87), generalised for other transitive sentences in the pair of examples (88)/(89), and finally confirmed by the conversion of type (90)/(91). This latter type is, by the way, interesting in that it applies also to example (96)—which could not be shown to have an underlying LOC.:⁵⁰

- (112) *paper-φ mām-Ṭu-ma-n=ta-φ yül=ŋu-Ku=η-φ wall-ηa*
 paper-NOM. stick-Afs.-CAUS.-Nom.-NOM. man-ABL.-NOM. wall-LOC.
 ‘Paper stuck on wall by man.’

but not:

- (113) **paper-φ mām-Ṭu-ma-n=ta-φ yül=ŋu-Ku=η-φ wall-li*
 paper-NOM. stick-Afs.-CAUS.-Nom.-NOM. man-ABL.-NOM. wall-DIR.

(ii) It was also shown that the EX. in transitive sentences may, analogously, be derived from an underlying LOC., whereby the agent of the transitive sentence is located ‘in, at, on’ a thing or place, or ‘near, at’ the person (see example (89)).

E. ERG. -INS. and other cases

I review here several facts which suggest a deep link between ERG.-INS. and some other cases. The ultimate outcome of the present paper is a certain indication, that also in Yülŋu ERG. and LOC. do not seem to be completely independent, although it is as yet unclear how to seize this relationship in all its complexity.

(i) It was shown above, that in the so-called *-Ku*-transformation the G.=D. is underlain by an ERG. (see the examples (55)/(56)). All transforms of the ERG. seem to contain the G.=D. suffix *-Ku*; this, however, is only a partial statement, as the same observation must be made for other oblique cases but, interestingly enough, with the exception of the INS. (whose typical transform is *-Pu=y*). It remains, therefore, unclear if and in which way this rule may reveal a particular relationship between ERG. and G.=D.⁵³ It is much more significant, that ERG. and G.=D. follow the same treatment in the morphological rules in a double sense: The adding of ERG.-INS. and of G.=D. to ABL. and to G.=D. both yield the EX₂ suffix (the Excessive itself being excluded from this comparison, because storable in the frame of the simple AGR. rules valid also for LOC. and DIR.). On the other hand, it is ABL. as well as G.=D. which yield both the same rules. Also here ERG. and INS. differ, in that ERG., but not INS. may be transformed into ABL., on which these rules apply, while the REL., into which INS. is typically transformed, follows other AGR. rules, as already stated above.⁵⁴

(ii) While it was just seen that the link with G.=D. concerns the ERG., not the INS., it would seem that there is a link between INS., rather than with ERG., and DIR.—which latter case has, by the way, been shown to be related to the G.=D. First, it has to be mentioned, that the suffix *-Ṭu*, given so far only as ERG.-INS. suffix, may also function as DIR. for place names (only):

(iii) It was finally shown in the pair of examples (22)/(23), that a REL.—considered to function also as ‘absolute LOC.’ with place names (see examples (20) and (21))—may be underlain by a LOC. This applies also with +HUM. nouns:⁵¹

- (114) *yūṭtu-φ ŋut=Ṭa-n tʰi=ŋa-Ku=ra taykka-Ku=ra* NOM. ⇒
 child-NOM. grow-Afv. this=obl-LOC₂ woman-LOC₂
 ‘Child grew up near this woman.’
- (115) *yūṭtu-φ ŋut=Ṭa-n=ta-φ tʰi=ŋa-Ku-Pu=y taykka-Ku=ru-Pu=y*
 child-NOM. grow-Nom.-NOM. this=obl.-G.=D.-REL. woman-EX₂-REL.
 ‘Child grown up near this woman.’

(iv) In this context it may be reminded that a DIR. may also be expressed by a G.=D.:

- (116) *yül=ŋu-φ ŋaru=ŋa-n kuya-li*
 man-NOM. go-Afv. fish-DIR.
 ‘Man went to fish(ing).’
- (117) *yül=ŋu-φ ŋaru=ŋa-n kuya-Ku*
 man-NOM. go-Afv. fish-G.=D.
 ‘Man went for fish(ing).’

It would seem that this is the case mainly—if not exclusively(?)—with DIR. which have so far resisted any attempt to derive them clearly from an underlying LOC. On the other hand, it is interesting that informants disagree or hesitate to admit sentences of type (118), where the DIR. is preserved under an embedded Nom.-transformation, whereas there is so far agreement for the admission of sentence (119), where the G.=D. is used:⁵²

- (118) ?*yül=ŋu-φ tʰäl kuya-li ŋaru=ŋa-na=ra-Ku*
 man-NOM. want fish-DIR. go-Nom.-G.=D.
 ‘Man wants to go to fish(ing).’
- (119) *yül=ŋu-φ tʰäl kuya-Ku ŋaru=ŋa-na=ra-Ku*
 man-NOM. want fish-G.=D. go-Nom.-G.=D.
 ‘Man wants to go for fish(ing).’
- (120) *yül=ŋu-φ ŋaru=ŋa-n yirrkala-li*
 man-NOM. go-Afv. N.=loc.-DIR.
 ‘Man went to Yirrkala.’⁵⁵
- (121) *yül=ŋu-φ ŋaru=ŋa-n yirrkala-Ṭu*
 man-NOM. go-Afv. N.=loc.-DIR₃
 ‘Man went to Yirrkala.’

Examples where a DIR. is employed in a way parallel to an INS. were vaguely and sometimes hesitatingly accepted. Thus, for instance, (123) was sometimes (though not by all informants) accepted, but usually immediately interpreted as being elliptical, and to be completed by *pū-ya-n luŋin⁵⁶-li* ‘(was) put into pipe’ or so:

- (122) *yül=ηu-Ṭu ηarali-Na pün^y-Ṭu-wa-n luñin^y-Ṭu*
man-ERG. tobacco-ACC. smoke-Afs.-Afv. pipe-INS.
'Man smoked tobacco with pipe.'
- (123) *yül=ηu-Ṭu ηarali-Na pün^y-Ṭu-wa-n luñin^y-li*
man-ERG. tobacco-ACC. suck-Afs.-Afv. pipe-DIR.
'Man smoked tobacco with pipe.'

The most interesting example is the one where the DIR₂ is used to render what may be termed a '+HUM. instrument';⁵⁶ for comparison I add the parallel sentences, where INS. and another locational case, namely TR., are employed:

- (124) *yül=ηu-Ṭu t^yürà-Na t^yüy-Ṭu-wa-n taykka-Ku yüt^{tu}-Ku=l*
Man-ERG. letter-ACC. send-Afs.-Afv. woman-G.=D. child-DIR₂
'man sent letter to woman with/by child.'
- (125) *yül=ηu-Ṭu t^yürà-Na t^yüy-Ṭu-wa-n taykka-Ku motocar-Ṭu*
man-ERG. letter-ACC. send-Afs.-Afv. woman-G.=D. car-INS.
'Man sent letter to woman by car.'
- (126) *yül=ηu-Ṭu tã-ruk-Na t^yüy-Ṭu-wa-n taykka-Ku wireless-muru*
man-ERG. letter-ACC. send-Afs.-Afv. woman-G.=D. radio-TR.
'Man sent message to woman by radio.'

It is clear that underlying the '+HUM. INS.' in (124) is typically an ERG.:

- (127) *yüt^{tu}-Ṭu t^yürà-Na ku-la-n taykka-Ku yül=ηu-Ku=ru*
child-ERG. letter-ACC. bring -Afs.-Afv. woman-G.=D. man-EX₂
'Child brought letter to woman from man.'⁵⁷

The EX₂ *yül=ηu-Ku=ru* 'from man' may be 'understood' in a purely locational sense. On the other hand, a more complex derivation is possible. It is interesting to compare that derivation with another one:

- (128) *yüt^{tu}-Ṭu t^yürà-Na kũ-la-n taykka-Ku yül=ηu-Ku=η-φ*
child-ERG. letter-ACC. bring-Afs.-Afv. woman-G.=D. man-ABL.-φ
'Child brought letter to woman from man.'⁵⁸

As already mentioned in this paper, it may be assumed, generally, that a sentence with an ABL. and without a VN, is elliptically formulated. It is, therefore, assumed that both (127) and (128) are elliptical sentences. I suggest, furthermore, that underlying sentence (127) is the verb *t^yüy-Ṭu* 'to send', while the verb underlying (128) is *wukkiri* 'to write'. This would yield the following derivations:

- (129) *yül=ηu-Ṭu yüt^{tu}-Na t^yüy-Ṭu-wa-n* ABL. ⇒
man-ERG. child-ACC. send-Afs.-Afv.
'Man sent child.'
- (130) *yüt^{tu}-φ t^yüy-Ṭu-n=ta-φ yül=ηu-Ku=η-φ*
child-NOM. send-Afs.-Nom.-NOM. man-ABL.-NOM.
'Child sent by man.'
- (131) *yül=ηu-Ṭu t^yürà-Na wukkiri* ABL. ⇒
man-ERG. letter-ACC. write
'Man wrote letter.'
- (132) *t^yürà-φ wukkiri-Pu=y-φ yül=ηu-Ku=η-φ*
letter-NOM. write-REL.-NOM. man-ABL.-NOM.
'Letter written by man.'⁵⁹

An ABL.-construction may be embedded into another sentence, whereby the head-NP (being in NOM.) of the construction takes the respective case-suffix, required by the main verb, while the ABL. follows a more complex

AGR. rule, the part of which, relevant to our discussion, is indicated here:⁶⁰ If the head NP takes the ERG., the VN also takes the ERG. suffix, but the ABL. is transformed into EX₂; if the head NP takes the ACC., the VN and the ABL. maintain the suffix -φ. Hence, if we embed (130) into (133), we obtain sentence (134), and if we embed sentence (132) into (135), we obtain sentence (136):

- (133) *X-Ṭu t^yürà-Na kũ-la-n taykka-Ku* Emb (130) ⇒
X-ERG. letter-ACC. bring-Afs.-Afv. woman-G.=D.
'Somebody brought letter to woman.'
- (134) *yül=ηu-Ku=ru t^yüy-Ṭu-n=ta-Ṭu yüt^{tu}-Ṭu t^yürà-Na kũ-la-n*
man-EX₂ send-Afs.-Nom.-ERG. child-ERG. letter-ACC. bring-Afs.-
ta^ykka-Ku woman-G.=D. Afv.
'Child, sent by man, brought letter to woman.'
- (135) *yüt^{tu}-Ṭu Y-Na kũ-la-n taykka-Ku* Emb. (132) ⇒
child-ERG. Y-ACC. bring-Afs.-Afv. woman-G.=D.
'Child brought something to woman.'
- (136) *yüt^{tu}-Ṭu yül=ηu-Ku=η-φ wukkiri-Pu=y-φ t^yürà-Na*
child-ERG. man-ABL.-NOM. write-REL.-NOM. letter-ACC.
kũ-la-n taykka-Ku
bring-Afs.-Afv. woman-G.=D.
'Child brought letter, written by man, to woman.'

I therefore suggest that (127) may be derived, by a Del(etion) rule, from (134), and (128) from (136), also by a Del. rule. This shows that ERG.-INS. and DIR₂ may be related in quite a complex way.

(iii) It is possible to find examples where an ERG. may be transformed out of a LOC₂. This is the case in an example, already considered in another context:

- (137) *yüt^{tu}-φ ηut=Ṭa-n taykka-Ku=ra* CAUS. ⇒
child-NOM. grow-Afv. woman-LOC₂
'Child grew up with/near woman.'
- (138) *taykka-Ṭu yüt^{tu}-Na ηut=Ṭa-n-ma=ra-na=ra-mi-ηka-n*
woman-ERG. child-ACC. grow-n-ma=ra-Nom.-mi-CAUS₃-Afv.
'Woman made child grow up.'

F. Conclusion

It has been shown above that the G.=D. is related to transitivity in a double way, namely by sometimes 'behaving like' an ACC. and in other constructions by 'being underlain' by an ERG. If in our last pair of examples it is correct that ERG. is transformed out of an underlying LOC., then we may say that also LOC. has this double link with transitivity, in that it may underlie an ERG., while the DIR.—so to speak the 'transitive counter-part' of the LOC.—was shown to have a certain link with ACC. The fact that the REL. may be underlain by an INS. as well as by a LOC. (see examples (22)/(23) and (114)/(115) as well as examples (29)/(38)) again suggests a deep link between INS. and LOC., the more so, as we have seen that REL. may also function as a sort of 'absolute LOC.'. In the following example it would seem, that REL. is derived from an underlying ACC.:

- (139) *ʔa=ŋu-φ kiri-φ yūl=ŋu-Ku=r̥u-Pu=y pū-ya-n=ta-Pu=y*
 this-NOM. stuff-NOM. man-EX₂-REL. hit-Afs.-Nom.-REL.
 'This thing is for killing people.'⁶¹

which seems to be transformed out of (140):

- (140) *X-ʔu yūl=ŋu-ŋa pū-ya-MOD. tʔi=ŋa-ŋ kiri-ʔu*
 X-ERG. man-ACC. hit-Afs.-MOD. this=obl.-INS. stuff-INS.
 'Somebody kill people with this thing.'

If all these examples are correct, and if it is correct to draw more general conclusions on them, it would then seem that not only may REL. also be related to ACC., but that the LOC.-link with transitivity is double, in that it may underlie the agent, hence an ERG., but also an ACC., which latter tie seems more closely related to INS. It is, then, as if INS. had an 'ACC.-tie' with transitivity, while ERG. only has the 'agent-tie' with transitivity.⁶² The fact that both are expressed by the same 'case' in Yūlŋu would be partly responsible for a variety of complications in the rules necessary for generating correctly the surface cases in the language.

Notes

1. For the name 'Murngin' see Warner (1958). As far as I know, the terms 'Wulamba' and 'Miwoit' or the like, have been introduced into the anthropological literature by R. Berndt; see, for instance, Berndt (1952). Capell (1963) also uses the term 'Wulamba', while Shapiro (1969) takes up again the term 'Miwoit'. For a discussion of these various names, see Schebeck (1968). As far as I can see, the term Yūlŋu has been introduced into the linguistic literature by G. N. O'Grady *et al.* (1966) although it has been known earlier—e.g. used by W. Chaseling—but it was apparently ignored by anthropologists. For the term Yūlŋu compare *yūl* 'who?', 'somebody', from which is derived *yūlŋu* 'human being': 'Aboriginal'. For the classification of this dialect-group into various sub-groups see Schebeck (1967, 1968). This classification is taken up also in Oates (1970).

- I am indebted to J. Heath, who worked in 1973 with Rittarŋu informants at Numbulwar, for a few critical remarks. He points out, that the label ʔiyakkuy was not recognised by his Rittarŋu and Wakilak informants at Numbulwar. As I explained already in Schebeck (1968) this label—on which I settled when trying to verify Berndt's 'clan'-name Dijogoi—implies some diachronic hypothesis from my side. Perhaps it is correct that the term should be dropped altogether; but I am still reluctant to use the term Rittarŋu in the double sense in which it is used by Heath, namely as referring to a dialect sub-group as well as to a dialect of that sub-group.
2. J. Heath denies this partly for the dialects he has studied more closely: 'Many of your transformations with -Kuŋu and so forth have no parallel in Rith.'. Unfortunately the expressions 'many' as well as 'and so forth' are too vague as to be discussed more clearly here. On the other hand, the limited Rittarŋu material which I have collected in 1966, does not allow me to define any substantial dialect differences with regard to the syntactic problems investigated in the present paper. The only non-ʔarŋu material published so far is found in Lowe (1962). In the morpho-

logical outline which follows, I draw mainly on Schebeck (1967). Examples, however, have been collected mainly on a more recent field-trip in 1973.

3. For this see Schebeck (1972). As every syllable is considered to begin with one consonant, the conversion of ʔ into [ʔ] is unambiguous. I follow, in general, the transcription-method used in Schebeck (1972) and which is based on O'Grady *et al.* (1966). I simplify, however, the present orthography in that I write word-initial retroflexes as alveolars, with the exception of *r̥*-. This is not due to a change in interpretation from my side, but rather an orthographical neglect, tolerated for convenience. I maintain the gemination-hypothesis in spite of several difficulties which this interpretation implies. J. Heath cannot escape some of the difficulties by going back (without much comment) to the terms 'fortis' vs. 'lenis', which I had adopted myself in 1967. I could so far not substantiate K. Hale's suggestion, that there might be some relationship between old (perhaps CA?) vowel length and lenition of stops.
4. [ʔ] denotes here a retroflex flap; to my knowledge, the simple alveolar stop /t/ never does occur, in any dialect, in the positions relevant for distinguishing the two series of stops.

It will be noted further below that the phonetic rules outlined here have to be completed by morphophonemic rules, involving mainly though by no means exclusively, pronominal forms; these rules are as yet completely unclear, the more so as they vary between dialects. Thus, e.g., *ŋā-ʔu* 'with what' is realised as [ŋāʔu] in some dialects, as [ŋāyu] in some others.

5. J. Heath comments: 'erg.-instr. in Rith.: -*du* after C, -*du* or -*y* after V'; that is, he confirms my rules, with two exceptions: he does not recognise a devoicing of the stop when the suffix follows a stop, and he considers the lenition (and shortening) rule as being optional. As for the absence of a devoicing rule after stops, this seems rather odd to me, and this would be, if really verified, the only dialect I know of where such a rule is lacking.
6. The ʔarŋu forms are taken from the virtually extinct Golpa (Kūlppa) dialect, and it is as yet unknown how important the differences of this interesting dialect are with other south-eastern ʔarŋu dialects, such as, e.g., Walamaŋu or Kamalaŋka.
7. J. Heath points out to me that Rittarŋu has one single occurrence of an ERG. allomorph -*li*, namely in *wara-li* 'who-ERG.'.
8. For this see the discussion of the ABL. -*Ku=ŋ* further below.
9. It is quite doubtful if a -AN NP may be said to have an ERG. suffix. In any case, after our rules, defined further below, it is clear that all informants who reject the grammaticality of example (82)* given below, implicitly reject the interpretation after which sentence (7) has an ERG. NP. Note for the following examples, that a general AGR(eement) rule in the language requires that a given case be added to every N (or Adj.) of an NP. For the examples and the interlinear translations note the following conventions: morphemes belonging to a single word are separated by a simple hyphen '-' in both text and interlinear translation. The double hyphen '=' hints at a hypothetical analysis within a given morpheme in the text, while it joins English words in the interlinear

translation, which render a single morpheme of the text. Boundaries indicated by '=' do therefore not necessarily coincide in text and inter-linear translation; e.g. $t^y i = \eta a$ - 'this=obl.-' in the interlinear translation, where it should be clear that $t^y i =$ may not be identified with 'this-', nor $=\eta a$ - with 'obl.-'.

10. In the examples I give the provisional 'basis forms' of the suffixes, to which the morphophonemic rules apply. For memory to the reader, I mark the initial consonant of such a suffix with a capital letter. The rules of the ACC. suffix may be resumed as follows:

$$-Na \Rightarrow \left\{ \begin{array}{l} (-n^y/V \text{---}) \\ (-\eta a) \\ (-\phi/-AN) \end{array} \right\}$$

There is some indeterminacy as to the 'realisation as zero' of the ACC. suffix (or the dropping of the suffix) with -AN. nouns. Usually, however, only +HUM. nouns take this suffix (obligatorily), but even some -AN. nouns are said to allow the adding of the suffix. Only some of the -AN. nouns may not take the suffix (only +ABSTR.?). One such category is the category of place names.

I have decided for the 'realisation as zero' of the suffix mainly because this allows the above rule to be written; probably it will turn out to be more adequate to consider these 'zero realisations' as being due to a dropping of the ACC. suffix.

11. For this see section 4 below.
12. Notice that in \dot{T} uwala, \dot{T} uwal, \dot{T} ayi and \dot{T} iyakkuy—i.e. in all the dialects having the suffix $-Ka=l(a)$ — $LOC_2 = DIR_2$. For the other forms of the DIR. and the EX., see further below, in section 5. I do not venture here any hypothesis relating directly the two 'residual' LOC. suffixes $-la$ and $-ra$ to each other, although J. Heath asks the question if $-ra$ and $-ya$ could be historically identical, by pointing out that 'There are several exx. of $*r \rightarrow \phi$ or $*r \rightarrow y$ in Rith. and Nungg. but all exx. so far involve initial $*r$ '.
13. The DIR_2 suffix $-Ka=ra$ in \dot{N} an \dot{u} contains the residual suffix $-ra$; note that $-li$ usually indicates direction to(wards) in the various dialects. Note in this context also that the EX. of the far-distant demonstrative in \dot{T} an \dot{u} - \dot{T} yan \dot{u} is $\eta u = \eta u - wa = li / pa = y - wa = li$, hence seems also to contain the same DIR.-suffix, while $pa=la$, indicating 'movement away from speaker' in all dialects, seems to contain the residual LOC. suffix $-la$. One may be tempted to speculate here about the demonstratives $\dot{t}uwa=la$ 'this' vs. $\dot{t}uwa=li$ 'that' in certain dialects.
14. As already mentioned above, it would seem that the suffix $-Pu=y$ is an old compound morpheme. But I have not found any trace of a suffix $*-Pu$ in the actual language.
15. I have recorded the same rules for \dot{T} iyakkuy, but J. Heath points out to me that 'Rith REL $-puy$ (fortis stop), not $-buy$ '.
16. J. Heath points out that $-Pu=y$ is 'distinct from emphatic $-pt$ '. This is obvious from a purely phonetic point of view, and if considering a single dialect; however, at a comparative level it seems fairly reasonable to expect that $-Pu=y$, $-Pa=y$ and $-Pi$ be directly related to each other, although this may not be achieved at present otherwise than by an *ad hoc* rule.

This means that I do not suggest deriving $-Pa=y$ from the 'residual' G.=D. suffix $-Pa$. The presumably contracted form $-Pi$ also appears in certain place-names (possibly, e.g., in *milinjim-Pi* 'Millingimbi'), in perfect parallel to the 'absolute locative' $-Pu=y$; this latter suffix has often been spelled $-bwi$ by anthropologists.

The general morphophonemic rules on stops, outlined above, do not apply for certain suffixes, especially with pronouns. I do not investigate these problems any further here.

17. Strictly speaking, a sentence like (13) may be considered as being ambiguous, although one would normally be more specific such as, e.g., $y\ddot{u}\ddot{u}\ddot{u}\ddot{u}-\phi n^y ina-n kupp\ddot{a}-\eta a taykka-Ku=ra$ 'child was sitting on woman's neck'.
18. I chose arbitrarily the verb $n^y ina$ - 'to sit' as a 'verb of existence' in these and similar LOC. sentences, in this paper.
19. Causal sentences may be formulated also by adding other case suffixes, the choice not being always clear as yet.
- For some more complex rules involved in the embedding of sentences, see below, and also Paper 70. It should be noted that the +HUM. nouns in the examples (19) and (20) have the LOC_2 $-Ku=ra$ and not the 'normal' LOC. $-\eta a$; in the example (19), moreover, a more complex AGR(ement) rule operates, yielding the form $\eta an-Ku=ra$, derived from the obliquous $\eta an-Ku$ 'he G.=D.'.
20. For an example showing more clearly the LOC. function of the suffix $-P=uy$, see the pair of examples (158)/(159) below; for the INS. function, see the examples (33)–(35). I have maintained the label 'REL.', proposed in Paper 70 (this volume) without any further justification.
21. As already pointed out above (note 10) I assume that place names never take an ACC. suffix.
22. The question apparently needs some investigation: while one hears today the form $\eta\ddot{u}lun-\eta a$ 'in Nhulunbuy' quite frequently, I do not remember having heard $*yirkkala-\eta a$, but only $yirkkala$ 'at Yirrkala'. I have provisionally assumed the dropping of the LOC. suffix rather than its 'realisation as zero'.
23. Here $-N$ refers to a nasal, either alveolar or laminal, the alternance following an unknown rule. When the nasal is alveolar, I usually write simply $-n$; but I continue to write $-N$ for the laminal, which is realised as palatal nasal after the vowel $-i$, as interdental elsewhere. For more details on nominalised constructions see further below, and Paper 70, this volume.
24. J. Heath tells me that 'Rith. distinguishes these two sentences:
 $jal-ti-ri \eta an-\eta u \eta ay jaw'wu-n-ra-wu$ money-gu
 wants for her he to take away money dat.
 'He wants her to take the money away.'
 $jal-ti-ri \eta ay \eta an-\eta u$ money-gu $jaw'wu-n-ra-wu$
 wants he her dat.
 'He wants to take away her money.'

First example: $\eta an-\eta u$ is indirect object dative, so can be part of enclitic complex. Dative enclitics precede nominative, so we get enclitic cluster $\eta an-\eta u \eta ay$.

Second example: *nan-ŋu* is genitive modifier of *money*, and cannot be separated from *money*. It is therefore not part of encited cluster and does not precede *ŋay*.'

25. In my first version of the present paper the problem was not defined in its complexity. In particular, it was not clear then, that a sentence like (37)* is ungrammatical, as is seen by the fact that on that occasion sentence (70) was given as a grammatical sentence. This disagreement, as other differences between the present paper and its former version, are largely due to disagreements between informants. This means also, that the statements made in the present paper need more verification with other informants.
26. I have decided to render *pit^y=t^aa-liŋku-* 'always' simply without bothering to analyse it any further in the interlinear translation.
27. In the first version I have suggested in a note that this might indicate a way to find a uniform 'explanation' of all the uses of the suffix *-Pu=y*. To remain clear, I know that the suffix 'basically means "associated with" or "characterised (inherently or permanently) by"', as J. Heath points out to me, just as I did not mean that B. Lowe's translations by 'belonging to' are wrong. What I, however, was and still am concerned with is to discover clear rules which allow us to generate *-Pu=y* forms correctly; I, moreover, was naturally looking for a simple (set of) rules achieving this task. To my knowledge no one has as yet proposed such a rule.
- The fact that *-Pu=y* belongs to those suffixes which may combine with other case-suffixes, supports the idea of interpreting *-Pu=y* forms as 'adjectival'; this also suggests that the correct orthography should be *-Pu=y-φ*.
28. In these and similar rules, as well as in most examples, I use a standardised word-order, to render comparison easier. It may turn out that I catch in most of these rules some 'preferred' word-order; but it must be pointed out that Yülŋu is basically a language with 'free word-order'.
29. For this see Paper 70, this volume.
30. The suffix *-ra* has already been mentioned as a 'residual' LOC. suffix, and I also have mentioned that the suffix *-y* may perhaps be regarded as a 'shortened' form of the 'residual' LOC. suffix *-Ťa*, if indeed this is a LOC. suffix. The suffix *-ru* appears in the case which I call EX(essive)—indicating 'movement away from'—and *-Ku=ru* is, as a matter of fact, the EX. marker for +HUM. nouns. It is interesting to note here again that *-ru* and *-ra* exhibit the vowel alternation *-u/a*, which is maybe to be discovered also in the pair *-Tu* 'ERG.-INS.' vs. *-Ťa* 'residual LOC.(?)'.
31. It is noted that, as I have suggested above, the REL. *-Pu=y* might also be looked upon as an 'adjectiviser', so that *-ŋu* might be considered to have a 'nominalising' function also here. Hence, *-Pu=y-ŋu* would mean something like 'the ones belonging to/associated with'; e.g. *yirrkala-Pu=y-nu* 'the Yirrkalish ones, the Yirrkalian ones' → 'the Yirrkalians'.
32. J. Heath tells me that 'Rel. clauses formed by adding *-ŋu* to tense-inflected verb, . . .'. I should mention here also, that *-y=ŋu* on the one hand may form an agent noun from a verb (B. Lowe (1962) already mentions, e.g., *pūkma-na:ra-y=ŋu* 'creator', from *pūkma-n* 'create'), but may also be used in 'while-clauses'; e.g. *tit^y-Ťu-n=ta-y-ŋu* 'while/when returning'.

While it would be 'plausible' to relate adjectiviser and G.=D., it would have to be shown that substantiviser and agent may be related.

33. For the complex AGR(eement) rules, see Paper 70, this volume.
34. The suffix *-mi* 'having' is not discussed in the present paper. See, however, the discussion of the examples below.
35. One is, therefore, tempted to define as 'middle voice' these constructions with agent deletion. It is unclear as yet if this may reasonably be suggested as a general definition in the language; some difficulties are implied in syntactic problems dealt with in Paper 70 and related to the problem of defining 'transitivity' and 'intransitivity' clearly. On the other hand, it will be seen that the CAUSative in Yülŋu typically transforms the subject of an intransitive sentence into the (direct) object, not into the agent, of the corresponding transitive sentence. Hence, agent deletion and agent addition are typical processes in the language considered. It must be pointed out here, that the term 'agent' is used here in a rather 'Fillmoreian sense', if I may say so, and not necessarily referring to an NP marked by ERG. As intransitive sentences having an 'indirect object' may undergo the R.-transformation, the present definition of R.-constructions by a rule of agent-deletion, implies that the subjects of such sentences are considered 'deep agents'. It is as yet unclear what significance has to be attributed to this formulation, as certain examples, supporting the idea of a clear definition of 'indirect transitives' in the first version of this paper, have been falsified since. For this see also further below and Paper 70, this volume.
36. These other examples, which have so far not been confirmed by other informants, involve verbs of verb-classes, where R. and the 'habitual-potential verbal noun', as I called this above, do not coincide formally. It is as yet unclear why an intransitive verb like *n^yima-* 'to sit' should derive an R. before deriving a CAUS. I shall not go into the difficult question of justifying these complex derivations, although a few hints are given at the end of the present paper. It must be pointed out that the CAUS. is not fully investigated yet. In particular, the use of CAUS. suffixes for deriving transitive verbs from nouns or adjectives is partly unclear, and examples for all three CAUS. suffixes are available. While examples (68)/(69) suggest that the suffix *-Ku* functions as the transitive counterpart of the Inc(ohative) suffix *-Ťi*, an Inc. derivation like *tiramu-Ťi-n* 'become (a) man' (man-Inc.-Afv.) has as transitive counterpart *tiramu-Ťu-ma-n* 'make (a) man' (man-Afs.-CAUS.-Afv.), and **tiramu-Ku-m* (man-CAUS₂-Afv.) is apparently impossible. This, by the way, is one of a series of examples which have so far suggested that the CAUS₂ suffix *-Ku* derives transitive verbs especially from adjectives. Besides a few 'irregular' formations such as *piyaŋi-Ťi-n* 'to be afraid' → *piyaŋu-wu-Ku-m* 'to frighten', there are a few examples where the 'causative' of an Inc. is formed by adding the verb *kuŋa-n* 'to give' to the root: *maŋaŋu-Ťi-n* 'to be(come) satisfied' → *maŋaŋu-Kuŋa-n* 'to satisfy'. Finally, the CAUS₃ suffix *-ŋka* is also used in derivations of the type *paŋka-mi-ŋka-n* 'to endow with feather-strings' (arm-mi-CAUS₃-Afv.) and of the (rarer) type *box-li-ŋka-n* 'to put into box' (box-DIR(??)-CAUS₃-Afv.). The last example is interesting, but it is as yet unclear if

-li really has to be identified with the DIR(ective) suffix -li; similarly, it is as yet unclear how to analyse an example like *ɲayi-ɬu-ŋka-n* 'to camp' (cf. *ɲayi* 'camp').

37. I have unfortunately not checked on the second object in the CAUS. sentence. In spite of many attempts, I have so far been unable to find any other example where a CAUS. of some sort is derived from a transitive verb.

It will be seen in the interlinear translation, that I have adhered to the idea that the pronouns follow a clear NOM.-ACC. morphology.

38. It is interesting to observe that in such a sentence a body-part is apparently put into the INS., not into the NOM.:

(i) *yūl=ɲu-φ nukku-φ* 'Man's (own) foot.'
man-NOM. foot-NOM.

but not:

(ii) **yūl=ɲu-Ku nukku-φ*
man-G.=D. foot-NOM.

The sentence corresponding to (74) is:

(iii) *yūl=ɲu-φ ɲaru=ɲa-n nukku-ɬu* 'Man went on foot.'
man-NOM. go-Afv. foot-INS.

It might seem plausible that in this sentence the body-part is not in the NOM., since the sentence obviously does not mean 'man's foot went'.

Interesting is the following example, which is taken from Lowe and Ross (1969) and then translated into Tāṅṅu:

(iv) *nhe yurru marŋgikuma wiripuwurrunha nhokiyingala goŋdhu*
'You can give the stop signal with your arm.'

This has been translated into Tāṅṅu by:

(v) *ɲu=nu-φ ɲaru marŋki-Ku-m ɲu-ŋku Pa=y-Ku=ru kūŋ-ɬu*
you-NOM. MOD. know-CAUS₂-Afv. you-G.=D.-Emph-EX₂ hand-INS.
'You will show (make known) with your own hand.'

another informant also gave:

(vi) *ɲu=nu-φ ɲaru marŋki-Ku-m ɲu-ŋku-Pa=y-Ku=ru-muru kūŋ-ɬu*
you-NOM. MOD. know-CAUS₂-Afv. you-G.=D.-Emph. EX₂-TR.
hand-INS.

'You will show (make known) with your own hand.'

but not:

(vii) **ɲu=nu-φ ɲaru marŋki-Ku-m ɲu=nu-Pi-φ kūŋ-ɬu*
you-NOM. MOD. know-CAUS₂-Afv. you-Emph.-NOM. hand-ERG.

39. Example (61) above has shown that there are sentences in Yūḷṅu which exhibit a pure NOM.-ACC. morphology. Although my interpretation of R.-constructions of the type exemplified there implies that the NOM. NP is transformed out of a G.=D. of the underlying 'active' sentence, not out of an underlying ERG., I propose to define transitive constructions by the presence of an ACC., not by the obligatory presence of an ERG. It should be clear, however, that I do not talk about elliptical formulations (elliptical dropping of ACC. being doubtlessly more frequent than elliptical dropping of ERG.). It will be noted that I do not employ any more the term 'indirect transitive' construction, used in the first version of this paper. This is due to the falsification of an important example which was important for proposing the term.

40. It will be noticed that the plural is not expressed with the -AN. INS.

NP. I mention here that I consider reciprocals as being underlain by a conjunction of identical sentences of type (75) (where NP₁ and NP₂ do not have the same individual referent, contrary to the reflexive).

41. The rules differ from the more complicated rules given in the first version of this paper, where sentences (80)* and (82)* both had been allowed. This has been falsified by now; this allows us to define the difference between ERG. and INS. much more clearly. It will be seen that example (78) is identical with example (38) above. In example (78), however, I have added -NOM. to both -ABL. and -REL. This may be justified by the derivation of more complex examples, of the type (83). While both rules, ERG. ⇒ ABL. and INS. ⇒ REL. are now established to be obligatory in these nominalising transformations, both the Agent and/or the Instrument may optionally be deleted in such a construction.
42. Remember that in an NP a given case is added to every noun or Adj. which is part of it. It should be clear that in the present sentence there is a double embedding, where an NP transformed out of a transitive sentence is embedded into another NP of this type. The AGR. rules implied here are easily statable in the rule given above.
43. Where necessary, I shall distinguish between L. 'deep locative', and LOC. 'locative in, at, on'.
44. Notice, however, the problematic examples (96)–(98)*.
45. It is as yet unclear if sentence (91) is ambiguous, being transformed out of (88) and (89).
46. This means that, while it is possible to eliminate LOC. from transitive sentences altogether, certain DIR. and/or EX. are not reducible by a simple rule to LOC.—although an *ad hoc* device may be construed for the purpose. This is why it was so far impossible to demonstrate convincingly the Fillmoreian hypothesis of the uniqueness of the 'deep L. case' in Yūḷṅu.
47. This poses therefore the problem for CAUSatives in general: while I have considered that the CAUS. transformation transforms an underlying NOM. into ACC. and adds an ERG., one might say that the CAUS. is the basis form and that intransitives are uniformly obtained by applying a transformation of Agent deletion. Although I cannot so far demonstrate this, I feel that this generalisation has something 'unnatural'.
48. If we accept the definition of the 'middle voice' as a construction with Agent deletion, and we accept the present explanation for sentence (97), this would be a middle sentence.
49. It is as yet unclear if this may be considered a general rule, so as to furnish the basis for distinguishing between POSS(essive) and DAT(ive). In any case, the rule given here is the reason why in examples of the type (107) I do not add -φ to the suffix -Ku.
50. The fact that only the Nom. construction allows for a LOC. might hint at the 'stative' character of the VN. The general problem of using DIR. with nominalised constructions has, therefore, to be taken up again from this point of view; as a matter of fact, only some of the informants allowed for a DIR. in some nominalised constructions, while others called for a G.=D.
51. This type of transformation might explain why the second of the following examples is ungrammatical:

(i) *ṭarppa-Pu=y-φ pūrūm-φ* 'tree-fruit'
tree-REL.-NOM. fruit-NOM.

but not:

(ii) **pūrūm-Pu=y-φ ṭarppa-φ* ('fruit-tree')
fruit-REL.-NOM. tree-NOM.

but only:

(iii) *pūrūm-mi-φ tarppa-φ* (a) 'tree having fruit (on it)'
fruit-mi-NOM. tree-NOM. (b) 'fruit-tree'

52. This hesitation poses, therefore, the problem in how far is it correct to say that the DIR. is preserved under a Nom. transformation. I mention in passing, that some verbs (e.g., some verbs of 'saying') seem to be construed with G.=D. or DIR., whereby the DIR. again is not accepted by all informants.
53. It is, however, significant, that this relationship with G.=D. exists only for cases used typically with +HUM. nouns. Thus, ABL., the transform of ERG., exhibits this relationship, but not REL., a typical transform of INS. (but also of -HUM. LOC.!).
54. It remains unclear how one should significantly take into account the fact that the form into which ABL. and G.=D. are transformed, coincides with EX₂. It is true, it has been shown that the EX. of a transitive sentence may be transformed out of an underlying LOC., attached to the agent of that sentence. However, I am so far unable to be more explicit about any 'deeper reason' for these facts.
55. No difference between these two examples has so far been noticed. It would seem, however, that -*Tu* does not occur in this function after nasals. I remind here also that *Ṇaju* adds -*li* on certain nouns for marking ERG., and *Riṭṭarṇu* has *warā-li* 'who-ERG'.
56. I have suggested above, that DIR. be related to INS. rather than to ERG. The so-called 'human INS.' discussed here, however, is clearly underlain by an ERG. However, this ERG. is embedded into an ACC. position. As I shall suggest below that there might be a certain link between ACC. and INS., this would support the expression of '+HUM. INS.' used here.
- Notice that -*Ku=ṛu* renders INS. with pronouns (AGR. rules).
57. I do not discuss the interpretation where -*Ku=ṛu* refers to a POSS., in which case word-order would normally be enough to disambiguate the example.
58. In the interlinear translation I have not rendered -*φ* by NOM., as it refers to an ACC., not to a NOM.
59. Morphemes functioning as verbs, but which are unchangeable morphologically, form the VN by adding simply the REL. suffix -*Pu=y*. This might strengthen the idea that -*ṛa* in the VN morpheme -*Na=ṛa* be identical with the 'residual' LOC. suffix -*ṛa*, a suggestion which is comparable with certain other uses of -*Pu=y* in VN-constructions.
60. For more details see Paper 70, this volume.
61. This sentence was interpreted as referring to magical outfit.
62. As mentioned above, in note 56, also the '+HUM. instrument' in example (124) (suffix -*Ku=l*) may be considered to be ultimately 'underlain' by an ACC.

Abbreviations used

The page where a given abbreviation occurs first is indicated.

ABL.	ablative (- <i>Ku=ṇ</i>)	(p. 359)
+ABSTR.	abstract (nouns)	(p. 374, note 10)
ACC.	accusative (- <i>Ṇa</i>)	(p. 354)
AfS.	stem affix	(p. 354)
Afv.	verb affix	(p. 354)
AGR.	agreement	(p. 360)
+AN.	animate (nouns)	(p. 354)
-AN.	inanimate (nouns)	(p. 354)
CAUS.	causative (- <i>ma</i>)	(p. 362)
CAUS ₂	causative II (- <i>Ku</i>)	(p. 362)
CAUS ₃	causative III (<i>ṇka</i>)	(p. 362)
COM.	comitative (- <i>Ku=ṛa</i> ; cf. → LOC ₂)	(p. 355)
Del.	deletion	(p. 371)
DAT.	dative (- <i>Ku</i>)	(p. 379)
DIR.	directive (- <i>li</i>)	(p. 374)
DIR ₂	directive II (- <i>Ku=l</i> , - <i>Ka=la</i>)	(p. 374)
DIR ₃	directive III (- <i>Tu</i>)	(p. 369)
Emb.	embedding	(p. 371)
Emph.	emphasis (pron.) (- <i>Pu=y</i> , - <i>Pa=y</i> , - <i>Pi</i>)	(p. 373)
ERG.	ergative (- <i>Tu</i>)	(p. 353)
ERG ₂	ergative II (- <i>lu</i>)	(p. 353)
ERG ₃	ergative III (- <i>li</i>)	(p. 354)
ERG ₄	ergative IV (- <i>ṛi</i>)	(p. 354)
ERG ₅	ergative V (- <i>ṇ</i>)	(p. 354)
ERG.-INS.	ergative-instrumental (- <i>Tu</i>)	(p. 361)
EX.	excessive (- <i>ṇu=ṛu</i> , a.o.)	(p. 374)
EX ₂	excessive II (- <i>Ku=ṛu</i> , - <i>Ka=la</i> , a.o.)	(p. 357)
G.=D.	genitive-dative (- <i>Ku</i>)	(p. 356)
+HUM.	human (nouns)	(p. 353)
-HUM.	non-human (nouns)	(p. 364)
Inc.	incohesive (- <i>Ti</i>)	(p. 356)
INS.	instrumental (- <i>Tu</i>)	(p. 357)
K.	case	(p. 361)
L.	deep locative	(p. 379)
LOC.	locative (- <i>ṇa</i> , - <i>ṇuṛa</i> , a.o.)	(p. 354)
LOC ₂	locative II (- <i>Ku=ṛa</i> , - <i>Ka=la</i> , a.o.)	(p. 355)
LOC ₃	locative III (- <i>l(a)</i>)	(p. 354)
LOC ₄	locative IV (- <i>ya</i>)	(p. 354)
MOD.	modality (of verb)	(p. 361)
Neg.	negation	(p. 362)
N.=loc.	place name	(p. 356)
Nom.	nominalisation (- <i>Na=ṛa</i> / <i>n=ta</i>)	(p. 356)
NOM.	nominative (- <i>φ</i>)	(p. 355)
NP	noun-phrase	(p. 354)
NP ₁	agent noun-phrase of trans. verb	(p. 360)
NP ₂	object noun-phrase of trans. verb	(p. 360)
obl.	obliquous	(p. 354)

pl.	plural (of nouns) (- <i>Para</i>)	(p. 362)
POSS.	possessive (- <i>Ku</i>)	(p. 367)
R.	reflexive-reciprocal (- <i>Na=ra-mi/-n-mi</i>)	(p. 361)
REL.	relative (case) (- <i>Pu=y</i>)	(p. 355)
REL ₂	relative II (- <i>Ku=y</i> , - <i>Ku=ru=y</i>)	(p. 355)
TR.	transgressive (- <i>muru</i> , - <i>Kuru</i>)	(p. 359)
VN	verbal noun (- <i>Na=ra/-n-ta</i>)	(p. 370)
VP ₁	transitive verb-phrase	(p. 360)

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45. Garawa

Velma J. Leeding

Garawa is spoken at Borroloola in the Northern Territory and at surrounding cattle stations in that area and Queensland.

The data and analysis in this paper is taken from 'A Preliminary Analysis of Garawa Phrases and Clauses' by E. S. and C. E. Furby (manuscript to be published); and 'The Pronominal System of Garawa' by C. E. Furby (accepted for publication by Oceanic Linguistics). Furbys' analysis uses the tagmemic model developed by Kenneth L. Pike. The content of this presentation and some of its notation are, however, the responsibility of the present author.

Introduction

The ergative case inflections in Garawa differ in form from those for the locative and instrumental cases. While the ergative case as the subject of a transitive sentence is similar to most other Australian languages, the form of the inflection is not 'common Australian', except in the ergative form of a very restricted group of kinship nouns.

Locative and instrumental case markers are identical. The form of the allomorphs differs from 'common Australian' except that the locative case does have the vowel *a*. Locative case occurs in intransitive, transitive and reflexive constructions. Instrumental case only occurs in transitive or reflexive constructions.

In predicting the allomorphs for the three cases, the nouns, demonstratives and adjectives of the noun phrase fall into four groupings defined mostly by morphology and to a lesser degree phonologically. The form of the case marker on each word in the phrase differs according to groups listed below.

The case markers are shown on the following chart:

	Ergative	Locative/Instrument
Group 1	-wanji	-na ~ -ina
Group 2	-nji	-njina
Group 3	-jini ~ -ji	-njina
Group 4	-yu	-yu

- Group 1: Singular common nouns, including proper and abstract nouns, body parts, etc.
Kinship nouns type 1
Singular adjectives not ending in *ra*
- Group 2: Nouns, adjectives and demonstratives marked by the dual or plural suffix or -*nguri* 'deceased'
Adjectives ending in *ra*
- Group 3: Singular demonstrative stem allomorphs, *naji* 'this' and *nana* 'that'
- Group 4: Kinship nouns type 2.
Kinship nouns divide into five subtypes on the basis of internal structure and inflection. No distinction in the form of inflection for these three cases is made on kinship nouns type 2. Other kinship nouns are not marked for case. Geographical names are not inflected for locative case.

B-1. Ergative

Form

There are four basic allomorphs occurring on the constituents of a noun phrase to indicate ergative case.

-wanji	with Group 1
-nji	with Group 2
-jini ~ -ji	with Group 3
-yu	with Group 4

The allomorphs -*jini* and -*ji* freely vary.

Group 1. Ergative allomorphs

... *ɲala nanda yařidjba-ɲga muwađa-na wili-na*
 while that put-pres canoe-loc side-loc
mađbingařa-wanji

expert:dugong:hunter-erg

'... while the expert dugong hunter puts that one at the side of the canoe.'

mařimba njulu buluŋu-φ guwađa-nanji đjuga-wanji
 hold he pup-nom ear-tactile boy-erg

'The boy holds the pup by the ear.'

yalu-φ břidjba gudjařa-nji yalgunji-wanji ɲaninji-mugu-nji
 they-subj sing two-erg one-erg man-pl-erg

maliwařa-φ

corroboree:name-nom

'The three men sing the "maliwarra" corroboree.'

Group 2. Ergative allomorphs

mamanumba-yi duɲala-φ nana-mugu-ɲji
 lose-p stone-nom that-pl-erg

'Those ones lost money.'

yali-ya nana-mugu-nji gaunsilu-mugu-nji gařu bugamba
 they:p:subj-can that-pl-erg councillor-pl-erg tell all

wudjini

few:days:ago

'All those councillors could have told (him) a few days ago.'

bagařidjba-yi đjanu bulaɲi-nji muŋgidji-wanji
 set:alight-p fire-nom they:d:poss-erg countryman-erg

'The countryman of the two of them lit the fire.'

naɲaɲi-nmugu-nji buwaɲanđja-wanji yagandjba yali
 he:poss-pl-erg older:brother-erg not:recognise they:pl:subj:p

'His older brothers did not recognise (him).'

dudidjba-yi bula-nduyanga walguřa-nji miya-wanji gugudu-wanji
 crawl-p they:d-transloc big-erg snake-erg black-erg

'The big black snake crawled past the two of them.'

naɲi-nmuŋgudji-nguya-nji nadjba-yi yalu-ɲja
 this-origin-d-erg see-p they:pl-obj

'The two of them belonging to this country saw them.'

yanjba-yi na-yi-nda yanji-φ naɲi-ɲguřu-nji malbu-řu-nji
 speak-p this:s-nom word-nom this-dec-erg old:man-dec-erg

'This old dead man said these words.'

migu nuři-φ đjabulinjba ɲaninj-mugu-nji mambuga-φ nanda-φ
 neg we:pl:ex:p-subj disregard man-pl-erg boss-nom that-nom

walguřa-φ

big-nom

'We, many (of us) men, take notice of that big boss.'

Group 3. Ergative allomorphs

njulu-φ mawał-φ lalanba-ga nana-ɲini mađbingařa-wanji
 he-subj float-nom watch-pres that-erg expert:dugong:hunter-erg

ɲaninji-wanji

man-erg

'He, the man, that expert dugong hunter, watches the float.'

migu-giya nadjba nana-ɲini wanana-wanji
 neg-did see that-erg buffalo-erg

'That buffalo did not see (him).'

daba-yi miya-φ nana-ɲi đjukai-wanji
 hit-p snake-nom that-erg boy-erg

'That boy hit the snake.'

Group 4. Ergative allomorphs

wadjba-yi baɲɲi-φ ɲaji malbu-wanji buwa-yu
 give-p meat-nom I:refr. old-man-erg older:brother-erg

'The old man, my older brother, gave me meat.'

Function

The ergative inflection is obligatory on all nouns, adjectives and demonstratives of a noun phrase functioning as transitive subject. The head of the noun phrase is usually animate but there are a few examples of an inanimate noun marked for ergative in the transitive subject. In two of these the noun is a body part and in two others there is an instrumental connotation.

bidjba-yi ɲuli-φ kuđanju mayi-wanji
 bite-p leg-nom strongly teeth-erg

'The teeth bit the leg hard.'

nidjinba-yi gabigabi-φ yařama-wanji mani-wanji đjalu-wanji
 trample-p calf-nom horse-erg hoof-erg foreleg-erg

'The front hoof of the horse trampled the calf.'

ɲařgadaba-yi nugami-φ gunda-wanji đjuga-φ
 spear-p foot-nom stick-erg boy-nom

'The stick speared the boy's foot.'

yadjba-ɲga yadji-φ nađara-wanji
 burn-pres country-nom sun-erg

'The sun is burning the country.'

B-2. Locative**Form**

There are four basic allomorphs occurring on the constituents of a noun phrase to indicate locative case, viz., *-na* ~ *-ina*, *-ɲjina*, and *-yu*.

The locative suffix *-na* ~ *-ina* occurs with Group 1 units.

-na following a vowel

-ina following a consonant

The locative suffix *-ɲjina* occurs with Groups 2 and 3 units.

The locative suffix *-yu* occurs with Group 4 units.

Group 1. Locative allomorphs

nala-na luwanjdja-gili wangala-wanji
thigh-loc twist-that oldentimes-erg
'The olden times people used to twist (the fibre) on the thigh.'

gudiyana bunjulbunjul-ina nana-njina gunḍa-na
sometimes soft-loc that-loc tree-loc
'Sometimes (we chop a hole) in those softwood trees.'

guliṛadjba na-ḡgi gala baṇḍa-na
cut:head he-refl:p down camp-loc
'He cut his head down at the camp.'

daba nuṛi-φ-li nanyi gaṛu-ṛinjba-na bayana-ṛinjba-na mili
kill we:pl:ex-subj-hab here east-side-loc west-side-loc again
'We used to kill (kangaroos) here on the east side and again on the west side.'

migu-yadji nana-ḡi wambiya-yi djulagi-na
nothing he-refr arrive-p plane-loc
'He did not come on the plane.'

... *nanda-φ maḍa waṛḡuna-φ magaba na-ḡga djamba-na*
that-nom also goanna-nom cover he-refl:pres earth-loc
'... and that goanna covered himself in the earth.'

gidjidjdjba na-ḡga gurul-ina
tangle:up he-refl line-loc
'He gets tangled up in the line.'

wulala yala wabuda-φ wangala-wanji yaṛaḡul-ina
on:head they water-nom olden:times:people-erg carrying:dish-loc
'Olden times people (carry) water in a dish on their head.'

nadjba-ḡga wajga waluḡanaṛa-φ gulu-guṛi ganjdja-na galawunji
see-pres down creature-nom sleep-obj:part sea-loc inside
'(He) sees the mythological sea creature sleeping deep in the sea.'

... *ḡala ḡayu-φ djungu-gili mugulaṛaḡu-φ ḡagi-njina yadji-na*
while I-subj sit-hab Robinson River-loc my-loc country-loc
'... while I used to live at my country, Robinson River.'

... *ḡala nanda yaṛidjba-ḡga muwaḍa-na wili-na*
while that put-pres canoe-loc side-loc
maḍbingaṛa-wanji
expert:dugong:hunter-erg
'... while the expert dugong hunter puts that one at the side of the canoe.'

guluga-ḡga gadji-φ nanidji-na bundal-ina
sleep-pres crocodile-nom that:big-loc river-loc
'Crocodiles live in that big river.'

Groups 2 and 3. Locative allomorphs

bulanji-nmugu-njina ganjiya-na djungu buli yalu-ndu
they:d:poss-pl-loc young:bro-loc sit they:d:subj:p they:pl-loc
'The two of them sat with their younger brothers.'

djadidjba njuli nanyi-njina yadji-na
grow he:subj:p this:s-loc country-loc
'He grew up in this country.'

ḡawamba djungidjba ḡayi-φ nugami-φ nana-njina wabuda-na
only know I:p-subj tracks-nom that-loc water-loc
gudjiṛi-na bayana-ṛi
crossing-loc west-place

'But I recognised (his) tracks by the river at the crossing in the west.'

djungu-yi ḡabaya-φ nana-ḡguṛu-njina djibaṛi-yuṛu-njina
sit-p spirit-nom that-deceased-loc woman-deceased-loc
'The spirit sat with that dead woman.'

Group 4. Locative allomorphs

djungu njulu wajga wabuda-na buwa-yu
sit he down water-loc older:brother-loc
'He is sitting down at the water beside his older brother.'

The locative NP only occurs in transitive, intransitive or reflexive clauses. It obligatorily refers to the subject of the intransitive or reflexive clause or to the object of the transitive clause.

The following comment, quoted from the Furbys' paper, shows the way the Garawa handle a locative which refers to the subject of a transitive clause.

In the following English clauses: 'That woman in the boat saw the emu', the locative phrase 'in the boat', obviously refers to the subject 'woman'. A literal translation into Garawa is impossible here as a locative would necessarily refer to the object of the transitive verb (which would make the statement ridiculous). Instead, a further clause would have to be inserted as follows:

nana-ḡi djibaṛi-wanji djungu-yi muwaḍa-na nadjba-yi ganananjdja
that-erg woman-erg sit-p boat-loc see-p emu
'That woman saw the emu; (she) sat in the boat' or 'That woman sat in the boat (and) saw the emu'.

These two clauses then form a merged sentence with the transitive clause, *nana-ḡi djibaṛi-wanji nadjba-yi ganananjdja*, interrupted by the intransitive clause, *djungu-yi muwaḍa-na*.

Function

The locative inflection usually means 'rest at a place' but there are a few occurrences of a possible allative (motion towards) function.

nadjba nanyi djuga-φ djila-jguṛi bundal-ina
see I:subj:p boy-nom go-obj:part river-loc
'I saw the boy going to the river.'

njuli djanba duḡala-φ djulagi-na
he:p throw stone-nom bird-loc
'He threw a stone at the bird.'

djunu lanḡu djala gaṛala nana-njina muwa-na yadji-na
perhaps north today descend that-loc stomach-loc country-loc
'Perhaps (he) went down to that bay in the north today.'

walja-nji-gili widjba lanjgi-na gamu
 dugong-refr-hab return north-loc later
 '(They) come back for the dugong in the north.'

The allative, however, is normally marked by a separate set of inflection markers, the allomorphs of which are: *-yuři* or *-jnjuři* for Group 1; *-jnjuři* for Group 2; *-nguri* for Group 3; and *-yaři* for Group 4. The allative is unmarked following *-nguri* 'deceased'.

The ablative NPs are normally marked by a separate set of inflections but the marker contains the locative *-na* in all forms (except with one interrogative stem). The allomorph *-nanji* occurs with Groups 1 and 2, *-nbunanji* with Group 3, and *-yunanji* with Group 4. The ablative is unmarked following *-nguri* 'deceased'.

The locative marker *-na* occurs on the compass points and could be regarded as functioning as ablative.

wilgu njuli-φ gaři-na miya-yannga bayaņa-ři
 run he:p-nom east-loc snake-transloc west-place
 'He ran from the east past the snake in the west.'

... *bagi guyu-yi lanjgi-na djanjuř-φ nanji-nguři nagi-nguři banđi-ři*
 and bring-p north-loc word-nom this-al my-al camp-al
 '... and brought the word from the north to this camp of mine.'

djala yalu manimani widjba lanjgi-na
 then they:pl for:nothing come:back north-loc
 'Then, for no particular reason, they come back from the north.'

The locative case is marked on a few time words such as *muņa* 'night', *ņabuņabu* 'afternoon', and *mugunđja* 'midday'. Location in time as well as in space is therefore indicated.

widjba nuři wađambi-dji mugunđja-na nuři-nga
 go:back we:pl:ex:subj:p feed-infin midday-loc we:pl:ex-refl
 'We went back to eat at midday.'

mangu űayi bula-nja madjařa-φ da-jguři
 hear I:subj:p they:d-obj married:couple-nom hit-obj:part
gunđa-yudi-nji muņa-na
 stick-concom-erg night-loc
 'I heard that married couple fighting with sticks at night.'

The locative case inflections are also used to indicate accompaniment. The meaning of accompaniment can only be assigned when human or animate nouns occur as the head of the noun phrase.

djuřa-yi nanņani-njina nidjananđji-njina
 dance-p he:poss-loc father-loc
 '(He) danced with his father.'

Sometimes it is difficult to decide whether the function is that of locative or accompaniment.

djuga űaninji-na djungu-ga
 boy man-loc sit-pres

A free translation of this clause could be either 'The boy sits at the man's side' or 'The boy sits with the man'.

Instrument versus Locative

Because the case-markers for locative and instrumental are identical, the decision as to the function of the marker in any given sentence is made on the basis of the class of nouns occurring as head of the NP. Locative case occurs on nouns for topographical or geographical location. Instrument case usually occurs only on inanimate nouns involving manipulation. There is a certain area of overlap, however, as both the inanimate nouns possessing manipulatory ability, and human or animate nouns may be used in locative slots.

The instrument NP only occurs in a reflexive clause (where reciprocity is expressed by reflexive construction) and in a transitive clause.

Group 1. Instrumental allomorphs

gadada-giyi nimbala-ga daba űuburu-na
 quietly-imp you:d-refl fight boomerang-ins
 'Don't fight so hard with those boomerangs!'

nadjba űayi űananji da-jguři djibaři-φ guladji-φ gunđa-na
 see I:p man hit-obj:part woman-nom head-nom stick-ins
banđa-na
 camp-loc

'I saw the man hitting the woman on the head with a stick at the camp.'

djanumba nayinda buyiņinginji-φ daba na-ņgi maņi-na
 only here pres:day:people-nom hit he-refl:p hand-ins
 'Here the present day people hit each other with fists only.'

ņaiřgadaba wuni-na bařgu-na yalu-ņgi-li
 spear spear-ins club-ins they:pl-refl-hab
 'They used to spear each other with spears and sticks.'

Group 2. Instrumental allomorphs

daba-yi miya-φ djuga-wanji walguřa-njina gunđa-na
 hit-p snake-nom boy-erg big-ins stick-ins
 'The boy hit the snake with a big stick.'

Group 3. Instrumental allomorphs

daba-yi miya-φ djuga-wanji nanji-njina walguřa-njina gunđa-na
 hit-p snake-nom boy-erg this-ins big-ins stick-ins
 'The boy hit the snake with this big stick.'

Instrumental function/Ergative marker

The most common way to show instrument is to suffix the head of the noun phrase with the concomitant marker *-yudi*, followed by the ergative marker *-nji*. This only occurs in a reflexive or transitive clause, as for the other instrumental inflection. The meaning of the concomitant marker is that of 'having'.

This combination of concomitant plus ergative is the only instance where the noun, demonstrative and adjective in the noun phrase are all marked with identical inflection. Restrictions as to the type of nouns are the same as described in the above section.

raŋimba ŋayi-φ ŋunba-φ ŋadjaŋ-yudi-nji gudjaŋa-φ
 shoot I:p-subj duck-nom rifle-concom-erg two-nom
 'I shot two ducks with (my) rifle.'

gadjala-yudi-nji yalu-ŋgi-li ŋaŋgadaba djibaŋi-wanji
 yam:stick-concom-erg they:pl-refl-hab spear woman-erg
 'Women used to spear each other with yam sticks.'

maɖa na-ŋga-φ mili ŋaŋgadaba nana-njdjudi-nji wuni-yudi-nji
 also he-refl-subj again spear that-concom-erg spear-concom-erg
lunggul-yudi-nji djaŋani-yudi-nji wangala wabula
 stone:blade-concom-erg spear:blade-concom-erg olden:times before
 'Also they (our ancestors) used to spear each other with those stone-bladed spears in the olden times.'

wudumba-dja yalu wulidji-φ duŋala-yudi-nji
 get-f they:pl beef-nom money-concom-erg
 'They get beef with money.'

namba yalu gaŋaŋun-φ guŋu-yudi-nji
 rub they:pl stick-nom fat-concom-erg
 'They rub the stick with fat.'

There is one example to date where the concomitant plus ergative marker does not appear to have an instrumental function.

djaŋba yali-φ walidji-φ djuŋu njaŋbal-yudi-nji
 eat they:pl:p-subj kangaroo-nom perhaps feathers-concom-erg
 'Perhaps they (those men) with feathers on ate kangaroo.'

46. The Western Barkly Languages

Neil Chadwick

1. Introduction

All the languages discussed are situated in the east central part of the Northern Territory and details are given in Appendix A.

There are two major divisions (a) Djingili (Dj.) to the west and (b) the Eastern Group (E.) consisting of Ngarngu or Ngarndji (Ng.) and the MacArthur subgroup (M.) located near the MacArthur River and consisting of Wambaya (W.), Gudandji (G.) and Binbinga (B.).

2. Points of general relevance

(a) In these languages, as in Djamindjungan, the nominal ergative affixes are quite different in form from the usual reflexes of *lu/tu* (*lu*)/*ŋgu* suffixes found elsewhere in widespread areas. It is quite possible that the Barkly suffixes developed from third person elements in the verb phrase.

(b) Allomorphs of the same suffixial form function for ergative, instrumental and locative in M. and for both ergative and locative in Ng.

(c) Both Dj. and Ng. exhibit distinct instrumental suffixes quite different in form from the ergative or locative suffixes.

(d) For functions other than ergative, forms occur which may have developed from earlier **lu/tu*. The allative in Dj. may be a reflex of CA locative **ŋga*.

3. Relevant forms

Dj. ergative (masculine): *-ni* normally; but also *li/-di*

Dj. ergative/dative/benefactive/purposive/possessive

(a) masculine: *-ŋa/-la/-da* (not ergative)

(b) feminine: *-ŋa* normally; but also *-ga*

Dj. instrumental: *-(w) aŋdi*

Ng. instrumental: *-(w) aŋdu*

Dj. allative: *-ŋga*

Dj. locative: *-mbili*

Ergative/locative/instrumental (M.) and

Ergative/locative (Ng.) *-ni* normally, but with a phonologically conditioned variant *-nu*.

Comitative in Ng.: *-li*

4a. Details of allomorphic variation

In all the Western Barkly Languages there are genders or noun-classes marked by suffix. For much of the early information on the MacArthur subgroup we are indebted to K. L. Hale. We are also indebted to R. H. Mathews who published material on the classifying suffixing nature of these languages at the turn of the century.

In Dj., and to some extent also in E., case marking in the ergative and also in some other grammatical cases cannot entirely be separated from gender marking; for case and gender function are combined in one suffixial form. This is why the ergative markers differ according to the categories of masculine and feminine.

In the masculine *-ni* is normal and almost certainly original as the ergative form. The forms *-li/-di* have probably developed from earlier **ni* by progressive assimilation of manner. In one subset of nouns/adjectives the form *-ŋa* which is also a marker of dative, purposive, benefactive and genitive, may have replaced earlier **ni* on analogy with neutralisation of case forms in feminine nouns. The forms *la/da* have most probably developed in a way similar to that of *li/di*.

In feminine nouns, the forms *-ŋa/-ga* function also for dative, benefactive, purposive and genitive. The form *-ga* has developed from earlier **-ŋa* by progressive assimilation of manner.

In the Eastern group, the form *-ni* may also function for both masculine gender and case. In feminine nouns *-ni* follows the gender suffix which is *-ŋa* or a reflex of **ŋa*. This case suffix has a minor allomorph in *-nu* determined by rules of vowel harmony.

4b. Case function

(a) Ergative

In all languages, the agent subject of a transitive verb is marked by the ergative suffix. The direct object of a transitive verb and the subject of an intransitive verb fall into 'nominative' case.

Examples

- (i) Dj.
walagu djargadja-dju 'The dog is running.'
 dog-nom. run-pres.
wawa mangia-dju 'The boy is sitting down.'
 boy-nom. sit-pres.
wawa-ni walagu maya-nu 'The boy hit the dog.'
 boy-erg. dog-nom. hit-past
gidgi-lji manjan -ga -dju 'The lizard(sp) is sleeping.'
 lizard(sp)nom sleep it/he pres.
gadga-li dadjba -nana -nu 'The lizard bit me.'
 lizard(sp)erg. bite it/me past
walagu-ni manjan-ga-dju 'The bitch is sleeping.'
 bitch-nom. sleep
walagu-na dadjba-nayi-niru-nu 'The bitch bit us.'
 bitch-erg. bite 3p. trans fem. 1p. pl. ex. past
- (ii) W.
djua yaaru-g-i 'The man is walking.'
 man-nom. walk-3p. pres.
mimari gulugbi-g-i 'The snake is sleeping.'
 snake-nom. sleep-3p. pres.
djua gi-n-a dau mimari-ni 'The snake bit the man.'
 man-nom. 3p. trans-past bite snake-erg.
ganayandja-na badbi-g-a 'The emu ran.'
 emu nom. (fem) run 3p past
ganayandja-na-ni niyi-n-a dau 'The emu bit me.'
 emu-fem.-erg. 3p fem. trans. me past bite

(b) Locative-*ni* (E.) -*mbili* (Dj.) -static locative ('in,at,on' etc.)

- (W.) *djamba-ni* 'On the ground.'
 ground-on
magi-ni 'In the camp.'
 camp-in
uluadja-na-ni 'In the sun.'
 sun fem. -in
mandjuju-nu 'In the shade.'
 shade-in
- (Dj.) *ηau-mbili* 'In the camp.'
 camp-in
garalu-mbili 'On the ground.'
 ground-on

Allative (Dj.) *ηga* ('to, into, towards')

- ηau-ηga* 'To the camp.'
 camp-allv.

(c) Instrumental instrument with which an action is performed.

- (Dj.) (w) *aŋdi*
 (Ng.) (w) *aŋdu*

- (Dj.) *walagu binnuru-aŋdi maya-mi* 'Hit the dog with a stick.'
 dog stick-instr. hit-impv.
 (Ng.) *yandji daarangu-aŋdu nadbi-ηa-ni*
 dog-nom. stick-with hit-I-pres.
 'I am hitting the dog with a stick.'
- (d) Comitative (Ng.) *li*
ηari-li babi-li 'With my elder brother.'
 my-com. brother-com.

5. Tentative historical explanations of case suffixes

(a) Ergative

As can be seen from the preceding sections, there is very little formal similarity between the ergative suffixes in these languages and CA *lu/tu/ηgu*.

One possible explanation is that, in the earlier stages of these languages, nouns were not marked for ergative function. As far as I can tell from the limited descriptions available so far, in some languages further north, like Nunggubuyu, Iwaidja and Gunwinjgu, there is no ergative affix on the agent nouns of transitive sentences. The modern ergative suffix in the Barkly languages may have developed from a third person element normally associated with the verb phrase, or from a gender marker whose original function was minimally to mark gender or noun-class and maximally to mark person (third) and syntactic function as well as gender or class.

A second possible explanation is that **ni/ni* and not *lu/ηgu*, was the original ergative marker. The similarity between *ni/ni* and the masculine transitive third person element in the verb phrase is either coincidental or the result of transference of the affix from the noun phrase.

Of the two explanations, I prefer the first for a number of reasons that cannot be described fully in a paper of this type. Acceptance of the second explanation leads to a number of difficult, controversial issues. In those nouns which exhibit two or three morphemes separable under analysis as a number, gender and case, the number and gender suffixes precede the case suffix. There are a number of historical possibilities which could have led to the modern pattern. At one extreme all the bound morphemes may have developed from original free morphemes. Whether bound morphemes in any language have always originated from earlier free morphemes is an interesting question. If this hypothesis (bound from earlier free) is accepted then the process by which bound morphemes came to occupy fixed positions often as affixes following a stem is also an interesting question and one which has been considered by A. Capell in a number of publications. It is also possible to assume that the sequence of affixes on a stem was original and one need not look for further explanation. Such an assumption would seem to run counter to the whole process of discovery and reconstruction in historical linguistics.

In the case of the dual number affixes in these languages, their modern forms *-(b)/(w)ul*, *-(b)/(w)il*, *-uil-* are almost certainly reflexes of a well-known CA free morpheme (**buladj*).

The gender markers, at least for particular neuter and feminine, have also almost certainly developed from earlier free morphemes. The vegetable

(particular neuter) class marker is clearly a reflex of North Australian **mayi*. The feminine marker and one of the masculine markers have probably developed from earlier third person pronouns and/or demonstratives, which in turn possibly developed from nominal/adjectival elements meaning 'man/male' and 'woman/female'.

If the ergative suffix was earlier than those for either number or gender or both, then either the number and gender morphemes were inserted (almost as 'infixes') between stem and case marker, or metathesis took place whereby the later suffixes formerly following the case suffix, came to precede it. There are reasons for rejecting both these explanations, if a simpler, more direct explanation can be found.

I suspect that, in the early stages of these languages, nouns were not marked morphologically for syntactic ergativity. The modern ergative suffixes, *ŋa* and *ni/ni* probably developed from gender markers which were also indicators of transitive third person.

Such markers probably had the forms **ŋayi* (fem.) and **ni/ni* (masc.) and still occur as markers of gender and third person transitivity. In Dj. they have the forms *-ŋayi-* and *-ni-*. There are corresponding forms in the Eastern group. The forms may originally have functioned as masculine and feminine oblique case demonstratives/pronouns.

The actual development of the position and function of these items is fairly complicated. But it seems evident that a position following the agent noun but not incorporated into the noun complex, was at first optional and then became obligatory. What had formerly been a free morpheme following the noun eventually became a bound morpheme incorporated into the structure of the noun-complex. The process is familiar with regard to pronominalisation (Capell, Wurm) in Australian languages and the early stages may in fact have been similar to affix-transference.

The examination of the historical process has brought into question the distinction between verbal and nominal transitivity markers (details in Appendix B.).

(b) Locative and comitative

(i) Two possible explanations of Dj. allative *-ŋga* are tentatively put forward.

1. That it may be a reflex of CA **ŋga* locative.
2. That it may be a development from earlier **-nga*, which in a modern form *-ŋga/-nga* occurs in the Eastern group as a marker of benefactive/purposive/possessive.

(ii) Ng. comitative *-li*

In Dj. the same affix functions for instrumental and comitative. In other languages in Australia the same form functions for ergative, instrumental and comitative. In some of these, the affix is a reflex of CA **lu/gu*. It is (very) tentatively suggested that Ng. *-li* may have developed in this way but that the problem remains of establishing whether there was originally a function related to operative or whether the affix is a borrowing from other languages.

(iii) Dj. locative *-mbili*

The second syllable of this affix may have the same origin as Ng. *-li*. The affix is also used for comitative function. The first syllable may have developed

from an earlier locative *-mba* for which there is some evidence, the vowel of which has assimilated to that of *-li*.

(c) Instrumental

(w) *anđi* Dj.
(w) *anđu* Ng.

It is very tentatively suggested that the *đi/đu* part of this affix could be a reflex of CA **lu*.

ndi < **nli* by progressive assimilation

nđu < **nlu*

**nli* < **nili* by loss of unstressed vowel

**nlu* < **nilu*

**nili* < **nilu* by vowel harmony.

ni may be from the same origin as the ergative suffix in Dj.

No satisfactory tentative explanation can be found for the first part of the affix.

Notes on the instrumental in Dj. and Ng.

From the corpus available so far it appears that there are no constraints on the use of the instrumental affix to express instrumental function. The affix appears in a variety of different types of sentence. As has been said at the symposia, the instrumental noun functions almost as an adverb.

The behaviour of the instrumental NP under reflexive transformation has not been tested. Anti-passive constructions do not occur in the corpus. For body parts, *hand* and *foot* occur with instrumental inflection. Instrumental forms for 'eye' and 'tooth' have not occurred in the corpus.

Appendix A—Notes on the languages

1. DJINGILI: Spoken in and around Newcastle Waters, Daly Waters and Elliott, Northern Territory.
2. NGARNGU: Formerly spoken around O.T. Downs, Northern Territory (north-west Barkly Tablelands and adjoining forest country).
3. WAMBAYA: Spoken in and around Anthony Lagoon and Brunette Downs, Northern Territory (central Barkly Tablelands).
4. GUDANDJI: Formerly spoken around Cape Crawford and Mallapunyah, Northern Territory and today in former Wambaya country at Cresswell Downs, Northern Territory.
5. BINBINGA: Formerly spoken around Bauhinia Downs and Borrooloola, Northern Territory (north central Barkly Tablelands and adjoining forest/river country).

Languages 3, 4 and 5 are closely related and since all the former tribal territories adjoin the MacArthur River, I have used that name for the subgroup. There seems to be a close genetic relationship between Ngarngu and the MacArthur subgroup. I have termed these languages the Eastern Group. Djingili, further west, is most probably more closely related to this group than to any other language in Australia.

Appendix B

The positing of a hypothetical development of the ergative suffix from a verbal transitive marker, raises the whole question of whether there should be a sharp distinction between nominal and verbal markers of ergativity. The ergative suffix in Australian languages is not always attached to the agent noun of a transitive sentence. In the Western Desert Language, the marker may be attached to elements other than the noun agent. Sometimes the affix is labelled 'transitive subject marker', a label that may also be used for a verbal marker or bound clitic pronoun. What may on the surface appear to be a petty problem of labelling, may be indicative of a serious problem in morphosyntactic class assignment. For when a verbal transitive marker is co-referential with a noun agent, it is also an ergative marker. The main difference between the nominal and verbal markers is that the nominal marker unambiguously identifies the noun or noun phrase which is the agent in a transitive sentence. In the absence of further nominal affixation in a language which lacks the nominal ergative affix and a fixed transitive word-order, a verbal transitive marker may fail to distinguish the subject from the object noun. Apart from this disambiguating function, there may be little syntactic difference between a nominal and a verbal marker of transitivity.

Appendix C—Other language groups

Ergative forms similar to those in the Barkly languages occur in the Djamindjungan group situated near the western border of the Northern Territory and separated from the Barkly languages by languages showing little affinity to either group.

In Ngaliwuru the forms *-ni* and *-gi* are probably original. The form *-gi* has probably developed from a common third person singular marker *g(a)*.

-di is probably a development from earlier *-ni* by assimilation of manner.

-i is also probably from earlier *-ni* firstly by assimilation of manner and then by elision of suffixial consonant.

In Nungali *-nji* is probably cognate with Ngaliwuru *-ni*.

-nanji (class II feminine) may be cognate with E. *-nani* in which the first element is a gender marker.

Note that in these two languages and also in Djamindjung 'one case inflection is used to indicate all three cases' (Ergative, Locative and Instrumental) (Hoddinott and Kofod, Paper 47, this volume). This characteristic is also common to the MacArthur subgroup.

In Nunggubuyu (east Arnhem Land) there are third person verbal markers *ni/nu* and *ni/nu* which may well be cognate with those in E. and Dj.

47. Djamindjungan

W. G. Hoddinott & F. M. Kofod

The Djamindjungan group of languages contains Djamindjung, Ngaliwuru and Nungali spoken in the Victoria River area, Northern Territory. Of these Djamindjung and Ngaliwuru are non-classifying languages which indicate case by means of suffixes. Nungali, which has four noun classes, indicates case in those words which have class prefixes by prefixes alone for the ergative, locative, instrumental, possessive, dative and purposive cases and by prefixes and suffixes for the ellative and allative cases.

In Nungali the case prefixes extend over all members of the noun phrase. As far as can be ascertained the use of prefixes to indicate case is unique among Australian languages. Those words which do not have class prefixes indicate case by suffixes alone.

In all three languages one case inflection is used to indicate all three cases. Because of this the forms will be treated together. As the case suffixes in Ngaliwuru and Djamindjung are identical (except for a few minor allomorphic variants) the Ngaliwuru case endings will be discussed to illustrate inflections in these two languages.

The forms of the case inflections

Ngaliwuru

The basic allomorphs for all three cases are:

-ni with stems ending in a vowel or bilabial nasal

e.g. *bibi* (father) ~ *bibini*; *yiram* (two) ~ *yiramni*

-gi with stems ending in alveolar and velar nasals

e.g. *bulgadiŋ* (father) ~ *bulgadiŋgi*

-di in stems ending in a stop

e.g. *wirib* (dog) ~ *wiribdi*

-i in stems ending in a lateral

e.g. *djumbul* (man) ~ *djumbuli*

Nungali

(a) Nouns with class prefixes

The noun classes of Nungali are indicated by the following prefixes:

Class I *di-* *di-gal* water

Class II *nja-* *nja-narun* woman

Class III *nu-/ni-* *nu-nulud* camp

Class IV *ma-/mi-* *ma-yadanj* skin

In Class III and IV there is a second order prefix which is used when the nouns designate body parts. *-ya-* if the person is male, *-na-* if female. Thus Class III *ni-ya-wa* 'foot of man'; *ni-na-wa* 'foot of woman'. Class IV *mi-ya-nargin* 'eye of man'; *mi-na-nargin* 'eye of woman'.

The ergative, locative and instrumental noun class prefixes are:

Class I *nji-* *nji-gal* in water

Class II *ŋa-nji=* *ŋa-nji-narun* woman -ERG

Class III *nj(i)-* *nju-nulud* in camp

Class IV *nji-* *nji-yadanj* on skin

(b) Adjectives with class prefixes

The forms for the ergative, instrumental and locative are also identical. The forms for Class III and Class IV are different from those found in the nouns.

Class I	<i>nji-</i>
Class II	<i>ŋa-nji-</i>
Class III	<i>wu-nji-</i>
Class IV	<i>mi-</i>

(c) Demonstratives

In the demonstratives the forms for ergative and instrumental are identical but there is a separate locative form.

	Ergative	Locative
Class I	<i>yi-nja-</i>	<i>wu-nja-</i>
Class II	<i>ŋa-nja-</i>	<i>wu-nja-</i>
Class III		<i>wu-nja-</i>
Class IV		<i>wu-nja-</i>

(d) Nouns without class prefixes

Those nouns which do not take class prefixes indicate case by means of suffixes. The words in this category appear to be words taken from Ngaliwuru and are small in number but commonly met with. The suffixes for locative, ergative and instrumental, are as in Ngaliwuru.

-ni following a vowel, for example, *bibi-ni* 'father'-ERG

-gi following a stop or nasal, for example, *djalín-gi* 'ashes'-LOC, 'in the ashes', *djalbud-gi* 'house'-LOC 'in the house'.

Class IV words may also take the suffix *-mayi* to form the instrumental *djimbilaŋ* 'spear' ~ *djimbilaŋ mayi* 'with a spear'-INST

Function

(a) Ergative

In all Djamindjungan languages the functions of the ergative are identical in that it marks the normally animate subject of the transitive verb. However, the way it is used differs. In the cases where inflection is indicated by suffix (that is, in Ngaliwuru, Djamindjung and the non-class marked nouns of Nungali) the ergative marker must appear on one of the elements of the noun phrase and may appear on all. It need not be on the noun itself. This also applies to the locative and instrumental NPs.

Ngaliwuru

- (1) *malayi yiramni bu-nj-aŋu gagawuli maŋarawu*
 woman two-ERG they(du) gather-PAST yam food-PUR
 'The two women gather yams to eat.'
- (2) *bibi-ni nuwina-ni muŋ ga-ni-ŋawu djalig*
 father-ERG his-ERG look he-him-see-PRES baby
 'His father looked at the baby.'
- (3) *bibi-ni ga-n-bu-ŋana mandadj maŋara*
 father-ERG he-me-FUT-give later food
 'Father will give me food later.'

- (4) *djirama-ni djumbul yiram bu-n-maliŋmaya lama*
 two-ERG man pair they-DU-make-PRES arrow head
 'The two men are both making arrow heads.'

Nungali

- (5) *winiŋgiri-ni walad-bari-ni ŋa-ni-nayi-na dulanj*
 little-ERG old man-ERG he-him-see-PAST snake
 'The little old man saw the snake.'

In Nungali the ergative marker is obligatorily prefixed to all constituents of the noun phrase which indicate word class by prefix. This also applies to the locative and instrumental NPs.

- (6) *ŋanji-nad ŋanji-ŋaruŋ durib ŋa-ni-yada*
 C2ERG-big C2ERG-woman dog she-him-hit-PAST
 'The big woman hit the dog.'
- (7) *ŋanja-ga-yiram ŋanji-ŋaruŋ-djiram wi-n-mil-a maŋara*
 C2ERG-that-DU C2ERG-woman-DU they-DU gather-PAST food
 'These two women were gathering food.'

(b) Instrumental

The instrumental marks a weapon, tool or object used to perform a task. It has not yet been ascertained whether body parts can take the instrumental inflections:

Djamindjung

- (8) *gan-i-ma gaburgad laŋin-gi*
 he-him-hit-PAST yesterday stick-INST
 'He hit him yesterday with a stick.'

Ngaliwuru

- (9) *djumbul ŋa-φ-maŋu gandi-ni*
 man I-him-hit-PAST stick-INST
 'I hit the man with a stick.'
- (10) *gan-i-dja-n mawud-i wargadi daramanman*
 he-him-kill-PAST stonespear-INST long right through
 'He stuck him right through with a long stone spear.'

Nungali

- (11) *yinjagadju njuŋunin durib djimbilaŋ-mayi ŋan-i-yada*
 that-one C1ERG-man dog spear-INST he-him-hit-PAST
 'That man struck the dog with a spear.'

Instrumental NPs can occur with transitive or reflexive and reciprocal clauses.

Ngaliwuru

- (12) *djalig dji balbalja ga-ra-da laŋin-gi*
 little boy he hurt he-hurt-self PAST stick-INST
 'The little boy hurt himself with a stick.'

In intransitive clauses the tool or object used is in the comitative case.

Djamindjung

- (13) *mayi waljin ga-ydga-nj lajin-mid*
 man walk he-go-PAST stick-COM
 'The man walked with a stick.'

(c) Locative

The locative inflection marks the place at rest and motion into or onto. It also indicates proximity to an object.

Djamindjung

- (14) *ga-n-uga djarinj-i*
 she-it-take-PAST cave-LOC
 'She took it into the cave.'
- (15) *dirg gan-i-ranj munuygu lajin-gi*
 fasten he-it-put-PAST rope tree-LOC
 'He fastened the rope to the tree.'

Ngaliwuru

- (16) *yagbali-ni ya-yadj wundju η-φ-wu-njawu*
 camp-LOC NEGF-he-be if I-him-FUT-see
 'If he is in camp I would like to see him.'
- (17) *ηarg-ina lidburg guranj ya-ndjara gulban-gi*
 my-POSS axe NEG NEGFUT SING-put ground-LOC
 'Don't put my axe on the ground.'

Nungali

- (18) *winingiri-ni waladbari-ni ηa-ni-ηayi-na dulanj nji-lanjin wunji-nad*
 little-ERG old man-ERG he-him-see-PAST snake LOC-tree LOC-big
gabugud
 yesterday
 'The little old man saw the snake under the big tree yesterday.'
- (19) *duyunin wa-nanduyu dub nji-lanjin wunji-nad*
 man he-be-PRES sit C3LOC-tree C3LOC-big
 'The man is sitting near the big tree.'

The locative may occur after prepositions.

- (20) *nju-ηunin ηa-φ-nar-a nja-yilgulunj lalinj-uy nju-mali*
 ERG-man he-it-put-PAST C2 stone axe close-INTENS LOC-paperbark
 'The man put the stone axe close to the paperbark tree.'

Djamindjung

- (21) *mayi-ni gudjugu-ni gan-i-ma njanjin malayi nu-wina*
 man-ERG big-ERG he-her-hit-PAST proper woman his-POSS
lajin-gi gudjugu yagbali-ni gaburgad
 stick-INST big camp-LOC yesterday
 'The big man hit his woman hard with a big stick in the camp yesterday.'
- In spite of the formal identity of the ergative and instrumental markers there are good reasons for keeping these two cases distinct.

(a) Instrumental NPs, but not ergative NPs, may occur in reflexive and reciprocal clauses, for example in (22)

- (22) *djalig dji balbalja ga-ra-dja lajin-gi*
 little boy he hurt he-hurt-SELF-PAST stick-INST
 'The little boy hurt himself with a stick.'

(b) Ergative NPs but not instrumental NPs may be replaced by bound transitive subject pronouns in verb phrases. Indeed the ergative NP is required to *specify* the agent, not to provide an agent.

Ngaliwuru

- (23) *ηalamag-di ga-n-ba miri*
 alligator-ERG he-me-bit-PAST leg
 may transform to:
ga-n-ba miri
 he-me-bit-PAST leg
 'The alligator bit my leg.'

The locative NPs may be distinguished from both ergative and instrumental NPs by being capable of being replaced by adverbials of location. For example in (24)

- (24) *ga-n-uga djarinj-i*
 she-it-take-PAST cave-LOC
 'She took it into the cave.'

We may write

- ga-n-uga waldjub*
 she-it-take-PAST inside
 'She took it inside.'

It is worth noting that the Nungali case prefixes clearly relate to the suffixes of the other languages and provide an example of Capell's assertion that markers which in one language exist as prefixes will exist elsewhere as suffixes.

48. Ngangikurungur

W. G. Hoddinott & F. M. Kofod

Ngangikurungur, like other members of the Daly River, Northern Territory family, does not indicate case by inflections but by post-positions which occur after nouns, pronouns, demonstratives or any other nominal. The post-position for the ergative and instrumental is *ninigi* and for the locative is *nide*. They occur at the end of noun phrases, and are invariable. As with other ergative languages the object of the transitive verb is unmarked.

Ergative

The subjects of transitive verbs are usually marked by having the post-position *ninigi*, at the end of the subject NP. The subject NP may be animate or inanimate.

- (1) *ηayi ninigi ηu-pu-nta wa-weti*
 I ERG I hit-PRES hit MALE-small
 'I am hitting the little boy.'

- (2) *a-wermisa ningi be-ŋ-im-ŋi katet*
ANIMAL-crocodile ERG it-do-PRES-me bite
'The crocodile bit me.'
- (3) *fuke ningi yewir w-ij-e fuwifuwi tje*
wind ERG tree it-lie-PAST blow PAST
'The wind blew the tree.'

Subject NPs of intransitive verbs, reflexives and reciprocals are not usually marked in this way.

- (4) *kala ŋayi kirim ŋitjir nide*
mother I she-sit-PRES ground LOC
'My mother is sitting on the ground.'
- (5) *a-wa-wuni fagari wi-reŋ-gu bulbul napa*
PL-MALE-that two they-hit-REFL PRES-DU fight then
wa-nuŋ-gu
they-go PRES-DU
'They are always fighting.'

While this is the general rule it is also possible for the NP subjects of transitive verbs to be unmarked while, more rarely, the intransitive subject NP of intransitive verbs is marked.

- (6) *ŋayi-ningi ŋi-njŋing-in wa-wuni*
I-ERG I-see-PRES MALE-that
'I can see that man.'

But c.f.

- (7) *ŋayi ŋi-njŋing-in a-fengu*
I I-see-PRES ANIMAL-snake
'I can see that snake.'
- (8) *a-wa-wuni fagari wer-beŋ-gu madi wir-uj-gu*
PL-MALE-that two they-do-PRES-DU side they-sit-PRES-DU
'Those two men are building a canoe (sitting down).'

Subject NPs both marked and unmarked have been found with a number of transitive verbs where the ergative is normally required. These include to *chop, find, catch, cook, paddle, hold, tread on, make*, etc.

The marker *ningi* may also occur on subject NPs of intransitive verbs, for example:

- (9) *a-yeyi ningi wa-r-a-ni fititit tje*
ANIMAL-other ERG they-PL-go-PAST rise up PAST
'The other birds rose up into the air.'

and with impersonal verbs:

- (10) *a-yeyi ningi kakana w-ayi-m pir batj*
ANIMAL-other ERG now it-PRES- to them hot
'Those others are hot.'

Perhaps in cases like (9) and (10) we should regard *a-yeyi ningi* 'those others' as an idiom. The use of *ningi* with intransitive verbs occurs largely in phrases of this kind, for example *wa-wuni ningi* 'that one', *a-wa-yeyi ningi* 'all these others'.

But idioms without the markers are equally frequent. *a-yeyi, wa-wuni*, occur frequently throughout the language in the same positions as the marked forms.

ningi also occurs on a number of idioms where it has no ergative function. It occurs in

(a) Temporal expressions:

- (11) *margu ningi ŋ-a-dd-i tje kimin*
first ERG we-go-PL-PAST PAST like
'When we went for the first time.'
- (12) *wur-weti ningi*
FEM-small ERG
'When (I was) a little girl.'

(b) Locative expressions:

- (13) *kuri y-en-im madi pap dir wukume ningi*
water it-came-PRES side up bank one ERG
'The river overflowed one bank.'

(c) Expressions of degree and extent:

- (14) *ereke ningi kuri kana wa-yi-m pir minjir*
how many ERG water now it-be-PRES- to them thirsty
'(I don't know) how thirsty they are.'
- (15) *ningi kinji yewir fengu kadi*
ERG this stick long enough
'This stick is long enough.'

Instrumental

The instrumental marks the weapon or tool used to perform a task. In Ngangikurungur body parts as well as objects may be considered instruments.

- (16) *ŋu-ru-pun-ta wa-weti yewir-ningi*
we-PL-hit-PRES hit MALE-small stick-INST
'We all hit the little boy with the stick.'
- (17) *wuwu k-ana-m batbitj k-iri-m defir ningi*
dog he-go-PRES kicks he-sit-PRES foot -INST
'He kicks the dog with his foot.'

Like the ergative, the instrumental NP may occur without the postposition. In (16) we could say

- (18) *ŋu-ru-pun ta wa-weti yewir*
we-PL-hit-PRES hit MALE-small stick
'We all hit the little boy with a stick.'

It is also possible to find both ergative and instrumental in the same sentence.

- (19) *ŋayi ningi nu-pun ta wa-weti yewir ningi*
I ERG I-hit-PRES hit MALE-small stick -INST

Theoretically it would be quite possible to have any of the following combinations of marked or unmarked NPs.

- (20) *ŋayi ŋupun ta wa-weti yewir ningi*
(21) *ŋayi ŋupun ta wa-weti yewir*
(22) *ŋayi ningi ŋupun ta wa-weti yewir*

Discussion

Ergative and instrumental are marked in the same way in the nouns, pronouns and other nominals. In the pronouns although both would be marked alike no instrumental use of the personal pronoun has been found. This may constitute a criterion of discrimination.

They may also be discriminated by the fact that instrument NPs but not ergative NPs may be found in reflexive and reciprocal clauses.

- (23) *yedi wuni ye-tj-in tri defir tjaga ningi nawa*
 man that he-carry-PRES cut foot what INST then
 'What did that man cut his foot with?'

As both ergative and instrumental may occur under the same conditions ambiguity is possible. In many cases the bound subject pronoun to the verb stem will make clear the subject whether it is expressed, left unmarked or not; for example in (1), (2), (6), (7), (8), (9), (19), (20), (21), (22).

But where the subject is in the third person singular then ambiguity is possible. A sentence like

- (24) *wu-pun ta wa-weti yewir ningi*
 he-hit-PRES hit MALE-small stick INST/ERG

can mean either

- (25) 'He hit the little boy with a stick.'

or

- (26) 'The stick hit the little boy.'

In practice ambiguity does not often occur because the context, the emphasis, and to some extent the order of the phrases, determines which is subject and which instrument. Under normal speech conditions the ergative NP, when expressed, precedes the instrumental NP as in the examples above. If possibility of ambiguity remains then the relevant noun phrase is expanded or reinforced to make its relationship clear. For example in (24) if a human subject is required then an NP ergative such as *wa-yedi ningi* 'the man' will be added.

Locative

The locative NP marker *nide* indicates both rest at, or near, a place and motion into, or onto a place. Locational expressions like 'behind', 'next to', 'against' usually require *nide* as well as the particular preposition. Motion towards is expressed by *pefi*; motion towards the speaker by *pagu*. Motion away from or out of, is expressed by *nimpi*.

Examples of the locative are:

- (27) *wa weti y-en-im pap fepi nide*
 MALE-small he-go-PRES up stone LOC
 'The child is climbing on the rock.'
- (28) *wa-r-gatj-en tjutjuk miri kultji kuderu nide*
 they-PL-bring-PRES together evening billabong LOC
 'They gather together by the billabong in the evening.'
- (29) *ŋ-an-a madi puritj fepi nide i kuri nide ŋa-gan-im fel*
 I-go-PAST side slippery rock LOC and water LOC I-go-PRES fall
 'I slipped on the rocks and fell into the water.'

As with the ergative and instrumental NPs, locative NPs may be unmarked where there is no likelihood of ambiguity.

- (30) *war-a-ni pek kanatje durmu dirkuri kuderu*
 they-PL-go-PAST paint now PAST pattern bank billabong
 'They then painted up on the bank of the billabong.'

Discussion

Ngangikurungur does not mark case by inflection but by postpositions. Some cases, for example, possessive, are not marked at all, and those which

are marked may be optionally left unmarked. In the pronoun system there exist the cardinal pronouns, direct and indirect pronouns and bound subject pronouns.

It is clear that Ngangikurungur has a rudimentary system of case marking and this may point to a situation which is in the process of development from unmarked NPs to NPs marked by postpositions to the more general system of case inflections.

49. Murinjata

Michael Walsh

Murinjata is spoken at Port Keats in the north-west of the Northern Territory.

1. Ergative

Form

Stems with a final stop, nasal, or lateral take the ending *-te/*; all other stems take the ending *-e/*; however, either ending may occur after final */r/*:

<i>yirŋip-te</i>	'cat-ERG'
<i>kaltelɛɛɛ-ɛe</i>	'spur-winged plover-ERG'
<i>ŋalar-te/ɛe</i>	'policeman-ERG'

Function

The ergative inflection occurs with noun-classifiers (NC), nouns, adjectives and free-standing pronouns in a noun-phrase (NP) which functions as a transitive subject. The following co-occurrence restrictions apply:

- the ergative inflection may not occur with a noun-classifier if there is also a noun in the NP;
- in an NP containing a noun and an adjective, the ergative inflection may occur either with the noun, or, with the adjective, but not with both.

The ergative inflection is rarely used in Murinjata: when it is used, it is most often in order to disambiguate a number of possible readings for one sentence. This disambiguating mechanism is seldom needed, for the following reasons:

- Free-standing pronouns are cross-referenced in the verb complex in bound form and within the verb complex the cross-referenced pronouns follow a SOV pattern:

- (1) *ŋayi-ɛe ŋiŋi-φ ŋa-ŋi-widun-nu*
 1sg.-ERG 2sg.-NOM 1sg.-2sg.-kiss-FUTURE
 'I'm going to kiss you.'

Here the ending *-ɛe/* is redundant on *|ŋayi|* since its cross-referenced form *|ŋa-|* is in subject position in the verb complex.

- Where (a) is not sufficient to disambiguate the sentence, the norm word order outside the verb complex is SOV:

- (2) *kaḍu lawaŋga ḍam-φ-paḷ*
 person wallaby 3sg.-3sg.-strike

1 2 3
 'Man struck wallaby.'

Equivalent in meaning to (2) are the orderings: 1-3-2 and 3-1-2, in that 1 (that is, S) always precedes 2 (that is, O). Predictably, the orderings: 3-2-1, 2-1-3 and 2-3-1 mean: 'kangaroo struck man'.

If /-*le*/ is added to /*kaḍu*/ in any of these six possible orderings the only possible reading, despite the order, is: 'man struck wallaby';

The head noun of an NP functioning as a transitive subject may be inanimate, as in (3) and (4), although it is more often animate as in (1) and (2).

- (3) *ku-wele-φ pan-φ-maṭ tu-malandayt-te*
 NC:meat-dog-NOM 3sg.-3sg.-hit NC:weapon-lightning-ERG

'The dog was hit by lightning.'

- (4) *burbur-le/te ḍam-ŋi-luŋ*
 cold-ERG 3sg.-1sg.-shiver, make to shiver

'I'm shivering with cold; the cold makes me shiver.'

2. Locative

Murinjpata does not have a nominal inflection to express location: instead the preposition /*ŋala*/ is used:

- (5) *kaḍu-wiye kaḍi-degdeg-ta ŋala ʒeṛ*
 NC:person-bad 3sg.DURATIVE-play-PAST 'in' church

'Bad person was (continually) playing in church.'

- (6) *ŋayi-le ŋini-kark-ta ŋapulu-nu ŋala kale-ŋayi*
 1sg.-ERG 1sg.sit-cry-PAST breast-DAT 'at' mother-1sg.

'I was crying for my mother's breast (literally: I was crying for the breast at my mother.)'

3. Instrumental

Form

In phonological shape, instrumental exactly coincides with ergative.

Function

Like Yidinj, the instrumental in Murinjpata marks a weapon or tool used to perform a task and can be used for the material out of which something is made:

- (7) *naṇḍi-at tiṭimambe-le ma-wata-nu*
 NC:thing-hat type of palm-INS 1sg.-make-FUTURE

'I'm going to make a hat out of tiṭimambe.'

- (8) *tu-kunewi-le puima-φ pan-φ-maṭ*
 NC:weapon-billy-INSTRUM wife-NOM 3sg.-3sg.-hit

'He hit his wife with a billy(-can).'

The instrumental may occur with at least some body parts—many body parts are hardly feasible as instruments, for example, body parts like 'brains'.

- (9) *tu-maŋe-le puima-φ pan-φ-maṭ*
 NC:weapon-hand-INSTRUM wife-NOM 3sg.-3sg.-hit

'He hit his wife with his fist.'

The instrumental occurs in transitive clauses as in (9) and in intransitive clauses as in:

- (10) *pumpān naṇḍi-*lapt-te**
 3pl.move NC:thing-raft-INSTRUM

'They are coming by raft.'

Like the ergative, the instrumental case form is often deleted when there is little or no chance of ambiguity:

- (11) *tamul-te lawaŋga-φ kaḍu-le ḍam-φ-paḷ*
 spear-INSTRUM wallaby-NOM NC:person-ERG 3sg.-3sg.-strike

'Man speared wallaby.'

can be contracted to:

- (12) *tamul lawaŋga ḍampaḷ*

Instrumental is sometimes used with an animate NP:

- (13) *ku waju n-ata wele-le*
 NC:meat towards 2sg.-chase dog-INSTRUM

'Chase it (meat) with a dog.'

Instrumental appears in interrogative words:

- (14) *maluk-φ taŋgu-le nam-φ-wata-yuu*
 didjeridu-NOM what-INSTRUM 2sg.-3sg.-make-INTERROG

'How did you make the didjeridu?'

- (15) *ŋala-le ʒe-t-ayḍin*
 what-INSTRUM ear-2sg.-have

'How do you know?' (Literally: with what/by what means do you have an ear?)

Temporal use: -*te*/*-e*

In Murinjpata there is a nominal/verbal suffix, identical in form to the ergative/instrumental nominal suffix: its function is temporal:

- (16) *kaḍu-ŋalandar-te/le waḍa ŋulu-nu maḍa*
 NC:person-old man-TEMPORAL INCHOATIVE 1sg.move-FUTURE NEG

waḍa ŋa-winduṭ-nu naṇḍi-yiṭṭit yuu
 INCHOATIVE 1sg.-lift-FUTURE NC:thing-heavy emph.pcle.

'When I am an old man I will not be able to lift heavy things.'

- (17) *kaḍu ŋem-te ŋi-nu ŋala ʒalput ŋipi*
 NC:person 1sg.sit-TEMP 1sg.sit-FUT 'at' house 2sg.

'As long as I am here I will stay at your house.'

4. Reflexive

The English sentence 'I cut myself with a knife' has at least two possible readings:

'I cut myself with a knife, on purpose.'

'I cut myself with a knife, accidentally.'

A differentiation is made between these in Murinjpata by using a reflexive prefix on the verb for the former and a non-reflexive prefix on the verb for the latter. In addition, 'knife' is in instrumental case in the former but in ergative case in the latter; the difference in case function is indicated not by the suffixed case forms on the noun but by the cross-referencing in the verbal complex:

- (18) *m-e-m-ŋeyṭ naṇḍi-maximali-le*
 1sg.-REFLEXIVE-PAST-cut NC:thing-knife-INSTRUM

'I cut myself with a knife (on purpose).'

(19) *m-a-m-ŋi-yeyt* *naŋdɪ-maɪmaɪ-ɛ*

3sg.-NONREFLEXIVE-PAST-1sg.-cut NC:thing-knife-ERG

'I cut myself with a knife (accidentally).' (Literally: the knife cut me.)

There is nothing corresponding to the anti-passive in Murinjpata.

Unlike Dyirbal, there is no transformation in Murinjpata which will explicitly distinguish between ergative and instrumental NPs.

(20) *kaka-nukunu* *pan-φ-mat* *tamul-te*

maternal uncle-3sg.m. 3sg.-3sg.-hit spear-ERG/INSTRUM

'His uncle got hit by a spear.'

The NP, [*tamulte*], can be looked on as ergative, that is, 'the spear hit his uncle' or as instrumental with an unstated, non-specific ergative NP, that is, 'someone hit his uncle with a spear'. Thus there are two interpretations.

50. Nunggubuyu

Jeffrey Heath

1. Ergative

There is no ergative case suffix in Nunggubuyu (spoken in eastern Arnhem Land) nor nominative, accusative, or dative for that matter. Word order is no help in indicating case functions either.

Instead, the case relations of the major NPs in a clause are indicated mainly by pronominal prefixes on the verb, cross-referencing overt or deleted NPs:

(1) *na - walyiñuŋ ŋu - ɾani ŋara-maŋiñuŋ*

MaSg man MaSg/FeSg speared FeSg woman

'The man speared the woman.'

Because the prefix *ŋu-* indicates masculine singular subject and feminine singular object, it is clear that *na-walyiñuŋ* must be the subject and *ŋara-maŋiñuŋ* the object. If the prefix on the verb were *ŋumu-* FeSg/MaSg the translation would be 'The woman speared the man'.

The zero (nominative) case is used for intransitive and transitive subjects, for direct and indirect (including benefactive) objects, and for comitative NPs. In the case of the comitative, there is a cross-referencing (but pronominally unspecified) prefix *-aŋji-* added to the verb:

(2) *ni:- ŋji-yaygi ŋara-maŋiñuŋ*

MaSg Comit went FeSg woman

'He went with the woman.'

The zero case is also sometimes used instead of more concrete case suffixes, especially allative *-wuy* and instrumental *-miri*, as long as there is no ambiguity in context:

(3) *ni- yaygi yi:-ŋala:ligi*

MaSg went turtle

'He went to/for turtles.'

Even though *ŋala:ligi* belongs to nonhuman class I, which is cross-referenced by the same intransitive prefix *ni-* as masculine singular human nouns, the *ni-* here cannot refer to *ŋala:ligi*. This is because if *ŋala:ligi* were functioning as subject it would have a class prefix *na-*. The only acceptable interpretation of (3) is that *ŋala:ligi* is a shortened form of *yi:-ŋala:ligi-wuy* 'to the turtles' (literally 'class I-turtle-allative').

2. Locative

The static locative suffix is *-ruj*, which becomes *-duj* after nasals and stops by a hardening process and undergoes other regular changes. The static locative ('in, on, at') is distinct from the allative in *-wuy* and the suffix *-waj* 'through, along, by'. An example:

(4) *ŋa - buri a:-gugu-ruj*

1Sg sat III water Loc

'I sat in the water (class III).'

3. Instrumental

The instrumental prefix is *-miri*. This is never used in an ergative sense, and normally refers only to objects or materials used in some physical activity:

(5) *ŋawu - ɾani la:ma-miri*

1Sg/III.2 speared spear Instr

'I speared it (class III.2) with a spear.'

As hinted at in B-1, the instrumental suffix may be optionally omitted in such a sentence since context makes it clear that *la:ma* can only be instrumental.

The instrumental can be used in intransitive clauses:

(6) *ni - ya:ri:wandulu - miri*

MaSg goes walking stick Instr

'He is walking with a walking stick.'

I have at present no data regarding the surface form of body part terms in instrumental function (the type 'I hit him with my hand').

4.

As we can see, there are no sychretisms involving ergative, locative, and instrumental cases in Nunggubuyu, except as a result of low-level case-suffix deletion in the sentence type (3). There are no transformations such as passivisation, antipassivisation, or relative-clause formation which rearrange case marking on nouns. The absence of morphological sychretisms and of case-changing transformations is interesting in view of the abundance of such phenomena elsewhere in the continent.

5.

It should be mentioned that there are one or two examples in my corpus where ablative *-wala/-gala* is used in something like an ergative sense. In a text dealing with emu and brolga, both in nonhuman class II (which is related to the feminine singular class), the following passage occurs:

(7) *ŋiga ŋ - a:- gamaji ŋara-wa:yin, yuguni yi:-guɟargu-wuy,*

it(II) II/II Indir stole II emu to that II brolga All

ŋ - a:- gamaji aba ŋ - a:- ŋaŋ, ana-ŋuga, ŋ - a:- ŋaŋ,

II/II Indir stole then II/II Indir ate III stone II/II Indir ate

ŋiga ŋara-wa:yin-gala

it(II) II emu Abl

'It', emu, stole it from it, from brolga.¹ It stole it from it, then it ate it away from it, the stone. It ate it away from it, emu (agent).'

The two were fighting for possession of a stone, and emu seized it and swallowed it, thus keeping it out of broлга's possession. The direct object is 'stone', while 'broлга' is an indirect object ('benefactive' is not an appropriate term here unless weakened to include counter-benefactive senses). In such constructions the verbal prefix combination marks category of subject and indirect object only, and adds an indirective prefix to show that the object is indirect. Since both subject and indirect object are in class II, the pronominal prefix $\eta(u)$ - 'II/II' was inadequate to clarify which noun was subject and which indirect object. To disambiguate the sentence, the narrator had recourse to the addition of the ablative suffix to the agent and the allative suffix to the indirect object. This case marking is extremely rare, and some other Nungubuyu speakers were unable to understand the passage and felt it was a mistake.

Although there is nowhere near enough data to determine the conditions under which the ablative can be used in this sense, my feeling is that it does not mark ergativity as such, but rather is available to mark either intransitive or transitive subject in a position where contrast with an indirect object is necessary. That is, the addition of *-wala|-gala* goes hand-in-hand with the addition of allative *-wuy|-guy*.

6.

I will close with a tentative etymology for instrumental *-miri*. In the large Yuulngu group of languages in north-eastern Arnhem Land, including the Ritharngu language which is geographically contiguous to the Nungubuyu-speaking area, there is a 'having' suffix *-miri*. Although this is not regularly used in an instrumental sense, there are occasions where it can have the same effect, as in the 'pseudo-instrumental' construction exemplified by example (2) in my Paper 27 in this volume.

If we suppose that Nungubuyu once had a nonzero case suffix functioning both as ergative and instrumental, and that this suffix has been dropped, Nungubuyu at one stage would have been unable to distinguish instrumental from other zero case categories (ergative, nominative, dative, comitative, etc.), and it is reasonable to suppose that a new instrumental inflection would arise. Under such conditions it does not unduly strain the imagination that the language could have borrowed *-miri* from the languages to the north, with slight semantic specialisation as an instrumental suffix.

Incidentally, *-miri* also shows up in Warndarang, the language immediately to the south. This language belongs to a family including Mara and Alawa, further to the south. Alawa does not have *-miri* as a case suffix, and to my knowledge neither does Mara. I therefore suspect a subsequent transfer of Nungubuyu *-miri* into Warndarang. In general, the Warndarang case system is very much like the Nungubuyu one and quite unlike the Alawa; there appears to have been considerable diffusion both of case system structure and in two or three cases of actual morphemes, probably from the large Nungubuyu group to the smaller Warndarang group.

Note

1. Note that in English the directions are reversed, since we follow the course of the stone *from* broлга *to* emu. In Nungubuyu the directionality

reflected in the use of case affixes is more abstract, since we follow the event emanating *from* (i.e. voluntarily caused by) emu, and directed *against* broлга.

51. Rapporteur's summary

R.M.W. Dixon

For all the languages described in papers for this topic, instrumental NPs can, of course, occur with simple transitive sentences; some languages also allow them with simple intransitive sentences but others do not. It appears, however, that an instrumental NP can always occur with a derived intransitive sentence (which relates to a transitive deep structure) such as reflexive, reciprocal or anti-passive; instrumental NPs occur with derived intransitives even where they cannot occur with simple intransitives.

This, and other evidence, suggests that instrumental NPs are not affected by the most straightforward syntactic transformations, which do affect subject (ergative) and object (nominative) NPs; and that in many languages this difference will constitute a main criterion for distinguishing between an instrumental and an ergative NP, especially where instrumental and ergative inflections coincide (see Dixon 1972:93-95).

The main problem, which it was hoped papers for this topic would help clarify and perhaps solve, was: why does instrumental coincide with ergative in some languages but with locative in others? Although some interesting and useful data has been presented by the contributors, none of it really sheds much light on this problem.

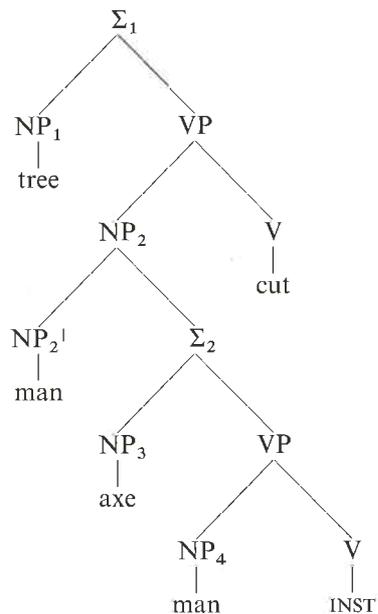
It may in fact be best to approach the problem syntactically—to ask what deep structure can appropriately be associated with instrumentals in each individual language, and whether this entails any natural explanation of instrumental inflection in that language. For instance, in Dyirbal (a language in which instrumental coincides formally with ergative) a strong case can be made out for representing an instrumental NP in terms of a deep relative clause, with dummy verb INST ('uses'). Then

(1) tree-NOM man-ERG axe-INST cut

'The man cuts the tree with an axe.'

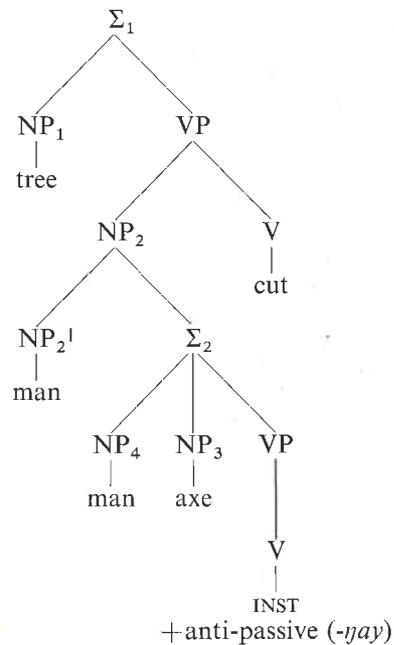
would have deep structure:

(2)



Now the NP in a relative clause that is co-referential with an NP in the main clause must in Dyirbal be in 'topic' position (leftmost NP immediately dominated by Σ_1). To satisfy this, the anti-passive transformation must apply on Σ_2 , yielding:

(3)



Now the dummy verb INST is deleted (together with its anti-passive affix); and the normal case-marking rules of the language mark NP₁ as nominative, and NP₂ and NP₃ as ergative (for full discussion with examples and explicit rules see Dixon 1972:187-90).

The important points here are (i) the instrumental NP is functioning as deep object in a transitive sentence to which the anti-passive transformation has applied; the object NP in an anti-passive in Dyirbal receives (in the unmarked case) ergative inflection—and this is why an instrumental NP receives ergative inflection; (ii) the case of an NP in a relative clause is not affected by the function of the co-referential NP in the main clause—thus any transformation (for example anti-passive, reflexive) that applies to the main clause, whilst affecting the subject of that clause (NP₂¹ in (2)–(3)) will not affect the instrumental NP, embedded as it is in a relative clause.

It should be noted that representing an instrumental in terms of a deep relative clause also explains the instrumental verbal construction, and relates it to nominal instrumentals (Dixon 1972:191-93, 196-98).

Let us now turn to Yidinj, in which instrumental coincides with locative. Although Dyirbal and Yidinj are not overall grammatically very similar (for two Australian languages) we find that a similar analysis can be provided for instrumental NPs in Yidinj, in terms of a deep relative clause with a dummy verb INST. Again, the co-referential NP in a relative clause must be in 'topic' position (leftmost NP immediately dominated by Σ) so that an anti-passive transformation must apply to Σ_2 in (2), again deriving (3). Thus it seems that, as in Dyirbal, an instrumental NP in Yidinj will take the inflection appropriate to the deep object in an anti-passive sentence. The appropriate case marking in Yidinj is dative (for human nouns) or locative (for inanimates, including body parts).⁸ An instrumental NP naturally takes locative case.

We thus get a natural syntactic explanation for the nature of instrumental inflection in the two languages: it is the marking appropriate to a deep object in an anti-passive construction; this is ergative in Dyirbal and locative in Yidinj. (It now remains, of course, to investigate why the anti-passive should involve different case markings in the two languages; but this is a quite different problem.)

We should now check whether a similar explanation can be given for instrumental inflection in other languages (we do not necessarily expect identical explanations to hold for all languages; but we should expect an explanation on lines similar to these to be valid for *some* other Australian languages—if indeed the explanation given here is a correct one). Unfortunately, most attempts at description of Australian languages have pitifully ignored syntax, and the sort of information we would require is most often just not available. But note that H. A. E. Meyer—an acute and insightful early linguist, whose description of the Encounter Bay language has not received the attention it deserves from modern workers—describes a transformation of the anti-passive type that substitutes nominative for the ergative inflection on a transitive subject NP, and ergative for the nominative inflection on the object NP (Meyer 1843:38-39). We would now expect instrumental to coincide with ergative, and this does seem to be the case (Taplin (1880:8) quotes 'ergative' as having instrumental function, although the data here is not totally clear—locative may sometimes be used to denote an instrument—Meyer (1843:15)).

More work is required on the syntactic investigation of languages in all

parts of the continent, before this hypothesis could be substantiated (or replaced by a more appropriate explanation).

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52. On Ergative and Locative Suffixial Alternations in Australian Languages

Kenneth Hale

The ergative and locative inflections in Australian languages are recorded in a number of alternants. A partial list of alternants (pseudo-reconstructions) is assembled in the following table:

(1)	ergative	locative
	*-lu	*-la
	*-ŋku	*-ŋka
	*-mpu	*-mpa
	*-nɪtju	*-nɪtja

An extremely common pattern of alternation is that according to which:

- (2) (i) *-ŋku, *-ŋka attach to vowel-final disyllabic stems;
 (ii) *-lu, *-la attach to vowel-final polysyllabic stems;
 (iii) *-Su, *-Sa attach to consonant-final stems—the symbol S is used here to designate a stop homorganic to the stem-final consonant.

In the ensuing discussion, I would like to suggest a historical explanation for the existence, in the first instance, of languages exhibiting roughly the range of alternants included in (1) above and, in the second instance, of languages exhibiting the pattern represented by (2i-ii).

A partial key, as I see it, to the eventual explanation of these phenomena consists in the existence of an assimilation rule accounting for (2iii). Let us assume, for the sake of this discussion, that the basic, historically underlying, forms of the ergative and locative inflections were *-lu, *-la (remaining as such after vowel-final stems) and that there existed an assimilation rule of very approximately the following general form:

$$(3) \quad l \rightarrow \left[\begin{array}{l} - \text{syllabic} \\ + \text{consonantal} \\ - \text{continuant} \\ \alpha \text{ coronal} \\ \beta \text{ anterior} \\ \gamma \text{ distributed} \end{array} \right] / \left[\begin{array}{l} \text{C} \\ \alpha \text{ coronal} \\ \beta \text{ anterior} \\ \gamma \text{ distributed} \end{array} \right] \rightarrow \text{---}$$

The effect of this rule is to convert /l/ into a stop consonant homorganic to an immediately preceding morpheme-final consonant. A rule of roughly this effect is synchronically attested in a number of Australian languages.

Now, to explain the existence of languages which show the variety of alternants in (1), where these are attached to vowel-final stems, it is necessary to consider the range of stem-final consonantism observed in modern Australian languages:

- (4) (i) There are languages which allow no final consonants whatsoever;
 (ii) There are languages which allow apicals only (for example, /n, l, r/);
 (iii) There are languages which allow coronals (for example, /n, l, r, nj, lj/);
 (iv) There are languages which allow both coronals and non-coronals (for example, /n, l, r, nj, lj, m, ŋ/).

It seems to me, on the basis of this rather superficial observation, that there is a definite historical tendency to eliminate final consonants according to a 'schedule of naturalness' in which:

- (5) (i) The first to be lost are non-coronals;
 (ii) The next are distributed coronals (for example, /nj, lj/);
 (iii) The last to go are apicals (for example, /n, l, r/).

Consider now a language which allows stem-final non-coronal consonants, that is, that has stems of the form CVCVm and CVCVŋ. The ergative of nouns exhibiting this canonical pattern would, by virtue of rule (3), be:

$$(6) \quad \begin{array}{l} \text{CVCVmpu} \\ \text{CVCVŋku} \end{array}$$

But then consider a language of this type which, at some point in its history, introduces a rule of the form:

$$(7) \quad \left[\begin{array}{l} \text{C} \\ - \text{coronal} \end{array} \right] \rightarrow \phi / \text{---} \#$$

A rule of this form would have the effect of deleting word-final non-coronal consonants, so that what was originally

$$\begin{array}{l} \text{CVCVm} \# \\ \text{CVCVŋ} \# \end{array}$$

would, after the introduction of the deletion rule, appear as:

$$\text{CVCV} \#.$$

But the ergative forms would remain as in (6), because the environment for the deletion would not be met. However, there would probably be a tendency to reanalyse forms like those in (6) in such a way as to make the underlying form of the stem identical to the surface, vowel-final, form (see Hale 1973)

with the result that the morpheme boundary would be placed *before*, rather than after, the erstwhile stem-final consonant. That is to say, before the advent of rule (7), the forms of (6) would be analysed as

- (8) CVCVm-pu
CVCVη-ku.

But after the advent of rule (7), and after consequent reanalysis of lexical representations, the forms of (6) would be analysed as

- (9) CVCV-mpu
CVCV-ηku.

This would amount to the development of the ergative alternants *-mpu ~ -ηku, that is, alternants which are no longer phonologically predictable. Moreover, these alternants would exist side-by-side with *-lu; there would then be three post-vocalic alternants: *-lu ~ -mpu ~ -ηku.

A similar scenario can be written, no doubt, for the development of the ergative alternant *-njtju (and *-nthu in languages with a second laminal series)—all that is necessary is the generalisation of rule (7) to embrace *all* distributed consonants, not merely the non-coronal ones. And, presumably, a further extension of the deletion rule (7) would account for certain other alternants of the ergative (and of the locative) which have been recorded for Australian languages.

I would like to turn my attention now to languages which exhibit the pattern represented in (2i-ii)—that is, in which the ergative is *-ηku on disyllabics and *-lu on polysyllabics.

Certain Australian languages (for example, Uradhi, Wik Me'nh, and certain dialects of the Arandic Anmatjera) undergo a somewhat mysterious, though reasonably well documented, rule which might be called 'velar-posthesis':

- (10) $\phi \rightarrow \eta/V___\#.$

The effect of this rule is to append a velar consonant (normally the velar nasal) to words ending in a vowel. In the Anmatjera dialect, the rule applies only to disyllabic forms (thus: *kali > Arandic *ayla > Anmatjera al^{pa}aj 'boomerang'). It is not altogether unreasonable to imagine that a rule of precisely the Anmatjera effect was present at a stage ancestral to the languages which now exhibit the pattern (2i-ii) and, further, that the final *η introduced by this rule was reanalysed as a part of the stem (by analogy with 'true' η-finals). This would result in a super-abundance of disyllabic η-final stems. By rule (3), these would have ergatives of the form:

- (11) CVCVηku.

Meanwhile, a large percentage of polysyllabics—predominantly vowel-finals, presumably—would have ergatives in *-lu. Subsequently, when rule (7) entered the language (or languages), a reanalysis of (11) would occur, assigning the velar nasal to the suffix, rather than to the stem. The weight of examples might, then, be sufficient to force an interpretation of the ergative (and locative) alternations which was in accordance with the rule embodied in (2i-ii)—that is, *-/ηku, -ηka/ after disyllabics, *-/lu, -la/ after polysyllabics.¹

This is, to be sure, highly speculative and only partially formulated. I offer this suggestion in the hopes that further attention will be given to this interesting problem of Australian historical linguistics.

Acknowledgement

I wish to thank R. M. W. Dixon for much stimulating discussion of this matter; without his encouragement, I could not have written this note.

Note

1. In Pitjantjatjara, *-ηku is suffixed to common nouns, while *-lu is suffixed to proper nouns. It seems to me quite possible that the phonological motivation was lost in favour of the semantic motivation on the basis of the following statistical correlation: the majority of proper nouns are polysyllabic, while a preponderance of common nouns (at least those of great textual frequency) are disyllabic.

Reference

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Topic C:
The bivalent suffix -ku

53. Rapporteur's introduction and summary

B. J. Blake

In *A New Approach to Australian Linguistics*, Capell devotes a section to the morpheme *-ku*, which he calls a 'bivalent' suffix because it occurs with both nouns and verbs. With nouns it generally has a *dative* function and with verbs a *purposive* function. In a recent paper Breen (1974) points out that it is unusual for *-ku* to be suffixed directly to a verb stem and that most of the purposive examples involve suffixing *-ku* to a nominalised verb stem. *-ku* occurs in every corner of the continent and while it does not occur in every single language, it is probably the most widespread affix to be found in Australia.

Forms

-ku occurs as the only form of the dative or purposive in some languages (for example, Dyirbal), but in others it is in an allomorphic relationship with forms such as *-ya*, *-ŋu* or *(w)u*. For example, in Galgadungu *-ku* occurs with consonant stems and *-ya* with vowel stems; in Warungu and in Ngaliwuru and Djamindjung *-ku* is used with consonant stems and *-wu* with vowel stems.

In some languages the presence of *-ku* is partially obscured by limited vowel harmony (for example, Walbiri *-ku* ~ *-ki*) or more completely obscured by vowel reduction (for example, Arandic *-ka*) or vowel reduction and metathesis (for example, Njungar sub-group *-ak*) or loss of the final vowel (for example, Gundjen *-k*).

Functions

Complement

Perhaps the most widespread function of *-ku* is to mark a complement noun or the nominalised verb of a complement clause. For example, in Bidjandjadjara we find

(1) *wati kuka-ku kutipitja-ŋu*

man meat-for go-PAST

'The man went for meat.'

(2) *wati-lu kuka kati-ŋu mama-lu nyaku-tja-ku*

man-ERG meat bring-PAST father-ERG see-NOM-for

'The man brought the meat for his father to see.'

In these cases it could be said that *-ku* indicates the function of *purpose*, but in fact *-ku* also appears in a wide range of complements where there is no notion of *purpose* and is probably best considered a syntactic marker of complements rather than a morpheme expressing a particular semantic function. For example, in Bidjandjadjara *-ku* appears in jussive complements,

(3) *wati-lu watja-ŋu waru yura-ltya-ku*

man-ERG say-PAST wood gather-NOM-to

'The man told him to gather firewood.'

and in complements of verbs for *be shy (of)*, *glad (at)*, *afraid (of)*, etc.

It is not always possible to predict from semantic considerations whether a predicator in an Australian language will be a transitive verb, a middle verb, or an intransitive verb or adjective with an optional complement (a middle verb being one which occurs with an unmarked subject and an obligatory complement in an oblique case other than the accusative). If the predicator expresses some activity initiated by an AGENT and impinging on some entity (AFFECTED OBJECT), then it will be transitive. However, if one of these two conditions is not met as in the English verbs *seek, look for, find, like, laugh at/with, learn, understand, know, see, look at, hear, listen to, listen for*, then the equivalent in an Australian language may be middle or intransitive with the complement most likely marked by the dative. In some cases a particular verb may occur as a transitive verb and as a middle verb with a somewhat different sense. For example, in Galgadungu *ḡaṅṅamai* appears as a middle verb meaning *look for* and as a transitive verb meaning *find*.

Three-place verbs are not well exemplified in the available literature and so it is not possible to say much about indirect object marking. *Give* is illustrated in a number of languages and it appears that the indirect object receives the same marking as the direct object in some languages and is marked by *-ku* or whatever the dative happens to be in other languages.

As Platt points out in Paper 55, both these possibilities are realised by different dialects of Bidjandjadjara. In the Ernabella dialect the indirect object is not marked by *-ku*, but in the Warburton Ranges dialect it is.

Allative 'to'

In some Australian languages, particularly in New South Wales and Queensland, the dative marker covers the allative function (expressing 'motion to'). In a few, the allative function is expressed by a compound of the dative *-ku* and another morpheme, for example Bidjandjadjara *-kutu* (although *-ku* appears with an allative function in some cases), Galgadungu *-kuṅa*. In a large number of languages the allative function is expressed by a variety of suffixes separate from the dative.

Possessor

Quite a number of Australian languages use the dative to mark the *possessor* in a possessive construction. For example, in Bidjandjadjara we find *wati-ku papa* (man-DATIVE dog) 'The man's dog'. In other languages a separate genitive suffix is used to mark the *possessor*.

Tense or aspect marker

In a few languages *-ku* appears affixed directly to the verb stem and usually indicates future time or desiderative aspect. In Bidjandjadjara, for example,

- (4) *minyma yula-ku*
'The woman will/may cry.'

Marking complement of future, etc., verb

In some languages we find that transitive verbs appear with an unmarked subject and dative complement if the verb is in the future tense or in certain aspects such as the imperfect or potential. Examples of this phenomenon are to be found in Yugulda (Keen 1972) and Galgadungu. The range of aspects involved in various languages has in common that reference is not to an

actual instance of an activity carried through to completion, but to activity that is in progress, or intended or characteristic. Closely related to this phenomenon is the use of nominative for both subject and object in Yugulda and Bidjandjadjara to indicate ability to carry out an action rather than actual performance of the action.

In Bidha-Bidha (Blake and Breen 1971) the subject of all future verbs, whether transitive or intransitive, is marked by *-ḡu* and the object is marked by *-ku*. However, *-ḡa* rather than *-ku* is the dative in this language.

- (5) (a) *kana-lu matjumpa-ḡa piṅi-ka*
man-ERG ROO-ACC kill-PAST
'The man killed a kangaroo.'
(b) *kana-ḡu matjumpa-ku piṅi*
man-FUT ROO-FUT ACC kill-FUT
'The man will kill a kangaroo.'

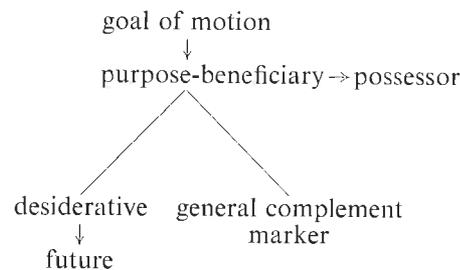
Historical development

The facts about *-ku* briefly outlined above suggest a number of directions for future research.

First of all there is the phonological problem of relating forms such as *-ku* and *-ya* that are in an allomorphic relationship. The various forms encountered can plausibly be related to *-ku* as a proto-form, but this needs to be verified. If this is done it may prove possible to tie in forms such as *-ya* in other languages where they have a dative-like function, but are not in an allomorphic relationship to *-ku*.

Secondly there is the problem of the historical development of the meaning/function of *-ku*. It is not uncommon to find that a language has a form covering two or more of the functions listed above for *-ku* (compare English *to*, French *à*, Indonesian *akan*).

In general, grammatical morphemes are derived from lexical morphemes and syntactic functions are derived from earlier concrete senses. For example, English *to* developed from being an adverb to a preposition and then later acquired its function of marking the infinitive phrase in addition to its allative function. Similar lines of development can be attested for other morphemes in a variety of languages. These examples suggest that *ku* may have developed along the following lines,



The fact that *ku* appears in different morpho-syntactic slots in different languages (cf. examples (1), (4), (5b)) may well reflect an earlier stage when *ku* was a free (probably adverb-like) form.

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54. Wunambal

E. Vászolyi

1. Noun declension: a case suffix

In Wunambal and the closely related dialects of Gunin and Gambera (spoken in the northern Kimberleys, Western Australia) case suffix *-gu*, showing no allomorphic variation whatever, is a general lative contrasting with a general locative (*-ŋindalu*), a general ablative (*-yaya*), a circumlative (*-ŋinja*) and a prolative (*-mare*).

1.1. Morphologically, the said lative suffix can join nouns (whether simple stems or derivatives), adjectives, demonstratives and pronouns. Thus:

- (i) *lumba* 'tree' + *gu* > *lumbagu* 'to(wards) a tree'
- (ii) *mari* 'penis' + *gude* 'having' + *gu* > *marigudegu* 'to the male'
- (iii) *giŋa ma:riwa* 'place rough' + *gu* > *giŋa ma:riwagu* 'to a rough place'
- (iv) *giŋa mingala* 'place that' + *gu* > *giŋa mingalagu* 'to that place'
- (v) *ŋaya* 'I' + *gu* > *ŋayagu* 'to me'

Personal/possessive suffixes can also precede the locative under discussion:

- (i) *wunaŋu* 'husband' + *nu* 'thy' + *gu* > *wunaŋunugu* 'to thy husband'
- (ii) *wunaŋu* + *ŋu* 'her' + *gu* > *wunaŋuŋugu* 'to her husband'

Derivative affixes may precede but not follow the lative suffix; other case suffixes may neither precede nor follow it; number markers (dual and trial) may also precede it:

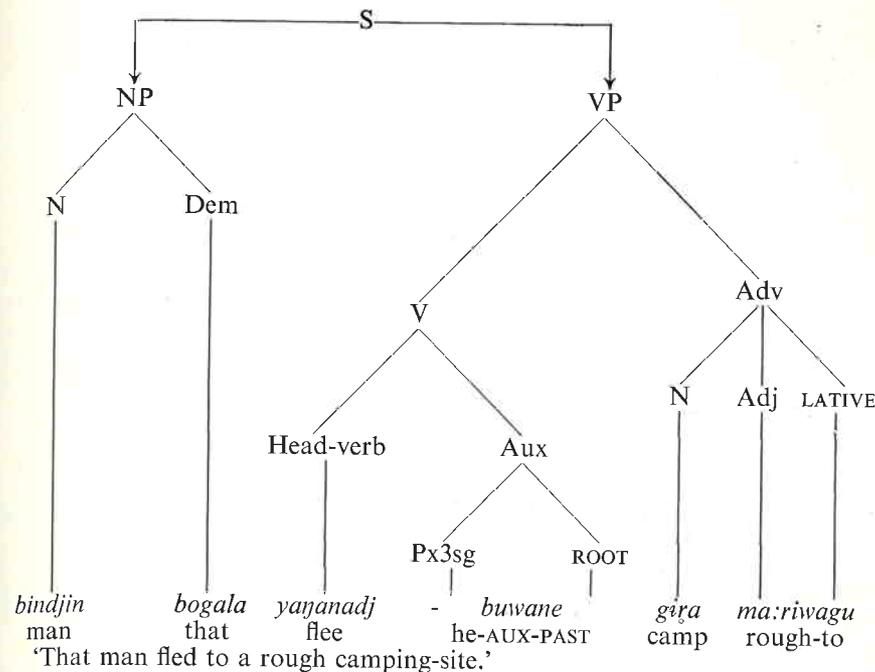
- (i) *gunuwa* 'shark' + *miya* 'Dual' + *gu* > *gunuwamiyagu* 'to the two sharks'
- (ii) *naŋara* 'we' + *na* 'Trial' + *gu* > *naŋaranagu* 'to the three of us'

Emphatic particles and modifying affixes (such as *-li* 'voici/voilà', *-eri* 'just, only' or *-njale* 'again, also') may follow the lative under examination:

le:wa 'dog' + *eri* 'only/just' + *gu* > *le:waguri* 'only to the dog'

The lative suffix under discussion can also be isolated and identified in defective adverbial forms, for example *galagu* 'there, thither, that way', *gadagu* 'there, thither, that way', *waŋgigu* 'later on', *ŋindagu* 'where, whither, which way', *gayanbagu-wiyindagu* 'to and fro'.

1.2. Syntactically, a lative form functions as an adverb.



1.3. Morphosemantically, suffix *-gu* is basically a general lative which can roughly be glossed 'to, towards, in the direction of something or somebody'. Close examination proves, however, that it has a wider semantic scope with more specific connotations which very often depend on an actual situation or context. Thus, the form *ganjagu* (from *ganja* 'what') can, without a context, be glossed 'where, whither, which way, in what direction' (lative) or 'why, for what reason' (causative) or 'why, for what purpose' (purposive); the form *lumbagu* (from *lumba* 'tree, wood, timber') can be 'to(wards) a tree' (lative) or 'for wood' (purposive) and so on and so forth.

The following list is a semantic summary of the suffix being examined.

Lative

- (i) *anja giŋagu aŋarmindamindamiya*
this-OBJ home-to it-we-take-PRES-DUAL
'The two of us take this home.'
- (ii) *yayanadj-buwane aŋugu, giŋa ma:riwagu*
flee-he-AUX-PAST rock-to, place rough-to
'He fled to a rocky country, to a rough camping site.'

Allative

- (i) *gala djo:li - andumiŋaŋi wunaŋuŋugu*
then return she-AUX-PAST husband-her-to
'Then she returned to her husband.'

- (ii) *amindaŋi anja na:mbaŋugu*
it-take-PAST this OBJ wife-his-to
'He took it to his wife.'

Dative

- (i) *midjingu wandidj-ŋaŋga laŋgađi*
mission-to carve-I-AUX-PRES boabnut
'I engrave boabnuts to the mission.'
- (ii) *wadj-bindiyu ŋalargu*
push he-AUX-PAST-him red-ant-to
'He (a murderer) dumped him (his victim) to the red ants.'

Causative

- (i) *baŋuru małga - birmirene bindjingu bogala debar-biyaŋgeŋarigu*
fight conduct they-AUX-PAST man-for that dead-having-gone-for
'They conducted a battle because of that man who had died.'
- (ii) *ŋawaŋindalu wadj-bindiwurumiya minangagu, woŋaygu*
water-in drown-he-AUX-them-DUAL girl-for woman-for
'He drowned those two in the water because of a girl, because of a woman.'

Purposive

- (i) *na: ganmaŋgugu giyaŋga*
thou yam-for thou-go-PRES
'Thou art going for yam.'
- (ii) *ŋjambambila biranŋenjale waŋagu*
womenfolk they-go-PAST-TOO wild honey-for
'The women have also gone out for wild honey.'

In addition to the above list, a few verbs always take an adverbial complement with *-gu* but, admittedly, they do not seem to be very numerous. Thus:

- (i) *ŋuru - baŋgeri wunambalgu*
listen he-PRES-FREQ Wunambal-to
'He listens to/learns Wunambal.'
- (ii) *yala-buwane a:mbagu*
hunt-he-AUX-PAST kangaroo-for
'He was hunting for kangaroo.'
- (iii) *ŋuya-baŋga yiragu*
hungry-he-AUX-PRES meat-for
'He is hungry for meat.'

2. Verb conjugation: a directive marker

The Wunambal verb can incorporate a variety of bound morphemes. Amongst them there are five, tentatively termed *directive-locative* markers:

<i>-gu</i> 'to(wards)'	<i>-ŋinja</i> 'around'
<i>-yaŋa</i> 'from'	<i>-mare</i> 'past'
<i>-ŋindalu</i> 'at'	

All the five can instantly be identified with the pentad of homophonous case suffixes but, naturally, the former and the latter always occur in a different morphological environment. For further information see the

author's paper on Simple and Compound Verbs in Wunambal (Paper 80, this volume), sections 2.7, 2.10, 3.5.

Suffix *-gu* as directive marker refers to an unspecified direction associated with an action; a direction which largely depends on speech situation or context and very often remains rather vague. For instance:

madug-biyaŋgerigu
walk-he-AUX-PAST-DIRECT
'He walked on that way.'

Now, the 'that way' in the above sentence is normally accompanied by a finger pointing at a certain direction or by a cast with the eye or the like. Most often, however, such a laconism is avoided and the above sample sentence would normally be structured differently, viz. including an adverbial complement which makes the reference to a direction more specific, for example:

madug-biyaŋgeri galagu
walk-he-AUX-PAST there-to
'He walked on that way.'

Briefly, *-gu* as a directive marker in a verb is quite grammatical; none the less it hardly ever occurs in present-day Wunambal.

55. Pitjantjatjara

John T. Platt

In Pitjantjatjara (or 'Western Desert' language) *-ku* affixation occurs in sentences with such verbs of emotion as: 'fear', 'love', 'respect', 'have confidence in', 'hate', all of them verbs which could be considered as having an 'experiencer' role for the subject. The normal ergative pattern of:

'Ergative' *-ŋku*, *-Tu*, *-lu* affixation on subject of transitive verb;

'Nominative' *-φ*, *-pa*, *-nya*, *-ŋa* affixation on object as in

watiŋku kuka ŋalkunu
man-erg meat eat-past
'The man ate the meat.'

is replaced by the 'nominative' *-φ*, *-pa*, *-nya*, *-ŋa* affixation on subject and *-ku* on object as in:

tjitji wati tjilpiku ŋuhuriŋu
child man old-*ku* feared/was afraid of
'The child feared/was afraid of the old man.'

Subject pronouns behave as in their usual subject manner, for example:

ŋajulu wati palaku rapariŋanyi
I man that-*ku* trust
'I trust that man.'

but object pronouns take the *-ku* (or *-mpa*) affix, for example:

minyma palumpa kurari-ŋanyi
woman him hates
'The woman hates him.'

Of course, the question remains whether these verbs are to be considered as transitive or intransitive or whether such terms are relevant here. They could all be glossed:

X has Y 'for' Z

where Y may be 'fear', 'trust', 'hatred'.

One might be tempted to consider *-ku* as the short form of *-kutu* 'towards' so that all these verbs might be glossed:

X BE Y 'towards' Z

where Y may be 'fearful', 'trusting', 'hating' but it happens that most 'free form' pronouns take *-mpa* as an affix, as they do to mark 'alienable' possession as well. Thus it would seem dubious as to whether *-ku* is here a reduction of *-kutu*.

All verbs which co-occur with the type of affixation discussed above are of the *-wa* class, to use the useful classification of Douglas (1964) and all end in *-riṅanyi* (present tense form), a common inchoative verb-forming affix. This is further discussed in my paper 'Verb Formation in Pitjantjatjara with particular reference to inchoatives and causatives' (Paper 83, this volume).

Interestingly, the verb of an embedded phrase which is the object of such a verb—or is within an NP complement in Rosenbaum's (1967) terms—occurs affixed by *-tja + -ku*, for example:

wati ṅurakutu ankuntjaku ṅuluriṅanyi
man camp-to to go fears

'The man fears/is afraid to go to camp.'

NOTE: The form *ankuntja* would occur in structures like: *wati ankuntja* 'the man who has gone'. Glass and Hackett (1970:26) state of *-tja* affixation that 'this mode is used to refer to a particular verb' in Ngaanyatjara—in other words it is the citation form.

The affix *-ku* appears affixed to noun phrases with a purposive meaning, for example:

minyma karukutu anu mina-ku
woman creek-to went water-for

'The woman went to the creek for water.'

It is also affixed to verbal forms in purposive phrases when the subject (not necessarily overt) of the purposive phrase is different from the subject (again not necessarily overt) of the main verb, for example:

punuṅi uwa papa pulka puṅkuntjaku
stick-me give dog big (for) to hit

'(You) give me the stick (for me) to hit the big dog.'

ṅajulu minyma maji uṅu tjitji ṅalkuntjaku
I woman food gave child for to eat

'I gave the woman food for the child to eat.'

However, when the subjects of both the main clause and the purposive phrase are identical, the *-tja + -ku* affixation is replaced by *-tjikitja(-ṅku)* affixation, for example:

maḷu pikatjara ma-wirtjapakani iluntjikitja
kangaroo sick runs away (for) to die

'The sick kangaroo runs away to die.'

minyma tjuṭa pititjaranṅku ili mantjiṅiṅi ṅalkuntjikitjanṅku
woman all dish-with-erg fig are getting (for) to eat

'The women with dishes are getting figs to eat.'

In the latter, *-ṅku* is affixed to the 'infinitive' to agree with the subject of the main verb *mantjiṅiṅi*

The form *-kitja* occurs separately with the sense of 'for the sake of'. It is possible that the *-tjikitja(-ṅku)* affix could be analysed as *-tja + -kitja* with regressive vowel harmony (cf. the analysis of *-tjaku* above) giving *-tjikitja*. One is tempted to analyse *-kitja* as *-ki + -tja* with *-ki* a variant of *-ku*. It is hardly satisfying to have an unanalysed *-tjikitja(-ṅku)* when it is obviously semantically related to *-tjaku*.

An interesting difference in affixation is to be seen between Warburton Ranges (Ngaanyatjara) Pitjantjatjara (henceforth WR) and Ernabella Pitjantjatjara (henceforth E) with the verb 'give'.

In WR, the *-ku* affix occurs on the recipient see Glass and Hackett (1970:80):

ninti-nu kuri-ku
gave spouse-for
'(He) gave to his wife.'

ṅayu-lu-la ninti-la tjimari-ḷ Tjitja-nya wana-lpayi-ku
I-sm-we give money-nm Jesus-nm follower-for

Tjuṛutjalama-la nyina-rantja-ku
Jerusalem-at were-staying-for

'Let us all give money to Jesus' followers at Jerusalem.'

In E, the indirect object is not marked with *-ku* but precedes the direct object, for example:

watiṅku minyma piti uṅu
man-erg woman dish gave

'The man gave the woman a dish.'/'The man gave a dish to the woman.'

However, in E, verbs such as 'bring', 'make', 'cook' co-occur with *-ku* affixed to nominal groups if the action is done *for* the person(s) indicated by that nominal group, for example:

watiṅku minymaku piti palyaṅu
man-erg woman-for dish made

'The man made a dish for the woman.'

The difference between the *-ku* and nominative affixation for the recipient of 'give' between WR and E somehow parallels the lack of agreement among those who have worked with deep case or role concepts in regard to whether 'give' implies a benefactive role or a dative/experiencer role as against the more obviously benefactive role of the person(s) for whom something is 'brought', 'made' or 'cooked'.

In Pitjantjatjara (both WR and E), *-ku/-mpa* affixation is used for what would probably universally be considered as alienable possession, for example:

ṅajuku kuḷaṭa 'my spear'

watiku ṅura 'the man's camp'

It is also used for family relationships, for example:

nyuntumpa mama 'your (sg.) father'

tjitjiku kuṭa 'the child's elder brother'

It is also used as affix on the 'possessor' of a story—the one who tells it. Thus the translations of the gospels:

Tjukurpa Palya Markaku

story good Mark-of

'The Gospel according to St Mark.'

56. The Western Barkly Languages

Neil Chadwick

1. Languages concerned

All the languages are situated in the east central part of the Northern Territory. (See Appendix A of Paper 46 for details.) There are two main groups—(a) Djingili (Dj.) and (b) Eastern Group (E.) which is divided into Ngarngu or Ngarndji (Ng.) and a subgroup consisting of those lying adjacent to the MacArthur River (M.). The dialects of this subgroup (M.) are Wambaya (W.), Gudandji (G.) and Binbinga (B.).

2. Characteristics of general interest

2.1. In Dj. the normal nominal suffix for dative and other case functions bears no resemblance to CA *ku. The corresponding suffix for feminine nouns is almost certainly not derived from *ku.

2.2. There are no obvious examples of bivalent affixes in these languages.

2.3. The historical reason for the absence of nominal -ku in Dj. may be related to the presence of a noun-class affix whose original form was probably *gu.

3.a. Relevant forms

- (i) Those which may contain reflexes of CA *ku.
- gul-wu/u (Dj.), -ga/-a (E.) general oblique of pronouns.
 - nga and -nga (E.) nominal suffix: purposive/benefactive/possessive.
 - yi (Dj.) verbal suffix: future/intentional.
 - u/-i (M.) verbal suffix: future/intentional.
 - nga (Dj.) nominal suffix: allative.
- (ii) Others:
- na or -na normally, but also: -da/-la (Dj.) nominal suffix: dative/purposive/benefactive/possessive.
 - nga/-ga (Dj.) suffix on feminine nominals: ergative/dative/purposive/benefactive/possessive (almost certainly not a reflex of *ku).

3.b. Function of suffixes and allomorphic variation

(a) Pronouns

The form -gu on non-singular pronouns in Dj. would seem to be a direct reflex of *ku. Pronouns taking this suffix function as a general oblique, including objective, dative and benefactive. Examples follow:

Dj. *djuwiri-mindi* - *yi unja* - *gu*
follow 1p.du.inc. fut/int. 3p.du. obl.
'We two will follow them two.'

nayi-ni *ndjbi-ni-nji* - *mi gunja-gu*
I erg. leave I 2p.obj. irr. you 2 obl.
'I might leave you two.'

bagja-ŋa-dju gura - *gu*
ask I pres. you pl. obl.
'I am asking you.'

djani ibilgini adga-nu gunja-gu
how much rain fall past you 2 obl.
'How much rain fell on you?'

ambaya-mi ura - *gu*
speak impv. them obl.
'Speak to them.'

In the Eastern Group G. and Ng. -ga occurs on the corresponding pronouns, for example *gira-ga*—you plural oblique.

The form -ga may have developed from *gu either by progressive vowel harmony or by a general levelling of non-front final vowels into -a.

Singular Pronouns

The singular pronouns have dative/benefactive forms which may correspond. In Dj. the second person form *ŋaangu* may contain a reflex of *ku. The vowels -u (Dj.), -a (W., G., Ng.), and -i (B.) in other pronouns may have developed from *ku.

The forms are:

Dj.	W.	B.	
<i>ŋaaru</i>	<i>ŋaara</i>	<i>ŋaari</i>	me
<i>ŋaangu</i>	<i>ŋaana</i>	<i>ŋaani</i>	thee
<i>ŋanu</i>	<i>ŋana</i>	<i>ŋani</i>	him/it

(b) Verbs

It is remotely possible that some of the suffixes for future/intentional function are reflexes of *ku. The situation with regard to tense-mode affixation in Dj. and W., and possibly also in B., is complicated, since there are suffixes which combine in the same form the functions of tense-mode and directive motion. The form -yi is, in Dj., the marker of future/intentional with no specific directive function.

The non-directive future/intentional suffix -i/-u contrasts in W. with directive suffixes, but not in G. The situation in B. is not clear at present since it is not easy to find a competent informant. Allomorph -i occurs only where there is a high front vowel in the preceding person marker, otherwise the allomorph is -u.

Vowel → 1. / $\left[\begin{array}{c} \text{C} \\ \text{vowel} \\ \text{alpha} \\ \text{front} \end{array} \right] \text{C}$ alpha front
non low person

2. minus front elsewhere

Dj. *ŋirmi-ŋiri* - *yi winmildja*
make we pl.ex. intent. windmill
'We will construct a windmill (for a bore).'

djuwiri-mindi-yi as in previous example.

djaljajngu imbiyi-ninji - yi djingilu
 today talk we 2 ex. intentl. Djingili
 'Today we will talk Djingili.'

njanja-nja - yi njanu
 sing you(sg.) fut. him
 'You will call (it) out for him.'

G. *madjbi-n-u djandji*
 hit I fut. dog
 'I shall hit the dog.'

madjbi-nj - u djandji
 hit you(sg.) fut. dog
 'You (sg.) will hit the dog.'

madjbi-gul - u djandji
 hit you two fut. dog
 'You two will hit the dog.'

madjbi-gir - i djandji
 hit you pl. fut. dog
 'You all will hit the dog.'

(c) Nouns/adjectives

It is most unlikely that there is any connection between the nominal suffixes for dative, etc., in Dj. and the bivalent **ku*. Even in the Eastern Group the reflexes of **ku* are not clearly evident.

Relevance of genders/noun-classes

In all these languages there are genders or noun-classes marked by suffix. For the first detailed information on this and other facets of the MacArthur subgroup we are indebted to K. L. Hale.

Details regarding genders or classes can be found in the paper on ergative suffixes and in my paper in *Linguistic Communications* No. 14, 1974. In Dj. in masculine and feminine nominals for nominative ergative and 'dative' function, case and gender are combined in the same suffix. 'Dative' is put in quotes because the suffixes function also in masculine and feminine genders for purposive, benefactive and possessive. In the feminine gender, they function also for ergative.

The masculine and general neuter dative suffix is normally *-na*. The forms *-la* and *-da* in a small subset of nominal items have developed from earlier **na* by progressive assimilation of manner.

Question:

njamba-na nibi - wunj - amigi nyanyaalu
 what purp. hold they 2 come-past. leaf
 'Why did they bring leafy branches?'

Answer:

bula-na 'For the ceremony.'
daruma-na-riyi buba-na
 search I go-intent. fire -purp.
 'I will search for firewood.'

ambaya-mi bayi-na njanu
 speak impv. man dat. him
 'Speak to the man.'

In nouns of the particular neuter class the alveolar nasal is non-retroflex: *-na*
guñju ñayini gabalama-na
 skin of-it yam(sp.) poss.
 'The skin of the yam.'

The feminine dative/ergative gender/case suffix is normally *-ña*. The form *-ga* in certain subsets of feminine nominals has developed from earlier **ña* by progressive assimilation of manner. It is almost completely certain that these forms have not developed from **ku*. See section 4 for possible origins.

ambaya-mi ñayini ñayu - ña
 speak her woman fem./erg./dat.
 'Speak to the woman.'

ñayu - ña walagu maya-nu
 woman erg. dog hit past.
 'The woman hit the dog.'

In the Eastern Group the suffix for purposive/benefactive/possessive is *-nga* in Ng., W., and B. In G. it is normally *-nga* but the form *-ñga* which has probably developed from *-nga* by regressive assimilation of place also occurs.

W. *gayina-nga* 'why'

G. *gayina-ñga*

G. *yaaru-ñi-ma gwi-yigi-nga*
 go I past. fire -purp.
 'I went for the firewood.'

W. *yaaru-ñ-uba gwi-yigi-nga*
 go I fut.-go fire purp.
 'I shall go for firewood.'

G. *ñayana djandji gamuli-ña - nga*
 her dog girl fem. poss.
 'The girl's dog.'

4. Tentative explanations of historical development

(a) Dj. *-ña/-ga* feminine ergative/dative

E. *-ña-* feminine gender marker

These forms have probably developed from a third person feminine transitive marker which probably developed from an earlier free form **ñayi*. See the paper on ergative suffixes for details.

(b) E. *-nga/-ñga* purposive/benefactive/possessive

Dj. *-ñga* allative

This form may have developed from an earlier disyllabic affix *nVgV* (where V stands for vowel). The vowel in the first syllable was probably *i* or *a*, was unstressed and finally elided. The second syllable was probably a reflex of **ku*. If the first syllable was *-na-* it may have been cognate with an earlier form of the dative in modern Dj., and the vowel *-u* of the second syllable may have assimilated to it. If the first syllable was *-ni-* it may have been cognate with an earlier form of *-ni*, the ergative/locative, and the vowel change of the second syllable may have been due to a general levelling of word-final vowels as described earlier.

Dj. *-ŋga*, if it is not cognate with CA *-ŋga* locative, may also have developed from this disyllabic suffix.

(c) One possible reason for the absence of a nominal reflex of **ku* for dative, etc., in Dj. may be that it would have been homonymous with another suffix. It seems very possible that at least one early gender marker for general neuter was *-gu*, at least following a consonant in the original noun stem. Cf. *yungu* 'foot' (probably from CA **djina(ŋ)*), *yurgu* 'flower', *mulgu* 'upper arm', *langu* 'ornaments', *gumungu* 'back'. Why this possibly original suffix has not survived on all forms, cf. *ŋabandju* 'eye', is not clear at present.

5. 'Dative' function and 'middle' verbs

The purpose of this section is to provide a few details on syntactic function as requested in the original introductory paper on Topic C.

The introductory paper centres around bivalent suffixes and direct reflexes of CA **ku*. Since in these languages in the corpus so far, it appears that there are no bivalent suffixes and since, apart from certain oblique-form pronouns, there are no clear reflexes of **ku*, it is not easy to relate this section to the introductory paper. However, despite the absence of helpful CA suffixes and bivalent forms, there are interesting parallels with characteristics of *'ku'* in other languages. The *na/ŋa* type of suffix in Dj. and the *-nga* type of suffix in E. function, like *'ku'* in some languages, for purposive and benefactive. Also like forms of *'ku'* they function for possessive, in which function they are obligatorily reinforced with an oblique pronoun.

Dj. *wawa-na ŋanu walagu*
boy poss. of-him dog
'The boy's dog.'

W. *djandji ŋayana alana-nga*
dog of-her girl poss.
'The girl's dog.'

In the non-singular, the pronoun is of course interesting because of what appears to be a direct reflex of **ku*.

Dj. *mami unja - gu bain-bili-na*
veg.food them 2 obl. man du. poss.
'The two men's food.'

For dative function in Dj. the oblique pronoun is again obligatory.

mami ŋunja-mi wa - njigili-ŋa unja - gu
food give impv. boy dual poss. them 2 obl.
'Give food to the (two) boys.'

Within the limits of the present Dj. corpus, the gift is always in the nominative ('unmarked') case and the recipient in the dative with obligatory oblique pronoun. In the M. subgroup of E., the relationships are different from Dj. From the corpus so far it appears that the pronoun reinforcement with 'give' does not occur. The items for gift and recipient may both appear in the 'unmarked' or 'nominative' case.

G. *djugi ŋui widjbi-nja*
boy water give impv.
'Give the boy water.'

The most interesting characteristic of these languages of the Eastern Group

is that what can be labelled 'dative' case may be used in such a sentence, but *not to indicate recipient*. That is:

**djugi-ni-nga ŋui widjbinja*
boy masc. dat.

is *not acceptable*.

Instead the case which corresponds to Djingili for purpose, benefactive and possessive may optionally be used to indicate the gift. For example:

djugi ŋui - ni - nga widjbinja
boy water masc. dat. give

is acceptable.

This phenomenon was repeatedly tested with different informants. The above result was always obtained.

Middle verbs

Within the limits of available corpus the principles described in the introductory paper for 'middle' verbs hold for these languages. Verbs like 'speak (to)', 'listen (to)' and 'look for' fit the case frame: Nominative, Dative and not the normal transitive case frame: Nominative, Ergative.

57. Djamindjungan

prefixe
ou infixe (negot)

W. G. Hoddinott & F. M. Kofod

Djamindjungan is a language family of the Victoria River area, Northern Territory. It consists of two prefixing non-classifying languages, Djamindjung and Ngaliwuru, and Nungali a prefixing language with four noun classes. In all of them *-gu* appears both as a nominal and verbal affix.

C-1. Forms

In Ngaliwuru and Djamindjung nouns are marked for dative by the suffixes:
-gu with stems ending in consonants;
-wu with stems ending in vowels.

Pronouns are marked in this case by *-gu* in the first and second person singular and *-ag* elsewhere.

In Nungali, in those nouns with class prefixes possessive and dative cases are indicated by the following prefixes:

Class I *gi-*
Class II *ga-nji-*
Class III *gi-/gu-*
Class IV *gi-*

Nouns without class prefixes and pronouns add the suffix *-gu* with stems ending in consonants, and *-wu* with stems ending in vowels, to indicate the dative.

In all the languages of the family there is a verb prefix, *-bu-/bi-* following a consonant and *-wu-/wi-* following a vowel, which seems to be related phonologically and semantically to the dative. The alteration between front and back high vowels is the result of vowel harmony.

C-2. Functions

C-2a. Complement

The affix marks the 'purposive' variety of noun complement (in order to obtain)

NGALIWURU

- (1) *ga-ŋga maŋara-wu*
he-go PRES food-DAT
'He goes for food.'

NUNGALI

- (2) *wa-ŋga gi-gal*
he-go PRES C1DAT-water
'He goes for water.'

Djamindjung languages do not have nominalised verbs in the manner of Galgadungu and other Paman languages. In the case of the verbal complement the practice is to use the unmarked verb particle of the verb in the complement construction. The object in the complement is marked for dative.

NUNGALI

- (3) *di-manu yiram wi-n-gindji lalabanj gi-yanjara*
C1 bachelor two they-DU-go-PRES hunt C1DAT-kangaroo
'Two bachelors went to hunt for kangaroo.'

C-2b. Benefactive function, and 'middle' verbs

The dative marker appears in cases where it indicates a beneficiary.

NGALIWURU

- (4) *yibilihman dud ga-ni-mili-m malayi-wu*
baby hold he-it-hold-PRES woman-DAT
'He is holding the baby for the woman.'

Dative complements appear with verbs of *speaking to, telling, throwing* (to or at), *sending, accompanying, bringing, approaching*. In Ngaliwuru when the dative complement is a pronoun it is usually accompanied by the possessive pronoun.

NUNGALI

- (5) *ni-lajjin ŋa-φ-yuŋgum ŋayu-wu ganji-ŋargina*
C2NOM-stick I-it-throw-PRES her-DAT C2DAT-me-POSS
gi-na-mad
C2DAT-FEM-sibling
'I throw my sister the stick.'

NGALIWURU

- (6) *dji djarag gan-u-wuyu ŋar-gu ŋar-gina*
he talk he-it-will-say me-DAT me-POSS
'He wants to talk to me.'

Verbs of *giving* on the other hand have the indirect object in the nominative (unmarked) case.

NUNGALI

- (7) *bibi-ni ŋa-na-ŋana djimbilan*
father-ERG he-me-give-PAST spear
'Father gave me a spear.'

C-2c. Possessor

In Djamindjung the possessive suffix is *-yulu*. In Ngaliwuru the possessive

and dative suffixes are identical: viz. *-nu* following a stem ending in a vowel or *-m*; *-du* following a stop; *-u* following *l*; and *-gu* following *-n* or *-ŋ*. They are clearly related to the dative suffix. In Nungali the possessive and dative case prefixes are identical in the nouns. In the pronouns there are different forms for possessive and dative but the dative forms are often used as possessives.

NGALIWURU

- (8) *yundju ŋargina-nu bulgadiŋ-gu gurubadu*
this my-POSS father-POSS boomerang
'This is my father's boomerang.'

NUNGALI

- (9) *yimambu djimbilan guranj gi-ŋarg-ina gi-ya-mad*
C4 this spear not C1DAT-me-POSS C1DAT-MASC-sibling
'This is not my brother's spear.'

The dative form of the pronoun is used as a possessive in stative expressions in Nungali

- (10) *mi-na-ŋargin ŋar-gu ma-manan*
C2NOM-FEM-eye me-DAT C2NOM-bad
'My eye is bad.' (said of a woman)
- (11) *nu-ŋulud ŋuŋ-gu ŋarab-bari*
camp you-DAT hot
'Your camp is hot.'

C-2d. Pronouns

With a pronoun *-gu* is used to express the allative.

NGALIWURU

- (12) *ŋala guranj na-wu-ruma ŋar-gu*
why NEG you-FUT-come me-DAT
'Why did you not come to me?'

It is also used in Nungali to convey the notion of proximity of location.

- (13) *yidan-mulu durib du-murgun wi-r-inu ŋar-gu dub*
C1-these-PL dog C1-three they-PL-are me-DAT sit
'These three dogs are sitting near me.'

C-2e. Tense and aspect marker

In intransitive verbs the future desiderative marker, *-bu-* following a consonant, and *-wu-* following a vowel is prefixed to the verb stem. It is used to indicate an action taking place in the future. The verb is either in the present tense or without tense suffix depending on the verb class.

NGALIWURU

- (14) *ga-wu-ru-m*
he-FUT-come-PRES
'He will come.'

NUNGALI

- (15) *dul ŋadji-b-i-ŋj-ara-m*
uncover you-S-FUT-them-DU-uncover-PRES
'You will uncover them. (d)'

These sentences also translate the notions of intention, desire and possibility. Thus *ga-wu-ru-m* may also be used to translate 'he intends to come', 'he wants to come', 'he can come'. Used with words like *madjani* 'perhaps',

wundju 'if' and *ɲala* 'why', 'well', 'then' it is used to convey notions of uncertainty.

NGALIWURU

- (16) *bibi ɲarg-ina ɲaba madjani bu-n-bu-ru-m*
 father me-POSS brother perhaps they-DU-FUT-come-PRES
 'My father and brother may come.'

When the verb stem has the remote-past suffix it expresses uncertainty about actions in the past. It often follows words like *ɲala* 'why'.

NGALIWURU

- (17) *ɲala guranj na-wu-ru-ma ɲar-gu*
 why NEG you-S-FUT-come-REMP me-DAT
 'Why did you not come to me?'

NUNGALI

- (18) *ɲala ɲandjanburu wuru-φ-wi-yada-ɲji diyaɲara y-u-r-ag*
 why something you-PL-him-FUT-spear-REMP kangaroo US-EX-PL-DAT
 'Did you spear us a kangaroo or something?'

In Galgadungu and some other languages *-gu* has been found in allomorphic relation with *-ya*. In Djamindjungan *ya-* is related to *gu-* since the irrealis prefix is *ya-* in Djamindjung and Ngaliwuru and by a regular correspondence *ɲja-* in Nungali. The *ya-* prefix is used as a negative future, with the notions of intention desire and possibility, with the negative particle *guranj*.

NGALIWURU

- (19) *guranj ya-ɲ-ur-um*
 not NEG FUT-I-come-PRES
 'I will not come.'

NUNGALI

- (20) *guranj ɲja-y-idga*
 not NEG FUT-he-come-PRES
 'He will not go.'

The relation between *-gu-* and *-ya-* can be seen by the relation between the following:

In Ngaliwuru *ya-* is used as a future conditional or irrealis with words like *madjani* 'perhaps' and *wundju* 'if'. The irrealis occurs in the protasis with a future desiderative verb in the apodosis.

NGALIWURU

- (21) *yagbali-ni ya-ɲadj wundju ɲa-φ-wu-ɲawu*
 camp-LOC NEG FUT he-be-PRES if I-him-FUT-see
 'If he is in the camp I would like to see him.'

In Nungali these ideas are expressed by the use of the future desiderative prefix *-wu-/-bu-* with *giyaɲula* 'perhaps', *midgu* 'if'.

- (22) *midgu ɲa-ɲji-wi-ɲayi-m ɲa-ɲji-wi-ɲana-m nu-wanbi*
 if I-you-S-FUT-see-PRES I-you-S-FUT-give-PRES C3-stone
 'If I see you I will give you the money.'
- (23) *giyaɲula ɲa-φ-bi-yaɲga-m ɲja-ɲaruɲ*
 perhaps I-her-FUT-send-PRES C2 woman
 'Perhaps I will send the woman away.'

It is used in the second person, with the negative particle *guranj*—NOT to express the negative imperative or prohibitive.

NGALIWURU

- (24) *guranj ya-ndj-idga*
 NEG NEG-FUT-you-go
 'Don't go.'

NUNGALI

- (25) *guranj dud ɲja-dji-mili*
 NEG hold NEG-FUT-you-s-gather
 'Don't pick it up.'

C-2f. Other uses

In Nungali the dative form of the pronoun occurs in stative and equative sentences.

- (26) *walad ɲar-gu*
 sick me-DAT
 'I am sick.'

This may be compared to the form with the stative verb *wananduyu*.

- (27) *walad ɲananduyu*
 sick I-sit-PRES
 'I am sick.'

58. Murinjpata

prefixe

Michael Walsh

Murinjpata is spoken mainly at Port Keats in the north-west of the Northern Territory.

Form

The underlying form is */-nu/*. Following stems having alveolar or retroflex phonemes in final position, */-nu/* is often elided to */-u/*.

Function

Complement

The dative marks the purposive variety of complement as in:

- (1) *palnun ɲasa tayi kanala ku-ɲitayi-nu*
 woman 'up' tree 3sg.climb NC:meat-sugarbag-DATIVE
 'A woman is climbing a tree for sugarbag.'
- (2) *ɲuuu-taytman-nu ku-lawanga-nu*
 Isg.move-hunt-FUTURE NC:meat-wallaby-DATIVE
 'I'm going hunting for wallaby.'
- (3) *kaɲu paɲu wuuini-ta lawanga pu-φ-baɲ-nu*
 NC:person there 3sg.move-PAST wallaby 3sg.-3sg.-hit-PURP
 'A man went there to kill a wallaby.'

Note that the purposive suffix is attached to the verb, not to the noun as it is in other Australian languages. Similarly:

- (4) *kuɬa katu na-ŋa-t pa-guɖuk-nu*
 water towards 2sg.-1sg.-bring 1sg.-drink-PURP
 'Bring me water to drink.'

However there are sentences in which the verb in the complement is not marked with /-nu/ but the object is:

- (5) *ŋuɬini-ta ŋijini-nu pam-ŋi-kaɖu*
 1sg.move-PAST 2sg.-DAT 1sg.-2sg.-see
 'I've come to see you.'
- (6) *ɖim-kark kaɖu yibim-bup ku kakaɬayɬ-nu*
 3sg.sit-cry NC:person 3sg.lie-be dead NC:meat-spirit-DAT
 'He's crying for the dead man.'

But (6) may be looked upon as two sentences: *ɖimkark kukaɬayɬnu*, literally 'He's crying for the spirit', and *kaɖu yibimbup*, 'The man is dead'. Semantically, this interpretation is appropriate since *kukaɬayɬnu*, being a spirit, does not die but *kaɖu*, a man, can die.

Adjectives may take /-nu/ with a purposive sense:

- (7) *meditin pa-guɖuk-nu pata-nu*
 medicine 1sg.-drink-FUTURE/PURP good-PURP
 'I'm going to drink the medicine to make me strong.'

Note that /-nu/ may occur more than once in the one sentence with the same function.

/-nu/ may also be used to mark a BENEFICIARY. In Murinjpatha, there is a full system of what may be called benefactive object pronouns, corresponding to two other systems of incorporated pronouns: subject, and, direct object pronouns. An example of an incorporated benefactive object pronoun occurs in (4). Thus an NP marked with /-nu/ may be cross-referenced in the verb complex as a benefactive object pronoun:

- (8) *ŋijini-nu ŋa-mpa-waɬ-nu kumbit*
 2sg.-DAT 1sg.-2sg.BENEF.-shoot-FUTURE kangaroo
 'I'll shoot a kangaroo for you.'

Since *ŋijini* is redundant in (8) it may be deleted and generally is; plainly though, the beneficiary NP, *kuweɬeŋayinu*, cannot be deleted in (9) because that would be non-recoverable deletion:

- (9) *ku ŋaŋɖin-na ku-weɬe-ŋayi-nu*
 NC:meat 1sg.get-3sg.masc.BENEF. NC:meat-dog-1sg.-DAT
 'I'm getting some meat for my dog.'

Where it is clear that an NP is dative in function (through cross-referencing in the verb complex, or, through context, for example) /-nu/ is often deleted. Because of this it is not so easy to say which verbs obligatorily take a dative complement (if this means dative complements which are *marked* as dative) since the complement (outside the verb complex) is frequently unmarked although what corresponds to it inside the verb complex is obligatorily marked dative. However some verbs which might go in this category are: 'like, want, look for, give, send, know, hear, teach, tell, ask for'.

- (10) *tangu-nu ŋim-pinayt-tulan*
 what-DAT 2sg.stand-look for-2sg.move
 'What are you looking for?'

(/-nu/ is used with its purposive sense with the interrogative word, *tangu*, to indicate 'why?'.)

- (11) *m-a-m-ŋe-ya nigunu-nu*
 3sg.-say-PAST-3sg.fem.BENEF.-EMPH 3sg.fem.-DAT
na-ŋa-peti-nu-ŋi wakal-ŋayiwada
 2sg.-1sg.BENEF.-look after-FUTURE-2sg.sit child-1sg. now
 'He told her to look after his child.' (Literally: 'He said to her; you will look after my child for me now'.)

Possessor

Possession is not handled by /-nu/ in Murinjpatha, but by apposition as in (9) *wele ŋayi*, dog 1sg. = 'my dog'.

Allative ('to')

Allative can be marked by /-nu/ in Murinjpatha but generally is not.

- (12) *ŋayi-ka ɖa-nu ŋunuŋam-ŋem*
 1sg.-TOPICALISER camp-DAT 1sg.move-1sg.sit
 'I am going to camp.'

Thus it may happen that an incorporated 'benefactive' object pronoun may cross-reference an NP which uses an allative preposition, *katu ŋala*.

- (13) *tuɖu-ŋa-tuk katu ŋala ŋayi*
 2sg.-1sg.-send towards 1sg.
 'Send it to me.'

Tense or aspect marker

/-nu/, attached to the verb stem, indicates futurity:

- (14) *ŋala ŋipiliŋi ŋuɬu-nu ŋipiniɬe*
 to river 1sg.move-FUTURE tomorrow
 'I will go to the river tomorrow.'

Marking the complement of imperfect, irrealis, etc., verbs

Rather than marking the complements of such verbs, /-nu/, attached to verbs, marks various aspects: desiderative (want to), intentional (intend to), or purposive/causative, conative, with /*mani*/ (try to). /-nu/ typically occurs in the apodosis of conditional expressions and is used to express futurity, with aspects marked by auxiliaries affixed to the main verb for example, habitative; durative. Thus (15) has a desiderative, an intentional and a 'plain' future reading:

- (15) *pa-ŋi-ɬiwitɬul-nu*
 1sg.-2sg.-cause to break wind by hitting with stone-NU
 'I'm going to/want to/intend to make you break wind by hitting you with a stone.'

Purposive/causative use of /-nu/ is exemplified in (7) and here:

- (16) *naŋɖi na-puɬ-nu na-pawayyi-nu*
 NC:thing 2sg.-wash-FUT 2sg.-make white-PURP
 'Wash these clothes and make them white.'

Note that positive imperatives are marked by /-nu/.

/-nu/ appears in the apodosis of a conditional expression:

- (17) *mi maɖa ŋata wunmuk-ka ŋu-layt-nu*
 food NEG CONDITIONAL rotten-TOPICALISER 1sg.-eat-FUTURE
 'If it is not rotten I will eat the food.'

Other functions

/-nu/ may be attached to adjectives with a future or inchoative sense:

- (18) *ku-nulmil pana-ka wunmuk-nu waḍa*
 NC:meat-fish that-TOPICALISER rotten-FUT 'now'
 'That fish is becoming rotten.'

Also, with what appears to be an inchoative sense, /-nu/ may be attached to adverbs:

- (19) *lawanga manda-nu nata-ka ḡa-ḡ-wal-nu*
 wallaby close up-NU CONDITIONAL-TOPIC 1sg.-3sg.-spear-FUT
 'If there is a wallaby close up I will spear it.'
- (20) *nakuḷ-nu ṭipijine pa-ni-kaḍu-nu*
 later-NU tomorrow 1sg.-2sg.-see-FUTURE
 'I'll see you tomorrow.'

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59. Nunggubuyu and Ritharngu

Jeffrey Heath

Part 1: Nunggubuyu (eastern Arnhem Land)**C-1. Forms**

Allative *-wuy*, becoming *-guy* after nasals and stops. Purposive *-yunguyuy*, becoming *-junguyuy* after nasals and stops. The proposed etymological segmentation is **-yuy-gu-yuy*. An element *-yuy* (with assorted allomorphs) shows up in nominal morphology in numerous functions, sometimes fused to another element (with *-yuy* sometimes first, other times second).

Although *w/g* and *y/j* alternations synchronically have the nonstop as underlying form, there is no doubt that in many cases the stop is historically primary, and the nonstop results from conditioned lenition. The synchronic primacy of the nonstop reflects reinterpretation and assorted consequent readjustments. Therefore there is no reason why the *-wu-* in *-wuy* cannot be correlated with the *-gu-* in *-yunguyuy*.

C-2. Functions

Allative *-wuy* is most commonly used with noun stems. It can be used with pronouns, but not in its usual form with deictics (cf. below). It refers primarily to direction, as in (1):

- (1) *ḡaḡja:ri ama-maḍala-guy* (base-form /*ama-maḍalag-wuy*/)
 I go IV beach All
 'I'm going to the beach.'

In real life there are many situations where an NP is both the goal of an activity and the terminus (actual or intended) of motion. In such cases English chooses to use the purposive preposition *for* rather than allative *to*, as in 'He went for firewood'. Such ambivalent situations are treated differently in Nunggubuyu, where allative *-wuy* is used instead of purposive *-yunguyuy*:

- (2) *niyaygi a - ḡura - wuy*
 he went III fire(wood) All
 'He went to (i.e. for) firewood.'

Occasionally *-wuy* can be added to a potential verb in a temporal adverbial clause. Most commonly these clauses are of the following type:

- (3) *amilalagiñ - guy ḡanuyambi:na*
 he get up (Pot) All I will talk to him
 'I will talk to him when he gets up.'

Such expressions do not occur often in my corpus.¹ Usually there is a simple conjunction of two un subordinating clauses: 'He will get up, I will talk to him'. Expressions like (3) were readily obtained only in elicitation sessions of the 'How do you say ____' type.

Deictics cannot take *-wuy* except for a few instances. There are four deictic stems: *ya:-*, *da-*, *yuwa:-*, and *ba-*. The first two can take *-wuy*, but only in irregular and special forms based on the class III (neuter) forms *ya:-ni* and *da-ni*. The allative forms are: *ya:-nu:-wuy* 'this way, in this direction', and *da-nu:-wuy* 'that way, in that direction (immediate vicinity)'. The change of *-ni* to *-nu:-* can be disregarded.

The expected forms **yuwa:-nu:-wuy* (distant) and **ba-nu:-wuy* (nonproximate anaphoric) are not found. Instead, we find thoroughly irregular forms *yuguni* and *buguni*. It is better to translate these as '(to) there' than 'in that direction', since *yuguni* and *buguni* generally imply attainment of the intended terminus, while *ya:-nu:-wuy* and *da-nu:-wuy* do not.²

Presumably we should segment *yuguni* and *buguni* into **-gu-* (allative), **-ni* (class III marker in neuter function here), and distorted forms of the deictic stems *yuwa:-* and *ba-*. Obviously such segmentation is synchronically unrevealing since the combinations are thoroughly frozen.

The occurrence of purposive *-yunguyuy* with nouns, pronouns, and deictics is circumscribed by two factors. Firstly, we have already noted that whenever possible the allative is used instead of the purposive, as in (1). Therefore the purposive is used only when the allative is inappropriate, as in (4):

- (4) *niḡaḍugumbi:na yi:-malḡana-yunguyuy*
 he fishes II proper Purp
 'He is fishing (with line) for groper (rock cod).'

Furthermore, the use of *-yunguyuy* is limited by the fact that contextually redundant case suffixes are often omitted. Sentence (4) would be perfectly comprehensible without *-yunguyuy*, and so this suffix is freely deletable (when it is deleted, the noun class prefix is frequently also deleted):

- (5) *niḡaḍugumbi:na malḡana*
 'He is fishing for groper.'

This deletability applies also to allative *-wuy*, though to a lesser extent. Purposive *-yunguyuy* may be added to potential verbs to form purposive complements. Again, however, if the logical relationship among the clauses

is fairly straightforward in context the purposive suffix is usually omitted and a simple potential verb is used:

- (6) (a) *niya:ri: anu - rayi:*
 he goes he/him spear(Pot)
 (b) *niya:ri: anu - rayi: yunguyuy*
 Purp
 'He is going (there) to spear him.'

Part 2: Ritharngu (northeast Arnhem Land)

Ritharngu is spoken just north and east of Nunggubuyu, but is not close to it genetically. It belongs to the Yuulngu group, which covers all of the northeastern part of Arnhem Land. In the matters discussed in this paper, Ritharngu is generally typical of Yuulngu languages except in minor points. However, in relative-clause formation Ritharngu differs radically from the others.

C-1. Forms

Dative-genitive *-gu* after noun stems, *-ku* or *-ŋu* after pronouns. *-gu* optionally becomes *-wu* after vowels and non-nasal sonorants by low-level lenition, hence *ɖaramu-gu* or *ɖaramu-wu* 'of/for the man'. The difference between *-k-* (Schebeck's *-kk-*) and *-g-* (Schebeck's *-k-*) is phonemic in the environment X ____ V, where V is a vowel and X is a vowel or non-nasal sonorant. Hence the opposition is neutralised initially, syllable-finally, and after a nasal, stop, or glottal stop. I write the neutralised stop as *-k-* syllable-finally, and as *-g-* syllable-initially. Deictic stems take an augment *-nʔ-* just before the dative-genitive suffix, so we cannot tell whether the resulting combination *-nʔ-gu* has underlying */-ku/* or */-gu/*, as in *ya:ŋu-nʔ-gu* 'for this'.

The following are the dative-genitive pronouns: 1Sg *ɣara-ku*, 2Sg *ŋu-ŋu*, 3Sg *ŋan-ŋu*, 3Du *maŋɖa-ŋu*, 3Pl *ɖali-ŋu*. All nonsingular first and second person pronouns take an oblique augment *-ŋ-*, to which is added either zero or *-gu* in the dative-genitive: for example, first exclusive plural *ŋanapuru-ŋ* or *ŋanapuru-ŋ-gu*. Since *-gu* here follows a nasal we cannot tell whether it is underlying */-ku/* or */-gu/*, but since only *-ku* occurs in the singular pronominal system it might be best to take */-ku/* as basic for all pronouns which do not have *-ŋu*. Interrogatives *ɣa:-* 'what?' and *waɣa-* 'who?' are treated like pronouns and so take *-ku* instead of *-gu*: *ɣa:-ku* 'why?', *waɣa-ku* 'of/for whom?'.

Class 6 verbs (in my system) have a related suffix added directly to the stem in the potential form (which can be future or imperative, among other things). The forms are: *-ku* after *ɣa:-* 'to hear', *-ŋu* after the other two Ca:- stems (*ɣa:-* 'to see', *ga:-* 'to carry'), and after all class 6 stems ending in *-u-* except *ɖurku-* 'to cut down (tree)', which takes *-ɸ* (*ɖurku-ɸ*, perhaps from **ɖurku-gu* via **ɖurku-wu*); and *-wu* (from **-gu*) after multisyllabic stems in *-a-* like *ma:ra-* 'to grab, get'.

Infinitive *-ɣarawu*, *-nɣawu*, etc., contains *-wu* from **-gu*.

The relative-clause suffix is *-ŋu*.

My view is that the difference between *-gu* and *-ku* is historically secondary, so that a single prototype **-gu* can be posited at an early stage of Proto-Yuulngu. It is notable that *-ku* shows up very frequently after stems of the shape CV:-, while *-gu/-wu* turns up after longer stems (I know of no relevant

stems of the shape CV-). The thought suggests itself that *-ku* once occurred exclusively after CV:- stems, and *-gu* exclusively after longer ones, and that there have since been minor analogical developments which make the *-ku/-gu* opposition a morphologically rather than phonologically conditioned one.³

Disregarding cases where *-ku* and *-gu* are neutralised (for example, after deictics with augment *-nʔ-*), we posit the following analogical changes: (a) *-ku* replaces **-gu* in first singular *ɣara-ku*; and (b) *waɣa-* adopts *-ku*, replacing **-gu*, because of the analogical influence of the inherited dative-genitive form *ɣa:-ku* 'why?' in the paradigm of the only other nominal interrogative stem.

As things stand, (b) is reasonable, but (a) is weak since there are no cases in pronouns other than the first person where *-ku* could have spread from. However, this difficulty vanishes when we consider the *-ku/-gu* alternation in the context of other such alternations, viz. the 'source' suffix *-kuju/-guju*,⁴ locative increment *-kala/-gala*, and ergative-instrumental *-ɖu/-ɖu*. (In each instance of *-k/-g-*, the *-g-* variant can be lenited to *-w-* under the same circumstances as *-gu*.)

The fortis/lenis alternates here have the same morphological distribution as do the variants *-ku* and *-gu*, except of course inasmuch as they may apply to different stems than those to which *-ku* and *-gu* are attached. For example, *-kala/-gala* and *-kuju/-guju* can be added to all pronouns, unlike *-ku/-gu* which is replaced by *-ŋu* after several pronouns. Of particular interest to us here are the second singular forms *ŋu:-kala* and *ŋu:-kuju*, since here the stem shows a long vowel and so fits the CV:- canonical shape.

We can now imagine an early situation where the second singular had forms like **ŋu:-kuju* and **ŋu:-kala* with **-k-*, but where the first singular forms were **ɣara-guju* and **ɣara-gala* since **ɣara-* did not fall into the **CV:-* shape required to bring about consonant-hardening in the suffix. Other pronouns also had **-gunu* and **-gala* for the same reason. The forms **-kuju* and **-kala* then spread analogically from the second singular to the first and third singular, yielding the attested forms *ɣara-kuju*, *ɣara-kala*, and third person singular *ŋanu-kuju*, *ŋanu-kala*. All nonsingular pronouns (including third person ones) have an oblique augment *-ŋ-* before *-guju* and *-gala*, so here no shift from **-gunu* and **-gala* to *-kunu* and *-kala* was possible phonetically, but the underlying forms could be reinterpreted as */-kuju/* and */-kala/* on the basis of the singular forms. By comparing pronominal *-kuju* and *-kala* with nominal *-guju* and *-gala*, we have now established a morpho-phonemic rule by which */-g-/*, and by extension lenis stops generally, are hardened in suffix-initial position following pronominal stems. This could then extend to the isolated **-gu* in first singular dative-genitive **ɣara-gu*, producing the attested form *ɣara-ku*.

Obviously it will be necessary to do more comparative work within the Yuulngu group before we can verify such conjectures.

C-2. Functions

I will not go into great detail regarding case-frames of individual verbs, since I intend to make this information available in more specialised future publications on this language. Briefly, the dative-genitive is used for possessives, benefactive objects, indirect objects with verbs of saying and telling,

and complements of certain emotive or cognitive verbs and adjectives (for example 'to fear', 'to be familiar with', 'to be desirous of', etc.). One example will do for now:

- (1) *jal-ʔi-ri+ra ʔaʔa-wu*
 want I food Dat
 'I want food.'

It is generally possible to distinguish the genitive and dative uses on syntactic grounds. We will omit details here.

The potential form of class 6 verbs is used exactly like potential forms of other verb-classes, which do not contain reflexes of **-gu*, **-ŋu*, or related suffixes. In main clauses potentials can be future, imperative, or true potential. However, potential clauses are frequently adjoined to other clauses, forming constructions which would be translatable in English as sequences of main clauses plus subordinated purposive clauses:

- (2) *wa:ni+nu+ŋay ʔumbala+ya, ʔa:-ŋu+ŋa+ŋay*
 goes now he there see Pot him he
 'He is going there to see him.'
 'He is going there, he might see him.'

The infinitive in *-ŋarawu* and other allomorphs is often interchangeable with a potential verb:

- (3) *wa:ni+nu+ŋay ʔumbala+ya, ʔa:-ŋarawu ʔan-ŋu*
 goes now he there see Infin he Gen
 'He is going there to see him.'

Infinitive clauses are more expressly subordinated to the main clause than are potential clauses, but the infinitive can be set off from the main clause by a pause, as indicated by the comma in (3).

Potential and infinitive clauses can also function as sentential complements. In (1), *jal-ʔi-* 'to want' has a nominal complement; the following examples show sentential complements:

- (4) *jal-ʔi-ri+ra wa:ni-ŋarawu*
 want I go Infin
 'I want to go.'
 (5) *jal-ʔi-ri+ra, wa:ni-φ+ra*
 want I go Pot I
 'I want to go.'

These constructions show clearly that infinitive and potential clauses can fulfil the same syntactic roles as dative-genitive NPs, like *ʔaʔa-wu* in (1).

The relative-clause forming suffix is *-ŋu*, and to my knowledge such a suffix is not used in this fashion in any other Yuulngu language. A suffix of this form is found in a number of these languages as an adjectival suffix, but is not added to verbs. It must be emphasised that this *-ŋu* is distinct from the potential allomorph *-ŋu* of some class 6 verbs in Ritharngu.

Without going into great detail, I will merely observe that Ritharngu relatives in *-ŋu* show some of the wide-ranging functions of 'adjoined relatives' described by K. Hale in Paper 4 above. That is, Ritharngu relatives are found corresponding not only to English relative clauses, but also to certain types of English adverbial clauses. Basically, I would say that Ritharngu relatives are clauses which set the stage for the main predication. I would compare them to English *-ing* clauses of the following type:

- (6) He having gone, I came back.

In Ritharngu this would be (7):

- (7) *wa:ni-na-ŋu+ŋay, ʔangul^ʔ-yu-na+ra*
 went Rel he returned I

However, Ritharngu does not add *-ŋu* to virtually any subordinated clause, as do certain Australian languages with their corresponding relativiser. It is not the case, for example, that all clauses describing events or states anterior to those predicated by following clauses must go into the *-ŋu* form. It is entirely possible to form a grammatical sentence (7¹) by deleting the *-ŋu* from (7). However, there is a subtle change in sense when the *-ŋu* is deleted. (7¹) could be interpretable as a loose conjunction of two logically unrelated predications. (7), on the other hand explicitly indicates that the initial clause is logically (here, causally) related to the predication of the second clause.

At this stage I suppose we must presume that Ritharngu relatives in *-ŋu* represent an innovation subsequent to the splitting-up of the Yuulngu group. If so, *-ŋu* has expanded from its use as an adjectival suffix to become a marker of clausal 'adjectives'.

Notes

1. Adverbial clauses with ablatives *-wala/-gala*, here translatable 'after', are not uncommon.
 2. This is because there are special completive allative forms for 'here' (also loosely employable for immediate 'there') which contrast with *ya:-nu:-wuy* and *da-nu:-wuy* and so confine the latter to incomplete or directional allative uses. Interestingly, the completive allatives are not based on the stems *ya:-* and *da-*, but rather on distant *yuwa:-* and nonproximate anaphoric *ba-*, and the suffixes used with them include *-ala/*, which is related to the ablative suffix *-wala/-gala*. In other words, instead of saying 'He came here' one says literally 'He came from there' ('come' and 'go' are not usually distinguished). Thus English overtly indicates the terminus but disregards the point of departure; Nunggubuyu, on the other hand, overtly indicates only the point of departure. However, English 'He went there' is translated more or less literally into Nunggubuyu, with *yuguni* '(to) there' or the like instead of a word meaning 'from here' or 'from there'. Since the addressee knows that Nunggubuyu 'from there' is normally used only when the terminus is 'here', the word meaning literally 'from there' can usually be specified more precisely in context as 'from there to here'.
 3. Incidentally, I should point out that the vowel-length patterns of *yuguni* and *buguni* are not certain. Vowel length is notoriously difficult to hear in Nunggubuyu, and this difficulty is compounded in the case of these adverbs by the fact that they are often either mumbled or pronounced with artificially exaggerated vowel length.
3. It may be best to try to account for this hypothetical original distribution of **-ku* and **-gu* in terms of vowel length. In Ritharngu, long vowels occur only in word-initial syllables. Therefore, instead of saying that **-ku* occurred after **CV:-* and **-gu* after longer stems, we could say that **-ku* occurred after long vowels and **-gu* after short ones. Even in modern Ritharngu, stops after long vowels are predominantly fortis, though there

are a dozen or so exceptions with lenis stop after long vowels. If we can account for these exceptions as borrowed, analogical, or of recent creation, we can envisage a situation where only fortis stops could follow long vowels, so that the change of *-gu to *-ku after long vowels would have been automatic.

4. This interesting suffix may be historically segmentable into *-gu- plus *-ŋu. It indicates the source of something, especially a human or animate provider. Hence expressions like 'I eat turtle meat *ɟali-ŋ-guŋu* (provided by them)'.

60. Kuuku Yaʔu

*Pronom
aute - pose.*

D. A. Thompson

Kuuku Yaʔu is a dialect spoken at the Lockhart River Aboriginal Community on the east coast of Cape York Peninsula, Queensland.

C-1. Form

-ku occurs without variation except that an alternative form -namu can be used for possessive.

C-2. Functions

-ku is used to mark purpose, benefactive, possessive and allative.

C-2.1. Complements

A. Complements expressing purpose, as in:

- (1) *ŋayu waaʔaŋka piiwuku*
I go-PRES.CONT wallaby-PURP
'I am going for wallaby.'

but not in:

- ŋayu waaʔaŋka piiwaja ʔaʔika*
I go-PRES.CONT wallaby-I kill-FUT
'I am going to kill wallaby.'
- (2) *ŋayu kuupi puʔanaku pinʔayika*
I like fish-PURP sea hunt-FUT
'I like to go fishing.'
- (3) *yuku ŋanaʔa ŋaʔal yikan muuŋalmaykaʔa*
tree we-excl-ERG that-LOC yikan type cut-PRES.HAB
yikanaku
long spear-PURP
'We always cut that yikan tree to make long spears.'

B. Complements expressing benefactive:

- (4) *ŋayu kuuʔaliŋa Managerku ŋaʔaŋku ʔaŋʔayaku*
I speak-NONF Manager-BEN me-POSS girl-BEN
'I spoke to the Manager for my daughter.'
- (5) *puʔan ŋaŋkal piipiku*
fish give-IMP father-BEN
'Give the fish to father.'

C. Complements containing a nominalised verb expressing abilitative purpose:

- (6) *Jerry pitalpitaanʔijŋaŋkalana wuntjawuntja ʔaaʔiŋuku*
Jerry know-CAUS.VBL-PRES.HAB-them boys dance-NOM-PURP
'Jerry is teaching the boys dancing.'
- (7) *ŋayu pitaanʔji tukulu matjiŋuku*
I know turtle catch-NOM-PURP
'I know how to catch turtles.'

Optional complements marked by -ku occur with the verbs:

- waatiŋa* 'go'
ʔuŋkaana 'cry'
piʔina 'wait'
ŋaatjina 'laugh'
wuntuna 'look around'
- and with the transitive verbs:
- ŋaŋkana* 'give'
miʔana 'show'
waanaana 'explain'
pitaanʔji 'know'
pitaanʔjimana 'learn'
pitaanʔjiŋana 'teach'

Complements of *ʔiŋtjina* 'tell' and *ŋamina* 'hear/listen to' are unmarked, but when *ŋamina* has the meaning 'listen for' then the complement is marked.

C-2.2. Possessive

-ku is used to mark the possessor and also to form possessive pronouns from the objective form of the personal pronoun. An alternate form -namu is frequently used especially with persons.

- (8) *kuʔaakanamu paʔan*
dog-POSS head
'The dog's head.'

The possessive predicative is indicated simply by placing the topic before the comment. A demonstrative word usually occurs.

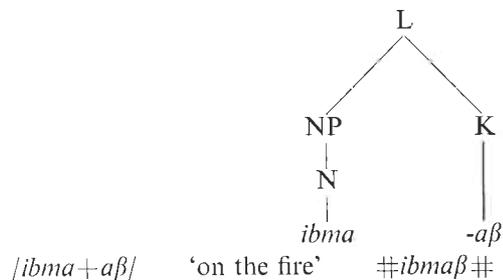
- (9) *kalka ŋiʔi kaalaku*
spear this uncle-POSS
'This spear belongs to uncle.'

C-2.3. Allative

-ku also marks the allative but must be distinguished from a directional or motional aspect which is marked by -ma.

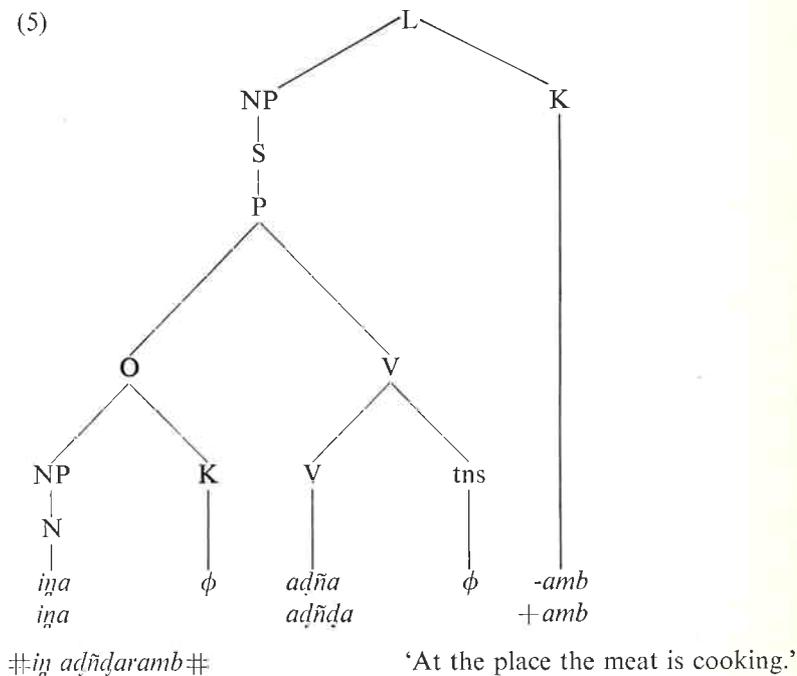
- (10) *ŋayu ʔilpiitja ŋaatjiku*
I return-FUT home-ALL
'I will return home.'

(4)



The suffix to verbs in sentences embedded within the L case is—unless other structural considerations intervene—the cognate /-amb/:

(5)



The obvious cognation of /-aβ/ with /-amb/ requires that (3) be reformulated in more general terms:

(6) LENITION

nasal+stop → analogous fricative/]_{noun}+a____#

Whether (6) is in generative terms a synchronic rule or else one that must be assigned to the history of Ogh Unjdjan is very much a moot point. The argument turns on whether the rule of LENITION in (6) is more or less costly to a grammar of Ogh Unjdjan than simpler re-adjustment rules for each of

/aŋg/ and /amb/. In terms of autonomous phonemics however, Ogh Unjdjan /-aŋ/ provides yet another counter-example to neo-grammarians' claims that phonetic change is solely conditioned by phonetic environment.

The spelling /aŋ/ appears on Ogh Unjdjan NPs to mark dative, allative and purposive cases. Phonologically conditioned rules operate to delete the suffixal vowel, or to effect vowel harmony (with respect to rounding) according to the vowel in the final closed syllable of the stem. Consonantal /ŋ/ becomes *g* after a stem final /l/ or /n/, and triggers the derivation of *r* from /R/ in that position.

The marker /aŋ/ appears on NPs in the role of 'experiencer' or 'indirect object' in typical dative usage; the head noun is typically animate.

iṅOR-aŋ ukon el und; aŋ aril
dog-DAT gave he some I sated
'He gave some to the dog; I was replete.'

araŋ! and-aŋ itORol el
o. woman son-DAT waits she
'The old woman is waiting for (her) son.'

enbal-g ar uran! en school-aŋ eliŋ!
frog-DAT not play you go
'Don't play with frogs! Go to school!'

The dative is also a 'weak benefactive':

agiŋar-ŋ alŋin aŋ
w.man-DAT carried I
'I carried (it) for the white man.'

A 'stronger' benefactive sense is rendered by the causal, which has morphological similarities to the dative, being spelled /aŋal/.

The allative expresses motion towards a point in space or time.

olor-oŋ oŋgiŋ!
tomorrow-ALL leave
'Leave (it) for tomorrow!'

opirigan-g olon arŋgurin ambin il
river-ALL (IDIOM=) eloped they-2
'They eloped to the river.'

Sayers and Kerr (1964) show that in Wig-Munggan *purpose* need not be differentiated from spatial or temporal orientation. The purposive could thus be regarded as an 'Allative of Purpose'.

en ikal-aŋ egaŋ; aŋ obyŋ ebur
you bark-PRP go I antbed getting
'You get the bark and I'll get the antbed.'

The suffix /aŋ/ differentiates dative pronouns from those developed as the representation of objective NPs.

Darwin *alkan aŋun-oŋ el 'amaŋ ey!*
called me-DAT he mother
'Darwin called out to me "Mother!"'

aŋ enun-oŋ enbal ibman-g ambin
I you-DAT frog (IDIOM=) showed
'I showed you the frog.'

Notes

1. The suffixal vowel is deleted when preceded by a stem vowel, as in (4).
2. The rhotic segment introduced following the verb in (2) and (5) is idiosyncratically determined by the verb stem in such structures; *n* is a much more common segment in this position.

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62. Warungu

Tasaku Tsunoda

Warungu, spoken in north-eastern Queensland, has in the nominal and verbal endings, *-gu*, *-wu* and its possible cognate *-ya*.

The reader is advised first to read a brief outline of Warungu morphology and syntax given in Paper 13 in this volume.

C-1. Forms

Nominals have dative endings:

- gu* following a consonant or semivowel *y*;
- wu* following a vowel.

The dative forms of common nouns and adjectives are formed by the affixation of *-gu/-wu* to their absolute case forms. Some *y* final words of class 2 take both *-gu* and *-ŋ-gu* (that is, with a thematic consonant *ŋ* intervening), for example *baŋgay-gu*, *baŋgay-ŋ-gu* 'spear-DAT', see example (7).

The formation of datives of other nominals involves (obligatorily or otherwise) a thematic consonant *n* and the genitive forms. The datives of three singular (personal) pronouns are formed by the affixation of *-n-gu* to their genitive forms, for example, *ŋaygu-n-gu* 'I-DAT'. Other pronouns appear to have two types of datives: those formed by the affixation of *-n-gu* to their nominative forms (for example, *ŋali-n-gu* 'we2-DAT') and those formed by the affixation of *-n-gu* to their genitive forms (*-ŋu*) (for example, *ŋaliŋu-n-gu* 'we2-DAT'). The interrogative word *waju* 'who-ABS/NOM' has at least one dative—*waju-n-gu*. Vowel final personal names and vowel final kinship nouns appear to have three types of datives, for example, *galhana-wu*, *galhana-n-gu*, and *galhana-ŋu-n-gu* 'uncle-DAT'. The dative forms of demonstratives (*yaru* 'this/here' and *ŋuna* 'that/there') and the interrogative word *ŋani* 'what' are generally those with *-wu*, but in a few instances those with *-n-gu*, for example, *yaru-wu* and *yaru-n-gu* 'this/here-DAT'.

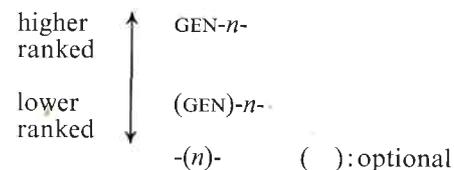
Now, the formation of datives and proprietives (discussed in Paper 13 in this volume) can be shown as the following:

Formation of datives and proprietives

	GEN- <i>n</i> - { <i>gu</i> / <i>di</i> }	NOM ABS)- <i>n</i> - { <i>gu</i> / <i>di</i> }	NOM ABS)- <i>gu/wu</i> { <i>di</i> / <i>yi</i> }
sing. pron.	*	†(a)	
other pron.	*		†
'who'		†	*
names, kinship	*	†	*
demonst., 'what'			*
common, adj.			*

(a) * indicates that we have example(s) of this particular type of dative; likewise for † (propriative).

It can therefore be seen that the principle of nominal hierarchy (see Papers 6-8 above) operates in the formation of datives and proprietives. The thematic consonant *n* and the genitives are involved in the nominals other than common nouns and adjectives. The more highly ranked the nominals are, the more obligatory the thematic consonant *n* is. Genitives tend to be obligatory in even more highly ranked nominals. Thus:



This principle concerning *n* and genitives operates in the formation of other oblique forms as well.

It should be mentioned that *-gu* appears in one instance other than in datives; that is, *ŋaygu* 'I-GEN'.

Verbs

-gu is found in intentional mood 1 *-(l)gu* and intentional mood 3 *-yalgu*. Intentional 3 is formed by the affixation of *-gu* to an intentional 2 form *-yal*. There are very few examples of *-yalgu*; *ŋina* 'sit', an irregular verb *yani* 'go/come' and reciprocal verbs (Vt-*wa*).

Intentionals in Warungu correspond to what are often called 'purposives' in other Australian languages.

C-2. Functions

Gali constructions—When the verb implies pursuit/purpose/goal, the object is put in the dative, otherwise (typically implying action) in the ergative:

- (1) T *bama-φ gamu-wu yanga-gali-n*
man-ABS water-DAT search-*gali*-Non-Future I
'A man is looking for water.'

- (2) *bama-φ gamu-ŋgu biḍa-gali-n*
 man-ABS water-ERG drink-gali-NF1
 'A man is drinking water.'

(Those examples marked by T were coined by the writer on the basis of other, attested examples.)

A *gali* verb in the *-yal* form, whether as an intentional mood form or as a participle, takes dative objects far more frequently than ergative objects, even when the verb is one of action. This is understandable, since a *yal* form expresses intention, purpose or else consequence. These are all good examples of the 'purposive' nature of *-gu/-wu*. Other examples include (4), (11) and (13).

C-2.1. Complement

Purpose—'In order to obtain . . .' is marked by the dative:

- (3) T *bama-φ gaḍara-wu yani-φ*
 man-ABS possum-DAT go-NF3
 'A man went to catch a possum.'

See (30) for another example.

An example of 'go to do OBJECT' is:

- (4) T *bama-φ yani-φ baba-gali-yal yuṛi-wu*
 man-ABS go-NF3 spear-gali-PART too-DAT
 'A man went to spear a kangaroo.'

The verb *baba* is transitive; therefore, for an absolute noun *bama* to mark its agent, *baba* must be intransitivised by means of the *gali* transformation—see also Paper 13, this volume or Tsunoda (1974b).

In sentences such as (4) and (27), the object is generally in the dative. It seems, however, that an ergative object can be used when the object is ready for action.

Beneficiary—There are a few examples, which include:

- (5) On a cold night:
waybala-ŋgu dumubuṛu-wu yagu-φ waḍu-n
 white man-ERG bullock-DAT grass-ABS burn-NF1
 'The white men burned grass for the cattle (to keep them warm).'

In a few instances, the genitive case seems to mark beneficiary.

- (6) *yani-ya ḡali-ŋu*
 go-IMPERATIVE we2-GEN
 'Go (hunting) for us.'

Middle verbs—Many intransitive verbs and adjectives (with absolute nouns or else nominative pronouns as their subjects) occur with datives, for example:

- (i) *bunba* 'cry (for)', *badi* 'cry (for)'
 (ii) *walḡgayi* 'keen, fond (of)', *gawurayi* 'in love (with)'
 (iii) *ṛina* 'sit (and wait for)', *ḍana* 'stand (and wait for)'
 (iv) *gawali* 'call out (at)', *yadi* 'laugh (at)', *wayuwayubi* 'call out like a dog (at)'
 (v) *ḍilbay* 'knowing', *ḍilbaybi* 'know, learn (about)', *ṛandu* 'not knowing', *ṛandubi* 'do not know (about)', *burmubi* 'forget (about)' (*bi*: intransitive verb forming affix)
 (vi) *guliyi* 'angry (with)', *guli waga* 'get angry (with)', *gulibi* 'be (come) angry (with)', *ḍaguli* 'feel sorry (for)', *yimiryimiri* 'smile, be pleased (with)'

- (vii) *miyamiṛa* 'smart, good (at)'

- (7) *ḡaya burmubi-n baḡgay-ḡ-gu*
 I-NOM-Si forget-NF1 spear-ḡ-DAT
 'I have forgotten (to bring) my spear.'

- (8) *ḍuwana-φ galḡana-φ yimiryimiri-n yinu-n-gu*
 nephew-ABS uncle-ABS be glad-NF1 you1-GEN-n-DAT
 'Your nephew and uncle are pleased with you.'

Some of them (for example, *ḍilbay* 'knowing') tend to occur with datives more frequently than others (for example, *ṛina* 'sit'). However, dative 'complements' do not seem to be obligatory.

A few of them occur with other cases as well; *ḍilbay* 'knowing' occurs with locatives, but far less frequently than with datives; *guliyi* 'angry' with genitives in a few instances; *wanba* and *wanbali*, both 'fear', generally with locatives, but in a few instances with datives. In all the cases, the difference between dative 'complements' and 'complements' of other case forms is not known.

Now, we shall examine those words which are, as the general statement by Blake on Topic C says, possible middle verbs.

- (i) Some of them are intransitive verbs or adjectives, and take absolute nouns or nominative pronouns (Si) as their subjects. They can all take dative 'complements'.

walḡgayi 'keen, fond', *yadi* 'laugh', *ḍilbay* 'knowing', *ḍilbaybi* 'know, learn, understand', *ṛandu* 'not knowing', *ṛandubi* 'do not know' and *burmubi* 'forget'

Examples include (7) and:

- (9) *ḡaya yinu-n-gu walḡgayi-φ*
 I-NOM-Si you1-DAT fond-ABS
 'I am fond of you, I like you.'
 (10) *warḡu-wu yubala yaḍi-gara-n*
 woman-DAT you2-NOM-Si laugh-gara-NF1
 'You are laughing at the woman.'

- (ii) Others are transitive verbs, and take absolute nouns or accusative pronouns as their objects. Their *gali* forms are 'intransitive', and they take ergative or dative objects. *yanḡa* 'search'—*yanḡa-gali-* takes only dative objects, see (1). *ḍaymba* 'find'—no example is found of its non-future *gali* forms. Its *-gali-yal* form, whether as an intentional or participle, has a meaning similar to 'search'. Naturally, it takes dative objects:

- (11) *ḡaya yani-φ ḍaymba-gali-yal maṛḍa-wu*
 I-NOM-Si go-NF3 find-gali-PART food-DAT
 'I went to find (i.e. to look for) food.'

ḡawa 'hear, listen to, understand (of language)'—its *gali* forms take ergative objects in non-future tenses and dative objects in the *-gali-yal* forms:

- (12) *ḍana-φ gugu-ḡgu ḡawa-gali-n*
 they3-NOM-Si talk-ERG listen-gali-NF1
 'They are listening to our talk.'

- (13) (T *ḡaya*) *gugu-wu ḡawa-gali-yal*
 I-NOM-Si talk-DAT listen-gali-INT
 '(I) want to listen to the talk.'

The reduplicated form *ɲawaɲawa* means 'think about . . .', and is always used in the *gali* forms. It takes dative objects, even in non-future tenses.

- (14) *yinda ɲawaɲawa-gali-n ɲayi-wu*
you1-NOM-Si think-gali-NFI girl-DAT
'You are thinking about a girl.'

ɲaga 'see, look at'—its *gali* forms in non-future tenses take dative objects when *ɲaga-gali-* means 'look for', and can take both ergative (only non-human?) objects and dative (any?) objects, when it means 'look at' or 'watch':

- (15) *ɲaya ɲaga-gali-φ wuriba-wu gaɟara-wu*
I-NOM-Si see-gali-NF2 bee-DAT possum-DAT
'I was looking for sugar bag bees and possums.'

- (16) *dina-ɲgu ɲula ɲaga-gali-n*
foot-ERG he-NOM-Si see-gali-NFI
'He is looking at his foot.'

The reduplicated form *ɲagaɲaga* (without *-gali*) means 'watch, mind'. Its *gali* forms appear to take both ergative and dative objects, at least with inanimate objects:

- (17) *yalga-wu ɲagaɲaga-gali-ya*
road-DAT watch-gali-IMPERATIVE
'Watch the road.'

- (18) *ɲagaɲaga-gali-ya yalga-ɲgu*
road-ERG As (17).

These remarks on the objects of *gali* verbs apply to nouns. However, pronouns behave in a few ways differently. See Tsunoda (1974a:527 ff).

Three place verbs—*guyba* 'give' can have three constructions: (i) gift is absolute and receiver is dative; (ii) gift is absolute and receiver genitive and (iii) gift is instrumental and receiver absolute. Examples include (18) and (21) in Paper 13, this volume and:

- (19) (T *ɲaya ɟara-φ guyba-n guman-gu*
I-NOM-St leg-ABS give-NFI other-DAT
'(I) gave leg (meat of a kangaroo) to other (people).')

(It is interesting to note that Chukchee, an ergative language of East Siberia has 'giving' constructions of the third type. See Bogoras (1922:781).)

ɲunbayɲa 'show, teach' can have two constructions: (i) what is shown is absolute and the person to whom it is shown is dative and (ii) vice versa:

- (20) *gambi-φ ɲula ɲaygu-n-gu ɲunbayɲa-n*
clothes-ABS she-NOM-St I-DAT show-NFI
'She showed me her clothes.'

- (21) *yinda ɲana-ɲa ɲunbayɲa-φ gamu-wu*
you1-NOM-St we3-ACC-O show-IMPERATIVE water-DAT
'Teach us about the water.'

(It is noted again that when we discuss transitive objects, 'absolute' includes 'accusative'.) Although this has not been confirmed, 'teach . . . how to . . .' would be rendered as, for example:

- (22) T *gayana-ɲgu galbin-φ ɲunbayɲa-n*
father-ERG child-ABS teach-NFI

or

dilbayɲa-n yuɟi-wu baba-gali-yal
teach-NFI ROO-DAT spear-gali-PART

'Father taught his child how to spear a kangaroo.'

(*dilbayɲa* is a transitive verbalisation of an adjective *dilbay* 'knowing'.)

mayga 'tell' can have two constructions: (i) the person spoken to is absolute and the topic is dative and (ii) vice versa.

- (23) *ɲula ɲaya mayga-lgu ɲani-wu?*
he-NOM-St I-ACC-O tell-INTI what-DAT
'What will he tell me about?'

- (24) *ɲaya buri-φ yinu-n-gu mayga-n*
I-NOM-St name-ABS you1-DAT tell-NFI
'I told you the names.'

mayga can take a subordinate clause:

- (25) *ɲaya yinu gayana-φ mayga-lgu yinda ɟaribaya-φ*
I-NOM-St you1-GEN father-ABS tell-INTI you1-NOM-Si good-ABS
'I will tell your father that you are good.'

'Tell . . . to do . . .' is rendered as:

- (26) T *gayana-ɲgu galbin-φ mayga-n ɲani-yal*
father-ERG child-ABS tell-NFI go-PART
'Father told his child to go.'

- (27) T *gayana-ɲgu biɟgu-φ mayga-n maɟa-wu waɟu-gali-yal*
father-ERG wife-ABS tell-NFI food-DAT cook-gali-PART
'Father told his wife to cook food.'

(As *waɟu* is transitive, it must be intransitivised by means of the *gali* transformation in order for the absolute noun *biɟgu* to mark its agent.)

C-2.2. Possessor

Genitive (*-ɲu*) is generally used to mark a possessor. In a few instances, the dative is used to mark one. Those 'possessed' are 'tail, track on grass, name, language, camp/nest, father and husband'.

- (28) *yaru-φ-wa ɟarugan-gu yamba-φ*
this-ABS-CLITIC turkey-DAT nest-ABS
'This is a scrub turkey's nest.'

(*wa* is a clitic for emphasis.)

Genitive that marks a possessor is quite frequently used in the sentences that contain predicate verbs, for example (25), but the dative that marks a possessor is not used in such sentences.

C-2.3. Allative ('to')

Dative marks goal/destination, etc. (to, into, onto, etc.).

- (29) *ɲaya gulmi ɲani-φ yamba-wu*
I-NOM-Si back go-NF3 camp-DAT
'I went back to the camp.'

C-2.4. Tense or aspect marker

In Warungu, *-gu* is not used as a tense or aspect marker. It is found in intentional moods 1 and 3, *-(l)gu* and *-yalgu*. All the intentional moods, when used as the predicates of simple sentences or else as the main-clause predicates of complex sentences, generally mark their subjects' intention. Examples include (25) and:

- (30) *ηaya yani-yalgu wingar-gu*
 I-NOM-Si go-INT3 fish-DAT
 'I am going fishing.'

Intentionals 1 and 2 (-*yal*) have a participial function as well—to extend simple sentences, for example (31), or to use them as the subordinate-clause predicates of complex sentences, for example (32). Here, they often express purpose or consequence, but not their subjects' intention.

- (31) *gaɖara-ηgu gandu-φ baɖa-n gawali-yal*
 possum-ERG dog-ABS bite-NFI growl-PART
 'A possum bit a dog and consequently the dog growled.'
- (32) The informant describes his work as a linguistic informant:
yinu yaru-φ gugu-φ ηaya guyba-n yinda
 youI-GEN this-ABS language-ABS I-NOM-St give-NFI youI-NOM-St
yaru-ηumay gaɖi-lgu
 here-ABLATIVE take-PART

'I give (i.e. teach) you this language so that you may take (it) from here.'

The functions of intentionals/participles (-*lgu* and -*yal*) are thus very similar. In addition an allomorphic relation of -*gu* and -*ya* is found in other languages (see Paper 53, this volume). Thus, Galgadungu has genitive -*gu* ~ -*ya* (Blake 1969:33). The Walbiri imperative endings include -*ga* and -*ya* (Sutton and Hale, comments at the Conference; see also Reece (1970:50)). It should be mentioned that Gugu-Badhun, which is linguistically the closest to Warungu, has verbal purposive -*gu* and future -*yay*, which are in form and function similar to the Warungu (-*lgu* and -*yal*) (see Sutton 1973:147, 149). The Gog-Nar verbal purposive endings include -*lg* and -*iy* (Breen 1974). Yanga-Mbara has the dative and verbal purposive -*ya* (Sutton 1974). It is thus not totally unlikely that the Warungu -*gu*, as dative and in (-*lgu*), and -*ya* in -*yal* are related. (If so, we would have an alternation of -*gu* ~ -*wu* in the nominals (dative) and one of -*gu* ~ -*ya* in the verbs.)

C-2.5. Marking the complement of imperfect, irrealis, etc., verbs

The verbs in potential mood show a normal behaviour as regards to the case frames in which they appear.

Warungu does not possess a distinct imperfect aspect. However, the contrast found in (12)–(13), (15)–(16) and (33)–(34) is similar to a contrast of perfect-imperfect or actual-potential.

- (33) *ηula daymba-n gaɖara-φ*
 he-NOM-St find-NFI possum-ABS
 'He found a possum.'
- (34) *yinda daymba-gali-ya yamba-wu*
 youI-NOM-Si find-gali-IMPERATIVE camp-DAT
 'Find (or, go and look for) the camp.'

Dative objects are thus used in the 'imperfect/potential' versions.

C-2.6. Instrumental verbs

An instrumental verb, formed by the affixation of -*yi* to a transitive verb root, means 'do . . . by means of . . .'. It takes only one conjugational ending -*lgu* (here used as a participle), but no other conjugational endings. The means for action is marked by the absolute case and the patient (or affectum) of the action by the dative case. Examples include (47) in Paper 13, this volume, and:

- (35) *bama-ηgu nuba-φ gaɖi-n gamu-wu gaɖi-yi-lgu*
 man-ERG billy-ABS carry-NFI water-DAT carry-yi-PART
 'A man carried a bark billy can to carry water in, or, for carrying water.'
- (36) *gangabu-φ wingar-gu baba-yi-lgu*
 spear-ABS fish-DAT stab-yi-PART
 'A gangabu (fishing spear) is to stab fish with, (or) a gangabu is for stabbing fish.'

Here, both the nominal -*gu*/-*wu* as dative and the verbal -*gu* in -*lgu*, express purpose (Dixon, private communication). These are good examples of the bivalency of -*gu*. (A similar example reported by O'Grady is given in Capell (1956:78).)

C-2.7. Miscellaneous

Other functions of dative include:

- Cause/reason
 (37) *ηani-wu yinda yayaybi-n?*
 what-DAT youI-NOM-Si scream-NFI
 'Why did you scream?'

Affiliation to a camp

- (38) *ηaya yaru-wu yamba-wu*
 I-NOM-Si this-DAT camp-DAT
 'I belong to this camp.'
 'Until' *garbala-wu* 'until tomorrow'

Period

- (39) *bulaji-wu gari-wu ηaya miyana-n*
 two-DAT day-DAT I-NOM-St make-NFI
 'I was making (it) for two days, (or) it took me two days to make (it).'

Acknowledgment

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63. Galgadungu

B. J. Blake

Galgadungu is an almost extinct language of the Mt Isa area (western Queensland). A brief grammar consisting largely of morphological information has been published (Blake 1969).

Forms

-*ku* appears with consonant stems and -*ya* with vowel stems. In rapid speech the vowel of -*ya* assimilates to the preceding vowel and the -*y*- is deleted, though this does not seem to happen when -*ya* appears with the nominaliser -*ŋca*- (see below).

ati (meat) and *maa* ((vegetable) food) have irregular datives: *ati-ŋei* or *ati-ŋcua* and *maa-ci* or *maa-cua*

The first person singular pronoun also has a similar dative, *ŋa-ci*.

Functions

Complement

The dative marks the 'purposive' variety of complement as in

- (1) *ŋka ŋai ŋarkun-ku*
go I wallaroo-DAT
'I am going for wallaroo.'

and also appears affixed to a nominalised verb as in

- (2) *ŋka ŋai ŋarkun-ku ʎai-ŋca-ya*
go I wallaroo kill-NOMINALISER-DAT
'I am going to kill wallaroos.'

However, although this construction is common in many Aboriginal languages it is very rare in Galgadungu. The preferred construction is one in which a complementiser *a*- introduces the complement and the subject of the

complement (in the form of a bound pronoun) is attached to this complementiser. The verb is unmarked and the object of the verb in the complement clause appears in the dative,

- (3) *yuru ŋka-ŋa ŋarkun-ku a-i ʎai*
man go-PAST wallaroo-DAT COMP-he kill
'A man went to kill a wallaroo.'

The complementiser plus bound pronoun (*ai*) appears as the second word of the complement. This is obligatory; it is probably relevant to note that free pronouns tend to appear as second word in a sentence (see examples (1) and (2)).

If, however, the object is first or second person and the subject third, or if the object is first person and the subject second, then the *object* appears as a bound pronoun suffixed to *ku* which in turn is suffixed to the complementiser *a*-.

- (4) *yuru ŋka-ŋa a-ku-tu ʎaa¹*
man go-PAST COMP-DAT-you kill
'A man went to kill you.'

The construction exemplified in (1) may also appear in cases where it indicates the BENEFICIARY,

- (5) *ŋka wampa kupaŋuru-ya*
go girl old man-DAT

'The girl is going (for water, etc.) for the old man.'

and dative complements occur optionally with verbs such as *ʎuŋa* (to cry (for)), *uŋata* (to wait (for)), *icamai* (to laugh (at)) and obligatorily with *waira ŋuu* (to like/desire), *ŋkumai* (to look (for)). *yakapii* appears as a transitive verb meaning 'hear/listen to', but takes a dative complement when it means 'to understand' or 'know' and *ŋaŋŋamai* appears as a transitive verb meaning 'to find', but takes a dative complement when it means 'to look for (something/someone lost)'.

With verbs such as *ʎumai* (to explain), *ŋuna-ŋuna-ŋya* (to teach), and *pai* (to tell (someone to do something)) the 'addressee' appears unmarked (there is virtually no accusative marking in Galgadungu) and the complement clause is as illustrated in (3).

- (6) *ŋaci maŋu-yu yuru pai-ŋa ʎuku-ya a-i ʎai*
my mo.-ERG man tell-PAST dog-DAT COMP-he hit
'My mother told the man to hit the dog.'

With the verb for *give*, both the indirect and direct objects are left unmarked.

Possessor

The dative is also used to mark the POSSESSOR, for example:

- (7) *kanimaiŋcir-ku yaraman*
horse-DAT policeman
'A policeman's horse.'

and *yaraman kanimaiŋcir-ku* with appropriate intonation would signify 'The horse belongs to the policeman' (leaving aside the necessary demonstrative(s) which I do not want to deal with here).

Allative ('to')

The allative in Galgadungu consists of the dative plus -*ŋa*,

- (8) *winton-ku-ŋa ŋai iŋka-ŋa*
Winton-ALL I go-PAST
'I went to Winton.'

Marking the complement of imperfect, irrealis, etc., verbs

A variety of transitive verbs in Galgadungu appear with a dative complement when reference is made to activity that is directed towards a goal but where the goal has not been achieved, for example:

- (9) *paa yuru iŋci-li-iŋci-manŋi ucan-ku*
there man chop-chop-IMPERFECT wood-DAT
'That man is chopping wood.'
- (10) *ŋuku caa ŋuli icai ruupu-ya a-i iŋka*
dog this always bite rope-DAT COMP-he go
'The dog keeps biting at the rope to (try and get) away.'
- though probably not verbs such as *ŋumai* (to break something) where the meaning of the verb implies success.

Other

Galgadungu also has an odd usage involving *-ku* in that the subject of a non-singular transitive imperative is suffixed to it, for example:

- (11) *ŋa-ya ku-mpi*
hit-IMP ku-you-two
'You two hit it!'
- (12) *ŋa-ya ku-tu*
hit-IMP ku-you-PLUR
'You mob hit it!'

The verbs *ai* (to eat), *ciai* (to take out of a container), *ŋkai* (to skewer, stab) usually appear with the suffix *-li*. When this suffix is used the subject remains unmarked and the object is marked with the dative,

- (13) *ati-ŋci ŋai ai-li*
meat-DAT I eat
'I am eating meat.'

The same construction appears with *ŋuyi* (to cook). As far as I know the construction is vestigial.

Note

1. The use of *ŋaa* in (4) as opposed to (3) is significant, being determined by whether the pronoun attached to the complementiser is co-referential with the subject of the governing clause. A full explanation would take too long to include here.

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64. Arabana-Wangganguru

L. A. Hercus

Arabana-Wangganguru was spoken in the Simpson Desert/Lake Eyre region of South Australia.

C-1. Form

The simple affix *-gu* is not affected by any morphophonemic changes in Arabana-Wangganguru.

There are a number of derivative forms:
declensional affixes *-guŋa*, *-rugu*, *-rigu*
conjugational affixes *-ŋugu*, *-ŋigu*

The declensional affix *-nda* shares some of the functions of *-gu*.

C-2. Functions

C-2.1. In the declensional system

C-2.1.1. GENERAL COMMENTS

There is some difference between the nominal and pronominal declension systems of Arabana-Wangganguru: personal nouns (denoting humans or personified animals) occupy a midway position;

Function	Nouns	Personal nouns	Pronouns
Allative	<i>-rugu</i>	<i>-nda</i>	<i>-nda</i>
Dative/purposive	<i>-gu</i>	<i>-gu</i>	<i>-nda</i>
Verbs of speaking and waiting	locative <i>-ŋa</i> (or unmarked object)	<i>-nda</i> (or unmarked object)	<i>-nda</i>
Wishing and wanting	<i>-gu</i> , locative <i>-ŋa</i> (or unmarked object)	<i>-gu</i>	<i>-(g)uŋa</i>
Some verbs of emotion and beneficiary	<i>-gu</i>	<i>-guŋa</i>	<i>-nda/-(g)uŋa</i>
Possessive	<i>-gu</i> , <i>-guŋa</i>	<i>-gu</i> , <i>-guŋa</i>	<i>-(g)uŋa</i>

The simple suffix *-gu* is not found in normal pronominal declension, except, as might be expected, for the one pronoun which can never refer to persons, *miŋagu* 'what for?'

-nda fulfils the functions of *-gu* in the pronominal system: it can be regarded as a late analogical introduction into the nominal declension system (a) because of its very restricted use with nouns, (b) because in nouns it is not subject to the basic restraint rule of Arabana-Wangganguru by which clusters of nasal + plosive cannot occur in successive syllables: in pronouns this restraint applies,

aṅḍida 'for me' (*aṅḍ-i-[n]-da*)
ungida 'for you' (*ung-i-[n]-da*)

but

ḍaṅḍinda 'for grandfather' (not **ḍaṅḍida*)

It can therefore be said that *-gu* belongs to the nominal system and *-nda* to the pronominal system.

Summary of functions

C-2.1.2. THE DATIVE-PURPOSIVE COMPLEMENT

(a) This complement is used most frequently with the verb 'to go'

(1) *guṅara-gu aṅḍa yuga-ṅda*
 kangaroo-DAT I go-PRES
 'I'm going for kangaroos.'

(2) *waḍu-guba-gu yuga-ga*
 baby-DAT went-PAST
 'She's gone (to hospital) to have a baby.'

and with other verbs of *movement*, for example, 'to jump up for', 'to grope round for', 'to exert oneself for', 'to assemble (*for* a corroboree, etc.).

(b) The dative-purposive can express any aim or reward,

(3) *ḍadlu yani-ṅda wayga-gu*
 false speak-PRES language-DAT

'(Don't worry granny, your meat is not burnt). She (Luise H.) is making it all up to get the language.'

As might be expected, *gaḍṅaḍigu* 'for money' can be used as a complement with transitive and intransitive verbs referring to a wide range of activities, but this only reflects European thought.

(c) The dative-purposive is common in equational clauses:

(4) *ḍigiri ṅurgu.* 'miṅa-gu?' 'buṅa-gu'
 'swamp-canegrass good.' 'what'-DAT? 'humpy'-DAT
 'Swamp canegrass is good stuff.' 'What for?' 'It's for (making) humpies.'

(d) In some rare locutions the dative-purposive marks the extent to which an action takes place

(5) *gubmari-gu biḍa-ira*
 blood-DAT hit-Tr-PRES
 'He hits him so hard that he draws blood.'

This usage is of interest in the case of adjectives + *-ma* 'to make' where there is a semantic distinction between

(6) *ṅurgu -ma-na*
 good make-PRES
 'To make good', 'To cure'.

and

(7) *ṅurgu-gu -ma-na*
 good-DAT make-PRES
 'to fix up completely', 'to return something to prime condition'.

C-2.1.3. VERBS OF SPEAKING AND WAITING

With verbs of speaking and waiting there are certain semantic distinctions

(8) *madla-ṅa yani-ṅda*
 dog-LOC talk-PRES

'I'm talking to my dog (without expecting any reply).'

(9) *madla-nda yani-ṅda*

dog-DAT talk-PRES

'I'm talking to my dog as if I were talking to a human being.'

(10) *madla yani-ṅda*

dog-OBJ speak-PRES

'I'm just talking to my dog.' (neutral)

Similarly,

(11) *ḍaṅḍi-nda miḍa-ṅda*

grandfather-DAT wait-PRES

'I am waiting for my grandfather.'

but

(12) *gaḍi-ṅa miḍa-ṅda*

meat-LOC wait-PRES

'I'm waiting for my meat.'

C-2.1.4. VERBS OF WISHING AND WANTING

The difference between pronominal and nominal usage is particularly marked with these verbs.

Nouns (and adjectives) which form the complement of the verb 'to want' are usually marked with the dative *-gu*:

(13) (W) *band aṅḍa waya-ṅda balgu-bidjirina-gu*
 hardly I want-PRES flesh-red-DAT

'I can't stand half-castes.'

(14) *maldja waya-ṅda Gada-Gumbira-gu*

not want-PRES Louse-Dead-DAT

'I don't like Dead-Louse (nickname of a person).'

Optionally, but rarely, a direct object form is used:

(15) *bardjana waya-ṅda*

all-OBJ want-PRES

'He wants everything.'

Pronouns which form the object of the verb 'to want' are always marked with the possessive affix (*g*)*uṅa*:

(16) *maldja unguṅa waya-ṅda*

not you-POS want-PRES

'I don't want you.'

C-2.1.5. THE BENEFICIARY

A noun indicating the beneficiary of an action (one for whom an action is performed), is always marked by *-gu* when no direct object is involved:

(17) *mayada-gu irdji-ṅda*

boss-for-DAT work-PRES

'He is working for the boss.'

The possessive is used when a direct object is involved:

(18) *mayada-guṅa guḍa ḍigi-ra*

boss-POSS water bring-back-Tr-PRES

'He brings back water for the boss.'

This is linked with the lack of actual/potential distinction characteristic of Australian languages (Dixon, *The Dyirbal Language*, p. 41). If I am bringing or doing anything for you, it is potentially yours, and one would therefore expect the use of a possessive marker.

The complement of verbs of emotion is marked in a manner similar to the beneficiary.

C-2.1.6. POSSESSIVE

-guṇa, a derivative of *-gu*, is used to form the possessive adjective marking the object possessed:

- (19) *waṛa-guṇa wadna? gagu-guṇa*
 who-POS digging stick sister-POS
 'Who's digging stick (is this)? It's my sister's.'

But the affix *-gu* can be used to mark the possessor, and this is the preferred form

(a) When there is a double possessive:

- (20) *uga-guṇa anja-gu waḍḍu Urubindja*
 his-POS father-of-POS country Urubindja
 'Urubindja was his father's country.'

and

(b) When there is a contrast between possessors:

- (21) *Dubu-waṛuṇa uljuḷa-guṇa ṇuṛa, Munguni ṇai gaṇa-gu*
 'smoke-white' woman-POS camp Munguni here men-POS
 'Toopoo waruna (White-smoke) was the women's camp, Munguni was the men's.'

C-2.1.7. ALLATIVE

The allative affix for nouns consists of the elative affix *-ru/-ri* plus *-gu*.

- (22) *ṇuṛa-rugu juga-ṇḍ 'aṇḍa*
 camp-ALL go-PRES I
 'I'm going to the camp.'

C-2.2 In the verbal system

C-2.2.1. THE PURPOSIVE

(a) *-gu* is affixed to the nominalised verb to form a purposive complement, *-ḷigu*, *-ḷugu*, which indicates the purpose of any movement (9) or action (10) on behalf of the subject of the main clause:

- (23) *aṇḍa ḍiga-ṇḍa maḍabuḍa ṇaṇi-ḷigu*
 I return-PRES old-man seeing-PURP
 'I'm going back to see the old man.'
- (24) *wadni waṅgaḍa guḍa gandi-ḷigu*
 chant sing water fall-make-PURP
 'He's singing a chant to make it rain.'

(b) The purposive can be used in equational sentences:

- (25) *ṇurgu ḍaṇi-ḷigu*
 good eating-PURP
 'It's good to eat.'

(c) One of the most commonly heard constructions with the purposive involves verbs of wishing and wanting.

- (26) *bardjana ṇawi-ḷigu waya-ṇḍa*
 all hearing-PURP want-PRES
 'I want to hear everything.'

C-2.2.2. NOTE:

A distinction is made in Arabana-Wangganguru as to whether the agent of the main clause is also associated with the action of the purposive or not:

the purposive construction with *-ḷigu/-ḷugu* can only be used in the former case.

- (27) *aḍu 'ṇa gaḍi ṇuṇi-ra ḍani-ḷigu*
 I you-OBJ meat give-Tr-PRES eating-PURP

'I'm giving you this meat to eat (for dinner, and I'm having some too).'

If the agent is not included, the locative of the non-past participle is used:

- (28) *aḍu 'ṇa gaḍi ṇuṇi-ra ḍaṇi-ṇa-ṇa*
 I you-OBJ meat give-Tr-PRES eating-NP-LOC

'I'm giving you this meat to eat (just for you on your own).'

and

- (29) *ḍadnaru aṇḍida ḍani-ṇa-ṇa*
 leave-IMPV me-for-DAT eating-NP-LOC
 'You leave it for me to eat!'

C-2.2.3. TENSE MARKER

-gu is combined with the nominalised verb (*-ḷigu/ḷugu*) to form not only the purposive, but also a historical past used mainly in mythological texts:

- (30) *gaḍi alga ṇuru ṇaṇi-ḷigu*
 meat kind other saw-HIST

'They saw a different kind of animal.'

This historical past is not entirely divorced from the semantics of the purposive: it often conveys a result, a protraction of past events. Possibly the closest English translation of this sentence would be: 'And so it came to pass that they saw a different kind of animal.'

The frequent use of *-gu* can be seen from the following sentence from the story of the Erotic Old Man

- (31) *yuga-ḷugu gaḷa-rugu ṇaṛawa-rugu ḍubi-rigu Guriyaba-rugu*
 went-HIST creek-ALL salty-ALL lake-ALL Guriyaba-ALL

'And so he went on to the salty creek, to the lake named Cooreeappa.'

Summary

Despite its wide and varied uses in Arabana-Wangganguru the suffix *-gu* remains basically bivalent, being used within both the verbal and the nominal system to indicate an aim, purpose or objective. But it is not trivalent: it is restricted to nouns and verbs, and is not characteristic of pronouns.

Additional Notes

1. In Maljaṇaba *-ida* fills the role of the bivalent dative-purposive suffix.
2. In Bāḡandji the bivalent suffix *-ri* fulfils only part of the functions of *-gu* (C-2.1.(b) and C-2.3.); there is also a dative-beneficiary nominal suffix *-mandi*.

For an introductory note on case inflections in Muruwari, which was spoken in north-western New South Wales and southern Queensland, see Paper 19 of this volume.

C-1. Form

Present analysis suggests that the form of the affix is *-gu*: when it means dative/purposive/future, and *-gu* when it means possession. But this analysis is tentative only. The underlying thought, whether suffixed to nouns or verbs, is purposive, stretching the meaning of that word as widely as possible. This meaning is quite clear when it is suffixed to adverbial particles and pronouns as the following three sentences indicate.

- (1) *minjan-gu: yandabu*
what-DAT go-PAST-3sg
'Why (for what purpose) did he go?'
- (2) *balaynj-gu: baɖara: ɲaɲa*
nothing-DAT punch-PAST-3sg me-OBJ
'He punched me for nothing (for no purpose.)'
- (3) *wala njindu-gu: (JB only)*
NEG you-DAT
'Not for you (your purpose.)'

C-2. Complement function

The following variety of purposive complementary functions has been observed.

1. For acquiring something or someone—a noun complement

- (4) *bagul ɲaɳa ɲuwana manu-gu:*
money-NOM give-IMP-me bread-DAT
'Give me money for (the purpose of buying) bread.'
- (5) *ɲaba-gu: yana*
water-DAT go-IMP
'Go for water.'
- (6) *balga:bu ... widji-gu:, wayan-gu:, maɲu-gu:*
come-PAST-3sg meat-PURP, honey-PURP, roots-PURP
'He came ... for meat, honey and edible roots.'

2. For performing an action—a noun complement

- (7) *yimbiyiyu: gaɖi, guɳɖi-gu:*
leave-PRES-1sg uncle, house-PURP
'I'm leaving uncle, for (the purpose of going to) the house.' (This may be allative, i.e. *to the house*.)
- (8) *madjiɳ ɲaɳa ɲuwuna wi:gu: ɲaɖu-gu digaret (JB only)*
matches-NOM give-IMP-me fire-DAT I-POSS cigarettes-NOM
'Give me matches to light my cigarette.'

3. For performing an action—a verbal complement, expressed by *-gu*: being suffixed to a verb root, so making a type of infinitive: *ba:ɲgi-gu*: '(in order) to swim', *ba:mba-gu*: '(in order) to stop', etc.

- (9) *naybu ɲuwana yagi-gu: ɲaɳa widji*
knife-NOM give-IMP-me cut-DAT meat-NOM
'Give me a knife to cut the meat.'
- (10) *ganda bandanga buɳbiya: ɲumbi-gu:*
up-LOC sky-LOC jump-PAST-3sg hide-DAT
'He jumped up into the sky (in order) to hide.'
- (11) *ɖa:n-gu: ɲaɳa yanmiyu:*
eat-DAT go-PROG-1sg
'I'm going to eat.'

4. As an indirect object *-gu*: has been found with the following two transitive verbs, *ɖaɳga*- 'tell' and *yungu*- 'sing'.

- (12) *ɲuwa daɳgayda mayinj-gu: giyanɖu ɖanana: (JB)*
there tell-PAST-3pl man-DAT moon-ERG did-PAST-it?
'There they told (to) the people what Giyan had done.'
- (13) *bidjiɳfugu ɖiɳa yungiya: muɳinj-gu: (JB)*
spirit-POSS song-NOM sing-PAST-3sg bark-DAT
'He sang a spirit song to the bark.'

C-3. Possessor function

Like Galgadungu, Warungu, Pitjantjatjara and others, Muruwari uses the dative to mark the possessor. It occurs

1. Suffixed to common nouns to show they are possessed either by another person (as in (14)), or more commonly by something else:

- guwinj-gu manga* 'the spirit's bones'
spirit-POSS bone-NOM
gula-gu gidju 'the kangaroo's young'
kangaroo-DAT small
baɳima:-gu gabun 'swan's egg'
swan-POSS egg-NOM
yudadayugaɖa-gu manduwi: 'the sorcerer's shoes'
sorcerer-POSS shoes-NOM
- (14) *ɖaɳgiya: muginj-gu-ga*
run-PAST-3sg woman-POSS-LOC
'He ran to his wife.'

Examples occur where both the possessor and the thing being possessed are suffixed.

- (15) *gula-gu ɲaɳa ɖina-gu ɲaɳa ɖina mayɲga*
kangaroo-POSS foot-POSS foot-NOM ground-LOC
'The kangaroo's tracks of his feet (are) on the ground.'

2. Suffixed to nominative pronouns they form one series of possessive pronouns

- ɲaɖu-gu* 'my, mine'
ɲjindu-gu 'your, yours'
numbu-gu 'his', etc.

- (16) *walaŋaŋa ŋaɖu ŋjindu-gu ŋaŋa gumbayn* (JB only)
 NEG I-SUBJ you-POSS sweetheart-NOM
 'I am not your sweetheart.'

3. **Suffixed to proper nouns** they occur with the second series of possessive pronouns suffixed by *-ga* and are used in a construction such as the following:

- (17) *guliya buga mari-gu*
 spear-NOM her-POSS 2 Mary-POSS
 'Mary's spear.'

C-4. Allative case

Muruwari marks allative case by *-gu* in line with Wangaybuwan, Wunambal, Bidjandjadjara and Arabana-Wangganuru. It expresses movement to a place.

- (18) *balga:da ŋu ŋaŋdu-gu*
 come-PAST-3pl this? river-ALL
 'They came to the river.'

- (19) *wadji:n yandibu ɖuwa-gu*
 white woman-NOM go-PRES-3sg store-ALL
 'The white woman is going to the store.'

- (20) *guwaŋiŋu balga:bula ŋuŋa:-gu*
 far-ABL come-PAST-3du camp-ALL
 'Two (men) came from afar to the camp.'

Sentence (20) above also contains an example of the ablative case, expressed by the widely used suffix *-ŋu* 'from'. It means from a place or thing or out of the midst or interior of something.

- (21) *wan-ŋu gidju muŋinj yagiya:*
 tree-ABL small bark-NOM cut-PAST-3sg
 'From a tree he cut a small piece of bark.'
- (22) *dugu bulgu:yu: baŋa-ŋu*
 guts-NOM pull-PURP/FUT-1sg goanna-ABL
 'I will pull the guts out of the goanna.'

C-5. Tense-aspect function

(A) In common with other Australian languages, Muruwari expresses *future time* with the suffix *-gu:*.

- (23) *ya: yan-gu: ŋali*
 yes go-FUT we two
 'Yes, we two will go.'

- (24) *badala yan-gu:-yu guya-gu:*
 tomorrow go-FUT-1sg fish-DAT
 'I'm going fishing tomorrow.'

- (25) *yaman ɖiŋa ɖiga ŋu yiŋɖiŋa-gu:*
 one song-NOM my-POSS 2 this be-IM-FUT
 'This will be my last song.'

(B) More frequently the thought expressed is of some kind of *aspect*: purpose (*going to*)

- (26) *ŋaɖu-ŋgu ŋaŋa mabu-gu: gula ŋaŋa*
 I-ERG cook-PURP kangaroo-NOM
 'I'm going to cook a kangaroo.'

possibility (*might*)

- (27) *yugan galamibu, buɖu-gu:*
 cloud-NOM come-PROG-3sg rain-PURP
 'Cloud is coming up; it might rain.'

ability (*can, could*)

- (28) *guruguru ɖaŋgaŋɖiŋalayu ba:ŋgi-ŋɖiŋayiyu-gu:*
 all tell-IM-SUB-1sg swim-IM-1sg-PURP
 'I told all (that) I could swim.'

obligation (*should*)

- (29) *ɖaŋga: ŋaŋu baɖalaya ŋuŋga balgaŋɖiŋayu-gu:* (JB)
 tell-PAST-3sg me morning-LOC here-LOC come-IM-1sg-PURP
 'He told me to come here in the morning (lit. that I should come).'

C-6. Independent function

The dative/purposive/future *-gu:* suffixed to a noun or pronoun may substitute for a verb.

- (30) *ŋaɖuŋgu ŋaŋa guliya-gu: ŋaŋa mayinj*
 I-ERG spear-DAT/PURP man-NOM
 'I'm going to spear a man.'

- (31) *wiya baɖabaɖa-gu:-ndu*
 QN morning-PURP-2sg
 'Are you (coming) in the morning?'

Or it may stand as a root in such a sentence as

- (32) *tomiga: gu:ŋaŋa sidni-gu ŋaŋa* (JB)
 Tommy-PER PURP- Sydney-ALL
 'Tommy is going to Sydney.'

(Compare Blake's example of Kalkatungu *-ku* functioning in a predicate-like manner, and as a root not a suffix.)

66. Wangaybuwan

Tamsin Donaldson

Wangaybuwan is spoken in western New South Wales.

C-1. Forms

-gu is a case inflection of constant form. The table shows which pronoun forms are used for syntactic and orientational functions which require *-gu* on nominals. Note that 'Subject-form' on the table, and 'SUBJ' in the glosses refer to forms used for both intransitive subject function and transitive subject (agent) function, while the term 'subject' in the text refers only to the intransitive subject.

C-2. Functions

C-2.1. Possessive

-gu is used to mark the possessor, for example, *mayiŋgu miri* (person-DAT dog-NOM) 'person's dog'. Similarly, when possession is predicative

- (1) *ŋinala: miri ŋigula: mayiŋgu gaya*
that-NOM dog-NOM this-DAT person-DAT be-PRES

means 'That dog is this person's'. Note that a possessed NP in a sentence where the possessor is marked with *-gu* is typically definite, while a possessed NP marked with *-buwan* 'having', in a sentence in which the possessor is topic, is never definite (see example (1b) in Paper 16, this volume).

The other non-orientational functions of *-gu* relate to its orientational function, allative, in the same way as the non-orientational functions of *-Di* relate to *its* orientational function, ablative; via a spatial/temporal/logical analogy (see example (3c) in Paper 16). Movement through space towards an end-point resembles movement through time towards a future identity or state; logically, the end-point of an action, if foreseen, may be its end not only in the sense of its terminus, but also in the sense of its goal or purpose.

C-2.2. Allative

-gu marks the allative, for example:

- (2) *wanḡaguwa:ndu yanana? ŋaḡu yaraŋa gali:ŋgu*
which-ALL-INTERROG-YOU-SUBJ go-PRES 1-SUBJ go-PRES water-ALL
'Where (i.e. to which (place)) are you going?' 'I'm going to the water.'

C-2.3. Dative: result

In sentences with verbs indicating making or transforming, the identity or state resulting from the action is marked with *-gu*, for example,

- (3) *bumbiyi ŋiyanuna ŋawar ḡabilgu*
blow-PAST we-PLUR-SUBJ-EXCL pouch-NOM ball-DAT
'We blew up the (kangaroo) pouch into a ball.'

Compare the same action seen from a different perspective

- (4) *bumbiyi ŋiyanuna ḡabil ŋawari*
ball-NOM pouch-FROM

'We made a ball out of the (kangaroo) pouch by blowing it up.'

In (4) *-Di* marks the origin of the ball (for other examples see example (3c) in Paper 16). In (3) *-gu* marks the result of the action on the pouch. By implication, the ball was also the purpose of the action, unless we are to suppose that no-one knew that a ball would result from blowing up the pouch. Similarly:

- (5) *ga:wa: ŋa:ruŋa ḡara:ŋgu*
always drink-PRES drunk-DAT
'(He) always drinks to (the point of) drunk(eness).'

This means 'He always drinks till (he gets) drunk' (result)—and by implication only, 'He always drinks to get drunk' (purpose).

A sentence with a verb indicating a transaction can involve a similar use of *-gu*, for example:

- (6) *gibaymiyila ŋiyanu guya ḡugagu*
exchange-PAST-THEN we-PL-SUBJ fish-NOM sugar-DAT
'We exchanged (our) fish for (their) sugar.'

The changed identity of the speakers' resources is marked with *-gu*.

Partial comparison of the nominal and pronominal case-systems
The area between the dotted lines shows functions for which the dative form *-gu* is used on nominals; and pronominal forms used for the same functions

Case inflection or suppletive form (only singular examples of suppletive forms are given)

Function	Nominals	Enclitic 3rd person pronouns	1st & 2nd person pronouns	subject-form (<i>ŋaḡu, ŋindu</i>)	Enclitic 1st & 2nd person pronouns	subject-form (- <i>ḡu, -ndu</i>)
Agent						
Intransitive subject	nominative (- <i>ḡ</i>)	nominative (- <i>na:/-ni:</i>)				
Object	"	"				
Possessive	dative (- <i>gu</i>)	dative (- <i>lugu:</i>)				
Dative	"	NONE				
Allative	"	NONE		accusative/genitive (- <i>ḡi:</i> , <i>ḡinu:</i>)		accusative/genitive (- <i>ḡi:</i> , <i>-nu:</i>)
Locative	locative (- <i>ga</i>)	NONE		Locative = acc./gen. + <i>-ga</i> (<i>ŋaḡi:ga, ŋinu:ga</i>)		NONE
		NONE		"		NONE
		NONE		"		NONE

C-2.4. Dative: purpose

(a) *-gu* marks the explicit purpose of an action.

- (7) *minja:nguwu:ndu yanaṅa? ṅaḍu yanaṅa gali:ṅgu*
 what-DAT-INTERROG-YOU-SUBJ go-PRES I-SUBJ go-PRES water-DAT
 'Why (i.e. what for) are you going?' 'I'm going for water.'

Or the response might include a verbal noun formed with the purposive affix, for example:

- (8) *ṅaḍu yanaṅa guṅuṅagirigu*
 I-SUBJ go-PRES swim-PURP-DAT
 'I'm going to swim/for a swim.'

or a verbal noun together with its object, for example:

- (9) *ṅaḍu yanaṅa gali: mamaligu*
 water-NOM take-PURP-DAT
 'I'm going to fetch water.'

The purposive affix has the forms:

- giri* on verbs of the predominantly intransitive Y conjugation;
- li* on verbs of the predominantly transitive L conjugation;
- ri* on the two monosyllabic transitive verbs of the R conjugation.

(b) *-gu* marks the purpose of objects as well as actions, that is, existential sentences can include a complement with *-gu*, for example:

- (10) *ḍiṅga:ṅgu ṅina mura gaṛa wayay mayi*
 animal/meat-DAT this-NOM spear-DAT be-PRES NEG person-NOM
ḍurigu
 spear-PURP-DAT
 'This spear is for animals, not for spearing people.'

(c) *-gu* marks the complement in a sentence whose predicate contains a value adjective, for example:

- (11) *ḍarma:yna: miri giyi girbadja*
 expert-NOM-3rd-NOM dog-NOM be-PAST kangaroo-NOM
gaḍaligu
 bite/catch-PURP-DAT
 'The dog was expert at catching kangaroos.'

A deverbal purposive complement with *-gu* may not contain an NP in intransitive subject or agent function. For deletion of the subject or agent NP of the complement to be possible, it must be identical to one of the NPs in the main sentence. If the main sentence is intransitive, the *-gu* complement is interpreted as having a subject or agent identical with its subject (8), (9). If the main sentence is transitive, the *-gu* complement is interpreted as having a subject or agent identical either with its agent ((13a) main agent = complement subject, (13b) main agent = complement agent); or with its object ((14a) main object = complement subject, (14b) main object = complement agent).

- (13) (a) *mayiṅgu wi: bangiyi gu:lagirigu*
 person-ERG fire-NOM burn-PAST get warm-PURP-DAT
 'Person burnt fire to get warm.'
- (b) *mayiṅgu wi: bangiyi girbadja wiriṅgirigu*
 kangaroo-NOM cook-PURP-DAT
 'Person burnt fire to cook kangaroo.'

- (14) (a) *mayiṅgu ḍumba: ga:ṅi bumagirigu*
 person-ERG sheep-NOM bring-PAST hit/kill-INTR-PURP-DAT
 'Person brought sheep (for it) to get slaughtered.'

(A transitive verb of the L conjugation—such as *buma-l* in (14a)—may drop the conjugation marker *-l* and take the inflection appropriate to the Y conjugation. This derives an intransitive 'agentless' form.)

- (b) *mayiṅgu ḍumba: ga:ṅi guṅun ḍaligu*
 grass-NOM eat-PURP-DAT

'Person brought sheep (for it) to eat grass.'

It appears that in sentences of the type (13a), (13b), the object in the main sentence must be an inert object which is interpreted as playing an instrumental role in the action indicated by the complement. This becomes more obvious if 'with' is added to the English glosses. By contrast, in (14a) the interpretation 'Person brought sheep to get killed with' is impossible, because *ḍumba:* 'sheep' is an animate noun incapable of functioning as an instrument. Likewise in (14b) an interpretation with identity of main and complement agents 'Person brought sheep to eat grass (with)' is impossible. A sheep cannot be a body-part instrument for eating with. In sentences of the type (14a), (14b) the complement is accordingly interpreted as having a subject or agent identical with the object of the main sentence.

When the main sentence verb and the verb of the deverbal purposive complement with *-gu* are both transitive, and the objects of the main sentence and the complement are identical, as well as their agents, both the object NP and the agent NP are deleted from the complement. Thus if (14a) contained the transitive form *bumaligu* instead of *bumagirigu*, it would be interpreted 'person brought sheep to slaughter (it)'. Likewise if *guṅun* 'grass' were omitted from (14b), (14b) would be interpreted 'person brought sheep to eat (it)'.

In complements of the sort illustrated so far, the purposive affix has a nominalising function. (The verb root marked with the purposive affix is the citation form of the verb, functioning metalinguistically as a noun if a verb is being discussed.) The purposive affix has a second function. It is a modal inflection, in paradigmatic contrast with the tense inflections, for example:

- (15) (a) *ṅaḍu yanagiri*
 I-SUBJ go-PURP
 'I must go.'
- (b) *bura:ḍu ḍiṅga: ḍali*
 child-ERG meat-NOM eat-PURP
 'Child must eat meat.'

Being a case inflection, *-gu* cannot occur after the purposive affix used in its modal function.

(d) *-gu* cannot mark a purpose which is also an explicit intention. When the subject or agent of a subordinate purpose sentence is not identical with an NP in the main sentence, and a deverbal purposive complement with *-gu* is therefore impossible, a construction must be used in which the purposive affix appears as a modal inflection, and the first word of the purpose clause is marked with the enclitic particle *-ḍan*, for example

- (16) *ṅaḍu yanaṅa ṅinduḍan guṅuṅagiri*
 I-SUBJ go-PRES you-SUBJ-*ḍan* swim-PURP
 'I am going so that you may/will swim.'

Even where the identity conditions for a deverbal complement with *-gu* are satisfied, the same construction is used if the subordinate clause explicitly expresses the intention behind the action undertaken by the agent or subject of the main verb, for example:

- (17) *ŋaɖu yanaŋa guŋŋagiridjanɖu*
I-SUBJ go-PRES swim-PURP-*ɖan*-I-SUBJ
'I am going so that I can swim.'

Example (17) differs from (8) in that the subject of the main verb (who in this case is also the speaker) has made it explicit that he intends to swim. In (8) this purpose is taken for granted, in the same way as the speaker of (13b) takes for granted his inference that the fire is being lit to cook kangaroo; there is no indication that the person lighting the fire has voiced such an intention. If she had done so, (13b) could have taken the form:

- (13) (c) *mayiŋgu wi: bangiyi girbadjadjalu wiriŋgiri*
person-ERG fire-NOM burn-PAST kangaroo-*ɖan*-3rd-ERG cook-PURP
'Person burnt fire (expressly) so that she could cook kangaroo.'

-ɖan in an indicative sentence means 'the evidence for this statement is verbal'. It contrasts with *-gara* 'the evidence for this statement is sensory'. These clitics are attached to the first word of the sentence, preceding any enclitic pronouns, for example:

- (18) *burayɖjalu ga:ŋi*
child-VERBAL EVIDENCE-3rd-ERG bring-PAST
'It's said she brought the children.'

-ɖan marks a modal sentence as the expression of a wish: *yanagirili:* (go-PURP-we-SUBJ) means 'we must go'. *yanagiridjali:* means 'let's go'. Likewise example (15a), with the insertion of *-ɖan*, means 'would that I might go!'

-ɖan is obligatory in any type of sentence which explains another in terms of the intention or conscious reason which motivates it, as in examples (16) and (17), Paper 16, this volume ('He is setting up camp lest it rain.'). Presumably this is because intentions can only be *known* to exist when articulated in speech. English recognises the connection between speech and intention in the adverb 'expressly' which means both 'explicitly' and 'on purpose'. 'Expressly' can always be used to reinforce the English equivalent of a structure with obligatory *-ɖan*, without ever distorting it. ('Expressly' is never obligatory in English because the English equivalents are introduced by obligatory subordinating words to mark the construction-type, such as 'so that . . .' or 'lest . . .').

C-2.5. Semantically 'middle' verbs (*-gu* has no rôle).

Wangaybuwan has no middle verbs with an obligatory dative complement. The verbs mentioned in the introduction to Topic C as liable to be middle in their syntax in Australian languages are:

1. Transitive, but unable to undergo the agentless passive transformation: *gaya:ŋɖi-l* 'search for', *mugami-l* 'stare at', *winaŋa-l* 'hear/listen to', *winaŋa-y* 'understand', *ɖi:rba-y* 'know/learn (with progressive affix)', *ŋa:y* 'see', *banmi-y* 'wait for'.
2. Intransitive: *ɖayambi-l* 'like (=be fond)', *yuna-y* 'cry', *ginda-y* 'laugh'. These are verbs describing emotional states/symptoms. All such verbs may take complements in *-ɖi* 'because of' (also the case-form for the ablative function), or *-ŋinda* 'for want of' (for details see example (1c) in

Paper 16). These complements are optional in that a sentence describing a subject's emotional state need not mention its cause, for example:

- (19) *buray yunaŋa (guni:ŋinda)*
child-NOM cry-PRES mother-FOR WANT OF
'The child is crying (for (its) mother).'

C-2.6. Case frames of three-place verbs (*-gu* has a small rôle).

Both the object and the indirect object of a three-place verb are marked with the forms listed as appropriate to object function on the table on page 477, unless both object and indirect object are represented by third person pronouns. In this case the pronoun representing the indirect object appears in the dative form appropriate to the possessive function, for example:

- (20) *ŋaɖuluguna: ŋiyiyi*
I-SUBJ 3rd-SING-DAT-3rd-SING-NOM say-PAST
'I said it to him/her.'

A single nominative NP in a sentence containing a three-place verb may represent either an object or an indirect object. *ŋaɖuna:ŋiyiyi* means either 'I said it' or 'I spoke to him/her' according to context.

The complements in structures like 'tell someone that . . .', 'know how to . . .', 'order someone to . . .', do not involve *-gu*, though the last two involve the purposive affix.

- (21) *ŋaɖu ɖi:rbaŋa guŋŋagiri*
I-SUBJ know-PRES swim-PURP
'I know (how) to swim.'
- (22) *ŋaɖuna: ŋiyiyi girmali ŋinu:*
wake-PURP you-ACC
'I told him to wake you.'

C-2.7. Focal (including beneficiary) NPs (*-gu* has a small rôle).

Verb roots can be marked with affixes to show whether the action indicated by the verb (or the emotion) focuses reflexively on the performer (or patient), or on someone/something else. These affixes do not change the transitivity of the verbs they are attached to, though they make them formally members of the predominantly intransitive Y conjugation.

ɖa-y 'focus on self' encompasses the notion of 'self as beneficiary' but is more general.

- (23) *bada wuŋaŋadaŋa*
dress/skirt-NOM sew-FOCUS ON SELF-PRES
is used to translate '(She) made the dress for herself' but also '(She) made the dress by herself'.

-yili-y 'Focus away from self' likewise encompasses the notion of 'someone else as beneficiary' but is much more general. For instance the focus need not be beneficiary.

- (24) *ɖayna: yani:linja*
towards speaker-3rd-NOM go-FOCUS AWAY FROM SELF-PRES

was said of someone on the lookout for someone else she wished to have a fight with, that is, meaning 'She's going (on the warpath) after someone in this direction'.

-yili-y expands the case frame of verbs to which it is attached to include an additional NP which indicates the identity of the person/thing focused on.

(The inclusion of such an NP in a sentence with *-yili-y* is optional. Example (24), for instance, does not contain one.)

In *intransitive* sentences the *focal NP* is in a local case (regardless of the presence or absence of an NP in the same local case with orientational function).

The focal NP is in the locative case when focus alone is indicated, for example:

(25) *yuvi:linji* *muḍiga* *gabuga:nga*
lie-FOCUS AWAY FROM SELF-PAST nest-LOC egg-LOC
'(The emu) lay on the nest (looking) after the eggs.'

(26) *ḍiṅga:nga* *yani:linja*
meat-LOC go-FOCUS AWAY FROM SELF-PRES
'(She's) going (looking) for meat/(She) is going after meat.'

In a sentence like (26) the focus is on an NP which can also be viewed as the purpose of the action. If a dative NP is present to indicate the purpose of the action in a sentence whose verb is marked with *-yili-y*, and if the dative NP is identical to the focus, the locative form indicating focus is omitted. Informants regard

(27) *ḍiṅga-ṅgu* (meat-DAT) *yani:linja*
as meaning 'just the same' as (26).

The focal NP may also be marked with *-Di* 'from, because of', the 'residual' ablative/interior case-inflection. Here the idea of 'keeping' the thing/person focused on seems to be involved (as opposed to 'looking for/after' in (25), (26)).

(28) *gayibi:linjilana:* *ṅuṅu:ynjdji* *ṅiyaniṅgi:*
run off-FOCUS AWAY FROM SELF-PAST-THEN emu-*Di* our-PL-GEN
'Then he ran away with our emu.'

In *transitive* sentences the *focal NP* is in the same case as the indirect object of a three-place verb. It can be translated 'for (the sake of)', which is sometimes the same as 'instead of', for example in

(29) *ṅinduḍi:* *miṅga* *bagi:lidja*
you-SUBJ-me-ACC/GEN burrow-NOM dig-FOCUS AWAY FROM SELF-IMP
'You dig this burrow for me.'

Hence a focal NP appears in the dative when both it and the object are represented by third person pronouns, for example:

(30) *bumbi:lidjaluguni:*
blow-FOCUS AWAY FROM SELF-IMP-3rd-DAT-3rd VISIBLE-NOM
'Blow (on) it for him' (burning hot food, for a baby).

In sentences with a three-place verb, *-yili-y* causes an NP which would otherwise be interpreted as the indirect object to be interpreted as a focal NP.

(31) *ṅinduḍi:ni:* *ṅuga:*
you-SUBJ-me-ACC/GEN-3rd VISIBLE-NOM give-IMP
'You give this to me.'

(32) *ṅinduḍi:ni:* *ṅugi:lidja*
give-FOCUS AWAY FROM SELF-IMP
'You give this for me (i.e. instead of me, on my behalf).'

I have no examples of *-yili-y* with three-place verbs which also include an indirect object, that is, 'You give this *to him* for me'.

Topic D: Are Australian languages syntactically nominative-ergative or nominative-accusative?

67. Rapporteur's introduction and summary

B. J. Blake

An ergative language is usually described as one in which the object of a transitive verb and the subject of an intransitive verb are in the same case or are identified by some other criterion such as word order. This arrangement can be exemplified from most Australian languages. For example, in Galgadungu (western Queensland) we find,

(1) *kalpin inka* 'The man goes.'

man go

(2) *kalpin-tu ŋarkun ɭai* 'The man kills a wallaroo.'

man-ERG roo kill

where the morpheme glossed as ERG(ative) marks what is usually referred to as the subject of the transitive verb, and the object of the transitive verb and the subject of the intransitive verb are identified by having no case marking (or being in the nominative case).

In the usual description of ergative languages, the subject of the transitive verb is usually identified as the agent or actor. Note however that the grammatical subject of a transitive verb is usually identified on the basis of grammatical properties shared with the nominal constituent occurring with an intransitive verb. In Indo-European languages the grammatical subject can be identified as the constituent that determines person and number concord in the verb, for example. If one looks for grammatical criteria in determining the subject of a transitive verb, then it would appear on the basis of our Galgadungu examples that the wrong constituent has traditionally been chosen as the subject in an ergative language. Clearly the non-agent constituent in (2) is identified with the nominal constituent in (1) on the basis of their being nominative, as opposed to *kalpin* in (2), which is marked by the ergative suffix *-tu*.

However, there are other facts to be considered, one of which is word order. Most Australian languages allow a good deal of freedom in word order, different orderings representing differences of style, emphasis or topicalisation rather than differences of reference, but it is usually possible to determine a basic or unmarked order. The unmarked or basic order for the majority of Australian languages is as shown in the Galgadungu examples. As these examples stand, they are no help in identifying a noun phrase in (2) with the noun phrase in (1). One could identify *kalpin-tu* in (2) with *kalpin* in (1) on the basis of occurrence in first position, but one could just as easily identify *ŋarkun* in (2) with *kalpin* in (1) on the basis of occurrence immediately before the verb. This problem can be overcome by considering a wider range of sentence patterns. The regular positioning of the conjunction *puyu* (if) in second position, the preferred positioning of the demonstratives in second position and various other rules make it clear that the first position rather than the pre-verb position is significant. The same argument can be applied *mutatis mutandis* in many other Australian languages. This means of course that there is conflict in the criteria that could be used to determine the subject of a transitive verb. The case marking singles out the non-agent noun phrase and the word order singles out the agent noun phrase.

Galgadungu exhibits the ergative pattern of case marking (as in (1) and (2))

with free form pronouns, but most Australian languages have free form pronouns that operate in an accusative paradigm or have three forms, one for intransitive subject, one for the agent of the transitive verb and one for the non-agent. These three possibilities can be illustrated by Galgadungu (Blake 1969:39), Warluwara (Breen 1972:182) and Bidha-Bidha (Blake and Breen 1971:78) (all western Queensland) respectively.

(3) Free Form Pronouns (first person singular forms illustrated)

	Galgadungu	Warluwara	Bidha-Bidha
Intransitive Subject	<i>ŋai</i>	<i>ŋana</i>	<i>ŋanytja</i>
Agent	<i>ŋaŋu</i>	<i>ŋana</i>	<i>ŋaŋu</i>
Non-Agent	<i>ŋai</i>	<i>ŋana</i>	<i>ŋanya</i>

The majority of Australian languages employ bound-form or clitic pronouns as well as free form pronouns, the former normally being the unmarked alternatives. These pattern in an accusative paradigm in most cases.

Dixon (1972:65-81, 128-37) notes that in Dyirbal (north-east Queensland) the non-agent of a transitive sentence is consistently identified with the noun phrase of an intransitive clause for the purposes of a number of syntactic rules.¹ This consistent identification operates irrespective of morphological marking (that is, irrespective of whether nouns or pronouns are involved),² and on the basis of this identification, Dixon calls Dyirbal a nominative-ergative language.

This syntactic identification in Dyirbal can be illustrated by considering the part the *-ŋay* construction plays in complex sentences. A *-ŋay* construction is one in which *-ŋay* appears suffixed to the verb and where the agent of the transitive verb is nominative. The non-agent appears in the ergative or dative. The use of this marked construction does not affect reference (op. cit.: 65-66).

(4) (a) *balan djugumbil baŋgul yaŋaŋu balgan*
the woman the-ERG man-ERG hit-NON-FUTURE
'The man is hitting the woman.'

(b) *bayi yaŋa baŋgun djugumbiŋu balgalŋaŋu*
the man the-ERG woman-ERG hit-ŋay-NON-FUTURE
'The man is hitting the woman.'

(c) *bayi yaŋa baŋgun djugumbilgu balgalŋaŋu*
the man the-DAT woman-DAT hit-ŋay-NON-FUTURE
'The man is hitting the woman.'

If a transitive verb is used in a non-initial clause of a complex sentence and if the agent of this transitive verb has the same reference as the noun phrase of a preceding intransitive clause or the non-agent of a preceding transitive clause, the *-ŋay* construction must be used in the non-initial clause or clauses (op. cit.: 154-56).

(5) (a) The non-agent of clause 1 = non-agent of clause 2
(no *-ŋay* construction)

bayi yaŋa baŋgul gubiŋgu mundan (bayi) (yaŋa) baŋgun
the man the-ERG doctor-ERG brought the man the-ERG
djugumbiŋu balgan
woman-ERG hit

'The man was brought here by the doctor and (he) was hit by the woman.'

(b) The non-agent of clause 1 = agent of clause 2
(*-ŋay* construction required)

bayi yaŋa baŋgul gubiŋgu mundan (bayi) (yaŋa) baŋgun
the man the-ERG doctor-ERG brought the man the-ERG
djugumbiŋu balgalŋaŋu
woman-ERG hit-ŋay-NON-FUTURE

'The man was brought here by the doctor and (he) hit the woman.'

The significant feature of these examples is that the occurrence of the *-ŋay* construction is determined by whether the agent (A) of a transitive verb is involved as opposed to the non-agent ((P) for patient) of a transitive verb or the noun phrase occurring with the intransitive verb (S_i, subject of intransitive verb). The rule for the use of *-ŋay* must group S_i and P together; that is, it must identify S_i and P.

Dyirbal consistently identifies S_i and P in a variety of syntactic rules. For example, the verb suffix *-djay* which marks plural, refers to S_i with intransitive verbs and to P with transitive verbs (op. cit.: 249). And the nominaliser *-muŋa* produces formations in which the reference is to S_i with intransitive verbs and to P with transitive verbs, for example *djanay+muŋa* = Someone who habitually stands a lot, *ŋaŋyɔdjay+muŋa* = Someone who is being watched. To form an agent noun like English 'watcher', *-ŋay* must be used, for example, *ŋaŋyɔdjay+ŋay+muŋa* (*ŋaŋyɔdjanaymuŋa*) = Someone who always watches.

If we look for evidence of syntactic identification in other Australian languages, it seems to me that what we find is identification of S_i and A. A difference, incidentally, which correlates with a difference in word order. In Dyirbal the P constituent precedes the A in the unmarked pattern (as in (4a)), whereas in other languages the order is APV (as in (2)) or AVP (as in a number of prefixing languages in the far north and in some Queensland languages).

One piece of evidence for the identification of S_i and A is the treatment of indirect commands in Galgadungu,

(6) (a) *marapai-ŋu yuru pati-ŋa a-i iŋka*
woman-ERG man tell-PAST COMP-he go
'The woman told the man to go.'

(b) *marapai-ŋu yuru pati-ŋa ŋantu-u a-i waŋukatii*
woman-ERG man tell-PAST hole-DAT COMP-he dig
'The woman told the man to dig a hole.'

The particle *a-* glossed as COMP(lementiser) introduces the subordinate clause and the form *-i* is a clitic pronoun referring to *yuru*. A rule for the formation of these sentences would need to refer to the S_i of the second clause of (6a) and the A of the second clause of (6b) since it is these functions that are represented by the clitic pronoun. This rule treats S_i and A alike and is one piece of evidence indicating that Galgadungu is syntactically nominative-accusative.

It is interesting to compare (6b) with an example of the same construction in Dyirbal (op. cit.: 165),

(7) *balan djugumbil baŋgul yaŋaŋu gigan baŋgun bunigu*
the woman the-ERG man-ERG told the-DAT fire-DAT
mabalŋaygu
light-ŋay-PURPOSIVE
'The man told the woman to light the fire.'

In (7) the *-ngay* construction is used since the P of the first clause is understood as the A of the second clause. On the other hand the unmarked construction suffices in Galgadungu. In fact it is interesting to observe that Dyirbal has to use a marked construction in an unmarked situation—the addressee of a command is normally told to do something rather than to have something done to him.

Note that the argument derived from (6a) and (6b) is independent of the fact that the clitic pronouns operate in an accusative paradigm but is based on the fact that it is S_i and A which must appear as pronouns. Note too that the rule for pronominalisation cannot be framed on the basis of whichever element in the dependent clause has been referred to in the governing clause, since in examples of the type 'She told them to hit her' both the arguments of the dependent clause are referred to in the governing clause and the pronoun appearing in the position under discussion still must refer to the A argument of the dependent clause.³

Pairs of examples parallel to (6a) and (6b) can be found for Walbiri (Northern Territory) (Hale 1968:36–37) and Thargari (Western Australia) (Klokeid 1969:47).

Other types of rule of course can afford relevant information. In Bidjandjadjara (Western Australia) the choice between the conjunctions *ka* and *nyangka* as opposed to *palunya* depends on whether the clauses being conjoined have 'different subjects' or the 'same subject' according to Glass and Hackett (1970:93–94) and 'subject' in their terminology is S_i or A. Similarly the choice between the purposive forms *kitja* and *tjaku* is determined by whether the 'subjects' of the main clause and subordinate (purpose) clause are the same or different according to Douglas (1964:114–15), and 'subject' in Douglas's terminology is also S_i or A.

The evidence available is not overwhelmingly strong, but the indications are that the typical Australian ergative language is syntactically nominative-accusative. On the other hand Dyirbal is syntactically nominative-ergative, and it is certainly true that it is the only Australian language that has been clearly documented as being ergative in syntax.

The situation seems to be that we have a large number of languages in which nouns (and in some cases free form pronouns) operate in an ergative paradigm but where the syntax operates in an accusative system, and Dyirbal, where nouns (but not pronouns) and the syntax operate in an ergative system.

Two interesting questions arise in this situation. The first is to do with the term 'ergative' and the second is to do with the term 'subject'.

It seems to me unsatisfactory to use the term 'ergative' solely to refer to languages in which nouns operate in an ergative paradigm. I would suggest that this use of the term 'ergative' be replaced by more specific labels such as 'ergative with respect to case marking in nouns', 'ergative with respect to case marking in all nominals', 'ergative in syntax' or whatever fits the facts.

As far as 'subject' is concerned, it seems to me that in European languages the actor or agent NP of a transitive verb is identified as subject by features such as word order, case, concord and by rules of syntax. In Dyirbal every feature except case marking on pronouns identifies the patient with the subject of an intransitive verb and hence I would call the patient NP the subject. Dixon implicitly adopts this arrangement in his deep syntax of Dyirbal.

In languages like Galgadungu, I would use the term 'subject' for the agent NP of a transitive verb because the rules of syntax identify this constituent with S_i . In terms of an 'Aspects' model, Galgadungu could be treated in the same way as English except that a late rule for case marking would add an ergative marker on the subject of a transitive verb.

In any model of description, one will have to frame a number of rules for Galgadungu covering S_i and A and it seems to me that subject can conveniently be used to cover this grouping. My feeling is that Australian ergative languages so-called, are only superficially ergative, except in the case of Dyirbal. For most of them their sole claim to ergativity is in case marking which I consider peripheral, relative to the syntax.⁴

Hale (1968, 1970) has pointed out that (morphologically) accusative languages occur in two areas in Australia. One area is the Wellesley Islands and adjacent mainland on the south of the Gulf of Carpentaria, where Lardil (the language of Mornington Island), is the best known representative. The other area is in north-west Western Australia where Ngarluma is probably the best known representative. Hale notes that these accusative languages have an active/passive voice distinction while the (morphologically) ergative languages lack it. In order to explain the correlation between an accusative system of case marking and the occurrence of the active/passive distinction, Hale suggests that proto-Australian was an accusative language with an active/passive distinction and that the ergative languages are ones in which the active voice has been lost. In other words the two groups of languages referred to above (Lardil, etc., and Ngarluma, etc.) represent relic areas.

It should be pointed out that a number of the prefixing languages of the far north (for example in Arnhem Land, the Kimberleys, and adjacent areas) are accusative and in most cases they lack the active/passive distinction. These languages often lack syntactic case marking. They are accusative in that subject/object distinctions are shown by subject and object markers incorporated into the verb and these markers operate on an accusative system. Often too the word order is SVO. Also, it should be noted that in his 1970 paper, Hale admits that Ngarluma and the other accusative languages of Western Australia have acquired the passive recently.

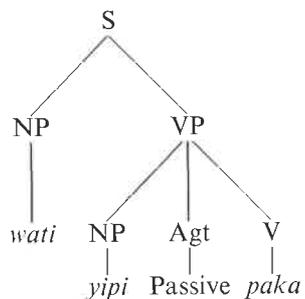
However, given this, it is still possible that Hale is correct in suggesting that proto-Australian was an accusative language.

Hale's argument is presented in terms of a standard transformational model.⁵ He envisages a proto-Australian grammar in which the base rules generate structures such as (8a) directly underlying active sentences and in which an optional passive rule produces structures such as (8b) directly underlying sentences such as (8c).

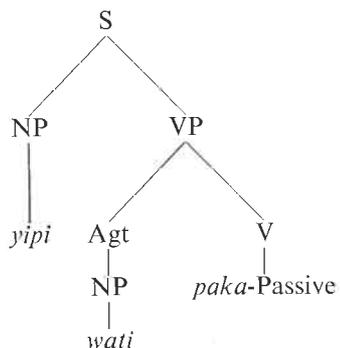
Example (8) is based on lexical morphemes familiar from a number of (mostly Western Australian) languages. *Li* is a putative passive marker and derives from Hale's observation that in many Australian languages transitive verbs are in a class that is phonologically more complex in that it contains an extra element, *-l(i)* or *yi*. Hale sees this extra element as a reflex of the passive marker of the proto-language.

Hale postulates a development in which the passive becomes obligatory rather than optional, the *pseudo-ergative* system as he calls it. Evidence for such a system would be found in the syntactic identification of S_i and A

(8) (a)



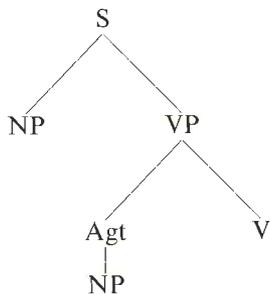
(8) (b)



(8) (c) *yipi wati-ŋku paka-Li-ŋu*
 woman man-ERG hit-PASSIVE-PAST
 'The woman was hit by the man.'

(against the lack of morphological identification) the regular appearance of a reflex of *-Li* on transitive verbs (this being interpreted as a passive marker) and in the appearance of *-ku* marking the complement of middle verbs (like *look for*) and the complement of verbs in certain embedded clauses (cf. Hale 1968:40ff), *-ku* being interpreted as the marker of the complement of a verb which does not undergo passivisation.

Hale sees as a further development a system in which transitive sentences are assigned the following structure by the rules of the base,



The *Agent* is neither the deep subject nor the surface subject; the NP

immediately dominated by S is the deep subject (identified with S_i for the purpose of various syntactic rules) and also the surface subject (morphologically identified with S_j). Dyirbal appears to realise this possibility, which Hale calls the *passive-ergative* system.

Another development envisaged by Hale is the *true ergative* or *active-ergative* system, where the *Agent* is the deep subject (identified with S_i syntactically) and case marking is simply on the basis of:

- (a) ergative for subject of a transitive verb;
- (b) nominative for the subject of an intransitive verb; and
- (c) nominative (or accusative) for the object of a transitive verb.

Hale however, ends his 1970 paper on a rather tentative note. He says that although he has suggested that Walbiri is a *passive-ergative* language, it is probably an *active-ergative* language as there is inconsistency between the presence of *Li* and transitivity. He also points out that it remains to be shown that reflexes of *Li* are or even have been used to mark passive, but that there is a small amount of evidence to suggest that it is reflected in reflexive and causative markers. He admits that he cannot fit the accusative marker *-ŋa* (as opposed to dative *-ku*) into his system, nor can he explain why the fully ergative languages (ones like Walbiri I presume, in which free form pronouns as well as nouns operate on an ergative system) have the most highly developed system of person concord between the subject and the auxiliary.

Regarding the inconsistency between the presence of a reflex of *Li* and transitivity in Walbiri, it should be noted that in Galgadungu transitive verbs are marked consistently by *-i* (alternatively it could be considered *-yi*). Moreover, this *-i* does not appear in certain complement clauses, for example in the 'lest' construction,

- (9) *rumpi ŋai ŋuatuŋu, ica ku-ŋi*
 fear I snake-because of bite *ku-me*
 'I'm afraid of the snake, it might bite me.'

and note that the pronoun *-ŋi* appears suffixed to *ku*. Thus (9) could be taken as an example of a construction in which the passive has not been preserved for there is no reflex of *Li*, the putative passive marker, on the verb and *ku*, which Hale sees as the marker for the complement of a verb that has not been passivised, is present. Since the change $*l > y$ between Proto-Galgadungu and Galgadungu is independently attested, *-yi* could be a reflex of *Li*.

To put this in perspective, I should add that while Galgadungu affords evidence favourable to Hale's hypothesis, a large number of languages are neutral in this respect and present no evidence in favour of the hypothesis nor any data that is particularly difficult to account for.

Regarding two other points of difficulty that Hale himself raises, both of these can be accounted for I think. The presence of *ŋa* or *nyā* as an accusative marker can be explained as a retention of the accusative marker of the proto-language. *ku* is seen by Hale as the accusative marker of the proto-language, but it could be that *ku* and *NYa* contrasted in the proto-language, *NYa* being the accusative marker and *ku* the complement marker for middle verbs and for verbs in certain types of embedded construction, or perhaps *NYa* was a marker of perfect aspect while *ku* denoted imperfect aspect. If the passive was introduced on the basis of transitivity or on the basis of perfect aspect, *NYa* could well have been lost in the process leaving *ku* in the constructions

where the passive was not substituted for the active. There is some support for the suggestion that a distinction of aspect or some similar distinction was involved. In the contemporary data *ku* is a dative marker not an accusative marker (in some languages such as Ngarluma it represents a neutralisation of both); where a semantic role can be ascribed to it, it is the role of *goal* as opposed to *achievement*, similarly where it appears as an aspect marker with verbs, it usually signifies *future* or *desiderative*. Moreover, the normal ergative construction does not occur in some languages if the *aspect* of the verb is imperfect or if the meaning of the verb signifies activity directed towards a goal that has not been achieved. And furthermore an ergative or passive construction in some other unrelated languages outside Australia is confined to or favoured in perfect as opposed to imperfect aspects. It is noteworthy that in the contemporary Australian languages *NYa* appears in some languages as a past tense marker as well as being an accusative marker in many languages. This parallels the occurrences of *ku* as a dative in many languages and as a future or desiderative marker in some languages, and it suggests that both the accusative and the past tense *NYa* forms are reflexes of a single morpheme in the proto-language.

The appearance is *NYa* as an accusative marker with pronouns in many languages and with animate, human or personal nouns in some languages may be related to the fact that there is a scale of proclivity for the passive that favours inanimate 'agents' rather than animate, animate rather than human, and human 'agents' rather than personal pronoun 'agents'. In other words, sentences such as 'The dog was run over by the car' are more common than 'The dog was run over by me' and so on. This is certainly true of European languages. The case would be stronger if it could be shown that the passive is also less likely with pronouns in non-agent roles. I doubt if this can be shown. As it is we would have to argue that since certain nominal subcategories in an agent role are less likely to appear as agents in a passive construction, the use of the passive was inhibited strongly in the case of pronouns and to some extent with animate, human or personal nouns.

In Paper 6 above, Silverstein points out that since certain categories of nominal are more natural subjects (in the sense of agent) and other categories more natural objects, it will be unmarked or natural for a language to use an accusative system of case marking for categories such as first and second person pronouns or human nouns and to use an ergative system for categories such as inanimate. In an ergative system of case marking the agent is specially marked and it is the special or marked situation for an inanimate object to be an agent, hence it can be said that the ergative system of marking is natural with inanimate agents since the special marking is used for the special or relatively unusual case. Conversely it is natural to mark the non-agent with first and second person pronouns or other categories that more frequently occur as agents, at least that is the theory. It is not so obviously true as the converse viz. that inanimates are relatively unusual agents.

We can sum up this theory of natural case marking in the following table.

- (10) (a) Inanimate 'Agent'—Ergative Case Marking
stone-ERG man- ϕ hit
(b) First or Second Person 'Patient'—Accusative Case Marking
man- ϕ you-ACC hit

and it is apparent that Australian languages tend to exhibit this 'natural'

state of affairs. This theory undoubtedly has some validity independently of the putative drift from an accusative system to an ergative system, but note that, given Hale's hypothesis, the nominal hierarchy theory would account for the conservatism of the pronoun paradigm and for the retention of the accusative marking on human, animate and personal nouns which is found in a dozen or so otherwise ergative languages.

Hale's reference to the highly developed system of person concord between subject (S_i and A) and auxiliary in languages like Walbiri is a reference to the fact that Walbiri uses clitic pronouns attached to an auxiliary particle and these pronouns operate on an accusative system (one set for S_i and A, another for P) whereas free form pronouns operate like nouns in an ergative system (Hale 1973:309, 328),

- (11) (a) *ɲatju ka-na pula-mi* 'I shout.'
I PRESENT-I shout-NONPAST
(b) *ɲatjulu-lu ka-na-ŋku njuntu nja-nji* 'I see you.'
I-ERG PRES-I-you you see-NONPAST

The fact that this system works on an accusative basis may simply reflect the fact that when it was introduced the free form pronouns were still operating on an accusative model. The ergative system with free form pronouns is a later development. If I understand Hale (op. cit.:344) correctly, Walbiri developed a new set of free form pronouns after the earlier set had become cliticised. Presumably these were modelled on the noun paradigm and are therefore ergative. It is difficult to see how they could have been modelled on an accusative system as a clitic system hardly provides a suitable base.

As for the problem of the reflex of the putative passive marker occurring with the accusative clitic system, Hale points out that there is not complete correlation between the presence of this marker and transitivity in Walbiri. This means that the element in question is not a passive marker or even strictly a transitive marker in contemporary Walbiri. This marker must have been reinterpreted as a fixed feature of most transitive verbs and generalised to all instances of usage of these verbs even in those cases where we have suggested the passive was not introduced, for example with pronouns and in certain types of embedding.

Notes

1. My presentation and terminology differs from Dixon's.
2. The Dyirbal pronouns operate in an accusative paradigm.
3. I have confined the examples to third person as other factors are involved if first or second persons are involved.
4. G. McKay in Paper 68 on Rembarnga in this volume presents data showing conflict in the syntactic criteria for identifying subject.
5. As in N. Chomsky, *Aspects of the Theory of Syntax*, MIT, 1965.

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68. Rembarnga

G. R. McKay

The term 'ergative' or 'nominative-ergative' has been the subject of some dispute among linguists, partly because of differing use of the term, and partly because of the mixed nature of the evidence for accusative and ergative structures in many languages. In discussing ergative syntax in Rembarnga, a prefixing language of central Arnhem Land, I adopt the view that 'nominative-ergative' refers to the identification of transitive object (O) and intransitive subject (S) for the purposes of syntactic rules, while 'nominative-accusative' refers to the identification of transitive subject or agent (A) and intransitive subject (S) in such rules.¹ To be purely nominative-ergative in syntax it is necessary for all syntactic rules of a language to be of the nominative-ergative type—or at least for some to be of this type and for the rest to be neutral as far as the ergative-accusative distinction is concerned. Where a mixture of rule types is present it is not strictly possible to speak of 'ergative languages' or 'accusative languages'.² Nevertheless I believe that one is justified in examining the evidence to determine the predominant pattern of each language. The main criterion for predominance of a pattern must be the relative depth of the syntactic rules providing evidence for that pattern. Evidence must be examined from all areas of the grammar from surface morphology to base rules to complex sentence derivations. The present paper is an attempt to begin this examination for the Rembarnga language.

1. Case marking

Rembarnga is clearly a nominative-ergative language from the morphological point of view. Nouns, demonstratives, and personal pronouns³ are all marked using the same set of case suffixes. Transitive subject (A) takes the ergative suffix *-yi?*,⁴ while intransitive subject (S) and transitive object (O) are marked alike with a zero nominative suffix. Thus

- (1) (a) *ɲinta-yi?* *ɲanapparu-φ paŋa-na*
1sg.-ERG buffalo-NOM 3pl.O+1sg.A-see+PAST PUNCT
'I saw some buffaloes.'
- (b) *ɲanapparu-φ para-tiŋ-miŋ*
buffalo-NOM 3pl.S-return-PAST PUNCT
'The buffaloes came back.'

As can be seen in (1), person and number of both A and O, and of S are marked by separate but related series of pronominal verb prefixes (see Appendix). The forms of these prefixes appear to provide no conclusive morphological evidence one way or the other for a nominative-ergative system (as opposed to nominative-accusative). A and O are distinguished in the pronominal verb prefixes mainly by their order (OA before the verb) which is opposite to the usual order of noun phrases in the sentence (AO before the verb complex). As in many other Australian languages word order is very free within the sentence.

Morphologically, then, Rembarnga is unambiguously a nominative-ergative language, unlike many Australian languages which have a nominative-ergative system of case marking for nouns, but a nominative-accusative system for pronouns.

2. Noun incorporation

Evidence for nominative-ergative syntax in Rembarnga is provided by some details of the process of incorporating nouns into the verb complex. In order to make this clear I will first make a few comments on the surface structure of Rembarnga sentences and of the verb complexes themselves. The two main types of simple clause have been exemplified in (1). Examples (2a) and (2b) set out the elements of transitive and intransitive clauses respectively.

- (2) (a) A-ERG O-NOM VC (Trans)
(b) S-NOM VC (Intrans)

Person and number of the noun phrases A, O, and S are also marked pronominally by prefixes to the verb root. A variety of tense and aspect suffixes may mark the verb, while reduplication of the verb root is also relatively common, mainly indicating durative aspect. Between pronominal prefix and verb a number of adverbs,⁵ as well as additional number prefixes and syntactic prefixes (such as the AFFECT prefix *pak* to be discussed below), may be incorporated. The surface structure of the verb complex may thus be symbolised in the most general morphological terms as in (3).

- (3) (a) TRANSITIVE
X-Y-(Z)-Root-Tense
(b) INTRANSITIVE
W-(z)-Root-Tense

Here X corresponds to the O prefix morpheme, Y to the A prefix morpheme, W to the S prefix morpheme, and Z represents the variety of other prefixes and incorporated elements. In addition nouns may also be incorporated into the verb complex between pronominal prefix and verb root (that is, in Z position). The order of nouns in relation to various adverbs incorporated into the verb complex has not been completely sorted out, and for the purposes of this paper the incorporation of adverbs can be omitted as irrelevant. There are no special forms of nouns for incorporation, the only modification being

the loss, from those nouns which have it, of the suffix *-na*.⁶ This also will be omitted here as irrelevant to the point at issue.

The crucial point for the argument of this paper is shown by the examples of (4) and (5).

- (4) (a) *ka-mələ-yuru*
3sg.S-water-lie+PRES
'The water is there./There is water there.'
- (b) *ka-ɾut-pol[?]-la*
3sg.S-road-end there-FUT
'The road will end there.'
- (5) (a) *munaya-yi[?] par-ɾut-mani[?]-mi[?]*
white man-ERG 3sg.O+3pl.A-road-make-PAST PUNCT
'White men made the road.'
- (b) *na-kal[?]-pete[?]-mi[?]*
3sg.O+1sg.A-stone-carry-PAST PUNCT
'I carried the stone.'
- (c) *nar-kepper-wa-na*
3sg.O+1/2pl.A-river bank-follow-FUT
'We'll follow the river bank.'

From these examples it may be seen that the incorporated noun is the subject (S) in the case of intransitive verbs and the object (O) in the case of transitive verbs. A transitive subject noun (A) is never incorporated into the verb.⁷

It is clear, then, that the rule needed to incorporate nouns into verb complexes must be formulated in such a way as to require syntactic identification of intransitive subject and transitive object (that is, S and O). This is essentially the type of evidence needed to indicate that Rembarnga is syntactically a nominative-ergative language.⁸

3. AFFECT marking

We must, however, look further. To the elements of the basic types of clause given in (1) and (2) one further nominal element is frequently added—an 'affected nominal' (AFF). This is basically what was termed in traditional grammars of classical languages the 'ethic dative'.⁹ Affected nominals (AFF) may occur with both transitive and intransitive verbs. They are marked in one of two ways exemplified in (6) and (7).

- (i) Using the genitive suffix *-kan*
- (6) *pan[?]-ɸ pi-kan ta-mani[?]-mi[?]*
this-NOM Aborigine-GEN 3sg.O+2sg.A-make-PAST PUNCT
'You made this one for the Aborigines.'
- (ii) Using the possessive pronouns
- (7) (a) *ɸ-pol[?]-mi[?] yarə*
3sg.S-come-PAST PUNCT 1pl. POSS.PRON.
'He came to us./He came after us.'
- (b) *yaraman ɳənə-ɸ ɳa-miya*
horse 1sg.POSS.PRON.-NOM 3sg.O+1sg.A-get+PAST PUNCT
ɳa-miya ɳənə
3sg.O+1sg.A-get+PAST PUNCT 1sg.POSS.PRON.
'I got my horse. I got it for myself.'

- (c) *takku ɳənə-ɸ ɸ-tuy[?]-mi[?]*
child 1sg.POSS.PRON.-NOM 3sg.S-fall-PAST PUNCT
'My child fell.'

3.1 With PAK

Alternatively AFFECT may be marked by using a prefix *pak* in the verb complex as exemplified in (8). Use of this prefix requires the transitive forms of pronominal verb prefix to be used with both transitive and intransitive verbs. The *pak* prefix occupies the Z position as shown in (3), while the X prefix represents AFF and the Y prefix represents A or S depending on the transitivity of the verb. O is not marked for person or number among the pronominal verb prefixes when *pak* is present.

- (8) (a) *takku-ɸ ɳan-pak-tuy[?]-mi[?]*
child-NOM 1sg.AFF+3sg.S-AFFECT-fall-PAST PUNCT
'My child fell.'
- (b) *ti[?]-yi[?] ɳanpa-pak-laray[?]-mi[?]*
woman-ERG 1sg.AFF+3pl.A-AFFECT-cook-PAST PUNCT
te[?]-ɸ
fish-NOM
'The women cooked (the) fish for me.'

The equivalence of these three types of affected nominal marking is indicated to some extent by the examples of (9) where more than one method is used in each to refer to the same affected nominal.

- (9) (a) *maɳayin nawə-ɸ paɳaykul*
[ceremony] 3sg.POSS.PRON.-NOM [place]
ɸ-pak-tiyi
3sg.AFF+3sg.S-AFFECT-stand+PAST PUNCT
'His *maɳayin* was at *paɳaykul* (for him).'
- (b) *maɳayin-ɸ koɳok-kan*
[ceremony]-NOM [skin group name]-GEN
ɸ-pak-tiyi
3sg.AFF+3sg.S-AFFECT-stand+PAST PUNCT
'*koɳok*'s *maɳayin* was there (for him).'
- (c) *taɳu[?]-ɸ wamut-kan*
story-NOM [skin group name]-GEN
ka-pak-yolyol-la
3sg.AFF+3sg.A-AFFECT-tell-FUT
'He is going to tell the story for *wamut*.'

The fact that it is A and S rather than O and S which are marked by the Y prefix alongside AFF when *pak* is involved might suggest a nominative-accusative structure rather than nominative-ergative. It is A and S which appear to be syntactically identified as subject at this morphological level.

The evidence from the apparent identification of A and S by marking these alongside AFF when *pak* is present is not, however, as clear as may first appear. The complication arises out of the fact that when *pak* is used two nominal elements are obligatorily marked by prefixes for both transitive and intransitive verbs. The transitive sentence with an affected nominal rendered by a verb complex with *pak* contains three noun phrases in the functions A, O, and AFF. Only two of these may be marked by pronominal prefixes to the verb. The third may not be so marked. It so happens that AFF takes

precedence over O among the prefixes. On the other hand the intransitive sentence with an affected nominal rendered by a verb complex with *pak* has only two noun phrases, in the functions S and AFF. Both may be marked by pronominal prefixes because *pak* requires a two-place pronominal prefix before it instead of the one-place prefix used with simple intransitive verb complexes (cf. (10b) below). Thus the question cannot arise as to whether AFF has or has not precedence over S, as there is room for both. It is therefore not at all clear that there is any link between A and S or any contrast between O and S. In 3.2 I will contrast this situation with that occurring when AFFECT involves noun incorporation.

3.2 With noun incorporation

We can summarise the surface prefix patterning in relation to the various syntactic functions in various types of verb so far as in (10) and (11). Prefix arrangement are on the left, while the corresponding syntactic functions are shown on the right.

- (10) (a) TRANSITIVE X-Y:O-A
 (b) INTRANSITIVE W:S
 (11) (a) TRANSITIVE X-Y-Z:AFF-A-*pak*
 (b) INTRANSITIVE X-Y-Z:AFF-S-*pak*

However there is one further method by which an affected nominal (AFF) is introduced to a verb complex. This is when a noun is incorporated into the verb complex. The prefixes pattern as in (12) where Z is a noun.

- (12) (a) TRANSITIVE X-Y-Z:AFF-A-O
 (b) INTRANSITIVE W-Z:AFF-S

The significant fact here is that the AFF prefix is the X prefix for transitive verbs and the W prefix for intransitive—that is precisely those prefixes which, in the absence of a noun Z, represent O and S respectively (cf. (10)). Note that where AFF marking involves noun incorporation an intransitive verb has a one-place pronominal prefix, unlike when AFF marking involves *pak* (cf. (11)). Thus we have here a clear case of AFF displacing both O and S among the prefixes, whereas when *pak* is involved it is only in the transitive verb complex that there is clear evidence of displacement by AFF.

This type of verb complex is restricted in its occurrence. The structure with AFF and incorporated noun occurs obligatorily when the transitive X prefix or intransitive W prefix is not third person singular, and optionally when this prefix is third person singular. I have given examples of the incorporation of nouns without AFF in (4) and (5). (13) contains a number of examples of noun incorporation with AFF.¹⁰

- (13) (a) *ŋa-takku-tuŋ[?]-miŋ*
 1sg.AFF-child-fall-PAST PUNCT
 'My child fell.' (cf. (7c), (8a))
 (b) *ŋanapparu para-waŋta-yuru*
 buffalo 3pl.AFF-tracks-lie+PRES
 'Buffaloes' tracks are there.'
 (c) *ŋanapparu paŋa-waŋta-na*
 buffalo 3pl.AFF+1sg.A-tracks-see+PAST PUNCT
 'I saw buffaloes' tracks.'
 (d) *tiŋ[?]-yi[?] ŋanpa-ŋeŋ-laray[?]-miŋ*
 woman-ERG 1sg.AFF+3pl.A-fish-cook-PAST PUNCT
 'The women cooked the fish for me.' (cf. (8b))

- (e) *paŋar-tata-ŋuŋ*
 3pl.AFF+1/2pl.A-wild honey-eat+PAST PUNCT
 'We ate their wild honey./We ate the wild honey on them.'
 (f) *paŋar-ŋaŋa-ŋiya*
 3pl.AFF+1pl.A-foot-cook+PRES
 'We "cook" their feet.' (Reference to touching boys' feet with hot stones during circumcision ceremony.)

Both the condition applying to determine obligatory and optional marking of AFF among the prefixes, and the marking of AFF itself imply, on a morphological level, the identification of O and S or rather of intransitive X prefix and intransitive W prefix. This lends further support to a nominative-ergative interpretation of Rembarnga syntax.

4. Relative depth

We have seen in sections 1, 2, and 3 three types of evidence bearing upon the question of whether Rembarnga is nominative-ergative or nominative-accusative in structure. The first was concerned with the case marking of noun phrases, the second with the incorporation of nouns into verb complexes, and the third with the marking of noun phrases by pronominal prefixes to the verb. In only one case was there any evidence at all for a nominative-accusative system: AFF marking involving *pak* among the verb prefixes. I showed that this evidence was inconclusive (3.1). However, I will assume for the sake of argument that this feature is in fact evidence for a nominative-accusative structure and will proceed to look for indications as to the depth of this, relative to that of the various types of evidence for nominative-ergative structure. This will indicate which of these two types of structure can be considered the predominant one at this stage.

Evidence on depth is provided by the incorporation of nouns into reflexive/reciprocal verb complexes. Reflexive/reciprocal forms of transitive verbs are marked with a reflexive/reciprocal suffix followed by a tense suffix, and with the intransitive pronominal prefixes. Compare the sentences of (14).

- (14) (a) *ta-teŋ-ŋa*
 3sg.O+2sg.A-cut-FUT
 'You will cut it./Cut it!'
 (b) *ŋiŋ-teŋ-məttəna*
 2sg.S-cut-REFL/RECIP+FUT
 'You will cut yourself./Cut yourself!'

A noun may be incorporated in the reflexive/reciprocal form of a transitive verb. This noun is always in O function while the intransitive (W) prefix, normally marking identical A and O, marks identical A and AFF when O is incorporated. A comparison of the two pairs of sentences (15) and (16) shows this.

- (15) (a) *ta-ŋaŋa-teŋ-ŋa*
 3sg.AFF+2sg.A-foot-cut-FUT
 'You will cut his foot.' (cf. also example (13f))
 (b) *ŋiŋ-ŋaŋa-teŋ-məttəna*
 2sg.S-foot-cut-REFL/RECIP+FUT
 'You will cut your (own) foot.'
 (16) (a) *paŋar-yaŋ-ŋawa-na*
 3pl.AFF+1/2pl.A-story-hear/listen to-FUT
 'We'll listen to their story.'

- (b) *ɲara-yaŋ-ɲawa-ttəna*
 1/2pl.S-story-hear/listen to-REFL/RECIP+FUT
 'We'll listen to each other's stories.' (i.e. 'We'll have a meeting/discussion'.)

In each of the (a) sentences the possessor of the incorporated noun is marked for person and number by the AFF prefix morpheme and is distinct from the agent marked for person and number by the A prefix morpheme. In each of the (b) sentences on the other hand the possessor (AFF) of the incorporated O noun and the agent of the verb are identical and this is marked for person and number by an intransitive prefix morpheme (surface S).

The fact that an O noun may be incorporated into the reflexive/reciprocal form of a transitive verb in spite of the surface intransitivity of reflexive/reciprocal forms, coupled with the marking of identical A and AFF with the intransitive prefix when the O noun is incorporated in a reflexive/reciprocal form, provides evidence that the rule of noun incorporation must precede the rule of reflexive/reciprocal formation. Furthermore it is apparent that, in order to mark a reflexive/reciprocal verb with an intransitive (W) prefix of the correct person and number, rather than a transitive (X plus Y) prefix, the rule marking noun phrases by pronominal prefixes will have to follow the rule of reflexive/reciprocal formation. Thus the ordering will be: (i) Noun Incorporation; (ii) Reflexive/reciprocal Formation; (iii) Prefix Marking. Noun incorporation evidence for a nominative-ergative syntax is therefore provided by a rule at a deeper level than the only evidence found so far for nominative-accusative structure. On the basis of this evidence the predominant pattern is nominative-ergative.

5. Other evidence

In his paper 'The Passive and Ergative in Language Change: the Australian Case' (1970) Hale suggests a number of rules and constraints in grammars which refer to the relation 'subject-of' and thus can provide evidence for the syntactic identification of either A and S, or of O and S. He writes:

The rules and constraints relevant here include: (1) the imperative (the subject must be 2nd person); (2) obviative and proximate conjoining (obviative if subjects distinct, proximate if identical); (3) complementiser insertion (depending on identity of embedded subject with NP object or subject in superordinate sentence); (4) subject agreement in AUX, for those languages which have it; (5) deep structure constraints associated with certain superordinate verbs. In fact, most rules and constraints which depend on the identity or distinctness of NPs require reference to the notion 'subject-of-S'. (Hale 1970:771-72)

A few comments are in order here about some of these: (1) Rembarnga has no separate imperative form—future or present tense forms of all persons and numbers are used without modification as imperative or hortative forms; (2) conjoined sentences are normally not modified whether or not any NPs are identical; (3) and (4) there is as yet no clear evidence on this question from complementizer insertion or subject marking of auxiliary verbs in Rembarnga. One might expect the most convincing evidence to come from rules for complex sentence formation. While I have not proceeded very far in working out such rules it appears that most of the data in the area of complex sentences is neutral as regards the distinction between nominative-

APPENDIX—REMBARNGA PRONOMINAL VERB PREFIXES

		Y PREFIX			W PREFIX					
		Singular			Plural					
		1	1/2	2	3	1	1/2	2	3	
X PREFIX	Singular	1 1/2 ^a	2 3	1 ɲiŋ	tan	ɲan yan {ɲiŋ ^b nan {ka ^c φ par	ɲiŋpa	yar	ɲar	ɲanpa yanpo ɲiŋpa
	Plural	1 1/2 ^a	2 3	naja	yara	ɲaran ɲaran {ɲaran ^b nan paran	nayar	ɲar	ɲaranpa	ɲaranpa ɲaranpa {ɲanpa {paranpa {panpa
		3	paga	para	para	paran	parar	pana	pana	pana
	Singular	1	1/2	2	3	1	1/2	2	3	
		ɲa	ya	ɲiŋ	{ka ^c φ	yara	ɲara	nara	para	

a. 1/2 person involves speaker and hearer, but speaker is not counted for purposes of number.

b. The top form is used in the north-eastern dialect, the bottom form in the south-western dialect.

c. The top form is used with verbs in non-past tenses the second form with verbs in past tenses, and the third form appears to be used where human O is involved.

ergative and nominative-accusative syntax in that deletions, identity conditions and such like are largely absent.

6. Conclusion

The evidence presented shows that Rembarnga is strongly nominative-ergative, not only in case-marking morphology but also in underlying syntax. The slight evidence found for a nominative-accusative structure was shown to be of little consequence. There are, however, a number of areas of syntax still to be fully examined for evidence for or against nominative-ergative structure and Rembarnga may eventually prove to be much more mixed in its pattern. Pending the outcome of this examination Rembarnga must be considered to be predominantly nominative-ergative in structure.¹¹

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Notes

1. In Papers 7 and 77 in this volume Jeffrey Heath questions the use of the terms 'nominative-ergative' and 'nominative-accusative' pointing out that the key element in the ergative versus accusative distinction is the treatment of the transitive agent (A) and transitive patient (O). Only one of these can be the unmarked term in a sentence and only one can be the pivot for the operation of transformational rules. In the case of intransitive sentences on the other hand, only one nominal element is involved so this must normally be the pivot or the unmarked term. While I admit this point, it appears to me that similar treatment for S and either A or O in particular syntactic rules is a useful test for which of the two transitive terms is pivotal, in view of the fact that S is normally in this situation. This identification does not, however, necessarily reveal what Heath calls 'the underlying dynamics of case-marking', and it may differ from rule to rule within the one language.
2. Hale, in his paper 'The Passive and Ergative in Language Change: the Australian Case' (1970) hypothesises that Australian nominative-ergative structures developed from the passive forms of earlier nominative-accusative structures. He uses the term 'ergative language' for any language with a surface nominative-ergative case-marking system, and suggests that there are three possible types of ergative language: (i) *pseudo-ergative*, in which deep structure can be proved to be of the active type (that which underlies a nominative-accusative surface structure. To prove this there must be at least a remnant of nominative-accusative surface structure in some part of the language); (ii) *passive-ergative*, in which S and O are identified syntactically as subject in a deep structure of a passive or ergative type; and (iii) *active-ergative*, in which, in a deep structure of the passive or ergative type, S and A are identified syntactically. Of these three types only (ii) is purely ergative in the sense defined in this paper, while (i) and (iii) involve mixed ergative and accusative elements. I do not wish to go into the possible historical

relationships of nominative-ergative and nominative-accusative structures here, but if the one is, in fact, derived from the other this would give a natural explanation for the existence of languages which have mixed ergative and accusative structures.

3. With the exception of the emphatic pronoun (ending in *-kaŋəʔ*) which is never inflected.
 4. This is sometimes omitted in fast speech, but is always used as stated here in elicited responses.
 5. e.g. *ŋa-walaŋ-pətət-tuŋʔ-miŋ*
1sg.S-then-almost-fall-PAST PUNCT
'Then I almost fell.'
- Both *walaŋ* and *pətət* occur as independent adverbs.
6. This is almost certainly to be identified with one form of the third person singular possessive pronoun. It is often suffixed to nouns denoting body parts, among other things. Compare Dalabon *-no* suffix, also lost upon incorporation (Capell 1962:101). Dalabon is spoken to the south and west of Rembarnga.
 7. There is a small number of at present unexplained examples with an incorporated noun which is not S or O. Nevertheless none of these involve incorporation of an A noun.
 8. It may well be the case that no language permits incorporation of a noun in the A function into a transitive verb complex. I know of no language in Australia which does this. Sapir, in his survey of noun incorporation in American languages (1911), does not include incorporation of transitive subject among the types of noun incorporation found in North America. This would considerably weaken my argument by showing that ergativity is universal in this particular feature, and thus that Rembarnga is no different from any other noun-incorporating language of either the ergative or the accusative type. This would only necessarily be the case if all languages which permit noun incorporation permit it for both O and S. If, on the other hand, some languages restrict incorporation to O only, the argument would not be so weakened because incorporation of O only is open to a nominative-accusative interpretation.
 9. 'Benefactive' is not a suitable term in Rembarnga because with some specific verbs the opposite (perhaps 'malfactive') is the case (e.g. person stolen from).
 10. I will omit here further complexities involving different semantic significance of AFF with different types of noun. Syntactically the pattern is always as outlined here.
 11. Since submitting this paper for publication further fieldwork has brought to light a complex-sentence construction providing evidence for nominative-accusative structure. This involves one of the ways of expressing commands such as
 - (17) (a) They told me to go.
 - (b) They told me to cook the kangaroo.
 - (c) I told you to give them meat.

The most usual Rembarnga form for these sentences is given in (18) where the sentence implies that the order, which refers to some future time, has not yet been carried out.

- (18) (a) *nanpa-yinə^owa* *ŋa-roŋara-kan*
 1sg.O+3pl.A-tell+PAST PUNCT 1sg.S-go+FUT-PURP
 (b) *nanpa-yinə^owa* *kuweŋ*
 1sg.O+3pl.A-tell+PAST PUNCT kangaroo
 ŋa-pulttuŋara-kan
 3sg.O+1sg.A-cover for cooking+FUT-PURP
 (c) *ŋiŋ-yinə^owa* *re*
 2sg.O+1sg.A-tell+PAST PUNCT meat
 para-te^owana-kan
 3pl.AFF+2sg.A-give+FUT-PURP

The purposive suffix *-kan* is identical with the genitive suffix used with noun phrases. It may be seen that in (18) there is no deletion of pronouns in the complement clause under conditions of identity. However, there is another version of the sentences of (17), in the same interpretation as (18), which does involve pronoun deletion. In this case the form of the verb used is what I have tentatively called an infinitive form (INFIN). For one class of verbs it is identical in form with the verb root alone, for all other classes it is identical with the past counter-factual form. This alternative form of the sentences of (17) is given in (19) and is to be interpreted only as for (18).

- (19) (a) *nanpa-yinə^owa* *roŋə-kan*
 1sg.O+3pl.A-tell+PAST PUNCT go+INFIN-PURP
 (b) *nanpa-yinə^owa* *pulttuŋə-kan*
 1sg.O+3pl.A-tell+PAST PUNCT cover for cooking+INFIN-PURP
 (c) *ŋiŋ-yinə^owa* *re* *te^owana-kan*
 2sg.O+1sg.A-tell+PAST PUNCT meat give+INFIN-PURP

In (19) the pronominal prefixes are deleted in the complement clause. This type of construction involving the use of the infinitive verb form and deletion of the pronominal prefixes is only possible if the O of the higher clause is referentially identical with the A or S of the lower clause, depending on transitivity. The O of a transitive lower clause may or may not be identical in reference with any noun phrase in the higher clause—it is not specified at all within the verb complex. This applies also to the AFF in the case of verbs like *te^owa* 'give', *muttu* 'show', and *keppu* 'deprive of'.

For the argument of this paper it is the identity condition on the use of the construction exemplified in (19) which is relevant. This condition supplies evidence for nominative-accusative syntax in Rembarnga by identifying or referring to A and S rather than O and S. The evidence on the ergative versus accusative question in Rembarnga is thus more mixed than at first appeared, with this first clear evidence of nominative-accusative syntax coming from one type of complex sentence formation, rather than from the more morphologically oriented areas of syntax discussed earlier. It is still too early to give a final judgement on the predominant pattern of Rembarnga syntax.

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69. Alawa

M. C. Sharpe

Alawa, spoken at Roper River, Northern Territory, is morphologically ergative for all nouns and adjectives (all substantives), interrogative pronouns and inflected demonstratives, but has an accusative type pronoun system.

1.a. Noun case inflection

Table 1 lists relevant case endings for regular unsuffixed and non-gender-marked singular substantives. Case marking differs for plural, gender-marked, or suffixed nouns. For plural or dual nouns (prefixed with *yi/-* and *yiř/-* resp.) nominative and ergative are unmarked cases, so that in the plural, ergative and locative are marked differently. Gender marked substantives (most feminine nouns and agreeing adjectives, and a few masculine—mainly kinship—nouns) have in the nominative case either the feminine prefix *an-* or the masculine prefix *na-*; in all other cases the prefixes are *ař-* and *a-* resp., and the ergative case is not further marked by suffixation (and thus again becomes distinct from the locative case). Suffixed forms are those with either a pronominal suffix indicating possessor, or the 'having' suffix *-war*; the system of case contrasts follows other substantives; form need not conce n us here.

The interrogative pronouns *ŋambini* 'who' and *ŋandini* 'what' follow the substantives in case contrasts, though forms differ slightly for 'what'.

Table 1: Case endings

Final phonemes (nom case)	Ergative and locative	Genitive (purposive)
<i>yi</i>	<i>yiři</i>	<i>yiŋda</i>
<i>yV</i>	<i>yiř</i>	<i>yiŋda</i>
<i>i</i>	<i>iři</i>	<i>iyi</i>
<i>V</i>	<i>iř</i>	<i>Vyi</i>
<i>Y</i>	<i>Yŋdi</i>	<i>Yŋda</i>
<i>H</i>	<i>Hđi</i>	<i>Hda</i>
<i>Vř</i>	<i>VndV</i>	<i>Vřda</i>
<i>VL</i>	<i>VldV</i>	<i>VLda</i>

NOTE: *V* stands for any vowel but */i/*, *Y* for semi-vowels */y, w/*, *H* for 'hardening' consonants, i.e. nasals and stops, and *L* for liquids, i.e. */l, l̥, r, ř/*. */ř/* stands for the alveolar flap or trill, and */r/* for the retroflexed alveolar continuant.

Some inflectable demonstratives make fewer case contrasts than substantives, but follow the same system of case use, unlike the pronouns.

In substantives, nominative case is used for subject (S_i) of equational and intransitive clauses, and for object or dative object (for both monoreferential and direferential verbs—see section 1.C. below) of transitive clauses. Ergative case is used for S_i of transitive clauses, and for instrument or location causally involved in an action.

- (1) *lilmi* (mal) *n-ała*
man-NOM (up) he-go-PRES
'The man is going (up).'
- (2) *lilmi-ři* *guñ* *g-φ-a-n-na* (nda) *yayan*
man-ERG watch φ-he-do-PAST-it (CONJ) snake-NOM
'The man saw a snake.'
- (3) *ař-giřiya* *ař-ga-mudu-wun-nu* (nda) *lilmi* (nda)
FEM ERG-woman she-give-PAST-him (CONJ) man-NOM (CONJ)
ngudaru
stone-NOM
'The woman gave the man some money.'
- (4) *lilmi-ři* *yay* *g-a-ηada-n-na* (nda) *giřimbu* *ngudar-iř*
man-ERG hit φ-he-do-PAST-it (CONJ) kangaroo-NOM stone-ERG
'The man killed the kangaroo with a stone.'
- (5) *giřimbu* *buđa* *n-e-ni* *ađal-da*
kangaroo-NOM cook it-be-PRES oven-ERG
'The kangaroo is cooking in the oven.'
- (6) *n-ała* *ndiyaya-řa*¹/*mambulud-đi*
he-go-PRES foot-ERG road-ERG
'He goes on foot/by road.'
- Genitive or purposive case is used for possessor in phrases expressing alienable possession, to express purpose of an action, beneficiary of an action or state, and with the non-existential *mandi* for expressing non-existence.
- (7) *ñđalguyi-ñđa* *bařagal* (niba) *ñuđ* *ñuđ*
young man-GEN spear-NOM (him) blunt
'The young man's spear is blunt.'
- (8) *lilmi* *guy* *φ-e-ñi* *giřimbu-yi*
man-NOM hunt he-be-PRES kangaroo-GEN
'The man is hunting for kangaroo.'
- (9) *lilmi-ři* *yay* *g-a-ηada-n-na* *wuřgulař-đa*
man-ERG hit φ-he-do-PAST-it old man-GEN
'The man killed it for the old man.'
- (10) *ninda mandi* *ηugu-yi*
here no water-GEN
'There is no water here.'

Inalienable possession (part-whole relation) is signalled by the possessed item or part being in the same case as the possessor or whole; the noun signifying the part appears always to precede that for the whole.

- (11) *lamalma adiyin ruwu*
trap-NOM hole-NOM tree-NOM
'The trap is a hollow log.'
- (12) *n-ała* *ηguyumu-ndu* *ηgudar-iř*
he go-PRES nose-LOC hill-LOC
'He goes along the point of the hill.'

- (13) *dañ* *dañ* *đil-i* *biřimil-đi* *giřimb-iř*
slice they-be-PAST shoulderblade-ERG kangaroo-ERG
'They sliced it with a kangaroo shoulderblade.'

1.b. Pronouns and pronominal prefixes

Table 2 lists the two sets of pronouns. The genitive or indirect pronoun is used for possessor, beneficiary and purposed goal, and for object or dative object in any clause where there is no pronominal affix in the verb coreferential with the object or dative object, whether the verb is monoreferential or direferential (see section 1.C. below). For emphasis, a direct or emphatic pronoun can replace an indirect pronoun indicating object or dative object.

Table 2: Direct and indirect pronouns

	Direct	Indirect		
sg 12 (1 incl)	<i>ñanu</i>	<i>ñaga</i>		
1	<i>ηina</i>	<i>ηaba</i>		
2	<i>ñangana</i>	<i>ñamba</i>		
3m	<i>nula</i>	<i>niba</i>		
3f	<i>ηandula</i>	<i>ηadu</i>		
non-sg 12 pl	<i>ñalu</i>	<i>ñalaja</i>		
	plural	dual		
1	<i>ηalu</i>	<i>ηařu</i>	plural	dual
2	<i>wulu</i>	<i>wuřu</i>	<i>ηalaja</i>	<i>ηařaja</i>
3	<i>yilula</i>	<i>yiiřula</i>	<i>wuluja</i>	<i>wuřuja</i>
			<i>yiluja</i>	<i>yiiřuja</i>

NOTE: All 3rd person non-singular forms are found also with /u/ in the first syllable: *yulula*, *yuřula*, *yuluja*, *yuřuja*.

- (14) *gala* *nda* *bařagal* *niba*
where CONJ spear-NOM him
'Where is his spear?'
- (15) *η-ađi-na-gunu* *ñamba*
I-come-PAST-FROM you
'I came for you.'
- (16) *ηa-mumba-n* *niba*
I-do-PAST him
'I said/spoke to him.'

The emphatic or direct pronoun is not obligatorily present in any clause, as pronominal prefixes on substantives or pronominal affixes on verbs usually signal the subject and sometimes referent of the clause. A brief account of these pronominal affixes follows in section 1.C. Together with them, direct pronouns can be used for the subject of an equational clause, and for any NP that a verb pronominal affix derives from (that is, S_i, S_t, and with direferential verbs object or dative object according to verb). They are also used whenever a pronoun is placed at the beginning of the clause or phrase for emphasis, and can thus replace the genitive or indirect pronoun.

- (17) *ηina* *ηa-mařa* 'I am a Mara person.'
I I-Mara
- (18) *ηina* *η-ała* 'I am going.'
I I-go-PRES

- (19) *nula yay g-ař-řada-n-na* 'I hit him/it.'
him hit ϕ -I-do-PAST-him
- (21) *řangana řuř guř-gu-muda-ya?*
you-sg. return you-them-give-PAST
'Did you give it back to them?'
- (22) *řandřini-řa nda řina řayi řuwi ne-mbe-řa nda wubu?*
what-GEN CONJ me not send he-do-SUBJ CONJ fire
'Why didn't he send me any fire?'

1.c. Pronominal affixes

Substantives can be prefixed with pronominal affixes; the prefix signals subject and the prefixed word becomes the predicate in an equational clause. No prefix is required for third person singular subject other than what is already present on the substantive as a gender prefix.

- (23) *yamini* 'It's big.'
big
- (24) *yil-yamini* 'They are big.'
they-big
See also (17).

Alawa has two sets of auxiliary verbs, the monoreferential (MR) with pronominal prefixes to indicate person and number of subject (S_i or S_j) with no distinction, and the differential (DR) with pronominal affixes (mostly prefixes, but some suffixes in third persons) indicating person and number of subject (usually S_i) and object or dative object (according to verb). The MR prefixes are identical with the substantive pronominal prefixes except in third person singular; the DR subject prefixes with third person singular object or dative object differ from the MR prefixes only in first and third person singular. The third person singular masculine suffix of a DR verb is omitted when the object NP has been replaced by a clause, or with a few DR verbs when the object can be omitted from deep structure (for example 'see' as an act with no object, as in 'he sees well'). Occasionally DR verbs with a third singular masculine suffix are intransitive, and the suffix is a dummy one. Some number and person distinctions, present in all MR pronominal affixes, are lost in many DR affixes; for example, *wuřgu-* (see (21)) indicates 'you' (number unspecified) acting on 'them' (dual or plural), *řuřgu-* indicates 1st sg acting on 2nd dl, 1st non-sg acting on 2nd or 3rd non-sg, and *yinbiř-* indicates 3rd non-sg acting on 3rd non-sg.

1.d. The conjunction *nda*

There is in Alawa a conjunction *nda* which occurs optionally. With very rare exceptions in the data it occurs:

- (i) linking S_i and predicate of non-verbal clauses;
- (ii) linking verb phrase and subject (S_i) of an intransitive clause;
- (iii) linking verb phrase and object or dative object of a transitive clause, whether the verb is MR or DR;
- (iv) linking partitive tagmeme and verb phrase;
- (v) occasionally with subject of transitive clauses not marked for ergative case (that is, with emphatic pronoun, uninflected demonstrative, or plural noun).

It therefore does not occur:

- (vi) between substantive or verb phrase and an indirect pronoun;
- (vii) with noun phrases marked for ergative case.

It is associated with the noun phrase, not the verb phrase, and may precede or follow the noun phrase (or its substitute, an embedded clause).

- (25) *řgiggarř nda yamini*
grinding stone CONJ big
'The *nggingarr* is the large grinding stone.'
- (26) *nda řidawari řadu yib*
CONJ name her Eve
'Her name was Eve.'
- (27) *ninda nda mandi yalřun-řa*
here CONJ no lilyseed-GEN
'There is no lilyseed here.'
- (28) *řandula nda ař-mumba-n niba e'e'?*
she CONJ she-say-PAST him hey
'She said to him "hey!"'
- (29) *řal ϕ -a-řa-na nda ninda benda*
talk he-be-PAST-him CONJ this above
'He was talking to the one above.'
- (30) *miyad miyad řil-uřala nda dina yil-a-řa-na*
move around they-go-PAST CONJ dinner they-eat-PAST-it
'They were moving around eating dinner.'
- (31) *yalřun nda wagu yil-be-ři*
lilyseed CONJ rub they-do-PRES
'They rub the lilyseed.'
- (32) *wiř g-eř-e-nu nda wiřmuř*
get ϕ -I-do-PRES-it CONJ wire
'I get the wire spear.'
- (33) *řguluř nda řalbi guř řiř-a-řa-n*
eye CONJ far watch they dl-do-PUNCT-PAST
'They two saw a long way.'
- (34) *guř řul-a-řa-n řinda nda dragdu yiluřa wud na-ri*
watch we-do-PUNCT-PAST here CONJ tractor them rest it-be-PAST
'We saw their tractor resting there.'

See also (3), (4), (14), (22).

The same conjunction can be found within embedded clauses replacing or expanding noun phrases, and its distribution is the same in these.

- (35) *guř g-ař-a-řa-n yeř nda mululbiři*
watch ϕ -I-do-PUNCT-PAST stick up CONJ porcupine
'I saw the porcupine sticking up.'
- (36) *gaya řul-ne-yi yiluřa nda yilařguliba yil-wuřgu-wuřgularř*
hear we(incl)-be-FUT them CONJ those PL-REDUP-old man
'We will listen to those old men.'
- (37) *dul ařg-a-řa-n-na nda nulři mama nda řugurř*
find she-do-PUNCT-PAST-it CONJ that fruit CONJ sacred
'She found that food that was forbidden.'
- (38) *řugurř nda mama mbuřgandi nda nulři ruwu řir na-ri*
sacred CONJ fruit in middle CONJ that tree stand it-be-PAST
'The fruit in the middle, of that tree standing there, is forbidden.'

In mutually exclusive distribution with *nda* is a certain intonation pattern

considered as its functional substitute. This pattern is most common in equational clauses, and less commonly occurs at the end of verbal clauses. It consists of a rising intonation medially in the phonological phrase terminated by a glottal stop, followed then by a fall; it is symbolised by /:/.
Generally *nda* occurs in about half the situations where it is possible. Where it may occur with a phrase before the verb, it occurs only 30–40 per cent of the time; where it may occur with an object phrase following the verb it occurs about 70–80 per cent of the time; where it may occur with a subject phrase following the verb it appears to occur more frequently than not. Objects or dative objects when present precede the verb slightly more often than they follow the verb, so that this suggests that for the object to precede the verb is the unmarked or normal order.

2. Substantivising suffixes

Alawa has some substantivising suffixes which may occur on verb roots, converting them to adjectives which may then be used predicatively. They are:

- (i) the stative suffixes *-mayin* and *-mañda* (no apparent difference in meaning, choice determined by verb particle) which only occur in the qualitative or stative batteries;³
- (ii) the negative stative suffix (called negative passive in Sharpe (1972)) *-mañdawanda*, which has been found on intransitive stative or qualitative verb particles, the instrumental transitive battery and the quotative battery;
- (iii) the active suffix *-ñuwal* which has been found with the transitive qualitative verb particle *galuř*, sensation verb particles (not transitive), action verb particles, instrumental transitive verb particles, transitive change of state verbs, and quotative verbs;
- (iv) the purposive suffix *-ñiyi* which has been found on transitive verb particles to indicate that the item to which the word is applied should have that action applied to it (transitive action and instrumental transitive verb particles) or is suitable for that action (instrumental qualitative verb particle), or that the action is purposed (transitive action);
- (v) the locative case suffix *-ñda*, allative *-ñdiřu* 'to' and ablative *-ñdiyumu* 'from' which have been found on the verb particle *law* 'across', and may well occur on other motion verb particles. Examples are not given as locative case is outside the scope of this paper.

Examples of substantivising suffix use are given below.

- (i) *gulgmayin* 'heavy'
bargmañda 'sharp nosed'
dewumayin 'white'
widmayin 'black'
galuřmayin 'round for water' (trans. particle)
- (ii) *gulgmañdawanda* 'not heavy' (stative)
yañmañdawanda 'unkillable' (instrumental transitive)
ñalmañdawanda 'not talkative' (quotative)
ña-guñ-mañdawanda niba 'I didn't see him' (trans. action)
I-watch-STATIVNEG him
- (iii) *angaluřñuwal* '(woman) always getting water' (trans. qualitative)

- liřñuwal* 'having pain' (sensation)
niđ niđñuwal 'having headache' (sensation)
ñalañuwal 'crybaby, always crying' (action)
wag wagñuwal 'always laughing' (action)
yaññuwal 'always hitting' (instrumental transitive)
dañalñuwal 'always sick' (trans. change of state)
ñalñuwal 'always talking' (quotative)
ga gañuwal 'always calling out' (quotative)
- (iv) *luđuluđu galuř-ñiyi* 'The cooliman is for getting water.'
cooliman round-PURP

na-wuđala daw-ñiyi 'He went to fish.'
he-go-PAST catch-PURP

ñam ñamñiyi 'good to eat, edible'

wiřđi yañ-ñiyi 'Mosquitoes should be killed.'
mosquito hit-PURP

Certain verb batteries in Alawa have both transitive and intransitive (usually agentless) clauses, different auxiliaries being used for these (except under (e) below). However the transitivity of the auxiliary is often determined by the verb particle it occurs with, although most auxiliaries have a 'preference' for a particular transitivity. Batteries shown below have both transitive and intransitive kernels.

- (a) The instrumental qualitative verb *galuř* 'round for water'.
(39) *luđuluđu galuř n-e-ni*
cooliman round it-be-PRES
'The cooliman is round for water.'
- (40) *ař-giřiya galuř ař-g-a-n-na nda ñugu luđuluđ-iř*
FEM ERG-woman round she-do-PAST-it CONJ water cooliman-ERG
'The woman got the water with the cooliman.'
- (b) The transitive change of state battery, verb particles *mud* 'break', *ñawuř* 'drown', *dañal* 'sick, die', *diwan* 'cook in ashes', *buđa* 'cook', etc. Verb particles in this battery are often repeated in successive clauses in a narrative, first with the transitive kernel, then with the intransitive.
(41) *lilmi-ři dañal n-uřga-n nda mamař-wař, dañal na-yima-n*
man-ERG die he-cause-PAST CONJ spike-HAVING die he-go-PAST
'The man killed the porcupine, it died.'
- (42) *(ař-giřiya) diwan g-eřge-ñede-ñu-nu (nda aga wub-iř),*
(FEM ERG-woman) cook ϕ -she-do-PRES-it CONJ fish fire-ERG
diwan ne-ñe-ni . . .
cook it-be-PRES
'She cooks it in the ashes, it cooks, . . .'
- (c) Certain actions, usually intransitive, can be made transitive by choice of a special auxiliary verb, usually *ařiga* 'go towards'.
(43) *lilmi wag wag n-e-ni*
man laugh he-be-PRES
'The man is laughing.'
- (44) *lilmi-fi wag ϕ -ařig-a-n-na nda yadađa*
man-ERG laugh he-to-do-PAST-him CONJ child
'The man was laughing at the child.'

(d) One example of a transitive action being made into a causative action has been found. Whereas *uřga* 'cause to' usually occurs to make an intransitive verb particle transitive (unless a DR auxiliary is used), *muda* 'give' is used here. The object cannot be expressed in this causative clause.

- (45) *lilmi-ři mař na-mba-n nda muwađa*
man-ERG carry he-do-PAST CONJ canoe
'The man carried the canoe.'
- (46) *lilmi-ři mař an-muda-ya-řuřu nda an-giřiya*
man-ERG carry he-give-PAST-her CONJ FEM-woman
'The man made the woman carry.'

(e) Some verb particles may occur in both ergative-nominative and nominative-dative (purposive or genitive) frames. They are classified here as action state verbs, and include *guň* 'watch', *mabin* 'remember, think', *đaw* 'feel for, catch (fish)'. For the two forms the auxiliary remains the same, but the object affix is dropped (all three occur with DR auxiliaries). The nominative-dative frame always indicates that the goal has not been attained. *guň* 'watch, see' may also be used intransitively without the genitive item in the sense of 'see'; here the partitive *řguluř* 'eye' may occur.

- (47) *lilmi-ři guň g-φ-a-n-na nda giřimbu*
man-ERG watch φ-he-do-PAST-it CONJ kangaroo
'The man saw the kangaroo.'
- (48) *lilmi guň g-φ-a-nda giřimbu-yi*
man watch φ-he-do-PAST kangaroo-GEN
'The man was watching for kangaroos.'
- (49) *lilmi řguluř niba řayi yumař guň g-φ-a-ndař*
man eye him not good see φ-he-do-SUBJ
'The man has poor sight.'
- (50) *lilmi-ři đaw a-řada-n-na nda aga*
man-ERG catch he-do-PAST-it CONJ fish
'The man caught some/a fish.'
- (51) *lilmi đaw a-řada-ňa aga-yi*
man catch he-do-PAST fish-GEN
'The man was feeling for fish.'
- (52) *mabin g-φ-a-nda-řuřu*
think φ-he-do-PAST-her
'He was thinking of her.'
- (53) *mabin g-φ-a-nda . . .*
think φ-he-do-PAST
'He was thinking.'

3. Speech reporting

For sentences translated *X told Y to do Z*, the only forms found in Alawa are *X told Y 'do Z'*, and, if the action is inferrable from the noun, *X told Y Z-GEN*.

- (54) *lilmi-ři ga na-mba-n (niba) wiđ g-ali nda muwađa*
man-ERG call he-do-PAST (him) get φ-bring-IMPER CONJ canoe
'The man called out (to him): "Bring a canoe".'

There are embedded intransitive clauses replacing an object NP, and here, where the matrix clause auxiliary verb is DR, the object suffix is dropped. No embedded transitive clauses have been found replacing object NPs.

- (55) *đul řul-a-řa-n-na* 'We found him/it.'
find we-do-PUNCT-PAST-it

Compare with:

- (54) *guň řul-a-řa-n ninda nda dragđu yilřa wud na-ři*
see we-do-PUNCT-PAST here CONJ tractor them rest it-be-PAST
'We saw their tractor standing there.'
- (56) *guň g-ař-a-řa-n-na nda mululbiři*
see φ-I-do-PUNCT-PAST-it CONJ porcupine
'I saw the porcupine.'
- (57) *guň g-ař-a-řa-n yeł nda mululbiři*
see φ-I-do-PUNCT-PAST stick up CONJ porcupine
'I saw the porcupine sticking up.'

Relative type clauses are often marked by the phrase linking conjunction *gada*, which may also link adjoined clauses describing time or location to the matrix clause. In the examples shown below of relative type clauses, the adjoined clause has the same object as the main clause.

- (58) *geł geł yil-a-řa-n-na nda malayin niba gada mař*
run away with they-do-PAST-it CONJ belongings him REL carry
na-mba-la
he-do-PAST
'They ran away with his belongings that he was carrying.'
- (59) . . . *nagul-yi bařagał-da wulađi wilmuř gada milař yil-uđala-gay*
another-ERG spear-ERG like wire REL make they-go-PAST-HABIT
' . . . with another spear, like the wire spear that they used to make.'

4. Subordinate clauses

Other subordinate clauses exist in Alawa, linked by the peripheral phrase linking conjunction *gada* (as described above), by subordinating conjunctions *mal* 'because', *ala* 'so that', and double conjunctions *mal gada* 'because' and *gada ala* 'if'. With (*gada*) *ala* the subordinate clause verb is always in future tense, either indicative or subjunctive, but there is no difference in marking of subject and object.

5. Topic marking and ergativity

The conjunction *nda* was designated in Sharpe (1972) as the topic linking conjunction, which label still seems appropriate. By topic is meant the main focus of interest of the clause, the item commented on in the remainder of the clause. The 'feel' gained from intonation and stress patterns often suggests that the phrase marked or potentially marked by *nda* is the topic; if this is so the topic is always an NP not marked for ergative case, and almost always is S_p , object or dative object.

Discourse level analysis appears to reinforce the case for *nda* marking topic. Usually in discourse a common item appears as subject or object of a string of sentences (for example, in a travelogue 'we' in 'we went across, and we went on', etc., or in a process description 'lilyseed' in 'we take the lilyseed, and we pound it, we soak it, then it is cooked', etc.). The evidence at present suggests that *nda* only occurs:

- (i) when an NP (usually S_p or object) occurs which introduces a new item, which then appears expressed or understood in a further string of sentences;

- (ii) in a sentence almost immediately following a sentence with *nda* as in (i), this second sentence echoing the first, with the same NP marked with *nda*.

Again, *nda* does not occur in all spots where there is a change of common item, but it appears to occur in more than half such occurrences. A short sample text is appended showing typical use of *nda*.

If further study confirms the above impressions, it is a strong case for the language being syntactically ergative. However study of discourse structure in unrelated languages (that is, non-Aboriginal) could also shed some light on discourse level topics and their marking.

The related language Mara has an optional particle *nana* preceding nouns, which appears to be used very similarly to *nda* in Alawa. Warndarang has a suffix *-gu* after nasals and stops, *-u* after /l/, /r/, /r̄/, *-yu* after /i/, *-ñu* after other vowels and semivowels; this suffix could, on very limited evidence, have a similar distribution, but the evidence is very inconclusive.

Appendix Text AP: On finding honeycomb

INTERVIEWER: Could you tell me how to find sugarbag?

INFORMANT: [1] *ruw-iř ŋul-ala* --- [2] *bařawad ŋul-e-ni* ---⁴ [3] *bařawad ŋul-ala* --- [4] *ruwu nda ŋul-e-řig-e-nu* *guñ* [5] *ruwu nda guñ*
 tree-LOC we-go-PRES hunt we-be-PRES hunt
 we-go-PRES tree CONJ we-to-do-PRES-it watch tree CONJ watch
ŋul-e-nu: [6] *guñ ŋul-e-nu bedi* --- [7] *nulu diwu n-ala*
 we-do-PRES-it watch we-do-PRES-it up there fly it-go-PRES
 [8] *ya nundiya nda wuđu*: [9] *mal ŋa-wiña*. [10] *mal n-ala bedi* ---
 yes there CONJ honey up I-go-FUT climb he-go-PRES up
ninda. [11] *ruđ g-e-ŋede-ñu-nu leřb*. [12] *dum g-φ-e-řig-e-nu*
 here chop φ-he-do-PRES-it break down φ-it-to-do-PRES-it
wañđuřu yeđ mbalg-iřu [13] *dum n-ala: muřu dađa ne-mbe-li* ---
 tomahawk drop ground-ALL down he-go-PRES okay chop he-do-PRES
dum g-e-ŋede-ñu-nu --- *muřu*. [14] *ŋalaluŋuñi ruđ g-e-ŋede-ñu-nu leřb*
 split φ-he-do-PRES-it okay underneath chop φ-he-do-PRES-it break
 [15] *muřu dum g-e-ŋede-ñu-nu, dum g-e-ŋede-ñu-nu* --- *banigin gayi*
 okay split φ-he-do-PRES-it split φ-he-do-PRES-it billy another
wiđ, lun. [16] *muřu led g-φ-e-ñu-nu*. [17] *led g-φ-e-ñu-nu* --- *banigin-diřu*
 get put okay fill φ-he-do-PRES-it fill φ-he-do-PRES-it billy-ALL
muřu. [18] *muřu duđ ŋa-wiña mbuđ-iřu, ne-mbe-li*: [19] *n-ala* ---
 okay okay return I-go-FUT camp-ALL he-do-PRES he-go-PRES
mbuđ-iřu. [20] *an-giřiya niba: an-giřiya niba: a-mudi-ñu-ŋuřu gada*
 camp-ALL FEM-woman him FEM-woman him he-give-PRES-her REL
yalbun-diřu ař-uđala: [21] *yadađa yiluŋa yil-mudi-ñiři* (yin-mudi-
 lilyseed-ALL she-go-PAST child them they-give-PRES(?) (them-give-
 ñi-řayga?) *muřu*. [22] *banigin wiđ*. [23] *yalga ne-mbe-li muřu wiđi, lun*
 PRES-she?) okay billy get fill up he-do-PRES okay grass put
n-uřge-li ŋaluŋun. [24] *mbuřguřgandi. mbagař nda bayebedi*
 he-cause-PRES underneath in the middle honeycomb CONJ on top
lun g-φ-e-ñu-nu [25] *ŋalñin dululu ne-mbe-li andabuřgi wiđi-řu*.
 put φ-he-do-PRES-it honey leak it-do-PRES onto grass-ALL

[26] *dum n-ala wad g-φ-e-nu nda ndaņigi ruwu n-ala* ---
 arise he-go-PRES leave φ-he-do-PRES-it CONJ that tree he-go-PRES
 [27] *bađa nagul ruwu guñ g-φ-e-nu*. [28] *ŋarawañ g-e-ŋede-ñu-nu*
 later another tree watch φ-he-do-PRES-it around φ-he-do-PRES-it
guñ guñ g-φ-e-nu --- *mandi*. [29] *wuđu-wanda*. [30] *gařđal*
 watch φ-he-do-PRES-it nothing honey-NOT HAVING pass by
n-ala. [31] *n-ala* --- *ninda gayi ruwu*. [32] *guñ g-φ-e-nu* ---
 he-go-PRES he-go-PRES here another tree watch φ-he-do-PRES-it
nulu gada diwu diwu n-ala bayenda. [33] *ruđ g-e-ŋede-ñu-nu*
 there REL fly he-go-PRES above chop φ-he-do-PRES-it
 [1] In a tree. [2] We go looking for it, [3] we go looking for it, [4] we look
 for a tree and watch it. [5] We watch the tree. [6] We look up, [7] ah some-
 thing is flying there, [8] yes there is the honey; [9] 'I'll climb up.' [10] He
 climbs up to the spot. [11] He chops it, and breaks it off. [12] It drops to the
 ground on top of the tomahawk. [13] He goes down, OK he cuts it, splits
 the wood [14] underneath, he chops it and it breaks. [15] OK, he splits it,
 he splits it, he gets another billy and puts it down. [16] OK he fills it. [17] He
 fills the billy up, OK. [18] 'OK now, I'm going back to camp,' he says.
 [19] He goes back to camp. [20] He gives it to his wife, who had gone out for
 lilyseed. [21] She gives it to their children OK, [22] and gets a billy. [23] He
 fills it up, puts grass underneath. [24] He puts the honeycomb in the middle
 on top. [25] The honey leaks onto the grass. [26] He sets out and leaves
 that tree. He walks and walks, [27] and later he watches another tree.
 [28] He walks around it and watches, but there is nothing. [29] It has no
 sugarbag. [30] He passes it by. [31] He goes on, here is another tree. [32] He
 watches it, there is something flying about. [33] He cuts it off.

Notes

1. *ndiyaya* 'foot' is one of four irregular nouns found; they are all optionally regular.
2. Glottal stop occurs intonationally and in a few non-phonemic sentence words.
3. For more details on verb batteries, see Paper 88, this volume.
4. Punctuation conventions are:
 ./ statement, falling pitch finally.
 /: statement, rising pitch finally.
 /- - / high pitch on lengthened preceding vowel, signifying continuous action.

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70. Thangu and Atjnjamathanha

Bernhard Schebeck

This topic will be investigated separately for two Australian languages: for a dialect of the north-east Arnhem Land group of dialects, and for Atjnjamathanha in South Australia.

Transitivity, ergativity and voice in Thangu

0. Introduction

In the present paper I use material of various dialects of the Thangu [T̪aŋu] sub-group of dialects in north-eastern Arnhem Land.¹ I shall adhere to the phonemisation² which interprets the glottal stop as a syllable feature, marked by the grave accent '̀', appearing above the vowel of the syllable at the end of which the glottal stop is realised phonetically. Hence:

/c̣ṿ/ ⇒ [cṿʔ]
 /c̣ṿc̣/ ⇒ [cṿc̣ʔ]
 /c̣ṿcc̣/ ⇒ [cṿcc̣ʔ]²

Moreover, I interpret the opposition between stops, occurring in some other dialects as a difference between 'lenis' vs. 'fortis' or as a difference between voiced and voiceless stops, as an opposition between simple and geminated stops. In T̪aŋu the geminated stops are realised as fortis, voiceless, unaspirated stops. In the relevant positions,³ the simple stops are realised as follows:

$\left\{ \begin{smallmatrix} /t/ \\ /ṭ/ \end{smallmatrix} \right\} \Rightarrow [ṭ]$; $\left\{ \begin{smallmatrix} /p/ \\ /p̣/ \end{smallmatrix} \right\} \Rightarrow [p̣]$; $/t/ \Rightarrow [d]$ ³

1. Case morphology

(a) NOUNS. In the following list I give the cases appearing in the Thangu dialects. The part of the label—which I will not try to justify—which is written in capital letters will be used throughout this paper as an abbreviation in translations and in other references. After the label, I indicate the most important functions a given case suffix indicates.⁴

1. - ϕ (NOMINATIVE): Subject of intransitive verbs; subject and predicate in a nominal sentence.⁵
2. - $\dot{N}a$ (ACCUSATIVE): Direct object of transitive verbs.⁵
3. - $\dot{T}u$ (ERGATIVE-INSTRUMENTAL): Agent of transitive verbs; instrument of intransitive and transitive verbs; DIRECTIVE 'to(wards)' with place names.
4. - Ku (GENITIVE-DATIVE): Indirect object with transitive and with intransitive verbs;⁶ possessive.
5. - ηa (LOCATIVE): Location 'in, on, at' a place or something.
6. - li (DIRECTIVE): Direction 'to(wards)' a place or something.
7. - $\eta u=r\dot{u}$ (EXCESSIVE): Direction '(away) from' a place or something.
8. - $muru$ (TRANSGRESSIVE): Indicates 'movement through' a place or something.
9. - $Pu=y$ (RELATIVE): Indicates an 'absolute locative' with place names. Also transformed out of a LOC. or of an INS.
10. - $Ku=\eta$ (ABLATIVE): Agent in a nominalised transitive sentence.

11. - $Ku=r\dot{a}$ (LOC₂): Location 'at, near' somebody.
12. - $Ku=l$ (DIR₂): Direction 'to(wards)' somebody.
13. - $Ku=r\dot{u}$ (EX₂): Direction '(away) from' somebody.⁷

The following 'residual' suffixes are not considered any further here:⁸

14. - ηy (perhaps an old 'genitive' or, rather, 'partitive'?)⁹.
15. - $r\dot{a}$ (appearing in case 11. Notice that the LOC. 5 is - $\eta u=r\dot{a}$ in several dialects, including Kuppapuyŋu, described in Lowe (1962)).
16. - $r\dot{u}$ (appears in cases 7. and 13.).
17. - la (perhaps an old LOC., appearing in the demonstrative pronoun below).
18. - Pa (a residual G.=D. suffix, appearing occasionally, for example, in $y\dot{u}l-Pa$ 'whose?', besides $y\dot{u}l-Ku$ 'whose?').
19. - mi ('having, possessing' is not a 'residual suffix', but not considered a 'case' suffix at the same level as, for example, the G.=D. suffix - Ku , given above as case 4.).

(b) PRONOUNS

(i) I give here the complete list of forms for the *personal pronoun*. We need to set out only three forms: 1./3. refers to the NOM., marking the pronominal subject of an intransitive verb, and also the pronominal agent of a transitive verb. 2. denotes the ACC., and O. denotes the 'obliquous stem', on which all the other case-endings are added. The other numbers refer to the cases numbered out in the above list of cases. Furthermore, I. denotes first person, II. the second person, and III. the third person. In the dual and plural we have to distinguish between I.i. 'first person inclusive' and I.e. 'first person exclusive'.¹⁰

	1./3.:	2.:	O.:
SINGULAR:	I. $\eta a=ya$	$\eta\dot{a}=\dot{N}a$	$n^y a-$
	II. $\eta u=nu$	$\eta un=\dot{N}a$	$\eta u=\eta-$
	III. ηan	$\eta an-\dot{N}a$	$\eta an-$
DUAL:	I.i. $\eta a=li$	$\eta a=li-\dot{N}a$	$\eta a=li=\eta-$
	I.e. $\eta a=li-n^y u$	$\eta a=li-n^y u-\dot{N}a$	$\eta a=li-n^y u=\eta-$
	II. $\eta u=ma$	$\eta u=ma=li-\dot{N}a$	$\eta u=ma=li=\eta-$
	III. $\dot{t}uppa=l$	$\dot{t}uppa=li-\dot{N}a$	$\dot{t}uppa=li=\eta-$
PLURAL:	I.i. $\eta a=l=ma$	$\eta a=l=ma=li-\dot{N}a$	$\eta a=l=ma=li=\eta-$
	I.e. $\eta a=nappu$	$\eta a=nappi=li-\dot{N}a$	$\eta a=nappi=li=\eta-$
	II. $n^y i=li$	$n^y i=li-\dot{N}a$	$n^y i=li=\eta-$
	III. $\dot{t}ana=l$	$\dot{t}ana=li-\dot{N}a$	$\dot{t}ana=li=\eta-$

The case-endings 4., 10.–13. are added to O. The suffix 13. is added to O. before the suffix 8. is added. For the suffix 9. see the following.

(ii) The *emphatic form of the personal pronoun*, also used as a *reflexive-reciprocal pronoun*, is as follows:

	1./3.:	2.:
SINGULAR:	I. $\eta a=ya-Pi$	$\eta\dot{a}=\dot{N}a-Pi-\dot{N}a=y$
	II. $\eta u=nu-Pi$	$\eta un=\dot{N}a-Pi-\dot{N}a=y$
	III. $\eta an=Pa=y$	$\eta an-\dot{N}a-Pi-\dot{N}a=y$
DUAL:	I.i. $\eta a=li-Pi=Pa=y$	$\eta a=li-\dot{N}a=y$
	I.e. $\eta a=li-n^y u=Pa=y$	$\eta a=li-n^y u-\dot{N}a=y$

	II.	$\eta u=ma-Pi$	$\eta u=ma-li-Na=y$
	III.	$\int uppa=li-Pa=y$	$\int uppa=li-Na=y$
PLURAL:	I.i.	$\eta a=l=ma-Pi$	$\eta a=l=ma-li-Na=y$
	I.e.	$\eta a=nappu-Pa=y$	$\eta a=nappi=li-Na=y$
	II.	$n^y i=li-Pa=y$	$n^y i=li-Na=y$
	III.	$\int ana=li-Pa=y$	$\int ana=li-Na=y$

Case 4. is formed by adding the G.=D. suffix $-Ku$ and then $-Pa=y$ (hence $-Ku-Pa=y$) to the O. given above. The other cases (that is, 9.-13. and 8., after the rule given above) are formed by adding the respective case-ending to this emphatic G.=D.¹¹

(iii) The interrogative-indefinite pronouns are: $y\tilde{u}l$ 'who?; somebody, anybody'; $\eta\tilde{a}$ 'what?; something, anything'.

The pronoun $y\tilde{u}l$ 'who?' forms the cases 1.-4. and 10.-13. by adding the suffixes given above for the noun; case 8. is formed by inserting first suffix 13., hence by adding $-Ku=\int u-muru$; the same rule applies to case 9., which is contracted into $-Ku=\int u=y$.¹² I have already mentioned above that besides the 'normal' G.=D. $y\tilde{u}l-Ku$ 'whose?', the 'residual' G.=D. $y\tilde{u}l-Pa$ 'whose?' is often used. The plural $y\tilde{u}l-Para-\phi$ is used as an indefinite form of address.

The pronoun $\eta\tilde{a}$ 'what?' forms the cases 1.-9. by adding simply the respective case-suffixes given above. The ACC. is regularly realised as $-\phi$. Case 7. has the alternative form $\eta\tilde{a}-wa\int i$, reminiscent of the forms of the far-distant demonstrative pronoun, given below. Derived from the pronoun $\eta\tilde{a}$ 'what?' are $\eta\tilde{a}-Pa$ 'such and such a thing, what is it?',¹³ and $\eta\tilde{a}-la-\eta$ 'at such and such a place, what's its name?'; the corresponding +HUM. form is $w\tilde{a}-la-\eta$ 'so and so, what's his name?',¹⁴ which is inflected like $y\tilde{u}l$ 'who?'.

The indefinite $\int ikka$ 'what is it?, I don't know', used as adjective with +HUM. and with -HUM. nouns, inserts the suffix $-\eta u$ (looking here like an adjectiviser) before adding the case-endings.

For the interrogative-indefinite pronoun $\eta a=la(-\eta a)$ 'where?' (with optional LOC. suffix), the following other forms were recorded:

6. $\eta a=la-m=pa=l$ 'where to?'
7. $\eta a=la-\eta u=\int u$ 'where from?'
8. $\eta a=la-\eta u=\int u-muru$ 'through which place?'
9. $\eta a=la-\eta u-Pu=y$ 'belonging to which place?'

(iv) There are four *demonstrative pronouns*. The forms which I label I. and II. correspond to the first and the second person of the personal pronoun (speaker vs. addressee); it will be seen that the distinction is not made for all cases. The distinction between the two far-distant deixes $\eta u-$ and $pa-$, labelled III. and IV. respectively, is unclear; it may have involved a distinction, for example, between 'visible' vs. 'non-visible'? This is not obvious today. I give here the full list of forms recorded, whereby the case-numbers correspond to the list given above:

I.:	II.:	III.:	IV.:
1. $\int a=\eta u-\phi$	} $\int u=wa=n-\phi$	$\eta u=\eta a-\phi$	$pa=\eta a-\phi$
2. $\int a=\eta u(-Na)$		$\eta u=\eta a(-Na)$	$pa=\eta a(-Na)$
3. $t^y i=\eta a-\eta(u-)$		$\eta u=\eta u-\eta$	$pa=yi-\eta$
4. $t^y i=\eta a-Ku(-ya)$		$\eta u=\eta u-Ku$	$pa=yi-Ku$
5. $t^y i=\eta a-l(a-\eta a)$		$\eta u=\eta a-l(a-\eta a)$	$pa=yi-\eta a\int a=\eta a-l(a-\eta a)$

6.	$\int a=m=pa=l$	$\int u=wa-li=l$	$\eta u=\eta a=m=pa=l$	$pa=\eta a=m=pa=l$
				$pa=na$ $pa=la-ya$
7.	$\int a-Ku=\int u$	$\int u=wa-li-\eta u=\int u$	$\eta u=\eta u-wa-\int i$	$pa=y-wa-\int i$
8.				
9.	$t^y i=\eta a-Ku(=\int u)-Pu=y^{15}$	$\eta u=\eta u-Ku(=\int u)-Pu=y$	$pa=yi-Ku(=\int u)-Pu=y$	
10.	$t^y i=\eta a-Ku(=\int u)-Ku=\eta^{15}$	$\eta u=\eta u-Ku(=\int u)-Ku=\eta$	$pa=yi-Ku(=\int u)-Ku=\eta$	
11.	$t^y i=\eta a-Ku=\int a$	$\eta u=\eta u-Ku=\int a$	$pa=yi-Ku=\int a$	
12.	$t^y i=\eta a-Ku=l$	$\eta u=\eta u-Ku=l$	$pa=yi-Ku=l$	
13.	$t^y i=\eta a-Ku=\int u$	$\eta u=\eta u-Ku=\int u$	$pa=yi-Ku=\int u$	

The pronoun IV. has for case 7. also the form $pi-wa-\int i$. This is doubtlessly derived from a 'residual deixis' pi ; cf. pi 'very very far away, very very high, a very very long time ago, etc.'. The case 3. of the deixis IV. is also used as a particle indicating a potentialis or a habitualis; the form $pi-la-\eta$, which looks like case 5. of the above-mentioned 'residual deixis' pi , usually marks an irrealis. Case 1. of the deixis IV. is used as particle introducing temporal ('when') or conditional clauses ('if'), and also introduces relative clauses.

It can be seen that most cases—excluding always the ACC. case, but including always the ERG.-INS. case and the ABL. case—are derived from what may be called the obliquus stem. Case 6. (DIR.) is always derived from the 'rectus stem', while there is some hesitation or irregular treatment for cases 5. (LOC.) and 7. (EX.). The typical +HUM. cases (of course with the exception of NOM. and ACC.) are always derived from the obliquus stem.

As already mentioned before, the NOM. of the deixis IV. $pa=\eta a-\phi$ is used as a relative particle. The necessary case-inflections are indicated on a pronoun (+HUM.) or on an NP:

- (1) $\int a=\eta u-\phi$ ($\eta an-\phi$) $\int aykka-\phi$ $pa=\eta a-\phi$ $y\tilde{u}l=\eta u-\int u$ $\eta an-Na$ $p\tilde{u}-ya-n$
this-NOM (he-NOM) woman-NOM that-NOM man-ERG he-ACC hit-Afs.-
'This is woman whom man hit.' Afv.
- (2) $\int a=\eta u-\phi$ $\eta ayi-\phi$ $pa=\eta a-\phi$ $\int aykka-\phi$ $t^y i=\eta a-Ku=y-\phi$ $\eta ayi-Pu=y-\phi$
this-NOM camp-NOM that-NOM woman-NOM this=obl.-REL₂-NOM
'This is place to which belongs woman.' camp-REL-NOM¹⁵

(c) COMPOUND CASES. Certain of the above case-suffixes have been considered to be compound suffixes. There are, however, a few compound cases in the language which have not been mentioned yet. In example (2) above, the REL. suffix is followed by the NOM. The suffix $-Pu=y$ is one of these three case suffixes, which may combine with another case; the other two suffixes are $-Ku$, the G.=D. (case 4. in the above list) and the ABL. $-Ku=\eta$ (case 10. in the above list). Although examples for all combinations are not yet available, the material collected so far indicates that the rule for the REL. is simple:

- (1) $-Pu=y+K. \Rightarrow -Pu=y-K.$

where K. denotes 'case'.

This rule is complicated at least in the following two instances:

The ACC. is always realised as $-\phi$.

The G.=D. is expressed by the suffix $-\eta u$, when $-Pu=y$ functions as the 'absolute LOC.' on place-names:

- (3) $y\tilde{u}l=\eta u-\phi$ $t^y \tilde{a}l$ $yirrkala-Pu=y-\eta u$ 'Man likes Yirrkala.'
man-NOM want N.=loc.-REL- ηu
- but:
- (4) $y\tilde{u}l=\eta u-\phi$ $t^y \tilde{a}l$ $yirrkala-Ku$ 'Man likes Yirrkala.'
man-NOM want N.=loc.-G.=D.

In the list which follows, I use the numbers given in the above list for the simple cases. The first line indicates to which suffix a given case is added:

1./2.	⇒	-Ku-φ	⏟	-Ku=η-φ
3./7./13.	⇒	-Ku=ɾu		
4.	⇒	-Ku(=ɾu) ¹⁶		
5./11.	⇒	-Ku=ɾa		
6./12.)	⇒	-Ku=l		
8.	⇒	-Ku=ɾu-muru		
9.	⇒	-Ku=ɾu-Pu=y ¹⁵		
10.	⇒	-Ku=ɾu-Ku=η ¹⁵		

The most interesting feature of this list, as far as it is as yet verified, lies in the fact that the compound forms of the G.=D. and of the ABL. are identical. Another interesting point lies in the fact that there is not any more a morphological difference between +HUM. and -HUM. suffixes, the +HUM. suffixes being obligatorily used; this seems plausible in view of the two suffixes (namely G.=D. and ABL.) involved in these rules. Finally, it has to be noticed that NOM. and ACC. are identical; in other words, these 'compound cases' exhibit a NOM.-ERG. morphology. Examples will be given further below (see section 3). No combinations are known which are more complex than those given here.¹⁷

2. Simple sentences

We may distinguish between nominal sentences and verbal sentences. Verbal sentences are either intransitive or transitive.

(a) NOMINAL SENTENCES consist of two NPs, one of which is obligatorily in NOM.:¹⁸

- (5) *ηa=ya-φ yūl=ηu-φ* 'I am Aboriginal.'
I-NOM man-NOM
- (6) *yūl=ηu-φ maɬakkarit^y-φ* 'Man is angry.'
man-NOM angry-NOM
- (7) *ηaɬta-φ yūɬtu-Ku-φ* 'Food is child's/for child.'
food-NOM child-G.=D.-NOM
- (8) *pūrum-φ ɬarppa-Pu=y-φ* 'Fruit is tree-fruit.'
fruit-NOM tree-REL-NOM
- (9) *kaŋa-φ yūl=ηu-Ku=η-φ* 'Spear is from man.'
spear-NOM man-ABL-NOM
- (10) *yūl=ηu-φ ɾaŋi-ηa* 'Man is on beach.'
man-NOM beach-LOC

There is another group of nominal sentences, which are transformed from underlying verbal sentences. These nominalised sentences will be dealt with separately further below.

(b) INTRANSITIVE SENTENCES consist minimally of an NP in NOM. and an intransitive VP, with various possible complements:

- (11) *taykka-φ ɾakkun^y-ɬi-n* 'woman died.'
woman-NOM dead-Inc.-Afv.
- (12) *taykka-φ ɾakkun^y-ɬi-n ɾiri-ɬu* 'Woman died through sickness.'
woman-NOM dead-Inc.-Afv. sickness-INS
- (13) *taykka-φ ɾakkun^y-ɬi-n ɾiri-Pu=y* 'Woman died through sickness.'
woman-NOM dead-Inc.-Afv. sickness-REL

- (14) *taykka-φ ɾakkun^y-ɬi-n ɾaŋi-ηa* 'Woman died at beach.'
woman-NOM dead-Inc.-Afv. beach-LOC

(c) TRANSITIVE SENTENCES consist minimally of an NP in ERG., another NP in ACC.,¹⁹ and of a transitive VP, with various possible complements:

- (15) *yūl=ηu-ɬu taykka-ŋa pū-ya-n* 'Man hit woman.'
man-ERG woman-ACC hit-Afs.-Afv.
- (16) *yūl=ηu-ɬu taykka-ŋa pū-ya-n ɬarppa-ɬu* 'Man hit woman with stick.'
man-ERG woman-ACC hit-Afs.-Afv. tree-INS
- (17) *yūl=ηu-ɬu warakkân-ŋa ŋā-ŋal ɬarppa-ηa* 'Man saw bird on tree.'
man-ERG meat-ACC see-Afv. tree-LOC
- (18) *yūl=ηu-ɬu yūɬtu-ŋa ku-ηa-n taykka-Ku* 'Man gave child to woman.'
man-ERG child-ACC give-Afv. woman-G.=D.

(d) Several TRANSFORMATIONS may operate on these verbal sentences:

(i) Every verbal sentence may be *nominalised*. In an intransitive sentence²⁰ the NOM. is preserved in the NP, and the verbal noun (VN) also takes the NOM. In a transitive sentence the ACC. is transformed into NOM., the ERG. is transformed into ABL. (+NOM.), and the VN takes the NOM. While REL. seems to be preserved under a nominalising transformation, INS. is transformed into REL. while the rules for the locative cases are more complex.²¹ The two rules for 'simple' intransitive and transitive sentences may, therefore, be resumed as follows:

(II) NP₂-NOM.+VP_i ⇒ NP₂-NOM.+VP_i-Nom.-NOM.

(III) NP₁-ERG.+NP₂-ACC.+VP_i ⇒ NP₂-NOM.+VP_i-Nom.-NOM.
+NP₁-ABL.-NOM.²²

The VN is formed by adding—after the verb-class to which a given verb belongs—the Nom(inalising) suffix *-Na=ɾa* or *-n=ta* to the verb stem+stem suffix.²³

These two rules yield the following examples, which are obtained by applying the Nom. transformation to sentences (11)–(18) given above:²⁴

- (19) *taykka-φ ɾakkun^y-ɬi-ŋa=ɾa-φ*
woman-NOM dead-Inc.-Nom.-NOM
'Woman is dead/died.'
- (20) *taykka-φ ɾakkun^y-ɬi-ŋa=ɾa-φ ɾiri-Pu=y-φ*
woman-NOM dead-Inc.-Nom.-NOM sickness-REL-NOM
'Woman is dead/died through sickness.'²⁵
- (21) *taykka-φ ɾakkun^y-ɬi-ŋa=ɾa-φ ɾaŋi-ηa*
woman-NOM dead-Inc.-Nom.-NOM beach-LOC
'Woman is dead/died on beach.'
- (22) *taykka-φ pū-ya-n=ta-φ yūl=ηu-Ku=η-φ*
woman-NOM hit-Afs.-Nom.-NOM man-ABL-NOM
'Woman hit by man.'
- (23) *taykka-φ pū-ya-n=ta-φ ɬarppa-Pu=y-φ yūl=ηu-Ku=η-φ*
woman-NOM hit-Afs.-Nom.-NOM tree-REL-NOM man-ABL-NOM
'Woman hit by man with stick.'²⁵
- (24) *warakkân-φ ŋā-na=ɾa-φ yūl=ηu-Ku=η-φ ɬarppa-ηa*
meat-NOM see-Nom.-NOM man-ABL-NOM tree-LOC
'Bird seen by man on tree.'²⁶
- (25) *yūɬtu-φ ku-ηa-n=ta-φ yūl=ηu-Ku=η-φ taykka-Ku*
child-NOM give-Nom.-NOM man-ABL-NOM woman-G.=D.
'Child given by man to woman.'

(ii) The adding of the suffix *-mi* 'having'²⁷ to a VN gives to it a 'habitualis-potentialis' meaning. Again, this transformation may be applied to intransitive and to transitive sentences; this may be resumed in the following rules:
(IV) NP₂-NOM. + VP_i VN-*mi* NP₂-NOM. + VP_i-NOM.-*mi*-NOM.

- (V) NP₁-ERG. + NP₂-ACC. + VP_t VN-*mi* ⇒
(a) NP₂-NOM. + VP_t-Nom.-*mi*-NOM. + NP₁-G.=D.
(b) NP₁-NOM. + NP₂-φ-VP_t-Nom.-*mi*-NOM.²⁸

These rules yield the following examples:

- (26) *yūt̪tu-φ yakku-ya-MOD.* 'Child sleep.' VN-*mi* ⇒
child-NOM sleep-Afs.-MOD
(27) *yakku-ya-na=ra-mi-φ yūt̪tu-φ* '(Always) sleepy child.'
sleep-Afs.-Nom.-*mi*-NOM child-NOM
(28) *yūl=ŋu-ŋu kuya-ŋa nūkka-MOD.* 'Man eat fish.' VN-*mi* ⇒
man-ERG fish-ACC eat-MOD
(29) *kuya-φ nūkka-na=ra-mi-φ yūl=ŋu-Ku* 'Fish is edible to/for man.'
fish-NOM eat-Nom.-*mi*-NOM. man-G.=D.
(30) *yūl=ŋu-φ kuya-φ-nūkka-na=ra-mi-φ* 'Man is fish-eating/fish-eater.'²⁸
man-NOM fish-φ-eat-Nom.-*mi*-NOM

(iii) The *R*(eflexive-reciprocal) transformation may apply only to intransitive sentences with an indirect object and to transitive sentences: the (indirect or direct) object, having the same referent as the agent, is transformed into a NOM., and the agent is deleted. The *R*(eflexive-reciprocal) of the verb is formed by adding to the verb-stem + stem-suffix a suffix combination *-Na=ra-mi* for the group of verb-classes where the VN-*mi* is formed in the same manner; the group of verb-classes where the VN-*mi* is formed by the suffix-combination *-n=ta-mi*, has the R. *-n-mi*. We may resume the rules for intransitive sentences with indirect object and transitive sentences just given, in the following rule:

- (VI) { NP₁-NOM. + VP_i + NP₂-G.=D. } R.
{ NP₁-ERG. + NP₂-ACC. + VP_t } ⇒
NP₂-NOM. + VP-R.-MOD.

The following examples illustrate this rule:

- (31) *taykka-φ ŋat^y=ŋi-n taykka-Ku* R. ⇒
woman-NOM cry-Afv. woman-G.=D.
'Woman cried for/about woman.'
(32) *taykka-φ-Para-φ ŋāt^y=ŋi-ŋa=ra-mi-n*
woman-NOM-pl.-NOM cry-Nom.-*mi*-Afv.
'Woman cried for/about each other/together.'²⁹
(33) *yūl=ŋu-ŋu yūl=ŋu-ŋa pū-ya-n* R. ⇒
man-ERG man-ACC hit-Afs.-Afv.
'Man hit man.'
(34) *yūl=ŋu-φ pū-ya-n-mi-n* 'Man hit himself.'
man-NOM hit-Afs.-*n-mi*-Afv.
(35) *yūl=ŋu-φ-Para-φ pū-ya-n-mi-n* 'Men hit each other/had a fight.'
man-NOM-pl.-NOM hit-Afs.-*n-mi*-Afv.

By formulating rule (VI), operating with the concept of agent-deletion, not of object-deletion, we can easily cope with the fact that R. sentences, apparently construed as intransitive sentences in that the subject is in NOM., may have a direct object:

- (36) *yūl=ŋu-ŋu ŋā=wu-ŋa rakka-ra-n yūl=ŋu-Ku* R. ⇒
man-ERG story-ACC tell-Afs.-Afv. man-G.=D.
'Man told story to man.'
(37) *yūl=ŋu-φ-Para-φ ŋā=wu-ŋa rakka-ra-na=ra-mi-n*
man-NOM-pl.-NOM story-ACC tell-Afs.-Nom.-*mi*-Afv.
'Men told each other stories.'³⁰

(iv) The CAUS(ative) transformation applies to intransitive sentences only.³¹ In a CAUS. transformation the NOM. of the intransitive sentence is transformed into an ACC., while an ERG. NP is newly introduced. The verb adds a CAUS. suffix. Hence:

- (VII) NP₂-NOM. + VP_i ⇒ NP₁-ERG. + NP₂-ACC. + VP_{caus}

There are mainly three different CAUS. suffixes:

The suffix *-ma* is added after the stem-suffix, to verbs belonging to the large *-ŋu* class:³²

- (38) *ŋarppa-φ pak-ŋu-n* 'Tree broke.' CAUS. ⇒
tree-NOM break-Afs.-Afv.
(39) *yūl=ŋu-ŋu ŋarppa-ŋa pak-ŋu-ma-n* 'Man broke tree.'
man-ERG tree-ACC break-Afs.-CAUS-Afv.

Certain Inchoatives form the CAUS. by replacing *-ŋi* by *-ŋu-ma*:³³

- (40) *yūt̪tu-φ tiramu-ŋi-n* 'Child became man.' CAUS. ⇒
child-NOM man-Inc.-Afv.
(41) *yūl=ŋu-ŋu yūt̪tu-ŋa tiramu-ŋu-ma-n* 'Man made child man.'
man-ERG child-ACC man-Afs.-CAUS-Afv.

The suffix *-Ku* is typically the CAUS. of Inc. verbs or, in other words, it derives transitive verbs from nominal roots:³³

- (42) *taykka-φ rakkun^y-ŋi-n* 'Woman died.' CAUS. ⇒
woman-NOM dead-Inc.-Afv.
(43) *yūl=ŋu-ŋu taykka-ŋa rakkun^y-Ku-wa-n* 'Man killed woman.'
man-ERG woman-ACC dead-CAUS₂-Afv.

The CAUS₃ suffix *-ŋka* is always preceded by the suffix-combination *-Na=ra-mi* when added to a verb root. It is as yet unclear how to explain this fact:³⁴

- (44) *yūt̪tu-φ n^yina-n* 'Child was sitting.' CAUS. ⇒
child-NOM sit-Afv.
(45) *yūl=ŋu-ŋu yūt̪tu-ŋa n^yina-na=ra-mi-ŋka-n*
man-ERG child-ACC sit-Nom.-*mi*-CAUS₃-Afv.
'Man made child sit down.'

3. Complex sentences

Complex sentences may be formed either by using particles, or by juxtaposition, or by embedding of nominalised sentences (participial constructions).

(a) CO-ORDINATION is usually indicated by a particle, the most frequent ones being *ka* 'and' and *pala* 'and then'. When an NP-ERG. or an NP-NOM. of the first sentence is co-referential with the NP-ERG. or the NP-NOM. of the second sentence, the second NP-NOM./ERG. is deleted; the same rule applies when the NP-ACC. of two transitive sentences are identical, but not when an NP-ACC. and an NP-ERG. or NP-NOM are co-referential. In case that an NP-ACC. is deleted, it is usually pronominalised when the

particle *ka* 'and' joins the two sentences; pronominalisation instead of Del. is optional but quite common also in the other cases:

(46) *yül=ηu-φ yat^y-Tu-wa-n* 'Man shouted/screamed.'

man-NOM scream-Afs.-Afv.

(47) *taykka-φ yat^y-Tu-wa-n* 'Woman shouted/screamed.'

woman-NOM screamed-Afs.-Afv.

(48) *yül=ηu-Tu taykka-Na pū-ya-n* 'Man hit woman.'

man-ERG woman-ACC hit-Afs.-Afv.

By application of the Del(etion) rules outlined above, we obtained the following sentences:

(46) × (48) Del. (49);

⇒

(48) × (46) Del. (50);

⇒

(47) × (48) Del. (51);

⇒

(48) × (47) Del. (52);

⇒

(49) *yül=ηu-φ yat^y-Tu-wa-n ka taykka-Na pū-ya-n (ηan-φ)*
man-NOM scream-Afs.-Afv. and woman-ACC hit-Afs.-Afv. (he-NOM)
'Man screamed and hit woman.'

(50) *yül=ηu-Tu taykka pū-ya-n ka yat^y-Tu-wa-n (ηan-φ)*
man-ERG woman-ACC hit-Afs.-Afv. and scream-Afs.-Afv. (he-NOM)
'Man hit woman and screamed.'

(51) *taykka-φ yat^y-Tu-wa-n ka yül=ηu-Tu ηan-Na pū-ya-n*
woman-NOM scream-Afs.-Afv. and man-ERG he-ACC hit-Afs.-Afv.
'Woman screamed and man hit her.'

(52) *yül=ηu-Tu taykka-Na pū-ya-n ka ηan-φ(-ma) yat^y-Tu-wa-n*
man-ERG woman-ACC hit-Afs.-Afv. and he-NOM(-ma) scream-Afs.-Afv.
(*pa=ηa-ya-φ taykka-φ*)
(over=that-ya-NOM woman-NOM)
'Man hit woman and she screamed (that woman).'

These examples show that the pronominalisation is obligatory if an ACC. is co-referential with the NOM. (the same applies for co-referentiality between ACC. and ERG.). Another means is to apply either the CAUS. or the ABL. transformation to one sentence; hence, we may combine sentences (48) and (53) into sentence (55), or embed sentence (54) into sentence (47) and obtain sentence (56):

(53) *yül=ηu-Tu taykka-Na yat^y-Tu-ma-n*
man-ERG woman-ACC scream-Afs.-CAUS-Afv.
'Man made woman scream.'

(54) *taykka-φ pū-ya-n=ta-φ yül=ηu-Ku=η-φ*
woman-NOM hit-Afs.-Nom.-NOM man-ABL-NOM
'Woman hit by man.'

(55) *yül=ηu-Tu taykka-Na pū-ya-n (ka) yat^y-Tu-ma-n (ηan-Na)*
man-ERG woman-ACC hit-Afs.-Afv. (and) scream-Afs.-CAUS.-Afv.
'Man hit woman and made her scream.' (he-ACC)

(56) *yül=ηu-Ku=η-φ pū-ya-n=ta-φ taykka-φ yat^y-Tu-wa-n*
man-ABL-NOM hit-Afs.-Nom.-NOM woman-NOM scream-Afs.-Afv.
'Woman hit by man screamed.'

These examples and rules show that the Thangu dialects—and by hypothesis all the other dialects of the group—have a NOM.-ACC. syntax.

There is an example which is construed as if there were a NOM.-ERG. syntax in the language:

(57) *yül=ηu-Tu wāyin-Na kū-la-n* 'Man brought meat.'

man-ERG meat-ACC bring-Afs.-Afv.

(58) *wāyin-φ parppā-Ti-na-n* 'Meat got rotten.'

meat-NOM rotten-Inc.-Afv.

One of the possible constructions resulting from a co-ordination of sentences (57) and (58) is the sentence (59):

(59) *yül=ηu-Tu wāyin-Na kū-la-n ka parppā-Ti-na-n*
man-ERG meat-ACC bring-Afs.-Afv. and rotten-Inc.-Afv.
'Man brought meat and it got rotten.'

One can easily see that the reason for this apparent ERG.-syntax lies in the optionality of the pronominalisation rule with -HUM. nouns.³⁵

(b) 'SUB-ORDINATION' may be indicated by various particles, such as *pili* or *liṅku* 'because', *mā* 'so that', *pa=ηa* 'when; if' and others. All these and other clause-types, not mentioned specifically, are treated basically in the same way: The particle is invariable, and the sentence joined has nouns or pronouns as 'carriers' for indicating the required case-relationships. Del. rules follow the same pattern as described for the co-ordination. It should suffice to illustrate this with a few examples of relative clauses; for convenience the relative clause is put between brackets in these examples:

(60) *yül=ηu-Tu taykka-Na li-Tu-wa-n* 'Man hit woman.'

man-ERG woman-ACC hit-Afs.-Afv.

(61) *yüṭṭu-Tu taykka-Na li-Tu-wa-n* 'Child hit woman.'

child-ERG woman-ACC hit-Afs.-Afv.

(62) *yül=ηu-φ ηaru=ηa-n kuya-li* 'Man went to fish(ing).'

man-NOM go-Afv. fish-DIR

(63) *yül=ηu-Tu ηaṭṭa-Na ku=ηa-n yüṭṭu-Ku* 'Man gave food to child.'

man-ERG food-ACC give-Afv. child-G.=D.

Typical applications of the relative clause embedding rule are the following examples (in the formula the sentence to appear as relative clause always appears second):

(60) × (62) Rel. (64)

⇒

(63) × (61) Rel. (65)

⇒

(61) × (63) Rel. (66)

⇒

(64) *yül=ηu-Tu (pa=ηa-φ ηan-φ kuya-li ηaru=ηa-n) taykka-Na*
man-ERG (that-NOM he-NOM fish-DIR go-Afv.) woman-ACC
li-Tu-wa-n
hit-Afs.-Afv.

'Man, who went fishing, has hit woman.'

(65) *yül=ηu-Tu ηaṭṭa-Na ku=ηa-n (+ pa=yi-Ku) yüṭṭu-Ku*
man-ERG food-ACC give-Afv. (+ that=obl.-G.=D.) child-G.=D.
(*pa=ηa-φ ηan-φ taykka-Na li-Tu-wa-n*)
that-NOM he-NOM woman-ACC hit-Afs.-Afv.

'Man gave food to child who has hit woman.'

- (66) *yūttu-Tu* (*pa=na-φ yūl=ju-Tu ŋaŋta-Na ku=ŋa-n ŋan-Ku*)
 child-ERG (that-NOM man-ERG food-ACC give-Afv. he-G.=D.)
taykka-Na li-Tu-wa-n
 woman-ACC hit-Afs.-Afv.
 'Child, to whom man has given food, hit woman.'

(c) NOMINALISED SENTENCES play an important part in the construction of complex sentences. The compound cases appear after the AGR. rules implied in the above list.³⁶ The following examples illustrate this type of complex sentences:

(i) *K.=NOM.:*

- (67) *yūl=ju-φ kāttura-n rakkun³-Ti-n*
 man-NOM today-n dead-Inc.-Afv.
 'Man died today.'
- (68) *wā=la=ŋ-Tu yūl=ju-Na pū-ya-n* ABL ⇒
 so=and=so-ERG man-ACC hit-Afs.-Afv.
 'So-and-so hit man.'
- (69) *yūl=ju-φ pū-ya-n=ta-φ wā=la=ŋ-Ku=ŋ-φ*
 man-NOM hit-Afs.-Nom.-NOM so=and=so-ABL-NOM
 'Man hit by so-and-so.'
- (67) × (68) ⇒ (67) × (69) ⇒ (70)
- (70) *wā=la=ŋ-Ku=ŋ-φ pū-ya-n=ta-φ yūl=ju-φ kāttura-n*
 so=and=so-ABL-NOM hit-Afs.-Nom.-NOM man-NOM
rakkun³-Ti-n
 today-n dead-Inc.-Afv.
 'Man hit by so-and-so died today.'

(ii) *K.=ACC.:*

- (71) *yūl=ju-Tu taykka-Na ŋā-Kul*
 man-ERG woman-ACC hear-Afv.
 'Man heard (about) woman.'
- (72) *yūttu-Tu taykka-Na taykku-wa-n* ABL ⇒
 child-ERG woman-ACC swear-Afv.
 'Child swore at woman.'
- (73) *taykka-φ taykku-na=ra-φ yūttu-Ku=ŋ-φ*
 woman-NOM swear-Nom.-NOM child-ABL-NOM
 'Woman swore at by child.'
- (71) × (72) ⇒ (71) × (73) ⇒ (74)
- (74) *yūl=ju-Tu taykka-Na ŋā-Kul taykku-na=ra-φ yūttu-Ku=ŋ-φ*
 man-ERG woman-ACC hear-Afv. swear-Nom.-NOM child-ABL-NOM
 'Man heard woman sworn at by child.'³⁷

(iii) *K.=ERG.:*

- (75) *yūl=ju-Tu mari-Na t³āma taykka-Ku*
 man-ERG trouble-ACC work woman-G.=D.
 'Man made trouble to woman.'
- (76) *wā=la=ŋ-Tu yūl=ju-Na t³ūy-Tu-wa-n kaliwinku-ŋu=ru*
 so=and=so-ERG man-ACC send-Afs.-Afv. Elcho-EX
rā=li-ya
 to=here-ya
 'So-and-so sent man from Elcho to here.'

- (77) *yūl=ju-φ t³ūy-Tu-n=ta-φ kaliwinku-ŋu=ru rā=li-ya*
 man-NOM send-Afs.-Nom.-NOM Elcho-EX to=here-ya
 'Man sent from Elcho to here.'
- (75) × (76) ⇒ (75) × (77) ⇒ (78)
- (78) *wā=la=ŋ-Ku=ru kaliwinku-ŋu=ru rā=li-ya t³ūy-Tu-n=ta-Pu=y-φ*
 so=and=so-EX₂ Elcho-EX to=here-ya send-Afs.-Nom.-REL-NOM
yūl=ju-Tu mari-Na t³āma taykka-Ku
 man-ERG trouble-ACC work woman-G.=D.
 'Man sent over from Elcho by so-and-so, made trouble to woman.'³⁸
- (iv) *K.=INS.:*
- (79) *yūl=ju-φ kit=kit-Tu-n tā=wu-Tu*
 man-NOM laugh-Afs.-Afv. story-INS
 'Man laughed because of story.'
- (80) *taykka-Tu tā=wu-Na rakka-ra-n* ABL ⇒
 woman-ERG story-ACC tell-Afs.-Afv.
 'Woman told story.'
- (81) *tā=wu-φ rakka-ra-na=ra-φ taykka-Ku=ŋ-φ*
 story-NOM tell-Afs.-Nom.-NOM woman-ABL-NOM
 'Story told by woman.'
- (79) × (80) ⇒ (79) × (81) ⇒ (82)
- (82) *yūl=ju-φ kit=kit-Tu-n taykka-Ku=ru tā=wu-Tu rakka-ra-na=ra-Tu*
 man-NOM laugh-Afs.-Afv. woman-EX₂ story-INS tell-Afs.-Nom.-INS
 'Man laughed because of story told by woman.'
- (v) *K.=G.=D.:*
- (83) *ta=ŋu-φ kiri-φ yūl=ju-Ku*
 this-NOM stuff-NOM man-G.=D.
 'This stuff is man's/belongs to man.'
- (84) *ta=ŋu-φ kiri-φ taykka-Ku*
 this-NOM stuff-NOM woman-G.=D.
 'This stuff is woman's/belongs to woman.'
- (85) *yūl=ju-Tu taykka-Na pū-ya-n* ABL ⇒
 man-ERG woman-ACC hit-Afs.-Afv.
 'Man hit woman.'
- (86) *taykka-φ pū-ya-n=ta-φ yūl=ju-Ku=n-φ*
 woman-NOM hit-Afs.-Nom.-NOM man-ABL-NOM
 'Woman hit by man.'
- (83) × (85) ⇒ (83) × (86) = (84) × (85) ⇒ (84) × (86) ⇒ (87)
- (87) *ta=ŋu-φ kiri-φ taykka-Ku pū-ya-n=ta-Pu=y-Ku yūl=ju-Ku*
 this-NOM stuff-NOM woman-G.=D. hit-Afs.-Nom.-REL-G.=D. man-G.=D.
 'This stuff belongs to woman hit by man.' (Also: 'This stuff belongs to man hit by woman'.)³⁹
- (vi) *K.=LOC.:*
- (88) *yūttu-φ n³ina-n yūl=ju-Ku=ra*
 child-NOM sit-Afv. man-LOC₂
 'Child sat/was near man.'
- (89) *yūl=ju-Tu taykka-Na pū-ya-n* ABL ⇒
 man-ERG woman-ACC hit-Afs.-Afv.
 'Man hit woman.'

- (90) *taykka-φ pū-ya-n=ta-φ yūl=ηu-Ku=η-φ*
 woman-NOM hit-Afs.-Nom.-NOM man-ABL-NOM
 'Woman hit by man.'
- (88) × (89) ⇒ (88) × (90) ⇒ (91)
- (91) *yūttu-φ n'ina-n yūl=ηu-Ku=ra pū-ya-n=ta-Pu=y-Ku=ra*
 child-NOM sit-Afv. man-LOC₂ hit-Afs.-Nom.-REL-LOC₂
taykka-Ku=ra
 woman-LOC₂
 'Child sat/was with/near man who hit woman.'⁴⁰
- (vii) *K.=DIR.:*
- (92) *yūttu-φ ηaru=ηa-n yūl=ηu-Ku=l*
 child-NOM go-Afv. man-DIR₂
 'Child went to man.'
- (93) *yūl=ηu-Tu taykka-Na pū-ya-n* ABL ⇒
 man-ERG woman-ACC hit-Afs.-Afv.
 'Man hit woman.'
- (94) *taykka-φ pū-ya-n=ta-φ yūl=ηu-Ku=η-φ*
 woman-NOM hit-Afs.-Nom.-NOM man-ABL-NOM
 'Woman hit by man.'
- (92) × (93) ⇒ (92) × (94) ⇒ (95)
- (95) *yūttu-φ ηaru=ηa-n taykka-Ku=l pū-ya-n=ta-Pu=y-Ku=l yūl=ηu-ku=l*
 child-NOM go-Afv. woman-DIR₂ hit-Afs.-Nom.-REL-DIR₂ man-DIR₂
 'Child went to man who hit woman.'⁴⁰
- (viii) *K.=EX.:*
- (96) *yūttu-φ tit'-Tu-wa-n taykka-Ku=ru*
 child-NOM return-Afs.-Afv. woman-EX₂
 'Child returned from woman.'
- (97) *yūl=ηu-Tu taykka-Na pū-ya-n* ABL ⇒
 man-ERG woman-ACC hit-Afs.-Afv.
 'Man hit woman.'
- (98) *taykka-φ pū-ya-n=ta-φ yūl=ηu-Ku=η-φ*
 woman-NOM hit-Afs.-Nom.-NOM man-ABL-NOM
 'Woman hit by man.'
- (96) × (97) ⇒ (96) × (98) ⇒ (99)
- (99) *yūttu-φ tit'-Tu-wa-n taykka-Ku=ru yūl=ηu-Ku=ru*
 child-NOM return-Afs.-Afv. woman-EX₂ man-EX₂
pū-ya-n=ta-Pu=y-Ku=ru
 hit-Afs.-Nom.-REL-EX₂
 'Child returned from woman hit by man.'⁴⁰
- (ix) *K.=REL.:*
- (100) *ta=ηu-φ kiri-φ yūl=ηu-Ku=ru-Pu=y*
 this-NOM stuff-NOM man-EX₂-REL
 'This thing is for man.'
- (101) *wā=la=η-Tu yūl=ηu-Na li-Tu-wa-n* ABL ⇒
 so=and=so-ERG man-ACC hit-Afs.-Afv.
 'So-and-so hit man.'
- (102) *yūl=ηu-φ li-Tu-n=ta-φ wā=la=η-Ku=η-φ*
 man-NOM hit-Afs.-Nom.-NOM so=and=so-ABL-NOM
 'Man hit by so-and-so.'

- (100) × (101) ⇒ (100) × (102) ⇒ (103)
- (103) *ta=ηu-φ kiri-φ yūl=ηu-Ku=ru-Pu=y-φ wā=la=η-Ku=ru-Pu=y-φ*
 this-NOM stuff-NOM man-EX₂-REL-NOM so=and=so-EX₂-REL-NOM
li-Tu-n=ta-Pu=y-φ
 hit-Afs.-Nom.-REL-NOM
 'This thing is for man hit by so-and-so.'⁴¹
- (x) *K.=ABL.:*
- (104) *yūl=ηu-Tu taykka-Na li-Tu-wa-n* ABL ⇒
 man-ERG woman-ACC hit-Afs.-Afv.
 'Man hit woman.'
- (105) *taykka-φ li-Tu-n=ta-φ yūl=ηu-Ku=η-φ*
 woman-NOM hit-Afs.-Nom.-NOM man-ABL-NOM
 'Woman hit by man.'
- (106) *taykka-Tu yūttu-Na nā-ηal* ABL ⇒
 woman-ERG child-ACC see-Afv.
 'Woman saw child.'
- (107) *yūttu-φ nā-na=ra-φ taykka-Ku=η-φ*
 child-NOM see-Nom.-NOM woman-ABL-NOM
 'Child saw woman.'
- (107) × (104) ⇒ (107) × (105) ⇒ (108)
- (108) *yūttu-φ nā-na=ra-φ taykka-Ku=η-φ li-Tu-n=ta-Pu=y-Ku=η-φ*
 child-NOM see-Nom.-NOM woman-ABL-NOM hit-Afs.-Nom.-REL-ABL-
yūl=ηu-Ku=ru-Ku=η-φ NOM
 man-EX₂-ABL-NOM
 'Child seen by woman hit by man.'⁴¹
- Similarly, with *G.=D.* constructions:
- (xi) *K.=NOM.:*
- (109) *yūl=ηu-Ku taykka-φ ηaru=ηa-n*
 man-G.=D.-NOM woman-NOM go-Afv.
 'Man's wife went.'
- (xii) *K.=ACC.:*
- (110) *yūttu-Tu yūl=ηu-Ku-φ taykka-Na nā-ηal*
 child-ERG man-G.=D.-NOM woman-ACC see-Afv.⁴²
 'Child saw man's wife.'
- (xiii) *K.=ERG.:*
- (111) *yūl=ηu-Ku=ru taykka-Tu yūttu-Na nā-ηal*
 man-EX₂ woman-ERG child-ACC see-Afv.
 'Man's wife saw child.'
- (xiv) *K.=INS.:*
- (112) *yūttu-Tu kuya-Na tarp=pu-wa-n yūl=ηu-Ku=ru wilmūr-Tu*
 child-ERG fish-ACC spear-Afv. man-EX₂ fish=spear-INS
 'Child speared fish with man's fish-spear.'
- (xv) *K.=G.=D.:*
- (113) *yūttu-φ t'al yūl=ηu-Ku=ru wilmūr-Ku*
 child-NOM want man-EX₂ fish=spear-G.=D.
 'Child wants man's fish-spear.'

- (xvi) *K.=LOC.:*
 (114) *taykka-φ n^oina-n yūl=ηu-Ku=ra waràw-ηa*
 woman-NOM sit-Afv. man-LOC₂ shade-LOC
 'Woman sat in man's shade.'
- (xvii) *K.=DIR.:*
 (115) *taykka-φ n^oina-n yūl=ηu-Ku=l waràw-li*
 woman-NOM sit-Afv. man-DIR₂ shade-DIR
 'Woman sat down in(to) man's shade.'
- (xviii) *K.=EX.:*
 (116) *yūl=ηu-φ tit^o-Tu-wa-n taykka-Ku=ru ηayi-ηu=ru*
 man-NOM return-Afs.-Afv. woman-EX₂ camp-EX
 'Man returned from woman's camp.'
- (xix) *K.=ABL.:*
 (117) *ta=ηu-φ kuya-φ tarp=pu-na=ra-φ yūl=ηu-Ku=ru-Ku=η-φ*
 this-NOM fish-NOM spear-Nom.-NOM man-EX₂-ABL-NOM
taykka-Ku=η-φ
 woman-ABL-NOM
 'This fish [is/was] speared by man's wife.'⁴¹
- (xx) *K.=REL.:*
 (118) *ta=ηu-φ kuya-φ tarp=pu-na=ra-φ yūl=ηu-Ku=ru-Pu=y-φ*
 this-NOM fish-NOM spear-Nom.-NOM man-EX₂-REL-NOM
wilmūr-Pu=y-φ
 fish-spear-REL-NOM
 'This fish [is/was] speared with man's fish-spear.'⁴¹
- (xxi) *K.=TR.:*
 (119) *yūtū-φ ηaru=ηa-n yūl=ηu-Ku=ru-muru tukka-muru*
 child-NOM go-Afv. man-EX₂-TR road-TR
 'Child went through/by man's road.'

The AGR. rule, hence some of the examples just given, are problematic, as not all informants agreed on them.³⁷⁻³⁹ The most remarkable alternative treatment to this AGR. rule occurred with locational cases; the alternative rule is $-ABL. + -L. \Rightarrow -ABL_2$.⁴³ We thus obtain the following examples:

- (120) *pa=yi-η yūl=ηu-Tu palà-Na tūl-Tu-wa-n* ABL =
 that-ERG man-ERG house-ACC build-Afs.-Afv.
 'That man built house.'
- (121) *palà-φ tūl-Tu-n=ta-φ pa=yi-Ku=η-φ yūl=ηu-Ku=η-φ*
 house-NOM build-Afs.-Nom.-NOM that-ABL-NOM man-ABL-NOM
 'House built by that man.'
- (xxii) *L.=LOC.:*
 (122) *taykka-φ n^oina-n palà-ηa*
 woman-NOM sit-Afv. house-LOC
 'Woman sat in house.'
- (120) × (122) ⇒ (121) × (122) ⇒ (123)
 (123) *taykka-φ n^oina-n pa=yi-Ku=ru-Ku=η yūl=ηu-Ku=ru-Ku=η*
 woman-NOM sit-Afv. that-EX₂-ABL man-EX₂-ABL
tūl-Tu-n=ta-Pu=y-ηa palà-ηa
 build-Afs.-Nom.-REL-LOC house-LOC
 'Woman sat in house built by that man.'

- (xxiii) *L.=DIR.:*
 (124) *taykka-φ ηaru=ηa-n palà-li*
 woman-NOM go-Afv. house-DIR
 'Woman went to house.'
- (120) × (124) ⇒ (121) × (124) ⇒ (125)
 (125) *taykka-φ ηaru=ηa-n pa=yi-Ku=ru-Ku=η yūl=ηu-Ku=ru-Ku=η*
 woman-NOM go-Afv. that=obl.-EX₂-ABL man-EX₂-ABL
tūl-Tu-n=ta-Pu=y-li palà-li
 build-Afs.-Nom.-REL-DIR house-DIR
 'Woman went to house built by that man.'
- (xxiv) *L.=EX.:*
 (126) *taykka-φ tit^o-Tu-wa-n palà-ηu=ru*
 woman-NOM return-Afs.-Afv. house-EX
 'Woman returned from house.'
- (120) × (126) ⇒ (121) × (126) ⇒ (127)
 (127) *taykka-φ tit^o-Tu-wa-n pa=yi-Ku=ru-Ku=η yūl=ηu-Ku=ru-Ku=η*
 woman-NOM return-Afs.-Afv. that=obl.-EX₂-ABL man-EX₂-ABL
tūl-Tu-n=ta-Pu=y-ηu=ru palà-ηu=ru
 build-Afs.-Nom.-REL-EX house-EX
 'Woman returned from house built by that man.'

While these examples may systematically be fitted into the general AGR. rule, the following examples show still other variations. Thus, for example, sentence (78) above was alternatively rendered as follows:

- (128) *wā=la-η-Ku=η-φ kaliwinku-ηu=ru rā=li-ya t^oūy-Tu-n=ta-φ*
 so-and=so-ABL-NOM Elcho-EX to=here-ya send-Afs.-Nom.-NOM
yūl=ηu-Tu māri-Na t^oāma taykka-Ku
 man-ERG trouble-ACC work woman-G.=D.

'Man sent over from Elcho by so-and-so, made trouble to woman.'

Perhaps it is possible to explain this disagreement by the following example, where the ABL. NP + VN are in apposition to the ERG. NP only in one example; but both examples follow the same AGR. rule:

- (129) *yūl=ηu-Ku=η-φ pū-ya-n=ta-φ taykka-Tu kāttuṛa-m*
 man-ABL-NOM hit-Afs.-Nom.-NOM woman-ERG today-m
yūtū-Ku māri-Na t^oāma
 child-G.=D. trouble-ACC work

'Woman hit by man made trouble to child today.'

- (130) *taykka-Tu, yūl=ηu-Ku=η-φ pū-ya-n=ta-φ, yūtū-Na li-Tu-wa-n*
 woman-ERG, man-ABL-NOM hit-Afs.-Nom.-NOM, child-ACC hit-Afs.-
 'Woman, hit by man, hit child.' Afv.

I finally give the following examples, which are taken as indicating another moot point in the AGR. rule:

- (131) *taykka-φ matakkarit^o-Ti-n yūl=ηu-Ku=ra tayk=Ku-na=ra-ηa*
 woman-NOM angry-Inc.-Afv. man-LOC₂ swear-Nom.-LOC
 'Woman was angry because man swore sc. at her.'
- (132) *taykka-φ matakkarit^o-Ti-n yūl=ηu-Ku=ru tayk=Ku-na=ra-Tu*
 woman-NOM angry-Inc.-Afv. man-EX₂ swear-Nom.-INS
 'Woman was angry because man swore sc. at her.'
- (133) *taykka-φ matakkarit^o-Ti-n yūl=ηu-Ku=η-φ tayk=Ku-na=ra-φ*
 woman-NOM angry-Inc.-Afv. man-ABL-NOM swear-Nom.-NOM
 'Woman was angry because man swore sc. at her.'

similarly:

- (134) *taykka-Tu yul=ŋu-Na ŋā-ŋal kuya-li part^y-Tu-n=ta-li*
 woman-ERG man-ACC see-Afv. fish-DIR spear-Afs.-Nom.-DIR
 'Woman saw man sc. going? to fish-spearing.'
- (135) *taykka-Tu yul=ŋu-Na ŋā-ŋal kuya-ŋu=ru part^y-Tu-n=ta-ŋu=ru*
 woman-ERG man-ACC see-Afv. fish-EX spear-Afs.-Nom.-EX
 'Woman saw man sc. coming/returning? from fish-spearing.'
- (136) *taykka-Tu yul=ŋu-Na ŋā-ŋal kuya-Pu=y-φ part^y-Tu-n=ta-φ*
 woman-ERG man-ACC see-Afv. fish-REL-NOM spear-Afs.-Nom.-NOM
 'Woman saw man sc. after fish-spearing/having speared fish.'

Again, it seems the most plausible to explain sentences (133) and (136) by assuming that the ABL. NP+VN is qualifying an NP—being in NOM. in example (133), in ACC. in example (136).⁴⁴ The translation of (136) rather suggests that the type of construction considered here be not equivalent to a sentence, where the ABL. construction is put into LOC. However, there is the following example, which differs in its AGR. rule from both sentence (91) and sentence (123) above:

- (137) *taykka-φ n^yina-n warāw-ŋa yul=ŋu-Ku=ŋ-φ talkka-ŋa-na=ŋa-Pu=y-φ*
 woman-NOM sit-Afv. shade-LOC man-ABL-NOM erect-Afs.-Nom.-
 'Woman sat in shade erected by man.'⁴⁵ REL-NOM

Although we may here again fall back on our explanation given above, considering that the ABL. NP+VN construction is 'in apposition' to the LOC. NP, it should be clear that the AGR. rules are not as yet defined with sufficient precision and certainty to permit us to draw more important conclusions from them (see note 36).

5. Transitivity

The great majority of verbs belongs to the class characterised by the stem-suffix *-Tu*: more than 75 per cent of the verbs—other than those belonging to the 'open' (and really derived) classes such as CAUS. or Inc. verbs—belong to this class; the remaining 25 per cent are distributed into more than 12 morphological classes, including 'rest classes' or 'irregular verbs'. At least 60 per cent—and probably more—of the *-Tu* class verbs are intransitive verbs, the rest being transitive. The same holds for the other smaller classes, although some small classes tend to be somewhat clearer transitive or intransitive classes.⁴⁶ This means that, generally speaking, the Yūlŋu dialects apparently show a tendency to operate in first place with intransitive verb-roots. This seems to be reflected in the relative importance of transitivity processes (CAUS.), as compared with intransitivity processes. As a matter of fact, the only intransitivity operation known is the R. transformation, while the Inc. (suffix *-Ti*) really derives intransitive verbs from nouns.

Similarly, the 'passive' constructions have to be considered within the frame of nominalisation processes, and no other 'passive marker' has been noticed in the language.⁴⁷

The transitivity and the intransitivity processes (namely the CAUS. transformation and the R.-transformation) have suggested that the agent, not the object, be added or deleted when these mechanisms are applied. This has led to a formulation of the rules, where the Subject of an intransitive sentence and the (direct) Object of a transitive sentence are indexed in the

same manner. This, one can see, reflects the ERG. morphology with +HUM. and -AN. nouns, where the direct Object is marked by *-φ*, just as the Subject of an intransitive sentence is. The same indexing allows for a coherent formulation of the rules in a simple set, including the Nominalisation transformations. However, the co-ordination test, with the Del. and Pron. rules, has suggested that Yūlŋu has a NOM.-ACC. syntax, not a NOM.-ERG. syntax. All the indexing indicates is the fact that the Subject of an intransitive sentence is transformed into the Object, not into the Agent, of a CAUS. sentence, and that the Object, not the Agent, is transformed into the Subject of R. sentences. The same holds true for nominalised constructions, such as, for example, the ABL. construction.

Let us summarise in table form the case-transformations observed; in a first table I indicate into which cases a given case may be transformed, in a second table I indicate out of which cases a given case may be transformed. For convenience I add in parentheses the rule where the transformation is indicated.

ERG. ⇒	$\left. \begin{array}{l} \text{ABL. (III)} \\ \text{G.=D. (Va)} \\ \text{NOM (Vb)} \end{array} \right\}$
NOM. ⇒	$\left. \begin{array}{l} \text{NOM. (II)} \\ \text{ACC. (VII)} \end{array} \right\}$
[ACC.] [G.=D.] ⇒	$\text{NOM. } \left[\begin{array}{l} \text{(III), (Va), (VI)} \\ \text{(VI)} \end{array} \right]$
[ABL.] [G.=D.] ⇐	$\text{ERG. } \left[\begin{array}{l} \text{(III)} \\ \text{(Va)} \end{array} \right]$
ACC. ⇐	NOM. (VII)
NOM. ⇐	$\left. \begin{array}{l} \text{NOM. (II), (IV)} \\ \text{ACC. (III), (Va), (VI)} \\ \text{ERG. (Vb)} \\ \text{G.=D. (VI)} \end{array} \right\}$

Besides this, it was suggested that only an ERG. and/or a NOM. may be deleted (rules (VI) and (VII)). Finally, it was accepted that G.=D. 'behaves like' an ACC. with respect to rule (Vb) above.

While the same holds for the R.-transformation, rule (Va) has shown that G.=D. may be underlain by an ERG. When giving these rules, it was shown that the VN-*mi* form may have as its head-noun an NP-NOM., transformed either out of the Agent or of the Object of a transitive sentence. If the Agent is transformed into the head-NP-NOM., the Object is compounded into the verb; if the Object is transformed into the head NP-NOM., the Agent is put into the G.=D.

By using the term Agent I imply that an NP-NOM. may be an Agent. After our rules, this has apparently to be accepted for those sentences where a G.=D. conforms to rule (V).⁴⁸ I, moreover, suggest that similar rules may operate on other types of intransitive sentences:

- (138) *n^yina-na=ŋa-mi-φ* 'chair'
 sit-Nom.-*mi*-NOM
- (139) [*ŋa-ŋu-φ*] *kiri-φ n^yina-na=ŋa-mi-φ* [sc. *kiri-φ*] (*yul=ŋu-Ku*)
 [this-NOM] stuff-NOM sit-Nom.-*mi*-NOM [sc. stuff-NOM] (man-G.=D.)
 '[This] thing [is] to be sit on to/for/by man.'

- (140) *yūl=ŋu-φ n^yina-MOD. kiri-L.*
 man-NOM sit-MOD stuff-L.
 'Man sit on thing.'

I propose that (138) be underlain by (139) which, in turn, is underlain by (140). If, analogously, we would formulate the derivation from (140) to (139) into a rule, we get:

(VIII) NP₁-NOM. + VP_L. + NP₂-L. VN-*mi*

⇒
 NP₂-NOM. + VP_L.-Nom.-*mi*-NOM. + NP₁-G.=D.

What I do suggest with this rule, is that other types of intransitive sentences, namely certain L.-sentences, are akin to transitive sentences. I have left open the question of how to interpret L. in sentence (140); there is some reason to believe that L. should be DIR. but not LOC. Hence, while it was proposed that only intransitive sentences contain a 'deep' LOC., it is now proposed that DIR. sentences be akin to transitive sentences.

Although I have not taken up in the present paper my suggestion to operate with the concept of 'indirect transitive sentences', the present discussion has shown that intransitive sentences with an indirect Object and intransitive sentences with a DIR. may both 'behave as' transitive sentences with respect to certain rules. This is, by the way, shown in the indexing in rule (VIII), where the NP-NOM. is indexed as 'Agent' while the NP-L. is indexed as 'Object'; the same holds true for a formulation of applying rule (V) to an intransitive sentence with an indirect Object.

The NOM. may, in a certain perspective, be called the 'topic case' *par excellence*. The Nom.-transformations in the language are, so to speak, 'designed for' topicalisation-processes. It has been shown that the Subject of certain intransitive sentences, the Agent of other intransitive sentences, indirect Object and DIR. complement of intransitive sentences and Agent as well as Object of transitive sentences may be transformed, by specific rules, into this topic case. The conclusion is, therefore, the following: Even though it is probably wrong that *every* complement (for example LOC. complements?) of a sentence may become the topic by applying a given transformation, it seems clear that the simple dichotomy into 'active' and 'passive' does not seem to be adequate for the treatment of the various topicalisation-processes, just as the simple dichotomy into intransitive and transitive sentences proved unsatisfactory in Yūljū.

Transitivity, ergativity and voice in Atjnjamathanha

0. Introduction

The Atjnjamathanha [A^ʔn^yamaɬaŋa] language is still spoken today in South Australia by a group of people whose tribal territory is located in the northern Flinders Ranges, centering around Mt Serle. No noteworthy linguistic publication has appeared up to date, and the present paper is based on material collected in 1964/5 and 1966/7 in and around Leigh Creek Coalfield, South Australia.⁴⁹

I shall adhere to the transcription method which distinguishes two series of stops; the series of 'lenes' is problematic: it contains the phonemes written *v*—realised as labio-dental voiced fricative; *ɟ*—realised as voiced interdental

fricative *d*; which is realised as alveolar flap; *ɟ*, which is realised as retroflex flap, and *g*, realised as a voiced velar stop. The opposition between 'lenes' and 'fortes' is found relevant only intervocally or between laterals or /r/, and vowels. In the non-relevant positions I employ the symbols used for the 'fortes' (voiceless) phonemes (even though, for example, stops after nasals are always voiced). I do not interpret the homorganic clusters stop+nasal or stop+lateral as single phonemes. Generally I write homorganic clusters as such—hence the orthographic spelling of the name of the group given above. Words and in general, syllables may begin with a vowel; vowel clusters are therefore allowed for, and there is no need to distinguish between long and short vowels.

1. Case morphology

(a) In the following list I give the case suffixes, indicating also their main functions. The part written in capital letters will be used as an abbreviation throughout the paper.

1. *-φ* (NOMINATIVE): Subject in a nominal sentence or for an intransitive verb; nominal predicate; object of a transitive verb.
2. *-lu* (ERGATIVE): Agent of a transitive verb, if a proper noun; only with certain common nouns and pronouns.
3. *-ŋa* (ERGATIVE-INSTRUMENTAL, LOCATIVE): Agent of a transitive verb for most nouns; instrument of a transitive or an intransitive verb; locative with stative verbs or with certain verbs of movement.
4. *-ŋa* (ACCUSATIVE): Object of a transitive verb, when a dual or a plural personal pronoun. Other functions remain unclear.
5. *-ru* (GENITIVE=DACTIVE): POSSESSIVE; direction 'to' a place, or thing, etc.; purpose; may have causal value.
6. *-ɬadi* (DIRECTIVE): Direction 'towards' a place, thing, etc. (without reaching it).
7. *-ŋuŋi* (EXCESSIVE): Provenance a 'from' place, thing, etc.; may have causal value.
8. *-ya* (VOCATIVE): Form of address.
9. *-li* (COMPARISON): Indicates comparison 'like' somebody or something; is not considered to be a 'case'.

(b) The complex PERSONAL PRONOUN has been dealt with elsewhere.⁵⁰ It will suffice here to give only the '1st series' pronoun: Sg., Du., Pl. refer to 'singular', 'dual', 'plural' respectively, I., II., III. to the 1st, 2nd, and 3rd person respectively. The arabic numbers refer to the cases, as numbered in the list given above:⁵¹

	1.	2.	3.	4.	5.	7.
SINGULAR						
I.	<i>ŋa-i</i>	<i>ŋa-ɬu</i>	<i>ŋa-i-ŋa</i>	<i>ŋa-i</i>	<i>ŋa-t^yu</i>	?
II.	<i>ŋi-na</i>	<i>ŋu-ntu</i>	?	<i>ŋi-na</i>	<i>ŋu-ŋku</i>	?
III.	<i>va-ŋa</i>	<i>va-lu</i>	?	<i>va-ŋa</i>	<i>va-n^yt^yu-</i> <i>ru</i>	<i>va-ŋa-na-</i> <i>-ŋuŋi</i>
DUAL:						
I.	<i>ŋa-lpu-φ</i>	<i>ŋa-lpu-φ</i>	?	<i>ŋa-lpu-ŋa</i>	?	?
II.	—	—	—	—	—	—
III.	<i>-pila-φ</i>	<i>-pila-lu</i>	<i>-pila-ŋa</i>	<i>-pila-ŋa</i>	<i>-pila-ru</i>	<i>-pila-ŋuŋi</i>

PLURAL:

I.	<i>ŋa=lpu=la-φ</i>	?	<i>ŋa=lpu=la- ŋa=lpu=la- ?</i>
			<i>ŋa -ŋa-ru</i>
II.	<i>ŋu=da-φ</i>	?	<i>ŋu=da-ŋa ŋu=da-ru ?</i>
III.	<i>yatna-φ</i>	?	<i>yatŋa-ŋa yatna-ru ?</i>

Some information on the pronominal forms is lacking. The Sg. pronoun has a NOM.-ERG. case morphology, while the Du. and Pl. pronoun follows a clear NOM.-ACC. morphology. The suffix *-ŋa*, having clearly the function of an Object-marker with the Du. and Pl. personal pronoun, is inserted between pronouns and certain case suffixes; the rules for this infixation are unclear.

(c) There are three DEIXES in the language, *i-*, *a-*, *ŋu-*, corresponding to the 1st, the 2nd and the 3rd person respectively of the personal pronoun. A deixis is never realised as such, but has to be 'supported' by another morpheme, the most common of which is *-ŋa*; one thus obtains the common forms of the demonstrative pronoun *i=ŋa* 'this', *a=ŋa* 'that', *ŋu=ŋa* 'that over there'; another morpheme is *-tla*, conveying the idea of lack of precision; *ŋu=tla-ŋa* 'over there somewhere (you know?)'. The nominal case suffixes given above, are added to this 'supporting' or 'modifying' morpheme. The EX. is rendered with the particular suffix *-nti*; hence, for example, *i=ŋa-nti* '(to) here'.

(d) Other pronouns are, in the first place, the INTERROGATIVE-INDEFINITE PRONOUNS, namely *ŋa=ŋata-ŋa* 'what?' and *ŋa=ŋa* 'who?'. They add the various case suffixes, given above, but the rules when *-ŋa* is dropped and when not, are unclear for the first pronoun: *ŋa=ŋata-ru* 'what for?/why?', but *ŋa=ŋata-ŋa-ŋa* 'in something'.

The interrogative pronoun *wa=ŋa* 'where?' has the EX. *wa=ŋa-nti* 'where to?'; the interrogative pronoun *ŋami-ŋa* 'how many?' never drops, in the examples known so far, the suffix *-ŋa* before adding a case suffix.

The forms *ut^yu=dapa-ŋa* 'another (one)' and *uru* 'all', and *utla* 'self' add case endings, and are therefore considered to be pronouns (contrary to, for example, the invariable *wapu* 'all, everything', or *ŋaŋka* 'how?').

The two words *wata-* and *aka-* are often inserted between a pronoun or adjective and a substantive, recalling 'classifiers', the first one appearing mainly with +HUM. nouns, the latter with -HUM. nouns.⁵²

(1) *ŋudi wata-ŋa-φ ŋam=ana-φ ut^yu udu ika-n^yt^yu apa=na-ŋu*
close Cl.-ŋa-NOM ŋamana-NOM ut^yu thought sit-FUT might-ŋu
'A close uncle might think [of him].'

(2) *ut^yu=dapa-ŋa-φ ŋutu-φ i=ŋa-φ aka-ŋa-φ*
another-ŋa-NOM story-NOM this-NOM Cl.-ŋa-NOM
'Another story [is] this one.'

2. Simple sentences

We may distinguish between nominal sentences and verbal sentences. Verbal sentences are either intransitive or transitive.

(a) NOMINAL SENTENCES consist of two NPs, one of which is obligatorily in NOM..⁵³

- (1) *ŋa=i yura-φ* 'I [am] Aboriginal.'
I-NOM man-NOM
- (2) *a=ŋa-φ yura-ru* 'That [is] man's.'
this-NOM man-G.=D.
- (3) *yura-φ watli-ŋa* 'Man [is] in house.'
man-NOM house-LOC
- (4) *unki-wa* 'He [is/was a] clever man.'
unki-he

The last example is interesting, but it is uncertain if the construction is possible with any pronoun other than the 3rd person Sg. pronoun.

(b) INTRANSITIVE SENTENCES consist minimally of an NP in NOM. and an intransitive VP, with various possible complements:

- (5) *yura-φ ŋuka-aŋku* 'Man went.'
man-NOM go-PAST
- (6) *yura-φ ŋuka-aŋku watli-ru* 'Man went into house.'
man-NOM go-PAST house-G.=D.
- (7) *ŋuka-aŋku-wa* 'He went.'
go-PAST-he
- (8) *ŋuka-naŋka-t^yu-ŋu* 'It would go along.'
go-along-FUT.-ŋu

The last example shows that in 'impersonal' sentences the S personal pronoun is dropped; this does not happen when +AN. nouns are pronominalised. It is, at present, assumed that an intransitive sentence may have an O(bject):

- (9) *i=ŋa-φ waŋka-t-a=i yaina-ŋa i=n^yt^yi-ŋa ŋawala-φ-t^yi*
this-NOM say-PR-I again-ŋa this-ŋa word-NOM-t^yi
'Now I am talking again about this story.'⁵⁴

(c) TRANSITIVE SENTENCES consist obligatorily of an Agent, being marked by ERG. if not a Du. or Pl. personal pronoun, and a transitive verb. It normally has an Object, which may be zero. On the other hand, there is no formal difference between a direct and an indirect O.⁵⁵

- (10) *yura-ŋa aŋu-φ naku-aŋku* 'Man saw woman.'
man-ERG woman-NOM see-PAST
- (11) *naku-aŋk-a=lu-wa* 'He saw her.'
see-PAST-he=A.-he
- (12) *yura-ŋa ŋura-aŋku* 'Man threw [it/something].'
man-ERG throw-PAST
- (13) *yura-ŋa wiŋi-φ nuŋku-aŋku yatna-ŋa* 'Man gave them sticks.'
man-ERG stick-NOM give-PAST they-ACC

(d) Some interesting TRANSFORMATIONS have to be considered here:

(i) A verb-root is either transitive or intransitive; every such root may, however, be converted into a verb of opposite transitivity, by suffixing either the intransitiver *-di* or the transitiver *-ŋu*:⁵⁶

- (14) *yura-ŋa aŋu-φ unŋa-aŋku* 'Man hit woman.'
man-ERG woman-NOM hit-PAST Intr. ⇒
- (15) *aŋu-φ unŋa-i-aŋku* 'Woman was hit.'
woman-NOM hit-Itr.-PAST

The justification for speaking of 'intransitivising' transformation rather than of 'passivisation' lies in the fact that the Agent may not be mentioned

in such an intransitivised sentence. Hence (16)* is ungrammatical; this, by the way, allows us to distinguish between ERG. and INS. (and also LOC.). Although (16)* is ungrammatical, it is possible to formulate sentences of type (19) where, however, the NP-EX. is not transformed out of the Agent in sentence (14):

- (16)* *aṭu-φ unā-i-ajku yura-ḡa*
woman-NOM hit-Itr.-PAST man-ERG
(17) *yura-ḡa aṭu-φ unā-ajku watna-ḡa* Intr. ⇒
man-ERG woman-NOM hit-PAST boomerang-INS
'Man hit woman with boomerang.'
(18) *aṭu-φ unā-i-ajku watna-ḡa*
woman-NOM hit-Itr.-PAST boomerang-INS.
'Woman was hit with boomerang.'
(19) *aṭu-φ unā-i-ajku yura-ḡuṇi*
woman-NOM hit-Itr.-PAST man-EX
'Woman was hit over/because of man.'

In the following examples it is also shown that Atjnjamathanha does not distinguish between indirect and direct O. also with respect to the transitivity transformation; it is, therefore, possible that there are two O. in Atjnjamathanha. Hence, the Tr(ansitivising) transformation may be applied to a transitive verb:⁵⁷

- (20) *yakati-φ wanti-ajku* Tr. ⇒ 'Child was lying.'
child-NOM lie-PAST
(21) *yura-ḡa yakati-φ wanti-ḡuṇka-ajku* 'Man laid child down.'
man-ERG child-NOM lie-Trs.-PAST
(22) *yura-φ waḡka-ajku* Tr. ⇒ 'Man spoke.'
man-NOM say-PAST
(23) *yura-ḡa aṭu-φ waḡu-ḡuṇka-ajku* 'Man spoke to woman.'
man-ERG woman-NOM say-Trs.-PAST
(24) *yura-ḡa vaalū-φ ampa-ajku* Tr. ⇒ 'Man cooked meat.'
man-ERG meat-NOM cook-PAST
(25) *yura-ḡa vaalū-φ ampa-ḡuṇka-ajk-i=na* 'Man cooked meat for you.'
man-ERG meat-NOM cook-Trs.-PAST-YOU

It will be noticed that the difference between the pairs of sentences (20)/(21) and (22)/(23) lies in the fact that in the first pair the S of the intransitive sentence is transformed into the O of the transitive sentence, but into the A of the transitive sentence in the second pair. I shall elaborate on this further below.

(ii) Another type of Intr. transformation is the reflexive and the reciprocal transformation, which are distinguished formally by adding *-ḡka=di* for the reflexive, *-ḡu=ḡi* for the reciprocal. This transformation again confirms that there is no formal distinction between indirect and direct O. This fact, again, allows the appearance of an O in this type of intransitive sentence:

- (26) *yura-ḡa aṭu-φ nanta-ajku*
man-ERG woman-NOM bone-PAST
'Man boned woman.'
(27) *yura-φ nanta-ḡka=di-ajku*
man-NOM bone-Rfl.-PAST
'Man boned himself.'

- (28) *yura-φ vapina-φ nanta-ḡu=ḡi-ajku*
man-NOM lot-NOM bone-Rcp.-PAST
'Aboriginals boned each other.'
(29) *ḡa=i i=ṭla waḡu-ḡka=di-nt-a=i*
I itla say-Rfl.-PR-I
'I speak about myself.'
(30) *ḡawi-ḡawi-ḡka=di-n^ṭu-wa-ajku*
smear-smear-Rfl.-FUT-he-ajku
'He will/would smear [it] over himself.'
(31) *ḡala=aka-ḡa ḡawala-φ walu-ḡu=ḡi-ajk-atna-φ*
big-ḡa word-NOM speak-Rcp.-PAST-they-NOM
'They spoke/said to each other big/important words.'
(32) *aṭu=na-φ nuḡka-ḡu=ḡi-ajk-atna-φ*
wife-NOM give-Rcp.-PAST-they-NOM
'They gave to each other/exchanged wives.'

(iii) The ending *-nta*, marking what may be called 'present tense', also functions as a verbal noun or participial; as such it may also function as adjective, in which latter case it takes—obligatorily??—the suffix *-ḡa*, which then functions as a sort of 'adjectiviser':⁵⁸

- (33) *yakati-φ wai-ni-ajku* Tr. ⇒
child-NOM fright-INTR-PAST
'Children were frightened.'
(34) *yura-ḡa yakati-φ wai-ni-ḡuṇka-ajku* Nom. ⇒
man-ERG child-NOM fright-INTR-Trs.-PAST
'Man frightened child(ren).'
(35) *a=ḡa-φ ḡawala-φ yakati-φ wai-wai-ni-ḡku-ta-ḡa-φ*
that-NOM word-NOM child-NOM fright-fright-INTR-Trs.-PR-ḡa-NOM
ḡawala-φ
word-NOM
'That story is story frightening children.'

(iv) There is finally another VN, taking the ending *-Ni*,⁵⁹ which is fundamentally an agent noun, the head noun of the nominal construction being transformed out of an ERG., an INS., or a LOC., the 'Object' NP of the nominal construction being transformed out of an O, but also of an INS. (examples (42)/(43))!

- (36) *va=ḡa yura-φ ḡalku-ajku* 'He ate men.'
he man-NOM eat-PAST Nom. ⇒
(37) *va=ḡa yura-ḡalku-ḡalku-Ni-φ* 'He [is/was] man-eater.'
he man-eat-eat-VN-NOM
(38) *yura-ḡa mai-φ vani-ajku aṭa-ḡa*
man-ERG food-NOM dig-PAST stick-INS
'Aboriginals dug food with digging stick.'
(39) *aṭa-φ mai-φ vani-vani-Ni-φ* 'Food-digging stick.'
stick-NOM food-φ-dig-dig-VN-NOM
(40) *mai-φ warku-ajk-atna-φ mala-ka-ḡa* 'They carried food in big net.'
food-NOM carry-PAST-they-NOM big=net-LOC/INS
(41) *mala=ka-φ mai-φ warku-warku-Ni-φ* 'Big net [is/was] food carrier.'
big=net-NOM food-φ-carry-carry-VN-NOM
(42) *yatna-φ unṭa-ḡu=ḡi-ajk-atna-φ aṭa-ḡa* 'They fought with yamsticks.'
they-NOM hit-Rcp.-PAST-they-NOM stick-INS

- (43) *yatna-φ afa-φ-unfa-unfa-Ni-φ* 'They [were] yamstick-fighters.'
 they-NOM stick-φ-hit-hit-VN-NOM

3. Complex sentences

(a) Sentences are CO-ORDINATED by juxtaposition, in rarer instances by using the particle *ta* 'and', also used to join constituents. In co-ordinated sentences I assume that every verb must have an S or an A pronoun, while the O pronoun may be lacking:

- (44) *yura-φ nuka-anjku, vaaļu-φ yutli-anj-k-a=lu*
 man-NOM go-PAST, meat-NOM chase-PAST-he=A.
 'Man went and chased meat.'
 (45) *yura-φ nuka-anjku, watni-anjku-waanku-ru*
 man-NOM go-PAST, return-PAST-he camp-G.=D.
 'Man went, and returned to camp.'
 (46) *yura-ηa vaaļu-φ naku-anjku, unfa-anj-k-a=lu*
 man-ERG meat-NOM see-PAST, hit-PAST-he=A.
 'Man saw game, and killed it.'

When the O is a +HUM. NP, it is obligatory:

- (47) *yura-ηa afa-φ naku-anjku, unfa-anj-k-a=lu-wa*
 man-ERG woman-NOM see-PAST, hit-PAST-he=A.-he
 'Man saw woman and hit her.'⁶⁰

(b) Also SUB-ORDINATION is unmarked, and the two sentences are simply juxtaposed; there is however, some change in the tense-aspect suffixes; but clear rules cannot be formulated so far:

- (48) *yura-φ nuka-anjku, vaaļu-φ yutli-n^yi^y-a=lu*
 man-NOM go-PAST, meat-NOM chase-FUT-he=A.
 'Man went, (in order) to chase game.'
 (49) *yura-ηa afa-φ naku-ku, unfa-anj-k-a=lu-wa*
 man-ERG woman-NOM see-NARR, hit-PAST-he=A.-he
 'When man saw woman, he hit her.'

(c) A sentence may be NOMINALISED, and then embedded into another sentence; this type of construction allows for the Deletion of the S or the A:

- (50) *yura-φ witni-anjku* 'Man walked around.' Emb. ⇒
 man-NOM walk-PAST
 (51) *yura-φ vudi-anjku vari-ηa* 'Man descended in creek.'
 man-NOM descend-PAST creek-LOC
 (52) *yura-φ witni-anjku vudi-nta vari-ηa*
 man-NOM walk-PAST descend-PR creek-LOC
 'Man walked around, descending creek.'
 (53) *yura-φ wit^ya-anjku* 'Man went up.' Emb. ⇒
 man-NOM. rise-PAST
 (54) *yura-ηa yata-φ naku-anjku* 'Man saw country.'
 man-ERG ground-NOM see-PAST
 (55) *yura-φ wit^ya-anjku yata-φ naku-nta* 'Man went up, seeing country.'
 man-NOM rise-PAST ground-NOM see-PR
 (56) *yura-φ vudi-anjku vari-ηa* 'Man went down in creek.'
 man-NOM descend-PAST creek-LOC

- (57) *yura-ηa vaaļu-φ njalku-nanjka-anjku* Emb. ⇒
 man-ERG meat-NOM eat-along-PAST
 'Man ate meat as he went along.'
 (58) *yura-ηa vaaļu-φ njalku-nanjka-anjku, vari-ηa vudi-nta*
 man-ERG meat-NOM eat-along-PAST, creek-LOC descend-PR
 'Man ate meat on his way, going down the creek.'
 (59) *yura-ηa aka=aka-lta-ku* 'Man was breaking [it].'
 man-ERG break-NARR
 (60) *yura-ηa vaaļu-φ vula=vula-pa-ku* Emb. ⇒
 man-ERG meat-NOM piece-piece-TR=NARR
 'Man pulled meat into pieces.'
 (61) *yura-ηa aka=aka-lta-ku, vaaļu-φ vula-vula-pa-nta*
 man-ERG break-NARR, meat-NOM piece-piece-TR-PR
 'Man broke it (up), pulling meat into pieces.'
 (62) *yura-ηa mani-φ aka=aka-lta-ku* 'Man broke fat by part.'
 man-ERG fat-NOM break-NARR
 (63) *yura-ηa mani-φ vula-vula-pa-ku* Emb. ⇒
 man-ERG fat-NOM piece-piece-TR-NARR
 'Man pulled fat into pieces.'
 (64) *yura-ηa mani-φ aka=aka-lta-ku, vula-vula-pa-nta*
 man-ERG fat-NOM break-NARR, piece-piece-TR-PR
 'Man broke fatty part (up), pulling in into pieces.'

The Del. rule operates only when the intransitive S and the transitive A, or the two A or the two O are 'identical' (co-referential). In case of a co-referentiality between an intr. S and a trans. O, however, a participial construction with a Del. rule may be applied only if some other operation—in the following case the Intr. transformation—is first applied, thus allowing the application of the Del. rules as just defined:⁶¹

- (65) *yura-ηa yakati-φ nampa-anjku utlu-valta-ηa* Intr. ⇒
 man-ERG child-NOM cover-PAST roo-rug-INS
 'Man covered child with kangaroo-rug.'
 (66) *yakati-φ nampa-i-anjku utlu-valta-ηa* Emb. ⇒
 child-NOM cover-Itr.-PAST roo-rug-INS
 'Child was covered with kangaroo-rug.'
 (67) *yakati-φ wanti-anjku yata-ηa*
 child-NOM lie-PAST ground-LOC
 'Child lay on ground.'
 (68) *yakati-φ wanti-anjku yata-ηa, nampa-i-nta utlu-valta-ηa*
 child-NOM lie-PAST ground-LOC, cover-Itr.-PR roo-rug-INS
 'Child lay on ground, covered with kangaroo-rug.'⁶²

All these examples quite clearly establish a NOM.-ACC. syntax for Atjnjamathanha.

4. Other sentence types

It has already been mentioned above that sub-ordination is usually 'unmarked' in Atjnjamathanha the usual process being juxtaposition. The relative clause may be construed in the same manner, or it may be marked by the suffix *-di*:

- (69) *aṭu-φ ika-nta ηu=ηa-ηa*
woman-NOM sit-PR over-LOC
'Woman is sitting over there.'
- (70) *aṭu-ηa naku-aṅk-i=na*
woman-ERG see-PAST-you
'Woman saw you.'
- (71) *aṭu-φ ika-nta ηu=ηa-ηa, naku-aṅk-a=lu ηi=na*
woman-NOM sit-PR over-LOC see-PAST-he=A. you
'Woman who is sitting over there, saw you.'
- (72) *i=ηa-ηa ut^yu ηu=ηa wata-ru aṭu-ru*
this-ηa ut^yu over Cl.-G.=D. woman-G.=D.
'This belongs to that woman.'
- (73) *aṭu-φ ika-nta ηu=ηa-ηa*
woman-NOM sit-PR over-LOC
'Woman is sitting over there.'
- (74) *i=ηa-ηa ut^yu ηu=ηa wata-ru aṭu-ru, ηu=ηa-ηa ika-nta-wa*
this-ηa ut^yu over Cl.-G.=D. woman-G.=D., over-LOC sit-PR-he
'This belongs to woman, who is sitting over there.'
- An example with the suffix *-di* is the following:
- (75) *ηa=ṭu ηuṭa-aṅku a=ηa-φ watlata-φ*
I=ERG make-PAST that-NOM spear-NOM
'I made that spear.'
- (76) *ηu=ntu watlata-φ aka=ṭa-aṅku*
you-ERG spear-NOM break-PAST
'You broke spear.'
- (77) *ηa=ṭu a=ηa-φ watlata-φ ηuṭa-aṅku, ηu=ntu-di aka=ṭa-aṅku*
I=ERG that-NOM spear-NOM make-PAST, you=ERG-di break-PAST
'I had made that spear which you have broken.'⁶³

Rel. ⇒

Rel. ⇒

Rel. ⇒

5. Verb classes and passive marker

It is tempting to relate the intransitivising suffix *-di* to a passive marker; I prefer speaking of an 'intransitiver' instead of a 'passiviser'. The reflexive suffix *-ηka=di* seems to contain the same suffix, while the reciprocal *-ηu=ri* could eventually contain the allomorph *-r(i)* of the same suffix, mentioned above. While the first part of the reciprocal suffix is formally identical with the transitive suffix *-ηu*, it is not obvious that one should explain the reflexive suffix as a combination of an intransitiver and a transitive. ⁶⁴

If one sets aside the verbs transitive by *-ηu* or intransitive by *-di* and the verbs derived by the transitive suffix *-pa/-ma* or the intransitive suffix *-ni*, there are no verb-classes in Atjnjamathanha. ⁶⁵

However, there are some small groups of verbs which are perhaps characterised by a fossilised 'stem suffix': The suffixes *-ku* and *-li* are candidates for such fossilised stem suffixes; another candidate is *-mi*, appearing at the end of a small group of verbs. While most verbs ending in *-ku* are transitive, most verbs ending in *-li* are intransitive; the *-mi* verbs are transitive or intransitive. The lists are too small, however, as to allow any important conclusion, nor do they seem to justify entering any details, which would involve hypotheses on etymological relationships.

It has finally to be mentioned that there are certain verbs which never occur without the intransitivising suffix *-di*. These verbs are rare. The tran-

sitive is formed by adding *-ηu*. Thus, for instance, *waka=di-nta* 'breaking' (intransitive) vs. *waka=di-ηku-ta* 'breaking' (transitive). The 'simple roots' **waka-nta* or **waka-ηu-nta* are unknown in the actual language.

6. Transitivity

It was shown in this paper that in Atjnjamathanha every verb may be used intransitively or transitively: an intransitive verb-root may be transitive, and a transitive verb-root may be intransitive; the process is general in the language, but the morphophonemic rules may not yet be stated in general terms. ⁶⁶ It also was shown that the language does not distinguish formally between an 'indirect Object' and a 'direct Object'; this may, of course, lead to certain ambiguities:

- (78) *vapapa-φ ηa=ṭ^yu nuṅku-a=ṭu* [sc. *aṭu-φ*]
vapapa-NOM my give-I=ERG [sc. woman-NOM]
(i) 'I will give my cousin [sc. to woman].'
(ii) 'I will give [sc. woman to] my cousin.'

The tests relying on the Del. rules operating with participial constructions (and to a lesser degree also with co-ordinated and sub-ordinated sentences construed by juxtaposition), have suggested that Atjnjamathanha—in spite of its ERG. noun morphology—is a '(NOM.)-ACC. language'.

It is, however, here where the distinction between Agent-deleting and Object-deleting Intr. transformation must be made:

- (79) *yura-ηa aṭu-φ unṭa-aṅku* 'Man hit woman.' Intr. ⇒
man-ERG woman-NOM hit-PAST
- (80) *aṭu-φ unṭa-i-aṅku* 'Woman was hit.'
woman-NOM hit-Itr.-PAST
- (81) *yura-ηa aṭu-φ waṅu-ηu-ku* 'Man spoke [to] woman.' Intr. ⇒
man-ERG woman-NOM say-Tr.-NARR
- (82) *yura-φ waṅka-ku* 'Man spoke.'
man-NOM speak-NARR

If we want to fuse into one rule the intransitivising transformation, we have therefore the choice between the following two notations:

- (a) $NP_1\text{-ERG.} + NP_2\text{-φ} + VP_1 \Rightarrow \begin{Bmatrix} NP_1\text{-NOM.} \\ NP_2\text{-NOM.} \end{Bmatrix} + VP_1$
- (b) $\begin{Bmatrix} NP_1\text{-ERG.} + NP_2\text{-φ} \\ NP_2\text{-ERG.} + NP_1\text{-φ} \end{Bmatrix} + VP_1 \Rightarrow NP_1\text{-NOM.} + VP_1$

Whatever our decision, ⁶⁷ it becomes clear that there are, so to speak, two types of transitivity in the language. If we call the type operating with A-Del. the 'direct transitive' type, and the type which operates with O-Del. the 'indirect transitive' type, we may re-establish—on a more precise basis—the two terms 'direct Object' and 'indirect Object' in Atjnjamathanha; 'double transitive' constructions are apparently preferably intransitive by O-Del.

Dixon has argued that every language is either a NOM.-ACC. or a NOM.-ERG. language, but never both at the same time; that it, he rejects the existence of a third, 'mixed' type: 'There could well be a language with three quite different case inflections (for NPs of all types) marking S, O and A. Yet the language could still conform to the universal hypothesis, in that it could SYNTACTICALLY identify either S with A or S with O'. ⁶⁸ We could think that Atjnjamathanha represents a case of a 'syntactically mixed type'. However, Dixon's criterion may be applied also to 'indirect transitive' constructions:

- (83) $a=na-\phi$ *munka-na nawala-phi vatli-i-nta na=ipu-la-na*
 that-NOM crowd-na word-NOM play-Itr.-PR we-na
waju-nunika-anik-atna-phi
 say-Tr.-PAST-they-NOM

'They said those words to us in a playing way.'

The translation of *vatli-i-nta* by 'story style' by the informant, is the only clear hint that the A of *waju-* 'speak, trans.' is also the S of the intransitive *vatli-i-*.

This last example shows sufficiently that Atjnjamathanha is *not* syntactically a mixed type, after the criteria proposed for distinguishing between NOM.-ACC. and NOM.-ERG. syntax. However, the preceding pages have shown that by defining this way Atjnjamathanha as having a NOM.-ACC. syntax, we do not define clearly enough concepts such as 'transitivity', 'ergativity' and 'voice' in the language.

Notes

1. In the first version of the present paper, I relied mainly on one Nayimil informant. Since then I have checked many of the examples with other speakers. Differences between the present paper and its former version are due mainly to the fact that several examples given before were not accepted by several informants.
2. For this see Schebeck (1972, 1974b).
3. The relevant positions are between vowels, and between consonants, other than stops or nasals, and vowels; ϕ represents here a retroflex flap. To my knowledge the alveolar simple stop does not occur, in any dialect, in the relevant positions.
4. For a more detailed discussion of several of these cases as well as for forms in other dialects, see Schebeck (1974b).
5. Although the ACC is often realised as $-\phi$ —or, perhaps better, the suffix is not added—it will always be distinguished from the NOM. by virtue of the following rule:

$$-Na \Rightarrow \left\{ \begin{array}{l} \{-n^y/V\text{---}\} \\ \{-na\} \\ \{-\phi/-AN.\text{---}\} \end{array} \right\}$$

There is some indeterminacy about the realisation as $-\phi$: While normally only +HUM. NPs take the (non-zero form of the) suffix, it was admitted by informants that even certain -AN. NPs could take it, while this was rejected for some other NPs. Thus, the feature involved in the above rule is, perhaps, rather +ABSTR.

6. The suffix *-Ku* and other suffixes containing it as first element (i.e. cases 10.-13.) do not always follow the morphophonemic rules outlined above. This is true, in particular—although not exclusively—with many pronominal forms, where the stop is realised as 'fortis'. I have so far no means to deal with these exceptions otherwise than by an *ad hoc* rule.
7. As indicated by the double hyphen '=', I consider cases 9.-13. as compound morphemes, although it is not always possible to isolate a given 'simple morpheme' in the actual language. It will be noticed that the first morpheme of cases 10.-13. is identical with the G.=D. suffix *-Ku*. I have so far no clear explanation for this fact, whose significance must

doubtlessly be sought in the fact that this happens with all the cases typically reserved for +HUM. NPs.

8. For a little more detail on these, see Schebeck (1974b).
9. It is uncertain if this has to be brought into connection with the 'CA' suffix $-(\eta)ku$, mentioned in Dixon (1973:10).
10. Although I hint at hypothetical analyses in the orthography, I do not discuss any further the pronominal forms here.
11. The suffix $-Pa=y$, but not the suffix $-Pi$, follows the morphophonemic rules given above; $-Pi$ is always realised with a fortis stop. The ACC. forms $-Na=y$ [$-n^y a=y$] are doubtlessly shortened from $-Na-Pa=y$; for obtaining the correct forms, it is necessary to apply the lenition rule for the stop before the palatalisation rule is applied. The ACC. forms of the singular might give support to the idea that $-Pi$ and $-Pa=y$ are distinct. I do not discuss this problem any further here. See, however, note 13 below.
12. That is $-Ku=ru-Pu=y \Rightarrow -Ku=ru=y$. For this see also note 15 below. If I write in examples the 'short' form $-Ku=ru=y$, I shall label it REL_2 .
13. The fact that $na=Pa$ (with fortis stop!) is equivalent to $na-Pu=y$ in other dialects, might indicate that the suffix $-Pa=y$ of the emphatic form is derived from the 'residual' G.=D. $-Pa$, in a way parallel to $-Pu=y$ (cf. no suffix $*-Pu$ is known!), rather than being 'corrupted' from $-Pu=y$.
14. Notice that the element *wa-* exists in certain other dialects. E.g. *wa-na* 'where?' in Tuwala and other dialects, *wa=ra-* 'who?' in Rittarnu. It would seem that $na-la-\eta$ contains the 'residual' LOC. $-la$ and the 'shortened' form of the 'normal' LOC. $-\eta a$. It is, however, difficult to explain analogously the form *wala η* , where at least $-\eta$ could be shortened from $-\eta u$.
15. The general lenition rule is followed by a simple contraction rule, after which $-uwu- \Rightarrow -u-$ (short vowel in unstressed position). One thus obtains, regularly, the following forms:
 - $-Ku-Pu=y \Rightarrow -Ku=y$
 - $-Ku-Ku=\eta \Rightarrow -Ku=\eta$ (hence identical with the simple ABL.)
 - $-Ku=ru-Pu=y \Rightarrow -Ku=ru=y$
 - $-Ku=ru-Ku=\eta \Rightarrow -Ku=ru=\eta$
 Where the 'shortened' forms will be used, they shall be labelled REL_2 and ABL_2 respectively.

I have so far not encountered more complex forms than those just given. This is why I do not add the suffix $-\phi$ after these compound cases. However, it has yet to be investigated if this is correct.

16. It would seem that this AGR. rule allows us to distinguish between POSS. and DAT., since POSS. transforms into $-Ku=ru$ while DAT. would remain $-Ku$.
17. As already mentioned, this is the main reason why I do not add the suffix $-\phi$ to forms containing as last element the suffix $-Pu=y$ or the suffix $-Ku=\eta$.
18. The following examples show that nominal sentences usually have both NPs in NOM. The fact that the only exception is furnished by L. sentences suggests that locatives may be derived from deep verbal sentences. However, no attempt is made here to clearly derive these or other nominal sentences from verbal sentences.
19. For stating this as a general rule, one must formulate the complementary

- rule, given above, that ACC. is realised as $-\phi$ (rather than dropped) with certain nouns.
20. Checking with various informants shows that not all intransitive sentences are nominalised with an equal readiness, and the examples given below showed some hesitation with informants. It is, however, beyond doubt that certain intransitive sentences are quite frequently nominalised. It is, however, unclear as yet what sort of constraints operate on the general rule given below.
 21. I have so far not obtained full agreement amongst informants on what concerns the obligatory transformation of INS. into REL. and about the preservation of DIR. under a Nominalising transformation. At present however, I assume that INS. is obligatorily transformed into REL. For this see also note 25 below.
 22. I have adopted the indexing of NOM. and ACC. NP as NP₂ for reasons to be discussed below.
 23. In the form $-Na=ra$ I indicate by $-N$ a nasal, which is realised as alveolar or as laminal, following unknown rules. In the former case I usually write simple $-na=ra$, while $-Na=ra$ is realised as $-n^y a=ra$ when following the vowel $-i$, as $-na=ra$ elsewhere.
 24. As already mentioned above, in note 20, not all informants accepted equally well the sentences (19)–(21). Some informants added that it means that the death occurred ‘a long time ago’. It seems, however, reasonable to suggest that the VN of an Inc. insists on the final result of a process, while a corresponding noun (e.g. *ɾakkun* ‘dead’) focuses interest uniquely on a state.
It is interesting to compare, e.g., the expression *pukku-kart^yt^yampal* ‘forehead-kangaroo’ which would normally be applied to somebody who, for instance, rejects some meat and wants kangaroo-meat, or he does not want to hunt any other game than kangaroos, etc. The expression *pukku-kart^yt^yampal-Ṭi-Na=ra* ‘forehead-kangaroo-Inc.-Nom.’ however, would rather apply to somebody who looks like a kangaroo. This type of expression is quite frequently used.
 25. It has been accepted in sentence (20) that the INS. suffix $-Ṭu$ may also be used. I have said above that I provisionally assume that INS. be obligatorily transformed into REL. under a Nom. transformation. It may, however, turn out that there is a difference, in this rule, between intransitive and transitive sentences.
 26. This sentence was felt as ‘funny sentence’ by some informants who accepted it nevertheless; this suggests that it is grammatical, although difficult to accept without a context; this is, I suppose, the reason why some informants rejected the sentence, while others accepted it without any further comment.
 27. The suffix $-mi$ ‘having’ is not dealt with here. It is as yet unclear how to explain the fact that this suffix is used for verbal nouns and R.
 28. Although I find it difficult to account for the suffix $-\phi$ in these examples (that is why I write simply $-\phi$ in the interlinear translation), I have added it as a reminder.

By comparing the present paper with the earlier version, it will be seen that the ABL. transformation as well as the $-Ku$ transformation is not

- supposed to apply to intransitive sentences with indirect object; this is why the term ‘indirect transitive’ sentences is dropped in the present paper. This is, by the way, one of the main differences between the present and my former treatment of the concept of ‘transitivity’ in the language. However, new verifications have shown that rule (Vb) (cf. example (42), though not example (41), in the first version) may be applied to certain intransitive sentences with an indirect object. It is as yet unclear how one may explain this fact, as it is as yet unclear how far such a rule may be generalised for other intransitive sentences with indirect object.
29. Reflexives have the same referent for the underlying NP₁ and NP₂, while reciprocals may be explained as a conjunction of two or more identical sentences, whereby NP₁ and NP₂ in a given single sentence do not refer to the same individual but to individuals of the same class—rendered by a given noun (e.g. *yül=ɟu* ‘man’, *taykka* ‘woman’, etc.). It is as yet unclear how to explain the fact that R. sentences transformed out of intransitive sentences with indirect objects are always reciprocal, while no example of a reflexive has yet been found.
 30. One might suggest that the term ‘middle voice’ be applied in Yülɟu to constructions with agent deletion.
 31. The example (62) in the first version of this paper, has been rejected by other informants. As this was the only example where a transitive sentence would form a CAUS., I assume that this example was simply wrong.
 32. The suffix $-Ṭu$ follows the morphophonemic rules given at the beginning of this paper; it moreover palatalises into t^y when following a palatal consonant. The same applies for the Inc. suffix $-Ṭi$.
 33. It is as yet unclear if there is any difference between forms in $-Ṭu-ma$ and forms in $-Ku$, although this has been sometimes admitted; but it is as yet unclear how to formulate these differences. Thus, e.g., besides the fact that certain informants rejected a form *ɾakkun^y-Ṭu-ma* ‘dead-Afs.-CAUS.-’, for the form *ɾakkun^y-Ku* ‘dead-CAUS₂-’, one informant explained that it means ‘reckon (erroneously) that somebody is dead’, while another informant said it meant ‘kill secretly’. The suffix $-Ku$ does not follow the morphophonemic rules outlined above, in that it is always realised with a fortis stop after vowels.
 34. In the first version of this paper, I tried to explain this as the R.-form, functioning as an intransitiviser. In spite of the arguments put forward there, a derivation like *box-li-ɟka-n* ‘box-DIR.(??)-CAUS₃-Afv.’ ‘put into box’ might suggest that $-Na=ra-mi-ɟka-$ has to be explained as ‘Nom.-mi-CAUS₃’. But it is, again, unclear how to explain the fact that a ‘habitualis-potentialis’ VN should be used here.
 35. This example has been cross-checked, and no disagreement has occurred so far between informants, who also rejected the idea that this may be an ambiguous sentence. The general explanation (sometimes given without being asked) was usually: *wāyin-φ ɟaru parppà-Ṭi-n ɟan-Ku=ra kūɟ-ɟa* ‘meat would be/get rotten in his hand’. The reason for this clearness of interpretation may easily be sought in Silverstein’s Paper 6, reported to us by J. Heath in Paper 7.
 36. Most of the examples in the following list may be said to be ‘artificial’—

the more so as they are out of context. This is probably one of the main reasons why it was difficult to obtain agreement, often even difficult to get a clear reaction, from the informants.

It should be noticed that after the list of compound cases given above, G.=D. and ABL. are treated alike. The only exception found so far lies in the fact that G.=D.+G.=D., besides [yielding *-Ku=ru* (EX₂), may also yield *-Ku* (G.=D.), while there is no such rule which would yield *-Ku=ru* or *-Ku* from ABL.+G.=D.

37. This example was rejected by some informants, confirmed by others.
 38. This sentence was not accepted by some informants, who rather gave the alternative version given as sentence (128) below.
 39. This example was rejected by several informants, but who did not propose any alternative construction. Even these informants, however, accepted sentences of type (91), (95) and (99), and also the fact that those sentences are ambiguous. (See next note).
 40. These sentences are ambiguous, as agent and object both take the locational case ending.
 41. Remember that these compound cases 'REL₂' and 'ABL₂' are considered to be contracted after lenition of the stop. Hence:

$$-Ku=ru + \begin{cases} -Pu=y \\ -Ku=\eta \end{cases} \Rightarrow -Ku=ru \begin{cases} -wu=y \\ -wu=\eta \end{cases} \Rightarrow -Ku=ru \begin{cases} y \\ \eta \end{cases}$$

It is uncertain if one should add $-\phi$ 'NOM.' to these two compound cases. The advantage of such a notation lies in the consistency of notation for all forms ending in $-Pu=y$ or $-Ku=\eta$. On the other hand, no forms are known which would be more complex than the cases mentioned here. It may be seen that the question goes beyond a simple orthographic problem, as it involves the problem concerning the possible recursivity of these combination processes. It is remarkable, in this context, that examples (103) and (108), where the problem of recursivity is the most obvious, are the most 'artificial' and the most uncertain of the examples given here.

42. It may be debatable if the adding of $-\phi$ 'NOM.' is correct here, or if one should rather add $-Na$ 'ACC.', which would be 'realised as zero'. ACC., then would appear to be the only case which does not follow an AGR. rule in an NP, consisting of a N and (at least) an Adj. (Whereby I consider N-*Ku* as 'functioning as Adj.', different from juxtaposed nouns, as they occur, for instance, in the construction of body-parts).
 43. Here L. stands for the three locational cases LOC., DIR. and EX. 'ABL₂', as already mentioned in note 41 above, stands here for the compound case EX₂-ABL.
 44. I am so far uncertain if (136) may be said to be ambiguous, in that the NP-REL.+VN may qualify the NP-ACC. (object) or the NP-ERG. (agent). It should be noticed that the second alternative is possible if sentence (128) is accepted.
 45. The VN was given with the REL. $-Pu=y$ by some informants, without it by some others.
 46. One of the clearer cases is the class of verbs having the stem-suffix $-ra$, for which I count at present 10 verbs: 6 are transitive, 3 are intransitive, and one is uncertain. Another small class, having a 'stem-suffix' $=pu$, which might be identical with the verb $p\bar{u}$ - 'to hit', contains mainly

transitive verbs. Also in the other classes there are always both intransitive and transitive verbs; the smallness of some of these 'classes' prevents us defining a clear tendency.

47. Remember however the definition of the 'middle voice' by the process of agent-deletion, that which made it possible to consider the intransitive verb form in example (97) in Schebeck (1974b). It is as yet unclear how to build those suggestions into the present considerations.
 48. This might suggest that the term 'indirect transitive', suggested in Schebeck (1974a), but rejected above and in Schebeck (1974b), should be taken up again.
 49. For the name Atjnjamathanha see Schebeck (1973); for more information on the grammar, see Schebeck (forthcoming); for phonemic problems, see Schebeck (1972).
 50. See Schebeck, Hercus and White (1973).
 51. I have added the zero suffix in NOM. only to Du. and Pl. pronouns only because of the morphophonemic complications in the Sg. pronoun.
 52. This is a guess; moreover, there is a question whether the definition should operate with the terms +HUM. or, rather, with the terms +AN.
 53. One may say that it is doubtful if sentences of type (3) really occur in the actual language; normally the sentence would be formulated with a 'verb of existence' like *ika-* 'sit'.
 54. I do not consider that the suffix $-na$ in $i=n^y i-na$ marks an ACC., in any way comparable to the ACC. marking of the Du. and Pl. personal pronoun.
 55. I remind the reader that the Du. and the Pl. personal pronouns add obligatorily the ACC. suffix $-na$ to mark the O. Example (13) shows that also in this instance there is no distinction between indirect and direct O, both being marked by $-na$ in the pronoun.
 56. No rule has so far been discovered which would allow to predict if, with a given root, the intransitiver is $-i$ or $-di$; with certain verbs it is $-i$ when followed by the PAST suffix $-anjku$ or $-anjkata$. The rules which determine, with a given root, the form $-nu$ or $-nyku$ respectively, are also unknown. The transitiver takes regularly the form $-nyjka$ when followed by the PAST suffix $-anjku$ and $-anjkata$.
 57. The formulation has something paradoxical about it (relating to the problem of knowing what 'transitivity' and 'transitiver' mean).
 58. The derivational suffixes, deriving verbs from nouns— na deriving intransitive, $-pa/-ma$ deriving transitive verbs—are not dealt with here. It is unclear what the difference between $-pa/-ma$ and $-ni-nu$ is. The allomorphs of $-nt(a)$ are $-nt(a)$, $-t(a)$, and $-f(a)$.
 59. I am so far uncertain if N should be an alveolar or an interdental nasal, although there are some palatalised examples available. I, therefore, write this suffix $-Ni$, that which also distinguishes it from $-ni$ which derives intransitive verbs from nouns.
 60. Out of context, sentence (47) is, of course, ambiguous, because of the two pronominal references in the verb.
 61. In the following examples I introduce *yura* 'man', instead of a 'dummy N' or an indefinite pronoun, etc.
 62. This example, once more, demonstrates the preservation of an INS. under an Intr. transformation.

63. I do not venture here any hypothesis about this suffix *-di*, and its possible relationship with the intransitivising *-di*, given above.
64. Such a combination occurs, e.g., in *manku-di-ŋku-* 'to seize', whereby it is unclear what the difference from *manku-* 'to seize' is. This example is, of course, different from the example *waka=di-ŋku-* 'to break', mentioned at the end of this chapter.
65. It is clear that there are no *conjugalional* classes whatsoever in the language; the expression 'verb class' refers, therefore, here only to the fact that certain verbs are predictably transitive or intransitive after a given 'stem suffix'.
66. The generality statement takes, of course, into account the fact that for certain roots the process is lexicalised; thus, for instance, *ampa-* 'to cook, trans.' vs. *nali-* 'to cook, intr.'
67. If we conform to a criterion of formal simplicity, after the relative number of occurrences of symbols, we would of course choose the first version.
68. See Dixon (1972: 128 ff, 140).

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71. Lardil

T. J. Klokeid

0. Introduction

Within Pama-Nyungan, the largest family of Australian languages, there are two gross typological groupings with respect to case marking. In the majority of Pama-Nyungan languages, the subject of a transitive verb is marked by a special inflection, while the intransitive subject is grouped together with the direct object in receiving no case inflection. Such languages are commonly referred to as having an ergative case system. Within this typological grouping, there are many sub-types according to other features of case marking as well as other aspects of the syntax. In this paper, however, my

primary concern is with a language of the other typological grouping, that is, one with a so-called accusative case system. In such languages, it is the direct object which is inflected (for the accusative case), in opposition to transitive and intransitive subjects, which are both uninflected.

A recent paper by Kenneth Hale (1970) is concerned with explaining the diversity of case-marking systems in Pama-Nyungan, and the way these correlate with other syntactic differences. For example, the accusative languages all have an active:passive relation, while ergative languages typically do not. (The passive is distinguished from the active in that the direct object of the latter becomes the subject, and the verb receives a special passive inflection which appears to be cognate with the nominal ergative inflections. The erstwhile subject receives an inflection in the passive, thereby being distinct in surface structure from active transitive subject and intransitive subject.) An ergative language typically has a conjugational system, in which there are at least two open conjugations, one for intransitive verbs, and one for transitive verbs: the latter is characteristically more complex phonologically in that it has a conjugation marker, one which often bears a striking phonetic resemblance to the ergative case inflection for nominals. On the other hand, there exist accusative languages which completely lack a conjugational system of this sort.

Hale's hypothesis for explaining these correlations is that the ancestral language of the Pama-Nyungan family was an accusative language, which lacked conjugations but which had a passive rule, that is, a language with a grammar essentially like that of actual contemporary accusative Pama-Nyungan languages. He speculates that, in the majority of the descendants of this language, passive surface structures came to predominate, and active surface structures were no longer used. At that point, the existing surface structures of the language would correspond exactly to that of contemporary ergative Pama-Nyungan languages: the underlying transitive subject would have a distinctive inflection; the transitive verbs would have a phonologically more complex conjugation, and there would be no overt active:passive contrast. Without any surface evidence for the latter, reanalysis would be expected, and the form of that reanalysis would lead to just the typological variation found within the contemporary ergative languages, as Hale shows in some detail (1970). This hypothesis, in spite of obvious weaknesses which have been pointed out several times in the literature, retains great explanatory power, which any alternative hypothesis would have to at least match.

In this paper, I extract one detail of Hale's hypothesis for closer examination. In postulating the grammar of the ancestral Pama-Nyungan language, Hale indicates (1970:759) that 'if any Australian languages continue the supposedly ancestral accusative system, they are the Wellesley Island languages', that is, Lardil and two of its sister languages, Kayardilt and Yanggal.

I propose, then, to examine the nature of case assignment in Lardil (spoken on Mornington Island in the Gulf of Carpentaria), and to evaluate Hale's analysis of that language. The nominal in Lardil has up to a dozen or so different inflected forms: elsewhere, there is description in some detail of the morphology and phonology (Hale 1973; Klokeid, forthcoming) and surface distribution (Klokeid, forthcoming) of these.

At the outset, it is clear that underlying case configurations must differ

from the surface forms. A case category like the instrumental (1)a or the locative (1)b contributes meaning to the sentence (in some occurrences at least) and must be generated by the base.

- (1) (a) *ngata nethakun ngawun parngar*
 I hit:INST dog:ACC stone:INSTRUM
 'I hit the dog with a stone.'
 (b) *ngata kurikun ma:nangan parnga:*
 I see:INST child:ACC stone:LOC
 'I saw the child on the stone.'

These categories are subject to deletion in surface structure, as illustrated by (2)a, the clefted version of (1)a, and (2)b, the dislocated version of (1)b.

- (2) (a) *ti:n parnga ngithun netharkun ngawungar*
 this stone I:GEN hit:NFUT dog:NFUT
 'This stone is the one I hit the dog with.'
 (b) *ti:n parnga, ngata kurikun ma:nangan parnga:*
 this stone, I see:INST child:ACC stone:LOC
 'This stone, I saw the child on it.'

A case like the accusative, on the other hand, is affixed to nouns with diverse semantic relations to the rest of the sentence, and moreover its distribution is definitely dependent on derived structure. For example, the direct object in the active sentence (3)a takes the accusative, while in the corresponding passive (3)b it is the agent which displays the accusative.

- (3) (a) *mangaťa nethakun yaramanin*
 child hit:INST horse:ACC
 'The child hit the horse.'
 (b) *yaraman neyikun ma:nangan*
 horse hit:PASSV:INST child:ACC
 'The horse was hit by the child.'

It is a reasonable hypothesis that a surface case like the accusative is generally, if not always, absent in the underlying representation.

The objectives of this paper are, therefore, to establish the underlying representation of case in Lardil, and to show how the surface case forms derive from these.

1. The domination hypothesis

1.1. I will begin by considering the distribution of uninflected NPs and those inflected for Accusative, ignoring the existence of the other cases, until Section 1.4.

There is one obvious and initially plausible possibility for predicting the appearance of uninflected versus oblique forms that is nevertheless incorrect and should be disposed of immediately. It might be speculated that any noun preceding the verb in surface structure is uninflected, while those after the verb receive the accusative. This hypothesis is substantiated by and large by an examination of typical sentences such as (1)–(3) above (only (2)a has an inflected noun before the verb). It appears to hold for simple intransitives (4)a, actives (4)b, passives (4)c, and for topicalised sentences (4)d.

- (4) (a) *ngata yalalikun tangan*
 I laugh:INST man:ACC
 'I laughed at the man.'

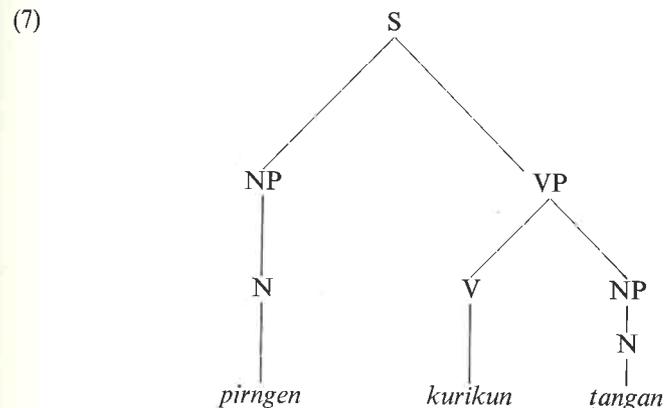
- (b) *tangka nethakun yaramanin*
 man hit:INST horse:ACC
 'The man hit the horse.'
 (c) *yaraman neyikun tangan*
 horse hit:PASSV:INST man:ACC
 'The horse was hit by the man.'
 (d) *ti:n yaraman, tangan nethakun*
 this horse, man hit:INST
 'This horse, the man hit it.'

However, this hypothesis is disconfirmed by an examination of stylistic reordering possibilities. The word order in (4)a merely reflects a simplification adopted for expository purposes. Actually, the constituents of a sentence may be fairly freely 'scrambled'. There is a general preference for the verb to be the second constituent in the surface sentence, but the first constituent may be any noun phrase or other sentence constituent. For example, sentence (5)a below has the equivalents (5)b, c, d. Observe that any NP, inflected or not, may precede the verb. Those sentences in which the verb is not in second position are less preferred, for example (5)c, or are relatively unacceptable, as is (5)d.

- (5) (a) *pirngen kurkiun tangan*
 woman see:INST man:ACC
 'The woman saw a man.'
 (b) *tangan kurikun pirngen*
 (c) *pirngen tangan kurikun*
 (d) *?tangan pirngen kurikun*

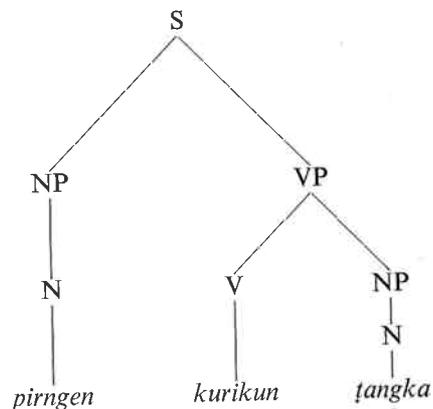
1.2. It has been proposed by Kenneth Hale (1970) that case is assigned in Lardil according to constituent structure. Specifically, according to Hale's theory, we would assume that the surface structure of (6) is that of (7)—details which are not immediately relevant are simplified or omitted.

- (6) *pirngen kurikun tangan*
 woman see:INST man:ACC
 'The woman saw a man.'



The noun /*tangan*/ is inflected for accusative in this surface sentence. In the underlying representation, it is caseless. This is shown in (8).

(8) (=D.S. of (6))



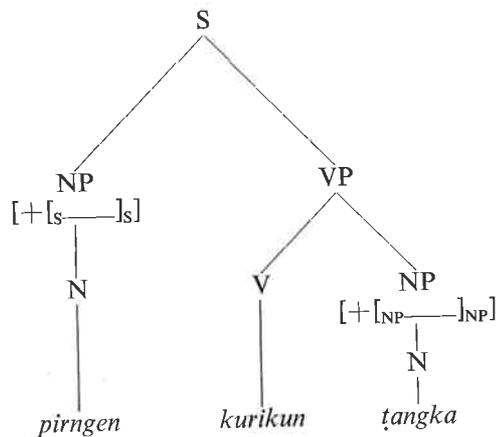
Case-marking is effected by a convention which assigns the feature $[+[\text{vp} \text{---}]_{\text{vp}}]$ to those NPs dominated by VP, as well as $[+[\text{s} \text{---}]_{\text{s}}]$ to the subject, and so on. More generally, an NP is assigned a feature reflecting the node which immediately dominates it. This is stated in Hale (1970) as:

(9) *The case-marking convention*

NP $\rightarrow [+[\text{x} \text{---}]_{\text{x}}]$, where X is the node label immediately dominating NP.

This convention converts (8) to (10):

(10)



In Hale's formulation, later rules of the grammar assign the actual cases, some of which are indicated in the article in an informal way, shown here in (11). Hale's 'agentive case' is the Genitive.²

- (11) nominative case = $[+[\text{s} \text{---}]_{\text{s}}]$
 objective case = $[+[\text{vp} \text{---}]_{\text{vp}}]$
 agentive case = $[+[\text{AGT} \text{---}]_{\text{AGT}}]$

The theory proposed by Hale (1970) involves two basic claims, to which I give the names Domination Hypothesis and Case Assignment Hypothesis:

- (12) (a) *The Domination Hypothesis*
 'case . . . is strictly a function of the domination of noun phrases' (p. 763)
 (b) *The Case Assignment Hypothesis*
 'the case features (which reflect the domination of NPs—TJK) are assigned by means of the case marking convention' (p. 763), which convention has already been stated in (9) above.

I will now explore these two hypotheses and their consequences.

1.3. The node AGT in Hale's (1970) grammar is intended to express the generalisation that the same verbs which are subcategorised for instrumental phrases (that is, the transitive ones³) are those which are subcategorised for the passive. That is, the node AGT dominates not only the agent phrase of a passive, but also the (optional) instrumental phrase. However, these two never have the same surface case in Lardil,⁴ and thus the Hale (1970) grammar for Lardil must be supplemented with additional rules to differentiate agent and instrumental phrases. This is sufficient to falsify the claim made in Hale (1970) that domination is a sufficient condition for case assignment. Moreover, some intransitive verbs are subcategorised for an instrumental phrase, cf. Klokeid (forthcoming).⁵

The fact that agent phrases receive the Accusative case in non-future sentences strongly suggests that these NPs are dominated by VP anyway, within the Hale (1970) theory of case assignment. So there are good reasons for abandoning Hale's node AGT.

One other motivation for the AGT node is, of course, the fact that the agent of a passive is distinctively inflected in the Future tense, receiving the Genitive case.⁶ With the abandonment of the AGT node, this fact must be accounted for in some other way. I turn to this problem below, especially in Sections 2 and 3.

One possible counter-example to the Domination Hypothesis should be eliminated at this point. Time expressions, for example */tiwarku/* 'yesterday', */pila:-/* 'tomorrow', are not inflected for accusative case. There are two reasons why this is no problem for the Domination Hypothesis: firstly, even though at least some time expressions (such as */tiwarku/*) have the appearance of being NPs (*/ti:n/* 'this' plus */warku-/* 'day'), such expressions are syntactically and morphologically different from NPs. Thus no time expression undergoes clifting,⁷ and a form such as */tiwarku/*, though no doubt historically two words, may inflect like a single word: for example */tiwarkungar/* 'yesterday: NFUT' occurs as well as */tinarwarkungar/* 'this: NFUT: day: NFUT'.

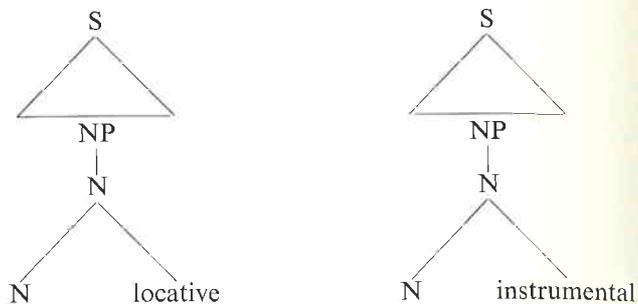
In the light of these facts, any consideration of the Domination Hypothesis can reasonably set aside the time expressions, as adverbial forms.⁸

Before considering whether the Domination Hypothesis accounts correctly for the distribution of the Accusative and Nominative cases, it is appropriate to consider the question of the surface cases like instrumental and locative, which are not predictable from domination only, at least in terms of major phrase categories, VP and S. Since instrumental phrases subcategorise verbs, the instrumental phrase must be dominated by VP, just like those NPs which receive accusative inflection. One possibility is that locative and instrumental NPs are dominated by special nodes, say, LOC and INSTRUM. However, these nodes are otherwise unmotivated (as we saw with the Hale (1970) proposal for an AGT node), playing no other role in the grammar besides

triggering spell-out rules for the locative and instrumental cases. Another possibility is the null hypothesis, that is, that instrumental and locative cases are generated by the base in their surface structure position, as affixes in the NPs. In the absence of any motivation for a different structure, the null hypothesis will be adopted here.

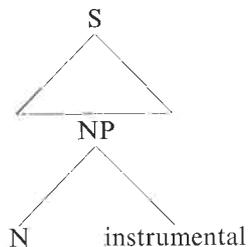
That is, I will assume that the base generates structures like these:

(13)



Case morphemes are clearly suffixes on words in the NP and not constituents of NP. This is captured in the representation (13) though not in other conceivable alternatives like (14):⁹

(14)



1.5. What we have seen so far is that some cases are underlying, in contradiction to the Domination Hypothesis ((12)a). Moreover, the node AGT proposed in Hale (1970) has been eliminated. With these modifications, the Domination Hypothesis does appear to be more workable.

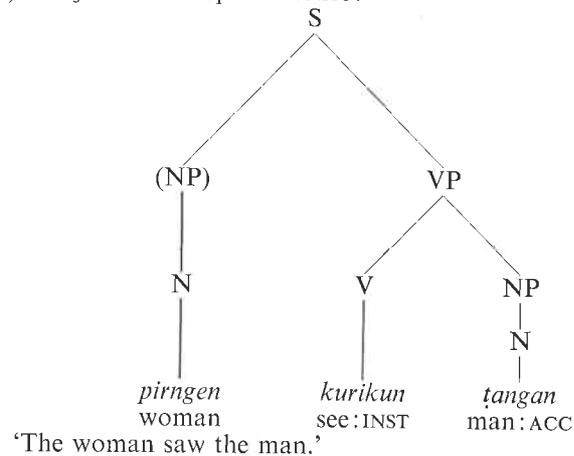
(15) *The Domination Hypothesis—Revised (RDH)*

There are certain cases generated in the base: in Lardil, including at least locative and instrumental. Otherwise, case is strictly a function of the domination of NPs.

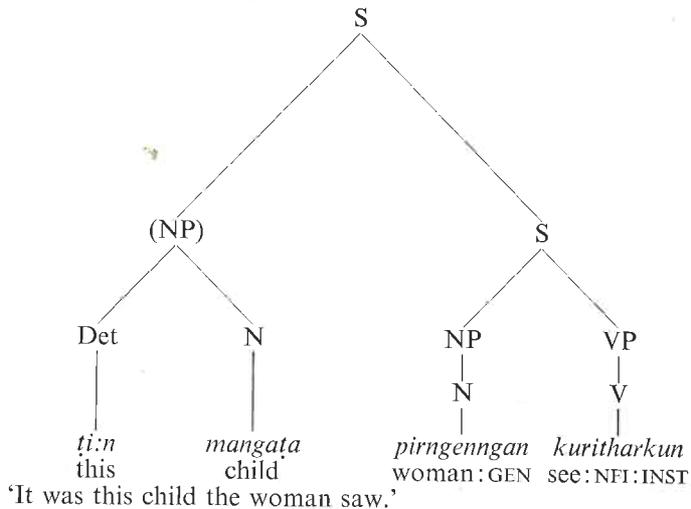
Essentially, the Domination Hypothesis as elaborated for Lardil requires that case be assigned to NPs dominated by VP that are otherwise uninflected and that NPs outside the VP and not receiving a case in the base remain uninflected. Let us see just how well this works.

1.6. First, I will survey briefly the range of uninflected NPs that the Revised Domination Hypothesis (RDH) correctly accounts for. The subject of a simple sentence, the clefted NP in a cleft sentence are nominative—the RDH handles these facts, since these NPs are not in the verb phrase. The surface structures in which these NPs occur are exemplified in (16)a–b with the NP node in question in parentheses.

(16) (a) Subject of a simple sentence:



(b) Clefted NP in a cleft sentence:



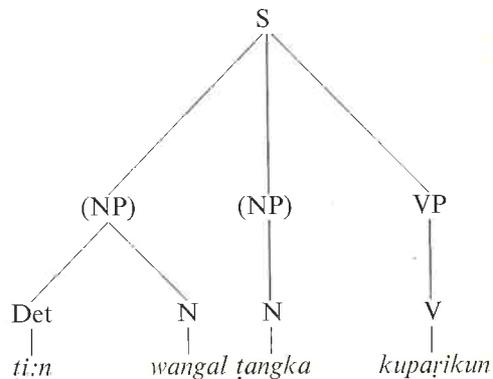
In a topicalised sentence, the topicalised NP is uninflected, and so is the subject NP, as in (17)b—in contrast to the subject of a cleft sentence, which is inflected for Genitive, as in (17)c.

- (17) (a) *tangka kuparikun ti:nin wangalkin*
 man make:INST this:ACC boomerang:ACC
 'The man made this boomerang.'
 (b) *ti:n wangal, tanka kuparikun*
 this boomerang, man make:INST
 'This boomerang, the man made.'

- (c) *ti:n wangal tangamen kuparitharkun*
 this boomerang, man:GEN make:NFT:INST
 'It was this boomerang that the man made.'

This can be handled in a way consistent with the RDH if we suppose that the derived structure of the topicalised sentence is different from that of the cleft sentence surface structure, shown in (16)b. Specifically, it could be supposed that the surface structure of a topicalised sentence has two NPs immediately dominated by the top S. This is shown in (18). The case assigned to both the topicalised NP and the subject will then be the uninflected one.

(18) (= (17)b)



This is an *ad hoc* solution—there are no other facts that I know of that support it. Moreover, the differences between a topicalised sentence and one in which the constituents have been scrambled under stylistic reordering remain unexplained, for example, the intonation and pause of a sentence like (17)b, (18).

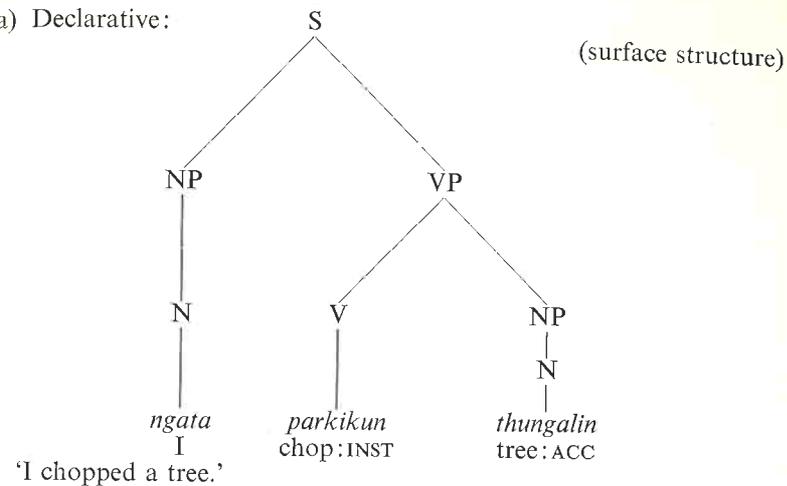
However, there is no actual solid argument against this *ad hoc* analysis of topicalised sentences, so the RDH cannot yet be said to have failed seriously. (The analysis that is ultimately argued for below in section 3 eliminates the need for this *ad hoc* solution.)

There are, however, two categories of NP which are uninflected in surface structure which definitely cannot be handled by the RDH. Firstly, the direct object of an imperative verb is uninflected if it is third person; if any first person category is present in the direct object NP, then the entire NP is inflected for Accusative. Now, the direct object of an imperative must be in the VP just as is the direct object of a non-imperative. The absence of the Accusative can only be expressed by reference to factors other than the domination of the NP, namely the category of imperative and the person categories of the NP in question.

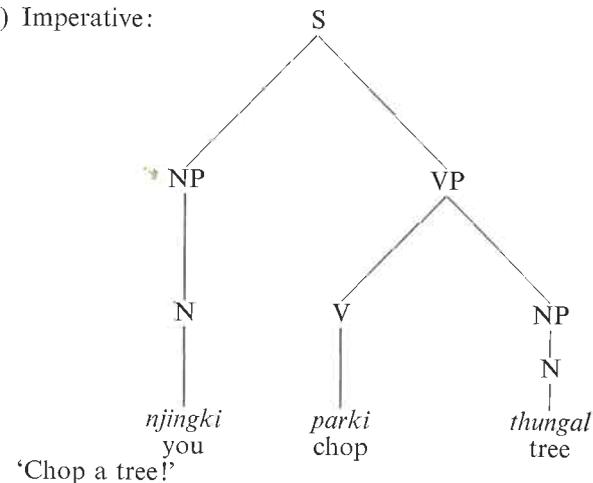
It is possible that the absence of the Accusative in the imperatives is handled as follows. The Accusative is assigned in the imperative, but then is deleted in the imperative.

This brief discussion has been sufficient to demonstrate that the Domination Hypothesis and the RDH are stated too strongly. It shows, at the very least, that case is at most *partly* determined by the domination of NPs, and is not strictly a function of domination' (Hale 1970:763).

(19) (a) Declarative:



(b) Imperative:

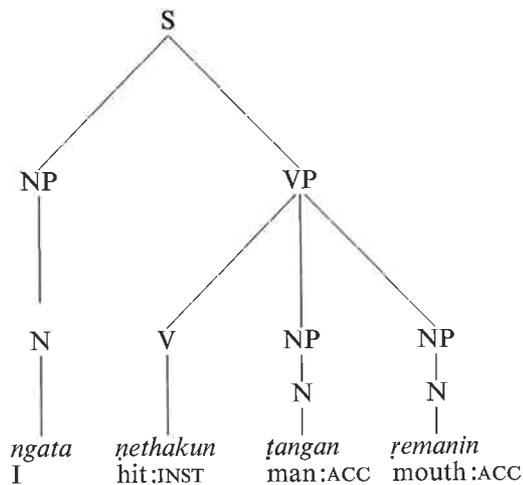


Supporting evidence for this conclusion is provided by a second instance of uninflected NPs, namely the body part NPs, in sentences like these:

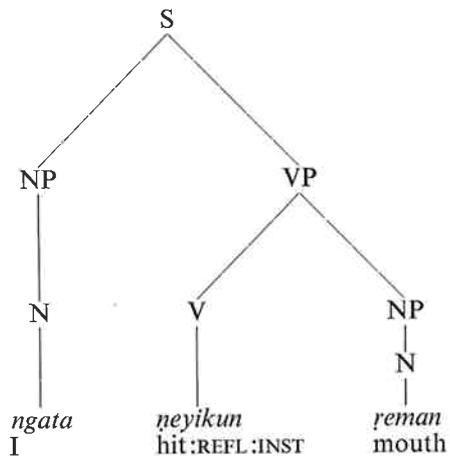
- (20) (a) *ngata nethakun tangan remanin*
 I hit:INST man:ACC mouth:ACC
 'I hit the man in the mouth.'
 (b) *ngata neyikun reman*
 I hit:REFL:INST mouth
 'I hit myself in the mouth.'

The surface trees of these sentences do not display any difference in domination of the NPs that could be used to account for the case differences.

(21) (a)

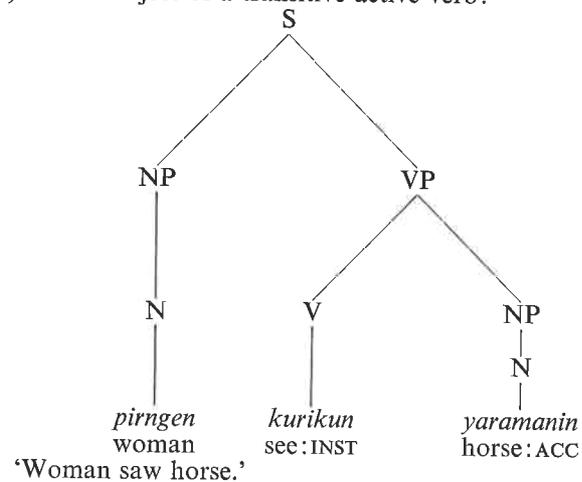


(b)

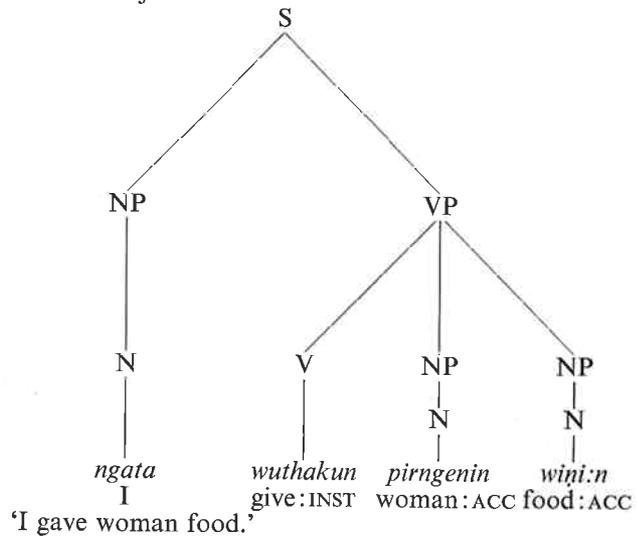


I argue that the case of body part NPs in sentences like those of (21) are explainable in all instances as determined by agreement with the 'controller' (i.e. possessor of the body part), and not by domination.
1.7. The RDH correctly predicts that the following NPs receive accusative case in surface structure, as it can be independently motivated that they are dominated by VP:

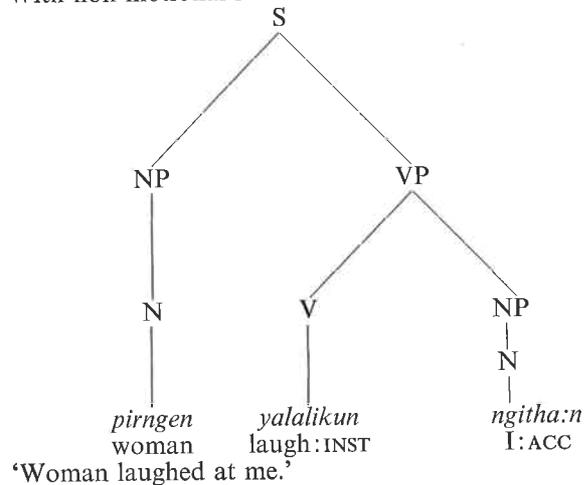
(22) (a) Direct object of a transitive active verb:



(b) Indirect object:



(c) With non-motional intransitive verb:



The agent of a passive is inflected, in the non-Future Uninflected tense, for Accusative case.

(23) (a) Active: *ngawa pethakun ngithunin yaramanin*
 dog bit:INST my:ACC horse:ACC
 'A dog bit my horse.'

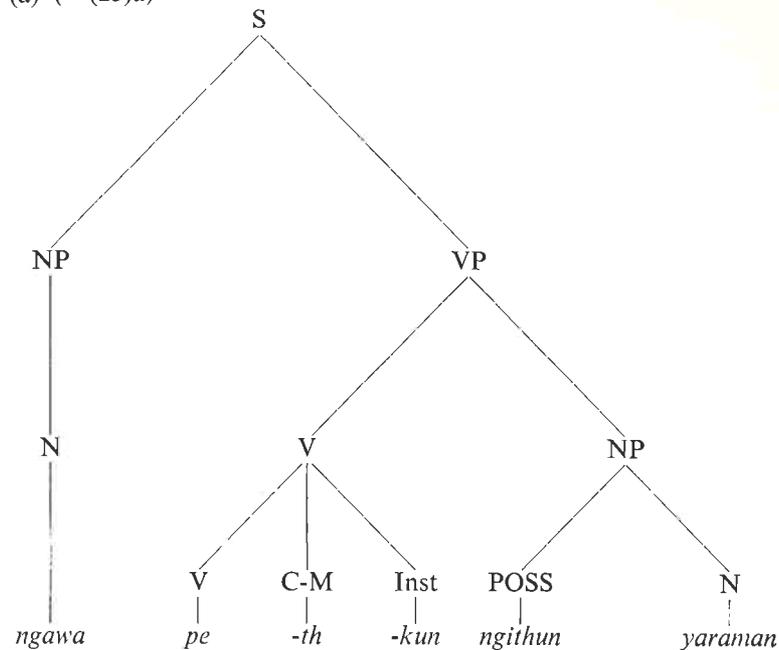
(b) Passive: *ngithun yaraman peyikhun ngawun*
 my horse bite:PASSV:INST dog:ACC
 'My horse was bitten by a dog.'

This fact can be explained with the Revised Domination Hypothesis, as follows. Verbs are subcategorised for the Passive; for a given verb the passive is ungrammatical (the intransitive verbs, plus verbs like /wu-/ 'give'¹⁰) or optional (the transitive verbs). For some verbs, such as /yulu:/ the Passive appears to be obligatory: I examine this observation and attempt an explanation of it in Klokeid (forthcoming). For the majority of passivisable verbs, active and passive pairs are generated, as for example (24)a-b which underlie (23)a-b.¹¹

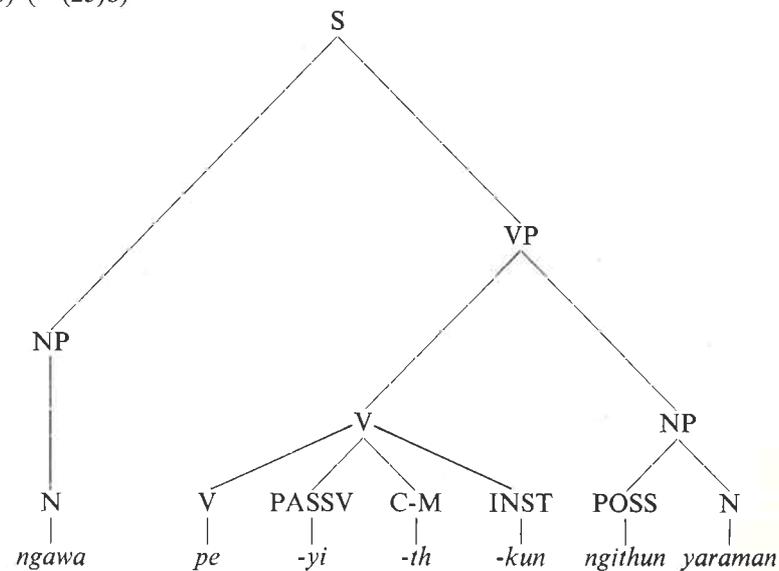
The surface form of (23)a is derived from (24)a by the assignment of Accusative case to the direct object. In (24)b, however, the presence of the Passive morpheme /yi/ triggers the Passive rule which interchanges the subject and direct object NPs. According to the hypothesis we are presently examining, case categories derive from structure, and the transformational rules have nothing to do with assigning case. Therefore, the Passive can be stated as in (25), with no mention of the case categories; I assume here, as earlier, that underlying order is Subject-Verb-Direct Object.

From (24)b, then, the structure (26) is derived. The Accusative case can now be assigned to the agent, since the latter is dominated by VP, and the surface structure (23)b is the result. The underlying direct object has become the surface subject, and so receives no case inflection.

(24) (a) (= (23)a)



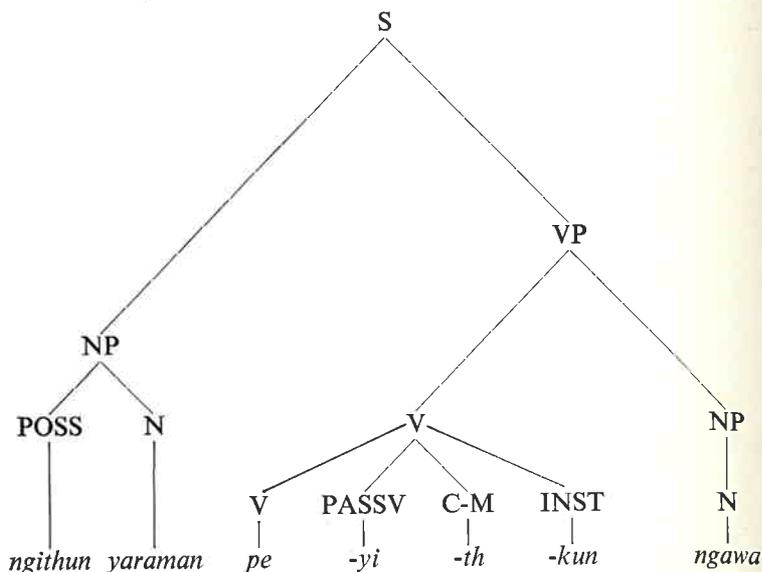
(b) (= (23)b)



(25) Passivisation

X-NP-V		PASSV(C-M)		(Tense-Mood)		(INST)-NP-X	
1	2		3			4	5
1	4		3			2	5

(26)



Thus the Revised Domination Hypothesis accounts for the case-marking of Direct Objects, Passive Agents (in clauses uninflected for tense), and the Subjects of simple active and passive sentences.

A serious problem for the Revised Domination Hypothesis is the Accusative inflection displayed by the surface subject of a simultaneous tense complement clause.¹² This case appears whether the verb in the simultaneous tense clause is intransitive, transitive active, or transitive passive:

(27) (a) *ngata kupari wangalkin, ngimpe:n kuna:tjir parngar*
 I make boomerang:ACC you:ACC sit:SIM stone:SIM
 'I made a boomerang while you were sitting on the rock.'

(b) *ngata kuparithur wangalkur, ma:nangan parkitjir thungalur*
 I make:FUT boomerang:FUT child:ACC chop:SIM tree:SIM
 'I'll make a boomerang while the child chops down the tree.'

There is no reason to suppose that the NP in question is within the VP of its clause: it is indeed the subject (including even the derived subject of a Passive), and so cannot receive the Accusative within its own clause under any analysis entertained so far in this discussion. (Even if the NP were inside the VP of its own clause, something other than Accusative would be expected, for example, simultaneous or Genitive.)

The structure of the subordinate clauses in (27) must be assumed to be the same as that of these corresponding simple sentences:

(28) (a) *njingki kuna:kun parnga:*
 you sit:INST rock:LOC
 'You were sitting on a rock.'

(b) *mangata parkithur thungalur*
 child chop:FUT tree:FUT
 'The child will chop down a tree.'

Let us then consider the possibility that the subject of the Simultaneous complement receives its case by virtue of some other aspect of the structure of the sentence.

Recall that time adverbs such as *|tiwarku|* 'yesterday', *|pila:(n)-|* 'tomorrow' typically occur without the morpheme *|-kun|* appearing on the verb, in the non-future, but with it in the future tense.

(29) (a) *ngata kurikun kentapalin*
 'I saw a dugong.'

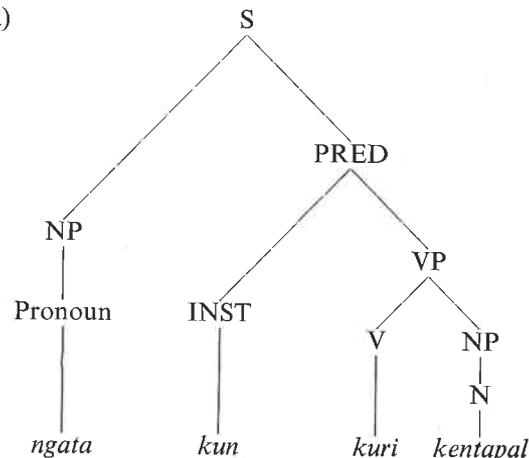
(b) *ngata kuri kentapalin tiwarku*
 'I saw a dugong yesterday.'

(30) (a) *ngata kurithur kentapalur*
 'I'll see a dugong.'

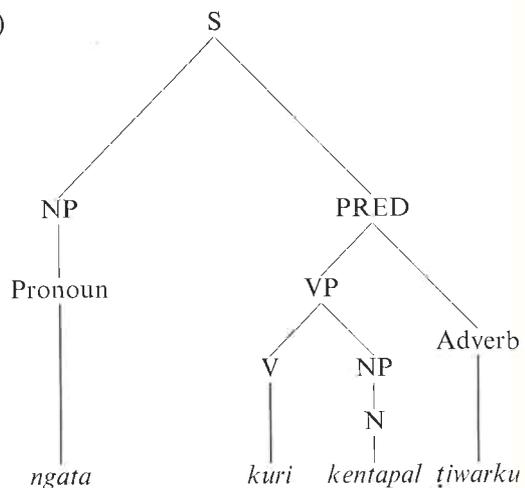
(b) *ngata kurithur kentapalur pila:nkur*
 'I'll see a dugong tomorrow.'

There are several possible ways to express this complementary distribution in the grammar: in Klokeid (forthcoming) I consider the issues in some detail. For present purposes, it is sufficient to observe that there exist co-occurrence restrictions among time elements. Furthermore, since verbs are subcategorised neither for tense nor for time adverbs, I assume that they are both generated outside of the VP, that is, I assume that the base generates structures like these:

(31) (a) (= (29)a)



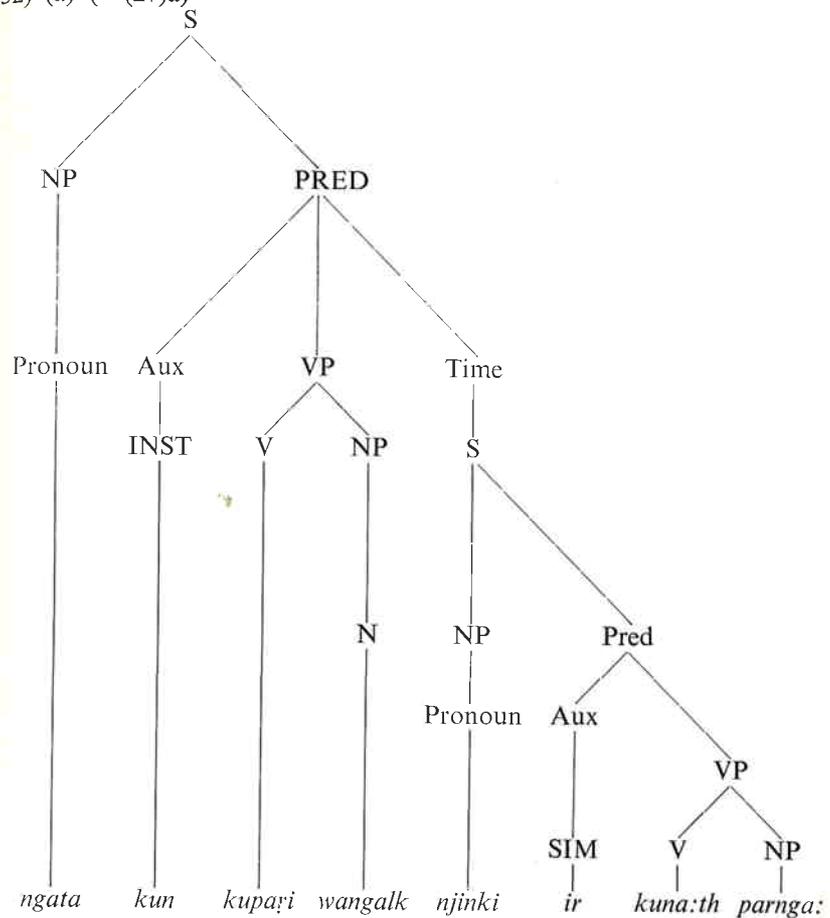
(b) (= (29)b)

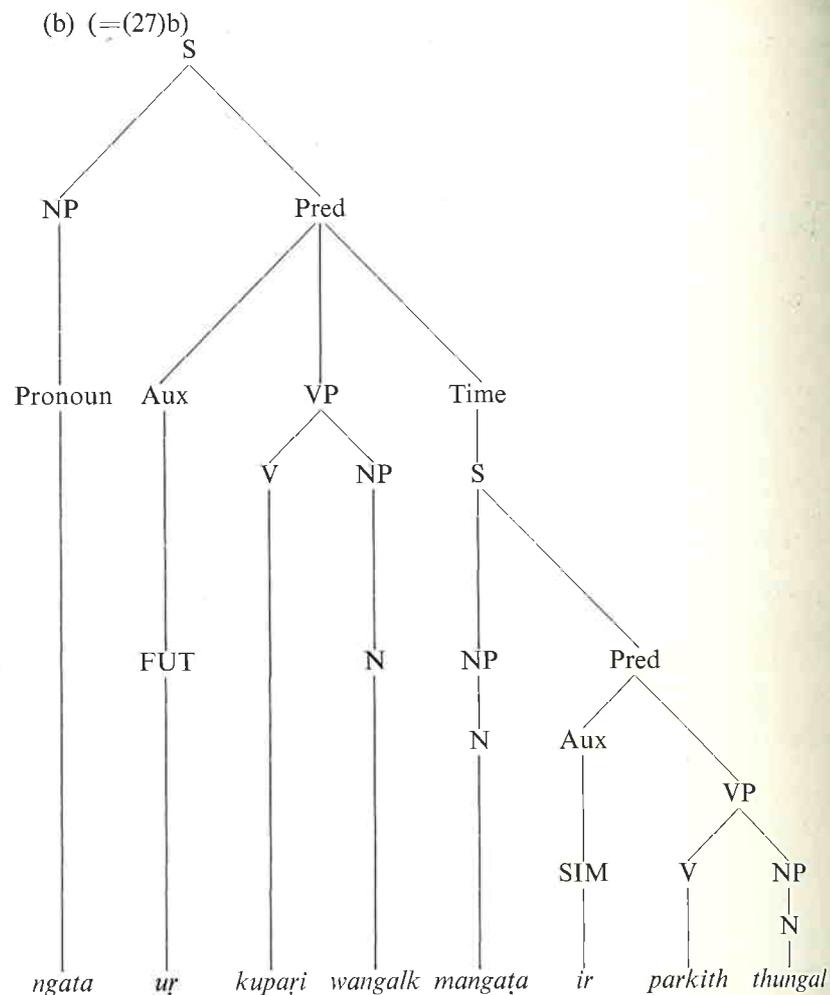


The surface sentences are derived from (31) by the assignment of Accusative case as required, and by the re-positioning of AUX and Adverb formatives as appropriate.

Returning now to the simultaneous clauses, observe that they exhibit selection restrictions in exactly the same way as simple time adverbs. That is, the simultaneous clause is a sentential time adverb. With that conclusion, we are now ready to suggest a structure for the examples of (27): here are the structures—prior to assignment of Accusative and prior to Aux-movement—

(32) (a) (= (27)a)





The remaining problem in the derivation of these sentences is the Accusative case on the subject of the time clause. The RDH will not work here as was already noted, since the NP is not immediately dominated by VP; in fact, it is not dominated at all by a VP node. There are two solutions here that are worth considering:

(33) There is a separate rule assigning case to the subject of the simultaneous tense clause, unrelated to the assignment of Accusative case elsewhere.

If this solution is adopted, then the RDH must be modified in working to state that there are two structural configurations in which Accusative case is assigned: when dominated by VP, and when the subject of an immediate relative. The second part of Hale's hypothesis, namely that the structural information determining case can be expressed in terms of features created

by the Case Assignment Convention, must be abandoned: to assign case to the subject of the simultaneous clause, other information is needed.

(34) Accusative case is assigned to any otherwise uninflected NP that is not immediately dominated by a root sentence.

This solution is simpler than the other: there is only one structural criterion for assignment of Accusative. Like the first solution, this one implies the abandonment of Hale's Case Assignment Convention, for recourse is had instead to the notion of root sentence. The formal statement of this solution is not so easy, however.

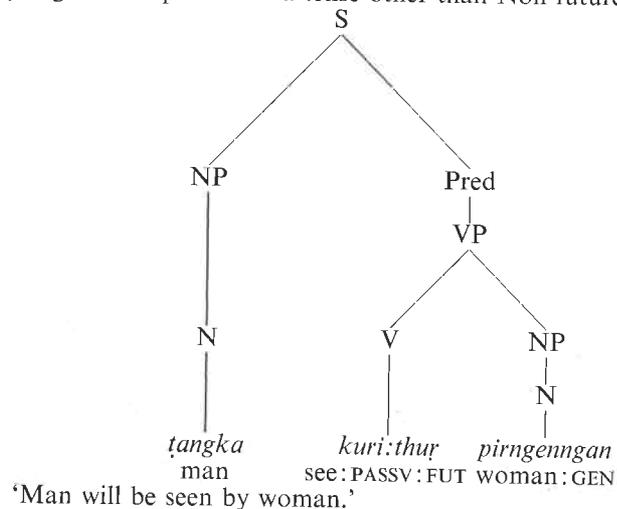
Solution (34) will handle the simultaneous tenses complements, since they are not root sentences, and so the subject can be assigned the Accusative.

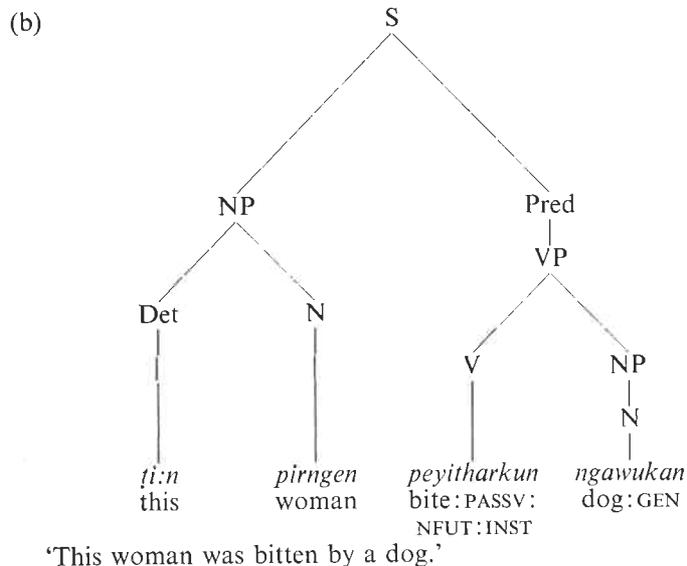
In Klokeid (forthcoming), I present evidence to show that conditional clauses, purpose clauses, restrictive relative clauses, and reason clauses ('because S') are root sentences in all instances where they contain an uninflected subject or other uninflected NP, and thus the solution (34) is consistent with these facts.

Our conclusion is that the RDH was stated much too strongly, and in so far as structure determines case, we have the two alternatives, (33)/(34), between which I am not in a position to choose at this point. Moreover, it is clear that the Case Assignment Convention is either very limited in utility (33) or unnecessary (34). The greatest inadequacy in the RDH and CAC has not yet been discussed, however: it will be dealt with in the next section, 1.8.

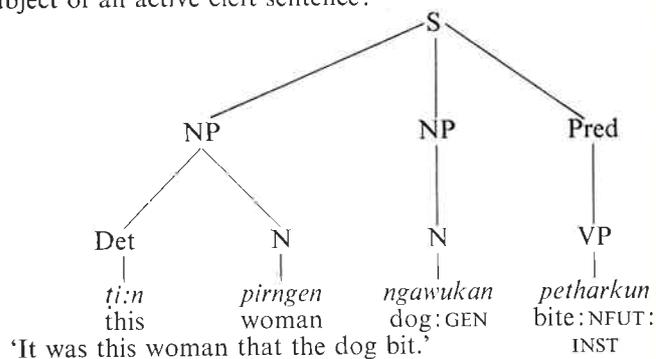
1.8. The RDH falls down most seriously in its failure to handle the following, for these NPs receive the Genitive case, and domination information does not account for it.

(35) (a) Agent of a passive in a tense other than Non-future Uninflected.





(36) Subject of an active cleft sentence:



The Revised Domination Hypothesis, even if supplemented with the observations made in sections 1.6–1.7, makes incorrect predictions about case assignment in (35)a,b and (36). The case of the passive agent in (35)a should be either Accusative or Future: the Revised Domination Hypothesis assigns Accusative to it, since it is dominated by VP. But it could also be Future, since we know that concord applies in Future tense clauses, and possibly the agent of a passive is subject to concord in tense. Thus the appearance of Genitive case here is totally unexpected, and not explainable on the basis of the Revised Domination Hypothesis, or concord.

Similarly, the analysis adopted so far predicts that the agent of the Non-Future passive (35)b will be either Accusative, according to its domination, or Non-Future tense, if it is subject to concord. And again, the prediction is incorrect, for the agent again takes the Genitive case.

The subject of the cleft sentence (36) is dominated by an S node that is a root sentence.¹³ It was concluded from the study of simultaneous tense complements that either (33) or (34) must be a part of the grammar of Lardil. If (33) is adopted, then we predict that the subject of a cleft sentence will be uninflected: neither the Revised Domination Hypothesis nor (33) will assign any case category to that NP. This prediction is incorrect: the subject of a cleft sentence is Genitive. The adoption of (34) does not improve the situation: that solution predicts that the subject of a cleft sentence, being immediately dominated by a root S, is not assigned any case—still a wrong prediction.

Recall that we eliminated the node AGT in Passive sentences, after considering Hale's Domination Hypothesis. Even if this node were now reinstated (let us ignore the clauses in the Uninflected tense for a moment), then we could still at most handle the sentences of (35) using the Revised Domination Hypothesis. This could be done by stating that an NP immediately dominated by AGT receives the Genitive case; this is the way Hale accounted for the Genitive in fact. But this still leaves the Genitive case in the cleft sentence (36) unexplained. So this alternative need not be considered further.

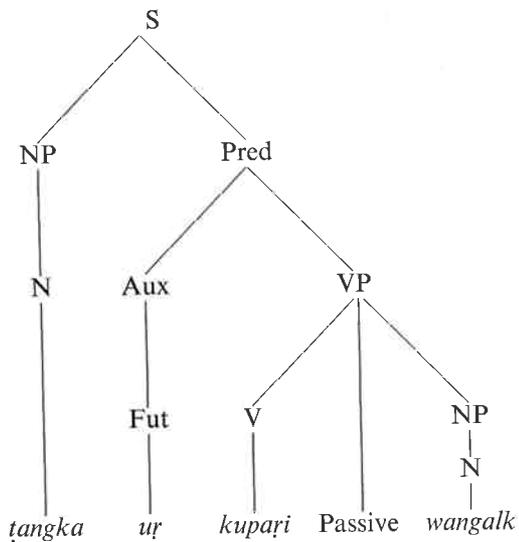
The way that both the DH and the RDH have been interpreted is that cases are assigned according to domination with respect to surface structure. This is not explicitly stated by Hale, but since case assignment must at least take place in surface structure, it has been interpreted up to this point as operating only at that level.

As the data clearly show, the configuration to be examined for case assignment must be that which exists prior to 'scrambling'. Therefore, I will use the term surface structure for that structure which exists prior to 'scrambling'.

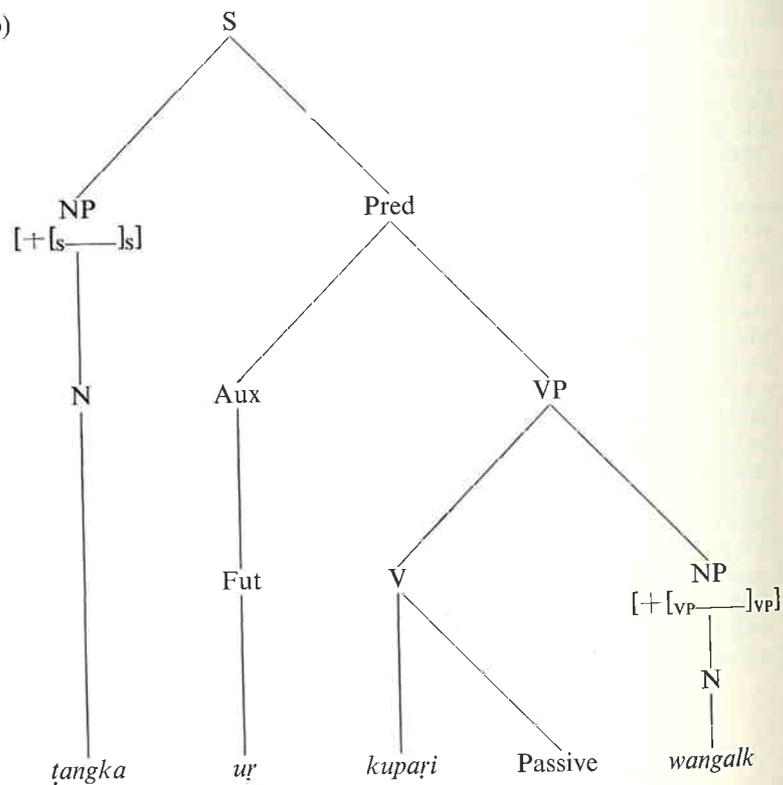
That case assignment applies at the level of surface structure is the interpretation that must be used for most structures, for example, for the derived subject of a passive sentence which is in the nominative. Since the case marking convention does not work completely satisfactorily, let us consider a modification in the application of the case marking convention. Suppose that the convention applies to the output of the base component as well as to the surface structure, for any one sentence. Then the agent of a passive will be assigned features for both sentence domination and verb phrase domination: on this basis, it can be distinguished from, say, the direct object of an active transitive verb, which received only the feature for VP-domination. This is illustrated in the derivation of (37), shown in (38)–(39). The underlying structure is (38): the case-marking convention applies at this point to assign the domination features shown in (38)b.

(37) *wangal kupari:thur tangamen*
boomerang made: PASSV: FUT man: GEN
'Boomerang was made by man.'

(38) (a)

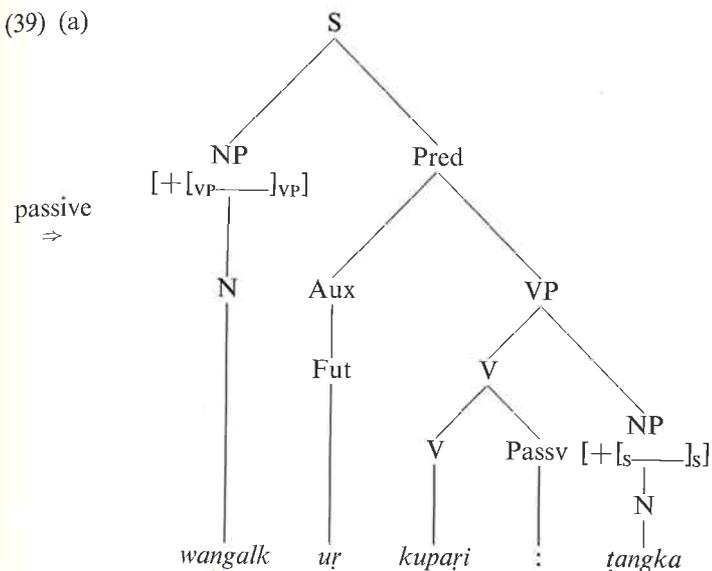


(b)

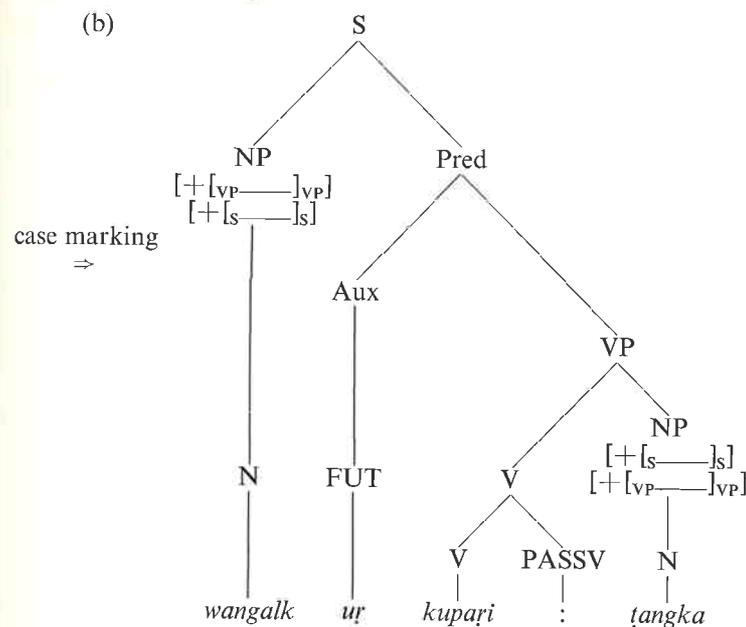


Next, the passive rule must apply, converting (38)b into (39)a. Then, at this point the case marking convention is applied for a second time, yielding the tree shown in (39)b which is interpreted by the rules assigning the actual surface cases.

(39) (a)



(b)



The problem becomes readily apparent from (39)b: the derived subject and the agent of the passive are not distinct in domination-features. Both have the features for sentence-domination and for VP-domination. Therefore, to make the case marking convention really work, it would have to be extended to reflect the order of assignment of the domination features.¹⁴ The approach suggested by Hale's hypotheses requires adding tremendous power to the theory, for example recording the derivational history of every NP to the extent that the order of application of feature-creating rules be recorded. Yet this power is really only needed to account for the case of the agent of passive sentences. Moreover, this approach does not even fully account for the distribution of the genitive on underlying subjects, since this is also the case which is assigned to the subject of a cleft sentence, even when it remains in subject position in the surface sentence.

The core of the problem in Lardil case is effecting the correct assignment of genitive case to the underlying subject, and I will now explore some alternative ways to do this.

2. Subjective case hypothesis

In section 3 to follow, I propose alternatives to the Revised Domination Hypothesis for assigning the Genitive case in derived structures. But first, it is advisable to consider briefly the possibility that the Genitive case is generated with subject NPs in the base. This proposal is stated in (40) below: I will argue that it is untenable.

(40) Subjective Case Hypothesis

- (a) Subjects are generated in the Genitive case in the base.
 (b) The Genitive case is deleted in the syntactic component in certain environments.

To make the Subjective Case Hypothesis work, it must be shown that the surface subject NPs that are not inflected for Genitive can be precisely identified, that is, the environment for (40)b must be stated in the grammar for Lardil. It is to this task that I direct my efforts in this section.

The agent of a Passive is Genitive if the verb is Future, Non-Future, or Admonitive. But in the Uninflected tense, the agent is in the Accusative.

- (41) *yaraman peyikun ngithunin ngawun*
 horse bite:PASSV:INST my:ACC dog:ACC
 'The horse was bitten by my dog.'

The agent in the Uninflected Tense can be assigned the Accusative by a mechanism along the lines of the Revised Domination Hypothesis, but to be a candidate for Accusative assignment, the agent must first lose its Genitive case. The environment for Genitive deletion is following an uninflected verb:

(42) Genitive $\rightarrow \phi/V \#$ NP—

There is one exception to the generalisation expressed in (42). A pronoun agent of a passive retains the genitive case even in the Uninflected tense:

- (43) *ngimpen yaraman rayikun ngithum*
 your horse spear:PASSV:INST me:GEN
 'Your horse was speared by me.'

Therefore, a condition must be attached to (42), to block that rule if the NP is a pronoun.

Even with this condition, the genitive deletion rule (42) still does not delete

the case inflection in the full range needed. The surface subjects of active future and non-future inflected clauses are uninflected, although the verb is inflected.

- (44) (a) *ngawa pethur yaramankur*
 dog bite:FUT horse:FUT
 'The dog will bite the horse.'
 (b) *ti:n ngawa pethar yaramanar, ngata wara nethur*
 this dog bite:Nfut horse:Nfut I counterfactual hit:FUT
 'If the dog bites the horse, I'll hit it.'

It is possible to handle these sentences with a rule which is needed anyway. Any NP which is attached immediately under S by the focussing or dislocation rules loses its case:

- (45) (a) *ngata nethakun yaramanin ti:nkur thungalur*
 I hit:INST horse:ACC this:INSTRUM thing:INSTRUM
 'I hit the horse with this thing.'
 (b) *Clefted:*
ti:n thungal, ngithum netharkun yaramanar
 this thing, I:GEN hit:Nfut:INST horse:Nfut
 'It was this thing, that I hit the horse with.'
 (c) *Left-dislocated:*
ti:n thungal, ngata nethakun yaramanin ti:nkur
 this thing, I hit:INST horse:ACC this:INSTRUM
thungalur
 thing:INSTRUM
 'This thing, I hit the horse with it.'

One way to handle this loss of case is to delete the case of the NP which is affected by either of the two rules, that is to specify the deletion in the two rules. A more general solution involves moving the NPs in the two rules, retaining their underlying case—then, a case deletion rule can be used to delete the case for clefted and topicalised NPs, that is, deleting the case initially in a root S:

- (46) case $\rightarrow \phi / s_{root} \text{---} X$

Moreover, this rule will delete the genitive case of the subject in sentences like those of (44). It will correctly leave the genitive case on the subject of clefted clauses since although the S dominating these NPs is a root S the subject is not clause initial. This solution cannot handle the simultaneous tense complement clauses. These clauses are not root sentences—and yet the genitive case must be deleted here, so that the accusative case can be assigned. The only way to rescue the SCH is to handle simultaneous tense complements quite separately from all other clauses, say by a separate rule which converts genitive to accusative case only for the subject of a simultaneous tense clause.

If the SCH is to work at all then, part (48)b of it must be stated along the lines of (47) below. That is, we require three separate case deletion rules only one of which is independently motivated. Moreover, one of the rules has a complex condition attached to it. SCH does have the virtue of relating the peculiarities of passive agent case to other facts about Lardil case. In the next section, I will offer another solution which retains this advantage, yet avoids the difficulties of Subjective Case Hypothesis.

- (47) (= (40)b revised) The genitive case is deleted and changed by three rules:

- (i) Gen $\rightarrow \phi/[s\text{---}V\#]$ (blocked if the NP is the first person pronoun, and the verb is passive, otherwise oblig.);
 (ii) Case $\rightarrow \phi/[s_{\text{root}}\text{---}X]$;
 (iii) Gen $\rightarrow \text{ACC/NP}\text{---}(\text{Aux SIM})\text{Aux}$

3. Transformational insertion of case

I now turn to the possibilities for assigning the Genitive Case in derived structures.

3.1. Firstly, observe that in all the surface clauses in which the genitive appears on the underlying subject, the verb is inflected for one of three categories: Non-Future Tense, Future Tense, or the Admonitive. The first person pronoun is an exception to this, occurring in the genitive in other tenses as well.

- (48) (a) Cleft sentence in the non-future:

ʔi:n wangaŋ ngithun thaputjikan kuparitharkun
 this boomerang my brother:GEN make:NFU:INST
ʔiwarkungar
 yesterday:NFUT

'This boomerang is the one my brother made yesterday.'

- (b) Cleft sentence in the future:

ʔi:n wangaŋ ngithun thaputjikan kuparithur pila:nkur
 this boomerang my brother:GEN repair:FUT tomorrow:FUT
 'This boomerang is the one my brother will repair tomorrow.'

- (c) Passive in the non-future:

ʔi:n mangata neyitharkun ngithun thaputjikan
 this child hit:PASSV:NFUT:INST my brother:GEN
 'The child was struck by my brother.'

- (d) Passive in the future:

ʔi:n mangata neyithur ngithun thaputjikan
 this child hit:PASSV:FUT my brother:GEN
 'The child will be struck by my brother.'

- (e) Passive in the admonitive:

ʔi:n mangata neyinjmer ngithun thaputjikan
 this child hit:PASSV:ADMON my brother:GEN
 'The child might be struck by my brother.'

I conclude that any rule assigning the genitive must be sensitive to the tense-mood of the clause. However, it is clearly not true that genitive case appears on all NPs derived from underlying subjects in the above three tense-moods. Consider the conditional clause in (49)a; the simple Future (49)b; the Topicalised Future (49)c, all of which contain a Nominative surface subject which derives from the deep subject.

- (49) (a) *mangata wungithar wangalkar, ngata niwenthar nethur*
 child steal:NFUT boomerang:NFUT I him:FUT hit:FUT
 'If the child steals a boomerang, I'll hit him.'

- (b) *mangata wungithur wangalkur*
 child steal:FUT boomerang:FUT
 'The child will steal a boomerang.'

- (c) *ʔi:n wangaŋ, mangata wungithur*
 this boomerang, child steal:FUT
 'The boomerang, the child will steal it.'

The genitive case appears on the surface when one of the two rules, Passive or Clefting, has applied. This is also true of the environment in which pronouns receive the genitive. I propose, therefore, that the genitive case is assigned to the deep subject when a rule applies to the sentence.

- (50) Subjective Case Insertion Convention (first version): When a clause with a tensed verb undergoes one of certain transformational rules, the deep subject receives the genitive case.

Elsewhere (Klokeid, forthcoming), rules have been proposed which play no role in assigning genitive to the subject: Topicalisation, Scrambling (Stylistic Reordering), and *ʔi:n*-Inversion. To make the above convention perfectly general, it must be shown that these three rules do not exist, or at the very least that they are not transformational rules.

Scrambling (cf. (5)) is suspect as a transformation. The rule cannot be stated in transformational form, since it involves the arbitrary reordering of constituents, and so no Structural Description is possible for the rule. Scrambling is actually a non-transformational stylistic reordering.

Topicalisation, (cf. (17)), also, is probably not a transformation. It violates the constraints of a general nature that apply to other rules in Lardil: for example, Topicalisation can move a possessive phrase out of an NP, or a constituent out of a subordinate clause. Quite possibly, Topicalisation merely reflects a common way of speaking: first one mentions an NP or other formative that is the topic of the discourse, and then in the sentence uttered next, which is of course about the same topic, the NP or other constituent referring to the topic is optionally absent due to pronominalisation. The pause after the topic formative that is characteristic of Topicalisation constructions is explainable as a pause between two phrase markers that are weakly, if at all, syntactically connected.

The other transformational rule suggested in 2.5., that is, *ʔi:n*-Inversion, is plausible only because of the relatedness of sentences like (51)a,b. But it has not been conclusively demonstrated that such sentences need be derived from the same underlying source.

- (51) (a) *yaka thuwaraya wantji wa:ngun*
 fish dive ascend go-INST
 'A fish came up for air and went back down.'
 (b) *ʔi:n thuwaraya wantji wa:ngun yaka*
 this dive ascend go-INST fish
 'There comes a fish up for air and back down.'

Possibly further research would produce some convincing arguments that none of the suggested rules, Topicalisation, Stylistic Reordering, *ʔi:n*-Insertion, are transformational rules. This conclusion certainly seems reasonable at this point. This leaves only Passivisation and Clefting as transformational rules. Thus it is possible that the Subjective Case Insertion Convention can be retained in the general form of (50).

This result is desirable for a number of reasons. The Subjective Case Insertion Convention helps to explain why genitive case is not assigned in the Simultaneous Tense Complement clause: this clause can never undergo Clefting, as already observed. Thus genitive case cannot be assigned in such a clause, and the subject is left uninflected, so that it may receive Accusative case by the Revised Domination Hypothesis.

However, convention (50) must be modified so as to prevent the assigning

of the genitive to the Passive agent in a simultaneous tense complement. In such constructions, the agent undergoes concord in tense (the surface form of the nominal simultaneous tense is neutralised with the future tense).

- (51) *ngata kurikun ma:nangan, peyitjirkun ngawur*
 I see:INST child:ACC bite:PASSV:SIM:INST dog:SIM
 'I saw the child being bitten by a dog.'

I modify the Subjective Case Insertion Convention accordingly, in (52).

- (52) Subjective Case Insertion Convention (revised from (50)):

When a clause undergoes a transformational movement rule, and that clause contains a verb inflected for a tense other than the simultaneous, then the underlying subject receives the genitive case.

The Subjective Case Insertion Convention, then, describes the surface distribution of genitive case in a very general way, and it is compatible with the revised Domination Hypothesis, so that the generalisations captured by the latter may also be retained.

The Accusative case of the Passive agent in an Uninflected tense clause is unexplained by the Convention (52). In such sentences, the genitive case should be inserted generally, not merely if the agent is a pronoun. Convention (52) must be supplemented with an *ad hoc* rule deleting the genitive case in an Uninflected tense passive, if the agent phrase contains a noun and is not simply a pronoun.

However, the convention (52) is not statable in any normal manner. To make it work, the history of a derivation must be recorded—specifically, a record of some kind must be attached to the sentence every time a movement rule applies, so that the convention may be triggered.

A similar problem was encountered with the Domination Hypothesis. It was concluded that the derivational history of every NP must be recorded under the Domination Hypothesis. In the present situation, the derivation is simpler in that the record of transformations applied is merely calculated for the sentence as a whole. However, the power of the Subjective Case Insertion Convention requires an extension of the theory no less than that required by the Case Marking Convention associated with the Domination Hypothesis.

Moreover, the Subjective Case Insertion Convention depends critically on the assumption that Clefting is a movement rule. As with the other proposed transformational rules that were rejected or questioned above, even Clefting can be called into doubt, at least as a movement rule. I have proposed that 'scrambling' is really non-transformational stylistic reordering. These rules account for the position of the clefted NP at the left of the sentence. Basically, the clefted NP represents 'new information', and the rest of the sentence 'old information'. Stylistic reordering shifts 'old information' to the end of its clause and new information to the beginning: thus the clefted NP ends up in sentence-initial position, in the sentences we have studied so far at least. There are sentences in which the clefted NP is not at the left, but is actually at the right: this fact is consistent with the stylistic reordering rules. The clefted clauses with the clefted NP at the right occur as restrictive relative clauses in extraposed position. The clefted NP is the head of the relative clause, and it contains an antecedent in the main clause:

- (53) *nganikin mangata rikur ngimpen netharkun mangata*
 that child cry, you:GEN hit:NFI:INST child
 'The child that you hit is crying.'

Since the head of the relative clause represents 'old information', being a repetition of a noun in the immediately preceding clause, it can appear at the end of its own clause.

Since the stylistic reordering rules can explain the word order in all cleft sentences, it seems that Clefting is not a movement rule at all, but simply involves the changing of case categories, in particular of the clefted nominal and of the underlying subject.

For the Passive, on the other hand, there is good evidence that this rule is indeed a transformational movement rule since it creates a new subject. In the light of these observations, any support for the Subjective Case Insertion Convention is considerably weakened.

Consider now the possibility that the two rules, Passive and Clefting, assign the Genitive case to the underlying subject in their respective Structural Changes, providing of course that an appropriate tense-mood category is present in the clause.

- (54) The Transformational Hypothesis of Case Assignment

- (a) The genitive case is assigned by the Passive and Clefting rules to the underlying subject, provided that the clause is a root S and contains an inflected tense.
 (b) Otherwise, case assignment in Lardil conforms to the statements in either (33) or (34).

Under the Transformational Hypothesis, it is not crucial whether Clefting is a movement rule or strictly a case-changing rule.

The disadvantage of the Transformational Hypothesis is immediately obvious—up to this point, I have attempted to effect case assignment with as few rules as possible, yet the Transformational Hypothesis duplicates the assignment of one case category in the same environments in two separate rules.

There is no apparent way to collapse the Cleft and Passive rules into one rule.

The Cleft rule has been formulated only in an informal way, and I offer a formalisation below. I assume here that Clefting is only a case-changing rule, and does not involve movement of formatives.

- (55) Clefting

NP	—	Tense	—	V X	—	(NP Det X	—	case) _{NP} —X	⇒
1		2		3		4		5	6
4+I+GEN		2		3		φ		φ	6

condition: applies only in a root S.

The Passive rule was presented in (25), but in a form which does not take into account the appearance of Genitive on the agent. To do so, the rule must be stated as in (56) below: the three rules (56)a,b,c, can be collapsed only if conditions are imposed on the rule, as in (57). (Other minor revisions in the light of discussion so far are made here.)

- (56) Passivisation (revised from (25))

NP	—	$\left\{ \begin{array}{l} \text{FUT} \\ \text{NFUT} \\ \text{ADM} \end{array} \right\}$	—	V [∧] PASSV [∧] C-M	—	NP	—	X	⇒
1		2		3		4		5	
4		2		3		1+GEN		5	

Vowels				
	short		long	
	front	back	front	back
high	<i>i</i>	<i>u</i>	<i>i:</i>	<i>u:</i>
mid or low	<i>e</i>		<i>e:</i>	
low		<i>a</i>		<i>a:</i>

Some other transcriptions used for Lardil in published articles correspond to the present orthography as follows:

<i>th, nh</i>	may be written as <i>t, ŋ</i> respectively
<i>tj, nj</i>	may be written as <i>tʲ, nʲ</i> respectively
<i>ng</i>	may be written as <i>ŋ</i>
<i>i, etc.</i>	may be written as <i>i</i> , etc.
<i>p, t, k</i> etc.	may be written as <i>b, d, g</i> etc., respectively

The non-obvious abbreviations used in interlinear glosses are as follows: ACC, Accusative case; ADM, Admonitive mood; C-M verb Conjugation Marker; FUT, Future Tense; GEN, Genitive Case; INST, Instantiative enclitic; INSTRUM, Instrumental case; LOC, Locative case; NFUT, Non-Future tense; PASSV, Passive morpheme; SIM, Simultaneous tense.

2. For reference, Hale's (1970) suggestion for a grammar of Lardil is reproduced here in its entirety (with actual Lardil lexical items in place of Hale's made-up ones used for expository simplicity).

Base	Lexicon
S → NP [∧] VP	[+V, +___Tense]/ <i>titha</i> /'sit'
VP → (NP (AGT))V Tense	[+V, +NP___Tense]/ <i>kangka</i> /'speak'
AGT → Passive	[+V, +NP AGT___Tense]/ <i>netha</i> /'hit'
NP → N	
V → CS	Lexical Redundancy Rule: [+V, +NP AGT___Tense] → [+NP___Tense]
Passive: NP — [VP NP — [AGT Passive] AGT — V — Tense] VP	
1 2 3 4 5 ⇒	
2 φ 1 4#3 5	

The case-marking convention: see (9).

Scrambling: 'Words' are reordered optionally; V[∧]Passive[∧]Tense and V Tense are 'words'.

Rules interpreting case features: see (11).

3. This refers to instrumental phrases in the true instrumental sense, as opposed to the proprietive or accompaniment sense.
4. This is shown in detail in Klokeid (forthcoming). The following examples illustrate the key points:

(i) <i>ngata neyikun tangan parngar</i>
I hit:PASSV:INST man:ACC stone:INSTRUM
'I was hit with a stone by the man.'

(ii) <i>ngata neyithur tangamen parngarur</i>
I hit:PASSV:FUT man:GEN stone:INSTRUM:FUT
'I'll be hit with a stone by the man.'

Case inflection is partially dependent on the tense of the verb. When the verb is uninflected, or inflected for the instantiative (INST; /-kun/) the agent is in the Accusative (ACC: -in ~ -n) and the Instrument is in the Instrumental (INSTRUM; /-r ~ -ur ~ -kur/). When the verb is in the future tense (FUT) e.g. (ii), the agent is in the Genitive (GEN; /-kan ~ -ngan/) and the Instrumental is in the Instrumental case with the Future inflection added to it (allomorph /-u/; for verbs it is /-ur/).

5. The agent and the instrument do have the same surface case in most ergative languages, and in the active-passive language Ngarluma. Thus Hale's (1970) theory may work better for those languages in the respect under discussion than is true for Lardil.
6. See note 4 and Klokeid (forthcoming).
7. Clefting is a rule which brings into focus any NP in the verb phrase, excluding the agent: the clefted version of (i) is (ii).

(i) <i>ngata rathakun ti:nin kantjinin</i>
I spear:INST this:ACC wallaby:ACC
'I speared this wallaby.'

(ii) <i>ti:n kantjin ngithun ratharkun</i>
this wallaby I:GEN spear:NFUT:INST
'This is the wallaby that I speared.'

See my thesis (forthcoming) for further details.

8. In any case, I argue below that time expressions are outside the Verb Phrase and it is only constituents of the VP that receive the Accusative.
9. However, it might conceivably be argued that (14) is indeed the initial base representation, and that the rule of Concord, which distributes inflectional categories such as the instrumental case onto each constituent of the NP, yields the configuration in (13).
10. /wuyi/ exists, but it is a suppletive passive of /tji-/ 'to eat'.
11. The underlying verb forms /pe-th-kun/ and /pe-yi-th-kun/ (24)a,b are converted to the phonetic forms /pethakun/ and /peyikun/, respectively, by rules discussed in Klokeid (forthcoming).
12. Simultaneous tense complements are described in Klokeid (forthcoming).
13. Root sentence is a concept developed in Edmonds (1969): 'The highest S or ... any S in turn immediately dominated by the highest S' (Edmonds 1969:Abstract).
14. This possibility was first suggested in a conference paper by Hale (n.d.).
15. See Klokeid (forthcoming).

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72. Miriwung

F. M. Kofod

There are many suffixes to the noun in Miriwung (spoken in the north-east of Western Australia), however the same marker occurs on the subject of both transitive and intransitive verbs. This is usually *-ŋ* for nouns in the masculine class and *-nj* for nouns in the feminine class. Some nouns do not take either of these suffixes but can be placed in one or other class by observing concord with adjectives, demonstratives, cardinal pronouns and pronouns incorporated in the verb.

A small number of nouns ending in *-ŋ*, for example *ŋaraganj* 'mother', *galaminanj* 'porcupine', actually belong in the feminine class and a few nouns ending in *-nj*, for example *yarrbaranj* 'young man', are in the masculine class. This again is determined by observing concord with adjectives, demonstratives and pronouns.

- (1) *djawalanj ŋandjanj ganjanjbuda djiranj*
man that he it speared wallaby
'That man killed the wallaby.'
- (2) *yilo girayin nawu djawalanj*
down there he is going he man
'The man is going down to the river.'
- (3) *djawalanj baladj nida*
man see I him hit
'I saw the man.'
- (4) *ŋalu wurmulunj njiniyanjan ŋanaima*
she woman she was sitting here loc. emph.
'The woman was sitting here.'
- (5) *baladj ŋjilindayin ŋalu ŋerreguwunj wurmulunj*
see her I hit pres. she big fem. woman
'I see that big woman.'
- (6) *ŋalu wurmulunj galunj djurru gi:ndanjan*
she woman water pour she it is hitting
'The woman is pouring the water.'

Nearly all parts of speech in Miriwung can take an emphatic suffix *-a*. This is always the final suffix and can occur in any case.

- (7) *baladj namini:ndayin djiranja ŋerreguwunja*
see I them am hitting kangaroo emp. big (plural) emph.
'I see those big kangaroos.'

- (8) *nawa djiranja baladj ni:ndayin nanyi*
he emph. kangaroo emph. see he it is hitting you obj.
'That kangaroo sees you.'
- (9) *ŋayanja ŋaraganja wawurb gerandja ŋjiwunja*
my emph. mother emph. swat she it brings mosquito emph.
'My mother is swatting the mosquitoes.'

The only examples of a noun subject taking any type of marker other than an emphatic or a possessive (the thing possessed takes a marker *-ga* in Miriwung) are found in stories reporting direct speech.

- (10) *umaya dji djamud bandjilj madjugunj*
he said to her turkey from emu
'("Let's camp here") said the turkey to the emu.'
- (11) *wudhep buwivu umaya ni djalaranbandjilj warananj*
inside you go imperative he said to him egret from eagle
'"You go in" said the egret to the wedgetailed eagle.'

The suffix *bandjilj* is not compulsory in this construction as we also have:

- (12) *wudhep ŋandiya ŋayu warananj umaya ni djalaranj*
inside I will go I eagle he said to him egret
'("I'll get in") said the wedgetailed eagle to the egret.'

Indirect noun objects are not marked on the nouns, however an indirect object pronoun is suffixed to the verb.

- (13) *ŋarin ŋandja ŋalamaya ni ŋandjanj ŋayanj bareyinj*
meat give I say/do to him that one my brother
'I give the beef to my brother.'

The cardinal pronouns do not take any markers to indicate subject or object.

- (14) *yarrubu baladj yimberrindayin milanj*
we d.ex. see we them hit present dual
'We (dual ex.) can see them.'
- (15) *yarrubu baladj ŋamberrida yarr milanj*
we d.ex. see us they hit past to us dual
'They saw us (dual ex).'
- (16) *yarrubu yirriyayin milanj galiwanj yilag djuruŋijam*
we d.ex. we were going dual walking down there yesterday
'We (dual ex.) walked down there yesterday.'

However, as can be seen in sentences (14) and (15), the pronouns incorporated in the auxiliaries are different for subject and object. In sentence (14) *yim . . . milanj* indicates 1st person dual exclusive as subject of the verb and in sentence (15) *ŋam . . . yarr milanj* indicates 1st person dual exclusive as object.

The only distinguishing factor between *yirr . . . milanj* as the incorporated subject pronoun in the intransitive verb in sentence (16) and *yim . . . milanj* as the incorporated subject pronoun to the transitive verb is that *yirr-* becomes *yim* before *-ber-*. By observing the incorporated pronoun forms the language could be said to be nominative/accusative but not nominative/ergative.

All verbs that incorporate object pronouns are transitive; however simple verbs which are normally intransitive sometimes have a transitive function through use with a verb particle of transitive meaning. Usually there is no indication of the object in the verb phrase.

- (17) *ŋalu gurabinj djanj umindanjan ŋundjunj ŋandjanj*
she old woman chew she is saying tobacco that
'The old woman is chewing tobacco.'

There are a small number of cases where verbs made transitive in this way take the benefactive pronoun suffix in reference to the direct object.

- (18) *burrubu durrmin berrandawun nuŋ*
they d. chase they are sitting for him
'They (dual) are chasing him.'

The locative and instrumental cases which in the neighbouring Djamin-djung languages are identical to the ergative, are expressed by quite different suffixes in Miriwung.

The locative suffix is *-m*.

- (19) *nawu gundarrinj nuwaitgu gadjawulam*
him fish I it will put fire loc.
'I will put the fish on the fire.'

Three different instrumental suffixes have been observed in Miriwung:

- (20) *yanuwunda gulamberi*
me he hit past stick with
'He hit me with a stick.'
- (21) *lidburg wuri gad gida*
axe with cut he it hit past
'He cut it with an axe.'

- (22) *djiraŋ gaŋaŋjbuda duwun deb*
kangaroo he it speared spear with
'He killed the kangaroo with a spear.'

There does not seem to be any restriction on the use of the suffixes *-beri* and *-wuri* although *-beri* is more common.

- (23) *lidburg beri yambaraŋ gat nuwidja*
axe with hair cut I it will hit
'I will cut his hair with an axe.'

The suffix *-deb* which also occurs as a verb particle meaning 'to hit' has been found only with *duwun* 'spear'. *duwun* can take the suffix *-beri* as well.

It seems then that Miriwung is definitely not nominative/ergative but nominative/accusative.

73. Warluwara and Bularnu

J. G. Breen

Nominal paradigms

Warluwara and Bularnu (spoken around the Georgina River, on the Queensland/Northern Territory border) are both basically ergative with respect to nouns and accusative with respect to pronouns. There is a mixed system for some demonstratives. Proper nouns (which include kinship terms and a few other words) have an obligatory nominative/accusative suffix and the stem form occurs only in the vocative. There is an optional accusative marker used with common nouns. The following paradigms are for Warluwara. Bularnu differs only in minor respects, that is, in the form of a few of the stems and affixes.

Noun paradigms

	PROPER	COMMON	NON-SINGULAR	GENITIVE
Meaning	little girl	stone	2 little girls	mine
Nominative	<i>babana</i>	<i>wada</i>	<i>babawiya</i>	<i>ŋaɖaŋu</i>
Accusative	<i>babana</i>	<i>wada ~ wadaaŋa</i>	<i>babawiya ~ babawiyana ~ babawiyanaŋa</i>	<i>ŋaɖaŋu ~ ŋaɖaŋuwana</i>
Ergative	<i>babagu</i>	<i>wadagu</i>	<i>babawiyagu</i>	<i>ŋaɖaŋuŋagu</i>
Genitive	<i>bababa</i>	<i>wadaba</i>	<i>babawiyaba</i>	— ¹
Purposive	<i>babayi</i>	<i>wadayi</i>	<i>babawiyana</i>	<i>ŋaɖaŋuyu</i>

Personal pronoun paradigm

	SINGULAR			OTHERS
	FIRST	SECOND	THIRD	
Nominative	<i>ŋana</i>	<i>yiba</i>	<i>yiwa</i>	stem
Accusative	<i>ŋana</i>	<i>yina</i>	<i>yinya</i>	stem + <i>-ŋa</i>
Genitive	<i>ŋaɖaŋu</i>	<i>yindaŋu</i>	<i>wuma</i>	stem + <i>-ma</i>
Purposive	<i>ŋaɖa</i>	<i>yinda</i>	<i>wuŋa</i>	stem + <i>-ŋa</i>

Non-singular personal pronoun stems

	FIRST INCLUSIVE	FIRST EXCLUSIVE	SECOND	THIRD
PERSON				
Dual	<i>ŋali</i>	<i>ŋayara</i>	<i>yibala</i>	<i>wula</i>
Plural	<i>ŋabala</i>	<i>ŋanu</i>	<i>wuru</i>	<i>yanu</i>

Demonstrative pronouns paradigms

Meaning	{here, (this	{there, (that (in sight?)	{there, (that	{where?, (which?	{somewhere (around
Nominative	<i>maŋa</i>	<i>nuŋa</i>	—	<i>ɖara</i>	<i>bala</i>
Accusative	<i>maŋa</i> (rarely <i>maŋana</i>)	—	<i>ŋaraŋa ~ ŋana</i>	<i>ɖana</i>	—
Ergative	<i>maŋagu</i>	—	<i>ŋagu</i>	<i>ɖagu</i>	<i>balagu</i>
Genitive	<i>maŋaba</i>	—	<i>ŋaba</i>	—	—
Purposive	<i>maŋayi</i>	—	—	—	—

The interrogative pronoun *ŋara-* 'who?' functions as a proper noun, and the interrogative pronouns *ŋaŋali* 'what?' and *ŋaŋu* 'how many?' function as common nouns. The purposive (except on non-singular nouns) is *-yi* with stem-final *a* or *i* and *-yu* with stem-final *u*. *-ŋa* is a rare and very specialised alternative. The *-ba* of most genitive forms is changed to *-ma* when *-la* follows; for example, *bababa* 'girl's' would become *babamaŋagu* 'girl's-ERG'. The accusative form *-wana* is used only after stem-final *i* or *u*. If the object precedes the verb an optional accusative suffix is nearly always omitted; if it follows it is used in a majority of cases but often omitted. The nominative-accusative suffix on proper nouns is *-nya* after stem-final *i*. The third person singular pronoun also functions as a demonstrative.

The only difference worth mentioning for Bularnu is that the optional accusative suffix has the form *-linya*. The similarity between the affixes *-liwa* 'having' (see Paper 21) and *-linya* and the nominative and

accusative forms, respectively, of the third person singular pronoun, *yiwa* and *yinya*, is striking, and suggests that these suffixes could be derived from earlier bound forms of this pronoun. There is also some similarity to the Warluwara forms of these suffixes, *-wara* and *-wara* (and shorter forms of both); *-wara* could well be derived from *yiwa* plus the shorter accusative suffix (common in many languages) *-ra*. No origin can be suggested at present for the *ra* of *-wara*. Neither language has any bound pronouns, with the exception of Bularnu *-ida*, used as a suffix to kinship terms with the meaning 'your' (compare *yida* 'for you (PURPOSIVE)' and *yidaju* 'your').² However, Wagaya, which is fairly closely related, makes extensive use of bound pronouns. The Wagaya suffix which was originally interpreted as an accusative case suffix is now regarded as probably a bound third person pronoun (see Paper 74).

Examples of subjects and objects

The following sentences illustrate, for Warluwara, proper noun, common noun, genitive, pronoun and demonstrative each as subject of an intransitive verb and subject and object of a transitive verb.

- (W1) *lalaṇa* *dyiridyida*
elder brother-NOM sick-CONTIN-PRES
'My brother is sick.'
- (W2) *lalagu* *gaṇaṇami* *ḍayiliwara*
elder brother-ERG bring-PAST-to here spear-ACC
'My brother brought his spear.'
- (W3) *lalaṇa* *ṇaṇa* *gaḷa* *ṇudana*
elder brother-ACC I meat give-PAST
'I gave my brother some meat.'
- (W4) *warawula* *ṇaḍaju* *maṇaḍurina*
dog my die-PAST
'Is my dog dead?'
- (W5) *yindajuḷagu* *ṇaṇa* *warawaḷagu* *ḍanmaṇa*
your-ERG me dog-ERG bite-PAST
'Your dog bit me.'
- (W6) *guruguruba* *yiwa* *ṇaḍaju* *ṇaṇaḍana*
hat he my take-PAST
'He took my hat.'
- (W7) *maṇa* *ḍawa* *mampunujuḷa* *ḍugarinyala*
this man well throw-AGENT
'This man is a good (boomerang) thrower.'
- (W8) *ganyiyidya* *maṇagu* *ṇaṇa*, *buḷlugudugu*
weigh on-PRES this-ERG me, heavy-ERG
'This is too heavy for me.'
- (W9) *yuyu* *maṇa* *ṇaṇa* *maṇala* *walaḍada*
tree this (ACC) I firewood pull-along-PRES
'I'm dragging this log along.'

There are no alternatives to the transitive sentence in either language.

Compound and complex sentences

The simplest method of forming a compound sentence in these languages is simple juxtaposition of two clauses. Such a sentence might translate an English sentence containing a relative clause, as in (W10).

- (W10) *ṇagu* *ḍawagu* *maṇala* *piṇiyidya*, *yiwa* *ṇuwagamaṇa*
that (ERG) man-ERG firewood chop-PRES, he steal-PAST
yinya *wata*
that money

'That man chopping the wood over there stole the money.'

One of the two clauses may include an adverb which functions to some extent as a conjunction, as *ṇunda* 'now, then', very common in Warluwara, *muḍu* 'if, when, while', common in Bularnu, *miyi* 'when', infrequent in Warluwara, *wadyi* 'before', occurring occasionally in both languages.

- (B2) *muḍu* *ṇaṇa* *yinya* *ṇaṇaḍayi*, *maṇayi* *ṇaṇa* *yinya*
if I him see-PURP, kill-PURP I him
'If I see him I'll kill him.'
- (W12) *dyirina* *ṇunda* *ṇaṇa*, *gaḷaṇa* *yinya* *miyi* *ṇaṇa*
sick-PAST then I, meat-ACC that (ACC) when I
yadyunmana
smell-PAST

'The smell of that meat made me sick.'

- (B3) *laḡaṇa* *ṇaṇa* *yugumaḷu*, *ṇaṇami* *wadyi*
take-PAST I him-CAUS, get-POT before
'I took it before he could get it.'

The postposition *wadyi* occurs only after the potential form of a verb or the causal form of a noun (in which case there is no verb in the clause). It appears that if there is both a noun and a verb in the clause the noun retains its normal (in the absence of *wadyi*) case form as in (W13). However, more data on this point would be useful.

- (W13) *yara* *gaṇḍila*, *ṇaana* *ṇandaami* *wadyi*
river alongside, flood go-POT-to here before
'(My camp was) alongside the river before the flood came.'

Certain verb forms occur frequently in subordinate clauses; these include the conjunctive in Warluwara (see last section of Paper 21) and the irrealis. The latter normally occurs in both clauses (the terms 'main' and 'subordinate' seem inappropriate in such a case) to form an 'if-would' type sentence.

- (W14) *ṇaṇa* *yinya* *ḍaṇunimaḷa* *gaḷaṇa*, *ṇunda* *ṇaṇa* *dyirimaḷa*
I that (ACC) eat-IRR meat-ACC now I sick-IRR
wumaḷu
it-CAUS

'If I had eaten that meat I would have got sick.'

Sentences containing a finite verb and a nominalised verb are frequent. The commonest form of nominalised verb is the purposive, formed by adding the nominal purposive suffix to the gerund. The purposive most commonly functions as the main verb of a sentence and in such cases it takes a subject and object exactly as does a finite verb. In a sentence with two clauses the

direct object of a purposive verb may (optionally, at least in certain types of sentence) be in the purposive case, as in (W15) and (B4) (compare (B2)).

(W15) *ŋana ŋandiyi yindaŋuŋalu ŋuriniŋu galayi yiba ŋana*
I go-PURP your-ALLA camp-ALLA meat-PURP you me
ŋudiyi
give-PURP

'I'm going to your camp so you can give me some meat.'

(B4) *bagayi ŋana ŋugunuyu balarayi*
go-PURP I honey-PURP chop-PURP
'I'm going to cut some sugarbag.'

Other forms of nominalised verbs used in subordinate clauses include the gerund, gerund plus privative, complement and subject (the last only in Warluwara, see Paper 37).

(W16) *ŋana nyinaŋi nyimi ŋana yaŋana wugulu*
I sit-GER fish I see-PAST water-ALLA
'While I was sitting there I saw some fish in the water.'

(W17) *yaŋaŋiŋaraŋu . . .*
look-PRIV . . .
'When he looked away . . .'

(B5) *ŋuwani maŋaŋu ŋana yaŋana*
snake kill-COMP I see-PAST
'I saw him kill a snake.'

It appears that there are no circumstances in which the subject of a subordinate verb is marked differently from the subject of a main verb, while the object is marked in a different way only in rather restricted circumstances and even then, unless there are some unknown conditioning factors, optionally.

There is no division of verbs into conjugations on the basis of transitivity in Warluwara or Bularnu.

Notes

1. There is a single occurrence of a genitive of a genitive, *ŋaŋaŋuba* 'belonging to mine' in the Bularnu corpus.
2. A corresponding Warluwara form, *-inda*, has now (1975) been heard.

74. Wagaya

J. G. Breen

Wagaya, spoken on the southern and eastern parts of the Barkly Tableland, Northern Territory, is ergative for nouns and accusative for pronouns except that it has a three-way system for the third person singular pronouns. On nouns nominative is unmarked, accusative is normally unmarked but sometimes marked by what is probably best interpreted as a bound third person singular pronoun, *uwiny* a operative is marked as described in Paper 40, and dative is marked by the suffix *riy* ~ *əriy* ~ *iy*, the first allomorph after stem-final *a* and *i*, the second after stem-final *u* (which is deleted) and, in the

Eastern dialect, after stem-final consonants, and the third after stem-final consonants in the Western dialect.

Paradigms for first and second person pronouns are given in Table 1. Bound forms are generally the same as the free forms except that the initial consonant, if any, of the free form is dropped. Where this is not the case the bound forms are included in the table. A dash denotes an unknown form.

Paradigms for third person pronouns and demonstratives are given in Table 2 and Table 3 respectively. These are tentative to some extent. Feminine/neuter forms in Tables 2 and 3 are not found in the Eastern dialect.

There are no alternatives to the ergative construction in simple sentences.

Table 1: Personal pronoun paradigms

	SINGULAR			DUAL	
	First	First, bound	Second	First incl.	First excl. Second
Nominative	<i>ŋuninydy</i>	<i>aŋ</i>	<i>imb</i>	<i>ŋal</i>	<i>ŋali: ibul</i>
Accusative	<i>ŋaŋ</i>	<i>aŋ</i>	<i>in</i>	<i>ŋaliny</i>	<i>ŋali:ny ibiny</i>
Genitive	<i>ŋəŋa</i>	<i>aŋ</i>	<i>inda</i>	<i>ŋaliba</i>	<i>ŋali:ba ibulba</i>
Dative	<i>ŋaŋiŋ</i>	<i>aŋiŋ</i>	<i>indiŋ</i>	<i>ŋaliŋ</i>	<i>ŋali:ŋ ibuŋ</i>
	PLURAL				
	First incl.	bound	First incl.	First excl.	Second
Nominative	<i>ŋambul</i>	<i>abəl</i>		<i>ŋani:</i>	<i>ir</i>
Accusative	<i>ŋambuliny</i>	<i>abiny</i>		<i>ŋani:ny</i>	<i>iriny</i>
Genitive	<i>ŋambaba</i>	—		<i>ŋani:mba</i>	<i>iriba</i>
Dative	<i>ŋambiŋ</i>	<i>abuŋ</i>		<i>ŋani:ŋ</i>	<i>iriŋ</i>

Table 2: Third person pronoun paradigm

	Sing. masc.	Sing. masc. bound	Sing. fem./neut.	Dual	Plural
Nominative	<i>yuwu</i>	<i>u</i>	<i>yamb</i>	<i>yawul</i>	<i>yal</i>
Ergative	<i>yuwəl</i>	<i>uŋ</i>	<i>yand</i>	(none)	(none)
Accusative	<i>yuwiny</i>	<i>uwiny</i>	<i>yani</i>	<i>yawiny</i>	<i>yaliny</i>
Genitive	<i>yuguwa</i>	—	<i>yaŋguwa</i>	<i>yawulba</i>	<i>yaliba</i>
Dative	<i>yugubəriy</i>	<i>uŋ</i>	<i>yaŋgubəriy</i>	<i>yawuŋ</i>	<i>yalinŋ</i>

Table 3: Demonstrative paradigm

	this (masc.)	this (fem./neut.)	that (masc.)	that (fem./neut.)
Nominative	<i>imu</i>	<i>imi</i>	<i>bulu</i>	<i>bi:</i>
Ergative	<i>imuwəl(?)</i>	<i>imig(a)</i>	<i>buləl</i>	<i>bi:g</i>
Genitive	<i>imub</i>	<i>imib(a)</i>	<i>bulub</i>	<i>bi:b</i>
Dative	<i>iməriy</i>	<i>imiriy</i>	<i>buləriy</i>	<i>bi:riy</i>

Compound and complex sentences may be formed in several ways. Simple juxtaposition of two clauses to form a compound sentence (which may, however, be translated by a complex English sentence) is illustrated in examples (1) and (2). (Examples are from Western Wagaya unless marked (E).)

- (1) *inbaniyan gil imban gurgumaniy*
(E) fall-PAST-I not you-me hold-PAST
'I fell because you didn't hold me.'
(2) *guraniy bulu, hindawaniy mi:ngid*
(E) die-PAST he, bury-PAST ground-ALLA
'He died and they buried him.'

Certain verb forms, while occurring in simple sentences, are especially likely to be found in subordinate or co-ordinate clauses. These include the purposive *ariy*, past purposive ('would have', 'wanted to') *aliy* and potential ('might') *i*. In the case of a verb in the purposive form with an object, one can distinguish between a subordinate clause and a co-ordinate clause because the object is in the dative case in the former and in the nominative or accusative in the latter (compare examples (4) and (5) with (6)).

- (3) *manalaya bangand indiy, ninabal wagiridiyariy*
(E) white man go-PAST-to here you-DAT, maybe work-PURP
'A (white) man came up here looking for you; he might want to give you a job.'
(4) *wi:namaniyan mi:bariy badariy*
tell-PAST-I hole-DAT dig-PURP
'I told him to dig the hole.'
(5) *bangayan galil lanndariy nadariy garawariy*
go-PAST-I west get-PURP my-DAT child-DAT
'I went out west to get my kid.'
(6) *dujaraniy bulubal, gilay laradyariy*
(E) keep quiet-PAST that-CAUS, not-me hear-PURP
'I shut up from him. I don't want him to listen to me.' (Informant's translation.)
(7) *gilamanjan inbaliy*
think wrongly-IMPERF-I fall-PAST PURP
'I thought I was going to fall.'
(8) *marali:mb naddagad, nuninydyin hundaliy mani,*
speak-PAST PURP-you me-ALLA, I-you-ACC give-PAST PURP money,
imbaqin lanaliy nanqand
you-me-DAT get-PAST PURP food
'You should have told me (you were going to town). I would have given you some money and you could have got some tucker for me.'
(9) *gura bangariyal, yuwidyalaliny walawi:*
(E) come on go-PURP-we (DUAL, INCL), sun-OP-us (DUAL, INCL) burn-POT
'Come on, we'd better go now, before it gets too hot, the sun'll kill us.'
(Informant's translation.)

Simultaneous action and immediate consequence are expressed by a nominalised form of the verb marked with the operative/locative case suffix if the subjects of the two actions are the same, or the allative case if they are different. If a nominalised transitive verb is marked allative its object is also in the allative case. Unfortunately, there are no examples in the corpus of an object of a nominalised transitive verb with operative/locative

case marking. In a few cases the case marker has been omitted from the nominalised verb (in one such case there is an object in the allative case).

- (10) *wiriwiriyan bangayal maniy yungumad*
along-I go-NOM-OP/LOC kill-PAST lizard
'I killed a (blue-tongue) lizard while I was going along.'
(11) *hubarani:nan budyugayal*
(E) bad-become-PAST-now-I run-NOM-OP/LOC
'I'm tired from running.'
(12) *dyirawanndariyan nunindanad*
(E) spear-PURP-I sleep-NOM-ALLA
'I'll spear him while he's asleep.'
(13) (both dialects) *inandiyan garawul, daraminndanad*
see-PRES-I child-PLU, play-NOM-ALLA
'I'm watching the kids playing.'
(14) *wayibalaran inanydyi gilyalid nangaranyad*
white man-I see-IMPERF meat-ALLA cut-NOM-ALLA
'I've been watching the white fellow cutting up a bullock.'
(15) *inaniyan mi:bad badani*
see-PAST-I hole-ALLA dig-NOM
'I saw him digging a hole.'

A common construction in Wagaya involves the relating/subordinating particle *il-* which is prefixed to a clause or phrase. It is not a free form, but always occurs combined with a bound pronoun, demonstrative, combination of two pronouns or pronoun and demonstrative, or dual formative (and possibly also plural formative). This compound form may form the first word of a clause or phrase, or may stand alone outside the main clause of the sentence. It seems, in some cases, to be used to relate to the main clause some item that was inadvertently omitted from it or was an afterthought; in effect, if not always in intention, it topicalises such items. See examples (20) to (25), especially (20), (22) and (25).

- (16) *ganggalina inandi, ilu bangadiy gu:ridy*
(E) policeman see-PRES, REL-he go-PRES to here
'(I) can see the policeman coming.'

This could also be expressed by means of a nominalised verb, as in example (13).

- (17) *ineliqindab unbannubal, ilinbulu wadi:*
watch-yourself spider-CAUS, REL-you (ACC)-that bite-POT
'Watch out for those spiders, they can bite.'
(18) *nunananiyan ilu banganiy*
(E) sleep-PAST-I REL-he go-PAST
'As soon as he went I had a sleep.'
(19) *nuninydy bulu hundaniy nannandaruwiny, ilimb lananiy*
(E) I that give-PAST food-it (ACC), REL-you take-PAST
bulubal
that-CAUS
'I fed the man you took the tucker from.'
(20) *manhwan nuninydy, ilindi*
dream-I sleep-IMPERF, REL-you-DAT
'I dreamt about you.' (Or, better, perhaps, 'I had a dream; it was about you.')

- (21) *ilaləgəd*, *ɲundiɔanbədi*
 (E) REL-us (dual, incl)-ALLA, return-PRES
 'He's coming back (to us).'
- (22) *ɲinabal yugar inbəl*, *ilabuɲ*
 maybe water fall-FUT, REL-us (PLU, INCL)-DAT
 'It might rain, for us.'
- (23) *urəmaliɲabəl* *iluɲ*, *mu:nd*
 look for-FUT-NOW-WE (PLU, INCL) REL-him-DAT, poor fellow
 'We'll go looking for him now, poor fellow.'
- (24) *yugar dyirəməniy imb ilaɔ*
 water spill-PAST YOU REL-my
 'You spilt my water.'
- (25) *wərawəru bəngənand*, *ilaɔgəgəd*
 dog-having go-PAST-to here, REL-me-ALLA
 'He came with his dog, to my camp.'

The final three examples show how the *il-* construction and the nominalised verb construction may be used as alternatives in the formation of a complex sentence, or may even be combined, with the object of the verb in the subordinate sentence being in the allative case although the verb itself is not nominalised. All three sentences mean 'I saw you hitting your dog'.

- (26) *iɲəniyanin indaɔ wəraɔ maɲɔdaɲəɔ*
 see-PAST-I-you(ACC) your-ALLA dog-ALLA hit-NOM-ALLA
- (27) *iɲəniyanin wəraɔ indaɔ, ilimb maɲiy*
 REL-you hit-PAST
- (28) *iɲəniyanin ilimb wəra maɲiy inda*
 dog your

Classification of Wagaya verbs into conjugations is based on the phonological form of the stem and is not related to transitivity.

75. Yandruwandha

J. G. Breen

Yandruwandha¹ is a member of the Karnic group of languages and its relationship with the other languages of this area has been discussed by Breen.² It was spoken about Innamincka, on Coopers Creek, and along Strzelecki Creek, in the far north-east of South Australia. The form described in this paper is the Innamincka dialect.

Yandruwandha is typical of the Karnic languages in that it has an ergative system for nouns, an accusative system for non-singular pronouns and a three-way system for singular pronouns.³ The syntactic case suffixes for Yandruwandha nouns are *ɔ* for nominative, *li* for operative and *ɲari* for dative (*ɲi* for kinship terms and proper names, which, however, still retain *ɲari* as the allative). The interrogative *wəra* 'who?' functions as a proper name except for optional alternative forms *wərana* (nominative) and *wəlu* (operative), and *miɲa* 'what?' functions as a common noun.

The personal pronoun/demonstrative paradigm is tabulated below.

	NOMINATIVE	ERGATIVE	ACCUSATIVE	DATIVE/ GENITIVE
1 sing	<i>ɲanyi</i>	<i>ɲaɲu</i>	<i>ɲaɲa</i>	<i>ɲakani</i>
2 sing	<i>yini</i>	<i>yundru</i>	<i>yina</i>	<i>yinɲani</i>
3 sing masc	<i>ɲunu</i>	<i>ɲulu</i>	<i>yinɲa</i>	<i>ɲuɲgani</i>
3 sing fem	<i>ɲani</i>	<i>ɲandra</i>	<i>ɲaɲa</i>	<i>ɲaɲgani</i>
3 sing masc 'here'	<i>ɲuniyi</i>	<i>ɲuliyi</i>	<i>yinɲayi</i>	<i>ɲuɲganiyi</i>
3 sing fem 'here'	<i>ɲaniyi</i>	<i>ɲandranyi</i>	<i>ɲaɲayi</i>	<i>ɲaɲganiyi</i>
3 sing masc 'there'	<i>ɲutyaru</i>	<i>ɲuluru</i>	<i>yinytyaru</i>	<i>ɲuɲgatyaru</i>
3 sing fem 'there'	<i>ɲatyaru</i>	<i>ɲandraru</i>	<i>ɲanytyaru</i>	<i>ɲaɲgatyaru</i>
1 dual incl	<i>ɲaldra</i>		<i>ɲaluɲa</i>	<i>ɲaluɲga</i>
1 dual excl	<i>ɲali</i>		<i>ɲaliɲa</i>	<i>ɲaliɲga</i>
2 dual	<i>yula</i>		<i>yulu</i>	<i>yulɲani</i>
3 dual	<i>pula</i>		<i>puɲu</i>	<i>pulɲani</i>
3 dual 'here'	<i>pulayi</i>		<i>puɲiyi</i>	<i>pulɲaniyi</i>
3 dual 'there'	<i>pularu</i>		<i>puɲuru</i>	<i>pulɲatyaru</i>
1 plural incl	<i>ɲandra</i>		<i>ɲanuɲa</i>	<i>ɲanuɲga</i>
1 plural excl	<i>ɲani</i>		<i>ɲaniɲa</i>	<i>ɲaniɲga</i>
2 plural	<i>yura</i>		<i>yuru</i>	<i>yungani</i>
3 plural	<i>ɲana</i>		<i>ɲaɲa</i>	<i>ɲangani</i>
3 plural 'here'	<i>ɲanayi</i>		<i>ɲaɲayi</i>	<i>ɲanganiyi</i>
3 plural 'there'	<i>ɲanaru</i>		<i>ɲaɲaru</i>	<i>ɲangatyaru</i>

The following sentences briefly illustrate the use of nominative, operative or ergative, and accusative forms.

- (1) *ɲawaɲa ɲanyi kaɲirriɲari*
 go-PRES I creek-DAT
 'I'm going to the creek.'
- (2) *murawa ɲutyaru yinɲila*
 child he-there cry-PRES
 'The baby is crying.'
- (3) *murawa ɲaɲu yirrana*
 child I-ERG wash-PAST
 'I washed the baby.'
- (4) *murwali ɲaɲa dranyiɲa maɲrali*
 child-OP me hit-PAST stone-OP
 'The child hit me with a stone.'

An alternative to the ergative construction is the use of a reflexive sentence, for example:

- (5) *kaɲi ɲanyi ɲayiyindriɲa*
 meat I eat-REFL-FUT
 'I'm going to have a feed of meat.'

and

- (6) *kaɲi ɲaɲu ɲayinɲa*
 meat I-ERG eat-FUT
 'I'm going to eat the/some meat.'

are both acceptable sentences, if not entirely synonymous. *yindri* is used as a

verb stem formative with the meaning 'to do (something) for oneself' and its incorporation in the verb, either with this function or as the reflexive/reciprocal marker, has the effect of making the verb intransitive as far as the subject is concerned, it may still have an overt object however, as in

- (7) *maṛa ḡunu mulpayindrina*
finger he-ERG chop-REFL-PAST
'He chopped off his own finger.'

In such a case the object is probably restricted to words denoting a part of the subject. Where *yindri* has its secondary meaning 'do for oneself' however, this is not so.

- (8) *kaṭi palari paṅdripanḡriyindrinaṅa*
meat own kill-kill-self-PRES
'(We) kill all our own meat.'
- (9) *ḡuṭiṅi ḡanyi mamayindrina windra*
brother-DAT I steal-self-PAST spear
'I took my brother's spear.'
- (10) *kaṛirriyi paṅḡiwaka kaḡukaḡu mandriyindrila*
creek-LOC down-EMPH fish get-self-PRES
'(He's) down at the creek fishing.'
- (11) *karruwalili ṭanayi pampu paḡakaḡa kuliniṅari ṭayiyindrinaṅa*
boy-OP they-here egg get-PRES cook-GER-DAT eat-self-FUT
ḡani
we (PLU, EXCL)
'The boys are bringing some eggs and we're going to cook them and eat them.'

The verb *waṅṭi* 'to look for' always has the suffix *yindri*.

- (12) *muruwa yini waṅṭiyindrila, ḡuniyi ḡinala ḡaliṅḡayi*
child you look for-self-PRES, he-here sit-PRES we (DU, EXCL)-LOC
'You're looking for the boy; he's sitting here with us.'

Another suffix which adds the meaning 'to do for oneself' to a verb is *ṭayi* (also, as a free morpheme, the verb 'to eat') but this does not affect the transitive nature of the verb (see the article on Yandruwandha, Paper 93).

Subordinate clauses most commonly involve nominalisation of the verb, which may then take certain nominal inflections, most commonly the dative/allative *ḡari* and the ablative *ḡura*. The nominaliser is the gerund formative *ini*, the final vowel of the verb stem being deleted.

- (13) *ḡaraṅana ḡaṭu paldriniṅura yina yini*
hear-PAST I-ERG die-GER-ABL EMPH you
'I heard you had died.'
- (14) *ḡaṭu mangarri yinbana mandriṭikiniṅari puṭu ḡakaṅi*
I-ERG girl send-PAST get-return-GER-DAT goods my
'I sent a girl (to the shop) to get my things.'
- (15) *ḡaṭu yina ḡanana ḡinapanḡḡiniṅari*
I-ERG him tell-PAST sit down -GER-DAT
'I told him to sit down.'
- (16) *ṭawawarraṅanatyi walya yini ḡatyara ḡakaṅari, kaṭila*
go-arrive-PAST-EMPH not you camp my-ALLA meat-EMPH
walya ḡaṭu yina ḡunyiniṅari
not I-ERG you-ACC give-GER-DAT
'If you had come to my camp I would have given you some meat.'

- (17) *kayiri ḡunu ṭikawarrana ḡuṭu wawaṭikiniṅura*
now he return-arrive-PAST brother see-return-GER-ABL
'He's just come home from visiting his brother.'

Another method of marking subordination is by means of the complement marker *layi*, added to the verb stem.

- (18) *waliwalimana ḡaṭu puḡuru ṭirriḡayi*
stop-PAST I-ERG them-DU-there fight-COMP
'I stopped them two from fighting.'
- (19) *paṅḡili ḡulu ḡaṅa maṭana, kaṭi walya yina ḡunyilaḡi*
dog-OP he-ERG me bite-PAST, meat not him give-COMP
'The dog bit me because I didn't feed it.'
- (20) *ḡaṭu kilkaṅukara patyinaḡayinyari ḡunu,*
I-ERG know-PAST good-become-COMP-like he,
munydyanalḡaṅu
sick-become-again-then
'I thought he was getting better but he got sick again.'

In some cases neither clause of a two-clause sentence is marked as subordinate.

- (21) *walkiṭikapḡḡi mayi, walkayila yini*
climb-return-down IMPER, fall-POT-EMPH you
'Climb down, because you might fall off.'

It will be noted that marking of subject and object of a subordinate clause, where they are expressed, is always as in a simple sentence.

There is no evidence in Yandruwandha of any passive marker, nor is there any grouping of verbs into conjugations.

Notes

- The Yandruwandha phoneme inventory appears to include a full set (6) of both voiced and voiceless stops (although the opposition may be significant only in certain environments) and also pre-stopped laterals and two pre-stopped trills, written *dr* and *ḡr*. There are three rhotic phonemes: an alveolar trill, written *rr*; an alveolar flap *r*; and a retroflex glide *r*.
- J. G. Breen, 1971, 'The Aboriginal languages of Western Queensland', *Linguistic Communications* 5: 1-88, especially pp. 20-24, 29-30.
- Wangkumara is unusual in this group in that it has a three-way system for all pronouns, and Pitta-Pitta (Bidha-Bidha) and Wangga-Yudjuru are unusual in that they have the three-way system for all nominals except in the 'future' forms, where the distinction between nominative and operative is lost. For a description of the last two languages see B. J. Blake and J. G. Breen, 1971, 'The Pitta-Pitta Dialects', *Linguistic Communications* 4: in particular pp. 74-92.

76. Arabana-Wangganguru and Bāgandji

L. A. Hercus

This note presents data on *i* as transitive/causative stem-final vowel in verbs from Arabana-Wangganguru [Wangganguru] (originally spoken in the Simpson Desert region of South Australia) and from Bagandji [Bāgandji] (spoken in the Darling River basin, New South Wales).

Arabana-Wangganguru

In Arabana-Wangganguru the stem of verbs ends in *-a* or *-i*. Verbs ending in *-a* may be intransitive or transitive: *yuga-* 'to go', *biḍa-* 'to hit'. Verbs ending in *-i* are usually transitive, though there are many exceptions, for example: *iḡni-* 'to lie round', 'to exist', *ḡari-* 'to fly'. Intransitive verbs ending in *-a* may be turned into transitive/causative verbs by the substitution of *-i* or *-a* as in:

<i>yuga-</i> 'to go'	<i>yugi-</i> 'to move (a sick person)', 'to drive a car'
<i>gudna-</i> 'to lie', 'to sleep'	<i>gudni-</i> 'to put down'
<i>ḡangga-</i> 'to sit'	<i>ḡangi-</i> 'to lay (eggs)', 'to give birth'
<i>ganda-</i> 'to fall (of rain)'	<i>gandi-</i> 'to make rain'
<i>ḡarga-</i> 'to stand'	<i>ḡargi-</i> 'to raise up'
<i>ḡiga-</i> 'to return'	<i>ḡigi-</i> 'to take back'

More rarely transitive verbs in *-a* may be turned into causative verbs in *-i*.
galba- 'to gather' *galbi-* 'to bring about an increase (by ritual means)'

Bagandji

In Bagandji the situation is similar to Arabana-Wangganguru. Both transitive and intransitive verbs may end in any of the three vowels *-a*, *-i*, *-u*. But there are a number of intransitive verbs ending in *-a* which correspond to transitive/causative verb stems ending in *-i*, for example:

<i>iba-</i> 'to lie down'	<i>ibi-</i> 'to put down'
<i>wanda-</i> 'to burn' (intr)	<i>wandi-</i> 'to burn' (tr)
<i>bura-</i> 'to fall out' (teeth)	<i>huri-</i> 'to pull out'
<i>ḡaba-</i> 'to lock up'	<i>ḡabi-</i> 'to cause someone else to be locked up', 'to dob someone in'

This evidence, combined with the slightly more complex situation in Dieri (causative stem-forming affixes *-ibana* and *-ingana*) shows that the use of stem-final *-i* as a transitive/causative marker was well established over a large part of eastern Central Australia.

77. 'Ergative/Accusative' Typologies in Morphology and Syntax

Jeffrey Heath

1. Morphology

The syntactic typology developed by Dixon which classes languages as syntactically 'ergative' or 'accusative' is obviously modelled on the well-known typology of case systems as ergative, accusative, and other types. Before discussing Dixon's typology, I would like to make some remarks about the morphological typology, since I feel that even this has been misunderstood by most linguists.

In defining morphological ergativity and accusativity, most linguists have taken for granted the opposition between the two major transitive categories, TS (transitive subject) and TO (transitive object). This leaves IS (intransitive subject) as the pivotal category. If IS is combined with TS into one case, we have the accusative system—so called because the marked case is the accusative TO category. If IS is combined with TO we get the ergative type, with TS in the marked ergative case. In both types the unmarked category is called nominative; this covers IS and TS in the accusative type and IS and TO in the ergative one.

In my view, this explanation of ergativity and accusativity is both oversimplified and misleading, precisely because the emphasis is on IS. In fact, the treatment of IS is invariable and hence predictable; in both accusative and ergative types it is put in the unmarked nominative case. The question really is this: which (if any) of the transitive categories is to join IS in the unmarked case? In other words, which of TS and TO is to be taken as the unmarked member of the TS-TO pair? In accusative languages, TS is the unmarked transitive category; in ergative languages it is TO.

It is true that the fieldworker analysing a particular language must work from a different direction. In his attempt to discover what kind of case system the language has, he uses the following algorithmic recipe:

- step 1—discover the form of the IS category;
- step 2—discover the forms of the TS and TO categories;
- step 3—compare IS with TS, and compare IS with TO;
- step 4—if IS matches TS we have the accusative system, whereas if IS matches TO we have the ergative system.

In this discovery procedure, then, the role of IS is crucial. The only way we can reliably ascertain which of the two transitive categories is relatively unmarked is to compare them one by one with IS, which we know in advance is in the least marked case.

Unfortunately, linguists have hopelessly confused this discovery procedure with the theoretical analysis of the systems in question. If I am right, the fundamental difference between ergative and accusative language lies in their treatment of TS and TO with respect to each other. The two possible surface equations, IS = TS and IS = TO, are trivial and automatic consequences of the decision which is made regarding the relative markedness of TS and TO. It is only because such surface equations are tangible, while underlying dynamics are not, that our discovery procedures must be based on the

former. However, to dress a discovery procedure up as a theory—to confuse a test with an explanation—is to make the same dreadful mistake which led to such sterility in American descriptive linguistics in the thirties and forties.

Since these concepts are important for syntactic typology as well, I will go into more detail as to how I think morphological case systems arise (synchronously). Out of the primeval semantic gelatin, where each NP is marked for a specific semantic role (for example, 'agent of hitting' 'recipient of gift', etc.), each language gradually builds up conglomerate categories of similar role functions, resulting in a system with a number of categories like Agentive, Patientive, Instrumental, etc. I take these as ill-defined and theoretically invalid, though heuristically useful, categories, and do not assign them theoretical primacy or absolute universality as does Fillmore. However, at levels close to the concrete semantic level the confluences of very specific categories into slightly more general and abstract ones is probably universal in its broad direction, if not in its details. For the purposes of this paper, then, we can think of a universal Fillmorean system with a dozen or so conglomerate categories occurring at a fairly deep level in all languages.

In general, still further confluences will be needed to map this Fillmorean system onto the surface morphological system, but these mapping processes begin to lose their universality the closer we get to the surface. Most languages, as an important step in the formation of the surface system, create an IS category which essentially covers all 'major' NPs which do not co-occur with another major NP in the same clause. I will not attempt a formal definition of 'major' here, but basically it covers the Agentive and Patientive.

Not all languages create such an IS category, however. In Choctaw (Mississippi), there is an agentive case, a patientive case, and a dative case in the case system used with pronominal affixes in the verb.¹ Some instances of what would be IS in English are agentive, others are patientive, and a handful of others are dative. The same cases recur in transitive and doubly-transitive combinations, so we can have agentive-patientive transitives, agentive-dative transitives, patientive-dative transitives, and the doubly-transitive clause type with all three cases represented. In effect, then, Choctaw freezes its system at a deeper level than do the languages which create a (semantically nonunitary) IS category. The Choctaw cases have a much clearer semantic basis than do such categories as nominative and accusative in English. I call the Choctaw type the *multiple-intransitive* type (subdivisible as double-intransitive, triple-intransitive as in Choctaw, and so forth). The type with an IS category I call *single-intransitive*. Although there are very few multiple-intransitive languages, the distinction between multiple- and single-intransitive systems is, from the structural viewpoint, the most significant bifurcation which can be made among the various types of case system.

As long as there are two or more intransitive cases like agentive and patientive, it may be difficult to determine which case (if any) is unmarked morphologically. In Choctaw, for example, the agentive and patientive are about equally common, equally well-distributed syntactically, and of about equal semantic importance and specificity. In such languages, therefore, it may well be that no single case can claim to be the least marked category.

In the single-intransitive type, there are three easily distinguishable possibilities, depending on how the two transitive categories, TS and TO, are

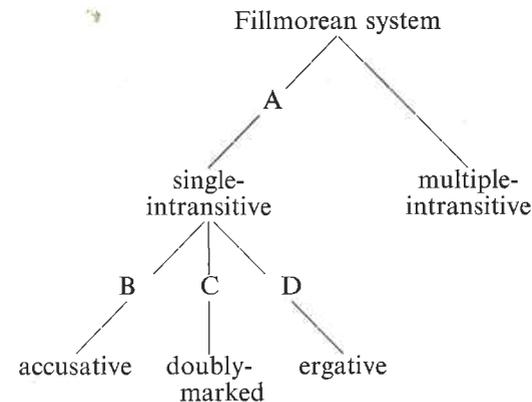
treated. TS covers all instances of semantically Agentive NPs, and TO covers all Patientive NPs, aside from those which have become ISs. TS and TO may also have absorbed some NPs from other semantic categories.

If TS is taken as unmarked with respect to TO, the former goes into the unmarked nominative case. Since this case has already been automatically assigned to IS, we have an equation $IS = TS$. This is the accusative system. On the other hand if TO is taken as unmarked, it goes into the nominative, we have an equation $IS = TO$, and we call the system ergative.

The final possibility within the single-intransitive type is that *both* TS and TO will remain marked. Since IS is in the unmarked nominative case, neither $IS = TS$ nor $IS = TO$ will be valid equations. TS will be ergative, and TO accusative. Although several terms have been suggested by various people as labels for this type of system (Silverstein's term 'agentive' being the latest contribution), I find none of them either widely-accepted or aesthetically satisfactory, and suggest the term *doubly-marked*.

Other single-intransitive systems can be formed by combining the accusative, ergative, and doubly-marked systems in various ways. Those 'split' systems where the choice depends on substantival hierarchies have been discussed in detail by Silverstein (this volume). Dyirbal and Ritharngu are examples of languages showing all three subtypes. Dyirbal, for example, has an accusative system for personal pronouns, the doubly-marked system for the human interrogative pronoun 'who?', the ergative system for inanimate and many other nouns, and either the doubly marked or ergative systems for personal names and some other human nouns.

The steps in the formation of the surface systems can be schematised as in:



A: creation of IS category.

B: TS unmarked, TO marked.

C: TS and TO both marked.

D: TS marked, TO unmarked.

E: (in all systems) IS unmarked.

No process as such is necessary to link the Fillmorean system with the multiple-intransitive one, since the two are fundamentally identical.

I would emphasise that the doubly-marked system is intermediate between

the ergative and accusative systems. In the ergative system the pendulum swings one way (so to speak), in the accusative system it swings the other way, but in the doubly-marked system it is in the middle. I say this since I view the formation of subtypes of the single-intransitive system as essentially a conflict between TS and TO for morphological primacy, and in the doubly-marked type the two are in equilibrium. A concrete manifestation of the intermediate status of the doubly-marked type is the fact that in split systems such as those investigated by Silverstein, the doubly-marked type is always lower in the hierarchical order than the accusative system, but higher than the ergative system (for example, Ritharngu, Dyirbal).

2. Syntax

Dixon's ergative/accusative syntactic typology was largely formulated within the context of 'classical' transformational grammar, the version of generative theory which was dominant in the sixties but has now lost most of its adherents to one form or another of generative semantics. The principal distinguishing feature of classical TG was its generation of underlying structures by means of PS rules, of which the first two for English were the following (given in simplified form):

PS-1 S → NP VP
PS-2 VP → (NP) V

An intransitive clause resulted if the optional NP in PS-2 was omitted; if it was present we got a transitive structure. On the basis of these rules, it was possible to define a 'subject' category as the case of the NP introduced in PS-1, or in terms of tree diagrams as an NP not dominated by a VP node. In other words, the accusative case system (with IS = TS) could be regarded as a natural derivative of the PS rules.

It was also possible to see how an ergative system could be generated by this kind of rules. One way of doing this was to take the NP in PS-1 as representing the IS or TO, and the optional NP in PS-2 as the TS. Alternatively, we could rewrite the rules altogether as PS-1' and PS-2':

PS-1' S → (NP) VP
PS-2' VP → NP V

Again the optional NP, this time in PS-1', is the TS and the obligatory NP, here in PS-2', is the IS or TO.

In the context of this theory, it seemed that every language had to be, at the deepest level, either ergative (IS = TO) or accusative (IS = TS), since these were the only systems which could be conveniently generated by such PS rules. Not much was made of this at first, since none of the linguists who mattered knew any ergative languages. However, Dixon's research on Dyirbal led him to conclude that this was a language with an underlying ergative organisation, as opposed to the many better-known languages with accusative deep structures. Dixon found evidence for underlying ergativity primarily in the workings of the rules creating 'topic chains', rules which were triggered and blocked by networks of coreferentiality and non-coreferentiality among major NPs in juxtaposed clauses.

It is clear from reading Dixon's grammar (1972) that he regarded Dyirbal as ergative to the core. That is, he believed that Dyirbal base forms, at the

deepest level prior to any transformational operations, were already ergative in structure, with IS and TO in equivalent positions distinguishable from that of TS. The ergative behaviour of Dyirbal clauses in the topic-chain transformations was regarded as a consequence of this underlying ergativity. This is an important point: ergative base forms come first, and ergative syntactic behaviour is a *result* of them.

Unfortunately, the trend of TG has been away from this way of conceptualising the formation of underlying structures. It is now clear that deeper, more semantic, underlying representations are necessary, roughly along the lines indicated by Fillmore and others (we do not have to accept the details and paraphernalia of Fillmore's theory to profit from its fundamental concepts). For example, no PS rules like those shown above can account for the multiple-intransitive, semantically-based case system of Choctaw mentioned earlier. So we have to start from deep structures where semantically-heterogeneous surface categories like nominative are missing, and where instead we have more concrete and specific case categories like Agentive and Patientive (even these may need to be broken up). To arrive at the surface morphological system, it is necessary to envisage several mapping processes, including straight mergers, context-sensitive hierarchical rules (for example, 'the highest-ranking NP becomes nominative'), etc., linking the deepest case system to the surface system. In a few languages we can see clear traces of intermediate stages in this development; in Choctaw, for example, we have the semantically-based agentive/patientive/dative system with pronominal affixes in verbs, but also a binary subject/oblique system for independent substantives and it is clear that the latter is derivable from the former by a simple, hierarchical rule.

In this light it begins to appear as though there is no *underlying* ergativity or accusativity; rather, there are differences in the way the more or less universal semantic cases are amalgamated into surface categories. This removes some of the attractiveness from a typology which asserts that all languages are either ergative or accusative at a deep level.

One consequence of this is that it is no longer possible to maintain that ergative syntactic behaviour is an automatic consequence of pre-existing structural characteristics. Instead, we now have deep structures which are neither ergative nor accusative. The definition of syntactic ergativity must now be in terms of syntactic behaviour—the way transformations operate, not the form of the inputs supplied to them by PS rules. Dyirbal is syntactically ergative to the extent that topic-chain rules work on an ergative basis; English is syntactically accusative to the extent that its transformations operate on accusative principles.

The next problem is deciding what kinds of syntactic evidence we are prepared to admit in trying to decide how a given language should be categorised. Unfortunately, there are many kinds of evidence which can be thought of, and in some languages certain syntactic phenomena suggest ergativity while others suggest accusativity. The diversity of evidence adduced in the papers contributed to this section of the conference confirms this point with painful clarity.

Blake, in precirculated materials, attempted to define more precisely the criteria for determining syntactic ergativity and accusativity, so that the information collected on various Aboriginal languages would be directly

comparable. This was a welcome step (and would have been more welcome had contributors paid more attention to it). What I now wish to do is to formulate more precisely the kinds of phenomena which I, along with Blake, consider most useful in this connection. In doing so, however, I will suggest that the binary ergative/accusative syntactic dichotomy is too oversimplified and rigid to account for even the rather limited syntactic phenomena at hand.

Suppose we have a transformation applying to a two-clause configuration like the following:

$$\begin{array}{l} S_1: NP_1 NP_2 NP_3 \text{ Verb} \\ S_2: NP_4 NP_5 NP_6 \text{ Verb} \end{array}$$

Suppose further that the transformation involves a choice between two possible structural changes P and Q (at most one of which is null), and that the choice depends on whether one particular cross-clause NP-pair is coreferential or not. For example, if NP_2/NP_6 is the triggering NP-pair, then P operates if $NP_2 = NP_6$ and Q operates otherwise. None of the other NP-pairs (NP_1/NP_4 , NP_2/NP_5 , etc.) has any bearing on the choice between P and Q.

Given such a rule, or an extended and more elaborate version of it as in Dyirbal (where more than one NP-pair can be relevant and where there are more than two possible operations), we have a basis for a syntactic typology so long as S_1 and S_2 are allowed to take a representative set of forms. For example, if any kind of clause can function as S_1 (which need not have exactly three NPs), there must be some general rule or convention determining which NP will act as the triggering NP (NP_1). Suppose, for example, that the rule is as follows: the triggering NP in S_1 is the IS of an intransitive clause and the TS of a transitive clause. This could be taken as evidence of syntactic accusativity. On the other hand, if the triggering NP were defined as the IS or TO, we would have evidence of syntactic ergativity.

There are some problems, however. One is that our transformation operates on two clauses at once, S_1 and S_2 . In many instances the rule for finding the triggering NP in S_1 is not the same as the rule for finding the other triggering NP in S_2 . Suppose the rule for S_1 is accusative and the rule for S_2 is ergative?

Examination of the precirculated Blake materials shows that he is interested only in the rule for S_2 , the subordinated or dependent clause, and makes no reference to the rule for the main clause S_1 . This choice is entirely arbitrary, and I fail to see any reason why S_1 is less worthy of attention than S_2 . If we are to eventually acquire some understanding of the functional principles behind the selection of particular triggering NPs as opposed to others, we must realise that the selection conventions are really choosing a *pair* of NPs. It is my belief that there are universal functional principles at work in forming each language's rules for selecting the two triggering NPs, and that these principles can be discovered and appreciated only by looking at pairs of triggering NPs, rather than at individual NPs.

The second problem is that the language may have more than one transformation of this kind, applying to different kinds of constructions, and that the selection conventions will differ from one to another. English is such a language, since there is an Equi-NP Deletion rule applying to complement-clause constructions, and a similar deletion rule applicable to gerundial clauses. The rule for determining the triggering NP in the main clause S_1 differs from the first rule to the second. Furthermore, it is possible to consider Relative-Clause Formation as another example of the rule type we are deal-

ing with, and in this transformation the rule for choosing the triggering NP in both S_1 and S_2 differs from the corresponding rules for deletion.

Therefore, in order to provide a meaningful typological summary of how triggering NPs are chosen in a given language, the typology must be complicated. It must cover the choice of triggering NP in both the main and dependent clauses, and it must recognise that different transformations can choose triggering NPs differently.

On the assumption that we are able to typologise a number of languages on these criteria, we still have the question of how the languages should be compared to each other. Suppose language X has a transformation of the type we are interested in, applying to complement-clause constructions, and that in language Y the only relevant transformation applies to relative constructions. We are likely to find that the rules choosing triggering NPs in X's transformation are quite different from those in Y's. On the basis of this evidence, are we really justified in saying that X and Y are fundamentally distinct linguistic types? I would answer no, since the transformations in question apply to different construction types (complement-clause constructions in X, relatives in Y), and are therefore not directly comparable.

In surveying five or six languages that I have some knowledge of (English, Choctaw, Basque, Arabic, Dyirbal, Nunggubuyu, Turkish), I find that if we restrict our attention to one construction type at a time we find considerable uniformity among languages. In those languages with a well-defined adjoined or gerundial construction subject to a transformation of the type described above (English, Choctaw, Basque, Turkish, Dyirbal), we find that the triggering NPs are chosen in the same way (IS or TS in both clauses), except that Dyirbal gives roughly equal priority to TS and TO in transitive clauses. Those languages with a well-defined complement-clause construction type distinct from adjunctions (English, Basque, Turkish, possibly Nunggubuyu) choose triggering NPs in basically the same way in the relevant transformations applicable to these structures (triggering NP in S_2 is IS or TS, triggering NP in S_1 is chosen by a more complex rule sensitive to specific choices of main-clause verb and other factors). Finally, those languages which have such transformations applying to relative constructions formally distinct from adjunctions (English, Basque, Dyirbal, Turkish) show similar selection rules (triggering NP in main clause S_1 is the head noun, triggering NP in dependent clause S_2 is whichever NP is coreferential to the head).

In other words, it begins to look as though the rules selecting triggering NPs are largely predictable on the basis of the construction types to which the transformations in question apply. The principal point on which languages can differ, and therefore the most suitable basis for a meaningful typology, is simply the range of syntactic constructions to which transformations of the type we are interested in are applicable.

Before we can offer generalisations with any certainty, it is necessary to obtain sketches of as many languages as possible describing how triggering NPs are chosen. In such typological sketches the following information is required: (a) what are the formally distinct construction types affected by the transformations in question? (Note that such concepts as 'relative clause' may mean different things in different languages, and may be inapplicable to some.); (b) for each distinct transformation, how are the triggering NPs in both clauses chosen?

Some terminology which may prove useful:

Triggering NP: as defined above.

Strict complex ID rule: the type of transformation we have been discussing, such that the choice of transformational operation (P, Q, etc.) is rigorously determined by the coreferentiality or noncoreferentiality of particular cross-clause NP-pairs. 'ID rule' because triggered by referential identities, 'complex' because involving two-clause constructions, 'strict' because the triggering NPs are chosen in a rigorous fashion (unlike English Anaphoric Pronominalisation, for example, where the antecedent can be any of several NPs).

Controlling clause: the main clause in a strict complex ID rule, S_1 in the schema shown earlier.

Dependent clause: the other clause (S_2) in such a rule.

Controller: the triggering NP in the controlling clause.

Pivot: the triggering NP in the dependent clause.

Controller- and pivot-selection rules (or, *selection rules*): the rules or conventions which determine which NP in the controlling clause will be the controller, and which NP in the dependent clause will be the pivot.

Independent selection rules: a controller-selection rule which operates solely on the basis of the internal structure of the controlling clause without taking the dependent clause into consideration; a pivot-selection rule operating solely on the basis of the internal structure of the dependent clause.

One-ended scanning selection rule: a controller-selection rule which scans the controlling clause to try to find an NP coreferential to an already-selected pivot; a pivot-selection rule which scans the dependent clause to try to find an NP coreferential to an already-selected controller.

Two-ended scanning selection rule: a rule which scans both clauses simultaneously trying to find a coreferential NP-pair to function as controller and pivot.

The three types of selection rules can be combined in the following ways for a given strict complex ID rule: (a) both controller- and pivot-selection are independent, so that the controller and pivot are chosen separately and only then compared to see if they are coreferential (example: English Equi-NP Deletion); (b) the controller is chosen by an independent rule, but the pivot is chosen by a one-ended scanning rule testing various dependent-clause NPs for coreferentiality to the already-selected controller (example: English Relative-Clause Formation, where the dependent clause is scanned for an NP coreferential to the head noun, which acts as controller); (c) the pivot is selected by an independent rule, but the controller is chosen by a one-ended scanning rule (I know of no examples, and this combination may be impossible in practice); (d) both controller and pivot are chosen by a single two-ended scanning rule (example: Dyirbal Topic-Chain Formation, which scans both clauses, examining NP-pairs like TS_1/TS_2 and so forth for coreferentiality).

3. Dyirbal

Since I hope to give a fairly detailed exposition of Dyirbal topic-chain phenomena elsewhere, I will merely outline my approach to the problem here. I will assume that readers are familiar enough with Dixon's grammar (1972) to be able to follow the highly-condensed analysis which I will provide here.

The most important strict complex ID rule is Topic-Chain Formation (in which I include the *ɲay*-Transformation, the *ɲura*-Transformation, and so forth). Given a string of n clauses, the rule applies $n-1$ times on one sequence of two clauses at a time. There is an initial S_1/S_2 cycle, a second S_2/S_3 cycle, etc. The controlling clause is the first on a given cycle, and the dependent clause is the second. Thus S_2 is the dependent clause on the first cycle and the controlling clause on the second.

On any given cycle, controller- and pivot-selection is by a single two-ended scanning selection rule which attempts to find a coreferential cross-clause NP-pair. There are two constraints: (a) the controller and pivot must both be major NPs (IS, TS, TO); (b) if there are two appropriate coreferential pairs, the one involving the TO as controller is selected.

Condition (b) is operative only when both clauses are transitive. If $TS_m = TS_{m+1}$ and $TO_m = TO_{m+1}$, the latter is the controller-pivot pair since it includes TO_m . If $TS_m = TO_{m+1}$ and $TO_m = TS_{m+1}$, the controller-pivot pair is the latter for the same reason.

We will attach the labels [+controller] and [+pivot] to the two NPs selected. If there are no such NPs (that is, if there are no coreferential cross-clause pairs of major NPs), then the transformation is inapplicable.

The actual transformational operations can be stated in three parts as follows: (a) if the controlling clause S_m is transitive and TS_m is marked [+controller], then S_m is *optionally* antipassivised, except that it cannot be antipassivised if TO_m has been marked [+pivot] on the preceding cycle; (b) if the dependent clause S_{m+1} is transitive and TS_{m+1} is marked [+pivot] then S_{m+1} is *obligatorily* antipassivised; (c) if at this stage S_m is still in unantipassivised form but has TS_m marked [+controller], then the suffix *-ɲura* is added to the verb of S_{m+1} .

I will attempt to justify this formalisation; for the present readers who do not wish to verify its validity by testing it on Dixon's data will have to take my word that it works.

In Relative-Clause Formation, the controller is the head noun (regardless of its grammatical function in its own clause) and the pivot is whichever major NP (IS, TS, TO) in the dependent clause is coreferential to it. The transformation works as follows: (a) if the dependent clause is transitive with its TS marked [+controller], then this clause is obligatorily antipassivised; (b) a relativising affix is added to the verb of the dependent clause; (c) a case ending agreeing with that of the head noun is added to the relativised verb.

Now, how do we typologise Dyirbal on the basis of this information? If we use the ergative/accusative syntactic typology, it seems to me that Dyirbal is by no means clearly ergative. There is not one single instance in any of the selection rules or transformations mentioned above where IS and TO are specifically associated to the exclusion of TS. The only points where IS is mentioned at all are in the conditions that controllers (except in relatives) and pivots must all be major NPs, but this includes TS as well.

Supporters of the claim that Dyirbal is significantly different from English typologically would do well to focus, not on doubtful surface equations like $IS = TO$ involving IS, but rather on the relationship between TS and TO in transitive clauses. The point is basically the same as that made earlier in connection with morphological typologisation. Given that controllers and

pivots must be in major cases, it follows automatically that IS will be the controller or pivot of an intransitive clause, and the only suspense is which choice will be made in transitive clauses where there are two candidates.

In this light the question becomes this: does Dyirbal give priority to TS or TO in controller- and pivot-selection? It seems to be that the two are approximately equal in syntactic importance, so that while Dyirbal may not be typologically identical to English it is not a drastically different, polar type.

In pivot-selection there is no discrimination in favour of either TS or TO, and the sole criterion for being selected as pivot is coreferentiality with an NP in the controlling clause. However, in controller-selection TO does have some priority, since if there are two coreferential pairs, that involving the TO as controller is chosen. Still, the priority is not absolute, since the TS does become controller in at least a respectable minority of instances—namely, those where it is coreferential to a major NP in the dependent clause while the TO is not.

There is also the fact that S_m can be antipassivised in cycle $m-1$, where it functions as the dependent clause. When this happens, underlying TO_m is demoted to a minor surface case, while underlying TS_m becomes surface IS_m and therefore remains a major NP. On the following m th cycle, where S_m is the controlling clause, the only possible controller is therefore the underlying TS_m . There are no converse situations where underlying TS_m is demoted to a minor case. Therefore, while TO_m has limited priority over TS_m in controller-selection on the m th cycle, this is only so if TO_m has escaped demotion on the $m-1$ th cycle. If we look at things in terms of underlying TS and TO categories, we find that even the limited priority for TO in controller-selection is eroded by this hidden factor.

The chief typological difference between Dyirbal and English, it seems to me, is not that categories like TS and TO are accorded vastly different degrees of syntactic importance, but rather that the English selection rules are of the independent type (except for pivot-selection in relatives), whereas the selection rule in Dyirbal Topic-Chain Formation is a two-ended scanning process. It is an automatic consequence of this *mechanical* difference in the form of the selection rules that English and Dyirbal will differ to some extent in choices of controller and pivot in particular utterances.

A typological summary of the Dyirbal phenomena: (a) Dyirbal has two strict complex ID rules, Topic-Chain Formation and Relative-Clause Formation; (b) in Topic-Chain Formation the controller and pivot are chosen by a two-ended scanning process restricted to major NPs (IS, TS, TO); (c) TO is granted apparent priority over TS in controller-selection when both are coreferential to dependent-clause major NPs, but this is counterbalanced by the removal of some potential TO controllers by restructurings on preceding cycles; (d) in Relative-Clause Formation the controller is the head NP, and the pivot is a major NP in the dependent clause determined by a one-ended scanning process.

4. Nunggubuyu

The Nunggubuyu language of eastern Arnhem Land is extremely weak in strict complex ID rules. Whereas Dyirbal syntax and discourse structure are dominated by these rules, in Nunggubuyu it is difficult to find a single such

rule. However, it appears that there is such a rule applying in the 'to want' construction with sentential complement.

The verb *-ŋaŋbanda-* 'to want' can be used as a simple transitive with nominal object:

ŋa- ŋaŋbandi: ana- ŋagu
1Sg/III.1 want (Pres) III.1 honey
'I want some honey.'

The pronominal prefix *ŋa* indicates that the subject is 1Sg and the object is a third person nonhuman noun in class III.1. The independent noun *ana-ŋagu* is optional.

When a sentential object is substituted for 'honey', it shows up as a formally complete clause with its verb in the Potential form (the Potential subsumes future, imperative, and other senses). In the Nunggubuyu equivalents of 'I want him to go' and 'He wants to go', the complement clause is formally indistinguishable from a simple sentence meaning 'He will go'. In other words, there is no transformational restructuring of a clause subordinated to 'to want'—no Equi-NP Deletion (what might appear to be Equi-NP Deletion is really the equivalent of English Pronominalisation, since when an independent NP is deleted there remains a pronominal element in the verb cross-referencing it), no Infinitive-Formation, no Subjunctive-Formation or the like.

Instead, the Nunggubuyu strict complex ID rule, Copy-Raising, affects the surface form of the controlling (main) clause. *-ŋaŋbanda-* is a transitive verb, requiring a transitive pronominal prefix marking pronominal category of both subject and object. The subject is, of course, the 'wanter'. When the complement is sentential, however, it is not clear what the surface object of 'to want' should be. It could either be a neuter third person object-marker referring to the dependent clause as a whole, or it could be a raised pronominal copy of one of the NPs in the dependent clause. As it turns out, Nunggubuyu shows both kinds of surface objects.

When the dependent clause is transitive, the surface object of *-ŋaŋbanda-* is a pronominal copy of the dependent-clause TS, provided this TS is not coreferential to the controlling-clause TS (the 'wanter'). If the two TSs are coreferential, then the TO of the dependent clause is copy-raised and becomes the surface object of *-ŋaŋbanda-*.

Consider these two underlying representations, differing only in the referential relationship between the two TSs:

He _i wants	[he _j will kill her]
He _i wants	[he _i will kill her].

In the first example, the two TSs are noncoreferential, so the TS of the dependent clause is copy-raised, and the surface structure is this: He wants him, he will kill her. On the other hand, in the second example the two TSs are coreferential, so instead of the TS it is the TO which gets copy-raised, producing this structure: He wants her, he will kill her. The Nunggubuyu forms are:

nu- ŋaŋbandi: aŋu- wiñ
3MSg/3MSg want(Pres) 3MSg/3FSg kill(Pot)

'He wants him to kill her.'

nu- *ɲaɲbandi: aɲu- wiɲ*
3MSg/3FSg

'He wants to kill her.'

The two surface structures differ only in the choice of object-marker in the controlling clause. Whereas English distinguishes 'He wants him to kill her' from 'He wants to kill her' by applying Equi-NP Deletion in the dependent clause of the latter, Nunggubuyu distinguishes them by showing two different object-markers in the controlling clause. The transformational mechanisms are entirely different, but the ultimate results are the same in the sense that the same disambiguation of otherwise identical surface structures has been achieved in both languages.

When the dependent clause is intransitive, the IS is copy-raised unless it is coreferential to the controlling-clause TS. In the event that the two are coreferential, no NP can be copy-raised, so we get a 'dummy' object-marker in nonhuman class III.2, perhaps referring to the dependent clause as a whole. The two basic input structures are these:

He_i wants [he_i will go]
He_i wants [he_i will go].

In the first example, 'he' is copy-raised and the output is this: He wants him, he will go. In the second, the coreferential 'he_i' cannot be copy-raised, so we get this: He wants it (III.2), he will go. In Nunggubuyu:

nu- *ɲaɲbandi: ani- ya:ri:*
3MSg/3MSg want(Pres) 3MSg go(Pot)
'He wants him to go.'

niwu- *ɲaɲbandi: ani- ya:ri:*
3MSg/III.2
'He wants to go.'

It is possible to formalise the rule as follows: (a) the controller is the 'wanter' (the TS of the controlling clause); (b) the pivot is the IS or TS of the dependent clause; (c) if the controller and pivot are noncoreferential, the pivot is copy-raised as the object of *-ɲaɲbānda-*; (d) if this fails, a dependent-clause TO is copy-raised if there is one; (e) if both of these fail, a dummy III.2 object-marker is provided.

It should be noted that in transitive dependent clauses, only the TS is really a pivot although either the TS or TO can be copy-raised. This is because the only NP-pair tested for coreferentiality at any stage is that consisting of the two TSs. Even when the TO is copy-raised, this is due to the referential relationship between the two TSs.

Nunggubuyu can therefore be typologised as follows: (a) there is a single strict complex ID rule, applying only to the complement-clause construction with 'to want'; (b) the controller is the only nonsentential NP in the controlling clause, namely the 'wanter'; (c) the pivot is the IS or TS of the dependent clause.

References

- Dixon, R. M. W. 1972. *The Dyirbal language of North Queensland*. Cambridge: Cambridge University Press.
Fillmore, C. 1968. 'The case for case.' In *Universals in Linguistic Theory*. Bach and Harms (eds). New York: Holt, Rinehart and Winston.

Note

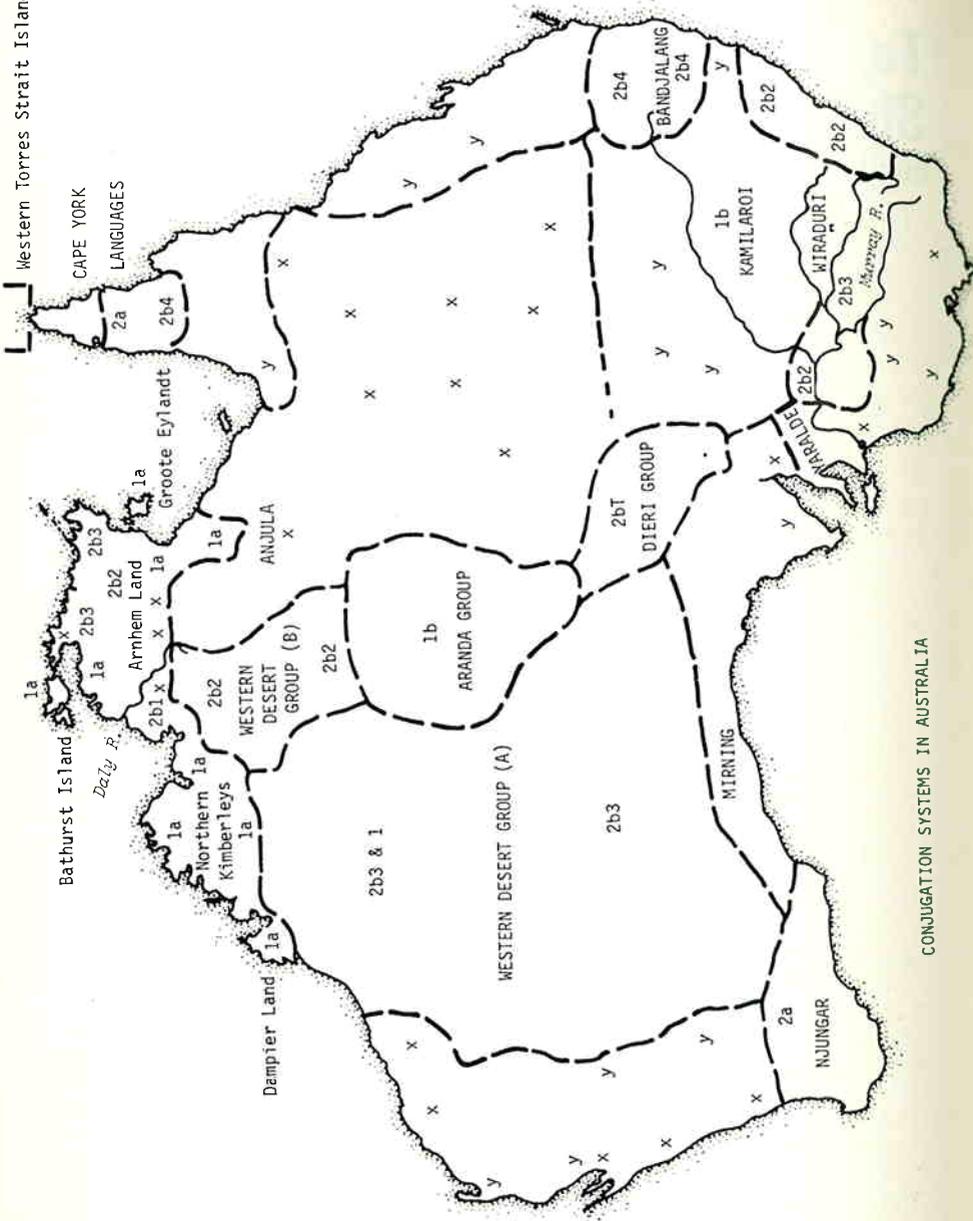
1. I will use small letters for names of surface cases (agentive, patientive, dative, nominative, etc.), and capital letters for names of semantic and Fillmorean cases (Agentive, Patientive, etc.).



Topic E:

Simple and compound verbs:

conjugation by auxiliaries in Australian verbal systems



CONJUGATION SYSTEMS IN AUSTRALIA

78. Rapporteur's introduction and summary

A. Capell

1. Purpose of the papers

While many Australian languages express all the information that European languages usually express in the verb, by means of a similar speech category, there are some that include in the verbal category itself only certain items, such as time, and others which express nothing but lexical meaning, leaving the verb functionally only a noun requiring verbalisation by other means, or at most a gerund requiring similar completion. Dixon has made the general statement with which this paper is concerned, in the following terms:

There are languages in which information regarding tense is shown, not by inflection of a verb but by an additional 'auxiliary' element in the utterance. Thus in Ngarinjin the auxiliary which follows the verb carries number, tense, mood and aspect. There are ten auxiliary roots, and each verb always occurs with a particular auxiliary: the ten classes into which auxiliaries divide verbs are thus a similar phenomenon to noun or gender classes. (1972:15).

The discussion below and that in the paper on Ngarinjin itself (Paper 79), will show that certain corrections are needed to the details of this statement, but in general it makes clear the subject of this Topic on Compound Conjugation (CC).

Examination of the papers shows that conjugation by auxiliary (C.Aux) is not a unitary type of process in all the languages. There seem to be several types. The first is semantic: an auxiliary gives a particular turn of meaning to the statement, or shows that a particular manner of action is thought of. This is the case in the Northern Kimberley (NK) languages and in some of those of the Arnhem Land and Daly River areas. In another type the auxiliaries are catalytic in nature. They add nothing to the clarity of the action, but serve to link a possibly non-verbal base with actor, time and other circumstances. Some of the examples given by Hercus (Paper 90) are of this nature, and so are some in central and northern Northern Territory languages and those of the Ord River region. The NK languages do not entirely exclude this use of auxiliaries, for example, Ngar. *ada anjinijan*, 'seated I-put-him-pres', that is, 'I make him sit down.'

This method of conjugation seems to decrease in frequency from west to eastern Australia. The examples in the latter area are less common. At the same time it is not limited to either Ergative or Accusative languages. Though there does seem to have been a spread from west to east (as in the case of the ergative languages), the system of CC by auxiliaries does not appear to belong as such to either type of Australian language. It is perhaps most frequent in the accusative languages of the north-west and Arnhem Land. The chances are that it did belong originally to these, but there does not seem any likelihood of proving the matter, at any rate without much more study. However, the actual charting of the languages which have these systems tends to agree very well with the spread of the CA languages, which are ergative. Something more will be said on this theme in the closing part of the present commentary.

Methods of CC in Australia are not uniform. Some languages seem to permit the compounding of roots in one way or another; others do not. In

some, N+N, N+V and V+V are possible types of compounds. Where V+V occurs, the two components may each carry its individual meaning with only slight modification, as in the case of 'baby-sit', 'man-handle' in English, and each element may be used separately, as in English one can 'man' a ship or 'handle' it in the literal sense—yet one could hardly 'man-handle' a ship. The examples presented by Hercus (Paper 90) on Arabana and Wangganguru in the present symposium seem to be chiefly of this type.

However, the type which mainly concerned the symposium is rather different from these. It involves the compounding of a verb and an auxiliary in the process of conjugation, whether its function is semantic or purely grammatical, more like the uses of 'shall', 'do' in English. Thus some of the languages present B+A (base plus auxiliary) combinations in which the semantic element is strong, but grammatically subordinated; others again tend to produce verb classes or 'conjugations', as Dixon says, like the conjugation types of Latin, and like them having no semantic distinctions.

The symposium papers do not exhaust the cases of the given phenomena in Australia. Some notes on other types form Section 4 of this summary.

It appears, however, that this kind of verbal system has a wide scatter, and the languages represented group as follows in geographical terms:

Western Australia

Northern Kimberley: Ngarinjin (Capell); Wunambal (Vászolyi)
 Eastern Kimberley: Miriwung (Kofod)
 Southern Kimberley: Walmadjari (Hudson)
 Central Desert: Pitjantjatjara (Platt)

Northern Territory

Arnhem Land: Gunwinjgu (Carroll); Alawa-Mara-Warndarang (Sharpe)
 Daly River: General (Tryon); Ngangikurungur (Hoddinott-Kofod);
 Djamindjung (Hoddinott-Kofod)

South Australia

Lakes District: Dieri (Capell); Ngamini-Midhaga-Yandruwandra
 (Breen); Dhirrarrri (Austin)
 Northern: Arabana-Wangganguru (Hercus)
 New South Wales: Wangaybuwan (Donaldson)

As rapporteur for the section, it falls to the present writer to summarise and comment on the papers presented. These comments are not meant to be evaluations or further analyses but merely the sort of comments that might have been made at the meeting itself, had time been sufficient. They try to point up types of possible classification and such matters. A second part, extending the study, forms a separate section for which the writer alone is responsible.

2. Distribution of conjugation systems

Most Australian languages conjugate by suffix, but north of a line roughly from Derby eastwards to the Robinson River (Yanyula) use prefixation to mark person of subject and sometimes of object if this is incorporated into the verb. Suffixes are used more generally to mark tense, mood or aspect.

This holds good if auxiliary verbs are not used, and also if they are. In the latter case the markers are added to the auxiliary verbs rather than to the verb base itself.

The symposium papers present several types of uses for auxiliaries in different languages, to which certain additions can be made. The subgroups represented here show the following types:

- A. Most languages of Arnhem Land, especially but not only those with noun classes. Some of the latter, such as Anindilyaugwa, do not use auxiliaries at all. The northern Kimberley languages illustrate this type.
- B. Languages of the Affix-Transferring (AT) group. These are subdivisible into B(1), of which Pitjantjatjara is a suitable type, and B(2) of which Mudbura is a type (not represented here). The chief features of Group B were set out by the author in a paper (1972:5-36). Areas of Victoria and New South Wales, especially Wiradjuri, are included in B(2). Waljibri lies between the two subgroups as a kind of 'half-way house' in methods of using auxiliaries and is referred to as B(3).
- C. A different type again is shown in the Dieri languages of central South Australia, a type which seems to be unique.

3. Features of the auxiliary systems

GROUP A: The languages of this group have both simple and compound verbs. They are generally prefixing languages, but in the east there are suffixing languages with noun classes and incorporation, for example Barkly Tablelands Group. Some verbs add conjugational markers to the verb stem direct person and sometimes tense as prefixes; mood, aspect, voice and often tense as suffixes. No principles have yet appeared as to why one verb should be simple and another compound, but auxiliaries as a rule define the manner of an action more closely. In some cases, auxiliaries themselves carry clear meanings and may be used as 'full' verbs. As a rule, more than one auxiliary can be used with a single base, with modification of the meaning, and Dixon's statement that 'each verb always occurs with a particular auxiliary' is not correct for Ngarinjin, but does seem to be correct for Maung (Arnhem Land). In Maung, although the majority of its verbs are simple, there is some compounding; using as auxiliaries the simple verb to 'go' there are amongst others, *ju'an ab*, 'he went sat' = 'he sat down'; *ju'an alja*, 'he went forgetting' = 'he forgot'. The verbs to 'do', 'take', 'eat' (*janjala aru*, 'she tricked me'), 'hit' and others are found (see Capell and Hinch, 1970:69-83). Here, uniquely, the auxiliary precedes the base. It is hard to categorise the verbal bases: they may be nouns or perhaps better, gerunds. This feature needs study. In Ngarinjin, *mindal* is 'mouth', and *mindjal ne*, 'I eat': more exactly, *mindjal nejiri*, 'I am eating'; *mindjal nama*, 'I do eat' (certain foods); *mindjal ano:n*, 'I am eating (a given food at present)'. In all these settings the 'base' remains unchanged; it is the auxiliary that carries the functional load.

GROUP B: The AT languages differ among themselves in their methods of using auxiliaries. The southern languages add suffixes of person and tense to most verbs, with the addition of the AT process whereby person markers of subject and object are transferred to the head word of the clause under certain conditions, leaving the verb with only a tense ending. The AT languages may be subgrouped: (1) southern; (2) central; and (3) northern. Examples:

B(1) Pitjantjatjara. Here many of the verbs are simple, but others are compounded in ways set out by Platt (Paper 83) at the symposium and he brings out certain conclusions from his facts. First, he suggests that it may be reasonable to write the compound as a single word, as has been normally done and as he does. In this he is correct, because the elements added to a root do not occur in a free form, and the root is not always a verb. Later he gives the analysis of groups of verbs totalling 526, of which 67 per cent turn out to be analysable. But at the end he says, 'It is clear that Pitjantjatjara has quite a small proportion of "simple" verbs. I feel that the actual proportion is closer to 10 per cent, as many of the *-ni* verbs are quite obviously not simple . . .'. Interesting analyses of verbs have been suggested and further examples given in Platt (1974).

It is still possible to treat the auxiliaries in Pitjantjatjara as only derivative suffixes, but seeing that some—for instance, *bu*, 'hit'—occur elsewhere as free verbs and/or auxiliaries, the point is uncertain and either course may be taken. On an historical basis all the auxiliary verbs are probably to be regarded in the same light as *bu*, but this fuller research is not part of the present discussion.

B(2) is exemplified in Waljibiri, where simple roots and auxiliaries depend on the tense of the verb: either *wana-na nja-ŋu*, 'snake-I see-did' or *ba-na wana nja-ŋu*, 'AUX-I snake see-did' are allowable in the past tense. There is also *ga-* as non-past auxiliary, but in this case the auxiliary must be used. For further detail on this system, see Kenneth Hale (1973).

B(3) is exemplified by Mudbura, but shared by all the northern languages of the AT group in the west. Here only auxiliaries are used, and these auxiliaries carry no individual semantic content but only a syntactic load. Hence they have been called 'catalysts'. Mudbura, *ba-na baru-nu*, 'φ-I hit-will', 'I will hit him'. There are numerous catalysts in the different languages, along with some meaning-bearing auxiliaries, such as *ma-*, of 'taking' (cf. CA *mara*, 'hand') and *dja-* of 'putting', some of which occur widely in Australia; for example, Walmadjari, *nja-nji ma-ŋa-ndi*, 'see-PAST bring-I-you', 'I saw you'; *ŋanaba dja-n ju-ŋgu*, 'where put-you give-will?', where 'giving' involves 'putting' in someone's hand, and it all means 'what will you give?'. Amongst the symposium papers, Hudson's Walmadjari (Paper 82) belongs to the north-western fringe of this language group, although it is geographically southern Kimberley. It does not, however, exhibit the phenomenon of affix-transferring that prevails more widely. It is the first detailed exposition from this area, and similar study of Mángala is needed now.

GROUP C: Apart from the preceding types, there are others, which are only partially or not at all illustrated in the symposium materials. The most outstanding of them is the Dieri system. This will be considered in the following section of this paper.

4. Review of papers by areas

Now that the various systems of auxiliaries have been discussed, it may be in place to draw attention to features of individual papers in terms of what has been said. The listing given earlier will be followed.

(1) THE KIMBERLEY LANGUAGES as a whole need no further comments. Paper 80 by Vászolyi on Wunambal enters into more detail of the language structure as a whole than Capell does on Ngarinjin (Paper 79), and is extremely useful as a clear exposition of the structures of these languages as a whole. Into Miriwung, Kofod (Paper 81) brings the eastern Kimberley languages known earlier as the Djerag Group. These present much similarity to the western NK languages, and it would seem that the Djerag Group as a whole must be related to those of the northern Kimberley and the southern Kimberley (Búnaba, Ginijan), but this relationship has not yet been worked out. It depends in part on analysis of the southern languages which still wait to be studied in detail. While the NK languages are multiple classifying, the EK languages are dual classing and the SK languages have no classes at all. Yet all share vocabulary and grammatical constructions, such as the use of a single verb for 'say' and 'do', which may be used alone or as an auxiliary. The Miriwung negative *ŋuwag* is clearly cognate with Forrester River *guwa*, Wunambal *ŋwa* and western Kimberley *wa*. The transitive verb prefixes in all the languages are O+S+stem; the reverse seems to be limited to the Djaminjung Group in the Northern Territory. The Miriwung *-milaj*, 'dual' is paralleled by Wunambal and general NK *-miya*, but Ngarinjin has *-njiri* and Worora *-andu*. The Miriwung frequentative suffix *-banj*, *-wanj* answers to the general Kimberley *-ba*, *-wa*, added to the base, not to the auxiliary. These features appear from a comparison of Kofod's paper with the NK languages; wider comparison should establish a definite relationship between the two groups, with a movement from east to west.

(2) ARNHEM LAND LANGUAGES. In Gunwinjgu and other languages of its group it is more open to doubt whether the phenomenon is one of derivational suffixing or of auxiliary verbs, or perhaps auxiliaries downgraded into suffixes, as was suggested in regard to Pitjantjatjara. Gunwinjgu is dealt with by Carroll (Paper 87). Here *-me*, *-ge*, etc., do not occur as free verbs, but as suffixes, and are not conjugated: only the verbal stem is. In some cases the roots to which they are added also occur without them, and they seem to be of the type seen in English 'national-ise' from 'national'. A neutral root *wog* occurs as *gun-wog*, 'word, speech' (with non-animate class prefix), and as *wog-di*, 'speak'. *wog* does not seem to occur alone; *di* may possibly be related to Pitjantjatjara *ri* discussed in Platt's paper. There is also *-bo-* 'reference to water', to which *-ŋu*, 'eat' is added, producing *-bo-ŋu-*, 'drink' (there is no separate verb 'to drink'); also *-bolg-*, 'reference to ground', giving *gun-bolg*, 'ground, earth' and *-bolg-ge-*, 'drop to the ground' (trans.). Other compounds of this root are found: a man's 'name' is *dunin ga-ŋeyo*, 'man his-name'; the 'name' of a place is *gunred ga-bolg-ŋeyo*, 'earth its ground-name'. If a man in a temper 'calms down', he *ga-ŋud-me*; if a stormy sea calms down one says *gugu ga-bo-ŋud-me*. These prefixed elements are noun classifiers extended to verb classification, not auxiliaries. The suffixed *-me* is usually intransitive, with *-ge* as a corresponding transitive.

In point of fact, the six groups used by Carroll are not enough. There are too many different endings grouped under the same class, and it looks as though these languages should be treated like those of the Daly River, as possessing quite a number of verb classes—see below on this. They should be studied as a group, including Dangbon and Balang (see Kinslow Harris,

1969). It is quite possible that these languages may finally link in this regard with the Daly River Group.

Paper 88 by Sharpe deals with the south-eastern Arnhem Land languages, Alawa-Mara-Warndarang. These do not really form a subgroup, and there are others which she does not mention. Mangarai to the west could also have been included with Alawa: there are obvious relationships, not only in general system but in grammar. For example, 'not' is *ɲayi* in both the languages, but with added tones in Mangarai [*ɲáyí*] with a rising-falling intonation. In general, the system is very like that of the Kimberleys, that is, semantically based. The auxiliary *mba*, 'do or say', is the Ngarinjin *-ma*, both in form and meaning. Some of the other languages of the area are multiple classing, with prefixes corresponding to those of the Kimberleys.

(3) DALY RIVER LANGUAGES. Tryon (Paper 84) gives a general description of these languages, which in many regards form a clear subgroup in Australia. The papers by Hoddinott and Kofod (Paper 85, this volume) and by Birk (forthcoming) deal with subareas of the same general group of languages. Tryon's *Daly Family Languages* should be studied in conjunction with these papers. In the present symposium, Tryon's opening paragraph defines the nature of the auxiliaries: 'numerous verb classes, each class being determined by a separate set of auxiliaries'.

These languages differ from those of other areas in the use to which the auxiliaries are put. They are chiefly indicators of the *manner in which the action is carried out*. Tryon for Maranunggu (op. cit.) shows 18 such verb classes. This is quite different from the Kimberley practice and still more from the AT languages. Those of Gunwinjgu might be closer if they were looked at once again. This is, of course, at the same time a semantic division, but on different lines from the other. The Maung system seems to have some relation to it but on a more limited scale.

Birk in his paper on Malak-Malak (see Birk, forthcoming) deals with the same system in a single language. He also brought out the fact that 'in the great majority of cases the verb root has the choice of up to six conjugations, of which five have the semantic role of variously defining the manner' of the action. He made the situation clear by adding: 'it is not the case that each verb root always co-occurs with a particular auxiliary; the choice is, in principle, multiple, all conjugations being productive'. In this last matter lies the difference from the Kimberley and northern Arnhem Land systems. Birk's discussion of the true nature of the auxiliaries was helpful, and presented a complex system in which it was obvious that the semantic aspect is primary, and indeed suggested that historically there has been a coalescence of more than one system. The language would be a good subject for study in terms of some current systems of grammatical analysis.

The papers by Hoddinott and Kofod treat a smaller area of the Daly River (Ngangikurungur), and on the immediate south, classed here on page 616 for convenience only, Djamingjung, with different relationships. The first language has simple and compound verbs, like the others. 'Simple' verbs form a closed set, some of which can stand as full verbs while others cannot. 'Compound' verbs use a possible 29 auxiliaries, more complicated than Maranunggu. There are also other elements which are invariable and indicate manner of action: *du*, 'touching': see Paper 85. The authors speak of

'semantic' particles and particles which 'have largely adverbial functions', like *du*. These cannot, of course, be called auxiliary verbs.

Djamingjung to the south belongs to a subgroup containing Ngaliwuru and Nungali also. It again has a large number of auxiliaries (22) and compound verbs form a majority in the language; according to Hoddinott and Kofod 'they appear to constitute an open set'. There are many structural differences from the Kimberley languages, including the S+O arrangement of the prefixes and the presence of an ergative construction.

(4) SOUTH AUSTRALIA. A decidedly different compounding system is found in central South Australia in the languages of the Dieri group (Papers 91-94). Arabana and Wangganguru do not really fit into this, as Hercus' paper shows. In these languages, verbs which are semantically 'full' and can be used as full verbs in a statement can also be used to indicate the aspect and mood, the tense being supplied by suffixes which do not vary for person. Moreover, there is no incorporation of object as in the northern languages. This would appear to be a local development which is not found outside the Lakes region of South Australia.

(5) NEW SOUTH WALES provided only one paper, although Wiradjuri exhibits a system not unlike that of the other AT languages. Wangaybuwan as presented by Donaldson (Paper 95) shows that 'three principles play a rôle in this classification: (1) association of actions with a particular part of the body; (2) actions depending on the type of instrument used, and (3) actions referring to movements and indicating direction'. Some of these are fairly widespread, for example, *-mal*, usually found without the *l*, and common in many parts of Australia including coastal New South Wales. This is, so to speak, a more transparent system than some and may prove to be quite primitive.

5. The wider issues

The symposium papers have presented one section of a larger problem. Wider issues can only be adumbrated: work is needed on them.

The map accompanying these notes shows the areas in which compound conjugation systems have been treated in the symposium. Though widespread, these areas still leave large parts of the continent unaccounted for. In some, of course, the phenomenon of compound conjugation is known not to occur, but there are others in which no examination has yet been made. Blank spaces on map (see p. 614) show not only areas in which such languages do not occur, but others marked out as unexplored in this regard. In some cases the desired information is no longer available because the languages are extinct and were not properly examined while they were spoken. The languages of Sydney and Newcastle areas certainly had something of the 'catalyst' type and Darawa:l (Thurrawal), along the coast south of Sydney, like Wiradjuri inland, is an AT language. Cape York shows some compound conjugation types, for example, Gog-Nar and Thayorre, and presumably others. In these regards the symposium papers do not give a complete coverage.

One fact that has appeared amongst the papers, is that most of the languages

where compound conjugation appears are ergative languages—but not all of them. Those from the Northern Kimberley and most of Arnhem Land are not. If it is asked whether the compound conjugation belongs to one or the other of major groups in this way, the answer is indecisive. One difficulty is that the dichotomy into ergative and accusative languages has not yet been accounted for. Hale has put forward a theory, but this has many weaknesses (see Paper 67 above by Blake).

If the material presented by Capell (1956:70) is rightly analysed, then the catalyst system is CA and goes with the spread of the CA languages. In any likely form of historical accounting, these are fairly late in Australian linguistic history, and even if there are difficulties in the mechanics of ergative development as presented by Hale, there must have been some factors that led to the appearance of ergative languages out of earlier types, presumably accusative. The only alternative is to regard the ergative languages, and with them the whole CA group as a comparatively late intrusion from outside by a north-western route—and this raises more difficulties. Capell has work in hand to examine the clearly non-CA languages in terms of lexicostatistics and glottochronology. This will hopefully contribute something towards an answer.

In the north Queensland languages, as mentioned above, Gog-Nar and Thayorre show a type of compounding in verbs that may link with the methods discussed in these symposium papers, but they do not make use of auxiliaries in quite the same way as the other languages. This is perhaps why they were not included in the languages studied, but their methods may have something to contribute to an understanding of how the compound conjugation systems elsewhere may have developed.

Gog-Nar was dealt with in the Cape York symposium (to be published as a separate volume) by J. G. Breen. Verbs can be compounded, usually of N and V bases, for example, *yel yem*, 'eye throw', 'look'. This compares with Ngarinjin *burgadj anebun*, 'I throw him a question', and English can speak of 'casting a glance'. There are also what Breen calls 'formatives', which in practice are auxiliary verbs much as in Pitjantjatjara—and their exact status is equally uncertain in both. They include *mba* which forms a stative verb, as Breen calls it: the examples suggest rather 'inchoative' as a better term; *man raymban*, 'throat got dry' < *ray*, 'dry'. There is also an independent *niŋdo*, 'become' as in *bungu niŋdar*, 'got on to one's knees' (*bungu*, 'knee'). Of *ba* ~ *baŋa*, Breen says that 'it is sometimes phonologically a separate word', for example, *landabaŋim*, 'is itchy', *binwarr baŋim*, 'is thinking'. A causative is *bi* added to the imperfective tense form of an intransitive verb to derive a causative transitive: *yegi*, 'climb' > *yegi-ŋ-bi-ŋ*, 'lifted' or 'woke' (trans.). Another causative is *bala*, 'leave' added to an N stem: *ŋugumb*, 'deep' > *ŋugumba-balaŋga*, 'make it deep'. These examples suggest a compound conjugation coming into being and could indicate a process through which such a system as is found elsewhere in Australia could have begun.

In Thayorre the phenomena as set out in A. H. Hall's University of Queensland Ph.D. thesis (1973) are rather complex. They include compounding by preposed classifiers such as *da:(w)*, 'mouth' (a CA root), in ways not unlike those of the Daly River languages. At the same time they are in line with the systems of noun classification in north Queensland languages

(as against those of the Multiple-classifying languages, which seem to have a different history) where for example *minj*, 'hunnable prey' (Hall) is preposed to names of animals; of these Hall finds 'at least fifteen' in Thayorre, and there are other ways in which compounding may occur. Study of these may suggest ways in which the more limited and specialised systems shown in the symposium papers may have originated.

Hall's statement for Thayorre reads: 'Thayorre does not have additional auxiliaries to carry inflections for number, tense, mood and aspect, as in Ngarinjin or Gunwinjgu. It rather resembles Walbiri perhaps, in which tense, mood and aspect are represented discontinuously in the clause, not by elements in an auxiliary word, but by suffixes on the verb stem and free aspectual or modal auxiliaries, uninflected except for one only, (*ŋ*)*ag(-na)*, "let him", the free imperative marker.' (1973:620).

In the very opposite corner of Australia very similar usages seem to belong to the languages about Perth. Recent study of the remains of Wadjug (now referred to as Njungar) by W. H. Douglas presents many examples of N+V, V+V, etc., compounds similar in principle to those of north Queensland. Of course it is hard to decide whether these were all part of the Wadjug and other dialects of the pre-European south-west, but for the present that does not greatly matter. Indeed some formatives may well have been lost in the 'Njungar' spoken nowadays. Douglas says: 'compound stems of two types—free root plus bound root; free root plus free root' and illustrates by *muŋidj*, 'strong'+-*h* 'to become'+aspect: *muŋidjabinj*, 'becoming strong', . . . *wang*, 'talk'+*njin*, 'sit' > *wang njin*, 'converse'; *wod* *baŋan*, 'to choke' > *wod*, 'throat'+*baŋan*, 'grasp', and many other examples are scattered through the work (1968:43–44 *et passim*). Here also at the least, the more complicated auxiliary systems of other areas are present in germ.

The largest area of Australia completely without compound conjugation appears to be Victoria, plus some parts of eastern Queensland. This may be due to the extreme scarcity of reliable information on the languages. The two volumes of *The Languages of Victoria: A Late Survey* by L. Hercus only serve to point up this scarcity. However, Capell pointed out (1956:22) that the Wudjawuru language of Geelong–Colac–Ballarat areas is shown in Tuckfield's notes (Cary 1898) to have been a fairly thorough AT language, with both catalysts and affix transferring. The brief paper by R. H. Mathews (1902) gave not the least suggestion that this was so. It is therefore possible that compound conjugation features were present in other Victorian languages, but if so the languages were so poorly recorded that there is no evidence of the fact. Hercus (1969:60) says of Wemba-Wemba that there are 'very few auxiliary verbs'—which means that there are *some*. Moreover, this language has AT features (op. cit. 60–64). As auxiliary verbs she gives on page 69 *gadjina*, 'be unable' and *ŋuwa*, 'be unwilling' (perhaps connected with Miriwung *ŋuwag*, Kimberley *guwa*, *ŋwa*, *wa*, 'not', referred to earlier) and *ganara*, 'be allowed'. These differ in principle from the auxiliaries with which the symposium papers have been concerned, but various suffixes parallel in function with those mentioned above in Gog-Nar are found. In Djadjala also similar constructions appear to have been present, but the material is less satisfactory in this language (op. cit.:123ff). Interestingly enough these languages all seem to be of the ergative type.

In summary, the following subclasses of compound conjugation may be suggested:

(1) PHRASAL VERBS: N+V, each occurring also free: Gog-Nar: *yel+yam*, 'eye throw' = 'look'. As a subgroup, (1.a.), compounds of two verbs, each of which may occur as a free form: Njungar *wang*, 'talk' + *njin*, 'sit' > 'converse'.

(2) AUXILIARY COMPOUNDING (CA) TYPES:

CA₁: compound of base and auxiliary, the latter also occurring free: Ngar. *ada η-ε*, 'seated I-am', 'I sit'.

CA₂: compound of base and auxiliary, the latter not occurring as a free form: Pitjantjatjara *-ri-*, 'inchoative'.

CA₃: instances in which verb stem+morph. are not found as free forms with assignable meaning. They are distinguished from CA₂ by the fact that the auxiliary morph. cannot be regarded as a verb in its own right. Gog-Nar: *ṭamta-paṭ-im*, 'is itchy'; *ṭamta* is not a free form, neither is *-pa/pat-*. These might be made a fourth subgroup and called perhaps 'morphic verbs'.

These notes are added as suggestions for further study. It is a matter of detailed language-by-language comparative study, and this cannot be done in a day. The symposium papers have rendered great service in showing the various systems of compounding within Australia and pointing a way towards further examination of these languages that may be profitable for a better historical understanding of their origins and developments.

Appendix: Note on west central Queensland by G. J. Breen

Western Queensland languages in general have no compound conjugation. (One exception is Midhaga: see Paper 92.)

Most languages seem to have a very few compound verbs, for example, Bularnu has a few of the form V+*-baga* meaning 'to V while going' (*baga* = 'to go'). Bidjara has a couple of what may be compounds with *bura*, 'to go away', for example, *waganibura*, 'to run fast' (*wagani*, 'to run'); Wagaya (eastern Northern Territory, not Queensland) has a few, such as *budyagajund*, 'to run away with' (*budyaga*, 'run' and *ḡund*, 'to give'); Wangka-Yutjuru has *ṭarilipirra* 'to (run and) spear' (*ṭari*, 'to spear' and *pirra*, 'to run'). None of the processes involved seem to be productive. There are a few productive stem formations clearly derived from verbs, for example, Pitta-Pitta *-yanṭa*, 'to do while going along', cf. *kanṭa*, 'to go'. Andegerebina has compound verbs in *-albə-*, 'action while going towards the speaker(?)', (cf. *albə*, 'to go'), for example, *bidyalbə-*, 'to return' (*bidya*, 'to come'), *ḡadyalbə-*, 'to bring' (*ḡya-*, 'to carry') and also verbs that seem to be compounded with *ḡə-*, 'to go', function not clear to me yet. I would not call any of these things compound conjugations. Other languages, similar to one or more of the above, or with less semblance of compound conjugation are Marganj, Gunja, Gungari, Wangkumara, Kungkari (Barcoo and Thomson Rivers), Ngawun/Mayagulan, Warluwara.

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79. Ngarinjin

A. Capell

Ngarinjin is one of the group of multi-classifying languages in the northern Kimberley family. The general sketch of its structure given by the present author in *Oceania*, 1972 may be consulted for fuller background. In this language, as in all the NK languages, the verb is conjugated by both prefix and suffix: prefix for person; suffix for tense, mood, voice and number (dual, trial or plural).

There are two groups of verbs: simple and compound. The former add the affixes directly to the stem, for example *-andju-*, 'make'. The latter uses a set of auxiliary verbs with an invariable verbal root, which is normally a noun: some are usable as nouns, some do not occur in isolation. Thus in *maṛa aṇo:n*, 'I see him', *maṛa* is 'light': in Worora this occurs as *maṛa-ma*, Class V, light. It does not seem to be in independent use in Ngarinjin. The first type is the 'simple' and the second the 'compound' conjugation. There is a cross division also into transitive and intransitive verbs, but this does not coincide

with the division into simple and compound. Either type may be transitive or intransitive.

Simple verbs are comparatively few. The auxiliary verbs themselves are simple verbs and take the affixes mentioned. The 'simple' class, however, is in a minority.

Compound verbs consist of a base such as *maŕa*, which is invariable (except for frequentative forms) and an auxiliary. The latter carries all the functional load of the verbal phrase. Each verb base has its own 'preferred' auxiliary, but is not necessarily limited to that particular auxiliary. Semantic considerations enter into the decision as to what auxiliary may be used in a given case. Thus *mindjal*, 'mouth' can yield *mindjal e*, 'he eats' (more often, of course, continuative, *mindjal ejiri* 'he is eating')—nothing in particular, or no object stated; *mindjal ama*, 'he eats' (a certain kind of food); *mindjal o:n*, 'he eats' (a specified food). Similarly *ŋuɖba aŋumindani*, 'I hit him', lit. 'I brought him blows' (-*ba* is the freq. suffix); *ŋuɖba inji*, 'he was striking, hitting about, (no object)'.

Examples of the simple conjugation are: *aŋijo:lo:n*, 'I lift him'; *aŋelan*, 'I hold him'; *aŋaluwen*, 'I fear him', and a number of others, including the verbs used as auxiliaries.

These auxiliary verbs, which can also be free or full verbs, are eleven in number. They comprise:

TYPE	BASE MEANING	NGARINJIN STEM
1. stative	'be'	-e-
2. action	'do'	-ama-
3. motion	'go'	-a-
4. reflexive	'fall'	-awa-
5. effective	'strike'	-bu- -o:-
6. continuous effect	'hold'	-ela-
7. ejective	'throw'	-ebi-
8. taking	'take'	-uma-
9. junctional	'give'	-uŋulu-
10. locating	'put'	-iniŋa-
11. causative	'make'	-andju-

As stated, the verb base remains unchanged, and the auxiliary takes markers of person, number, tense, etc.

In these languages, noun class is marked in verbs of the third person. In the southern subgroup, to which Ngarinjin belongs, subject marking by class concord is required only in intransitive verbs: *maɖa a*, 'he is walking', *maɖa ŋja:*, 'she is walking'. With transitive verbs, Ngarinjin does not mark the class of the subject (though the northern languages—Gambere etc.—and in Arnhem Land Laragia, Maung and Enindhiljagwa, do); the eastern dialect of Ngarinjin does have a common Cl. IV and Cl. V marker; otherwise, only object class is marked. Thus:

Cl. I	'I bring the kangaroo'	<i>jali aŋuman</i>
II	'I bring the phalanger'	<i>laŋgari njaŋuman</i>
III	'I bring the children'	<i>jile:la buŋuman</i>
IV	'I bring the stone'	<i>mandja wuŋuman</i>
V	'I bring the sandstone'	<i>banaru muŋuman</i>

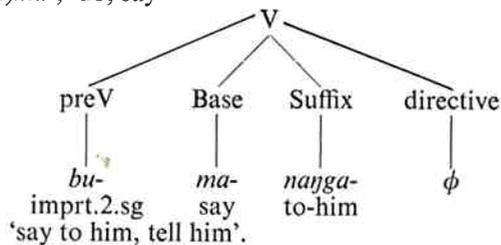
In the compound verb a similar principle is followed: the auxiliary marks object class, if that auxiliary is by itself transitive, for example, I chase the

children: *jile:la guɖu buŋo:n*. If the auxiliary is intransitive, an indirect pronoun object suffix is used to mark a transitive action, but class is not regarded: *o:ndan bu ŋa-ma-naŋga*, 'I blow the paint (on to something)'. If the object is dual or trial, a suffix marks the fact: *buŋuŕe:ri maŕa bu-ŋ-o:n-ŋjiri*, 'people-two them-I-see-two'; the 'see' phrase is literally 'light them-I-strike'. The root **bu*, Common Australian, 'strike', has here lost its original force and now simply means 'I act on' somebody: it is perhaps the commonest auxiliary. Any intransitive verb in Ngarinjin can be transitive by the use of benefactive suffixes.

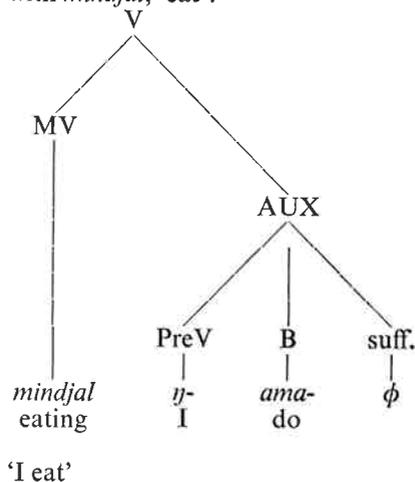
The choice of auxiliary with a base is a matter of custom; theoretically the semantic content of the auxiliary determines its use, but there are normal usages, for example with *maŕa*, 'light', 'I see him' is normally *maŕa aŋo:n*, 'I strike him with light, act on him by seeing him'; but there is also *maŕa aŋelan*, 'I hold him with light, I gaze at him', for continued watching. These various uses are lexical matters, and the lexicon will list the usages of auxiliaries with different bases.

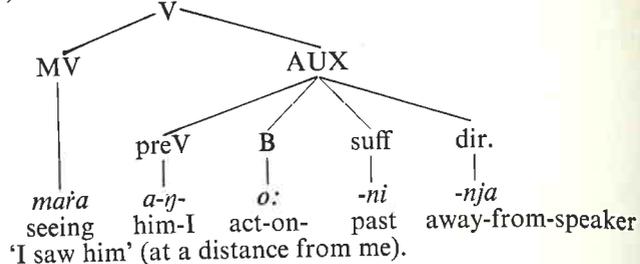
From the viewpoint of analysis, a tree diagram of the following type has been found useful:

1. auxiliary -(a)*ma*-, 'do, say'

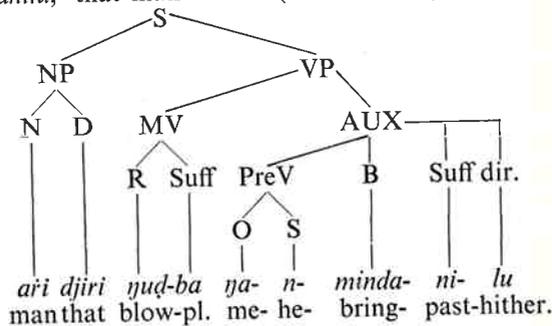


2. auxiliary -(a)*ma* with *mindjal*, 'eat':



3. auxiliary **bu*, 'I act on him'.

In a sentence setting this type of analysis would give, for example *ari djiri ŋuɖba ŋanmindanilu*, 'that man hit me (several times)':



Some extra terminology seems necessary in analysing a language of this type, and its possible form is suggested here.

The interchange of auxiliaries has a bearing on Voice in Ngarinjin also. Voice is either neutral (active-stative) or middle, which also serves at least in some cases as passive. The person markers of the middle are the same as those of the intransitive active (neutral) verb; there are special suffixes. A compound verb is made middle-passive by means of the auxiliary *-awa-* 'fall', taken in the sense of 'become': *marā aŋo:ni*, 'I saw him' *marā awiŋga*, 'he became seen', using the middle suffix *-ŋga* (past tense) with the auxiliary *-awa-*. An agentive passive is possible, though rather rare in actual native text. It marks the agent by the locative (*-ra*) and the middle voice. 'The house was built by me' would then be 'the house built itself at me'. Example: 'I was hit by Wattie': *baɖa ŋawiŋga Wadi-ra*, 'hit I-fell-myself Wattie at'. 'All things were made by him': *miriŋun andu-ra waŋɖidj birwiŋga*, 'everything him-at making they-fell-to-themselves'. There are other ways: 'the cloth was torn' = 'the cloth went torn', but they are not relevant here.

It has, of course, not been possible to enter into all details here on the uses of Ngarinjin auxiliaries, but the above gives the substance of the facts. Other dialects of the group follow similar principles; the Arnhem Land multi-class and incorporating languages differ rather considerably in places, but again have a similar patterning where compound verbs are used.

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80. Wunambal

E. Vászolyi

Along with a number of related and unrelated languages, Wunambal (north-west Kimberleys, Western Australia) also presents the dichotomy of what we term *simple verbs* and *compound verbs*.

The object of this paper is to table a concise description of both kinds of verbs with particular regard to the contrast between them. A comprehensive analysis of the Wunambal verb would obviously be a far too ambitious undertaking and may not be the best way of contributing to our symposium: a jungle of details and marginal problems may well side-track the reader and distract his attention from what is relevant indeed. Such a depth study ought to be part of a full-scale Wunambal grammar (actually being written up by the author).

Simple verbs

1. Introduction

The heading above refers to a certain number of finite verbs, most of which appear to be distinct grammatical-lexical entities in their own right. Appendix 1 presents a list of simple verbs.

Quantitatively, they are incomparably outnumbered by compound verbs. Structurally, simple verbs incorporate roots, prefixes, infixes and suffixes alike. Taking the possible combination of these bound morphemes as a basis for classification, simple verbs fall into two separate groups, viz. *single-prefixing* and *double-prefixing* verbs. Why some verbs belong to one group and some to the other, remains a puzzle. The two terms are meant to indicate what is thought to be the most conspicuous structural difference between the two subdivisions of simple verbs; notably that single-prefixing ones take one prefix preceding the stem and the prefix refers to the person of the subject. Thus:

- (1) *ŋu-wanban* 'I fall' Sing1
I-fall/PRES
- (2) *gu-wanban* 'thou fall' Sing2
thou-fall/PRES
- (3) *bu-wanban* 'he/she falls' Sing3
he/she-fall/PRES

In contrast, double-prefixing verbs carry two prefixes (preceding the stem), the first of which indicates the person of the object and the second marks the person of the subject. For instance:

- (1) *gu-ŋa-nbun* 'I hit thee'
thee-I-hit/PRES

- (2) *bu-ŋa-nbun* 'I hit him/her'
him/her-I-hit/PRES

2. Single-prefixing verbs

The conjugation of single-prefixing verbs embraces a wide range of grammatical categories. Appendix 2 presents the full conjugation of a verb belonging to this group.

2.1 VOICE. Single-prefixing verbs distinguish two voices: an *active* and a *reflexive-reciprocal* one. The morphological marker of the former is zero morpheme; the latter, in most cases, is marked by an affix (suffix *-ŋani* in the present tense) which indicates either action on self (whether singular or plural) or reciprocity, that is action on each other (in plural only). Most verbs belonging to the latter subgroup hardly ever occur in singular and some have no singular at all. However, they are very common both in singular and plural as auxiliaries of compound verbs. Indeed, some reflexive-reciprocal verbs appear to function exclusively as auxiliaries.

More often than not there is a cross-division between active and reflexive verbs, on the one hand, and single-prefixing versus double-prefixing verbs, on the other (see Appendix 1).

Passive does not appear to be a morphologically marked category in Wunambal, albeit it can be expressed by lexical means.

2.2 MOOD. The verbs under discussion distinguish an *indicative-affirmative*, a *conditional-negative* and an *imperative* mood (Capell 1941 termed the first two *realis* and *irrealis* which very aptly underlines the contrast between them).

Morphologically, indicative is marked by a zero morpheme; conditional-negative has an *-N-* infix occurring between the initial prefix and the verb root; and imperative normally shows a suppletory paradigm in sharp contrast with the two other moods (see Appendix 2).

The mood termed here *conditional-negative* contrasts with the indicative-affirmative and covers a wide range of morphosemantic functions, expressing conditional, optative, desiderative, potential and other hues for which apt technical terms should either be found or coined. It can also indicate simple negation either by itself or, more often, taking a negative particle: *ŋga* or *ŋuwa* 'no/not' (preceding the verb).

2.3 TENSE. Single-prefixing verbs have three tenses: *present*, *past* and *future*. The last is clearly marked by a *-YA-* suffix but comparatively seldom used; instead, present tense may often occur implying an action in the future.

The morphological distinction between present and past appears to be a rather knotty problem. There are several grammatical devices to indicate either of these tenses (suppletion, reduplication, zero morpheme, an *-A* present versus an *-E* past marker for some, but not all, verbs etc.) and the selection of the present/past marker seems to vary a good deal from one conjugation to another. Partly, and perhaps primarily, for this reason it seems both convenient and justifiable to postulate a certain number of conjugational systems in Wunambal (that is paradigms which follow more or less the same patterns and apply more or less the same set of syntactic devices), in a way like the conjugations in Latin and other languages.

2.4 NUMBER. The Wunambal single-prefixing verb has four numbers:

singular, *dual*, *trial* and *plural*. The last is marked by infix *-R-* occurring between the initial prefix and the verb stem; dual and trial are indicated by suffixes following the plural stem (*-MIYA* and *-NA*, respectively); singular has a zero morpheme in contrast with both the plural infix and the dual/trial suffixes. Thus:

Sing2	<i>guwanban</i> 'thou fall'
Plur2	<i>gurwanban</i> 'you fall'
Dual2	<i>gurwanbanmiya</i> 'you-two fall'
Trial2	<i>gurwanbanna</i> 'you-three (or few) fall'

NOTE: The technical term *trial* is somewhat inappropriate in that it generally indicates 'more than two and less than a lot' which may incidentally be 'three' but very often 'a few' (numerically up to five or even more).

2.5 PERSON. The verbs under examination have eleven distinct forms to denote the first, second or third person of the subject both in singular and plural (and of course dual and trial): one each for Sing1, Sing2, Plur2 and Plur3, two for Plur1 (distinguishing Plur1 inclusive and Plur1 exclusive) and, in addition, five for Sing3 (indicating the person as well as the gender of the subject, see below).

The morphological marking of person by *prefixes* is one of the most symptomatic features of Wunambal. There are altogether eight prefixes for all the eleven forms referring to three persons.

(i) Prefix *ŋ-* marks first person, in Sing1 followed by ϕ singular marker, in Plur1incl. by a plural infix:

Sing1	<i>ŋuma</i> 'I do'
Plur1incl	<i>ŋarma</i> 'we (all) do'

(ii) Prefix *G-* marks second person both in singular (with a following zero morpheme) and plural (preceding the plural infix):

Sing2	<i>guma</i> 'thou do'
Plur2	<i>gurma</i> 'you do'

(iii) Prefix *B-* indicates third person singular and plural. In the latter case, it is always followed by the plural infix. In singular it precedes a zero morpheme and fulfils a twofold function: in addition to the person, it also marks the third person's gender (notably gender *BINI*, see below). In Plur3 there is no gender distinction. Thus:

Sing3 (BINI)	<i>buma</i> 'he/she does'
Plur3	<i>burma</i> 'they do'

(iv) Prefix *W-* marks third person singular plus gender *WINI* (see below):

wuma 'it (e.g. a stone) does'

(v) Prefix *M-* jointly indicates third person and gender *MINI* (see below):

muma 'it (e.g. a water-goanna) does'

(vi) Prefix *A-* refers to third person singular plus gender *ANI* (see below):

ama 'it (e.g. a shark) does'

(vii) Prefix *N-* refers to third person singular in gender *NANI* (see below):

numa 'it (e.g. a bird) does'

(viii) Prefix *NJ-*, always followed by a plural infix, marks first person exclusive (in plural only):

njarma 'we all do, except the person being talked to'

2.6 GENDER. Gender, or noun classification, is another typical feature of Wunambal in addition to prefixation. The language distinguishes five

genders (one dialect only three, see Capell 1941) which play a most significant role both in the nominal and verbal spheres.

Single-prefixing verbs indicate the gender of a Sing3 subject.

NOTE: It is not easy to decide how to term the respective genders. They could be marked by numbers or specially coined distinctive labels or by other means. Here, tentatively, the respective Sing3 personal pronouns will be used as qualifiers after the term *gender*. There are five of these pronouns: *bini* 'he/she' refers to humans without sex distinction, *wini*, *mini*, *ani* and *nani* refer to non-humans (animals, plants, things of all sorts). To make a sweeping generalisation, the assignment of a noun to one gender rather than another is more or less arbitrary, albeit there are tendencies to assign certain lexemes to one particular gender and others to another one. Generally speaking, Dixon's statements about noun class affiliation in Dyirbal also hold good for Wunambal to a great extent (Dixon 1972: 306-12).

The morphological markers of gender (and jointly Sing3 person) are five prefixes detailed in the previous section.

2.7 DIRECTION AND LOCATION. Five suffixes may occur as *directive* or *locative* markers following the verb root plus the affixed tense markers. Morphophonologically (though not syntactically) they can promptly be identified with five case suffixes which occur in the noun declension:

- (i) *-yaya* 'from' Ablative
- (ii) *-gu* 'to(wards)' Lative
- (iii) *-ɲindalu* 'at, on, in' Locative
- (iv) *-ɲinja* 'round, about' Circumulative
- (v) *-mare* 'past, by' Prolative

The semantic role of the above morphemes as verb suffixes is somewhat nebulous. They indicate a location *where* or *round which* an action takes place; or they refer to a direction *from* or *towards* or *past which* something or somebody moves along (coming, going, approaching, appearing, emerging, running etc.). However, the reference to an actual location or direction is rather vague (or very general and unspecified) and mainly depends on speech situation, context etc. For instance:

- (1) *bindjin biyangeyaya* 'A man came from that side/direction'
Man he-go-PAST-from
- (2) *bindjin biyangegu* 'A man went that way/thither'
Man he-go-PAST-towards
- (3) *bindjin biyangemare* 'A man went past/by that place'
Man he-go-PAST-by

2.8 EMPHATIC-MODIFYING MARKERS. There is a fair number of suffixes (with varied and often hardly definable functions) grouped here under the tentative heading *emphatic-modifying* affixes. Some of them may, it seems, refer to verb aspects (*-eri* often, but not always, indicates continuity or duration, *-nda* can perhaps be interpreted as a perfect marker); others appear to have a confirmative-emphatic function (*-diya*, *-ga*, *-ɲga*); some can be glossed conveniently (*-ɲjale* 'also, too, again') while others are hard to render (*-li* 'lo; voici/voilà'). Examples:

- (1) *bindjin biyange gala* 'A man went there'
Man he-go-PAST there

- (2) *bindjin biyangeri gala* 'A man kept going there'
Man he-go-PAST-CONT there
- (3) *bindjin biyangediya gala* 'A man did go there'
Man he-go-PAST-CONF there

2.9 OBJECT MARKING. Single-prefixing verbs may take a definite set of suffixes to mark the person and number of the object (direct or indirect). These object markers are by and large (morphophonologically) identical with the personal-possessive suffixes attachable to nouns (for example *gara-nu* 'mother-thy', *gara-ɲu* 'mother-his/her', *gara-ɲaru* 'mother-our' etc.).

NOTE: The above-mentioned suffixes are syntactically and semantically very reminiscent of the personal-possessive markers (of nouns as well as of verbs) in Uralo-Altaiic languages.

The following list presents the object markers under discussion.

Sing1	<i>-(ɛ)ra</i>	Plur1incl.	<i>-ɲaru</i>
Sing2	<i>-nu</i>	Plur1excl.	<i>-ɲjaru</i>
Sing3	<i>[-ɲu (gender BINI)</i>	Plur2	<i>-nuru</i>
	<i> -nuɲu (other four genders)</i>	Plur3	<i>-wuru</i>

A few examples demonstrate the application of the object markers to a random sample verb: *banbunbun* 'he/she-spear-PRESENT'.

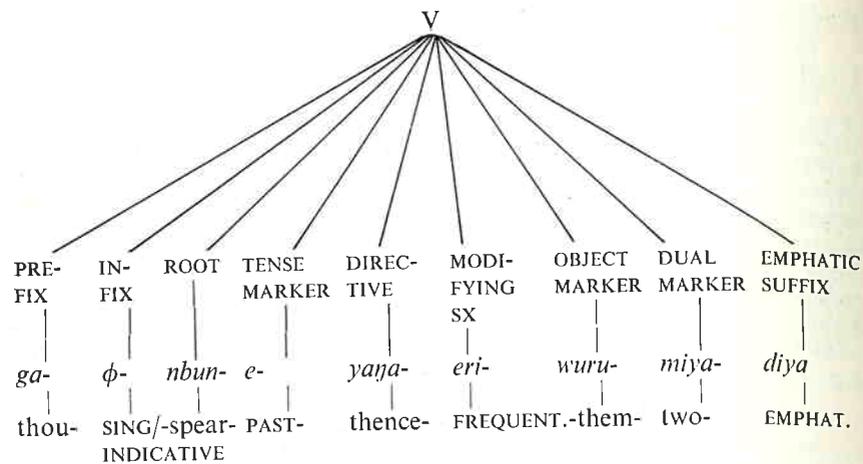
SUBJECT	SAMPLE VERB	OBJECT
Singular3 Gender BINI	<i>banbunbunɪra</i> 'he spears me'	Sing1
	<i>banbunbunnu</i> 'he spears thee'	Sing2
	<i>banbunbunɲu</i> 'he spears him/her'	Sing3/gender BINI
	<i>banbunbunnuɲu</i> 'he spears it'	Sing3/other four genders
Singular3 Gender BINI	<i>banbunbunjaru</i> 'he spears us-incl.'	Plur1incl.
	<i>banbunbunjaru</i> 'he spears us-excl.'	Plur1excl.
	<i>banbunbunnuru</i> 'he spears you-PI'	Plur2
	<i>banbunbunwuru</i> 'he spears them'	Plur3
	<i>banbunbunwurumiya</i> 'he spears them-two'	Dual3
	<i>banbunbunwuruna</i> 'he spears them-three'	Trial3

2.10 THE MORPHOLOGICAL STRUCTURE OF SINGLE-PREFIXING VERBS. Schematically, the sequence of bound morphemes making up a single-prefixing verb can be outlined as follows (taking all possible constituents which may be, but not necessarily are, incorporated):

PREFIX	+	INFIX	+	ROOT	+	TENSE	+	LOCATIVE-	+	MODI-
						MARKER		DIRECTIVE		FYING
						(SUFFIX)		MARKER		SUFFIX
								(SUFFIX)		
+	OBJECT	+	DUAL/	+	EMPHATIC					
	MARKER		TRIAL		SUFFIX					
	(SUFFIX)		MARKER							
			(SFX)							

Of the above morphemes, the first four are always compulsory while the other five optional.

A tree diagram unfolding a sample verb may be useful.



In other words: *ganbuneyaneriwurumiyadiya* 'thou did spear the two of them from there several times'.

3. Double-prefixing verbs

The basic syntactic difference between single-prefixing and double-prefixing verbs has been touched upon above (see Introduction). As object-marking in the latter group is compulsory (facilitated by an initial prefix) and so is, naturally, subject-marking (by another prefix following the first one), the combination of constituents results in a highly intricate conjugation comprising many more forms than any of the single-prefixing verbs. Appendix 3 is meant to provide a partial illustration.

3.1 VOICE, MOOD AND TENSE in this group are the same as those of simple-prefixing verbs. So is number, in so far as singular, plural, dual and trial are invariably suffixed. However, since the number of both the subject and the object must be indicated, the morphological arrangement of number-marking in singular and plural differs from that of single-prefixing verbs.

Firstly, the number of object is compulsorily marked by an infix (zero morpheme in singular, an *-R-* morpheme in plural) which is inserted between Prefix 1 (object marker) and Prefix 2 (subject marker). Thus:

- (1) *gu-ŋa-nbun* 'I hit thee'
Px1-INFIX-Px2-ROOT
Sg2- φ- Sg1- hit/PRES
- (2) *gu-r-ŋa-nbun* 'I hit you-PLUR'
Px1-INx-Px2-ROOT
Sg2-Pl- Sg1-hit/PRES

Secondly, the number of subject is also compulsorily marked by an infix (zero morpheme in singular, an *-R-* morpheme in plural) which, in turn, occurs between Prefix 2 and the verb root. Thus:

- (1) *bu-r-ŋa-nbun* 'I hit them'
Px1-INx-Px2-ROOT
Sg3-Pl- Sg1-hit/PRES

- (2) *bu-r-ŋa-ru-nbun* 'We hit them'
Px1-INx1-Px2-INx2-ROOT
Sg3-PLUR-Sg1-PLUR-hit/PRES

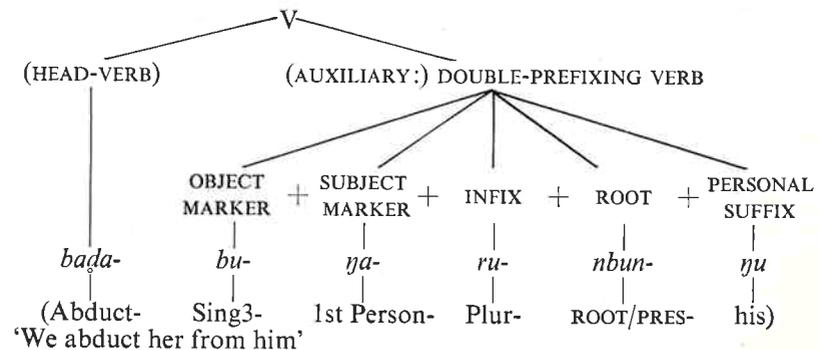
3.2 PERSON AND GENDER OF OBJECT. There are altogether eleven prefixed forms referring to first or second or third person objects both in singular and plural, just like the subject-marking of single-prefixing verbs (see 2.5). Five Sing3 variants indicate the person as well as the gender of the object; Plur1 shows up again the dichotomy of an inclusive and an exclusive.

3.3 PERSON AND GENDER OF SUBJECT. The distinct grammatical forms referring to a first or second or third person subject (singular and plural) amount to eight (that is as many as the total of object-markers suffixed to single-prefixing verbs). Again, inclusive and exclusive are distinguished in Plur1 and Sing3 only has a contrast of gender BINI and the four other genders.

NOTE: The question may be raised whether it is appropriate to term the subject marker as *prefix* whereas it occurs word-medially and not word-initially (like the object marker). It may therefore be argued that it is infix rather than prefixed and that is, in a way, true. However, the subject-marking bound morphemes do occur elsewhere word-initially as 'real' prefixes; indeed, they appear in word-initial position much more often, throughout the declensions and conjugations of Wunambal, than here in the double-prefixing conjugation, inserted between two other bound morphemes. On this ground it seems quite correct to talk about two prefixes following each other. On the other hand, the bound morphemes termed here *infixes* may never occur word-initially, therefore they are really and invariably infixes: confined to a word-medial morphological position.

3.4 SUFFIXATION. Directive-locative markers, emphatic-modifying suffixes and the dual-trial affix may optionally follow the stem of a double-prefixing verb the same way as they do with single-prefixing ones.

Nota bene, personal-possessive suffixes (see 2.9) may also occur incorporated in a double-prefixing verb but fulfilling, of course, a different function. Here they do not refer to the object's person since the job is already done: that is what the initial prefix is good for. Instead, the personal markers refer to the object's *possessor* (that is the possessor's person, number and gender).



parative plane. For example *maɣa-* 'see, find' in present-day Wunambal is clearly nothing but a non-finite head-verb. The same vocabulary item in the related Worora is, however, a noun (see Capell's sample paper re Ngarinjin verbs). Incidentally, Wunambal does have a noun glossed 'light' (*mara*, gender WINI) which also appears as a head-verb (*mara-* 'burn, light, shine') but, for phonological reasons, it cannot be related to *maɣa-* 'see' (indeed, *mara-* 'burn, light' versus *maɣa-* 'see, find' represent a minimal pair).

Scores of head-verbs can, however, be collated with homophonous nouns and adjectives. See the following examples:

<i>buɾi</i> 'full'	-----	<i>buɾi-</i> 'satiated'
<i>dʒadan</i> 'upright'	-----	<i>dʒadan-</i> 'erect'
<i>dʒari</i> 'pit'	-----	<i>dʒari-</i> 'dig'
<i>dʒowu</i> 'pile'	-----	<i>dʒowu-</i> 'pile up'
<i>yey</i> 'speech'	-----	<i>yey-</i> 'speak'
<i>mindʒal</i> 'mouth'	-----	<i>mindʒal-</i> 'eat'
<i>worɪ</i> 'circle'	-----	<i>worɪ-</i> 'encircle'

On the surface, the above pairs appear to be identical and might suggest that nouns and adjectives, followed by an auxiliary, can function as head-verbs. Closer examination shows, however, that (1) head-verbs can be derived from nouns or adjectives but (2) a head-verb can never be a noun or vice-versa. The nature of the head-verb is not as bivalent as it may seem at the first glimpse.

Firstly, there is a distinct set of suffixes deriving head-verbs from nouns and adjectives, for example:

<i>ɲori</i> 'cooked blood'	<	<i>ɲoridj-</i> 'take one sip of cooked blood'
	>	<i>ɲoriba-</i> 'drink up cooked blood'

Head-verbs in the above list (*buɾi*-etc.) do, however, not seem to show any derivative suffix. None the less they can be construed as forms having an affix ϕ in which case zero morpheme is a special representation of a derivational affix.

Because, secondly and more importantly, the crucial difference between nouns/adjectives and head-verbs is found in their environments and distribution. If A is a noun or adjective and A' a head-verb, the former occurs in environments in which the latter never does and vice versa. Thus, *dʒari* 'pit' is a noun and *dʒari-* 'dig' a non-finite verb. The first may take, say, lative or locative or ablative suffixes, dual or trial markers, personal-possessive affixes and so on and so forth whereas the second may not take any of these. But the second can (and the first cannot) take, say, derivative affix *-wa* and make up another head-verb (*dʒariwa-* 'dig about a long time'); or it can derive another head-verb with reduplication (*dʒadʒari-* 'dig deep, excavate') etc. Likewise, *mindʒal* 'mouth' is a noun and *mindʒal-* 'eat' a head-verb; the latter underlies a derived *mindʒala-* 'eat up' and *mindʒal-mindʒal* 'eat a lot' whereas the former can neither be reduplicated nor take a derivative affix *-a-*. NOTE: The contrast of homophonous verbs and nouns in Finno-Ugrian is very reminiscent of the above problem. Hungarian, for instance, has pairs like *nyom* 'trace': *nyom* 'to press', *fagy* 'frost': *fagy* 'freeze', *vadász* 'hunter': *vadász* 'to hunt' etc. Traditionally-oriented grammars term such forms *nomen-verbum* which implies a bivalent hybrid category and leaves the examination (and evidence) of distribution out of consideration. Some linguists, including the author, argue that there is no such mule-category as *nomen-verbum* and that the forms referred to are either nouns or verbs.

5.3 THE MORPHOLOGY OF THE HEAD-VERB. Head-verbs are non-finite forms which can, in turn, serve as bases of other head-verbs.

5.3.1 A large number of head-verbs can agglutinate various derivative suffixes (*-a*, *-ba*, *-dʒa*, *-wa*, *-ya*, *-dj*, *-bay* etc.). Thus:

<i>den-</i> 'pile up'	>	<i>denba-</i> 'make a big pile'
<i>bara-</i> 'talk'	>	<i>barawa-</i> 'talk a lot'
<i>wala-</i> 'like'	>	<i>walaya-</i> 'love'

5.3.2 Infixation is another applicable device:

<i>buɾ-</i> 'blow with mouth'	>	<i>buguɾ-</i> 'wind blows'
-------------------------------	---	----------------------------

5.3.3 Reduplication is also frequently applied:

<i>ada-</i> 'sit'	-----	<i>adada-</i> 'keep sitting, camp'
<i>birgadʒ-</i> 'ask a question'	-----	<i>bibirgadʒ-</i> 'ask many questions'
<i>bara-</i> 'talk'	-----	<i>bara-bara-</i> 'chat away'
<i>mindʒal-</i> 'eat'	-----	<i>mindʒal-mindʒal-</i> 'eat a lot'

5.3.4 Various derived forms may originate from a verbal root which itself does not occur as a vocabulary item:

	<i>birgadʒ-</i> 'ask a question'
* <i>birga-</i>	<i>birgaba-</i> 'ask many questions'
	<i>bibirgadʒ-</i> 'ask questions again and again'
	<i>gidʒ-</i> 'look, peep'
* <i>gi-</i>	<i>gigidʒ-</i> 'look at repeatedly'
	<i>giyba-</i> 'watch, keep an eye on'
	<i>gigiba-</i> 'peep in, visit'

5.3.5 A head-verb, whether derived or not, can directly be followed by an auxiliary:

<i>bara-ɲaŋga</i>	'I talk'
<i>babara-ɲaŋga</i>	'I talk a lot'
<i>bara-bara-ɲaŋga</i>	'I chat a lot'

5.3.6 A few bound morphemes (particles? or infixes?) may occur between the head-verb and the auxiliary. For instance, *-bidʒi-* can perhaps best be described as a continuative-durative-frequentative-repetitive particle; *-ɲjale-* can be glossed 'also, too, again' etc. Thus:

- (1) *wundidʒ-buɲanbun* 'I shoot at him'
- (2) *wundidʒ-bidʒi-buɲanbun* 'I shoot at him several times'
- (3) *daɾ-gumamiŋga* 'thou art going to stand up'
- (4) *daɾ-ɲjale-gumamiŋga* 'thou art going to stand up, too'

5.4 HEAD-VERB WITHOUT AUXILIARY. The head-verb is not supposed to occur without an auxiliary—but (sometimes) it does. In imperative sentences the auxiliary (to be accurate: the imperative form of the auxiliary) may be omitted and the bare head-verb fulfils an imperative function. In everyday speech situations it can be heard frequently and apparently is regarded as quite grammatical:

<i>ɲuɖ!</i> 'Hit!'	<i>mindʒal!</i> 'Eat!'
<i>dʒo!</i> 'Drink!'	<i>dʒuru!</i> 'Dive!'

Such bare imperatives are used despite the fact that the omission of

auxiliary may sometimes cause ambiguity (theoretically, at least, as otherwise the speech situation normally rules out misunderstanding). Thus, for instance, *ada!* can be 'Sit!' or 'Stay!' (cf. *ada-bani!* 'Sit!' and *ada-bama!* 'Stay!').

5.5 MUTATION OF HEAD-VERBS AND SIMPLE VERBS. Finite simple verbs and non-finite head-verbs are clearly two distinct categories. But in Wunambal the barrier between two syntactic categories very seldom seems impenetrable: in most instances there are areas of overlap or linkage (cf. 3.6 and 4.), as it is in this case. There are certain roots which occur in the class of head-verbs as well as amongst double-prefixing simple verbs and represent an obvious conversion or mutation between them. Two examples will be illustrative.

- (1) *yama* 'curse, swear-word' (noun)
yama- 'swear at, tell off' (head-verb)
(buji)yama 'swear at, tell off' (double-prefixing verb)
- (2) *nyā* 'fright, fear' (noun)
nyā- 'be afraid' (head-verb)
(buji)ya(ni) 'get scared, frightened' (double-pref. verb)

NOTE: In the last item, the first two morphemes are object and subject markers, the last one a reflexive suffix and the verb root is *-ya-*. The preceding head-verb and noun carry the very same root; the word-initial *nyu-* morpheme is a derivative prefix (not very common in Wunambal but not unparalleled, either) evidenced in several examples (*nyuma!* 'embers/slow fire' < *ma!* 'flame' or *nyandjala-nyandjala* 'caterpillar' < *-andjal* 'foot' etc.).

6. The Auxiliary

The auxiliary is one of the simple verbs, either single or double-prefixing, which follows the head-verb and carries most of the syntactic load of the compound. Most but not all simple verbs are eligible for this function (see Appendix 1).

6.1 SEMANTIC NEUTRALISATION OF AUXILIARIES. Semantically, the lexical meaning of a simple verb appears more often than not obscured or neutralised when functioning as an auxiliary. See the following examples:

- (1) *djo:-nyiyanga* 'drink'
 drink-go
- (2) *yeli-bujanbun* 'calm down, soothe'
 calm-hit
- (3) *yala-nyuwanban* 'hunt'
 hunt-fall

The above statement seems certainly justified at a descriptive-synchronic level. The compound *djo:-nyiyanga* means 'I drink' and not 'I go to drink' or the like. However, it should be noted that in olden days a Wunambal did not have drinks sitting at a table, nor did he carry water himself in a container, but after having a good meal (preferably close to a waterhole or creek) he had to get up and go for a drink. Thus the selection of the auxiliary in this case was by no means arbitrary or incidental and had a clear-cut cultural motivation. This is of course not to say that the choice of auxiliaries can always be explained culturally or historically. Indeed, and most regrettably, it very rarely can. However, it might be seen in a different light if we knew more about the historical and cultural background against which the language developed undergoing consecutive periods of change through the ages.

6.2 THE SELECTION OF AUXILIARIES: OPTION AND COMPULSION. It seems extremely difficult or, rather, just impossible to detect any general rules governing the selection of auxiliaries following a particular head-verb. Neither an overall regularity nor an unlimited liberty can be proved.

6.2.1 A number of compound verbs allow for more than one auxiliary to follow the head-verb and any one of them can be selected optionally, on the one hand, while the given set of simple verbs excludes any other auxiliary, on the other. See the following pairs:

- (1) *ay-nyanga* } 'call out for, shout for'
ay-nyuma }
- (2) *bara-nyanga* } 'tell, say, notify'
bara-nyuma }
- (3) *ba:-nyiyanga* } 'arrive, emerge, appear'
ba:-bujamiyamiya }
- (4) *dali-bujanbun* } 'call by name'
dali-bujamiyamiya }

6.2.2 Sometimes a head-verb may take several auxiliaries, some of which make no semantic differentiation while others do. Thus:

- ada-nyanga* 'sit'
ada-nyuma 'stay'
ada-nyumamiya 'sit down/seat self'
ada-nyuwanban 'intend to sit down'
ada-bujiyangi 'mind, take care, look after'

6.2.3 Very often, however, auxiliaries operate as means of semantic differentiation and are not freely interchangeable. See the following examples:

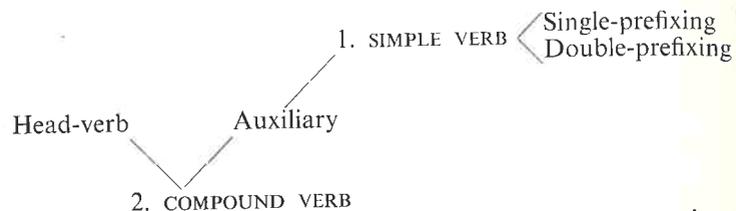
- (1) *balja-bujamindaminda* 'abduct, run away with'
balja-bujamiyamiya 'approach, sneak towards'
balja-bujanbun 'check, make sure'
balja-nyuma 'move along, advance, proceed'
- (2) *dar-nyuma* 'stand' *dar-nyuwanban* 'stop'
- (3) *maden-nyanga* 'draw, paint, decorate, engrave'
maden-bujanbun 'organise, arrange, plan, scheme'

6.2.4 A special instance of the above differentiation is when the contrast of auxiliaries functions as a distinction between transitivity versus intransitivity. Thus:

- (1) *djo:li-nyanga* 'return intrans.'
djo:li-bujamindaminda 'return trans.'
- (2) *nyuda-nyanga* 'smell intrans.'
nyuda-bujamiyamiya 'smell trans.'
- (3) *wul-nyuma* 'lie down'
wul-bujanbun 'lay down'
- (4) *yergadj-nyanga* 'hang intrans.'
yergadj-nyuma 'hang trans.'

7. Summary

The whole complex system of verb in Wunambal can be summarily written down thus:



The most striking feature of this highly sophisticated structure is perhaps its amazing incorporative complexity whereby a single form is capable of embracing an impressively large number of signals fulfilling a variety of functions and conveying a large amount of information. A simple verb can include a maximum of eleven morphemes. If preceded by, say, a two-morpheme head-verb and an infixed particle, the total of constituent morphemes making up a single compound verb amounts to fourteen. No wonder that such an intricate syntactic entity equals the whole of a complex sentence in English or other languages and proves manifestly how highly developed an idiom Wunambal is.

Appendix 1

Simple verbs

SINGLE PREFIXING	DOUBLE PREFIXING
ACTIVE	
<i>ɲaŋga</i> 'be' <i>ɲiyaŋga</i> 'go' <i>ɲuma</i> 'do/make' <i>ɲuwanban</i> 'fall' <i>ɲanbunbun</i> 'spear'	<i>bunbanbun</i> 'hit/strike' <i>bunamindaminda</i> 'take away' <i>bunamiraŋamiŋa</i> 'catch/grab' <i>bunamiya</i> 'bring' <i>bunjiyaŋgi</i> 'hold' * <i>bunyaŋga</i> 'wait' * <i>bunahyanjan</i> 'give' * <i>bunamalima</i> 'kill' * <i>buniyama</i> 'swear/curse'
REFLEXIVE-RECIPROCAL	
<i>ɲunbun</i> 'hit self' <i>ɲiniɲani</i> 'do to self' <i>ɲumindaɲani</i> 'take self' <i>ɲumiraɲani</i> 'catch self' * <i>ɲumalimaɲani</i> 'kill self' * <i>ɲarwadaɲani</i> 'split/depart' <i>ɲiyaŋgaɲani</i> 'AUXILIARY'	* <i>buniraɲani</i> 'get scared' * <i>bunamiyaɲani</i> 'recognise'

* Not used/recorded as auxiliary.

Appendix 2

Conjugation *ɲuma* 'do, make'

INDICATIVE-AFFIRMATIVE

	PRESENT	PAST	FUTURE
Sing1	<i>ɲuma</i>	<i>ɲume</i>	<i>ɲumaya</i>
Sing2	<i>guma</i>	<i>gume</i>	<i>gumaya</i>
Sing3	<i>buma</i>	<i>bume</i>	<i>bumaya</i>
	<i>wuma</i>	<i>wume</i>	<i>wumaya</i>
	<i>muma</i>	<i>mume</i>	<i>mumaya</i>
	<i>ama</i>	<i>ame</i>	<i>amaya</i>
Plur1incl.	<i>numa</i>	<i>nume</i>	<i>numaya</i>
Plur1excl.	<i>ɲarma</i>	<i>ɲarme</i>	<i>ɲarmaya</i>
Plur2	<i>gurma</i>	<i>gurme</i>	<i>gurmaya</i>
Plur3	<i>burma</i>	<i>burme</i>	<i>burmaya</i>

CONDITIONAL-NEGATIVE

Sing1	<i>ɲunuma</i>	<i>ɲunumi</i>	<i>ɲunumaya</i>
Sing2	<i>gunuma</i>	<i>gunumi</i>	<i>gunumaya</i>
Sing3	<i>bunuma</i>	<i>bunumi</i>	<i>bunumaya</i>
	<i>wunuma</i>	<i>wunumi</i>	<i>wunumaya</i>
	<i>munuma</i>	<i>munumi</i>	<i>munumaya</i>
	<i>anuma</i>	<i>anumi</i>	<i>anumaya</i>
Plur1incl.	<i>ɲanuma</i>	<i>ɲanumi</i>	<i>ɲanumaya</i>
Plur1excl.	<i>njanuma</i>	<i>njanumi</i>	<i>njanumaya</i>
Plur2	<i>ganuma</i>	<i>ganumi</i>	<i>ganumaya</i>
Plur3	<i>banuma</i>	<i>banumi</i>	<i>banumaya</i>

IMPERATIVE

Sing1	<i>ɲumi</i>	Plur1incl.	<i>ɲarmi</i>
Sing2	<i>bama</i>	Plur1excl.	<i>ɲarmi</i>
Sing3	<i>bumi/wumi</i> etc.	Plur2	<i>gurmi</i>
		Plur3	<i>burmi</i>

Appendix 3

Present affirmative forms of *buŋarubun* 'hit, strike'

Object	Subject	Object	Subject
	SINGULAR FIRST PERSON		SINGULAR THIRD PERSON, GENDER BINI
Sing1 Sing2	<i>buŋarubun</i> 'I hit thee' <i>buŋarubun</i> 'I hit him/her'	Sing1 Sing2	<i>ŋandubun</i> 'he/she hits me' <i>gandubun</i> 'he/she hits thee' <i>andubun</i> 'he/she hits him/her'
Sing3	<i>wuŋarubun</i> 'I hit it'	Sing3	<i>gawunbun</i> 'he/she hits it' <i>mawunbun</i> 'he/she hits it' <i>awunbun</i> 'he/she hits it'
Plur1incl. Plur1excl. Plur2 Plur3	<i>gurnarubun</i> 'I hit you' <i>burŋarubun</i> 'I hit them'	Plur1incl. Plur1excl. Plur2 Plur3	<i>ŋandubun</i> 'he/she hits us-incl.' <i>ŋandubun</i> 'he/she hits us-excl.' <i>gandubun</i> 'he/she hits you' <i>bundubun</i> 'he/she hits them'
	SINGULAR SECOND PERSON		SINGULAR THIRD PERSON, GENDER WINI, MINI, ANI, NANI
Sing1 Sing2	<i>djanubun</i> 'thou hit me'	Sing1 Sing2	<i>ŋunbunbun</i> 'it hits me' <i>gunbunbun</i> 'it hits thee' <i>bunbunbun</i> 'it hits him/her'
Sing3	<i>bunbun</i> 'thou hit him/her'	Sing3	<i>wunbunbun</i> 'it hits it' <i>munbunbun</i> 'it hits it' <i>anbunbun</i> 'it hits it'
Plur1incl. Plur1excl. Plur2 Plur3	<i>ŋandubun</i> 'thou hit us' <i>banburubun</i> 'thou hit them'	Plur1incl. Plur1excl. Plur2 Plur3	<i>ŋanbunbun</i> 'it hits us-incl.' <i>ŋanbunbun</i> 'it hits us-excl.' <i>gunbunbun</i> 'it hits you' <i>bunbunbun</i> 'it hits them'

Appendix 3—continued

Object	Subject	Object	Subject
	PLURAL FIRST PERSON INCLUSIVE		PLURAL SECOND PERSON
Sing1 Sing2	<i>buŋarubun</i> 'we hit him/her'	Sing1 Sing2	<i>ŋunburubun</i> 'you hit me'
Sing3	<i>wuŋarubun</i> 'we hit it'	Sing3	<i>burubun</i> 'you hit him/her' <i>wurubun</i> 'you hit him/her' <i>murubun</i> 'you hit him/her' <i>arubun</i> 'you hit it' <i>nurubun</i> 'you hit it'
Plur1incl. Plur1excl. Plur2 Plur3	<i>burŋarubun</i> 'we hit them'	Plur1incl. Plur1excl. Plur2 Plur3	<i>ŋjanburubun</i> 'you hit us' <i>bunburubun</i> 'you hit them'
	PLURAL FIRST PERSON EXCLUSIVE		PLURAL THIRD PERSON
Sing1 Sing2	<i>gunjarubun</i> 'we hit thee' <i>bunjarubun</i> 'we hit thee'	Sing1 Sing2	<i>ŋunburubun</i> 'they hit me' <i>gunburubun</i> 'they hit thee' <i>anburubun</i> 'they hit him/her'
Sing3	<i>wuŋjarubun</i> 'we hit it'	Sing3	<i>gawurubun</i> 'they hit it' <i>mawurubun</i> 'they hit it' <i>awurubun</i> 'they hit it'
Plur1incl. Plur1excl. Plur2 Plur3	<i>gurnjarubun</i> 'we hit you' <i>burnjarubun</i> 'we hit them'	Plur1incl. Plur1excl. Plur2 Plur3	<i>ŋanburubun</i> 'they hit us-incl.' <i>ŋanburubun</i> 'they hit us-excl.' <i>gunburubun</i> 'they hit you' <i>bunburubun</i> 'they hit them'

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81. Miriwung

F. M. Kofod

Miriwung is a dual classifying language in the Miriwunic group of the Djeragan family spoken by a large number of people in Kununurra and surrounding stations in the east Kimberleys.

There are both simple and compound verbs. Simple verbs are conjugated by both prefix and suffix for person number, mood and aspect. The object pronouns in transitive verbs are indicated by various combinations of prefix and suffix. Tense is indicated either by suffix or a change in the verb stem.

Compound verbs consist of what Capell calls a verb base and what I will call a verb particle, which is followed or preceded by a simple verb acting as an auxiliary.

The simple verbs cover general types of action such as sitting/staying, going, hitting, putting away from and gathering towards. The choice of simple verb to accompany each particle is determined by custom. Semantic considerations apply in the majority of cases but not always.

<i>galiwanj girayin</i>	'He is walking.'
walking he is going	
<i>wudju wumindayin</i>	'He is running.'
run he is doing/saying	
<i>luwerrminj namindiyadja mayarun</i>	'I will change my clothes.'
turn around I them will put clothes	

The intransitive simple verb

The intransitive simple verb used in a main clause is made up as follows:

1. Subject pronoun.
2. Verb stem (this sometimes changes for tense and is difficult to separate from the tense marker).
3. Tense marker—past, present or future.
4. Tense aspect marker which can be one of the following:
 - (a) definite action marker *-da*, *-ya*, and indicates that the action is definitely being done, has been done or will be done. This is optionally followed by an imperfect pronoun.
 - yin* 1st singular, 1st non-singular exclusive and 3rd singular masculine class;
 - yan* 1st non-singular inclusive;
 - njan* 3rd person singular feminine class;
 - nan* 2nd person singular and non-singular;
 - wun* 3rd person plural.

- (b) a distant past frequentative marker which can follow the past *-njalinj*
- (c) an irrealis interrogative marker *-gu*.
- (d) a subjunctive suffix *-ben*.

5. Dual marker *-milaj*.6. Optional emphatic marker *-ra/a*.

Some examples of intransitive simple verbs:

<i>ŋa -na</i>	<i>-da</i>	<i>-yin</i>	'I am going.'
I	go PRES	definitely	I am

<i>ŋa -ni</i>	<i>-ya</i>	<i>-yin</i>	'I was going'
I	go PAST	definitely	I was

<i>ŋa -nda-</i>	<i>-ya</i>		'I will go.'
I	go FUT	definitely	

<i>ŋa -na</i>	<i>-ya</i>		'I went.'
I	go PAST	definitely	

<i>be-ri</i>	<i>-ya</i>		'They went.'
they	go PAST	definitely	

<i>be -ri:</i>	<i>-ya</i>	<i>-wun</i>	'They were going.'
they	go PAST	definitely	they were

<i>be -ra</i>	<i>-ya</i>		'They will go.'
they	go FUT	definitely	

<i>be -rran</i>	<i>-da</i>	<i>-wun</i>	<i>milaj</i>	'They(dual) are sitting.'
they	sit PRES	definitely	they are dual	

<i>be -ni</i>	<i>-ya</i>	<i>-wun</i>		'They were sitting.'
they	sit PAST	definitely	they were	

<i>be -ri:</i>	<i>-njalinj</i>	<i>milaj</i>		'They(dual) used to go a long time ago.'
they	go PAST	distant p. freq. dual		

<i>ŋa -ndin</i>	<i>-da</i>	<i>-yin</i>		'I will be sitting.'
I	sit FUT	definitely	I will be	

<i>be -rran</i>	<i>-ben</i>			'They may be sitting.'
they	sit PRES	might		

The negative intransitive simple verb consists of the negative marker *ŋuwag*, the subject pronoun, the stem/tense morpheme and the imperfect pronoun which is optional.

<i>ŋuwag ŋa -nda</i>	'I am not going.'
not I go FUT	

<i>ŋuwag ge -ri:</i>	'He did not go.'
not he go PAST	

<i>ŋuwag ge -ri:</i>	<i>-yin</i>	'He was not going.'
not he go PAST	he was	

The interrogative *-gu* can be suffixed to either the negative marker or to the verb stem/tense cluster.

<i>ŋuwag nem -bin</i>	<i>-gu</i>	'Will you not be there?'
not you sit FUT INTERROG		

<i>ŋuwag ge-ri:</i>	'Didn't he go?'
not INTERROG he go PAST	

The intransitive simple verb when it occurs in a subordinate clause consists of:

1. Subject pronoun
2. Verb stem/tense cluster
3. Optional imperfect pronoun or subjunctive marker
4. Subordinating suffix *-ŋi:ŋ* (lit. from)
5. Optional emphatic marker *-a*.

be -ni -wun ŋi:ŋ du: be -ri: -ya
 they sit PAST they were from set off they go PAST DEF
 'They went away from the place where they were sitting.'
ŋa-nda -ya yilag gananura -malik ŋa-nda -ŋi:ŋ -a
 I go FUT DEF down there river to I go FUT from EMPH
njimugap ŋa -ndin -da -ra
 bathe I sit FUT DEF EMPH
 'When I get to the river I will have a swim.'

Transitive simple verb

The transitive simple verb has a very complicated system of incorporated subject and object pronouns and a full analysis is not attempted here.

The verb consists of:

1. A subject/object or object/subject pronoun cluster
2. Stem/tense cluster
3. Unsuccessfully attempted action/irrealis marker *-dhu-* when applicable
4. Tense aspect marker *-ya, -da, njalinj*
5. Optional imperfect pronoun which can only occur if (4) is the definite action marker
6. Another pronoun which can refer to either the subject or the object
7. Dual suffix *milaj*
8. Optional emphatic marker *ra/a*

Some examples of transitive simple verbs:

ga -nalin -da -njan djiraŋ
 she-it cook PRES DEF she is kangaroo
 'She is cooking the kangaroo.'

nawu yarrbanj ga -ŋanjbuda gundarrinj ŋerreguwun
 he young man he-it spear PAST DEF fish big
 'The young man speared a big fish.'

ŋerrerreguwun gundarrinj bena -ŋanjbuda
 big (plural) fish them-he spear PAST DEF
 'He speared a lot of big fish.'

Discussion of some examples of subject object incorporation in the transitive verb

The order of subject and object pronouns varies according to person.

The 3rd person singular feminine class pronoun object prefix always occurs in the initial position, *njilida*, 'I hit her' and:

galaminaj njem -berra-ŋun -da -wun
 porcupine she they eat PRES DEF they are
 'They are eating porcupine (a feminine noun).'

The next in order of preference are first person subject or object prefixes. For example: *ŋanida*, 'He hit me' and:

ŋem -berrida -wun
 me they hit PAST DEF they were
 'They were hitting me.'

yim -berrida -yin
 we they hit PAST DEF we were
 'We were hitting them.'

When there is a 3rd person plural subject and a first person non-singular object the number is indicated by use of the first person benefactive pronoun suffix after the imperfect pronoun.

ŋem -berrida -wun
 me they hit PAST DEF they were
 'They were hitting me.'

ŋem -berrida -wun yarr milaj
 me they hit PAST DEF they were to us (dual)
 'They were hitting us (dual exclusive).'

The second person as an object of a first person pronoun is expressed by the same subject/object cluster as the 1st person subject/3rd person object in combination with the second person benefactive pronoun as a suffix.

yim -berrida -yin
 we they hit PAST DEF we were
 'We were hitting them.'

yim -berrida -yin ŋuŋ
 we they hit PAST DEF we were to you
 'We were hitting you.'

yim -berrida -yin nuŋgurr milaj
 we they hit PAST DEF we were to you (non-sing) (dual)
 'We were hitting you (dual).'

The imperfect pronoun in most cases agrees with the subject of the verb, however when the second person is the object of a first person singular subject or a 3rd person non-singular subject, the second person imperfect pronoun is used.

nidayin 'I was hitting him.'
nidanana ŋuŋ 'I was hitting you.'
nam -berrida -nan wurr
 you (obj.) they hit PAST DEF you were to them
 'They were hitting you.'

As is seen in the last example the third person plural benefactive suffix is used when the third person plural subject or object is combined with the second person subject or object.

djam -berrida -nan wurr
 you (subj.) they hit PAST DEF you were to them
 'You were hitting them.'

The negative transitive simple verb consists of the negative marker, the subject/object pronoun cluster, the stem/tense cluster and where applicable the pronoun suffix. This can be followed by an optional negative suffix *-gin*.

ŋuwag ŋem -berrit
 not me they hit PAST
 'They did not hit me.'

nuwag nit -gin
not I-him hit PAST not
'I did not hit him.'

The transitive verb when it occurs in a subordinate clause consists of the subject/object pronoun cluster, the stem/tense cluster, an optional imperfect pronoun, the suffix *-gin* and an optional emphatic marker *a*.

birrga djamanan ni:ŋ biya ŋa -nda ya
make you it do with hands PAST from also I go FUT DEF
ningi
to you (indirect object)
'When you have made it I will come to you.'

The imperative simple verb

The imperative intransitive and transitive verbs take a prefix *b-* to indicate the imperative mood.

benewu 'you sit', *benalu* 'you cook it', *biyaru* 'you go'.
A few cases of an imperative mood for persons other than 2nd person have been noted.

bamu ni nawu guwiyangu
you say to him (ind. obj.) he let him come
'Tell that man to come.'

The compound verb

The compound verb consists of a simple verb which is usually preceded but sometimes followed by a verb particle.

The verb particle

The verb particle can be partially reduplicated to indicate continuous action most commonly with a plural subject. A different auxiliary is sometimes used with the reduplicated particle.

mayiginj yanŋe nilanda -ni
food for ask I it put to him
'I asked him for food.'

burru wula-laŋ yangiyangip benyawun mayiginj
they child asking they were sitting food for
'The children were asking for food.'

When the particle is only one syllable repeated action can also be expressed by repeating the particle three or more times. This usually occurs in stories to heighten the dramatic effect and may be considered as a stylistic device.

burr burr burr benyanjan
clap on thighs they were sitting
'The women all clapped on their thighs.'

yalp yalp yalp ganiya
swing hair from side to side he sat
'He swung his hair from side to side (while dancing).'
djimilwiriŋa minj minj minj minj minj minj minj umaya wurri
lightning flash flash flash flash flash flash flash it did to them
gamerrmilima
all around
'The lightning flashed all around them.'

There are some verbs where a different particle is used with a plural subject.

lolo ginayin 'He is sitting.'
sit he is sitting
wurrb berrandawun 'They are sitting.'
sit they are sitting
bare ginayin 'He is standing.'
stand he is sitting (in the state of)
darrb berrandawun 'They are standing.'
stand they are sitting
yogap berrandawun 'They are sleeping.'
sleep they are sitting
yog ginayin 'He is sleeping.'
sleep he is sitting

Compare this with:

yogyog njinanjan 'She is sleeping continuously.'

There is a frequentative suffix to the particle *-banj/wanj*

golan garrb gamandayin
stick pick up he it did with hands
'He picked up the sticks.'
gagaiya bonaginj garrbanj njindanjan
grandmother ashes for gathering she is going
'Grandmother has gone looking for ashes.'

ded ŋanimindayin
look me he is doing
'He is looking at me.'
ŋanadayin dedbanj gadawun
I am going looking for boabnuts
'I am looking for boabnuts.'

gama derreb nani
where camp you sat
'Where did you camp?'
yuwaya derrerrebanj
we (inc.) will go camping
'You and I will go camping out.'

The frequentative suffix can be fixed to adjectives to indicate being in the state described by the adjectives.

yawurru djuwadmiwa yirruwada djuruŋiyam galaŋu
large number sick all we fell yesterday today
waranj ŋundeniwanj yirrida
well then good freq. suffix we become
'We were all sick yesterday but we are better today.'

Verb particles can also take the suffix *-be* which seems to have a continuous aspect function, although it does not really make a great deal of difference in meaning.

gurad ŋalamindayin nawan
dig I am doing hole
'I am digging a hole.'
guradbe guwi:nda
digging he will do with hands
'He will dig.'

The suffix *-be* is found suffixed to the noun *djubunj*, didjeridoo to form a verb particle *djubunjbe*.

djubunbe nandinda
playing the didj. I will sit
'I will play the didjeridoo.'

The verb particle can take a purposive suffix *-gerinj*.

marram nandaya djogbanjerinj
go away I will go hunting for
'I am going away hunting.'

Sometimes more than one particle is used with the one simple verb.

bunburr berradawun marram galiwanj dawaginj djerrawum
set off they are going go away walking camp for another LOC
'They are going away to another camp.'

When a verb particle has the same meaning as the simple verb the particle is optional.

'She was sitting in the camp all day' can be expressed by either

nalu njiniyanjan wanewuganj dawam
she she was sitting all day camp LOC.

or

nalu lolo njiniyanjan wanewuganj dawam
she sit she was sitting all day camp LOC.

In a subordinate clause, the suffix *-yi:ŋ* can be fixed to the verb particle and the simple verb omitted.

lelpbe nandengu burruwa mayiŋa ŋuŋ njiniyanj
peel I will sit IRREALIS them from food EMPH to you yours
wani:m lelpbeni:ŋ djanap nembinda
when peel from eat you will sit
'If I peel your orange for you, when it is peeled you will eat it.'

The verb particle can occur with a transitive simple verb to indicate active voice and with an intransitive simple verb to form an agentless passive.

ŋuwag lak nit
not split I it hit
'I did not split it.'

ni:ndayin lakbanj deb
I it am hitting splitting hit
'I am chopping the wood.'

dawaja lak lak beniya
place split they sat
'The rocks were all cracked.'

The negative marker in the compound verb must come before both the simple verb and the verb particle.

ŋayu lambuj ŋuwag birrga nemanj
I coolamin not make I did with hands
'I did not make the coolamin.'

The interrogative suffix *-gu* can be suffixed to any word in the sentence including the negative marker, the verb particle and the auxiliary.

ŋuwagu galubinja yara
not INTERROG water to EMPH we will go
'Can't we go to the water?'

gundarrinŋu djamberramanan
fish INTERROG you them gathered
'Did you catch any fish?'

njiŋu gundarrinŋa djemandangu ganinj
you fish EMPH you it gather INTERROG want
'Do you want some fish?'

An intransitive verb can be made transitive by the use of a verb particle with transitive meaning and object but there would be no object marker affixed to the simple verb.

'I am eating food' can be expressed by either:

nijundayin mayiŋ
I it eat PRES food

or

mayiŋ djanap ŋanandayin
food eat I am sitting

This is only a preliminary analysis of the verb in Miriwung. A more detailed analysis will be completed next year.

82. Walmadjari

Joyce Hudson

Introduction

The term auxiliary is used throughout this paper to refer to that part of the verb complex which consists of a root and suffixes. The suffixes refer to the person and number of noun phrases in the sentence and the root is the type of morpheme referred to by Capell as a catalyst (Capell 1967:34). The term catalyst is not used here because the form of the root changes according to the mood of the sentence. The type of construction usually referred to as an auxiliary in Australian languages can perhaps be more closely related to the simple verb stem in Walmadjari.

One of the functions of the verbal auxiliary in Walmadjari¹ is to indicate the mood of the sentence. The aim of this paper is to present the modal system of Walmadjari. Mood is shown in the verbal auxiliary but morphemes in the verb also play a part. The verbal auxiliary and the verb must be viewed together for an understanding of the modal system.

Sections 1 and 2 briefly describe the dual tense systems, and the structure of the verb respectively. The verbal auxiliary is described in more detail in Section 3. These are necessary as background for Section 4 where the seven moods are described.

1. Dual tense systems

Two distinct tense systems function in Walmadjari; the Regular and the Past/Nonpast. The Regular Tense System differentiates between past, present, future and customary tenses by second order suffixes on the verb. The Regular Tense System functions only in three moods, indicative, inter-

rogative and hortative. With other moods the Past/Nonpast Tense System operates and differentiates only between past and nonpast tenses by a third order suffix on the verb.

Examples of tenses in the Regular Tense System:

Past tense

kaŋ-a maŋa 'I carried it.'
carry-PAST I

Future tense

kaŋ-ku maŋa 'I will carry it.'
carry-FUT I

Present tense

kaŋan-a maŋa 'I am carrying it.'
carry-PRES I

Customary tense

kaŋ-anj maŋa 'I carry it.'
carry-CUST I

Examples of tenses in the Past/Nonpast Tense System:

Past tense

kaŋ-ka-la maŋa
carry-MOOD-PAST I
'I should have/would have carried it.'

Nonpast tense

kaŋ-ka-φ maŋa
carry-MOOD-NPAST I
'I should/would carry it.'

2. Verbs

The verb consists of a stem and three orders of suffixes which indicate aspect, mood and tense. Stems may be simple or compound and are divided into five conjugation classes.

Stems

There are many compound verb stems and in present data less than 10 percent are simple stems (monomorphemic) on a dictionary count. Examples of simple verb stems representing the five conjugation classes are given below. Morphophonemic changes in the final consonant of the stem account for the different verb form in the sentences.

puŋ- 'hit'
puŋ-ku maŋa 'I will hit it.'
hit-FUT I

maŋj- 'say'
maŋ-ku maŋa 'I will say it.'
say-FUT I

yan- 'go'
yan-ku maŋa 'I will go.'
go-FUT I

patjař- 'bite, chop'
patjař-ku maŋa 'I will chop it.'
chop-FUT I

wanti- 'fall'

wanti-wu maŋa 'I will fall.'
fall-FUT I

Compound stems are formed by combining other morphemes with one of these simple stems or with one of four verbalising morphemes. The verbalising

morphemes are:

-man- 'do'
-tjaři- 'become'
-kutji- 'cause'
-kař- (meaning uncertain)

Examples of compound stems:

takuř-puŋ- 'put inside'
inside-hit

maŋa maŋa takuřpuŋ-ku
thing I put :inside-FUT
'I will put the thing inside.'

puřul-manj- 'bubble'
bubble-say

puřulmal-ku pa ŋapa
bubble-FUT it water
'The water will bubble (boil).'

takuř-yan 'enter'
inside-go

takuřyan-ku maŋa mayařu-la
enter-FUT I house-LOC
'I will enter the house.'

tjuŋ-patjař- 'chop'
cut-chop

tjuŋpatjař-ku maŋa maŋa
chop-FUT I tree
'I will chop the tree.'

puluk-wanti- 'dive'
plop-fall

pulukwanti-wu maŋa ŋapa-ŋa
dive-FUT I water-LOC
'I will dive into the water.'

ruku-kař- 'block'
block-VBS

rukukař-ku maŋa kiřiŋiři
block-FUT I hole
'I will block the hole.'

tjuŋ-man- 'cut'
cut-do

tjuŋan-ku maŋa kuyi
cut-FUT I meat
'I will cut the meat.'

(The second consonant is lost when the two nasals occur contiguously in this verb.)

kařuwařa-tjaři- 'become afternoon'
afternoon-become

- karuwařatjaři-nja pa*
become: afternoon-PAST it
'It became afternoon.'
takuř-kutji- 'put inside'
inside-cause
takuřkutji-ni manja yapawaři
put: inside-PAST he-them children
'He made the children go inside.'

FIRST ORDER SUFFIX. Aspect is shown by the first order suffix *-an*. Its presence means continuous action while its absence means completed action. Continuous aspect is found with all second order suffixes.

- yan-an-ku maņa*
go-CONT-FUT I
'I will keep on going.'
řatjiřa pa yan-an-ta-la
not he go-CONT-MOOD-PAST
'He didn't keep on going.'

Present tense morpheme *-a* cannot occur without the continuous aspect as in

- yan-an-a maņa* 'I am going.'
go-CONT-PRES I

SECOND ORDER SUFFIXES. The six second order verbal suffixes are:

1. *-ta* 'implicative'
2. *-u* 'obligative'
3. *-i* 'past tense'
4. *-a* 'present tense'
5. *-ku* 'future tense'
6. *-anj* 'customary tense'

These morphemes can be divided according to the tense system in which they operate. The first two morphemes function in the Past/Nonpast Tense System. They indicate mood only and are further inflected for tense.

Morphemes 3 to 6 belong to the Regular Tense System and cannot be further inflected with the Past/Nonpast System suffix. These four morphemes only occur in indicative, interrogative or hortative moods.

The second order suffix on the verb and the verbal auxiliary root function together to indicate the mood of the sentence. Examples in this Section illustrate only the verbal morphemes. Full detail of the moods is given in Section 4.

Examples of second order suffixes:

1. implicative suffix with past tense
yan-ta-la palu 'They should have gone.'
go-IMPL-PAST they
2. obligative suffix with nonpast tense
paři yan-u . . . 'The boy ought to go . . .' (This is not a complete utterance.)
boy go-OBL
3. past tense, indicative mood
yan-i palu 'They went.'
go-PAST they

- past tense, interrogative mood
yan-i řalu 'Did they go?'
go-PAST they
4. present tense, indicative mood
yan-an-a palu 'They are going.'
go-CONT-PRES they
 5. future tense, indicative mood
yan-ku palu 'They will go.'
go-FUT they
future tense, hortative mood
yan-ku-li 'Let us two go.'
go-FUT-we:two:INCL
 6. customary tense, indicative mood
yan-anj palu 'They go.'
go-CUST they

THIRD ORDER SUFFIXES. The Past/Nonpast Tense System, though it distinguishes between two tenses, uses only one morpheme, *-la*, which is the past tense suffix. The absence of *-la* means nonpast tense. The past tense suffix *-la* can only follow morphemes 1 and 2 of the second order suffixes.

Nonpast tense with implicative suffix

- řatjiřa pa yan-ta-φ*
NEG he go-IMPL-NPAST
'He isn't going.'

Nonpast tense with obligative suffix

- řatjiřa patjan-u*
NEG bite-OBL
'One should not chop it.'

Past tense with implicative suffix

- řatjiřa pa yan-ta-la*
NEG he go-IMPL-PAST
'He didn't go.'

Past tense with obligative suffix

- patjan-u-la pa kanj-a waļu*
chop-OBL-PAST he carry-PAST firewood
'Having chopped it, he carried the firewood.'

NOTE: In the last example, *patjan-u-la* which has the obligative suffix followed by the past tense suffix is not an independent verb. Similarly, the nonpast tense with obligative suffix is rarely heard in isolation.

3. Verbal auxiliary

The verbal auxiliary is an obligatory element in sentences using the Regular Tense System.² In sentences using the Past/Nonpast Tense System the presence or absence of the auxiliary is significant to the mood of the sentence. The verbal auxiliary is never first in the sentence but it is normally the second word.

The function of the auxiliary is twofold. The auxiliary root helps indicate the mood of the sentence and the auxiliary suffixes refer to noun phrases of the sentence. The person-number of the noun phrases in ergative, nominative, benefactive and accessory cases are cross referenced in the auxiliary. Only two of the four cases can be referred to in the auxiliary of any given sentence.

The modal root

The modal root indicates the mood of the clause but only in combination with the second order suffix of the verb. There are two forms of the root. They are *pa-* and *ŋa-* and they contrast with the absence of a root (ϕ). They function in the moods as follows. *pa-* occurs in indicative and implied negative moods, *ŋa-* in interrogative and implied admonitive and $\phi-$ in hortative, imperative and obligative moods.

One important morphophonemic change in the root deserves mention here. The consonant of the root *pa-* is affected by the following consonant in that it changes to *ma-* preceding any nasal-initial morpheme.

pa + *njanta* > *ma-njanta* 'He with him.'
pa + *ŋa* > *ma-ŋa* 'I'

Suffixes

There are six orders of suffixes in the auxiliary. The first five orders refer to the person and number of the noun phrases in nominative, ergative, benefactive and accessory cases. The sixth order suffix is the reflexive/reciprocal morpheme.

The noun phrases of the sentence fit into a nominative-ergative case system. That is, the subject of an intransitive sentence and the object of a transitive sentence are inflected identically (nominative case) and the subject of a transitive sentence is inflected differently (ergative case). In the auxiliary the morphemes do not pattern in this way but rather they pattern in a nominative-accusative system. That is, the subject of both intransitive and transitive sentences are marked identically, and the object of a transitive sentence is marked differently.

Person-number

Of the four cases which are referred to in the auxiliary, only two can be referred to at any one time. The choice of these two is determined by an ordering of rank among the cases. That order is

subject
 accessory
 benefactive
 object.

The subject, as the highest ranking case, is cross referenced in the auxiliary in every instance, while only one of the other three can ever be referred to in the auxiliary. These three are cross referenced according to their rank. That is, if an accessory noun phrase occurs in a clause it will be referred to in the auxiliary, but benefactive and object will not. If accessory noun phrase does not occur then benefactive but not object will be referred to. Object noun phrase is only shown in the auxiliary if there is no benefactive or accessory noun phrase in the clause.

There is no such ranking among noun phrases. All cases can co-occur but it is rare to find more than three in any one clause.

The morphemes of orders 1 and 2 indicate person and orders 3 and 4 indicate number though each person morpheme is viewed in relation to number and each number morpheme must be viewed in relation to person. Person of subject and number of subject are shown in orders 1 and 4 res-

pectively while person and number of accessory/benefactive/object are shown in orders 2 and 3 respectively.

Orders	person		number	
	1 subject	2 accessory benefactive object	3 accessory benefactive object	4 subject

njuʔawanti- ϕ ma-ŋa-n-ta-lu

you:PL-NOM AUX:RT-1:EXCL:SB-2:OB-SG:OB-PL:SB

njanja ŋanampa-lu

saw we:all:EXCL-ERG

'We all (exclusive) saw you.'

If there is no accessory, benefactive or object noun phrase in a sentence then subject only is referred to in the auxiliary which means that only morphemes from the 1st and 4th orders will occur in the auxiliary.

yani ma-n-pila ŋuʔa-kaŋi

went AUX:RT-2:SB-DU:SB camp-to

'You two went to the camp.'

A complete inventory of suffixes is not given in this paper but Chart 1, which displays the morphemes of the 1st order subject-person suffixes, is presented as an example.

Chart 1

1st order suffixes: subject-person

	SINGULAR	DUAL	PLURAL
1	incl		- <i>li</i> - <i>lipa</i>
	excl	- <i>ŋa</i>	- <i>tjaʔa</i> - <i>tjaʔaŋa</i>
2	- <i>n</i>	- <i>n</i>	- <i>n</i>
3	- ϕ	- ϕ	- ϕ

Second and third order suffixes are shared by the three cases accessory/benefactive/object. There is only one paradigm in the second order and it shows the person of the three cases while in the third order there are two paradigms showing the number for the three cases. The two paradigms of Order 3 will from here on be referred to as paradigms I and II. Paradigm I is used when the object is referred to. Paradigm II is used when benefactive case is referred to. Either paradigm may be used for the accessory case depending on the ranking system. Just as accessory outranks benefactive and object for choice of cross reference into the auxiliary, so accessory

outranks benefactive and object in the use of paradigms I and II. Whereas object and benefactive cases are referred to by one paradigm each, accessory is referred to by either of these paradigms. To do this accessory is identified by the presence of the 5th order suffix and then it can choose either paradigm from the 3rd order to show the number of the accessory noun phrase. At the same time the 2nd order suffix shows the person of the accessory noun phrase.

The next four examples illustrate the use of the 3rd order suffix paradigms I and II.

Paradigm I—Object

njuřa-tjařa-φ ma-φ-nj-pinja-lu
 you-two-NOM AUX:RT-3:SB-2:OB-DU:OB-PL:SB
njanja paři-waņti-lu
 saw boy-PL-ERG

'The boys saw you two.'

Paradigm II—Accessory

njuřa-tjařa-la ma-φ-nj-pinja-lu-la
 you-two-ACC AUX:RT-3:SB-2:ACC-DU:ACC-PL:SB-ACC
kiřani paři-waņti-φ
 sat boy-PL-NOM

'The boys sat with you two.'

Paradigm II—Benefactive

wanķi-φ ma-φ-nj-pilaņu-lu
 word-NOM AUX:RT-3:SB-2:BN-DU:BN-PL:SB
maņani paři-waņti-lu njuřa-tjařa-wu
 were:talking boy-PL-ERG you-two-BN

'The boys were talking to you two.'

Paradigm II—Accessory

wanķi-φ ma-φ-nj-pilaņu-lu-la
 word-NOM AUX:RT-3:SB-2:ACC-DU:ACC-PL:SB-ACC
maņani paři-waņti-lu njuřa-tjařa-la
 were:talking boy-PL-ERG you-two-ACC

'The boys were talking with you two.'

The order of certain suffixes in the auxiliary is altered under special circumstances. These are not described in the paper.

Reflexive/reciprocal

The suffix *-njanu* is both reflexive and reciprocal. If the subject of the sentence is singular, then the meaning is reflexive. When the subject is either dual or plural there is no syntactic distinction between reflexive and reciprocal.

mapalanj pa-φ-lu-njanu palpu-φ
 paint AUX:RT-3:SB-PL:SB-REFL back-NOM
piyiņ-waņti-lu
 man-PL-ERG

'The men paint each other's backs.'

kuyi-φ ma-n-pila-la-njanu kampawu
 meat-NOM AUX:RT-2:SB-DU:SB-BN-REFL will:cook
 'You two will cook meat for yourselves.'

When a sentence is reflexive or reciprocal, a different system of cross referencing noun phrases onto the auxiliary is used, details of which are not given.

4. Mood

There are seven moods in Walmadjari, four of which can be negated. Mood is indicated by combination of the auxiliary root and the second order suffix of the verb. Neither the auxiliary root nor the verbal suffix can, on its own, show the mood. Both morphemes must be looked at together.

For purposes of description the moods are divided into two groups according to the tense system in which they operate. Stative clauses and their moods are described separately.

The auxiliary roots *pa-*, *ņa-* and *φ-* can each occur with either tense system in the verb producing seven moods. The auxiliary roots and tense systems are shown along the parameters of Chart 2 and the seven moods are displayed in the body of the chart.

Chart 2

	REGULAR TENSE SYSTEM	PAST/NONPAST TENSE SYSTEM
Aux root <i>pa-</i>	indicative	implied negative
Aux root <i>ņa-</i>	interrogative	implied admonitive
Aux root <i>φ-</i>	hortative	imperative obligative

Moods which occur with Regular Tense System

The moods described here are indicative, interrogative and hortative. None of these can be negated. Indicative and interrogative can occur with all tenses of the Regular Tense System. Hortative is only found with future tense.

INDICATIVE MOOD. The auxiliary root *pa-* in combination with the second order verbal suffixes for past, present, future and customary tenses produce indicative mood.

yan-i pa-φ-lu 'They went.'
 go-PAST AUX:RT-3:SB-PL:SB
yanan-a pa-φ-lu 'They are going.'
 go-PRES AUX:RT-3:SB-PL:SB
yan-ku pa-φ-lu 'They will go.'
 go-FUT AUX:RT-3:SB-PL:SB
yan-anj pa-φ-lu 'They go.'
 go-CUST AUX:RT-3:SB-PL:SB

INTERROGATIVE MOOD. The auxiliary root *ņa-* in combination with the second order verbal suffixes for past, present, future and customary tenses produces interrogative mood.

yan-i ņa-φ-lu 'Did they go?'
 go-PAST AUX:RT-3:SB-PL:SB

<i>yanan-a</i>	<i>ŋa-φ-lu</i>	'Are they going?'
go-PRES	AUX:RT-3:SB-PL:SB	
<i>yan-ku</i>	<i>ŋa-φ-lu</i>	'Will they go?'
go-FUT	AUX:RT-3:SB-PL:SB	
<i>yan-anj</i>	<i>ŋa-φ-lu</i>	'Do they go?'
go-CUST	AUX:RT-3:SB-PL:SB	

HORTATIVE MOOD. The absence of an auxiliary root in combination with future tense on the verb produces hortative mood. The suffixes which would normally be attached to the auxiliary root are attached to the verb in hortative mood. Semantic restrictions mean that hortative mood usually occurs with 1st person inclusive subject, though others are also heard.

<i>yan-ku-li</i>	'Let's go (we two incl).'
go-FUT-1:DU:INCL:SB	
<i>yan-ku-lipa</i>	'Let us all go.'
go-FUT-1:PL:INCL:SB	
<i>yan-ku-ŋi-φ-tja-lu-la</i>	
go-FUT-EMPH-3:SB-1:ACC-SG:ACC-PL:SB-ACC	
	'Let them come to me.'

Moods which occur with past/nonpast tense systems

The moods described here are more complex than those occurring with the Regular Tense System. The implied negative, implied admonitive and imperative moods are formed by combination of the auxiliary root and the second order verbal suffix *-ta*. Tense is shown by the third order verbal suffix. The implied negative and implied admonitive moods can be negated.

IMPLIED NEGATIVE. The combination for implied negative mood is auxiliary root *pa-* and second order verbal suffix *-ta*. The meaning with this mood is 'should have, would have'. The implication is that the action was not carried out and will probably not be carried out, hence the title 'implied negative'. Both past and nonpast tenses occur.

<i>ŋuŋa-kaŋi pa-lipa-φ</i>	<i>yan-ta-la</i>
camp-to AUX:RT-1:INCL:SB-PL:SB	go-IMPL-PAST
	'We should have gone to the camp.'
<i>yaŋka pa-lipa-φ</i>	<i>yan-ta-φ</i>
that AUX:RT-1:INCL:SB-PL:SB	go-IMPL-NPAST
<i>ŋuŋa-kaŋi</i>	
camp-to	
	'We should go to that camp.'
<i>ŋjanaŋi-φ yapa-wuŋu-φ ma-φ-φ-ŋja-φ</i>	
that-NOM child-even-NOM	AUX:RT-3:SB-3:OB-PL:OB-SG:SB
<i>maŋaŋ-an-ta-la</i>	<i>paŋaŋj-tju,</i>
keep-CONT-IMPL-PAST	old:woman-ERG
<i>kalinta-ŋi</i>	<i>ŋunaŋ-an-ta-la</i>
young:woman-EMPH	exists-CONT-IMPL-PAST
	'Even (if) the old woman would have had many children, she would have stayed young.'
<i>ŋjanaŋi-φ pa-φ-φ</i>	<i>tjiljlan-u-tjaŋka-φ</i>
that-NOM	AUX:RT-3:SB-SG:SB
	pierce-OBL-from-NOM

<i>piyiŋ-φ tupaŋj-tja-φ</i>
man-NOM swell-IMPL-NPAST
'The man should be swelling up from that snake bite.'

IMPLIED ADMONITIVE. The combination for implied admonitive mood is the auxiliary root *ŋa-* and the second order verbal suffix *-ta*. The meaning here is 'might', and it is frequently used as a warning or admonition with a second person subject. Both past and nonpast tenses can occur.

<i>wanti-φ-φ</i>	<i>ŋa-n-φ</i>
fall-IMPL-NPAST	AUX:RT-2:SB-SG:SB
	'You might fall.'
<i>wanti-φ-la</i>	<i>ŋa-n-φ</i>
fall-IMPL-PAST	AUX:RT-2:SB-SG:SB
	'You might have fallen down.'
<i>puŋ-ka-la</i>	<i>ŋa-φ-n-ta-lu</i>
hit-IMPL-PAST	AUX:RT-3:SB-2:OB-SG:OB-PL:SB
	'They might have hit you.'
<i>ramaŋa-wuŋi-φ ŋa-φ-lipa-ŋja-lu</i>	
ribs-even-NOM	AUX:RT-3:SB-1:INCL:OB-PL:OB-PL:SB
<i>luwa-φ-φ</i>	
spear-IMPL-NPAST	
	'They might even hit us in the ribs.'

IMPERATIVE. Only sentences with 2nd person subject occur in imperative mood. There is an absence of an auxiliary root and the 2nd order suffix *-ta* is present in the verb. In this mood the subject noun phrase is obligatorily absent and the 2nd person subject morpheme (1st order) is deleted from the auxiliary. Other suffixes from the auxiliary are then attached to the verb. There is no past tense in imperative mood.

<i>yan-ta-lu</i>	'All of you go!'
go-IMPL-PL:SB	
<i>maŋj-tja-φ-ŋjanaŋu-pila</i>	'You two talk to them!'
speaK-IMPL-3:BN-PL:BN-DU:SB	
<i>puŋ-ka-φ-pinja-φ</i>	'You hit those two!'
hit-IMPL-3:OB-DU:OB-SG:SB	
<i>ŋjumukmaŋj-tja-ŋjanu</i>	'Wash yourself!'
wash-IMPL-REFL	
<i>ŋjaŋ-an-ta-φ-tji-lu</i>	<i>paŋi-φ</i>
see-CONT-IMPL-1:BN-SG:BN-PL:SB	boy-NOM
	'You all keep watching the boy for me!'

OBLIGATIVE MOOD. The obligative mood is irregular in the following respects.

1. There is no verbal auxiliary. Both root and suffixes are absent.
2. It does not occur in a clause in isolation. The only times it occurs as a main verb are in procedural discourses or sentences where tense and identity of participants are already established. It shares the subject with a clause contiguous to it. (In examples in this section the literal translation of verbs in obligative mood are in italics, and commas separate the clauses.)

yijkilan-u, kulpuŋ-an-i
 pull:out:with:stick-OBL try-CONT-PAST
ma-ŋa-φ-φ-lu-ŋjanta "pukař"
 AUX:RT-1:EXCL:SB-3:ACC-SG:ACC-PL:SB-ACC cooked
pa-φ-φ waliwu.", *paŋkiman-u*
 AUX:RT-3:SB-SG:SB alright awake:OBL
pinitj, kuřkukan-u, kuřkukan-u layi-ŋa
 finish heap:up-OBL heap:up-OBL one-LOC
pinitj, patjan-u yařapuy-u
 finish crack-OBL spread-OBL

'Now (we) pull them out of the fire with a stick. We used to test them, "It's cooked alright". Take (them) all out of the fire, heap (them) up, heap (them) all up in one place, crack (them), spread (them) out.'

3. The past/nonpast tense distinction is not easily defined although both tenses occur. The meaning of obligative mood in nonpast tense is 'one must, one should do something'. To show the contrast examples in both tenses are given.

Nonpast tense

tjamuŋ pa-řipa-φ-φ-φ *yaŋka*
 almost AUX:RT-1:INCL:SB-3:OB-SG:OB-PL:SB that
pamař-φ mařal-anj, mařpi ŋuřa-ŋa
 money-NOM keep-CUST maybe camp-at
pakit-ta yakuř-φ mařaŋ-u ŋjanti-φ
 pocket-LOC bad-NOM keep-OBL it-NOM
yutukan-an-u yalařila-ŋi pulka-ŋa
 put-CONT-OBL there-EMPH big-LOC
yapitj-tja
 office-LOC

'As soon as we get money, maybe it's bad to keep it in your pocket in the camp. It should be put in the bank at the office.'

Past tense

tjuŋuŋ-u-la ma-ŋa-φ-φ-lu
 cut-OBL-PAST AUX:RT-1:EXCL:SB-3:OB-SG:OB-PL:SB
kuyi-φ kampaŋ-i
 meat-NOM cook-PAST
 'Having cut it, we cooked the meat.'

Negative moods

The two moods, implied negative and implied admonitive can be negated. Two negative words are involved. They are *ŋatjiřa* and *kayan*. *ŋatjiřa* is used in isolation as a negative response as well as in the negative mood, whereas *kayan* doesn't function anywhere else in the language. The negative word is normally first in the clause.

IMPLIED NEGATIVE. Implied negative can only be negated with the word *ŋatjiřa*. When implied negative mood is negated it is semantically the negation of the indicative mood. It becomes an absolute negative and both tenses can occur.

ŋatjiřa pa-φ-lu yan-ta-la
 NEG AUX:RT-3:SB-PL:SB go-IMPL-PAST
 'They didn't go.'
ŋatjiřa ma-ŋa-φ-ŋja-φ
 NEG AUX:RT-1:SB-3:OB-PL:OB-SG:SB
wanjtiři-φ luwa-φ-φ
 kangaroo-NOM spear-IMPL-NPAST
 'I don't spear kangaroo.'
ŋatjiřa pa-φ-φ-lu
 NEG AUX:RT-3:SB-3:OB-SG:OB-PL:SB
řan-ta-la kuyi-φ
 pierce-IMPL-PAST animal-NOM
 'They didn't spear the animal.'
ŋatjiřa ma-φ-φ-ŋja-φ
 NEG AUX:RT-3:SB-3:OB-PL:OB-SG:SB
kunjař-u patjan-an-ta-φ
 dog-ERG bite-CONT-IMPL-NPAST
 'The dog doesn't bite them.'

IMPLIED ADMONITIVE. Implied Admonitive mood can be negated with either negative.

With the negative *ŋatjiřa* it is semantically the negation of the imperative mood. Past tense has not been definitely established with the negative *ŋatjiřa*.

ŋatjiřa ŋa-n-φ yan-ta-φ
 NEG AUX:RT-2:SB-SG:SB go-IMPL-NPAST
 'Don't go!'
ŋatjiřa ŋařa-φ-ŋja-φ
 NEG AUX:RT-1:INCL:SB-3:OB-PL:OB-PL:SB
ŋana-ŋu-wuři ŋja-ka-φ
 what-ERG-even look-IMPL-NPAST
 'Don't anybody look at it!'
ŋatjiřa ŋa-řipa-φ-ŋja-φ
 NEG AUX:RT-1:IN:SB-3:OB-PL:OB-PL:SB
ŋja-ka-φ
 look-IMPL-NPAST
 'We must not look at them!'

With the negative *kayan* this mood gives a negative possibility. Both tenses have been heard with *kayan* but past tense is not very common.

kayan ŋa-ŋa-φ-ŋja-φ ŋanj-tja-φ
 NEG AUX:RT-1:SB-3:OB-SG:OB-SG:SB eat-IMPL-NPAST
miyiwaŋři-φ ŋjanařiwaŋři-φ
 foods-NOM those-NOM
 'I can't eat those foods.'
kayan ŋa-řipa-φ mimi-φ wanti-φ-φ
 NEG AUX:RT-1:INCL:PL:SB sick-NOM fall-IMPL-NPAST
 'We won't get sick.'
kayan ŋařa-φ-φ řuřapuy-ka-la wikpala-φ
 NEG AUX:RT-3:SB-SG:SB rise-IMPL-PAST weak-NOM
 'He couldn't get up because of weakness.'

OBLIGATIVE. Both negative words occur with obligative mood and the meaning is 'one must not, ought not do something'. There is insufficient data to determine in what situations either of the negatives should be used.

Kayan has only been found once in text.

ḡanampa-ḡ yapawaḡi-ḡ wuḡu-ḡ kiḡaḡ-an-i,
we:EXCL-NOM children-NOM silent-NOM sit-CONT-PAST

ḡatjiḡa-ḡi luḡ-u, kulkuḡukutjiḡ-i
NEG-EMPH cry-OBL quieten-PAST

ma-ḡ-ḡa-panja-lu

AUX:RT-3:SB-1:EXCL:OB-PL:OB-PL:SB

'We children sat quietly, we couldn't cry, they quietened us.'

kayan piyiḡ-ḡ yan-u

NEG man-NOM go-OBL

'Man mustn't go (there).'

Stative clauses

Moods which function in stative clauses are indicative and interrogative. As there is no verb, the mood is indicated only by the auxiliary root.

Indicative mood:

mimitjaḡi pa-ḡ-lu 'They are sick.'
sick AUX:RT-3:SB-PL:SB

Interrogative mood:

mimitjaḡi ḡa-ḡ-lu 'Are they sick?'
sick AUX:RT-3:SB-PL:SB

The indicative stative can be negated with *ḡatjiḡa*. Interrogative stative cannot be negated.

ḡatjiḡa pa-ḡ-lu mimitjaḡi
NEG AUX:RT-3:SB-PL:SB sick
'They are not sick.'

ḡatjiḡa pa-ḡ-ḡ njang-u-puḡu
NEG AUX:RT-3:SB-SG:SB see-OBL-PURPOSE
'It is not to be seen (by women).'

Notes

1. The author's spelling of this language name is *Walmatjara*. Its reference number in Oates *A revised linguistic survey of Australia* is 59, 7b.

Walmadjari is spoken in the southern Kimberley area of Western Australia. The *Walmadjari* people in the main live on cattle stations and in towns along the Fitzroy River though some are to be found as far east as Balgo Hills Mission and as far west as La Grange Mission. The material for this paper was collected at Fitzroy Crossing between 1967 and 1974 by the author and Eirlys Richards of the Summer Institute of Linguistics.

2. Although the auxiliary is obligatory, there is one circumstance where it may be omitted without loss of meaning. When 3rd person singular subject and 3rd person singular object are used, there is no suffixation attached to the auxiliary root. In this case, when the mood is indicative, the auxiliary root *pa-* may be deleted. This usually happens in fast flowing speech.

ḡanpayi-ḡ pa-ḡ-ḡ ḡuḡa-ḡa kiḡaḡana
man-NOM AUX:RT-3:SB-SG:SB camp-LOC is:sitting

becomes

ḡanpayi ḡuḡa-ḡa kiḡaḡana
'The man is sitting in the camp.'

ḡanpayi-lu pa-ḡ-ḡ-ḡ-ḡ paḡi-ḡ
man-ERG AUX:RT-3:SB-3:OB-SG:OB-SG:SB boy-NOM

pinja
hit

becomes

ḡanpayi-lu paḡi-ḡ pinja
'The man hit the boy.'

When these same cases (3rd person singular subject, 3rd person singular object) occur in moods where the root *ḡa-* is used, the root changes to the form *ḡaḡa-*. This may not be deleted.

ḡanpayi-ḡ ḡaḡa-ḡ-ḡ kiḡaḡana ḡuḡa-ḡa
man-NOM AUX:RT-3:SB-SG:SB is:sitting camp-LOC
'Is the man sitting in the camp?'

Reference

Capell, A. 1967. 'Pronominalisation in Australian languages.' *Pacific Linguistics*, Series A, No. 11: 21-41.

83. Pitjantjatjara

John T. Platt

1. Introduction

Capell states of Pitjantjatjara (precirculated version of Paper 78 above): 'Here most verbs are simple, but some are compounded with *bu* "hit", *dju* "put", *ri* "become" and others. Glass and Hackett (1970) speak of "an obligatory core tagmeme manifested by . . . (one of these auxiliaries)", but they then write them as a single word.'

On the basis of the stress pattern in Pitjantjatjara—stress on syllable one—it seems appropriate to consider such compound verbs as single lexical items, unless primary stress occurs twice as it does with some compound verbal groups. I should like to claim that the vast majority of Pitjantjatjara verbs must be considered as compound.

2. Verb types

Verbs will be considered according to the verbalising affix. The class of verb according to Imperative affixation: *ḡ*, *la*, *ra* or *wa* will also be given, cf. Douglas (1964:36). However, the exemplification will be from the Ernabella form of Pitjantjatjara and not from the Ngaanyatjara form described by Douglas and by Glass and Hackett (1970).

2.1. THE *-riṅanyi* TYPE (*-wa* CLASS). Of a list of 72 verbs ending in *-riṅanyi* (Present Tense form), 67 are clearly analysable into Stem+*-riṅanyi*. Many of these are obvious Inchoatives by anyone's judgement, for example:

<i>muṅa</i>	'night'	<i>muṅariṅanyi</i>	'become night'
<i>kawakawa</i>	'mad'	<i>kawakawariṅanyi</i>	'become mad'

Some are clearly Inchoatives if we gloss them as 'become+adjective/noun' rather than simply 'verb', for example:

<i>pakuwiyariṅanyi</i>	'rest', 'become not tired'
<i>rapariṅanyi</i>	'trust', 'become trusting'
<i>walariṅanyi</i>	'flow (of water)', 'become waterfall'

The five for which no definite analysis can be given are:

- iluriṅanyi* 'thirst, be thirsty'
- kitikitiriṅanyi* 'go aside'
- nyaliriṅanyi* glossed as 'girl making eyes at a man'
- ra:ra:riṅanyi* 'swell, become swollen'
- ultariṅanyi* glossed as 'sit in camp and not go hunting'

Of these (a) and (d) are easily conceived of as Inchoatives, (b) too as *kitikiti* is 'aside', 'apart'. However, what *nyali* and *ulta* could be, I cannot suggest. However, it seems that *-riṅanyi* is an Inchoative verb forming suffix.

2.2. THE *-rinyi* TYPE (*-wa* CLASS). The *-rinyi* (Present Tense form) affix is probably to be considered with *-riṅanyi* as an allomorph of an Inchoative forming affix, the forms occurring according to the number of syllables in the stem. Included here is the *-arinyi* form occurring after consonant final stems.

Of a total of 48 verbs with *-rinyi*, *-arinyi* (and one irregular *-ariṅa*) affixation, 41 are clearly analysable. Again, some are semantically interesting:

<i>tjiṭula</i>	'orphan'	<i>tjiṭularinyi</i>	'miss someone' (become as if an orphan)
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<i>wipiya</i>	'emu feathers'	<i>wipiyarinyi</i>	'work up for a fight'
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but others are quite usual and obvious, for example:

<i>witulya</i>	'power, strength'	<i>witulyarinyi</i>	'become strong'
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The seven for which I cannot find related adjectives or nominals—or a related verb—are:

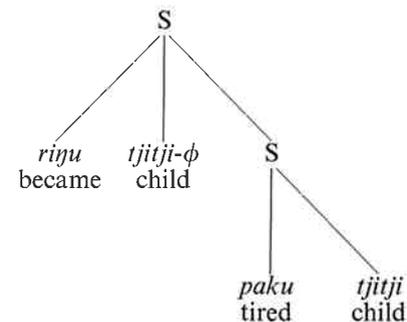
- ilṭiṅkailṭiṅkarinyi* 'ring'
- malykunarinyi* 'become faded, blurred'
- manararinyi* 'become numb, cold'
- wayiririnyi* glossed as 'be confident in strange place'
- itipirinyi* 'cross over'
- aranarinyi* 'become calm'
- ṭaṭanarinyi* 'sprout, grow'

Of these, (b), (c) and (f) are obviously Inchoatives, (e) seems to be related to *itinka* 'by, beside', but *ilṭiṅka*, *wayiri* and *ṭaṭan* are not attested forms.

The underlying structure of sentences with inchoative verbs might be represented as (1).

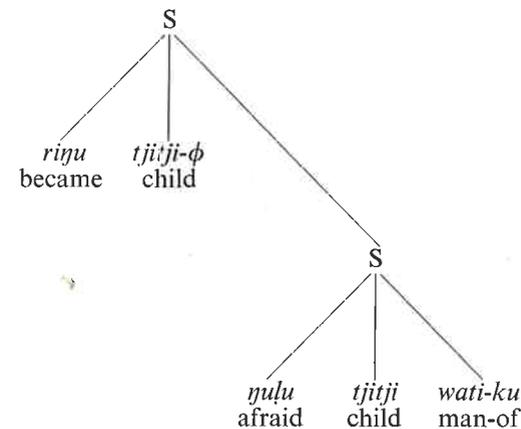
Some verbs which might be considered as transitive are also of this type and do not follow the usual *-ṅku/-lu/-tu* Subject affixation and *ḥ/-nya/-pa/-ṅa* Object affixation but *-ḥ/-nya/-pa/-ṅa* Subject affixation and *-ku* 'Object' affixation, for example (2).

(1)



tjitji pakuriṅu
'The child became tired.'

(2)



tjitji watiku ṅuluriṅu
'The child became frightened/afraid of the man.'
'The child feared the man.'

2.3. THE *-ṅi* TYPE (*-la* CLASS). Of 197 verbs checked in this class, many are very obvious Causatives, for example:

<i>alaṅi</i>	'open'	<i>ala</i>	'hole'
<i>kumpiṅi</i>	'hide'	<i>kumpilpa</i>	'hidden'

or incorporate a nominal or adjective as:

<i>maṅaṅi</i>	'crawl'	<i>maṅa</i>	'hand'
<i>miṅi</i>	'skin'	<i>miṅi</i>	'skin'
<i>ṅa:lyariṅi</i>	'sigh'	<i>ṅa:lypa</i>	'breath'

Of the 197 *-ṅi* affixed verbs, 101 are easily analysable, leaving 96 for which no adjective or nominal stem could be found. Of the 101 analysable verbs, some are quite interesting, for example:

<i>uti</i>	'explain, make clear'	<i>uti</i>	'visible, easy'
<i>paka</i>	'arise, get up'	<i>paka</i>	'palm of hand, sole of foot'
<i>kunakulu</i>	'kill, murder'	<i>kunakulu</i>	'recent corpse, unconscious'

Of the remaining 96, a number seem in various ways to be very 'unprimitive' like:

<i>jurujuru</i>	'run around in fear'
<i>lakalakani</i>	'knock' (e.g. sticks together in rhythm)

In fact, it is conceivable that all *-ni* verbs are, in a way, causatives. Even verbs like:

<i>ηalkuni</i>	'eat'
<i>tjikini</i>	'drink'

are verbs in which X causes Y to be Z, namely 'eaten', 'drunk'.

2.4. THE *-tjijani* TYPE (*-la* CLASS). Of 24 verbs ending in *-tjijani* (Present Tense Form), 21 are very clearly analysable, for example:

<i>ikaritjijani</i>	'make to laugh'	<i>ikarijanyi</i>	'laugh'
<i>pakaltjijani</i>	'raise up'	<i>pakani</i>	'rise up'
<i>wiritjijani</i>	'move, shake'	<i>urinyi</i>	'move'

(cause to move or shake)

The three remaining verbs are:

- ηunarijtjijani* 'spin a top, etc.'
- partjijani* 'scrape'
- wimulytjijani* 'slosh water in container'

Of these, (a) and (c) appear to be clearly causatives and (b) appears to be onomatopoeic.

2.5. THE *-tjananyi* TYPE (*-ra* CLASS). Of 14 verbs in this group, 10 are clearly analysable, for example:

<i>piłunťananyi</i>	'knock down'	<i>piłukatinyi</i>	'collapse'
<i>liriťananyi</i>	'choke' (cause to choke)	<i>liri</i>	'neck, throat'

The four exceptions are:

- kutiťananyi* 'hide, conceal' (but cf. *kutiťi* 'shield')
- ku:ntjananyi* 'suck'
- ηurkaťananyi* 'choose' (but cf. *ηuriņi* 'seek, look for')
- pu:ntananyi* 'press, crush' (but cf. *pu:ni* 'blow')

2.6. THE *-tjunanyi* TYPE (*-ra* CLASS). Of 32 verbs in this group, 25 are clearly analysable, for example

<i>nyinatjunanyi</i>	'put in sitting position'	<i>nyinanyi</i>	'be seated'
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The remaining seven are:

- iņiťiritjunanyi* 'pinch'
- ku:łťjunanyi* 'swallow'
- kurkałťjunanyi* 'make fire blaze up'
- ηampalťjunanyi* 'put on a patch'
- tjunatjunanyi* 'bury' (obviously, this is a matter of reduplication but I have included this as there is no separate identifiable morpheme)
- walatjunanyi* 'set free' (but cf. *wala* 'quick(ly)')
- walyťjitjunanyi* 'cook on coals'

None of this group of seven looks particularly monomorphemic.

2.7. THE *-pujanyi* TYPE (*-wa* CLASS). This group of 43 verbs is obviously formed by affixation of the verb *pujanyi* (Present Tense form) 'hit'. Only 10 are clearly analysable as having attested stems, for example:

<i>ułupujanyi</i>	'grind, smash to pieces'	<i>ułu</i>	'ground food'
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wiřupujanyi 'plane smooth' *wiřulya* 'slippery'

but the others such as:

<i>kunytjulpujanyi</i>	'cough'
<i>winarpujanyi</i>	'make hole in end of spear'

are obviously compounds.

2.8. THE *-nanyi* TYPE (*-ra* CLASS). Of 27 verbs, only three are not relatable to nominals, adjectives or to other verbs. Of the 24, all are of a causative type, for example:

<i>parurunanyi</i>	'dry'	<i>paruru</i>	'dry'
<i>kaputunanyi</i>	'bring together'	<i>kaputurinyi</i>	'come together'

The remaining three are:

- palkanťkananyi* 'lift meat on shoulder'
- papulananyi* 'start to recognise'
- tjanalananyi* 'ask'

Of these, only (c) could be considered at all 'primitive' from any semantic viewpoint and it does not look so in morphology.

2.9. THE *-mananyi* TYPE (*-ra* CLASS). The *-mananyi* affix is a well known verbalising affix and appears as an independent verb in some related dialects, for example, Gugada, as 'put, do'.

Of the 35 verbs in this group, 24 are clearly analysable and the remaining 11 are mostly as 'compound meaning' as:

- nantirmananyi* 'creak in the wind, squeak'
- ηa:urmananyi* 'growl'

2.10. THE *-katinyi* TYPE (ϕ CLASS). It is known that *katinyi* is 'bring, take, carry'. Nearly all the 35 verbs in this group refer to actions or movements like: 'drag', 'sink down', 'turn back'. The odd one out is:

<i>pi:łkatinyi</i>	'glisten'
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It could be related to *pi:* 'skin, pelt'. Of the others, 28 are clearly relatable to other lexical items, for example:

<i>tja:katinyi</i>	'yawn'	<i>tja:</i>	'mouth'
<i>nyinakatinyi</i>	'sit down'	<i>nyinanyi</i>	'be seated'

3. Proportion of unanalysable verbs

So far, I have mentioned groups containing 527 verbs. Of these, if we add up those mentioned as clearly analysable, we have 351 with 176 not definitely analysable. Thus, we have 67 per cent of verbs analysable, and with an identifiable stem.

If, of course, we allow all *-tjunanyi* 'put', *pujanyi*, *mananyi* and *katinyi* verbs as not simple, we must add 57 more to the 351, making 408, which is 77 per cent of the total.

Of all the groups, the most dubious is the *-ni* group. All the others seem to be formed with clearly Inchoative or Causative forming affixes. If we were to allow *all* verbs of the groups mentioned to be considered as compound except the 96 *-ni* affixed verbs not at present analysable, we would have 430 compound verbs out of the 527, a proportion of nearly 82 per cent.

4. Other verbs

Of 75 other verbs or verbal groups, 25 are verbal groups such as:

ɲalku katinyi 'eat whilst going along'
kulira wantinyi 'disregard' (listening reject)

This leaves 50, of which a number are clearly compound:

1 is a compound with *nyanyanyi* 'see'
 1 is a compound with *ananyi* 'go'
 1 is a compound with *wantinyi* 'reject'
 1 is a compound with *pitjanyi* 'come'
 1 is a compound with *kampanyi* 'burn'
 1 is a compound with *ruŋkani* 'grind, hurl'
 1 is a compound with *pakani* 'rise'
 4 are compounds with *ɲaranyi* 'stand'

making a total of 11.

This leaves 39 possible primitive verbs although some of these are almost certainly not, for example:

tjilpirtjalkanyi 'be rent apart' (*tjilpirpa* 'wood chips')
tjunmirinanyi 'cook in ashes' (*miri* 'skin')
tjukutjutinyi 'foam at the mouth' (*tjulku* 'mud')
palyaruŋuŋi 'make better' (*palya* 'good')

This leaves 35 verbs, some of which do not seem at all simple, for example:

wawanyarinyi 'be weak after illness'

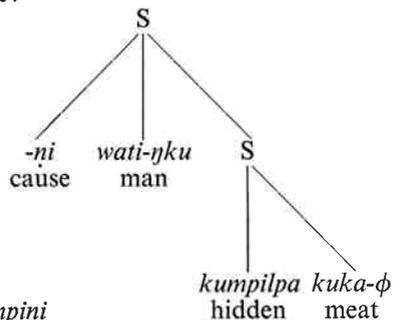
5. Conclusions

If we add the 50 verbs under section 4 (leaving out the 25 which occur as separate lexical items) we have a total of 577 verbs. If we add the 35 dubious verbs just mentioned to the 96 *-ni* verbs, we have 131 possibly simple verbs out of a total of 577. Thus, we have nearly 23 per cent possibly 'simple' and just over 77 per cent compound.

Of course, proportions like this are only a rough indication. For example, among the verbal groups of two lexical items are concepts expressed by a single verb in English, for example 'roll', 'argue'.

However, it is clear that Pitjantjatjara has a quite small proportion of 'simple' verbs. I feel that the actual proportion is probably less than 10 per cent as many of the *-ni* verbs are quite obviously not simple, as mentioned under 2.3.

Some further analyses of inchoative type verbs are given in Platt (1974). The following is a suggested underlying structure representation for a typical causative verb sentence:



watiŋku kuka kumpiŋi
 'The man hides the meat.'

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84. The Daly Family

D. T. Tryon

1. Introduction

The languages of the Daly Family (Northern Territory) are generally characterised by numerous verb classes, each verb class being determined by a separate set of auxiliaries which bear tense/aspect, actor and often 'type of action' morphemes.

This paper proposes to examine the nature of the verbal auxiliaries within the Daly Family as a whole, as well as their function within individual groups and subgroups, since while all of the Daly languages manifest 'conjugation by auxiliaries', the function and composition of the auxiliaries varies to some extent throughout the Family. Before examining the nature of the Daly auxiliaries and their variation and function throughout the various subgroups, the membership of the Daly Family should be outlined.

2. The Daly Family

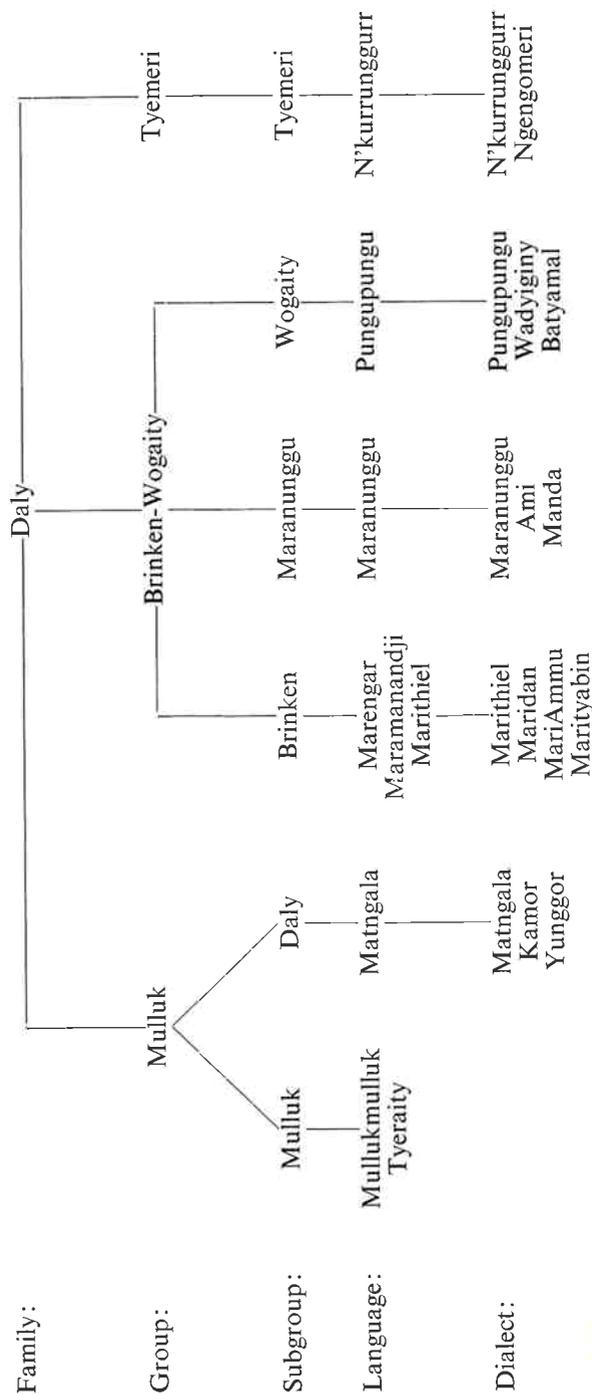
The Daly Family is located in northern Australia, roughly one hundred miles south-west of Darwin, on and around the Daly River. It consists of nine distinct languages and numerous dialects, represented in Table 1.

The classification is based on both morphological and lexico-statistical criteria, details of which are irrelevant for purposes of this paper. (For further details see Tryon (1974).) Nearly half of the languages represented are on the point of extinction. Indeed, Yunggor, Kamor and Tyeraity have become so since research in the area was first undertaken by the present writer in 1967. However, depth studies of a reasonable number of Daly Family languages have been undertaken recently by Hoddinott, Birk and Tryon.

3. The nature of Daly Family auxiliaries

The nature of the Daly Family auxiliaries is perhaps best explained by a brief examination of the main features of the verb morphology of one of the languages, Maranunggu, taken as a model for the Family as a whole. This may be taken as a standard against which the auxiliary systems present in other Daly languages may be measured, as they are described below.

Table 1: Languages and dialects of the Daly Family



In Maranunggu there are some 18 verb classes, as follows:

1. Verbs of motion.
2. Verbs of projection.
3. Verbs in which the action is performed standing.
4. Verbs in which the action is performed lying.
5. Verbs in which the action is performed sitting.
6. Verbs of saying.
7. Verbs of holding
8. Verbs in which the action is performed with the hands.
9. Verbs of building or destroying.
10. Verbs of cutting.
11. Verbs of eating, drinking and dying.
12. Verbs of seeing.
13. Verbs of involuntary movement.
14. Unaspectual verbs.
15. Verbs of vertical movement.
16. Verbs of arranging.
17. Verbs of sensing.
18. Verbs of burning.

Only the main six classes, of which the vast majority of verb stems are members, will be described here. For a more complete description, see Tryon (1970a).

In Maranunggu, the verb phrase may be expressed in terms of the formula:

$$\text{VPhr} = \pm \text{Verb Stem} + \text{Auxiliary Unit}$$

This is to say that all verb stems, free forms in Maranunggu, must be accompanied by an auxiliary unit appropriate to the particular verb class of which they are members. The auxiliary unit is generally trimorphemic, the morphemes indicating tense, actor and type of action. In several cases, the auxiliary unit itself may constitute a complete utterance, a feature which will be further commented on below. The auxiliary units for the six principal Maranunggu verb classes are as follows:

Class 1: Verbs of motion

	Non-future	Future
I	<i>ka-ŋa-ni</i>	<i>ŋa-wa-ni</i>
you	<i>ka-na-ni</i>	<i>wari</i>
he	<i>ka-na</i>	<i>ka-wa-ni</i>
we pl. inc.	<i>ka-rka-ni</i>	<i>ŋa-rka-ni</i>
we pl. exc.	<i>warin</i>	<i>ŋa-ra-ni</i>
you pl.	<i>ka-ra-ni</i>	<i>warira</i>
they	<i>ku-ni-n^ya</i>	<i>pu-ra-ni</i>
we dl. inc.	<i>ka-ma-ni</i>	<i>ŋa-ma-ni</i>

The auxiliary unit may either precede or follow the verb stem and is phonologically separate from it. It describes the general field of action, while the verb stem itself describes the particular action performed within the specified field. Examples:

tir wuttar wat ka-ŋa-ni yi
edge beach walk NF-I-go PAST/CA
'I walked to the beach.'

tawar ŋa-wa-ni kalkal atu
tree FUT-I-go climb FUT
'I shall climb the tree.'

There are two basic tenses in Maranunggu, the non-future and the future. A non-future auxiliary unit indicates a present continuous or immediate past tense. A general past tense, indicating a completed action, is indicated by the completed action marker *yi/ayi* following the verb stem and auxiliary unit. The future auxiliary unit indicates an immediate future tense, while the general future is indicated by a secondary auxiliary *tu/atatu*. In this paper we will be concerned specifically only with the auxiliary units or 'primary' auxiliaries.

Several of the auxiliary units constitute meaningful utterances in their own right.¹ Examples:

tawun ka-ŋa-ni yi
town NF-I-go CA
'I went to town.'

tawun ŋa-wa-ni tu
town FUT-I-go FUT
'I shall go to town.'

It will have been noted that for dual pronoun subjects the only separate pronominal form expresses a first person dual inclusive. In all other cases, the dual paradigm is the same as the plural, with the addition of a dualising suffix.

As is normal in Australian languages, when the subject of a sentence is a noun, it reappears in pronominal form within the auxiliary unit. Example:

werempen ka-na wat ayi wuta yena
crocodile NF-go walk CA water in
'The crocodile went along in the water.'

Remarks made concerning the above verb class are applicable to all other Maranunggu verb classes, so that explanatory notes may be kept to a minimum for the remaining Maranunggu classes to be described.

Class 2: Verbs of standing

Verb stem members of this class normally denote actions performed in a standing position. The corresponding auxiliary units are as follows:

	Non-future	Future
I	<i>ka-ŋa-ma</i>	<i>ŋa-ta-ma</i>
you	<i>ka-na-ma</i>	<i>ta-ŋa-ma</i>
he	<i>ka-ma</i>	<i>ka-ta-ma</i>
we pl. inc.	<i>ka-rka-ma</i>	<i>ŋa-rka-ma</i>
we pl. exc.	<i>tanman</i>	<i>ŋa-ra-ma</i>
you pl.	<i>ka-ra-ma</i>	<i>ta-ŋa-ra-ma</i>
they	<i>ku-ma-n'a</i>	<i>pu-ra-ma</i>
we dl. inc.	<i>ka-ma-ma</i>	<i>ŋa-ma-ma</i>

Examples of usage:

t^yinta na-la ka-ŋa-ma kay ayi
spear it-for NF-I-stand call CA
'I called out for a spear.'

t^yalt^yara ka-ŋa-ma wul ayi
yesterday NF-I-stand return CA
'I came back yesterday.'

Class 3: Verbs of lying

Verb stems belonging to this class normally denote actions thought of as usually performed in a lying position. The Auxiliary units are as follows:

	Non-future	Future
I	<i>ka-ŋi-ya</i>	<i>ŋa-yu</i>
you	<i>ka-ni-ya</i>	<i>yu-ŋu</i>
he	<i>ka-ya</i>	<i>ka-yu</i>
we pl. inc.	<i>ki-rki-ya</i>	<i>ŋi-rki-ya</i>
we pl. exc.	<i>yun</i>	<i>ŋi-ri-ya</i>
you pl.	<i>ka-ri-ya</i>	<i>yu-ŋu-ra</i>
they	<i>ku-yi-n'a</i>	<i>pi-ri-ya</i>
we dl. inc.	<i>ka-mi-ya</i>	<i>ŋa-mi-ya</i>

Examples:

t^yalt^yara ŋurkur ka-ŋi-ya yi
yesterday sleep NF-I-lie CA
'I slept yesterday.'

tinkirk ka-ŋi-ya yi
sick NF-I-lie CA
'I was sick.'

Class 4: Verbs of sitting

The verb stem members of this class normally denote actions performed in a sitting position. The corresponding auxiliary units are as follows:

	Non-future	Future
I	<i>ka-ŋi-nan</i>	<i>ŋe-ti</i>
you	<i>ka-ni-nan</i>	<i>ni-ŋa</i>
he	<i>ka-nan</i>	<i>ke-ti</i>
we pl. inc.	<i>ki-rki-nan</i>	<i>ŋi-rki-nan</i>
we pl. exc.	<i>nin</i>	<i>ŋe-ri-nan</i>
you pl.	<i>ka-ri-nan</i>	<i>ni-ŋa-ra</i>
they	<i>ku-ni-nan</i>	<i>pi-ri-nan</i>
we dl. inc.	<i>ka-mi-nan</i>	<i>ŋa-mi-nan</i>

Examples:

peku ka-nan wuliya yi
woman NF-sit dance CA
'The woman danced.'

leri ka-ŋi-nan ayi
happy NF-I-sit CA
'I was happy.'

Class 5: Actions performed with the hands

The auxiliary units of this verb class are used with a great number of verb stems denoting almost any action performed with the hands. As the verb stems belonging to this class are almost invariably transitive, the auxiliary unit may not stand alone as a complete utterance, but must always be accompanied by a free form verb stem. The Auxiliary units are as follows:

	Non-future	Future
I	<i>ka-ŋa-ra</i>	<i>ŋa-wa-ra</i>
you	<i>ka-na-ra</i>	<i>ara</i>
he	<i>ka-ra</i>	<i>ka-wa-ra</i>
we pl. inc.	<i>ka-rka-ra</i>	<i>ŋa-rka-ra</i>

we pl. exc.	<i>aran</i>	<i>ŋa-ra-ra</i>
you pl.	<i>ka-ra-ra</i>	<i>ara-ra</i>
they	<i>ku-ri-n'a</i>	<i>pu-ra-ra</i>
we dl. inc.	<i>ka-ma-ra</i>	<i>ŋa-ma-ra</i>

Examples:

t^yinta ka-ŋa-ra pal ayi
 spear NF-I-hands break CA
 'I broke the spear.'
mi natla ka-ŋa-ra pet^y
 dog good NF-I-hands have
 'I have a good dog.'

Class 6: Verbs of cutting

The verb stems belonging to this class fit into the general field of cutting and cleaning, although nothing approaching a specific semantic field has been found which covers all the members of the class. As with Class 5, above, all auxiliary units must be accompanied by a free form verb stem. The auxiliaries are as follows:

	Non-future	Future
I	<i>ka-ŋa-la</i>	<i>ŋa-pa-la</i>
you	<i>ka-na-la</i>	<i>pula</i>
he	<i>ka-la</i>	<i>ka-pa-la</i>
we pl. inc.	<i>ka-ɾka-la</i>	<i>ŋa-ɾka-la</i>
we pl. exc.	<i>pulan</i>	<i>ŋa-ra-la</i>
you pl.	<i>ka-ra-la</i>	<i>pu-la-ra</i>
they	<i>ku-li-n'a</i>	<i>pu-ra-la</i>
we dl. inc.	<i>ka-ma-la</i>	<i>ŋa-ma-la</i>

Examples:

ŋatta ka-ŋa-la putur ayi
 house NF-I-cut clean CA
 'I cleaned the house.'
t^yalt^yara yimin^y ka-ŋa-la kat ayi
 yesterday wood NF-I-cut chop CA
 'I chopped the wood yesterday.'

Summary matrices of auxiliary units

As stated above, the auxiliary units in Maranunggu are generally composed of three morphemes, which occur in the following order: tense-actor-type of action.

TENSE MORPHEMES. The morphemes which indicate the basic tense, either future or non-future, occur first within the auxiliary unit. These are:

	Non-future	Future
3 sing.	<i>ka-</i>	<i>ka-</i>
3 pl.	<i>ku-</i>	<i>pu-</i>
elsewhere	<i>ka-</i>	<i>ŋa-</i>

The forms presented in the above table are generalised. For a detailed discussion, see Tryon (1970b).

ACTOR MORPHEMES. The actor morphemes, with the exception of the third person plural non-future, normally occupy the second position in the

auxiliary unit. The third person plural non-future morpheme, however, normally occupies the final position in the auxiliary unit. The third person singular non-future is always zero, while the first person plural exclusive of the non-future and the second persons singular and plural of the future form a subset which is phonologically quite separate from the remaining units. These will be listed in a separate table. The actor morphemes, in general terms, are as follows:

	Non-future	Future
I	<i>-ŋa-</i>	<i>-wa-</i>
you	<i>-na-</i>	[see below]
he	<i>-φ-</i>	<i>-wa-</i>
we pl. inc.	<i>-ɾka-</i>	<i>-ɾka-</i>
we pl. exc.	[see below]	<i>-ra-</i>
you pl.	<i>-ra-</i>	[see below]
they	<i>-n'a</i>	<i>-ra-</i>
we dl. inc.	<i>-ma-</i>	<i>-ma-</i>

It will be seen that three actor morphemes have the same form *-ra-*. No confusion arises, however, as each is preceded by a different tense morpheme, as outlined above. The forms for the first person plural exclusive non-future and the second persons singular and plural of the future form a separate subset as follows:

	lexc. NF	2s. F	2pl. F
Class 1:	<i>warin</i>	<i>wari</i>	<i>warira</i>
Class 2:	<i>tanman</i>	<i>tayama</i>	<i>tayarama</i>
Class 3:	<i>yun</i>	<i>yuyū</i>	<i>yuyura</i>
Class 4:	<i>nin</i>	<i>niŋa</i>	<i>niyara</i>
Class 5:	<i>aran</i>	<i>ara</i>	<i>arara</i>
Class 6:	<i>pulan</i>	<i>pula</i>	<i>pulara</i>

TYPE OF ACTION MORPHEMES. The morphemes which indicate the general type of action delimiting the field of particular action (indicated by the free form verb stem) normally occur in final position within the auxiliary unit, with the exception of the third person plural discussed above. They are as follows:

Class 1:	<i>-ni</i>
Class 2:	<i>-ma</i>
Class 3:	<i>-ya</i>
Class 4:	<i>-nan</i>
Class 5:	<i>-ra</i>
Class 6:	<i>-la</i>

It is to be noted that some verb stems may be members of more than one verb class, but that as they change class they also change meaning. For example:

kur+ -man AU = to spear, catch
kur+ -n'a AU = to hit (with stick)
kur+ -la AU = to shoot

Further discussion of this feature is to be found in Tryon (1970b).

The above description will serve to illustrate the modus operandi of auxiliaries within the Daly Family as a whole and within Maranunggu in particular. It is proposed, now, to take a representative from each of the subgroups which constitute the Daly Family and to discuss briefly the nature

and form of the auxiliaries within these subgroups, so that similarities and differences of form and function may be assessed.

4. Conjugation by subgroup

4.1. The Brinken-Wogaity Group

As stated above, the Brinken-Wogaity Group consists of three subgroups, as follows:

- (a) Maranunggu subgroup
- (b) Brinken subgroup
- (c) Wogaity subgroup.

4.1.1. **MARANUNGGU SUBGROUP.** The Maranunggu subgroup consists of Maranunggu, Ami and Manda. The auxiliary system within this subgroup has been discussed, see page 678-9, for Maranunggu, and will not be further discussed here.

4.1.2. **BRINKEN SUBGROUP.** The Brinken subgroup, a very close-knit unit, both morphologically and phonologically, consists of Maramanandji, Marengar and Marithiel and its dialects. Only Marithiel will be considered here. For information concerning the other languages, see Tryon (1974).

In Marithiel, as with other members of the Daly Family, there are several verb classes, defined by auxiliary class. The most common Marithiel verb classes are as follows:

1. Actions performed mainly with the hands.
2. Actions performed mainly lying down.
3. Actions performed in a sitting position.
4. Throwing actions.
5. Actions involving cutting.
6. Verbs of seeing and perceiving.
7. Verbs of catching.
8. Verbs of motion.
9. Actions normally performed in a standing position.
10. Verbs of acquiring.
11. Verbs of drinking/dying.
12. Verbs of talking and saying.
13. Verbs of involuntary movement.
14. Verbs of falling.
15. Verbs of wanting and requiring.

The classes outlined here for Marithiel have almost exact parallels in the other languages of the Brinken subgroup. In Marithiel, and by implication the Brinken subgroup, the auxiliary units, while fulfilling basically the same function as in the Maranunggu subgroup, namely that of verb conjugation, show a marked difference in that what was a free form verb stem in Maranunggu becomes a bound form in Marithiel, the bound form being 'infix' within the auxiliary unit. This point will become clear once a selection of Marithiel verb classes is examined below. The following is a brief but representative selection:

Class 1: Verbs of standing

	Non-future	Future
I	<i>kuja-X-a</i>	<i>ŋat^ya-X-wa</i>
you	<i>kuna-X-a</i>	<i>ŋunta-X-wa</i>
he	<i>kuwa-X-a</i>	<i>kat^ya-X-wa</i>
we pl. inc.	<i>kumpa-X-nim-a</i>	<i>ŋumpa-X-nim-wa</i>
we pl. exc.	<i>kirin^ya-X-a</i>	<i>ŋirin^ya-X-wa</i>
you pl.	<i>kinin^ya-X-a</i>	<i>nin^ya-X-wa</i>
they	<i>kun^ya-X-a</i>	<i>pirin^ya-X-wa</i>
we dl. inc.	<i>kumpa-X-a</i>	<i>ŋumpa-X-wa</i>

In each case X represents any verb stem appropriate to the particular verb class. As might be expected, verb stems belonging to this class normally denote actions which are performed in a standing position. Examples:

nit^yiŋani nat^ya-wul-wa
tomorrow I/stand-return-FUT
'I shall come back tomorrow.'
muku kuwa-waliya-ya
woman she/stand-dance-CA
'The woman danced.'

However, with verb classes whose sense is basically intransitive, such as classes representing verbs of sitting, standing, going, lying, etc., the verb stem may be omitted from the verb phrase without rendering the utterance incomplete. Thus:

t^yuwuŋanan kuŋa-ya
yesterday I/stand-CA
'I stood up yesterday.'

Further examples of this feature are cited from the class representing verbs of motion. Thus:

awu ŋin-mir-a
meat I/go-cover-CA
'I covered up the meat.'

BUT:

t^yuwuŋanan tawun ŋin-a
yesterday town I/go-CA
'I went to town yesterday.'

Because of the ability of Brinken subgroup 'basically intransitive' verb classes to omit the lexical verb and yet maintain the completeness of the verb phrase, the term 'auxiliary unit' has been retained to facilitate comparison with other Daly Family languages. To this point, then, Marithiel may be said to exhibit 'conjugation by auxiliary' in much the same manner as Maranunggu described above. However, with verb classes whose sense is basically transitive, the lexical verb is obligatory in all verb phrases, as the class outlined below will demonstrate.

Class 2: Verbs involving cutting actions

The bound form members of this class are many and various, without any more obvious link than the fact that they often include verbs denoting destructive actions of some type, especially cutting actions. As mentioned above, this class always requires a bound form lexical verb. The auxiliary paradigm is as follows:

	Non-future	Future
I	<i>ɲil-X-a</i>	<i>ɲupul-X-wa</i>
you	<i>kinil-X-a</i>	<i>pali-X-wa</i> ¹
he	<i>kil-X-a</i>	<i>kupul-X-wa</i>
we pl. inc.	<i>kumpul-X-nim-a</i>	<i>ɲumpul-X-nim-wa</i>
we pl. exc.	<i>kiliŋki-X-a</i>	<i>ɲiliŋki-X-wa</i>
you pl.	<i>kiniliŋki-X-a</i>	<i>naliŋki-X-wa</i>
they	<i>kuliŋki-X-a</i>	<i>piliŋki-X-wa</i>
we dl. inc.	<i>kumpul-X-a</i>	<i>ɲumpul-X-wa</i>

Examples of usage:

karila ɲil-tut-a
stone I/cut-find-CA
'I found the money.'
ɬawur ɲil-kit-a
wood I/cut-chop-CA
'I chopped down the tree.'
ɬawur kupul-kit-wa
wood he/cut-chop-FUT
'He will chop down the tree.'

The verb class just outlined is typical of Marithiel 'transitive' verb classes in that a bound form verb stem is always required. More typical, however, is the fact that the first 'morpheme' in the verb phrase may be divided into two morphemes, the one expressing the actor and the other the general field of action within which the action expressed by the bound form lexical verb is performed. Thus, with the above class, the morpheme breaks would more properly have been set out as:

	Non-future	Future
I	<i>ɲi-l-X-a</i>	<i>ɲupu-l-X-wa</i>
you	<i>kini-l-X-a</i>	<i>pali-X-wa</i>
he	<i>ki-l-X-a</i>	<i>kupu-l-X-wa</i>
we pl. inc.	<i>kumpu-l-X-nim-a</i>	<i>ɲumpu-l-X-nim-wa</i>
we pl. exc.	<i>ki-l-iŋki-X-a</i>	<i>ɲi-l-iŋki-X-wa</i>
you pl.	<i>kini-l-iŋki-X-a</i>	<i>na-l-iŋki-X-wa</i>
they	<i>ku-l-iŋki-X-a</i>	<i>pi-l-iŋki-X-wa</i>
we dl. inc.	<i>kumpu-l-X-a</i>	<i>ɲumpu-l-X-wa</i>

It is of interest to note that several of the 'action type' markers in Marithiel, such as *-l-* for cutting actions and *-r-* for actions performed mainly with the hands, are the same as for several other members of the Daly Family, for instance Maranunggu, described above.

While it is possible, within the Brinken subgroup, to divide the actor 'morpheme' as presented into two or more morphemes, there are many irregularities in the system, especially with singular actors in the future tense, when the forms for all verb classes are considered. This and related considerations are not vital for purposes of this paper. The point which is important is that while with Brinken subgroup 'transitive' verb classes the term 'auxiliary unit' may not exactly parallel the independent auxiliary units of the Maranunggu subgroup, the transitive units obviously have the same constituents as the independent auxiliaries. For this reason, it has been considered worthwhile retaining the term 'auxiliary unit'. Although the verb stem may be infix or suffixed to it, it nevertheless reveals a system of

'conjugation by auxiliary', whether or not the auxiliary unit has independent status, since, apart from the above considerations, a distinct and separate set of auxiliaries is required by each verb class.

For the Brinken subgroup, then, 'conjugation by auxiliary' is much the same as for the Maranunggu subgroup, described above, but with the difference that the auxiliary units are potentially independent only with verb classes whose sense is basically intransitive (but which may include transitives, as in the examples cited above), while with transitive verb classes the auxiliary units do not enjoy independent status. The question of transitivity/intransitivity will be further discussed in 5. Birk (this conference) will doubtless also discuss this question in his paper on Mullukmulluk auxiliaries, for the role of the auxiliary units within that language is tied as much to transitivity/intransitivity as to any semantically definable range of verb stems constituting a distinct verb class.

4.1.3. WOGAITY SUBGROUP. The Wogaity subgroup consists of Pungupungu, Wadyiginy (Wogaity) and its dialectal form Batyamal. This subgroup poses an unusual problem in that the auxiliary systems present in Pungupungu and Wadyiginy diverge considerably in some areas. Normally within the Daly Family, subgroups manifest almost total uniformity of system.

Pungupungu auxiliary units function in practically the same manner as those described for Maranunggu above. Pungupungu has approximately twenty verb classes, all covering a restricted semantic field. The classes themselves are very similar to those listed for Maranunggu and Marithiel. Two verb classes only will be described here as illustration.

In Pungupungu the verb stem is always a free form, as with the Maranunggu Subgroup. Each verb stem is obligatorily accompanied by an auxiliary unit appropriate to the particular verb class. The paradigm for Class 1 (Verbs of Lying) is as follows:

	Non-future	Future
I	<i>ɲi-ye</i>	<i>ɲa-pi-yaŋ</i>
you	<i>ken^ɲi-ye</i>	<i>ɲa-pi-yaŋ</i>
he	<i>ki-ye</i>	<i>ye-pi-yaŋ</i>
we pl. inc.	<i>ɲeri-ye</i>	<i>ɲara-pi-yaŋ</i>
we pl. exc.	<i>ɲere</i>	<i>ɲar-pi-yaŋ</i>
you pl.	<i>kenki-ye</i>	<i>nar-pi-yaŋ</i>
they	<i>kere</i>	<i>per-pi-yaŋ</i>
we dl. inc.	<i>ɲaŋki-ye</i>	<i>ɲaŋka-pi-yaŋ</i>

The morphemes occur in the order: actor-tense-type of action. In the non-future the tense marker is *-ɸ-*.

Examples:

mærakara marka n^ɲuk ɲi-ye
yesterday flower smell I/lie
'Yesterday I smelled the flower.'
yin^ɲmek ɲatta luruŋ ɲa-pi-yaŋ
tomorrow house clean I-FUT-lie
'I shall clean the house tomorrow.'

The actual constituents of the auxiliary unit need not concern us here. For further details see Tryon (1974). As with Maranunggu, where the sense of the verb class is basically intransitive (that is, verbs of lying, standing, sitting,

motion, saying, etc.), the auxiliary unit may stand alone as a complete utterance. Thus:

<i>ŋi-ye</i>	'I lay down.'
<i>ken'i-ye</i>	'You lay down.'
<i>ki-ye</i>	'He lay down.'

From the above it will be seen that verb classes which are 'basically' intransitive do not exclude transitives. With verb classes which are 'basically' transitive, a free form verb stem (lexical verb) is always required with the auxiliary unit.

With Class 2, Verbs of Sitting, the paradigm is as follows:

	Non-future	Future
I	<i>ŋe-mi</i>	<i>ŋa-p-mu</i>
you	<i>ken'e-mi</i>	<i>na-p-mu</i>
he	<i>ke-mi</i>	<i>ya-p-mu</i>
we pl. inc.	<i>ŋere-mi</i>	<i>ŋara-p-mu</i>
we pl. exc.	<i>ŋer-mi</i>	<i>ŋar-p-mu</i>
you pl.	<i>kanka-mi</i>	<i>nar-p-mu</i>
they	<i>ker-mi</i>	<i>par-p-mu</i>
we dl. inc.	<i>ŋaŋka-mi</i>	<i>ŋaŋka-p-mu</i>

Example:

marakara met'em lak-ma ŋe-mi
yesterday meat eat-state I-sit
'I was eating meat yesterday.'

With Pungupungu, then, the auxiliary unit is different for each verb class, and carries morphemes indicating the actor, tense and general action type.

In Wadyiginy, however, there are considerable similarities, but also considerable differences of system. First let us consider the similarities.

All intransitive verbs in Wadyiginy fall into the same verb classes as they would in Pungupungu. In fact the two systems are practically identical. As an example, an extract from the Class 2 (Verbs of Sitting) paradigm in Wadyiginy is as follows:

	Non-future	Future
I	<i>ŋe-mi</i>	<i>ŋa-p-mu</i>
you	<i>ken'e-mi</i>	<i>n'a-p-mu</i>
he	<i>ke-mi</i>	<i>ya-p-mu</i>
we pl. inc.	<i>ŋere-mi</i>	<i>ŋara-p-mu</i>

Example:

marakara ŋe-mi rek pene
yesterday I-sit camp at
'I stayed home yesterday.'

With intransitive verb classes (which exclude all transitives, unlike the Pungupungu 'basically' intransitive verb classes), then, the Wadyiginy auxiliary units parallel those of Pungupungu in almost every respect.

With transitive verbs, however, Wadyiginy has been observed to employ a system which is unique within the Daly Family. All transitive verbs fall within the same class, or viewed negatively, there are no verb classes based on auxiliary conjugation or on any other basis in Wadyiginy as far as the writer is aware.

In Wadyiginy all noun direct objects reappear in pronominal form within the verb phrase. In Pungupungu, and indeed in all the other languages of the

Daly Family, pronominal objects are normally suffixed to the auxiliary unit. However, in Wadyiginy they are prefixed, the transitive verb phrase having the structure:

VPhr(Trans.):+Subject/Object+Pred.(VS+tense).

Not only are the Wadyiginy forms prefixed rather than suffixed but also they are phonologically unrelated to the forms used in Pungupungu. In fact, the pronoun subject and object are fused into a combined or portmanteau morpheme, a feature not found elsewhere within the Daly Family. With noun objects, then, there are four possible forms for each actor, as illustrated in the following examples:

<i>win</i>	<i>ŋin-pirine</i>	'You cut the wood (stick).'
wood	you/it-cut NF	
<i>win</i>	<i>n'an-pirine</i>	'You cut the wood (sticks).'
wood	you/them-cut NF	
<i>win</i>	<i>ye-pira</i>	'You will cut the wood (stick).'
wood	you/it-cut F	
<i>win</i>	<i>n'at-pira</i>	'You will cut the wood (sticks).'
wood	you/them-cut F	

There are four forms which occur with each person according to whether the tense of the verb is future or non-future and whether the object is singular or plural. This pattern, of course, forms an integral part of the personal pronoun object system of Wadyiginy. The fact that Wadyiginy has a separate portmanteau morpheme to express all pronoun subject/object relationships is not of particular relevance to this paper. What is pertinent is that with Wadyiginy transitive verbs, auxiliary units, as described so far for other Daly Family languages, are absent, as are the verb classes so characteristic of other members of the Family. For further details and discussion of this point, see Tryon (1974).

4.2. Tyemeri Group

The Tyemeri Group is represented by Ngangikurrunggurr and Ngengomeri, both dialects of the same language. The dialect selected to illustrate the auxiliary system is Ngangikurrunggurr.

Hoddinott (personal communication) estimates that there are approximately 25 verb classes in Ngangikurrunggurr, each defined by auxiliary class and having a generally specifiable semantic range. Some typical verb classes for this language include:

1. Verbs of lying.
2. Verbs of sitting.
3. Verbs of motion.
4. Verbs of projection.
5. Verbs of standing.
6. Verbs of destroying.

It will be seen that these classes are almost identical to those discussed above for other Daly Family languages.

A typical Ngangikurrunggurr auxiliary unit paradigm (verbs of sitting, in this case), is as follows:

	Past	Present	Future
I	<i>ŋi-ni-X</i>	<i>ŋi-rim</i>	<i>ŋi-wi-X</i>
you	<i>yi-ni-X</i>	<i>yi-rim</i>	<i>yi-wi-X</i>
he	<i>di-ni-X</i>	<i>ki-rim</i>	<i>wi-ri-X</i>
we pl. inc.	<i>ŋindi-ni-X-nime</i>	<i>ŋindim-nime</i>	<i>ŋimbi-X</i>
we pl. exc.	<i>ŋin-ni-X</i>	<i>ŋi-rim</i>	<i>ŋi-ri-X</i>
you pl.	<i>yin-ni-X</i>	<i>yi-rim</i>	<i>yi-ri-X</i>
they	<i>win-ni-X</i>	<i>wi-rim</i>	<i>wi-ri-X</i>
we dl. inc.	<i>ŋindi-ni-X</i>	<i>ŋindim</i>	<i>ŋimbi-X</i>
we dl. exc.	<i>ŋin-ne-X</i>	<i>ŋi-ruŋ-gu</i>	<i>ŋi-ri-gu-X</i>
you dl.	<i>yin-ne-X</i>	<i>yi-ruŋ-gu</i>	<i>yi-ri-gu-X</i>
they dl.	<i>win-ne-X</i>	<i>wi-ruŋ-gu</i>	<i>wi-ri-gu-X</i>

Examples:

kult^yi nimbi ŋi-ni-t^ye
 yesterday I-NF/sit-PAST
 'I sat down yesterday.'
miyi ni-ŋi-lalir-t^ye kult^yi nimbi
 food I-NF/sit-eat-PAST yesterday
 'I ate food yesterday.'

But also:

miyi lalir ŋi-ni-t^ye kult^yi nimbi
 food eat I-NF/sit-PAST yesterday
 'I ate the food yesterday.'

As with other Daly Family languages the auxiliary unit alone may constitute a complete utterance, as in the first example above, with verb classes whose basic sense is intransitive, such as verbs of sitting, standing, lying, etc. In Ngangikurrunggurr, the verb stem is normally a bound form, as in the second example and is infixed within the auxiliary unit, as was the case with the Brinken Subgroup of the Brinken-Wogaity Group described above. However, the verb stem may also occur as a free form and precede the auxiliary unit. The independent status of the auxiliary unit in Ngangikurrunggurr, then, is established, although with the same restrictions as apply to the Brinken Subgroup. Further discussion of the status of the auxiliary unit in Ngangikurrunggurr may be found in Tryon (1974).

As an example of a basically transitive verb class, the singular auxiliary unit paradigm for the class 'verbs of seeking' is given, as follows:

	Past	Present	Future
I	<i>ŋu-ni-X</i>	<i>ŋu-pun</i>	<i>ŋu-φ-X</i>
you	<i>yu-ni-X</i>	<i>yu-pun</i>	<i>yu-φ-X</i>
he	<i>wu-ni-X</i>	<i>wu-pun</i>	<i>wu-φ-X</i>

Examples:

ŋun^yananiŋgi nandu ŋu-pipili-ŋini
 tomorrow horse I-look-FUT
 'I shall look for the horse tomorrow.'
kult^yi nimbi nandu ŋu-ni-pipili-t^ye ŋa-kadi
 yesterday horse I-seeking-seeking-PAST I-go
 'I went looking for the horse yesterday.'

It is to be noted that with present tense forms the verb stem is usually not 'infix' but precedes the auxiliary unit as a free form.

4.3. Mulluk Group

The Mulluk Group while manifesting basically the same type of compounding and conjugation by auxiliary as the other languages of the Daly Family differs in that only five verb classes have been found, compared with the twenty or so which characterise the remaining Groups within the Family. The Mulluk Group forms two subgroups, the Mulluk and Daly Subgroups.

4.3.1. MULLUK SUBGROUP. The Mulluk subgroup consists of Mullukmulluk and Tyeraity. Since Birk (this conference) will be discussing the Mullukmulluk auxiliary system in some detail, illustrative material will be taken from Tyeraity, although in terms of verb morphology the two languages are very closely related.

Within the Mulluk Group, the five verb classes, determined by auxiliary, are as follows:

1. Verbs of sitting.
2. Verbs of standing.
3. Verbs of lying.
4. Verbs of motion
5. A general verb class.

In Tyeraity, as in Mullukmulluk, the verb stem is always a free form, and is followed by an auxiliary unit appropriate to the particular verb class involved. As with the other Daly Family languages, each verb class has a special set of auxiliary units. For example, in Tyeraity, the auxiliary paradigm for the class 'Verbs of Lying' is as follows:

	Non-future	Future	Immediate future
I	<i>ayæ(me)</i>	<i>awun^yuŋ</i>	<i>etæyuy</i>
you	<i>nun^yæ(me)</i>	<i>nuwun^yuŋ</i>	<i>næntæyuy</i>
he	<i>yæyæ(me)</i>	<i>yiniyay</i>	<i>yin^yuŋ</i>
she	<i>næn^yæ(me)</i>	<i>næniyay</i>	<i>nun^yuŋ</i>
it (a)	<i>wæyæ(me)</i>	<i>wæniyay</i>	<i>wun^yuŋ</i>
it (b)	<i>mæyæ(me)</i>	<i>mæniyay</i>	<i>mun^yuŋ</i>
we pl. inc.	<i>er^tyæ(me)</i>	<i>ærkuwun^yuŋ</i>	<i>ertæyuy</i>
we pl. exc.	<i>eræ(me)</i>	<i>aran^yaŋ</i>	<i>ettæyuy</i>
you pl.	<i>nukuRu(me)</i>	<i>nuŋkuRun^yuŋ</i>	<i>nukuttuyuy</i>
they	<i>wuru(me)</i>	<i>wurun^yuŋ</i>	<i>wuttuyuy</i>
we two inc.	<i>aŋkuyu(me)</i>	<i>aŋkuwun^yuŋ</i>	<i>aŋkutuyuy</i>

As is usual within the family, the auxiliary unit carries the actor and tense/action type morphemes, a breakdown of which is unnecessary for purposes of this paper. The actor morpheme occupies the first place in the unit, as an examination of the paradigm will show, followed by morphemes indicating basic tense and/or action type.

Examples:

pent^yu ŋurŋur nun-yæme
 yesterday sleep you-lie NF
 'You had a sleep yesterday.'
nuŋyuy ŋurŋur nuŋkuRu-n^yuŋ
 tomorrow sleep you pl.-lie F
 'You can have a sleep tomorrow.'

To this point, the auxiliary units of the Mulluk Subgroup will be seen to

function in much the same way as for other Groups described above. All of the auxiliary units with the exception of Class 5 (General) may stand alone as complete utterances in their own right; this parallels the usage of auxiliary units with verb classes whose sense is basically 'intransitive' in the previous languages described above.

In Tyeraity the fifth class auxiliary units always require the presence of a lexical verb, thus:

pent^yu t^yuŋu t^yurp a-ya
yesterday wood cut I-GEN NF
'I chopped the wood yesterday.'

But: **pent^yu a-ya*

Whereas with the Brinken-Wogaity and Tyemeri Groups there are numerous verb classes with rather rigid membership, within the Mulluk Group, with only five verb classes, membership is rather fluid. In fact Birk (personal communication) considers that the general class (Class 5) within the Mulluk Group serves as a kind of 'transitivity index', since he reports that the great majority of verb stems belonging *per se* to this class are transitive, while intransitives belonging to other classes become members of Class 5 when transitivity is added. Birk's paper will amply illustrate this point. The relationship between transitivity and fully independent auxiliary units will be discussed further in section 5.

4.3.2. DALY SUBGROUP. The Daly subgroup is represented by Matngala, Kamor and Yunggor, all dialects of the one language. The Matngala dialect will provide illustrative material for this section.

Within the Daly subgroup there are five verb classes, the same as those listed above for the Mulluk subgroup. As with the Mulluk subgroup, the verb phrase consists of a free form verb stem (lexical verb), followed by an auxiliary unit (grammatical verb) appropriate to the particular verb class to which the lexical verb belongs. For comparative purposes, the auxiliary units for Matngala Class 3 (Verbs of Standing) are cited below:

	Non-future	Future	Immediate future
I	<i>attak</i>	<i>kataŋak</i>	<i>atay</i>
you	<i>ant^yutak</i>	<i>kant^yutaŋak</i>	<i>ant^yutay</i>
he	<i>puttak</i>	<i>kutaŋak</i>	<i>putay</i>
we pl. inc.	<i>arattakarar</i>	<i>karataŋakarar</i>	<i>aratayarar</i>
we pl. exc.	<i>arattak</i>	<i>karataŋak</i>	<i>aratay</i>
you pl.	<i>nun^ykuruttak</i>	<i>nun^ykurataŋak</i>	<i>nun^ykuratay</i>
they	<i>purattak</i>	<i>kurataŋak</i>	<i>puratay</i>
we dl. inc.	<i>amputtak</i>	<i>kamputaŋak</i>	<i>amputay</i>

Examples of usage:

wuRuma ku-ta-ŋak
get up he-stand-FUT
'He will get up.'
t^yat^yin kay ampu-(t)ta-k
yesterday call we dl.-stand-PAST
'We (dl. inc.) called out.'

With verb classes whose basic sense is intransitive, the auxiliary unit may constitute a complete utterance, independent of any accompanying free form

'lexical' verb. With the 'General' class referred to above, for the Mulluk Group, Matngala requires the presence of both free form verb stem and auxiliary unit. As with other members of the Daly Family, the auxiliary unit in Matngala indicates the actor as well as tense and/or type of action. The Daly subgroup, then, functions in a practically identical manner to the Mulluk subgroup, even as far as the 'General' verb class, see above, acting as a type of 'transitivity index'. The Mulluk Group can be seen, therefore, to be characterised by a high degree of homogeneity, its auxiliary units serving a slightly different function from that assignable to auxiliary units in the Brinken-Wogaity and Tyemeri Groups.

5. Summary

Perhaps the most striking feature of the languages which constitute the Daly Family, apart from the large number of verb classes encountered, is the almost universal use of a double verb within most verb phrases. In all of the languages there are, in general terms, two verbs contained in any verb phrase; one is a grammatical verb, contained within the auxiliary unit; this is used to indicate both the verb class and the general type of action; such verbs are termed secondary or auxiliary verbs, for they indicate either the general action type or the physical position in which the action denoted by the primary or lexical verb is performed. The primary verb stem, as shown in the numerous

Table 2:

	Aux. Present		Aux. Indep.		Verb Stem	
	TV	ITV	TV	ITV	Free	Bound
BRINKEN-WOGAITY GROUP						
1. Maranunggu subgroup						
(a) Maranunggu	+	+	-	+	+	-
(b) Ami	+	+	-	+	+	-
(c) Manda	+	+	-	+	+	-
2. Brinken subgroup						
(a) Marithiel	+	+	-	+	-	+
(b) Marengar	+	+	-	+	-	+
(c) Maramandji	+	+	-	+	-	+
3. Wogaity subgroup						
(a) Pungupungu	+	+	-	+	+	-
(b) Wadyiginy	-	+	Nil	+	+	+
TYEMERI GROUP						
(a) Ngangikurrunggurr	+	+	-	+	+	+
MULLUK GROUP						
1. Mulluk subgroup						
(a) Mullukmulluk	+	+	-	+	+	-
(b) Tyeraity	+	+	-	+	+	-
2. Daly subgroup						
(a) Matngala	+	+	-	+	+	-

examples above, generally indicates the particular action which is performed within the range delimited by the secondary or auxiliary verb.

Some of the more important features of the verb phrase within the Daly Family, with particular reference to auxiliaries are presented in the table on page 689.

The table above reveals that all Daly Family verb phrases, with the exception of Wadyiginy, are composed of two verbs, one a lexical verb and the other an auxiliary. The auxiliary varies according to verb class, and, apart from denoting general action type, carries morphemes indicating tense and actor. Ample illustration of its *modus operandi* has been provided above. Exceptionally, with transitive verbs, Wadyiginy abandons 'conjugation by auxiliary' and all notion of verb class, all transitives being treated as members of a single class, without auxiliary, the tense and actor morphemes being affixed directly to the 'lexical' verb stem.

In all cases throughout the Family, with verb classes whose range is basically intransitive (that is, verbs of sitting, standing, lying, motion) the auxiliary unit may constitute a complete utterance in its own right. As was pointed out above, however, while the verb contained within the auxiliary may be intransitive the lexical verb may be transitive, thus rendering the whole verb phrase transitive. For example, in Maranunggu, the sentence:

tawun ka-ra-ni yi
town NF-you pl-go PAST
'You (pl) went to town.'

is intransitive, while

tawar ka-ra-ni kalkal ayi
tree NF-you pl-go climb PAST
'You (pl) climbed the tree.'

is transitive.

With verb phrases in which the auxiliary has a basically transitive range, both a lexical and grammatical verb are required if the verb phrase is to constitute a complete utterance. In Wadyiginy, however, as stated above, there is no auxiliary verb whatsoever with transitive verb phrases.

As far as lexical verbs are concerned, these are always free forms within the Maranunggu and Wogaity subgroups of the Brinken-Wogaity Group, in general, as well as in both subgroups of the Mulluk Group. With Wadyiginy transitives, however, only the bound form has been found, with a few exceptions beyond the scope and generality of this paper. Bound form verb stems are normally required in the Brinken subgroup of the Brinken-Wogaity Group, with both transitives and intransitives, while with Ngangikurrunggurr the lexical verb may occur either as a free form or as a bound form within the 'auxiliary unit'. In these cases, the present writer considers that the validity of the term 'auxiliary unit' is not impaired as, with intransitives, the lexical verb may be omitted from the 'auxiliary unit' without rendering the verb phrase incomplete.

Within the Daly Family, then, there is a formal relationship between the status and *modus operandi* of the auxiliary units and transitivity/intransitivity. In the most general terms, with intransitives, the auxiliaries have a completely independent status, while with transitives they are dependent upon the presence of a lexical verb. The status of the lexical verbs as free versus bound forms appears a secondary consideration, since even in the subgroups in

which they occur as bound forms (Brinken subgroup and Tyemeri Group) the lexical bound form verb stem does not displace the grammatical verb, but occurs suffixed to it.

In summary, then, this paper has attempted with a fair degree of generality to provide an insight into the nature and function of auxiliary verbs within the Daly Family as a whole. Within individual languages there are minor departures from the system presented, but in the interests of generality these have been excluded, as they would only obscure the presentation of the 'conjugation by auxiliary' which so markedly characterises the languages of the Daly Family.

Note

1. Throughout the Daly area this feature appears to be restricted to verb classes whose sense is basically intransitive (i.e., verbs of sitting, lying, etc.).

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85. Ngangikurungur

W. G. Hoddinott & F. M. Kofod

0. Introduction

Ngangikurungur is a prefixing, multiple-classifying language of the Tyemeri group of the Daly Family of languages. It is now spoken mainly around the Daly River Mission area of Western Arnhem Land and is the main language at the mission, being spoken by 150-200 speakers as a first language.

It has both simple and compound verbs. Simple verbs are conjugated by prefixes and suffixes added to a verb stem for person and number and tense. Person and number of the subject are indicated by prefix except for the dual which also adds a dual-suffix *-gu/-gi* to the plural form. A second alternative plural may be formed by the addition of the clitic *-nime* to the dual form. Tense is indicated by suffix and in the indicative usually requires the tense

markers *tje* (past) and *ɲini* (future) affixed to the verb phrase though not necessarily to the verb itself. Compound verbs consist of a verb particle or series of verb particles which precede or follow the auxiliary verb, or both precede and follow it.

1. Simple verbs

These form a closed set and may be divided into two groups:

- (a) those verbs capable of standing as full verbs;
- (b) those verbs which exist only as auxiliaries, that is, which require verb particles.

1.1 FULL VERBS. There are nine full verbs and they include verbs of orientation as well as basic action types. Ngangikurungur generally requires the provision of a frame of reference within which specific actions may take place. It requires to be stated if an action was performed sitting or at rest, or if the actor was moving, standing, lying etc. As a result full verbs are used to:

- (a) Describe these actions or states.

(1) *wa-yedi k-irbe-m kana*
MASC man he-stand-PRES now
'The man is standing now.'

- (b) As auxiliaries with verb particles which designate actions done in these orientations.

(2) *kuri k-irbe-m tyir-tyir*
water it-stand-PRES flow-REDUP
'Rain is falling.'

- (c) Optionally, but frequently after compound stems, to provide the frame of reference within which specific actions may take place.

(3) *k-ebe-m kerkir k-irbe-m*
he-hitdown-PRES cut he-stand-PRES
'He is cutting (standing up).'

(4) *k-ebe-m kerkir y-eni-m*
he-hitdown-PRES cut he-go-PRES
'He is cutting (walking along).'

The full verbs are listed below with their meanings, action types and orientations. They are listed in the first person singular of the present tense except for *yirini* which occurs only in the third person singular past tense form.

VERB	MEANING	ACTION TYPE OR ORIENTATION
1. <i>ɲirim</i>	I am sitting, I am	sitting, state
2. <i>ɲirbem</i>	I am standing	upright, standing
3. <i>ɲibem</i>	I am lying	horizontal, lying
4. <i>ɲinɲinɲin</i>	I see	seeing
5. <i>ɲaganim</i>	I go	motion
6. <i>ɲim</i>	I do, say	
7. <i>ɲemengen</i> (Reflex)	I arrive	carry (self)
8. <i>ɲagatjen</i>	I bring	movements towards
9. <i>yirini</i>	he went	continuous movement

1.2 AUXILIARIES. In addition to the full verbs the following verbs function as auxiliaries with verb particles. The auxiliaries designate types of action, for example, actions involving movement of the hands, holding, lifting, heating and so on. Some attempt has been made at distinguishing these but it is not always clear what the actual differences between the meanings of the verbs may be. They are again in the first person singular present tense.

VERB	ACTION TYPE
10. <i>ɲinjerem</i> (reflexive)	look at one another, self
11. <i>ɲin</i>	put, lean
12. <i>ɲimiɲgin</i>	pick up
13. <i>ɲiwe</i> (reflexive)	fight, lift
14. <i>ɲebem</i>	movement downwards
15. <i>ɲerim</i>	make, cause
16. <i>ɲemen</i> (reflexive)	bend, scratch
17. <i>ɲudupun</i>	push
18. <i>ɲupun</i>	hit, scratch, cut
19. <i>ɲudem</i>	fall, turn
20. <i>ɲurum</i>	swallow
21. <i>ɲem</i>	have, make
22. <i>ɲaran</i>	carry, scratch, scrape
23. <i>ɲi</i>	twist
24. <i>ɲarim</i>	put, make
25. <i>ɲanan</i>	go, move
26. <i>ɲitjibem</i>	hang
27. <i>ɲirem</i>	pull
28. <i>ɲinem</i>	burn, heat (trans)
29. <i>kawam</i> (impersonal)	do, cause, be
30. <i>wayim</i> (impersonal)	

1.3 SOME ASPECTS OF THE MORPHOLOGY OF THE SIMPLE VERB. Morphologically the simple verbs are very diverse and as yet no general criteria have been discovered to classify them. Each simple verb may be regarded, meanwhile, as constituting a separate morphological class. Some groups of verbs have certain morphological features in common and these may provide the basis for some general remarks.

- (1) The present tense suffix is usually a nasal *-m* or *-n*.
- (2) The future tense is usually formed by the loss of the nasal or in some cases by the loss of the syllable containing the nasal suffix. In many cases, but not all, the future ends in a vowel. For example:

<i>ɲebem</i> (pres)	<i>ɲebi</i> (fut)
<i>ɲupun</i> (pres)	<i>ɲu</i> (fut)
<i>ɲudupun</i> (pres)	<i>ɲudi</i> (fut)
<i>ɲem</i> (pres)	<i>ɲe</i> (fut)
<i>ɲinem</i> (pres)	<i>ɲine</i> (fut)

but note the following:

<i>ɲagatjen</i> (pres)	<i>ɲawam</i> (fut)
<i>ɲirbem</i> (pres)	<i>ɲirim</i> (fut)
<i>ɲibem</i> (pres)	<i>ɲim</i> (fut)

- (3) The past may be indicated by the suffix *-e* where the future ends in *-i* or may be formed from the future by the suffix *-ni*. For example:

<i>ηemi</i> (fut)	<i>ηeme</i> (past)
<i>ηebi</i> (fut)	<i>ηebe</i> (past)
<i>beyi</i> (fut)	<i>beye</i> (past)
<i>ηimi</i> (fut)	<i>ηime</i> (past)
<i>ηudu</i> (fut)	<i>ηuduni</i> (past)
<i>ηara</i> (fut)	<i>ηarani</i> (past)
<i>ηudi</i> (fut)	<i>ηuduni</i> (past)
<i>ηa</i> (fut)	<i>ηani</i> (past)
<i>ηude</i> (fut)	<i>ηudeni</i> (past)

but note the following:

<i>ηani</i> (fut)	<i>ηagadi</i> (past)
<i>ηawam</i> (fut)	<i>ηagandji</i> (past)
<i>ηiwi</i> (fut)	<i>ηini</i> (past)

- (4) There are often two forms of the third person singular especially in the present. In the main the third person is indicated by the prefix *k-* or *w-* in the present: *w-* is the usual form in the future; *d-* is often found as the third person indicator in the past alternating with *w-*. Reasons for this alternation are not clear. What is perhaps more interesting is the alternation of third person singular forms of verbs. It will be seen from the list below that some alternative forms involve the replacement of one person marker for another, but that in others a different form is chosen for the third person. This has some relevance to the selection of the verb particle. Some verb particles are selected by one form and some by another.

Alternative third person singular present tense forms

<i>yenim</i>	<i>kaganim</i>
<i>daran</i>	<i>karan</i>
<i>wibem</i>	<i>kibem</i>
<i>dagam</i>	<i>kanan</i>
<i>dijim</i>	<i>kem</i>
<i>dem</i>	<i>kerim</i>
<i>dim</i>	<i>kirim</i>
<i>wupun</i>	<i>kupun</i>
<i>wudem</i>	<i>kudem</i>
<i>wudupun</i>	<i>kudupun</i>
<i>dinjingim</i>	<i>kinjingim</i>
<i>wi</i>	<i>ki</i>
<i>dinem</i>	<i>kinem</i>
<i>bejim</i>	<i>kebem</i>
<i>daɲim</i>	<i>karin</i>

While it is difficult at this stage to generalise it is clear that where there are alternative third person forms one is preferred for impersonal constructions:

daɲim *ηi* *kada* 'I am sad.'
it (IMPER) puts me sad

but note:

karin *du* 'He shows.'
he-put-PRES show

2. Compound verbs

All verbs listed above may take verb particles before or after the simple verb to form compound verbs. These form the majority of the verbs in Ngangikurungur. The particles carry much of the specific meaning of the verb phrase and seem to be able to combine with any semantically appropriate verb. For example *du* which has the notion of touching occurs with the following auxiliaries:

<i>ηarin du</i>	I show, feel for turtles
<i>ηudupun du</i>	I taste, try point of spear
<i>ηebem du</i>	I grind up
<i>ηerim du</i>	I wake up (trans)

2.1 VERB PARTICLES. It is in its verb particles that the verb achieves its fineness of discrimination. The majority of particles follow the auxiliary verb, here indicated in brackets.

<i>(direm) baɲ</i>	it pulls out
<i>(dagam) batj</i>	he kicks, stamps
<i>(dem) batj</i>	he has, takes.

Some, particularly with intransitive verbs, precede the auxiliary.

<i>deti (mem)</i>	he tells a lie
<i>dudu (yenim)</i>	he is swollen
<i>ηirkirk (mem)</i>	he is short of breath
<i>kuri weri (yenim)</i>	he is drunk
<i>mutji (yenim)</i>	he dies
<i>muwi wurir (yenim)</i>	he is afraid

but note:

(kirim) muwi wurir he is afraid.

There are a small number of discontinuous particles.

<i>apokek apokek (mem) pi</i>	he bends his head
<i>fil (mem) muwi</i>	he looks up
<i>ket (kirim) tjeri</i>	he forgets
<i>nanama (wereni) tjir</i>	they were all singing.

2.2 WORD CLASSES OF PARTICLES. Verb particles are drawn from a number of word classes. Most exist only as verb particles, for example *du* occurs only as a verb particle with the generalised notion of touching. It has the reduplicative form *dudu*. It is interesting to note that there is another verb particle *dudu* (redup. *dududu*) which is an adjective meaning 'swollen'.

Some verb particles are adjectives or adverbs, particularly those occurring with verbs of state, such as *kirim*, *mem* and *yenim* in intransitive compounds.

<i>tjutjuk mem</i>	he is sick
<i>dudu mem</i>	he is swollen
<i>yenim yubu</i>	he is well.

Some of the particles are nouns. These are often used in conjunction with other particles as agents or instruments of the action. Where class-marked nouns are used the class marker is omitted.

<i>mengin wa</i>	he picks up
<i>mengin ba wa</i> (arm = <i>da-ba</i>)	he picks up by the arm
<i>garin baɲ</i>	he pokes
<i>garin deri baɲ</i> (back = <i>de-deri</i>)	he pokes in the back

In others the noun is used to describe the actor, often with intransitive verbs.

detjeri weri yenim
ears having he-go-PRES
'He knows', OR 'He remembers.'
yenim pi dudu
he-go-PRES head swollen
'He has a swollen head.'

2.2.1 REDUPLICATION. Particles may be reduplicated to indicate re-iteration, continuation or intensity of the action described.

yenim fa 'He screams.'
he-go-PRES scream
yenim fafa 'He goes on screaming.'
he-go-PRES scream REDUP
wudem fel 'He dives.'
he-fall-PRES fall
wudem felfil 'He jumps (or hops).'
he-fall-PRES fall REDUP

Habitual action is expressed by the use of the reduplicated form of the particle with the past or present auxiliary.

yawul yer-wu nide w-ar-im fitjutjuk w-ann-im
spear WOOD-that LOC 3-PL-PRES put REDUP 3-PL-go-PRES
'They usually put their spears under the tree.'
minta d-a-ni ne yeriyer d-i-n-i
NOT he-make-PAST him cheer he-sat-PAST
'He used not to cheer him.'

2.2.2 GERUNDIVE USE OF PARTICLES. Particles are used with the future-purposive marker *-ɲini* as verb complements.

waddi tje tjutjur ɲini
they-go-PAST PAST swim PURP
'They went swimming.'
yedi tje walalma ɲini
he-go-PAST PAST hunt for
'He went hunting.'

2.2.3 IMPERATIVE USE OF PARTICLES. Compound verbs form the imperative in two ways (a) by using the future form of the second person singular, dual or plural of the auxiliary with the particle;

yani wap 'Sit down.'
IMP-go-FUT down

or (b) with a few common verbs by the particle alone.

wap! 'Sit down.'

2.3 TENSE, MOOD AND ASPECT. Ngangikurungur has three morphological tense forms. Of these the present and the past indicate the time when the action took place.

The future tense form is used to convey action taking place in the future and, with a number of adverbial modifiers, ideas of obligation and necessity, intention, desire, possibility, and condition. The future is essentially the tense for non-completed action. Thus:

ɲini kuduk tje 'I drank.'
I-sat-PAST drink PAST

But

minta ɲiwi kuduk tje 'I did not drink.'
NEG I-sit-FUT drink PAST

The second person singular dual and plural without *ɲini* is used as the imperative.

yani wap 'Sit down!'
IMP-go-FUT down
yiwu kuduk 'Drink!'
IMP-sit-FUT drink

The following uses of the future tense form with adverbials may be noted: NECESSITY is expressed by the future form.

wa-ɲi fime malargu
he-FUT-me give turtle
'He must give me the turtle.'

DESIRE is expressed by the future form of the verb with *tje*.

ɲi-wi tje dede yubu
I-sit-FUT PAST place good
'I would like to live at that good place.'

ɲani tje ep wuddupun ɲer madi pir
I-go-FUT PAST but they-push-PRES me side stop
'I wanted to go but they wouldn't let me.'

POSSIBILITY is expressed by *ep* and the future form of the verb with the future marker *ɲini*.

ep wiregu bulbul ɲini
if 3-FUT DU hit will
'They (dual) may start fighting.'

CONDITION is formed from the future form of the verb with the particle *nimbi*.

The present conditional has the particle *ɲini*.

ya-ɲi fime nimbi ɲini . . . 'If you give it to me . . .'
you-FUT-me give if FUT
wana felfil nimbi . . . 'If he runs . . .'
he-go-FUT run if

The perfect conditional uses the future with the past marker *tje*, with *nawa* and the conditional marker *nimbi*.

ɲuda bat nimbi tje nawa ɲuda wa tjutjuk
I-fall-FUT fall if PAST only I-fall-FUT hurt
'If I had fallen I would have hurt myself.'

TRYING is expressed by the future of the verb with the particle *kimi*.

ɲu kat kimi ɲini
I-hit-FUT catch like FUT
'I tried to catch it.'

2.4 IMPERSONAL VERBS. Perhaps the most interesting feature of the Ngangikurungur verb is the large number of impersonal constructions used. There are two impersonal verbs *kawam* and *wayim* which take particles.

wayim pirki purɲpurɲ bilikan fagari
IMPERS to them boiling billycan two
'The two billycans are boiling.'

aliyi kawam pudup
fat IMPERS melt
'The fat melts.'

With the verbs the effect is largely reflexive. In the first example above where the verb is singular and the billycans plural they should not be regarded as the subject of the sentence but as an explanatory noun phrase making clear what it intended by the pronoun *pirki* 'them' (dual).

There is also a widespread use of the ordinary auxiliaries in impersonal construction. As stated earlier some verbs have two third person singular forms, for example *kebem-bejim*; *garim-dajim*, one of which tends to be used more frequently in impersonal constructions.

dajim *ŋi* *kada* 'I am sad.'
it-puts me sad
bejim *ŋi* *da* 'I am hit.'
it-makes me hit

In the latter example above we have what may be regarded as a notional agentless passive and it is possible (though not frequently met with) for an agent to be supplied, for example we could say

bejim *ŋi* *da* *yawul* *niŋgi*
it-makes me hit spear INST
'I was hit by a spear.'

There are however difficulties here. As the ergative and instrumental marker are identical (*ŋiŋgi*) we might regard this not as a passive but as an ergative sentence. Again it could be argued that the instrumental phrase is parenthetical and explanatory as in the first example (p. 697). Certainly there is no formal passive in Ngangikurungur and only at times does the impersonal construction suggest a notional passive.

86. Djamindjungan

W. G. Hoddinott & F. M. Kofod

1. Introduction

In all the three Djamindjungan languages, Djamindjung, Ngaliwuru and Nungali (spoken in the Victoria River area, Northern Territory), the verb is conjugated by prefixes for person and number of the subject in intransitive, and of the subject and object in transitive verbs. In addition, prefixes also indicate the future-desiderative tense and the irrealis and imperative moods. The present and past tenses and the reflexive are indicated by suffix.

Morphologically the verb may be classed according to its tense suffixes. But the verbs are more significantly divided into simple and compound. The simple verb adds its affixes directly to the verb stem. The compound verb consists of a simple verb together with another element to which the simple verb serves as an auxiliary. We have referred to this element as a 'preposed particle' (Bolt *et al.* 1970: 88). Metcalf has called it a 'pre-stem' (Metcalf 1972: 85) while Capell has referred to it as a 'verb base'. In this paper we shall refer to it as the verb particle.

The discussion of the Djamindjungan verb will confine itself to the verb in Nungali. Djamindjung and Ngaliwuru verbs are formed in the same way; and what is said of Nungali applies to them equally.

2. Simple verbs

The Nungali simple verbs may exist as 'full' verbs without the need of particles and comprise both transitive and intransitive verbs. Semantically the simple verbs designate basic types of action or express states. In Nungali there are twenty-two simple verbs; eighteen are transitive, four are intransitive. The simple verbs are listed below with their stems and meanings as full verbs. They are in the third person singular present indicative.

NUNGALI VERB	STEM	MEANING
<i>ŋa-na-ra-m</i>	- <i>ra-</i>	he-it-puts
<i>ŋa-ni-ŋaŋga-m</i>	- <i>ŋaŋga</i>	he-it-hits
<i>ŋa-ni-wada-gara-m</i>	- <i>wada-gara-</i>	he-it-follows
<i>ŋa-ni-nama-m</i>	- <i>nama-</i>	he-it-dances
<i>ŋa-ni-yaŋ-gara-m</i>	- <i>yaŋ-gara-</i>	he-it-sends
<i>ŋa-ni-yada-m</i>	- <i>yada-</i>	he-it-spears
<i>ŋa-ni-ŋana-m</i>	- <i>ŋana-</i>	he-it-gives
<i>ŋa-ni-djama-m</i>	- <i>djama-</i>	he-it-brings
<i>ŋa-ni-malin-ma-m</i>	- <i>malin-ma</i>	he-it-makes
<i>ŋa-ni-mili-m</i>	- <i>mili-</i>	he-it-gathers
<i>ŋa-ni-wiri-m</i>	- <i>wiri-</i>	he-it-bites
<i>ŋa-ni-ndji-m</i>	- <i>ndji-</i>	he-it-eats
<i>ŋa-nu-ŋgu-m</i>	- <i>ŋgu-</i>	he-it-says (throws)
<i>ŋa-na-ndja-φ</i>	- <i>ndja-</i>	he-it-takes
<i>ŋa-ni-riga-dja</i>	- <i>riga-</i>	he-it-cooks, burns
<i>ŋa-ni-ŋayi-m</i>	- <i>ŋawu-</i>	he-it-sees
<i>ŋa-ni-mala-ŋawu-m</i>	- <i>mala-ŋawu</i>	he-it-hears
<i>ŋa-ni-maŋu-m</i>	- <i>maŋu-</i>	he-it-hits, kills
<i>wa-ruma-m</i>	- <i>ruma-</i>	he-comes
<i>wa-da-m</i>	- <i>da-</i>	he-falls
<i>wa-ŋga-φ</i>	- <i>ŋga-</i>	he-goes
<i>wa-nandu-yu</i>	- <i>nand(u)-</i>	he-is, stays

2.1 VERB STEM. Verb stems are either simple or compound. Simple verb stems are either monosyllabic or disyllabic and have the patterns CV, CV.CV, CVC.CV. One stem *-ŋga-* 'to go' has a CCV pattern.

There are four examples of compound stems: *-wada-gara-* 'to follow', *-yaŋ-gara-* 'to send', *-mala-ŋawu-* 'to hear' (c.f. *-ŋawu-* 'to see') *-malin-ma-* 'to make.'

2.2 PREFIXES to the stem of the simple verb indicate:

(i) Person and number of the subject of intransitive verbs in the present and past tenses, for example, in Nungali the pronoun subjects of intransitive verbs consist of a set of first order prefixes to the intransitive verb stem. In the singular the initial consonants are: first person *ŋ-*; second person *ŋ-*; third person *w-*. The stem vowel for the singular is *-a-*. The second person singular has the final morpheme *-dju*.

In the nonsingular, with the exception of the first person dual inclusive (*bidi-*), the initial consonants are: first person *y-*; second and third persons *w-*. The stem vowel in the first person dual and plural exclusive and the third person dual and plural, and the first person plural inclusive is *-u-*.

The dual is indicated by *-nj* (except in the first person dual inclusive), and the plural by *-r-*.

- (1) *w-a-ŋga* 'he goes'
he-SING-go-PRES
(2) *w-inj-aŋga* 'they (two) go.'
they-DUAL-go-PRES
(3) *w-ir-aŋga* 'they (pl) go.'
they-PL-go-PRES

(ii) Person and number of subject and object pronouns in transitive verbs in the present and past tenses. The table below provides the morpheme lists from which the subject and object prefixes may be formed. (For a detailed study of the formation rules see Bolt *et al.* 1970: 107-11).

PERSON	Subject-object prefixes to transitive verb stems			
	SUBJECT	NUMBER	OBJECT	NUMBER
1st sing.	<i>ŋa-</i>		<i>-an</i>	
2nd sing.	<i>ŋadj-</i>	<i>φ</i> sing	<i>-nj(i)</i>	<i>φ</i> sing
3rd sing.	<i>ŋan-</i>		<i>-o/-i</i>	
1st d in.	<i>bid-</i>		<i>-mindi</i>	
1st d ex/pl. ex.	<i>yi-</i>	<i>-nj</i> dual	<i>-iri-</i>	<i>-nj-</i> dual
1st pl in.	<i>yu-</i>	<i>-r-</i> plural	<i>-iri-</i>	<i>-r-</i> plural
2nd d/pl	<i>wu-</i>		<i>-(w)u</i>	
3rd d/pl	<i>wi-</i>		<i>-(w)i</i>	

Thus

- (4) *ŋan-φ-i-φ-yada-m* 'he spears it.'
he-SING-it-SING-spear-PRES

(iii) The future-desiderative prefix to intransitive verbs. The term 'tense' has been employed to designate those suffixes which denote present and past. The future desiderative prefix is formed by adding *-wu-* to the present-past pronominal if it ends in a vowel; and *-iwu* or *-uwu* if it ends in a non-palatalised consonant. Otherwise the form is *-bu* and causes depalatalisation of preceding palatalised consonants. For example:

- ŋa + wu* → *ŋawu* 1st sing.
yinj + bu → *yinbu* 1st d. ex.
yir + iwu → *yiriwu* 1st pl. ex.

The future-desiderative prefix is added to the verb stem usually with the present tense suffix and in the main is used to convey the notion of future action.

- (5) *wawangga* 'He will go.'
he-FUT-go-PRES

It is also used to convey intention, desire or possibility often with words like *giyaŋula* 'perhaps', *midgu* 'if' and *ŋala* 'why'.

- (6) *giyaŋula wiriwurumam* 'Perhaps they will come.'
perhaps they-FUT-come-PRES
(7) *giyaŋula wawidam digal* 'Perhaps it will rain'
perhaps it-FUT-fall-PRES water

In the transitive verb the future-desiderative prefix comes after the subject pronoun person and number marker and the object pronoun person marker. It occurs before the object pronoun number marker.

- (8) *ŋadj-φ-bi-nj-ara-m*
you-SING-them-FUT-DU-put-PRES
'You (s) will put them (dual)'.

As with the intransitive verb, the future desiderative prefix is also used after words like *giyaŋula* 'perhaps' to convey notions of desire, intention and possibility. In conjunction with the remote past suffix it expresses uncertainty or unfulfilled intention about actions which took place in the past in both transitive and intransitive. For example:

- (9) *ŋala ŋandjanburu w-uru-φ-φ-wi-yada-nji*
why something you-PL-US-FUT-spear-REMP
diyaŋura yurag
kangaroo us-PL-DAT
'Did you spear us a kangaroo or something?'

(iv) The irrealis aspect. In Nungali this is expressed by the prefix *nja-* placed before the present-past subject or subject-object pronouns and conveys the notion of an action which will not take place. With the negative particle *guranj* it expresses the future negative.

- (10) *guranj nja-ni-ŋawu* 'He will not see it.'
not NEG-FUT-he-it-see
(11) *guranj njayidga* 'He will not go.'
not NEG-FUT-he-go
(12) *guranj njanurum* 'I will not come.'
not NEG-FUT-I-come

In both transitive and intransitive verbs it is used in the second person singular, dual or plural with the negative particle *guranj* to express the negative imperative or prohibitive.

- (13) *guranj dud njadjimili* 'Don't pick it up!'
not hold NEG-FUT-you(s)-gather

(v) The imperative mood. In Nungali *wa-* (singular), *wawunj-* (dual) or *wawuru-* (plural) are prefixed to the verb stem in intransitive verbs and to the object pronoun and verb stem in transitive verbs.

- (14) *wa-n-ŋana gagawuli* 'Give me yams.'
IMP SING-me-OB-give yams
(15) *warum* 'Come!'
IMP SING-come
(16) *wawinjidga* 'Come' (Dual)
IMP DU-come
(17) *ŋanjala wawariyad* 'Sing!' (pl)
sing-IMP PL-be

2.3 SUFFIXES to simple verb stem indicate:

(i) TENSE. Present, past and remote past tenses are indicated by suffixes to the verb stem. In Nungali verbs of Class 1 take *-m* in the present, *-nj* in the past and *-nji* in the remote.

(ii) REFLEXIVE AND RECIPROCAL. The present tense reflexive suffix is *-dji* and the past *-dji-na*. The suffixes replace the tense marker. The future reflexive is formed by the future desiderative subject pronoun prefixed to the verb stem with the present tense reflexive suffix *-dji*. Examples:

(18) *ŋa -maŋa -dji* 'I cut myself.

I -cut -self (PRES REFLEX)

(19) *ŋa -nayi -dji -na* 'I saw myself.'

I -see -self (PAST REFLEX)

The imperative reflexive adds *-dji* to the imperative transitive verb. The negative imperative is formed by the reflexive suffix to the irrealis forms of the verb together with the negative particle *guranj*. When the subject of the verb is dual or plural the verb may express reciprocal action.

(20) *wawunjmaŋadji* 'Hit each other!'

IMP-DU-hit-self-PRES

(21) *guranj muŋ djiram njuŋayidji* 'Don't look at each other!'

not look two NEG-IMP-DU-see-self-PRES

3. Compound verbs

Compound verbs form the majority of the verbs used and appear to constitute an open set. They consist of a verb particle which comes before the simple verbs listed above which now take on the function of auxiliaries. The particle may come from one of a number of word classes, though adjectives and adverbs make up the majority of them. The choice of particle is partly determined by the simple verb used as an auxiliary. Thus in Nungali *wanŋa* (he goes) may take the adjective *bududj-* (steep), to form the compound verb *bududjwanŋa* (he climbs) while *ŋanimilim* (he-it-gathers) takes as particle the instrumental noun *njigal* (INST-water) to form *njigal ŋanimilim* (he washes it). It is also partly a matter of custom. The degree of freedom varies within the language group. In Djamindjung particles are bound to particular verbs. In Ngaliwuru and Nungali a particle may occur with a number of auxiliaries, for example, in Nungali *diyu* may occur in *diyu ŋanungum* (he throws it away) or *diyu wanŋa* (he flies). The particle is invariable in Nungali and Djamindjung. In Ngaliwuru the suffix *-uŋ* may be added to indicate the persistence of the notion described.

(22) *muŋ ganŋayim* 'He is looking at me.'

(23) *muŋuŋ ganŋayim* 'He keeps looking at me.'

In all the Djamindjung languages voice is either active or middle. There is no evidence of an agentive passive though particles with *wananduyu* may give the sense of the agentless passive, for example, *balbaljma wanandiyi* 'he was hurt.' *wananduyu*, however, occurs largely as a verb of state or non-motion and the general sense here is stative rather than passive.

References

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- Metcalf, C. D., 1972. *Bardi verb morphology—a transformational analysis*. Ph.D. Thesis, A.N.U., Canberra.

Appendix

The following simple and compound verbs occur in Class I in Nungali which includes both transitive and intransitive stems. The third person singular forms are given.

Class 1(a)

Present tense suffix *-m*; preterite suffix *-ŋ*. For example:

(i) <i>-ra-</i>	<i>ŋanaram</i>	he it puts
Present	<i>ŋanaram</i>	
Preterite	<i>ŋanara</i>	
Fut. desid.	<i>ŋaniwaram</i>	
Imper.	<i>wara</i>	
Irrealis	<i>guranj njanara</i>	
Imper. neg.	<i>guranj njadara</i>	
Rem. past	<i>ŋanaranji</i>	

Other Simple Verbs

(ii) <i>-ŋanga-</i>	<i>ŋaniŋangam</i>	he it hits
(iii) <i>-wadagara-</i>	<i>ŋaniwadagaram</i>	he it follows
(iv) <i>-nama-</i>	<i>ŋaninamam</i>	he it dances
(v) <i>-yalgara-</i>	<i>ŋaniyalgaram</i>	he it sends
(vi) <i>-yada-</i>	<i>ŋaniyadam</i>	he it spears
(vii) <i>-gana-</i>	<i>ŋaniŋanam</i>	he it gives
(viii) <i>-djama-</i>	<i>ŋanidjamam</i>	he it brings
(ix) <i>-malinma-</i>	<i>ŋanimalinmam</i>	he it makes

Compound Forms

(i) <i>gul ŋanaram</i>	he makes it stop
<i>nuŋug ŋanaram</i>	he makes a fire
<i>mudjud ŋanaram</i>	he it covers
<i>dul-ŋanaram</i>	he it uncovers
<i>wiri ŋanaram</i>	he it turns
<i>luŋj ŋanaram</i>	he it puts
<i>milid ŋanaram</i>	he it shows
<i>djulug ŋanaram</i>	he it pushes
<i>mundul ŋanaram</i>	he it covers
<i>mul ŋanaram</i>	he it roasts
<i>bag ŋanaram</i>	he it breaks
(ii) <i>dadaya ŋaniŋangam</i>	he it chops
(iii) <i>yibiraj ŋaniwadagaram</i>	he it follows
(iv) <i>nuwangad ŋaninamam</i>	he it dances
<i>dul ŋaninamam</i>	he it kicks
(v) <i>yiryir ŋanidjamam</i>	he it leads

Class 1(b)

This consists of the intransitive verb *-rum-* to come. Present tense suffix is *-am*.

Preterite suffix is *-a*. For example:

<i>-rum-</i>	<i>warumam</i>	he comes
Present	<i>warumam</i>	
Preterite	<i>waruma</i>	
Fut. desid.	<i>wawurumam</i>	
Imper.	<i>warum</i>	
Irrealis	<i>njarum</i>	
Imper. neg.	<i>njadjurum</i>	

Class 1(c)

This consists of the intransitive verb *-da-* to fall. The present stem is *-da-* and

the present suffix is *-m*; the preterite stem is *-dba* and the preterite suffix is *-φ*.

For example *-da-* *wadam* he falls

Present *wadam*
Preterite *wadba*
Fut. Desid. *ɲawidam*

Imper. none recorded; probably *wada*

Irrealis (*gurunj*) *njanadbad*

Imper. neg. (*guranj*) *njadjidbad*

Compound forms

<i>djag wadam</i>	he falls
<i>balaya wadam</i>	he is born
<i>lugu wadam</i>	he marries
<i>niyamannga wadam</i>	he forgets (lit., the ear falls)
<i>ɲabulɲ wadam</i>	he dives, he washes

87. Gunwinjgu

Peter J. Carroll

Gunwinjgu¹ is a prefixing, noun classifying language of Western Arnhem Land. Prefixes mark pronominal subject and object, incorporated noun subject and object, adverbial modifier and aspect. Suffixes mark aspect, tense and mood. The following examples show the structure of the verb. The verb root is shown in non-italic type.

bene - *yawoyh* - *djarrk* - *durrkmirra* - *nginj* (class 6)

they again together worked (past completed)

nga - *yawoyh* - *red* - *na* - *ni* (class 3)

I again camp was seeing (past continuous)

nga - *m* - *re* *nga* - *re* (class 9)

I will come I will go

minj ku - *m* - *bo* - *bebme* - *ninj* (class 1)

not it water appeared (past negative)

'*m*' is an aspect prefix indicating motion towards the speaker.

Verb suffixes have the triple function of indicating tense, mood and aspect, which structurally are part of a single suffixing system. '... the fact that the five suffixes form a consistent pattern in each class indicates that they function as a unity' (Oates 1964:46). Characteristic forms of the suffix establish thirteen verb classes (some with very restricted membership) which can be combined into six groups with various subgroups. The following examples illustrate verb class membership

Class 1 (Oates 1A) suffix *-me*,

-lombe 'to run'

-karrme 'to have'

Class 2 (Oates 1B) suffixes *-ke*, *-nje*, *-ye*, *-we*,

-djobke 'to chop'

-dadjke 'to cut'

-kinje 'to cook'

-kurrme 'to put'

-yibme 'to sink'

-munkewe 'to send'

-marrwe 'to be hungry'

-baye 'to bite'

Class 3 (Oates 2A(i)) suffixes *-ka*, *-na*, *-wo*, *-ngu*,
-ka 'to take' *-wo* 'to give'
-manka 'to fall down' *-bawo* 'to leave'
-na 'to see' *-ngu* 'to eat'
-wohna 'to keep watch' *-bongu* 'to drink'

Class 4 (Oates 2A(ii)) suffixes *-bu*, *-wa*,
-bu 'to hit' *-yawa* 'to search'
-bidbu 'to climb' *-mulewa* 'to inform'

Class 5 (Oates 2B (i) and (ii)) suffixes *-ru*, *-du*, *-lu*, *-dju*, *-do*, *-dje*, *-de*, *-ma*
-ru 'to burn' *-dahkendo* 'to put in a container'
-karu 'to dig' *-borrhborrdje* 'to shake off'
-djakdu 'to rain' *-durnde* 'to return'
-kolu 'to go down' *-ma* 'to get'
-kadju 'to follow' *-djalkma* 'to split'
-do 'to throw stones'

Class 6 (Oates 3A) suffixes *-da*, *-rra*,
-wokda 'to talk' *-rra* 'to stand'
-bengmidjda 'to forget'

Class 7 (Oates 3A) suffixes *-di*, *-rri*, *-ni*
-di 'to stand' *-durrkmirri* 'to work'
-wokdi 'to talk' *-ni* 'to sit'
-dirri 'to play' *-wayini* 'to sing'

Class 8 (Oates 3B) suffix *-yo*,
-yo 'to lie down' *-bukirriyo* 'to dream'

Class 9 (Oates 4) suffix *-re*,
-re 'to go' *-djalkmire* 'to tear'

Class 10 (Oates 5) suffix *-rre* (reflexive),
-burre 'to hit oneself' *-dadjkerre* 'to cut oneself'

Class 11
-mak 'to be good' *-babang* 'to ache'
-djare 'to like'

Class 12 (Oates 6A and B) suffix *-men*,
-makmen 'to become good' *-djaremen* 'to want'
-kimukmen 'to grow'

Class 13
-rrowe 'to be sick'

In some classes monosyllabic verb roots occur as the form of the suffix which may also compound with other verb roots to form verbs of the same class. In some instances these monosyllabic verb roots are forms given in Capell's Common Australian (Capell 1956:90-93). For example: *-na* 'to see'; *-ka* 'to take' (class 3); *-bu* 'to hit' (class 4); *-ma* 'to get' (class 5); and *ni* 'to sit' (class 7). Note that verbal auxiliaries in other languages are suffixes in Gunwinjgu (Dixon 1972:15).

I have grouped the verbs into thirteen classes. Oates has six classes, four of which are sub-divided (1A and B, 2A and B, 3A and B, 6A and B) and two of these are further sub-divided (2A(i) and (ii), 2B(i) and (ii)) making a total of twelve separate groups of verbs. My class thirteen has only one example, *-rrowe* 'to be sick', which is given by Oates as an exception.

The five categories indicated by the suffixing system are past and non-past, a completed and a continuous aspect within past tense, past negative and the

Gunwinjgu conjugations

VERB CLASS	SUFFIX (BASE FORM)	IMPERATIVE	NON-PAST	PAST COMPLETED	PAST CONTINUOUS	PAST NEGATIVE
1	-me	+n	ϕ	+ng	-mi	+ninj
2	-ke -nje -ye -we	+men	ϕ	+ng	+yi	+meninj
3	-ka -na -wo -ngu	ϕ	+n	{ +ng +neng	+ni	+yi
4	-bu -wa	ϕ	+n	+m	+ni	+yi
5	-du -ru -lu -dju -do -de -dje -ma	ϕ	+ng	{ +y -di -dji -mey	+ngi	+yi *
6	-da -rra	ϕ	+n	+nginj	+nj	+ngimeninj
7	-rri -ni -di	+n	ϕ	ϕ	ϕ	+wirrinj
8	-yo	-yun	ϕ	+nginj	+y	+wirrinj
9	-re	-ray	ϕ	-wam	+y	-rawinj
10	-rre	+men	ϕ	-rrinj	+ni	+meninj
11	-mak -djare -babang	+nin	ϕ	+ni	+ni	+niwirrinj
12	-men	-mimen	ϕ	-minj	-meni	-meninj
13	-we	+men	+n	+ng	+ni	+meninj

* Some speakers say *meyi* in lieu of *mayi*.

ϕ Indicates that the base form is used in this category.

+ Indicates an addition to the base form.

- Indicates a replacement of the base form.

imperative. The reduced number of verb classes in Oates' analysis is an attempt to group verbs with similar patterns in the different categories of the suffix. If one examines each of the five categories it is possible to make different groupings of the verb classes according to the category chosen. A basic division in the verb classes is according to which category uses the base form of the verb. Classes 3-6 do this in the Imperative and classes 1, 2, and 7-12 do it in the non-past category. This division is not consistently followed in the other categories, but is almost paralleled in the past negative where classes 3, 4 and 5 use *yi* and the other classes use *-inj*.

The verb classes and their suffixes in the various categories are set out in the facing chart.

Comments

- There is evidence of *vowel raising*. For example class 8—past negative, *-yuwirrinj* occurs where *-yowirrinj* is expected.
i.e. *o* → *u* / ___*w*
Classes 10 and 13—imperative and past negative, *-rrimeninj* occurs where *-rremeninj* is expected, *-wimen* occurs where *-wemen* is expected.
i.e. *e* → *i* / ___*m* (this does not apply to class 2 verbs).
- There is evidence of *vowel lowering*. For example class 4—past completed *-bom* occurs where *-bum* is expected.
i.e. *u* → *o* / ___*m*
- There is no transitivity distinction in relation to class membership.
- Classes 1 to 5 are open with no *semantic basis*. Classes 6 to 13 are closed with some semantic basis.
Class 7 verbs involve sitting or standing.
Class 8 verbs involve lying down.
Class 10 are reflexives.
- Some verb roots occur in both class 1 and class 2. In class 1 they are intransitive with the *-me* suffix, and in class 2 they are generally causative with the *-ke* suffix. This does not apply to all verbs ending in *-me* or *-ke*. For example:

<i>-bakme</i> 'to break'	<i>bakmeng</i> 'it broke'
<i>-bakke</i> 'to cause to break'	<i>bakkeng</i> 'he broke it'
<i>-bebme</i> 'to appear'	<i>bebmeng</i> 'it appeared'
<i>-bebke</i> 'to cause to appear'	<i>bebkeng</i> 'he brought it out'
<i>-warrhme</i> 'to fall'	<i>warrhmeng</i> 'it fell'
<i>-warrhke</i> 'to cause to fall'	<i>warrhkeng</i> 'he dropped it'

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Note

1. Gunwingju is spoken by approximately 600 people resident at Oenpelli and its outstations, and by another 400 resident in an area bounded by Darwin, Katherine and Maningrida, some of whom speak it as a second language. It has been studied by Capell, Oates and Harris. The orthography used is that adopted by the Oenpelli Literature Project, which is:
- | | |
|------------------------------|------------------------------|
| <i>b</i> —bilabial stop | <i>m</i> —bilabial nasal |
| <i>d</i> —alveolar stop | <i>n</i> —alveolar nasal |
| <i>dj</i> —laminal stop | <i>nj</i> —laminal nasal |
| <i>rd</i> —retroflex stop | <i>rn</i> —retroflex nasal |
| <i>k</i> —velar stop | <i>ng</i> —velar nasal |
| <i>h</i> —glottal | <i>l</i> —alveolar lateral |
| <i>rr</i> —flap | <i>rl</i> —retroflex lateral |
| <i>r</i> —retroflex resonant | |
| <i>w, y</i> —semivowels | <i>i, e, a, o, u</i> —vowels |

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88. Alawa, Mara and Warndarang

M. C. Sharpe

Alawa, Mara and Warndarang, adjacent languages of Arnhem Land, have much common vocabulary and many similarities in grammar. Verbs consist of either an uninflected verb particle and an inflected auxiliary verb, or an inflected form or auxiliary verb only. (An auxiliary can be omitted after a verb particle, although the native speaker is likely to insist it is there.) The inflected forms or auxiliary stems are affixed for person and number, and are suffixed or changed in form for tense, aspect and mood, and reflexivity. Some verb particles can be used as adjectives, and some may have substantivising suffixes.

1. Verb particles

All three languages have verb particles commonly of a distinctive phoneme pattern, the most frequently occurring being CVC, a rare pattern in other

words. A few verb particles have been found in Alawa beginning with prenasalised stops (analysed as unit phonemes in this language). Rarely, verb particles in Alawa with a devoiced stop initially have a semantically related noun identical in form except for having the corresponding prenasalised stop initially, for example *n̄dili* 'bank, hillside', *d̄ili* 'go along the side of a hill'. Phoneme patterns found in verb particles are shown below. L represents consonants /l, ɭ, r, ʀ/; C represents any consonant including L.

ALAWA	MARA	WARNDARANG
(CV)CV((L)C)	CV((L)C)	CV((L)C)
CVCCV(C(V(C)))	CVCCV(C(V))	CVCCV(C)
CVCVC(C)V	CVCV(C(V))	CVCV(C(V))
CVCVCVCVCV	CVCVCVCVCV	
VL		

2. Auxiliaries and inflected verbs

Auxiliary verbs and inflected verbs may be monoreferential MR (affixed for person-number of subject only, both S_i and S_j), or direferential DR (affixed for person-number of subject, usually S_i, and referent R, either object or dative object); transitive and intransitive verbs of both types occur (intransitive DR verbs lack a referent suffix, or have a 'dummy' 3rd singular masculine referent suffix (as for example with the auxiliary *nedu* 'do in a mob'). All person-number affixes are prefixes except in DR auxiliaries in Alawa, where 3rd person singular, either referent or subject (subject only when referent is other than 3rd singular), and some 3rd person non-singular referents, are suffixes. Mara and Warndarang have no affix for 3rd person singular referent. Of the three languages (Alawa with a two-gender system, Mara with no clear system at this point of analysis, and Warndarang with several noun classes), Alawa is the only one with gender (or class) reference in the verb pronominal affixes; 3rd singular masculine and feminine are distinguished for both subject and referent.

2.1. Pronominal affixes in Alawa

Space precludes exhaustive treatment of these. The reader is referred to Sharpe (1972:79-86) for full treatment. However, the following general observations can be made for Alawa.

- (i) DR subject prefixes with 3rd person singular referent are identical to MR prefixes except in the 1st and 3rd persons singular.
- (ii) Wherever a plural affix has the phoneme /l/, it is replaced by /ʀ/ for the dual.¹ Sometimes the dual-plural distinction is neutralised in DR affixes; usually then /n/ marks non-singular, although /ʀ/ is used in some affixes.

In DR auxiliaries (and inflected verbs):

- (iii) There is ranking of persons in that, in general, affixes for 1st persons precede those for 2nd persons, which precede those for 3rd persons.
- (iv) Ranking of a slightly different sort is shown in that 2nd person involvement (as subject or referent, acting with 1st person or not) is usually signalled by the presence of /n̄/ in the prefixes. Involvement of 3rd person feminine, or 1st person without 2nd person, is usually signalled by the presence of either /ŋ/ or (3rd singular feminine or 1st singular only) /aʀ/ in the affixes.

2.2. Consonant hardening for the three languages

Pronominal prefixes with vowel or semivowel initially change form following a verb particle ending in a stop or nasal, according to the following rule, where *H* signifies a hardening consonant (stop or nasal), # word boundary between particle and inflected form, and ϕ absence of consonant.

$$\phi \rightarrow \{\phi, g\}/g\# \text{---}$$

$$\{\phi, w, y\} \rightarrow \{g, g, d\}/H\# \text{---}$$

Also, at least in Alawa, another consonant hardening rule applies within words across certain morpheme boundaries. The phoneme /g/ is inserted between prefixes *aŕi-* 'towards', *ya-* 'with', and *yaŋ-* 'kill' and the auxiliary stem *a*; also

$$w \rightarrow b/H \text{---} \text{ in pronominal suffixes.}$$

(The full statement of this internal hardening rule and its other applications do not concern us here.) Although the synchronic rules are formulated as hardening rules, historically it may have been a lenition of certain stops. Evidence to suggest this includes the prenasalised stop-devoiced stop correspondence in word initial positions in Alawa and Mara words, alternate names Alawa and Galawa for the Alawa tribe, and other correspondences.

2.3. Tense-aspect-mood

My data on Mara and Warndarang is still very sketchy, and I have had almost no time recently for further study of the data. That Alawa has seven tense-aspect-mood combinations is well established, and the data appears to show that Mara has six such distinctions, and Warndarang six or less. In each language there is a confusing array of irregularity in auxiliary verb forms. In Alawa about 30 auxiliary and inflected verbs have been found, and they can be roughly classified into conjugations by the final vowel of the stem, but even then a variety of affixes occur to signal each tense-aspect-mood combination, according to the auxiliary stem. This classification cuts across the MR-DR and transitive-intransitive distinctions (except that one past punctiliar indicative suffix *-wun* does not occur with MR stems). In both Mara and Warndarang I have listed only about 15 inflectable verbs and auxiliaries with any degree of certainty and completeness, and it is hard to find even as much semblance of system in these as in Alawa. Jeffrey Heath, who is also working on Warndarang, also finds irregularity and incompleteness in many paradigms; he hopes however in work later this year to gain a fuller picture. Some of his data are quoted below in 3.1.

Table 1 shows the seven Alawa tense-aspect-mood combinations; Mara has only one present subjunctive form, but otherwise follows the Alawa.

Table 1: Alawa tense-aspect-mood matrix

	PAST	PRESENT	FUTURE
indicative mood	punctiliar continuous	— continuous	neutral
subjunctive mood	— —	punctiliar continuous	— continuous

In Warndarang the meanings of the different forms are not entirely clear. The language definitely has past punctiliar and continuous indicative tenses, and future can be formed from these past tense forms by use of the prefix *u-* inserted between verb particle and auxiliary (prefixed to inflected forms), or replacing 3rd person singular subject prefix when present. Two other forms translate as present or future tense; one form is a subjunctive; and a form in *-yi* has contradictory evidence as to its tense and mood.

Subjunctive mood in Alawa and Mara is used for abilitative in the present ('can') and for probable action in the future ('may'), and with a negative to form negative verbs except for negative future (indicativeused here); the subjunctive in Warndarang is used similarly, although the tense reference is not yet clear. Table 2 shows how negation is accomplished in Alawa and Mara. Warndarang appears to use the particle *gu* before the verb particle for negation; Alawa uses *ŋayi* in this position, and Mara *wula* (or *gana*) *gu* according to tense.

Table 2: Negation in Alawa and Mara

	ALAWA	MARA
future definite 'will not'	<i>ŋayi</i> +fut indic	<i>wula</i> +fut indic
present cts 'is not'	<i>ŋayi</i> +fut subj	<i>wula</i> +fut subj
past 'didn't'	<i>ŋayi</i> +pres subj	<i>gu</i> +pres subj

2.4. Reduplication

All three languages may exhibit reduplication or repetition of verb particles when present, or of inflected forms when verb particles are absent, usually co-occurring with continuous aspect, to indicate repeated or extended action. Verb particles may be repeated even up to three or four times. In Alawa an inflected form is reduplicated according to one of two patterns (the patterns have not been checked for the other languages): either the initial CVCV of the inflected form is reduplicated, or the initial VC of the inflected stem is repeated.

yīwi-yi-wiña 'You (sg) will go.'

REDUP-YOU-GO FUT

ŋuli-ŋul-iña 'We (excl) will go.'

REDUP-WE-GO FUT

OR

yil-uq-uqala 'They were going.'

they-REDUP-GO PAST

yil-aq-aq-na 'They gave (it) to him.'

they-REDUP-give PAST-him

2.5. Other non-pronominal prefixes in Alawa

Three prefixes other than pronominal prefixes have been isolated in Alawa, all occurring with the DR auxiliary *a*. The resultant forms can stand alone as inflected verbs (which *a* cannot); two of them have also been found with a variety of verb particles, including all which occur as motion verbs with *wiña* 'go' and *aqi* 'come'. The three are:

- (a) *yaŋ-* 'hit, kill', homophonous with the verb particle for 'hit, kill'; the inflected verb seems to have the same gloss as the verb particle and auxiliary.

yaŋ g-φ-a-ŋa-n-na 'He hit/killed it.'
hit φ-he-do-PUNCT-PAST-it
a-yaŋ-g-a-ŋa-n-na 'He hit/killed it.'
he-hit-φ-do-PUNCT-PAST-it

- (b) *aŋi-* 'towards'. As a full verb or with motion verb particles, this brings location-goal into nuclear position as object of the verb.

lilmi-ŋ-i (dum) φ-aŋi-g-a-n-na walba
man-ERG (down) he-to-φ-do-PAST-it river
'The man goes (down) to the river.'

With certain intransitive verb particles a transitive verb is formed.

wag n-e-ni 'He is laughing.'
laugh he-be-PRES
wag g-an-aŋi-g-a-ŋa-n-na-ŋga
laugh φ-me-to-φ-do-PUNCT-PAST-he-SUBJECT
'He laughed at me.'

With the quotative verb particle *ga* 'call out' there is no obvious change in transitivity or other focus.

ga ŋa-mumba-n niba muwaða-yi
call out I-say-PAST him canoe-GEN
'I called out to him for a canoe.'
ga aŋ-aŋi-g-a-ŋa-n-na muwaða-yi
call out I-to-φ-do-PUNCT-PAST-him canoe-GEN
'I called out to him for a canoe.'

- (c) *ya-* 'with'. As a full verb or with motion verb particles, this is translated as 'take, go with'; it thus forms a converse to the inflected verb *aŋi* 'bring, come with'.

aŋ-ya-g-a-ŋa-n-na
I-with-φ-do-PUNCT-PAST-it
'I took it.'
gedḍ ḍil-ya-g-a-n-na nda maŋayin niba
run they-with-φ-do-PAST-it CON belongings him
'They ran away with his belongings.'

lilmi-ŋ-i (dum) a-ya-g-a-n-na nda muwaða walb-iŋu
man-ERG (down) he-with-φ-do-PAST-it CON canoe river-ALL
'The man took the canoe (down) to the river.'

lilmi-ŋ-i (dum) φ-aŋi-ŋa-n-na nda giŋimbu
man-ERG (down) he-bring-PAST-it CON stone kangaroo
ŋgudar-iŋyumu
hill-ABL
'The man brought the kangaroo (down) from the hill.'

ya- also carries the concept of action repeated over and over ('stuck with'), as is seen in its use with the particle *yaŋ*.

yaŋ g-φ-a-ŋa-n-na 'He hit it (once).'
hit φ-he-do-PUNCT-PAST-it
yan g-φ-a-n-na 'He was hitting it.'
hit φ-he-do-PAST-it
yaŋ g-a-ya-g-a-n-na 'He was hitting it over and over.'
hit φ-he-with-φ-do-PAST-it

2.6. Listing of auxiliaries and inflected verbs

Tables 3–5 (p. 730f) show some of the inflected forms (auxiliaries and full verbs for the languages. Many auxiliaries have been omitted; for omitted ones in Mara and Warndarang, as no doubt also for some listed, information has not always been sufficient to place the forms in their correct positions in the charts. In Alawa for some DR auxiliaries the final vowel listed changes when the 3rd singular suffixes are added (detail on phonological rules here may be found in Sharpe (1972) by comparing chapter 5 with the tables on pages 91–92, or by consulting Appendix G). Numbers beside certain of the auxiliaries in tables 3, 4 and 5 cross reference auxiliaries fairly clearly related by form or usage in the three languages.

Table 6 (p. 734) shows the more obvious inflection patterns in Alawa and Mara.

3. Semantics of auxiliaries and inflected forms

In all three languages, for certain auxiliaries (for example those translated 'go', 'come', 'be', 'do, say', 'cause to', 'give'), there is a core of verb particles for which the particular auxiliary chosen can be guessed from the meanings involved. Some auxiliaries occur with a large number of verb particles of the same type. In Alawa *wiŋa* 'go' and *aŋi* 'come' occur in a large number of motion verbs, *ri* 'be' in most stative verbs, *mba* 'do, say' in many action verbs (including all introduced English action roots), *a* and *ŋada* in the majority of transitive verbs with DR auxiliaries, and *muda* 'give' apparently only with ditransitive, quotative and purposive verbs.

Some auxiliaries almost always add a particular meaning to the verb particle; in Alawa (the only one properly checked) these include: *aŋi* 'come', *ŋidi* 'be about to', *uŋga* 'cause to', *aŋiga* 'go towards', *yaga* 'take', *aŋi* 'bring', *neḍu* 'in a mob', and *muda* 'give' (which very often has an animate dative object as referent); in Mara and Warndarang there is the auxiliary 'eat'.

The form for 'go' in Warndarang, *ra*, occurs as *raŋa* as an inflected verb, and as *ra* when occurring as an auxiliary (or also in certain tense-aspect-mood combinations as an inflected verb).

In each language there are inflected forms which do not appear to occur with verb particles. Some of these are:

ALAWA	MARA	WARNDARANG
<i>lamu</i> 'try'	<i>andayaŋi</i> 'spear'	<i>gaya</i> 'hear'
<i>maba</i> 'keep'		
<i>ŋuŋimu</i> 'show'		
<i>rir</i> 'eat'		

The Alawa verb *ŋuŋimu* 'show', like *muda* 'give', always has an animate dative object as referent. There is one definite example in Alawa (and there may well be others in the three languages) of a unique verb particle-auxiliary combination, where neither the verb particle nor the auxiliary have been found in other verbs; it is *ŋag abu* 'spear'.

Heath has sent a summary of some of his Warndarang findings for incorporation in this paper (3.1 below). (His orthography has been adapted for consistency within this paper.) It would appear from his quoted data, that Warndarang auxiliaries have a more discernable semantic load than Alawa

and Mara auxiliaries. Although there are patterns of auxiliary choice in Alawa and Mara as mentioned above, these languages have large numbers of verb particles for which choice of auxiliaries seems quite arbitrary. To further illustrate this, some of the verb batteries in Alawa are described and illustrated with examples in 3.2. For a summary on the substantivising suffixes and their occurrences, see my Paper 69 on Alawa.

3.1. Warndarang auxiliaries

The basic structure of the verb complex as described by Heath is '(Neg)-(Benef.)-Vb-Pronominals-Aux-Suffixes, all fused into a single phonological unit.' Compare Alawa and Mara (Neg) Vb Pronominals-Aux-Suffixes-(Pronominals) (suffixed pronominals in Alawa only). I have regarded the verb particle as a separate phonological unit to the auxiliary verb complex; however my main Alawa informant would refer to verb particle-auxiliary complex as one word, and a verb with repeated verb particle as two words, in Alawa. Heath, in his communication for quoting in this paper, omits all inflected stems which are never used as auxiliaries. The most important auxiliaries, he says, after discarding all identifiable affixes, are:²

- (1) 'to go' (see below);
- (2) *ba/bi/bu* DR 'to hit' (**bu*);
- (3) *ga* DR 'to convey, take' (**ga*);
- (4) *da* DR 'to tell' (possibly **du* 'to put');
- (5) *du/da* MR (paradigm distinct from that of *da*) used mostly with position verbs (**du/da* 'to stand', reflected in Nunggubuyu, Ngandi, etc.);
- (6) *ida* DR, used with verbs like *mud* 'to break' which involve handling or affecting the surface of something;
- (7) *igiři* DR, used with motion verbs directed at or against an entity;
- (8) *ilami/ilama* DR 'to cut', rare as Aux;
- (9) *inađi* MR, with *dalag* 'to fall down' (and others?);
- (10) *irayi* DR(?), with *wařd* 'to grab, pick up';
- (11) *mi/ma* MR 'to do/say like that', very common as intransitive Aux (**ma*, cf. Nunggubuyu *yama* < **yay-ma* 'voice-thus');
- (12) *malđu/malđa* MR 'to sit', a derivative of (5);
- (13) *muři/muna* 'to sting';
- (14) *muřgi* DR, causative;
- (15) *naji* MR 'to burn (intrans)', not common as Aux (**na* 'to burn (trans)' plus augment *-*ŋa* plus reflexive-mediopassive *-*i*, as is made clear by Nunggubuyu parallels);
- (16) *niđa* DR 'to hold on to, to keep in one's possession', not common as Aux;
- (17) *numi* DR, occasionally with *wařd* 'to pick up, grab';
- (18) *ňayi* MR, with *ŋir* 'to breathe';
- (19) *walmida* DR 'to spear repeatedly' (tentative gloss), as Aux with *mud* 'to break';
- (20) *wiņđi* DR 'to go looking for', as Aux with *war* 'to see' and verbs of emotion with indirect objects like 'to fear' and 'to pity' (trans.);
- (21) *ya* DR 'to bite'.

Reflexives and reciprocals are formed from DR auxiliaries by adding reflexive or mediopassive *-i* or reciprocal *-yi* to the auxiliary stem; hence *ga* becomes *gi*, *gayi*.

The actual paradigms are fairly irregular, but some order can be gleaned by noting that in many cases all present and continuous forms have an augment *-ŋa* or *-ma*. Some paradigms are defective—in some cases this reflects the informant's inability to recall rare forms, in other cases the paradigm really is suppletive. For example, (5) and (12) have no punctual forms; they are supplented by another verb (possibly *inađi*—Heath has not had time to check this).

As mentioned earlier, 'to go' has different forms in its auxiliary function than it has in its (defective) independent function. Past/future continuous *rařa* and present *rařani* both lose their augment *-řa* and become *ra* and *rani* when used as auxiliaries.

miři ŋa-ra-řa-ni 'I go now.'
 now I-go-PRES
miři nad-ŋa-ra-ni 'I run now.'³
 now run-I-go-PRES

Other forms of 'to go' are based on different stems; most cannot be used except as auxiliaries. The defective forms of 'to go' are supplented by forms with verb particle *gi* 'to go' plus the auxiliary, hence *gi-ŋiřa* 'I went', not **ŋiřa* alone. There is also an alternative 'to go' paradigm used as auxiliary, based on a stem *mayi/maya*, which may have had a complete paradigm.

3.2. Alawa verb batteries

In all verb batteries quoted, some typical verb particles are listed first together with the auxiliaries and substantivising suffixes they can occur with; then follows a brief description of the battery and clauses to illustrate the battery.

Qualitative battery

gul: *ri*, *-mayin*, *-maňđawanda* 'heavy'
gulmug: *mba*, *-mayin* 'deaf'
dewu: *ri*, *-mayin* 'white'
wid: *mba*, *-mayin* 'black, blacken'

Qualitative verb particles most commonly occur in a clause kernel with auxiliary stem *ri* 'be' and are intransitive, or in a phrase with the substantivising suffixes *-mayin* 'being' or *-maňđawanda* 'not being'. The subject of the clause, or the item described by the adjective, are the same, being the item having the quality signified.

ruwu gul n-e-ni 'The tree is heavy.'
 tree heavy it-be-PRES
ruwu gulg-mayin 'The tree is heavy.'
 tree heavy-QUAL
ruwu gulg-maňđawanda 'The tree is not heavy.'
 tree heavy-STATIVNEG
ŋugu wid wid na-mbi 'The water will blacken.'
 water black it-do FUT

Instrumental qualitative battery

galuř: *a*, *ri*, *-ŋuwal*, *-mayin*, *-ňiyi* 'round for water'
galuř is the only verb particle found to suggest this battery. When agent is absent, the kernels are the same as those for the qualitative battery. The intransitive kernel has as subject the instrument with the quality signified; in the transitive kernel this item appears as the instrument.

luḍuluḍu galuř n-e-ni /galuř-mayin
cooliman round it-be-PRES/round-QUAL
'The cooliman is round for water.'

luḍuluḍu galuř-ñiyi
cooliman round-PURP
'The cooliman is for getting water.'

ař-giřiya galuř ař-g-a-n-na nda ŋugu luḍuluḍ-iř
FEM ERG-woman round she-do-PAST-it CON water cooliman-ERG
'The woman got water with the cooliman.'

an-giřiya an-galuř-ŋuwal
FEM-woman FEM-round-ACT
'The woman is always getting water.'

Transitive sensation battery

gaya: na 'hear'⁴

ñiŋaya: ri 'like'

dul: a 'find, see'

The transitive sensation battery includes verb particles which occur in transitive clauses. Instrument and partitive have not been found, nor have substantivising suffixes.

dul ŋul-a-ŋa-n-na nda yařgała
find we-do-PUNCT-PAST-it CON kangaroo
'We found the kangaroo.'

gaya ŋe-ne-ni nda guřureřu ñur ne-mbe-łi
hear I-sit-PRES CON dingo howl it-do-PRES
'I hear the dingo howling.'

nula nda ñiŋaya n-e-ni niba
he CON like he-be-PRES him
'He likes him.'

Transitive action state battery

guñ: a 'see, watch'

mabin: a 'think, remember'

ḍaw: ḥada, -ñiyi 'feel, catch'

The transitive action state battery includes verb particles which may occur with an object as referent, or (with the same auxiliary stem) with an object as purposed goal, when the action has not attained its goal; the object may be absent. The partitive represents the body part involved in the action; this is more commonly present when object is absent.

lilmi-ři guñ g-φ-a-n-na nda giřimbu
man-ERG see φ-he-do-PAST-it CON kangaroo
'The man saw/was watching the kangaroo.'

lilmi guñ g-φ-a-nda giřimbu-yi
man watch φ-he-do-PAST kangaroo-GEN
'The man was looking for kangaroos.'

lilmi ŋguluř niba ŋayi yumař guñ g-φ-a-ndař
man eye him not good see φ-he-do-SUBJ
'The man doesn't see well/has poor eyesight.'

Instrumental transitive battery

yaŋ: a, yaga, -ŋuwal, -mañḍawanda, -ñiyi 'hit, kill'

manbař: a 'cut oneself' (only reflexive found)

ñag: abu 'spear'

The instrumental transitive battery contains verb particles which occur in transitive constructions with an instrument, but which cannot occur in intransitive clauses. These verbs may occur as reflexives. Active and passive nominalisations are possible. When the part of the object 'touched' by the instrumental transitive action is mentioned, it is in nominative case, probably functioning as an inalienable possession item in the referent noun phrase.

lilmi-ři yaŋ g-a-ḥada-n-na nda giřimbu ruw-iř
man-ERG hit φ-he-do-PAST-it CON kangaroo stick-ERG
'The man hit the kangaroo with a stick.'

lilmi yaŋ ñun-ḥada-n-na ŋguruguru niba ruw-iř
man hit himself-do-PAST-him head him stick-ERG
'The man hit himself on the head with a stick.'

lilmi-ři yaŋ g-a-ya-g-a-n-na nda yaŋan
man-ERG hit φ-he-with-φ-do-PAST-it CON snake
'The man hit the snake over and over.'

lilmi yaŋ-ŋuwal

man hit-ACT

'The man is always hitting.'

giřimbu yaŋ-mañḍawanda

kangaroo hit-STATIVNEG

'The kangaroo is unkillable.'

Change of state battery

leřb: a₂, ñidi 'fall down to ground'

buy: ñidi 'be born'

bub: weñḍu 'cool'

budid: wiña 'get up, go'

The change of state verb particles are those which denote actions which change the state or position of the subject. Only one kernel appears to exist, the intransitive clause. These verb particles do not occur with *-mayin* or *-ŋuwal*.

bub ge-weñḍi-lu-nu nda yałbun
cool it- -PRES-it(dummy) CON lilyseed

'The lilyseed damper cools.'

lilmi budid n-ała

man set out he-go PRES

'The man sets out.'

Transitive change of state battery

mud: wiña, a 'break'

ŋawuř: wiña, a 'drown'

ḍaŋał: wiña, uřga, -ŋuwal 'sick, die'

diwan: na, ḥada 'roast in ashes'

In this battery, verb particles occur with an MR auxiliary with object as S₁, and an optional instrument, or with an MR causative or DR auxiliary with transitive sense. They signify actions which inherently change the state of an object, and which may be caused by an external agent. When the active suffix is used with one of these verb particles, it signifies the item undergoing the

change of state. Verb particles in this battery are often repeated in successive clauses, first with the transitive kernel, then with the intransitive.

ař-giřiya diwan g-eřge-řede-řiu-nu nda aga wub-iř
 FEM ERG-woman roast ϕ -she-DO-PRES-it CON fish fire-ERG
 'The woman is roasting the fish in the fire.'
diwan ne-ne-ni nda aga wub-iř
 roast it-sit-PRES CON fish fire-ERG
 'The fish is roasting in the fire.'
řařal-řuwal
 sick-ACT
 'He is always sick.'

Motion battery

wiřa, aři, ařiga, yaga, ali 'go', 'come', 'go to', 'take', 'bring' resp.

Verb particles plus the above:

<i>mal</i> 'go up'	<i>řuř</i> 'come back, return'
<i>murb</i> 'go in a mob'	<i>geř</i> 'run'
<i>bili</i> 'enter'	<i>diwu</i> 'fly'
<i>dum</i> 'go down'	<i>law</i> 'go across'

Motion verb roots enter several clause types. All of them may occur with the auxiliary stems listed above (which also occur as inflected verbs); probably all can occur with *neđu* 'in a mob'. Not all verb particles which occur with *wiřa* 'go' are in this battery, but almost all which may occur with *aři* 'come' are. These verb particles are basically intransitive in meaning, and subclassify accordingly as they are most likely to co-occur with a locative case item, or with allative ('towards') or ablative ('from'). When occurring with *ařiga*, *yaga* and *ali* the clauses are transitive; with *ařiga* the referent is the place (or person) towards which the motion is directed, and no allative can co-occur; with *yaga* and *ali* the referent is an item taken by the agent in the manner specified by the verb particle, *yaga* usually being used when it is taken away from the speaker, and *ali* towards. Examples are not given here; some examples occur elsewhere in the paper, and the battery description is fairly self-explanatory.

Ditransitive battery

(*ma/me*): *muda* 'give' (most common with no verb particle)

ma/me: mba 'give'

řuř: muda 'give back'

řuřimu 'show'

The ditransitive battery contains verb particles and inflected verbs which appear to occur in only one clause type. The referent of the verb is human, and there is a second referent with which the verb (if DR) has no agreement, and it is the object. Only dative direferential auxiliaries or inflected verbs and the dative monoreferential auxiliary *mba* (so called because it can take dative object as referent and commonly does so, and because it is the only MR auxiliary which in combination with a verb particle can take two referents—object and dative object) may occur in this battery.

lilmi-ři a-muda-ya-řuřu nda an-giřiya nda řgumbi
 man-ERG he-give-PAST-her CON FEM-woman CON beef

OR

lilmi-ři me na-mumba-n nda an-giřiya nda řgumbi
 man-ERG give he-do-PAST CON FEM-woman CON beef
 'The man gave the woman the meat.'

lilmi-ři a-řuřimu-wun-nu nda yařada nda aga
 man-ERG he-show-PAST-him CON child CON fish
 'The man showed the fish to the child.'

Quotative battery

řař: muda, aři, mba, -řuwal, -mařdawanda 'speak, say, tell'

ga: mba, ařiga, -řuwal 'call out'

wele: muda 'ask a question'

The quotative battery shares with the ditransitive battery the general restriction of auxiliary verbs to the dative auxiliaries, though *ařiga* has also been found. The referent of the verb is human, and the matter of the speech is given in genitive case, unless the actual quotation is given. If an MR auxiliary is used, and there is no overt referent (person spoken to), the subject (speaker) may optionally be in nominative case; elsewhere it is ergative. Verbs which have DR auxiliaries may occur as reflexives. Substantivisers *-řuwal* and *-mařdawanda* occur; the suffix *-mařdawanda* here indicates the converse of *-řuwal*, and does not have a passive sense in this battery.

lilmi-ři řař a-muda-ya-řuřu nda an-yařada aga-yi
 man-ERG speak he-give-PAST-her CON FEM-child fish-GEN
 'The man talked to the girl about the fish.'

lilmi(-ři) ga na-mumba-n muwařa-yi
 man(-ERG) call out he-do-PAST canoe-GEN
 'The man called out for a canoe.'

lilmi ga ga-řuwal

man call out-ACT

'The man is always calling out.'

lilmi řař-mařdawanda

man talk-STATIVNEG

'The man doesn't talk much.'

3.3. Listing of verb particles and auxiliaries

This paper is concluded with a listing of verb particles according to the auxiliaries they occur with for the three languages. Citation forms for the auxiliaries are usually those forms from which most tense-aspect-mood forms can be predicted, but as this in Alawa is most often the future tense, the future tense form is cited for very irregular auxiliaries such as 'go' in this language. The lists are not exhaustive for either verb particles or auxiliaries, and the data given includes areas of uncertainty.

In the listings, indication is given (with dash and gloss) if the auxiliary can occur as a full inflected verb. Then a listing of verb particles occurring with the auxiliary is given with gloss of verb meaning (and transitivity if different from the preferred transitivity of the auxiliary). If the verb particle occurs with other auxiliaries this is shown, together with the transitivity (if different) and gloss (if different). Cross-referencing numbers with certain auxiliaries are those given in Tables 3, 4, and 5.

Alawa verb particles classified by auxiliary:

- ađi* MR 'come'
(all intrans)
1. *wiña* MR 'go'
(mostly intrans)
- 'come'
Many motion particles listed under *wiña* 'go'; almost all of such particles are semantically possible. Also, *yur* 'come out'; *yur a* (tr) 'pull out'
bubub (*bub bub*?) 'blow'; *bubub weñđu*
- 'go'
bili 'enter'; *bili neđu* 'enter in a crowd'; *bili uřga* (tr) 'cause to go in'
mbul 'big mob go away'
budid 'get up, go'
đadba 'chop'
đalub 'paddle canoe'
đajal 'die, sick'; *đajal uřga* (tr) 'kill, cause to die'
đangay 'hunt'
dili 'go along side (of hill)'
duđ 'go back'; *duđ muda* (tr) 'give back'
dum 'go down'; *dum ařiga* (tr) 'go down to'
duy 'go away'; *duy mba* (tr) 'send away'
dar 'pull out'; *dar yaga* (tr) 'bring out'
diwu 'fly'; *diwu ŋada* (tr) 'fly'
dun 'arise, get up, set out'; *dun ařiga* (tr) 'set out for'
ged 'run'; *ged ařiga* (tr) 'run away with'
lal 'stop, be quiet'
law 'go across'; *law ŋada* (tr) 'cross over'; *law ařiga* (tr) 'go across to'
lim 'swim, dive'; *lim ri*; *lim a* 'dive for'
lul 'scatter, spread out'; *lul ŋada* (tr) and *lul uřga* (tr) 'scatter, spread out'; *lul aña* (intr);⁵ *lul neđu* (intr) 'scatter in large numbers'
mađ 'hunt out, hunt away'; *mađ mba* (tr)
mal 'go up'; *mal yaga* (tr) 'take up'; *mal ařiga* (tr) 'go up to'
milar (tr) 'build'; *milar aña*
miyad 'move around in camp'
mud 'break'; *mud a* (tr)
mug 'forget, lose'; *mug mba* (tr?)
murb 'go in mob'; *murb ŋada*
nelg 'be tired' (cf. *belg* under *mba*)
ŋawuř 'drown, sink'; *ŋawuř a* (tr); *ŋawuř ŋada* (tr)
ŋuy 'swim'
wagul 'come, go back'
yariririma 'go round in corroboree'
bili 'enter in a mob'; *bili wiña* 'enter'; *bili uřga* 'make go in'
lul 'scatter in large numbers'; *lul wiña* 'spread out'
- 'be'
barg 'sharp nosed'
barig 'dry in sun'; *barig uřga* (tr)
bib 'fill with water'; *bib uřga* (tr)
buda 'cook'; *buda uřga* (tr)
- neđu* DR 'in a mob' (intrans)
- ri* MR 'be'
(mostly intrans)

- đanba* 'hang up, be above'
đar (tr) 'cut stomach'; *đar ŋada* (tr)
đidi 'be covered with dust'; *đidi a₂* (tr); *đidi muda* (tr)
đil 'rain'
đir 'stand'
dawaiř (tr) 'dig'
dewu 'white'
gađ (tr) 'pick up with hands'
gal (tr) 'bite'; *gađ a₂*
galuř 'round for water'; *galuř a* 'fill with water, get water'
gar 'dance'
gulg 'heavy'
gul 'drink'; *gul a₂* (tr)
lařg 'split down front'; *lařg ŋada* (tr); *lařg yaga* (tr)
leř (tr); *leř a₂* (tr)
lim 'dive'; *lim wiña*; *lim a* (tr) 'dive for'
ñam 'eat' (homonym with *ñam a* 'shut, close' or maybe same)
ñiŋaya (tr) 'like, want'⁶
niđ 'have headache'
wab 'singe hair'
wag 'laugh'; *wag ařiga* (tr) 'laugh at'
wagař 'sit' (the state of sitting)
wayař 'be hungry'
wud 'be at rest'
wulug 'be sleepy'
yađ 'wait'; *yađ na* 'wait for' (+ genitive); *yađ a₂* (tr) 'wait for'; *yađ muda* (tr) 'wait for'
yana 'sleep'; *yana ñidi* 'go to sleep'
yeđ 'drop down'; *yeđ uřga* 'throw down'
(n)daŋ 'be thirsty'
diwan 'roast in ashes'; *diwan ŋada* (tr)
gaya (tr) 'hear'; *gaya uřgamu* (refl) 'feel oneself'
liřiw 'burn'; *liřiw mba*
ŋal 'hot, burn'
yađ 'wait'; *yađ ri*; *yađ aña* (tr) 'wait for'; *yađ muda* (tr) 'wait for'
buy 'be born'
ŋum 'begin to burn'; *ŋum mba* (intr); *ŋum uřga* (tr)
yana 'go to sleep'; *yana ri* 'sleep'
biŋ (tr) 'finish, eat up'; *biŋ ŋada* (tr) 'finish'
amu MR
uřga MR 'cause to' (mostly intrans)
ař (intr) 'sunrise' (no causative sense)
barig 'dry in sun'; *barig ri* (intr)
bib 'fill up with water'; *bib ri* (intr)
bili 'make go in'; *bili wiña* (intr) 'enter'; *bili neđu* (intr) 'enter in mob'
buda 'cook'; *buda ri* (intr)
đagar 'eat breakfast'
đajal 'cause to die, kill'; *đajal wiña* (intr) 'be sick, die'

2. *mba* MR 'do, say'
(mostly trans or
dative trans)

gaḍ 'pick up with hands'; *gaḍ ri*; *gaḍ aña* (tr)
ḡum 'make burn'; *ḡum ñidi* (intr) 'begin to burn';
ḡum mba (intr)
yed 'throw down'; *yed ri* (intr) 'drop down'
 —'do, say'
 All foreign borrowings of actions, e.g.
ḍiḡ 'sing'
midim 'meet'
milgim 'milk'
wurg 'work'

belg 'tired' (intr) (cf. *nelg wiña*)
biř (intr) 'be full up (with food)'
bu 'light fire'
buy 'dry'
ḍaḡaḡ (intr) (men's corroboree call)
ḍuy 'send'; *ḍuy wiña* (intr) 'go away'
dada 'chop'
ga 'call out'; *ga ařiga* 'call out to'
galg (intr) 'break'; *galg ḡada* (tr)
gelele (intr) 'call gelele (women's corroboree call)'
gulmug (intr) 'be deaf'
gululu (intr) 'thunder'; *gululu aḍi* 'truck sound come'
liři (intr) 'hurt, ache'
maḍ 'hunt out, drive away'; *maḍ wiña*
mař 'carry'; *mař muda* 'make carry'
me (ditrans) 'give'; see *muda*, *ma muda* 'give'
mug 'forget, lose'; *mug wiña* (tr?)
ñur (intr) 'howl'
ḡal 'talk (to)'; *ḡal muda*; *ḡal a₂*
ḡum 'burn' (intr); *ḡum uřga* (tr) 'make burn';
ḡum ñidi 'begin to burn' *wad* (intr) 'leave';
wad a (tr); *wad ḡada* (tr) *wid* (intr) 'blacken'
 —(tr) 'eat'
ḍaw 'catch fish'; *ḍaw ḡada* (intr+genitive) 'feel for
 fish'
dul 'find, see'; *dul a₂*
galuř 'get water'; *galuř ri* (intr) 'be round for water'
gaḷ 'dig out from fire'
guñ 'watch, see'
libi 'be angry at'
lim 'dive for'; *lim wiña* (intr) 'dive'; *lim ri* (intr) 'dive'
mabin 'remember'
malmal 'have children growing up'; (*malmal* (noun)
 'child')
manbař (refl) 'cut oneself'
mayag 'understand'
mud 'break'; *mud wiña* (intr)
ñam 'shut, close' (homonym with *ñam ri* 'eat')
ḡařañ 'scratch'

3. *riř* DR 'eat'4. *a* DR (mostly
trans)*yaga* DR 'take'
(trans)*ařiga* (DR) 'go to'*a₂* (and *aña*)
MR and DR
(intrans and trans)⁷

ḡawuř 'drown'; *ḡawuř wiña* (intr)
wad 'leave'; *wad mba* (intr); *wad ḡada* (tr)
wař 'sing corroboree'; *wař a₂*
wiḍ 'get'; *wiḍ a₂*; *wiḍ ali* 'bring'
yab 'sit down' (usually intr); *yab ḡada* (intr)
yaḡ 'hit, kill'; *yaḡ yaga* 'hit repeatedly'
yuř 'pull out'; *yuř aḍi* (intr) 'come out'
 (compound *ya-* 'with' + *a*)
 —'take'
dař 'pull out'; *dař wiña* (intr) 'go out'; *dař aḍi* (intr)
 'come out'
gař 'cook in oven'; *gař ḡada* (homonym with *gař
 muda* 'pierce')
geḍ 'run away with'; *geḍ wiña* (intr) 'run'; *geḍ aḍi*
 (intr) 'come running'
lařg 'split down front'; *lařg ri*; *lařg ḡada*
law 'take over'; *law wiña* (intr) 'go across'; *law aḍi*
 (intr) 'come across'; *law ařiga* (tr) 'go across to'
mal 'take up'; *mal wiña* (intr) 'go up'; *mal aḍi* (intr)
 'come up'; *mal ařiga* (tr) 'go up to'
yaḡ 'hit repeatedly'; *yaḡ a* 'hit, kill'
 (compound *aři-* 'to' + *a*) 'go towards'
ḍum 'go down to'; *ḍum wiña* (intr) 'go down'; *ḍum
 aḍi* (intr) 'come down'
dul 'see, find'; *dul a*; *dul ḡada*
duḡ 'set out for'; *duḡ wiña* (intr) 'arise, set out'
ga 'call out to (a person)'; *ga mba*
law 'cross over to'; *law wiña* (intr) 'go across'; *law aḍi*
 (intr) 'come across'; *law yaga* (tr) 'take across'
mal 'go up to'; *mal wiña*; *mal aḍi*; *mal yaga* (as *law*)
wag 'laugh at'; *wag ri* (intr) 'laugh'
yagul 'be frightened of'; *yagul aña* (intr) 'be afraid'
ḍaḍ DR 'catch fish'; *ḍaḍ muda*
ḍidi DR (tr) 'cover with dust'; *ḍidi ri* (intr) 'be
 covered with dust'; *ḍidi muda* (tr)
ḍum MR (intr) 'go down'; *ḍum wiña*, etc.
dul DR 'find, see'; *dul a* (tr); *dul ḡada* (tr)
gaḷ (tr) 'bite'; *gal ri*
guḷ DR 'dunk in water'; *guḷ ri* 'drink'
guy MR (intr) 'hunt' (plus genitive); *guy muda* (as
guy a₂)
leř 'set fire'; *leř ri* (tr)
leřb 'fall down to ground'
milař MR (tr) 'build'; *milař wiña* (tr)
ḡal DR 'speak'; *ḡal muda*; *ḡal mba*
wař DR 'sing corroboree'; *wař a*
wiḍ DR 'get'; *wiḍ a*; *wiḍ ali* 'bring'
yaḍ 'wait for'; *yaḍ ri* (intr) 'wait'; *yaḍ na* (intr); *yaḍ
 muda*

- yagul* MR (intr) 'be frightened'; *yagul ařiga* (tr) 'be frightened of'
- řada* DR (trans) Closely related to *a*, and takes many or most of those verb particles which occur with *a*, also *biř* (tr) 'finish'; *biř amu* (intr) —'bring'
- ali* DR 'bring' (trans) *wiř* 'bring'; *wiř a* 'get'
Also motion verb particles *mal*, *řum*, etc.
—'keep, have'
- mabu* DR 'keep' (trans)
- lamu* DR 'try' (trans) —'try'
5. *abu* DR 'spear' (trans) *řag* 'spear'
6. *muda* DR 'give' (ditrans or trans) —'give'
- řađ* (tr) 'catch fish'; *řađ a₂* (tr)
- řiđi* (tr) 'cover with dust'; *řiđi ri* (intr); *řiđi a₂*
- řuđ* 'give back to'; *řuđ* otherwise is a motion verb particle and occurs with *wiřa*, *ađi*, *ali*, etc.
- gař* (tr) 'spear, pierce with spike, cut deep' (homonym with *gař yaga*, *gař řada* 'roast')
- gel* (tr) 'pull out'
- guy* (intr—no R—plus genitive case goal); *guy a₂* (as *guy muda*)
- ma* 'give'; *me mba*
- mař* 'cause to carry' (R is person, object carried obligatorily absent); *mař mba* (tr) 'carry'
- nał* 'talk to'; *řał mba*; *řał a₂*
- řan* (tr) 'catch (fish)'
- wele* 'ask'
- yad* 'wait for'; *yad a₂*; *yad ri*, *yad na* (intr) 'wait'
- 'show'
- řuřimu* DR 'show' (ditrans)
- Mara verb particles classified by auxiliary:
1. *yuřa* 'go' (mostly intrans) —'go'
- ya-* (aux prefix before pronominals) 'come'
- wuř-* (verb particle prefix) 'coming to'
- ma-* (verb particle prefix) 'back'
- balwad* 'be plenty'
- balala* '(truck) run'
- bay* 'stand up'; *bay nbu*; *bay ři*
- biđiđi* 'rain come up'
- biłin* 'finish'; *biłin ři* 'be more plenty'
- biř*, *wuřbiř* 'finish'; *biř ři*; *biř řu*; *biř a*
- řađba* 'chop'
- řalab* 'paddle canoe'
- řalala* (*řalala?*) 'hunt'
- řangay* 'hunt'
- řum* 'go down'
- řuy* 'go away' (redup. *řuyřuyřuyb*)

- řađ* 'stop (there)'
- řařa* 'tide go down'
- řiwu* 'fly'; *řiwu a* (tr) 'take by air'
- řruř* 'muster, come in mob'⁸
- řuđ* 'just finish'
- řun* 'arise, get up, set out, take off, go away'
- řab* 'come up'
- řaw* 'go across'; *řaw a* (tr) 'bring over'
- řim* 'wash, bathe, dive'
- řal* 'go up'
- řađ* 'run'
- řan* 'run'
- řanna* 'come back'; (*řanna?* 'run back'?)
- řa* 'come'
- řab(řa)* 'go up (to)' (not 'climb')
- řuy* 'swim'
- wari* 'come back, go back'
- wiři* 'come in'; *wiři a* (tr?)
- yariririma* 'go round in corroboree'
- yil* 'be tired, knocked up'
- yili* 'go alongside'
- yingan* 'come' (?)
- yu(r)* 'turn up'
- malgaya* —'sit'
- aņđi* —'sit down'
- řan ya-* 'bring up'
2. *ma* 'say' —'say, know, talk'
- balwayi* 'grow bigger'; (*balwayi* 'big' is an adjective)
- bař* 'call'
- bu* 'burn'
- řađ* 'sit down, stop'
- řanag* 'be on top'
- řalg* 'keep'
- řaņ* '(wind) hot'
- řal* 'chop'
- řarig* 'wind increase'
- řari* 'make'
- řelele* 'call gelele' (women's corroboree call)
- řululu* 'thunder'
- řiři* 'hungry'
- řuł* 'cry'
- řał* 'talk'
- wari* 'pound, grind' (homonym with *wari a* 'call')
- mbulma* 'start' —'start'
- nbu* *bay* 'stand'; *bay yuřa*; *bay ři*
- řalag* 'land'
- wari* 'come back'; *wari yuřa*
- yana* 'sleep'

ɖana, ɖulu
(classified with
nbu)

3. *ɖi* 'eat' (trans)

ɖu

niŋu 'tell, say'

bay 'stand'; *bay yuʃa*; *bay ɖi*
ɖil 'rain'
gul 'drink'; *gul ɖu*
guwaɖa 'hear'; (*guwaɖa* 'ear' is a noun in both
Alawa and Mara)
ŋangul 'sit down'
wayaʃ 'be hungry'
wiru 'start' (?)
wulug 'feel sleepy'
yana 'sleep'
—'eat'
baʃ 'split down back'
bay 'stand'; *bay yuʃa*; *bay nbu*
biŋ 'finish up'; *biŋ yuʃa*; *biŋ ɖu*; *biŋ a*
buyuʃ 'dig out, clean'
ɖalag 'throw down'
ɖaʃa 'start'
dad 'cook in stone oven'; *dad ɖu*
dalag 'stalk'
dar 'cook in ashes'; *dar niŋu*
daʃ 'cook in ashes' (*dar* ?); *daʃ ɖu*
diwan 'cook in ashes'
gaʃ 'cook in stone oven'; *gaʃ ɖu*
giʃ 'split down front'; *giʃ niŋu*
ŋiŋaya 'want'
yay 'laugh'
yiwu 'put out fire'
biŋ 'finish up'; *biŋ yuʃa*; *biŋ ɖi*; *biŋ a*
biri 'fill, be in canoe'
buma, bumbay 'burn, clean off hair'
ɖarag 'make'
ɖil 'rain'; *ɖil nbu*
dad 'cook in stone oven'; *dad ɖi*
daʃ 'cook in ashes'; *daʃ ɖi*
gaʃ 'cook in stone oven'; *gaʃ ɖi*
gul 'drink'; *gul nbu*
mayag 'look for'
wul 'catch fish'
yaɖa 'find, look about'
—'tell, say'
bal 'write down'
bay 'stand up'
biɖ 'stalk'
bin 'carry'
biʃin 'talk'
ɖi 'shake'
dad 'cook in ashes' (cf. *dad ɖi*—possibly same particle)
daŋ 'cook'
dar 'cook in ashes'; *dar ɖi*
dun 'arise, set out'; *dun yuʃa*

yudɪ 'blow'
a (trans)

4. *mina* 'see' (trans)

5. *andayaʃi* 'spear'
(trans)

Wandarang verb particles classified by auxiliary:

1. *ra* 'go' (intrans)

giʃ 'split down front'; *giʃ ɖi*
ŋaʃ 'talk'
ŋayi 'take away'
wayi 'get wire'; *wayi a*
yawur 'go walkabout'
—'blow'
bad 'go out'
baɖab 'get up'
biŋ 'finish'; *biŋ yuʃa*; *biŋ ɖi*
ɖaʃ 'pull out'
diwu 'take by air'; *diwu yuʃa* (intr) 'fly'
duʃ 'find'
dun 'go catch'
gal 'dig out'
gurid 'turn belly up'
laʃ 'cut'
law 'bring over'; *law yuʃa* 'go across'
mun 'break'
ŋal 'make a person cry'
nabali 'look it up'
rag 'hit'
raŋ 'go hunting, kill, hit'
wal 'go pull out'
waʃ 'call, name' (homonym with *waʃ ma* 'pound,
grind'
waʃi (?)/*waʃg* 'go get'
wayi 'leave' (homonym with *wayi niŋu* 'get wire')
wur (?) 'put up house, put down(?)'
yiwu 'put out fire'
yuru 'take bingy out'
—'see'
—'spear'

—(*raʃa*) 'go'
bili 'enter'
biŋ 'finish'; *biŋ gaʃi*
ɖalala 'go walkabout'
ɖangay 'hunt'
ɖub, ɖuɖub 'go down'
ɖuwi 'go away'
daʃ 'get in, arrive'
diʃwu 'dive, plunge'
diwu 'fly'; *diwu ɖa* (tr) 'throw away'
gal 'grow' (homonym with *gal ɖa* 'spear')
gi, gil 'go, proceed'; *gi wiŋɖi*
giwal 'tell someone to come up'
liʃa 'bite'
mal 'climb, go up'
nad 'run around'

- waři* 'return'
waya 'finish, die'
wiya 'go'
ya- 'come'
yil 'tire, knock up'
 —'camp, stop'
malđura 'camp, stop'
 2. *mi* 'do, say'
 —'do, say'
biř 'frighten' (tr) (homonym with *biř wiņđi* 'build')
bu 'burn, have fire'
dad 'sit down'
day 'run away'
gay 'knock'
gar, garıgar 'dance'
mabał 'die out'
mug 'forget'
ıał 'talk'; *ıał ɖa*
wunga 'want to do, say'; *wunga ɖa*
wurg 'work' (borrowing)
 —'eat'
 3. *ıama* 'eat'
gaya 'hear'
 4. *wiņđi* 'see' (trans)
 —'hear' (cf. Alawa *gaya na* 'hear')
 —'see'
buř 'be same as'
gi 'hunt'; *gi ra* (*gi ııa*) 'go'
ma 'put for them' (?)
ıil 'ask'
wař 'see' (homonym with *wař gaııi* 'sing, call')
yagul 'be frightened of'
bad 'leave'
biı 'finish'; *biı ra*
muıur 'take'
ııal 'get'
ıał 'write'; *ıał mi* 'say, talk'; *ıał ɖa* 'say, talk'
ıim 'camp'
ıiıđal 'get, bring back'
ray 'kill'
waɖu 'finish'
war 'hook up, catch'
wař 'sing, call' (homonym with *wař wiņđi* 'see')
wundawa 'take news'
yaɖ 'stop (it)'; *yaɖ ɖa* 'wait'
bał 'write down'
biɖ 'carry'
ɖaɖ 'chase'
diwu 'throw away'; *diwu ra* (intr) 'fly'
dul 'send away'
gal 'spear' (homonym with *gal ra* 'grow')
maɖul 'send'; *maɖul mi*
ıał 'talk'; *ıał mi*; *ıał gaııi* 'write'
way 'leave'

gaııi

ɖa

wuɖaııu 'leave'
wunga 'want to do'; *wunga mi*
ya 'find' (?)
yaɖ 'wait'; *yaɖ gaııi* 'stop'

Notes

1. /ř/ signifies the flapped or trilled alveolar, and /r/ the retroflexed continuant. /ıı/ is used for the alveodental nasal and /ɖ/ for the alveodental stop.
2. In the convention I follow, the stem, even though it may never occur alone, is listed without hyphens; items prefixed to the stem are listed *x-*, and suffixed *-x*.
3. In all three languages, word initial alveolar consonants become retroflexed following vowels utterance medially. In definable cases, a similar rule applies within words across morpheme boundaries.
4. Note that Warndarang has an inflectable stem *gaya* 'hear'.
5. There is an MR and a DR form of the auxiliary *a₂*; the MR form is symbolised *aııa* in this list.
6. *ııııaya* also occurs in the compounds *ııııaya yumaııi ri* 'be happy', and *ııııaya weııeɖu ri* 'be sad'.
7. It is not clear whether *a₂* and *aııa* are different auxiliaries or the same. Some examples are clearly either MR or DR, but where there is no referent affix, and incomplete paradigms lack 1st and 3rd persons singular, the forms are identical.
8. *druř*, a particle which does not fit the phonological patterns of the languages, is probably derived from the English *drover*; the particle has also been found in Alawa text.

References

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Table 3: Alawa auxiliaries and inflected verbs^a

STEM, TYPE AND MEANING	PAST PUNCT	FUTURE	FUT CTS SUBJ	PR CTS SUBJ	PR PUNCT SUBJ	PRES CTS	PAST CTS
1. <i>wiña</i> MR 'go' <i>ađi</i> MR 'come' <i>ri</i> MR 'be'	<i>yiman</i> <i>ađa</i> —	<i>wiña</i> <i>eđi</i> <i>ni</i>	(i) <i>nđiđ</i> <i>ađiyiđ</i> <i>nindiđ</i>	(i) <i>nđiđi</i> <i>ađiyiđi</i> <i>nindiđi</i>	(i) <i>nđiđi</i> (<i>ri</i>) <i>ađiña</i> <i>riñiña</i>	<i>ađa</i> <i>ađini</i> <i>eni</i>	<i>wuđala</i> <i>ađina</i> <i>ri</i>
2. <i>mba</i> MR 'do, say' <i>na</i> MR 'sit' <i>ñidi</i> MR 'be about to' <i>amu</i> MR <i>uřga</i> MR 'cause to' <i>muļa</i> DR	(<i>mban</i> <i>numban</i> <i>naganan</i> <i>ñidan</i> <i>amun</i> <i>uřgan</i> <i>muļan</i>	<i>mbi</i> (imper <i>mimbi</i>) <i>neyi</i> <i>ñidi</i> <i>ami</i> <i>uřga</i> <i>muļa</i>	<i>mbayař</i> <i>nadaɣař</i> <i>ñidiyiř</i> <i>amindiř</i> <i>uřgañđiř</i>	<i>mbeyiři</i> <i>nedeyiři</i> — (<i>amindiři</i> <i>amunduru</i>)	<i>mbeña</i> <i>negeña</i> <i>amiña</i> <i>uřgiña</i>	(<i>mbeli</i> <i>mbili</i> <i>neni</i> — <i>amiļi</i> <i>uřgeļi</i> <i>muļi</i> <i>eli</i>	<i>mbaļa</i> <i>nana</i> — <i>amaļa</i> <i>uřgala</i> <i>ala</i>
3. <i>rir</i> DR 'eat'	<i>rir</i> ^b	(<i>riyiř</i> <i>riđiř</i>)	<i>riyiři</i> (<i>riyuřu</i> with 3sR suffix)	<i>riyiři</i> (<i>riyuřu</i> with 3sR suffix)		<i>eli</i>	<i>ala</i>
4. <i>a</i> DR <i>a</i> ₂ DR ^c <i>řada</i> DR <i>aļi</i> DR 'bring' <i>mabu</i> DR 'keep' <i>lamu</i> DR 'try' <i>uřgamu</i> DR <i>weñđu</i> DR <i>neđu</i> DR (intrans) 'in a mob'	(<i>ařan</i> <i>an</i> (<i>da</i>) — <i>řadan</i> <i>aļiya</i> <i>maban</i> (<i>a</i>) <i>lamuwun</i> <i>uřgamuwun</i> <i>weñđiwun</i> (<i>neđin</i> <i>neđiwun</i>)	<i>a</i> <i>a</i> <i>řada</i> <i>řa</i> <i>eļi</i> <i>mabu</i> <i>lama</i> <i>uřgami</i> <i>weñđu</i> <i>neđu</i>	<i>andař</i> <i>endař</i> (?) <i>řadaɣař</i> <i>mabunduř</i> <i>neđiyiř</i>	<i>endiři</i> <i>neđeyiři</i> <i>mabindiři</i>	<i>eña</i> <i>eña</i> <i>řadaña</i> <i>aļiña</i> <i>mabi</i> <i>lamaña</i>	<i>endi</i> <i>eņi</i> <i>ředeņi</i> <i>řadini</i> <i>aļiņi</i> <i>mabi</i> <i>uřgamili</i> <i>weñđili</i> ^a <i>neđili</i>	<i>anda</i> <i>aņi</i> <i>řadaña</i> <i>aļiña</i> <i>lamaļa</i> <i>neđila</i>
5. <i>abu</i> DR 'spear'	<i>abuwun</i>	<i>abi</i>	<i>abunduř</i>	—	<i>abiña</i>	<i>abiļi</i>	<i>abaļař</i>
6. (<i>muda</i> DR 'give' <i>ađa</i> <i>řuřimu</i> DR 'show'	<i>mudaya</i> (<i>adana</i> <i>ađawun</i> <i>řuřimuwun</i>	<i>muda</i> <i>mudu</i> <i>adana</i> <i>ađawun</i> <i>řuřima</i>	<i>mudiyiři</i>	<i>mudiyiři</i>	<i>mudiña</i> <i>řuřimiña</i>	<i>mudini</i> <i>ađini</i>	<i>ađana</i> <i>řuřimaļa</i>

a. A dash means the form is definitely absent; a blank indicates the form has not been found, but there is no evidence to suggest it does not exist.

b. This form is never found isolated: it is postulated from *riř+na* (3sR) which is realised as *riña*.

c. *a*₂ very frequently can replace *muda* as an auxiliary, and has a predilection for animate dative object as referent.

d. The retroflexed /l/ of a continuous aspect suffix is realised as an alveolar in a syllable following an alveopalatal; cf. also the past cts of 'go', *wuđala*.

e. This past continuous is only found with the habitual past action suffix *-gay* suffixed to the auxiliary verb (following pronominal suffixes).

Table 4: Mara auxiliaries and inflected verbs

STEM, TYPE AND MEANING	PAST PUNCT	FUTURE	FUT SUBJ	PRES SUBJ	PRES CTS	PAST CTS
1. <i>yur̥a</i> MR 'go' <i>malgaya</i> 'sit' <i>añđi</i> 'sit down' 2. <i>ma</i> 'do' <i>mbulma</i> 'start' <i>nbu</i> (<i>mbu</i> ?) 3. <i>đi</i> DR 'eat' <i>đu</i> DR 'cut' (?) <i>niju</i> 'say' <i>yud̥i</i> 'blow' 4. <i>a</i> <i>mina</i> DR 'see' 5. <i>andayaři</i> 'spear' a. Or past cts(?)	<i>aya</i> (<i>iya</i> (rarer) <i>malgayaya</i> <i>añđi</i> <i>ma</i> <i>mbulma</i> <i>mbu</i> <i>điñđi</i> <i>yayja</i> <i>đi</i> <i>ɣana</i> <i>añi</i> <i>minanji</i> <i>nad̥i^a</i> <i>andayaři</i>	<i>đuřa</i> (imper <i>ia</i>) <i>mi</i> (imper <i>mi</i>) <i>mbulmi</i> <i>bingađi</i> <i>nbuyu</i> <i>đana</i> <i>điyiyi</i> <i>galay</i> <i>a</i> (past?) <i>minay</i> <i>na</i> <i>andayaři</i>	<i>yur̥a</i> <i>may</i> <i>mayi</i> (?) <i>nbuy</i> <i>đu</i> <i>niju</i> DR <i>ay</i> <i>gay</i> <i>ni</i> <i>minayi</i> <i>nay</i>	<i>yur̥ayi</i> <i>miyi</i> <i>mbulmayi</i> <i>nbuyi</i> <i>điñđiyi</i> <i>điyi</i> <i>điñđiyi</i> (?) <i>đayi</i> <i>(ninawayi</i> <i>(nijuyi</i> DR <i>yud̥iyi</i> <i>gayi</i> (?) <i>nayi</i>	(<i>lindu</i> (<i>lindiyi</i> <i>malgayayi</i> <i>wuđani</i> <i>mañđi</i> (<i>đulu</i> <i>đuliyi</i> <i>điyiyiyi</i> <i>điñđi</i> (<i>y</i>) <i>ñđini</i> <i>đaya</i> (?) <i>đuđuju</i> or <i>đuđumu</i> (<i>ya</i> <i>đayan</i> <i>yacuđumu</i> <i>gađiyi</i> <i>gaña</i> <i>gañđi</i> <i>minađi</i> (<i>ni</i>)(?) <i>minami</i> (?)	<i>lini</i> <i>añđañđi</i> <i>mindini</i> <i>đali</i> (<i>yali</i>) <i>đuđuñi</i> <i>đa</i> (<i>ña</i>) <i>ni</i> DR <i>gañđi</i> <i>minađi</i> (<i>ni</i>)(?) <i>minami</i> (?)

Table 5: Warndarang auxiliaries and inflected verbs

STEM AND MEANING	PAST PUNCT	PRES SUBJ	(?)	PRES(?)	PRES (FUT?)	PAST CTS
1. <i>ra</i> 'go' <i>malđura</i> 'camp, stop' 2. <i>ni/ma</i> 'do' 3. <i>ɣama</i> 'eat' <i>gaya</i> 'hear' 4. <i>wiñđi</i> 'see' <i>ga</i> <i>đa</i>	<i>ija</i> (<i>mal</i>) <i>malđura</i> <i>mi</i> (imper <i>mind</i>) <i>ɣama^c</i> (<i>ga</i>) <i>gayama</i> <i>wiñđi</i> <i>đaya</i>	<i>yani</i> <i>mamaři</i> (<i>ɣama</i>) <i>ɣamaři</i> <i>gayamaři</i> <i>wiñđiri</i> <i>gi</i> (<i>vi</i>)(?)	(?) <i>raniyi</i> (<i>mamaniyi</i> <i>niyi</i> (<i>ɣ</i>) <i>ɣayi</i> (?) <i>gayiwi^d</i> <i>giyi</i> <i>đi</i>	<i>ra</i> (<i>ra</i>) <i>ni^a</i> (<i>mal</i>) <i>malđani</i> (<i>ma</i>) <i>mani^b</i> <i>gayamani</i> <i>gini</i> <i>đayani</i>	<i>raniñu</i> <i>miñu</i> (<i>wiñđiñu</i> <i>đaniñu</i> <i>raniñu</i> <i>giñu</i> <i>điñu</i>	<i>ra</i> (<i>ra</i>) ^a (<i>inađi</i> ?) <i>mama</i> (<i>gayiwi</i> ?) <i>wiñđima</i>

a. Augment is present in inflected verb but not auxiliary.

b. A nominal type affix appears to occur in *mandarini* 'for ...-ing'.

c. Several forms I have listed as past, probably punctiliar, are given by Heath as continuous; this could well be so for this one.

d. Or past cts?

Table 6: Inflection patterns in Alawa and Mara

LANGUAGE	PAST PUNCT	FUTURE	FUT CTS SUBJ	PR CTS SUBJ	PR PUNCT SUBJ	PRES CTS	PAST CTS
Alawa	-n(a) -wun -ya	-φ -yi	-Caɾ ^a -Cɪɾ -Cuɾ	-Cɪɾi -Cuɾu	-iɳa -eɳa	-ɳi -li -ni -ndi	-ɳa ^b -la -na -nda
Mara		(shorter than past punct)			PRES SUBJ -yi	-u/-iyi -ɳdi -ni -yi -mu	-ɳi -li -ni -ɳdi -mi

a. C stands for any consonant.

b. Affixes do not correspond across the table, except for pres cts and past cts forms in Alawa, and possibly -mu/-mi in Mara.

89. North-east Arnhem Land

Jeffrey Heath

At first sight, there appears to be a sharp break between the structure of verb complexes from the Mara-Alawic family (Mara, Alawa, Warndarang, Yugul) in the Roper River area (Northern Territory) and those of the languages just north of them (Nunggubuyu, Ngandi, and the Yuulngu group, exemplified here by Ritharngu).¹ In this paper I will argue that the discontinuity is less severe than it seems.

In Mara-Alawic the verb-complex type is usually this:

(1) Verb + Pronominals-Aux-Suffixes

Here — is the usual word-internal morpheme boundary, and + a special boundary intermediate between — and a true word boundary.

Example: *war+ɳa-wiɳdi-ma-ni* 'I see him' ('see+I/him-Aux-Continuous-Present').

The complex is usually tightly fused phonologically, with several morphophonemic rules applying over the + boundary which do not apply over word boundaries. The order of elements is rigidly fixed.

A few verbs do not require the auxiliary and are instead directly inflected, the result being Pronominals-Verb-Suffixes. Most of these inflectable verbs can also function as auxiliaries.

To the north, we find that main verbs are directly inflected for tense-aspect (Ritharngu), or for both tense-aspect and pronominal subject and object (Nunggubuyu, Ngandi). Thus Nunggubuyu *ɳanu-na-yi*: 'I see him' ('I/him-see-Present'). In Ritharngu, subject- and object-marking pronominals are enclitics added to the first constituent of the clause:

(2) *ɳaramu -ɳa ɳa ra ɳa: -ma* 'I see the man.'
man Accus him I see Present

This could also be *ɳa:-ma ɳa ra ɳaramu-ɳa* with reordering, showing that the pronominal enclitics are not prefixes or proclitics to the verb.

Ritharngu pronominal enclitics appear to historically represent reductions of independent pronouns found in other Yuulngu languages; in the others the pronominals can occur in any position in the clause.

Despite these substantial differences between Mara-Alawic and the northern languages, the latter (especially Ritharngu) have constructions which could be regarded as parallels to or precursors of the Mara-Alawic auxiliary constructions.

Ritharngu has a large verb-class, which I call class 5, whose roots are normally of the form CVC or CVCVC, where noninitial C may be a cluster or a single consonant.² To be inflected verbally, these roots must add a thematising suffix -Cu- (-ɳu-, -yu-, etc.). The consonant is predictable from the final segment(s) of the root. For example, *baɳgul?* 'return' is thematised as *baɳgul?-yu-* 'to return', as in potential *baɳgul?-yu-ru*.³ Sometimes, but not often, the root can be identified historically with a nonverbal stem surviving elsewhere in the language: *ba:nu* (particle) 'alone, abandoned', class 5 root *ba:nu?(-yu-)* 'to abandon, reject'.⁴

Another thematising suffix, -ti-, is added to a different set of stems when inflected verbally. Most of these are clearly adjectival or nominal in nature, and some can occur with nominal inflection: *mu:kuy* 'dead body, devil',

verbalised *mu:kuy-ti-* 'to die'. I will refer to this as the inchoative verbaliser (following B. Schebeck).

Thus Ritharngu, like Mara-Alawic, has mechanisms for converting uninflected roots into main verbs. In one language the root is verbally thematised and then the affixes are added to it directly; in the others, the root remains uninflected and a special auxiliary verb takes the affixes. We have a functional, but not formal, parallel here. However, going further into Ritharngu we find constructions which have both formal and functional similarities to Mara-Alawic auxiliary constructions.

Ritharngu verbs in *-Cu-* and *-ti-* are normally capable of dropping all affixes (including thematising *-Cu-* or *-ti-*) and thereby showing a special 'root form'. Since root forms of *-ti-* verbs are often identical to, or at least confusable with, unverballed nominal and adjectival stems, we will focus on class 5 roots with *-Cu-*.

The normal past tense form of *bangul?* 'return' is *bangul?-yu-na*. However, in narratives where all verbs are in the past tense, the truncated root form *bangul?* can occasionally be used instead:

(3) *wa:ni-ña ña ñay bangul?* 'He went and returned.'
go Past he return

The root form can also sometimes be used as an imperative, though potential verbs are more common in this function:

(4) *bangul?* 'Come back!'

The root form is usually pronounced emphatically, like an interjection, and is definitely expressive. Therefore with activity verbs it often refers to sudden or surprising events, as in (3). Similarly, the imperative type (4) is a curt or rude type which might be used when shouting at children. However, for the most part the root form is best described simply as a contraction of longer and more complex forms, and thus as essentially atemporal and non-aspectual. Furthermore, it can be seen from (3) and (4) that the root form can function as the contracted form of an entire clause, not merely of a complex verb form. In (3), *bangul?* is not simply the simplified form of *bangul?-yu-na*, but of the clause *bangul?-yu-na ñay* with third person enclitic pronoun *ñay*, and in (4) it is the contraction of *bangul?-yu-ru ñi:*, with second singular *ñi:* added to a potential verb. While it is true that the root form sometimes takes pronominal enclitics and so can be said to be the nucleus of a clause, more often it patterns as a single, isolated particle.

Since the root form is not inflected verbally, it is not always easy to determine what its surface word-class is (verb, noun, adjective, adverb, etc.). In fact, there is no reason to draw a sharp line between root forms and other types of particle, including some which may well historically be nominal or adverbial. For example, there is a particle *maramba?* referring to the act of stealing or running off with a woman. The full expression usually contains a verb like *ma:ra-* 'to grab, get', as in this example:

(5) *ma:ra-ña ña ñay maramba?* 'He ran off with her.'
grab Past her he

Although *maramba?* may well be a noun historically ('elopement' or the like), it is not unlike the root form in sentences like (3).

Furthermore, there are certain particles which appear to function as suppletive root forms for verbs which cannot form regular root forms. For example, *git* appears to correspond to the inflected verb *la-* 'to strike with a

spear', *đut* to the verb *ñi:na-* 'to sit', and *bat* to *ma:ra-* 'to grab, get'. These suppletive root forms are often used as adjuncts to the inflected verbs, and serve mainly to add an expressive flavour:

(6) *ma:ra-ña ñay bat* 'He grabbed it.'
grab Past he

The nuance of elements like *bat* and *git* can sometimes be expressed in translation by an expression such as *all of a sudden* or even an interjection like *Pow!* or *Bang!*. However, the Ritharngu elements are more clearly related to verbal notions.

So we have a wide range of verb-plus-particle constructions, including such diverse types as (3), (5), and (6). I would suggest that the Mara-Alawic auxiliary system can be plausibly explained as reflecting crystallisation of certain of these verb-plus-particle constructions. The following developments could convert Ritharngu into a language similar to Mara-Alawic: (a) increase in the number of verbs which can produce root forms (in Ritharngu, many verbs cannot); (b) loss of the inflected forms of many of these stems, so that to indicate tense and aspect it is necessary to juxtapose to them one of a dwindling number of inflectable verbs; (c) consequent semantic dilution of inflectable verbs, at least when juxtaposed to root forms; (d) fixation of ordering of verb-plus-particle constructions, including those where the particle is a root form of a verb but also those with other types of particle.

The constructions of types (3), (5), and (6) which we have been looking at are more productive in Ritharngu than in Nunggubuyu, but this language does have some examples of them; the Ngandi types will probably turn out to be similar after more research is done on the language.

There are not many root forms related to inflectable verb stems in Nunggubuyu. One example is *jalg*, which is associated with the stem *-yalđa-* 'to go past, to get away'. This example is instructive, since the root form is phonologically archaic, and could not possibly be a recent creation. The full stem can be reconstructed as **-jalg-đa-*, with a thematic suffix parallel to (and perhaps historically related to) Ritharngu *-Cu-*. This becomes *-yalđa-* by lenition and loss of **-g-* between consonants; the *-đa-* is no longer clearly segmentable. The root form *jalg* must be a survival of a period where the full stem was still in the form **-jalg-đa-*. There are only a few other root forms, and in general they are similarly indicative of or compatible with sporadic survival of a formation no longer productive. The use of the surviving root forms is similar to that of similar Ritharngu forms, and like them they are usually pronounced as interjections. An example:

(7) *jalg ni-yalđ-iñ* 'He went past (all of a sudden).'
he go past Past

Nunggubuyu also has a few particles of basically nominal type as in the case of Ritharngu *maramba?* in (5). In fact, this Ritharngu element has an exact correspondent in Nunggubuyu *wu-manjumanju* (with nominal derivational prefix *wu-*). Another example is *wu-ña:ri* 'fighting'.

In summary, then, there is evidence that what we might call a 'proto-auxiliary construction' consisting of an inflected verb and a free particle is still productive in Ritharngu (and, I might add, other Yuulngu languages), was probably once productive in Nunggubuyu and Ngandi, and may well underly the crystallised auxiliary constructions of Mara-Alawic. We can now envisage a situation where all of these languages were more uniform in the

structure of verb complexes than they are now. Starting from a relatively undifferentiated common base, each language or family has gone its own way by developing and suppressing different combinations of construction-types, so that of the four languages treated here only Nunggubuyu and Ngandi show substantial structural similarities to each other today.

Our job is not yet completed, however, since we have yet to tackle the question of what the relationship is between auxiliary and proto-auxiliary constructions on the one hand and compounds on the other. I will now argue that there is a close historical connection between them, and specifically that compounds in the northern languages in many cases reflect the same historical processes which have led to auxiliary constructions in Mara-Alawic.

We are not interested in just any compounds here. For example, Nunggubuyu compounds with incorporated noun stem are only marginally relevant to us. The compounds which are relevant are chiefly those where the initial element is either definitely verbal or at least semi-verbal in force, and the second (main) element is one of the language's high frequency verb stems.

In Ritharngu, we find a fair number of compounds of this sort with final elements *-ɖara* (cf. *ɖa:ra* 'to stand'), *-mara* (cf. *ma:ra* 'to grab, get'), and a few others. Examples are *ɖumɖum^o-ɖara* 'to bend over' and *wuñ-mara* 'to use magic against'. In the latter example *wuñ-* may be a noun historically, but its force in the compound is semi-verbal since it modifies the sense of the verb.⁵ We note at once the similarity between such compounds and Mara-Alawic auxiliary constructions, where the initial stem is a verbal or semi-verbal particle and the auxiliary is one of a small set of high-frequency verbs which have lost most of their semantic force.

The reason why Mara-Alawic has auxiliary constructions while Ritharngu has compounds is not hard to discover. It is an automatic consequence of the fact that Mara-Alawic had subject- and object-marking pronominal prefixes on main verbs at the time auxiliary constructions were formed, while Ritharngu had independent pronouns not bound to the verb. Therefore, when a sequence of uninflected particle plus inflected verb became a single fused unit in Mara-Alawic, we wound up with Particle-Pronominals-Verb-Suffixes, reinterpreted as Verb-Pronominals-Aux-Suffixes when the particle came to acquire the major responsibility for specifying the activity or state involved. On the other hand, in Ritharngu the fusion of the particle to an inflected verb did not trap pronominal elements in between, since these were not fixed in pre-verbal position, so we get Particle-Verb-Suffixes, as in *ɖumɖum^o-ɖara* (really *ɖumɖum^o-ɖara-φ* with zero present-tense suffix) and *wuñ-mara* (for example present *wuñ-mara-ma*). Thus the position of the pronominal elements is decisive in determining the shape of verb complexes with fused particles.

Unfortunately for this theory, it turns out that Nunggubuyu and Ngandi have Ritharngu-type compounds rather than Mara-Alawic-type auxiliary constructions. For example, Warndarang main verb *mal* 'to go up' (with 'to go' as auxiliary, so that *mal* may once have merely referred to upward direction) shows up in Nunggubuyu in one example as the first part of a compound. In Warndarang we get *mal + ŋ-ija* 'I went up' ('go up + I-Aux') with *mal* preceding the pronominal, but in Nunggubuyu we get *ŋanu-mal-nayi*: 'I look up at him' ('I/him-up-see') where *-mal-* follows the pronominals.

We might expect **mal-ŋanu-nayi*: with the fusion of particle **mal* to an inflected verb **ŋanu-nayi*: 'I see him'.

There are a number of ways to account for the difference between Nunggubuyu and Mara-Alawic in this regard. I would like to close by suggesting one interesting possibility which deserves consideration although it is much too early to assert that it is the best theory. This is the possibility that the difference between Mara-Alawic and Nunggubuyu (as well as Ngandi) in the relative ordering of fused particles and pronominal affixes is due to different timing of the fusion of the pronominals themselves as prefixes to inflected verbs. That is, at the period when particles like **mal* were being fused to inflected verbs in Mara-Alawic, the pronominals had already become bound prefixes, so that **mal* was added to a combination of the type Pronominals-Verb-Suffixes. At the period when corresponding particles were being fused to inflected verbs in Nunggubuyu and Ngandi, so this theory goes, the pronominals were still free or semi-free words or enclitics. In this case, particles like **mal* would have been fused directly to the verb stem, and at a later period the pronominals became fused prefixes, yielding a combination Pronominals-Particle-Verb-Suffixes. That is, Mara-Alawic and the other two languages differ in the relative ordering of the two fusion processes, one affecting particles and the other applying to pronominals.

There is little or no direct evidence in Nunggubuyu for a relatively late fusion of pronominal prefixes, and since most languages in the area (except for Yuulngu languages like Ritharngu) have bound pronominal prefixes one would normally assume that the pronominal prefixes were an early development. Against this view, however, we may adduce evidence from Ngandi, where the pronominal 'prefixes' are in reality independent from the phonological point of view, though they must immediately precede the verb. Thus, while Nunggubuyu has *ŋanu-nayi*: 'I see him', where the pronominal prefixes are phonologically part of the verb, in Ngandi we get *ŋanu + naçini*, with at most a weak boundary +. The element *ŋanu* is best described as proclitic rather than prefixal, and has its own stress pattern and may be set off by a short pause from the verb. The fact that *na-* 'to see' begins with a retroflexed nasal is also instructive, since in Nunggubuyu we get *-na-* (and cf. Rith. *na:-*, etc.). There is evidence that Ngandi, like Ritharngu and some other languages in the area, neutralises apico-alveolars and apico-domals (retroflexes) word-initially (N.B.), and the neutralised consonants are phonetically apico-domal. Thus a shift from **na-* to *na-* is reasonable in Ngandi provided the preceding boundary is a word-boundary, or at least no more than the weak clitic-boundary +, and in any event not a normal word-internal morpheme-boundary.

Since Nunggubuyu and Ngandi are fairly close genetically, it now seems likely that Nunggubuyu also had Ngandi-type proclitic pronominals not long ago. It is hardly likely that Nunggubuyu-type fused prefixes could have somehow become detached from verb stems in the recent history of Ngandi, since such fusions are generally irreversible. If we can recover a prototype for Nunggubuyu and Ngandi with semi-independent pronominals, is it not possible that going back one stage further we can envisage a situation where pronominals were a bit more independent, so that particles like **mal* could fairly freely intervene between them and the verb?

The point is merely that the development of auxiliary systems and certain

types of compounds can only be accounted for in detail by simultaneously examining the history of other grammatical phenomena; conversely, an understanding of the history of auxiliary and compound constructions may provide precious clues for the reconstruction of the history of these other phenomena.

Notes

1. I have done fieldwork on Nunggubuyu and Ritharngu, and to a lesser extent on Warndarang and Ngandi. For a discussion of Mara-Alawic auxiliaries see Paper 88 by Margaret Sharpe.
2. These root-shapes are essentially identical to those of 'main verbs' in Mara-Alawic auxiliary constructions. I am unable to cite many actual cognates at this stage of research. Nevertheless, note Warndarang *lar* 'to cut up', Ritharngu class 5 root *lar[?]lar* 'to cut up' (a frozen reduplication).
3. I gloss inflectable stems, including thematised class 5 stems, as English infinitives ('to return'), and uninflectable roots as simple verbs ('return').
4. The final glottal stop is historically secondary in the class 5 root, as in many others. My suspicion is that it originated in reduplications: **ba:nu(-yu-)* reduplicated as **ba:nu[?]-banu(-yu-)*, with later analogical re-shaping to **ba:nu[?]-banu[?](-yu-)* and simplex *ba:nu[?](-yu-)*. Cf. *qa:ra[?]-qara*, the reduplication of class 1 *qa:ra* 'to stand', and many other reduplications with 'inorganic' glottal stop.
5. To *wuñ-mara-* someone you take a piece of his clothing and seal it in a hole in a tree, preferably ironwood. As a noun, *wuñ* appears to denote the article used in this fashion.

90. Arabana-Wanggangu

L. A. Hercus

Wanggangu [Wanḡanḡu] and Arabana are dialects of a single language, originally spoken to the west of Lake Eyre, in the Simpson Desert and on the Lower Diamantina.

1.0. The conjugation system

The Arabana-Wanggangu verb is invariable for person and number, but the verbal system is complex on account of the large number of affixes that can be used. These indicate:

Voice
Mood
Aspect
Tense

In addition, there are certain other semantic modifications or 'action-types' ('Aktionsarten', as they have been called in Hindi grammar since S. Lienhard's *Tempusgebrauch und Aktionsartenbildung in der modernen Hindi*, 1961). Some of these action types can be expressed by stem-forming affixes, for example Arabana *-mind-* 'action or state lasting only a little while or slight

in extent', *-iwa* 'while travelling', *-ba-* 'action carried out in all directions', *-ḡaḡa-* 'continually';

- (1) *unguḡa ḡidna ḡurgu-ḡi- ḡḡa-mindi-ḡa*
your-POS foot good-become-SP -little -PRES
'Your (sore) foot is suddenly getting a little bit better.'
(SP = speed form, use of the affix *-ḡḡa* to denote hastily finished action or development, also action taken before leaving.)

Stem-forming affixes like *-mind-* may have originated as auxiliaries, but now they exist only as bound forms and are very limited in their use.

2.0. The main auxiliaries

A number of these 'action-types' can be expressed by auxiliaries. When auxiliaries are used the main verb can be followed by the voice marker and by certain aspectual stem-forming affixes, particularly the speed-marking affix, but tense and mood are always expressed by the auxiliary.

Two of the common auxiliaries generally retain their basic meaning:

ḡiga 'to return' *ḡaridji-* 'to descend'

but considerable variation of meaning can be achieved by the use of the speed form in the main verb:

- (2) *mani-ḡiga-ḡḡa* 'He is going back to get it.'
fetch-return-AUX-PRES
(3) *manda-ḡiga-ḡḡa* 'He's picking it up and bringing it back.'
fetch SP-return-AUX-PRES

The other three most common auxiliaries modify the semantic value of the verb in the following manner:

	MEANING	SEMANTIC VALUE ADDED TO VERB
<i>marga-</i>	to crawl	slow movement, steady action
<i>wanga-</i>	to rise	inceptive
<i>ḡawi</i>	to throw	rapid action
(4) <i>uga ḡarga-marga- ḡḡa</i> (W)	he stand-crawl AUX PRES	'He is getting up gradually.'

again the use of the 'speed' form in the main verb makes for a considerable difference in meaning:

- (5) *uga ḡarga ḡḡa-marga- ḡḡa*
he stand SP- crawl AUX PRES
'He is getting up gradually, prior to leaving.'

The following sentences illustrate the use of the other auxiliaries:

- (6) *aḡḡa ḡadjiwiri-widji- ḡa ilaḡa bidla-ru ḡawi-wanga- ḡugu(W)*
I big- become PRES thus name INSTR hear-arose AUX HIST
'As I grew up I began to hear it called by that name.'
(7) *uga jaḡi- wanga- ḡa aḡḡida*
he speak-arise AUX PRES me DAT
'He is starting up a conversation with me.'
(8) *ḡaḡi mani-ḡa-ḡawi!* 'Get some meat quickly!
meat get SP-throw AUX IMPV

A few other verbs, such as *ḡarga* 'to stand' and *ḡuda* 'to lie down' are occasionally used as auxiliaries.

Apart from semantic limitations, any auxiliary can be used with any verb.

Conclusion

In Arabana-Wangganguru the use of auxiliaries is peripheral, even long conversations may not contain a single auxiliary. This is in contrast to the neighbouring Dieri language where the use of auxiliaries is central to the verbal system. The peripheral use of auxiliaries to express semantic modifications, as in Arabana-Wangganguru, may represent an early phase in the development of auxiliaries.

91. Dieri

A. Capell

Dieri (from South Australia) has been chosen as the subject of a specimen paper not because it can be set out fully but because it seems to represent a special type of conjugation by auxiliaries and there is no suitable grammar of the language to hand. This paper is therefore strictly an introduction to it and not the last word on it. The material used is drawn from existing published work: Reuther's translation of the New Testament (1897) plus a little more material presented in Berndt's 'A day in the life of a Dieri man before alien contact' (1953). The spellings have been modified, and the analysis and interpretation are the author's.

The Dieri verbal system seems to be *sui generis* in Australia but this may be only because sufficient material from the surrounding languages is not yet available. No person or number markers are used: in these regards the verb is invariable. The actor and goal are indicated by pronoun or noun. Dieri is an ergative language, and pronouns as well as nouns have separate nominative and ergative cases.

Dieri sentence syntax is fairly regularly SOV and in the verb the pattern is base+auxiliary. The simple base is used alone only in dependent clauses, and the suffix then is not a tense but an aspect marker. An exception is provided by the present tense, which is better regarded as an aorist. In one of Berndt's sentences we find *nanija nanai widla nurunuru*, 'she is woman strong', where the syntax (*nanai* = 'is') can be justified in a way not relevant here. Apart from the present or aorist, verb bases are used only with auxiliaries: *jada nanai*, 'is speaking'.

Suffixes to the stem

There are two such suffixes: *-na*, perfective and *-la* imperfective. The auxiliary conveys the actual tense: the decision does not depend on a tense suffix to the auxiliary but on the choice of auxiliary. These do not carry a semantic load in the normal sense, but by their own basic meanings indicate the manner of the action first and only secondarily the tense.

Auxiliaries

There are six auxiliaries, each having its own basic meaning, and able to be used under certain conditions as a main verb. They are:

AUXILIARY	MEANING	USE
<i>bara</i>	lie	state just attained
<i>nyana</i>	be	permanent state
<i>waba</i>	go	entry upon a state
<i>wandi</i>	seek	state attained or action done
<i>wara</i>	throw	action already done
<i>wiri</i>	enter	state recently attained

Suffixes of mood

In addition to the two suffixes of aspect, Dieri has a number of modal suffixes which are added to the verb stem, and if these are used the auxiliaries are not required. These are:

- Added to stem:
 - Indicative tenseless: *-ai*
 - Imperative: *-au*, and a number of others
 - Dehortative: *-jadi*
- Added to perfective:
 - intention: *-ndu*: *jada-na-ndu*, 'that I may say'
 - relative: *-ni*: *jada-na-ni*, 'speaking'

The last is not quite clear: *nau worgara-na-ni*, 'he who comes, when he comes, the one coming', for the former: *nyajana daji-nandu*, 'let us be happy'.

Details on the auxiliaries

The auxiliaries can be used as full verbs by themselves, with other auxiliaries but not with themselves: **wandina wandi* is not acceptable; the example from Berndt above could not be **nanija nyana nanai* for this reason; but *winda nyani dei nyana-na warai*, 'when I was a young man' is acceptable because the auxiliary (*wara*) is not the same as the base (*nyana*).

The aspect endings may be used without an auxiliary in dependent clauses: *nau worga-la wandi*, *buyani wiri-la*, 'he came to enter the house': the imperfective *-la* indicates the purpose of his coming.

The details of tense, aspect, etc., are expressed in various combinations of root and auxiliaries.

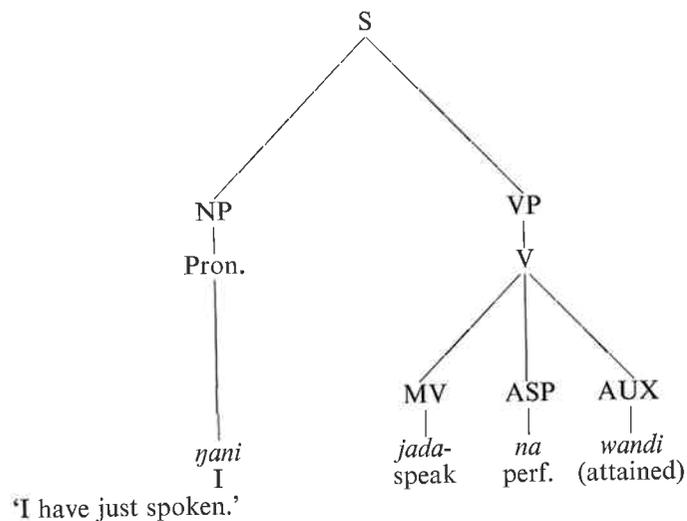
- With *-na* perfective: *nyani jadana wandi*, 'I spoke'; *nyana jadana warai*, 'I have spoken', *nyani-jada-na bara-ia*, 'I spoke some time ago': *bara* suggests 'I have thrown in my word' and it's all done. This verb and *waba* both use an ending *-ia* which needs explanation.
- With *-la* imperfective: *nyani jada-la nanai*, 'I am about to speak, I shall speak'; *nyani jadala waba-ia*, 'I am in process of speaking, going to speak'; *nyani jadala wiri*, 'I have entered upon speech, have begun to speak'.

There is a tense that is formed by the combination of the two aspect markers: *nyani jada-na-la*, which seems to be a close past: 'I spoke', at a time not exactly specified. This again needs more explanation.

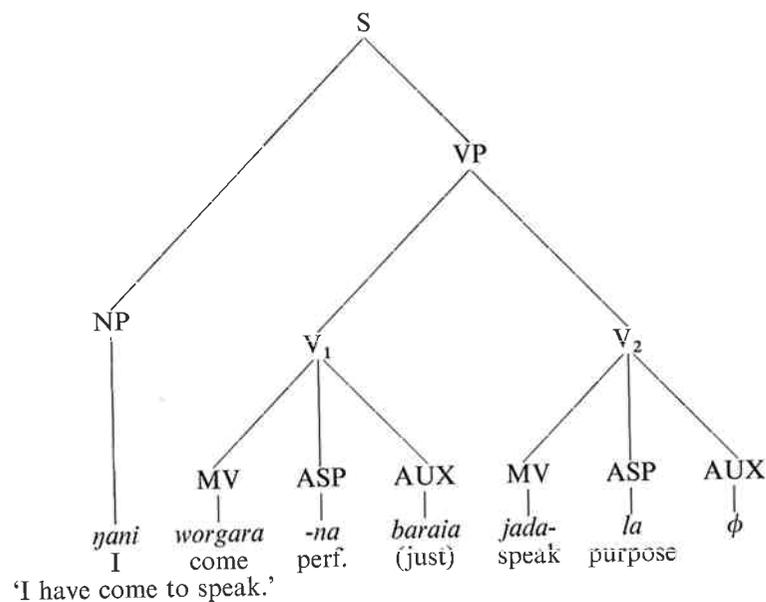
The entire system of auxiliaries here is clearly very different from those used in other languages. It seems to be a matter of expressing first of all by means of an aspect marker whether the act is complete or not, then by an auxiliary when it was completed or will be completed, and what sort of activity is involved in the completing.

In terms of nodes and phrase markers the various situations might be set out in something like the following ways.

1.



2.



An example of the ergative construction, the locative ending and the sentence medial use of *-na* aspect is seen in the following example (not so fully analysed for the present purpose as the above):

nu-lu bradjana madjadinda-na nuga-ɲu-bini mida-ni, mawa
 he-ERG everything now having-lost that-in-EMPH land-in, hunger
bina bandji-na wandi
 great make-PERF PAST

'When he had lost everything, a great famine happened in that country.'

Dieri is a language which will repay more detailed analysis than has yet been done or can be done in this paper, which, of course, is concerned chiefly with verbs and auxiliaries.

92. Ngamini, and a note on Midhaga

J. G. Breen

Introduction

Ngamini and Midhaga are members of a dialect chain which extends from Dhirari, on the east of Lake Eyre, east to Dieri (Diyari), north to Ngamini and Yaluyandi and east to Midhaga and Garuwali. Ngamini was spoken about Goyders Lagoon and further south, and Midhaga north-east of Birdsville. These dialects formed a single language,¹ that is neighbouring members of the chain were mutually intelligible although there were big differences, especially in vocabulary, between members near different ends of the chain.

Both Ngamini and Midhaga are virtually extinct; neither has any living native speakers and the only informants are an old couple who have a fair knowledge of Ngamini as a second language, and the wife of this couple and another old man who remember a little Midhaga. The old lady, Mrs Maudie Naylor, is a native speaker of Wangganguru and also knows Arabana, Dieri, Yaluyandi, Yandruwandha and Yawarawarka.

Ngamini

Ngamini resembles Dieri in its use of auxiliaries but differs somewhat in details. There seem to be at least eight auxiliaries, whose functions overlap only partially with those of the Dieri auxiliaries. Most marking for tense, mood and aspect is by suffixation.

The Ngamini auxiliary verbs are:

wara, basic meaning 'to throw', marks past tense;

wapa 'to go, to walk', habitual action in the (distant?) past;

ɲana, probably 'to do, to be', but rare as a main verb, as an auxiliary denotes intention;

marka 'to crawl', marks a continuing action carried out while the agent is in motion;

parka 'to run', marks a momentary action carried out while the agent is in motion;

wiri 'to enter', appears to denote arrival;²

ɲika 'to return', denotes action directed back towards where the action has come from;

kurru, unknown as a main verb, denotes motion away (from the speaker or from some referent).

A brief summary of Ngamini verb morphology will now be given, followed by further discussion of the use of auxiliaries. Note that where a suffix has initial *i* the stem-final vowel of the verb is deleted.

Verb stem formatives

CAUSATIVE: *-pa*, added to intransitive verb stem, as *wiripa* 'to insert' from *wiri* 'to enter';

-ka, added to intransitive verb stem, as *wapaka* 'to take' from *wapa* 'to go';

-naka, added to noun (adjective?) stem, as *nařinaka* 'to kill' from *nari* 'dead'.

STATIVE: *-ni*, added to noun stem, as *piřani* 'to grow' from *piřa* 'big'.

Mood

IMPERATIVE: *-φ* or *-ya*, often followed by *mayi*, as in *wapa mayi* 'go away!'.

PURPOSIVE: *-la*, as in *winytya yini wapařa* 'when are you going?'

POTENTIAL: *-nda*,³ as in *řaři yulkuřa tanrranda* 'I might hit you (two)'.

Aspect

CONTINUOUS: *-řama*, as in *řaya řamařamayi řayina* 'he's sitting down eating' (*řama* 'to sit', *řayi* 'to eat').

IMPERFECTIVE: *-na*, as in the previous example. A few verbs have irregular forms, as *minda* from *mani* 'to get', *palta* from *pali* 'to die' and *řanda* from *řana* 'to be'.

Tense

PRESENT: *-yi*, see continuous aspect example.

Nominaliser

AGENT: *-ini*, e.g. *parkini* 'runner' from *parka*.

Subordinators

COMPLEMENT: *-iyimu*, e.g. *řaři řařayi kana wapiyimu* 'I can hear a man coming' (*řara* 'to hear', *wapa* 'to go').

IMMEDIATE CONSEQUENCE(?): *-ili*, e.g. *řanaka řinakatu wapili* 'make him go!'.

SIMULTANEOUS ACTION: *-nařtu*, see example (21) below. The difference between the last two is not completely clear.⁴

Seven of the eight auxiliaries are used only with the main verb in its imperfective form; the other (*řana*) is used only with the main verb in the purposive form. The functions of these two verb forms will therefore be looked at a little more closely.

The *-na* form of the verb seems to be best described as an imperfective in spite of the fact that its major use is as a component of the past tense form; it appears that it is the past tense auxiliary which overrides the imperfective connotation and imposes a perfective aspect. The imperfective, without an auxiliary verb, is used as a main verb to describe a continuing action or a state which, though possibly now completed, continued for some time.

- (1) *řayiniwara yařayařana*
we (pl. incl)-pl talk-talk-impf
'We're having a chat.'

- (2) *řamařa řariya mayi*
sit-impf get down-imper
'Sit down!' (i.e. 'Get down so that you are seated'.)

- (3) *řurranu řiriřa řunřani tanrrařa*
always dog his hit-imperf
'He belts his dog all the time.'

- (4) *řawa yařana warayi kalapatyařa*
he say-past be very sick-impf
'He says he's very sick.'

- (5) *matya yini muřayi řuru tanrrařa*
already you finish-pres firewood hit-impf
'Have you finished chopping the wood?'

The purposive is used as a future tense form as well as to denote purpose of an action and the complement of certain verbs.

- (6) *řaři wima wařkařa*
I song sing-purp
'I'm going to sing a song.'

- (7) *řapa řaya kilpařiřa*
water this cold-become-purp
'This water will freeze.'

- (8) *řanyi pařiřka wařayi řapa mařiřa*
I river-to go-pres water get-purp
'I'm going to the river to get some water.'

- (9) *yini wapařa wařamuli, wima řirřkařa, řalkiyimu*
you go-purp tomorrow, corroboree see-purp, dance-comp
'If you come here tomorrow you'll see a corroboree.'

- (10) *yindi řurku kira řakařa*
you know-pres⁵ boomerang make-purp
'Do you know how to make a boomerang?'

- (11) *mayi, řanyi řanytyayi wiriřa*
well, I want-pres enter-purp
'Can I come in?'

Of the auxiliaries, by far the most frequently used is *wara*, used in its present tense form *warayi* to mark the past tense. It may be used with any main verb (including itself; see example (12)) and may be added to a complex that already has an auxiliary (see examples (20), (21), (25), (26)). There is one example in the corpus where it does not immediately follow the main verb in a two verb construction and also two cases where the main verb is separated from and follows the auxiliaries in a three verb construction (see examples (15) and (21)).

- (12) *kupanu mařa řakanamu warařa warayi*
child-op stone me-ind obj throw-past
'That kid threw a stone at me.'

- (13) *řaři matya řurkuřa warayi řulu řatiņa warayi kantu*
I already know-past he spear-past wallaby
'I knew he speared a wallaby.'

- (14) *řanyi wapařa warayi yinkanamu mukamu*
I go-past you-ind obj sleep-loc
'When I came here you were asleep.'

- (15) *kuṛiṭarranala ṇanyi warayi*
forget-impf-emph I-past
'I forgot.'

The auxiliary *wapa* is used in its agent form *wapini* 'goer, walker' to mark continuing or habitual action in the past—probably the distant past. There are only a few examples in the corpus. Contrast example (18) with (16) and (17).

- (16) *yini yinrrina piṇa ṇamaṇa wapini kupakupa*
you cry-impf big sit-used to child
'When you were a baby you used to cry a lot.'
- (17) *ṇayiniwara tyukurru ṭayiṇa wapini, kariliṇa ṇayiniwara*
we (pl incl)-pl kangaroo eat-used to, now
ṭampakala ṭayiyi
sheep-emph eat-pres
'We used to eat kangaroos but now we eat sheep.'
- (18) *manya ṇanyi wapaṇa warayi wiṛariṇga*
long ago I go-past Birdsville-to
'I came to Birdsville a long time ago.'
- ṇana* is used rarely in its present tense form in association with the purposive; so rarely that it may be an intrusion from another of the informants' languages. However, it may be a genuine marker of immediate future (example (19)). The use of the past tense form to mark past intention ('would have', 'wanted to'), though not common, does seem to be genuine.
- (19) *matya ṇaya paliṭa ṇanayi*
already this die-purp be-pres
'(The fire) is just about to go out.'
- (20) *ṇanyi yinkanamu yaṭaṭa ṇanda warayi, ṇanyi kuṛiṭarranala*
I you-ind obj say-purp be-past, I forget-impf
wapaṇa kurruṭa
go-impf away-purp
'I was going to tell you but I forgot (and went without telling you).'
- (21) *ṇanyi ṇanda warayi muka parraṭa, ṇayala wapananṭu ṇakanamu*
I be-past sleep lie-purp, this-emph go-sim act me-indobj
'I was just going to have a sleep when he came.'
- The remaining five auxiliary stems are probably usable in various forms, although examples are few; I have found it difficult to elicit these constructions. Only the present tense form of *parka*, in its auxiliary function, has been obtained. The auxiliary *wiri* is known to occur in its present and past tense forms, *marka* in present tense and imperfective, *ṭika* in present, past and imperative and *kurru* in present (see note 5), past, future, complement and immediate consequence forms.
- (22) *ṭanaya yara wapayi, kiḍariṇa markaṇa*
they (plu)-here hither go-pres, call out along-impf
'They are coming here, singing out as they come (to let us know they are coming).'
- (23) *ṇulaya ṇaṇa ṇirrkana parkayi*
he (op)-here me look-passing-pres
'He looked at me as he went past.'⁶
- (24) *parṭyana wapaṇa wiriyila*
all go-arrive-pres-emph
'Everybody came.'

- (25) *milyarumu ṇakatu wapaṇa wiriṇa warayi*
dark-loc he-there go-arrive-past
'He came here in the middle of the night.'
- (26) *ṇawa ṭirriṭa ṇakaṇi parkaṇa kurruṇa warayi, ṇaṭi ṇina*
that dog my run-away-past, I him
manda ṭikaṇa warayi
get-back-past
'My dog ran away, but I brought him back.'
- (27) *parkaṇa ṭika yara ṇulpa⁷ kaṇanu ṇirrkanda*
run-back to here he (op)-that man-op see-might
'Come back here before that man sees you.'
- (28) *winytya ṇanyi wapaṭa, ṇaṭi yina ṇaṅkiṇa kurruṭa*
when I go-purp, I you(acc) give-away-purp
'Before you go I'll give you some money.'

Although it is not an auxiliary in the same sense as the verbs discussed above, the verb *wana* 'to be' is of interest in the context of this paper. It is used only in association with certain words describing temporary states, for example:

- (29) *kupa muwanu wanayi*
child hungry be-pres
'The baby is hungry.'
- (30) *tadinu ṇanyi wanayi*
thirsty I be-pres
'I'm thirsty.'
- (31) *pandanu ṇanyi wanayi*
afraid I be-pres
'I'm frightened.'

However, contrast *ṇanyi kilpanu* 'I'm cold' and *ṇanyi walrranu* 'I'm hot'.

Midhaga

The data on this dialect are very meagre and unreliable, but it did have at least two auxiliary verbs. The verb morphology is, very tentatively and incompletely, as follows:

- imperative, *-ya*
past tense, *-ntari*
present tense (or imperfective), *-nta*, (*-na*)
purposive, *-naṇa*, (*-ṇa*)
reciprocal, *-pali*

The stem form of the verb *kuli* 'to sit', was frequently used with the present tense form and this may have added a continuous aspect.

- (33) *wani ṇaṭu yatapanta kuli*
song I sing-pres sit
'I'm singing a song.'

The auxiliary may be used with main verb *kuli* to give the phrase *kulinta kuli* 'sitting'.

The verb *wiri* 'to enter' is used as an auxiliary in the same way as in Ngamini. The connotation 'arrived' is supported by the informant's comment 'That's when you landed, like.'

- (34) *wataṇantuwara yini ṭarinta wirintari*
where-from you come-arrive-past
'Where did you come from?'

Notes

1. See J. G. Breen, 'Aboriginal languages of Western Queensland', *Linguistic Communications* 5: 1-88, especially pp. 21-24.
2. The function of *wiri* was originally thought to be marking recent past, as in Dieri; Mrs Naylor once translated it as 'just lobbed in' which seems to imply recent past (as well as arrival). However, if this were so it would not be expected to have a past tense form (see example (25)), except possibly in a subordinate clause. Examples of this auxiliary in its present tense form (e.g. (24)) do seem to suggest a past tense meaning but are probably actually present tense; present tense of 'arrive' implies recent past of 'come' as arrival is the completion of coming.
3. Note that Ngamini seems to have a voiced/voiceless stop opposition, but only in the two apical positions. Note also that there is an opposition between trill (*rr*), flap (*r*) and glide (*r̥*).
4. There are only two examples of this morpheme in the corpus and Austin (private communication) suggests, probably correctly, that it is an intrusion from Dieri of the suffix corresponding to Ngamini: *-ili*.
5. *ɲurku* 'to know' and *kurru*, the auxiliary 'away', have an irregular present tense marked by a zero suffix.
6. This type of sentence requires further study. It may be in the present tense because 'he' is still going.
7. *ɲulpa* is probably not a genuine Ngamini form.

93. Yandruwandha

J. G. Breen

1. Introduction

Yandruwandha is closely related to the dialects of the Dieri chain. However, it does not make use of auxiliary verbs except that one form of the future tense in the dialect spoken along Strzelecki Creek¹ uses *ɲana* 'to do' as an auxiliary.

- (1) *ɲanyi ɬawaɲa ɲanaɬa* OR *ɲanyi ɬawaɲa*
 I go-fut do-pres
 'I am going to go.'

It does, however, have a system in which verbs (or certain other words) are compounded with a main verb to perform a wide range of functions, including some similar to those performed by auxiliaries in Ngamini. Thus it forms a link between the auxiliary verb system and the more common system in which verb modification is by affixation of morphemes which exist only in bound forms.

2. Verb morphology

The material used in the remainder of this paper has been taken from the dialect spoken around Innamincka. Most marking of tense and mood is by means of bound morphemes (with no free counterpart), the most important of which are now listed:

IMPERATIVE: *ɸ*.PAST TENSE: *na*, very recent.

ɲana, within the last couple of days.
 (And others, to be dealt with later.)

PRESENT TENSE: *ɬa*.PRESENT CONTINUOUS: *ɲaɲa*.FUTURE TENSE: *ɲa*.

UNSPECIFIED (because it is in the second clause of a sentence or because it is unnecessary for other reasons): *ri*.

'AGAIN': *kaldri* (with no specification of tense).POTENTIAL: *yi*.COMPLEMENT: *ɬayi*.

Some important verb stem formatives are:

GERUND: *ini* (with deletion of final vowel of the verb stem to which it is added).

REFLEXIVE/RECIPROCAL: *yindri*.STATIVE VERB FORMATIVES: *ɲana, na*.CAUSATIVE VERB FORMATIVES: *ka, ma, na*.

Reduplication of verb stems to denote intensification, prolongation or extension of an action is fairly common. The morpheme *na* is often suffixed to a reduplicated form; its function in such cases is not clear.

(2) *wawa* 'to see, to look at', *wawawawana* 'to look after'

Stems which exist also (without phonetic modification) as bound forms modifying verbs include a number of verb stems, at least one probable, but unattested, verb stem, three adverbs and one probable adverb. In some cases the meaning of the combined form corresponds fairly closely to the meaning of the free form (for example *ɬika* 'to return' in its bound form denotes action directed back), in other cases it is clearly related (for example *ɲina* 'to sit, to be', as a bound morpheme denotes continued action) and in others it is so different as to create doubt as to whether they are not simply homophones belonging to different morphemes (for example *windri* 'to enter', action directed away).

Stems functioning as productive compound verb formatives are listed, with examples of their use, in the following pages. Example (3), taken from a text, gives some idea of the usefulness of verb compounding in the language.

- (3) *ɲapaɬa kudru pakunɲari, ɲa yankula kurrawaɲari,*
 then hole dig-down-unspec, then bough-emph put-around-unspec,
ɲa windripaɲɲina paɬa mukuli wilpiɲinaɲa, ɲala kaɬi,
 then enter-down-fut, bird bone-op whistle-sit-pres, then animal,
ɬana ɲaɲaɲaminilayila warruwityilityi. ɬawawarraɲa
 they hear-hear-run-comp-emph emu-op-emph. go-arrive-fut
ɬaɲguwagawagaɲa, ɲala kana ɲunu purriɲinalayi ɲari miɲkayi.
 stand-around-fut, then man he hide-sit-comp down hole-loc.
ɲarru taɲguɬalkawarraɬayi ɬranyiɲalatyi yarali kaɬi
 just stand-up-arrive-comp hit-fut-emph boomerang-op. animal
ɬana yaɲdu paɲdripariparini
 they thus hit-used to

'Then they would dig a hole and put boughs around it. Then (a man)

would get down into the hole and whistle with a bird bone, and the emus would hear it as they were passing. They would come and stand around² while that man hid down in the hole. Then he would just jump right up and hit (one) with a boomerang. That's how they used to kill them.'

2.1. COMPOUND VERB FORMATIVES. *ɲina*, meaning as a free form 'to sit, to stay', denotes, as a bound form, continuing action or state, or alternatively action during the day.

(4) *ɲura* 'to lie', *ɲuraɲina* 'to be lying' or 'to lie down during the daytime'.

(5) *ɲinaɲina* 'to be, or remain, seated'.

(6) *paɲra* 'to hold', *paɲraɲina* 'to hang on to'.

(7) *pirriyampanaɲa ɲanyi, miniminiɲiniɲura*
tired-become-pres I run-run-sit-ger-abl
'I'm tired of running about all day.'

ɲawa, 'to go, to walk', denotes momentary action carried out while the agent is in motion, or about to go somewhere, or has just completed or interrupted motion.

(8) *wawa* 'to look', *wawaɲawa* 'to look at while passing, or to go and look at, or to look at and go away'.

(9) *paɲdri* 'to kill', *paɲdriɲawa* 'to kill while travelling, etc.'

(10) *ɲura* 'to lie', *ɲuraɲawa* 'to camp (while on a journey)', *ɲuraɲawaɲuraɲawa* 'to have two or three days on the road'.

(11) *kurrapaɲɲi ɲiɲguru ɲanuɲanu mandriɲawaɲa ɲaɲu yita*
put-down there in the middle, get-go-pres I (erg) there
'Put it down in the middle. I'll pick it up as I'm going home.'

mini 'to run', has the same function as *ɲawa* but is used with different verbs.

(12) *ɲaygu* 'to stand', *ɲaygumini* 'to stand up and go away, or to come and stay for a while and then go away'.

(13) *karra* 'to tie', *karramini* 'to tie here and there'.

ɲana mulpiniɲura wanta payipayirru yina maɲa wityunyari ɲapaɲa
they cut-ger-abl short length emph finger-like, then
karramininaɲa
tie-run-pres

'After cutting (the reeds) up into short lengths, about the size of a finger, they tie them here and there (on the net, so that it will float).'

ɲura, not known as a free morpheme, denotes a continuing action carried out while the agent is in motion.³

(14) *ɲayi* 'to eat', *ɲayiɲura* 'to eat along'.

(15) *ɲina* 'to sit', *ɲinaɲura* 'to travel in a vehicle'.

(16) *ɲawalayi yini, wawaɲura paɲipuru*
walk-comp you, watch-along snake-caus
'Watch out for snakes as you go along.'

ɲika, 'to return', denotes action directed back to camp, or to another point of recent origin of the agent. Alternatively, it denotes action carried out on behalf of someone other than the agent.

(17) *mandri* 'to get', *mandriɲika*, normally 'to go and get', but could mean 'to get for someone else'.

(18) *wawa* 'to look', *wawaɲika* 'to look back'.

(19) *walki* 'to climb', *paɲɲi* 'down', *walkiɲikapaɲɲi* 'to climb back down'.

(20) *ɲina* 'to sit', *ɲinaɲika* 'to stay somewhere for a while (and then go back home)'.

waraɲa ɲutyaru ɲiɲgiyi ɲinaɲikana
who he-there here sit-return-past

'Who's that fellow who was here a while ago?'

(21) *kula* 'to cook', *kulaɲika* 'to cook for someone else'.

The reduplicated form *ɲikaɲika* has a separate function, meaning 'to do something over a wide area, or affecting many referents'.

(22) *wawa* 'to look', *wawaɲikaɲika* 'to have a look around everywhere'.

yura ɲawaparaparaɲa walya, padlakunu padlakunu
you (pl) go-habit-pres not, place-one place-one
(= everywhere)

wawaɲikaɲikaɲa
look-return-return-fut

'You fellows ought to go and have a look all round the place.'

(23) *mapa* 'to gather', *mapaɲikaɲika* 'to gather everything up'.

(24) *ɲana* 'to tell', *ɲanaɲikaɲika* 'to tell everyone'.

(25) *murruwa ɲana miniɲikaɲikala*

child they run-return-return-pres

'The kids are running about here and there.'

warra, not known as a free morpheme, denotes arrival.⁴

(26) *ɲawa* 'to go', *ɲawawarra* 'to come, to arrive'.

(27) *walɲa* 'to carry', *walɲawarra* 'to carry in (to the camp)'.

(28) *kukupu* 'to jump', *ɲalka* 'up', *kukupuɲalkawarra* 'to jump right up'.

(29) *ɲunu tanɲuɲalkawarrana wawayindripanɲiriɲu*
he stand-up-arrive-past look-refl-down-unspecified tense-then
'He stood right up and looked down at himself.'

windri 'to enter', action directed away from the speaker or some other referent.

(30) *paka* 'to carry', *pakawindri* 'to take away'.

(31) *ɲunyi* 'to give', *ɲunyiwindri* 'to give to an outsider'.

(32) *ɲaygu* 'to stand', *ɲayguwindri* or *ɲayguminiwindri* 'to get up and go, or to get up in order to go'.

(33) *yilakari kaɲa pula winkaminiwindrina*
where-alla maybe they (du) disappear-run-away-past
'I don't know where they ducked off to.'

waga 'to shift (trans)', action located or directed around some referent. As a bound morpheme it is usually reduplicated.

(34) *ɲina* 'to sit', *ɲinawagawaga* 'to sit around (a fire, for example)'.

(35) *ɲawa* 'to walk', *ɲawawagawaga* 'to walk around'. See also example (3).
ɲarra 'to fly', denotes to do something thoroughly or completely. It also has other functions which are not clear. There may possibly be two compound verb formatives, *ɲarra* and *ɲara*.

(36) *wawa* 'to see', *wawaɲarra* 'to see it all'.

(37) *paldriɲarralapurra ɲana*

die-fly-far past they

'They all died out long ago.'

(38) *warrka* 'to throw', *warrkaɲarra* 'to let (something) go'.

(39) *yinba* 'to send', *yinbaɲarra* 'to send away'.

(40) *walka* 'to fall', *walkaɲarra* 'to fall down flat'.

- (41) *ɲina* 'to sit', *ɲika* 'to return', *ɲinaɲarraɲika* 'to go and visit'.
- (42) *mandri* 'to get', *para* 'inside', *mandriɲarapara* 'to take out (e.g. of a bag)'.
ɲayi, 'to eat', action performed for the benefit of the actor.⁵
- (43) *mandri* 'to get', *mandriɲayi* 'to get for oneself' (used also for winning money, e.g. at the races).
maɲra ɲani mandriɲayiɲa piɲa
money we (pl, ex) get-eat-fut big
'We'll win a lot of money.'
yukarra, 'to spend the night', action at night or in the dark.
- (44) *ɲawa* 'to walk', *ɲawayukarra* 'to walk in the dark'.
- (45) *padlayi yina kuɲutyi kurrari, ɲala kandraldra*
ground-loc emph one-emph put-unspec. tense, then top-emph
ɲambalkari kuɲulityi, kaɲu ɲurayukarraɲa
cover-unspec tense one-op-emph, warm lie-at night-fut
'They would put one (kangaroo skin rug) on the ground and cover themselves with another and sleep warm at night.'
warrka, 'to throw', action in the morning.⁶ (There is some doubt about this; it was once translated as 'a long time ago'.)
- (46) *ɲawa* 'to go', *ɲawawarrkana* 'went this morning'.
- (47) *tambanaɲikawarrkana ɲanyi yita*
dance-return-morning-past I there
'I was dancing over there a while ago.'
paɲɲi, 'down', action directed downwards.
- (48) *warrka* 'to throw', *warrkapaɲɲi* 'to throw down'.
- (49) *ɲina* 'to sit', *ɲinapaɲɲi* 'to sit down'. See also examples (3) and (29).
ɲari, 'down', action directed downwards.
- (50) *paku* 'to dig', *pakuɲari* 'to dig (down)'.
- (51) *wawa* 'to look', *wawaɲari* (also *wawapaɲɲi*) 'to look down'.
The usage in example (52) is idiomatic; in English we mix things up.
- (52) *puka ɲaɲu ɲapiɲarina maɲri*
damper I mix-down-past heavy
'I mixed a thick damper.'
ɲalka 'up', action directed upwards; also action in the morning.⁷
- (53) *walki* 'to climb', *walkiɲalka* 'to climb up'.
- (54) *ɲaɲgu* 'to stand', *ɲaɲguɲalka* 'to stand up, get up'.
- (55) *ɲawa* 'to go', *ɲawaɲalka* 'to walk uphill', or 'to go in the morning'.
- (56) *waja* 'to light (a fire)', *wajaɲalkana* 'lit (the fire) this morning'.
para, 'inside', denotes action across or in(to) something, and in some cases its function is unclear or unusual (see examples (63)–(67)).
- (57) *ɲina* 'to sit', *ɲinapara* 'to sit inside'.
- (58) *yinba* 'to send', *yinbapara* 'to send across'.
- (59) *ɲanma* 'to swim', *ɲanmapara* 'to swim across'.
- (60) *wawa* 'to see', *wawapara* 'to see (something) on the other side'.
- (61) *ɲiɲa* 'to pull', *ɲiɲapara* 'to pull (a net) in (to the shore)'.
- (62) *windri* 'to enter', *ma* 'causative', *windrimapara* 'to put in'.
- (63) *kuɲi* 'to go', *kuɲipara* 'to go early in the morning'.
- (64) *ɲuka* 'to pull out', *ɲukapara* 'to pull out'.
- (65) *ɲinba* 'to chop', *ɲinbapara* 'to chop something standing', in contrast to *ɲinbapaɲɲi* 'to chop something lying down'.
- (66) *mandri* 'to get', *yindri* 'reciprocal', *mandriyindripara* 'to get married'.

The reduplicated form of this morpheme denotes habitual action. The gerund form of such a verb is the normal means of expressing past habitual, 'used to'.

- (67) *wawaparaparaɲatyi ɲaɲa ɲulu, ɲarru ɲaɲa pandriparaɲaɲu*
see-habit-pres-emp me he (erg), just me hit-in-fut-then
'Every time he sees me he hits me.'
- (68) *tyukurru ɲani ɲayipariparini*⁸
kangaroo we (pl, ex) eat-used to
'We used to eat kangaroo.'

See also example (3).

2.2. SPECIFICATION OF PAST TENSE. It will have been noted that certain of the compound verb formatives involve some reference to time, that is action during the day, action in the morning, action at night. These are mostly used with past tense inflections, of which there are several, and allow a fair amount of specification of past time in the verb.

Note that one of the past tense inflectional suffixes is itself a bound form of a morpheme which also functions, in a free form, as an adverb; this is *ɲukara*, 'before', which denotes action within the last few days.

The full list of suffixes denoting past tense, or combinable with past tense markers to further specify the time of an action, are as follows:

- na*—very recent past;
ɲana—within the last couple of days;
ɲukara—within the last few days;
nga—weeks or months ago;
*lapurra*⁹—distant past;
pariparini—past habitual;
ɲina—action in the daytime;
ɲalka—action in the morning;
warrka—action in the morning (some doubt);
yukarra—action at night.

In addition, of course, certain suffixes may implicitly specify past tense because a verb in a preceding clause or sentence has explicitly specified it, for example *kaldri* 'again', *ɲayi* complement marker, *ɲi* unspecified tense.

The informants' usage of these suffixes has been fairly consistent except for some possible confusion of *ɲana* and *ɲukara*; however, a certain amount of overlap of the time ranges specified by the past tense inflections is to be expected. The first six of the suffixes listed above may be used alone (*pariparini* is, of course, a compound suffix), while the last four are auxiliaries providing additional specification of time already specified less precisely by one of the others. These auxiliaries have not been heard with *nga*, *lapurra* or *pariparini*, although an informant accepted combinations with *nga* and *lapurra*.

A few more examples will now be given.

- (69) *pukuna ɲaɲu paɲrayukarrana tyukurru ɲaɲu warrkanana*
dream I (erg) hold-night-past kangaroo I (erg) spear-past
windrali manipiɲa
spear-op fat-big
'Last night I dreamt I speared a fat kangaroo.'

Compare *ɲarayukarraɲana* 'heard last night'; it may depend on what time of day the sentence is spoken whether action last night involves *na* or *ɲana*.

The words *ɲaraɲinaɲukara* 'heard yesterday' and *ɲaraɲinaɲana* 'heard the day before yesterday', elicited in succession, illustrate the confusion between *ɲana* and *ɲukara*. Also elicited at the same time were *ɲaraɲukara* 'heard the other day', *ɲaraɲana* 'heard a couple of days ago, or the other day' and *ɲaraɲalkaɲukara* 'heard yesterday morning'. Compare:

- (70) *wiki kumu ɲaɲu ɲaraɲukara*
week one I (erg) hear-past
'I heard a week ago.'

and note also:

- (71) *wiki parkulu ɲaɲu ɲaraɲangaty*
week two I (erg) hear-past-emph
'I heard two weeks ago.'

Further examples of *nga* and *lapurra* are:

- (72) *kilkaɲa yundru kaɲi tyukurru ɲaldra yina paɲdringa,*
know-pres you(erg) animal kangaroo we (du incl) emph kill-past,
yini kuɲiɲikanga
you come-return-past
'Do you remember that kangaroo we killed last time you were here?'
- (73) *walya ɲaɲu ɲaɲa kilkaɲaty ɲiɲarri ɲanyityi paɲdrilapurrala*
not I (erg) her know-pres-emph baby I-emph die-far past-emph
ɲamatya ɲakaɲi
mother my
'My mother died before I can remember her.'

Notes

1. See Paper 75 for details of location of Yandruwandha.
2. Emus are notoriously curious.
3. *ɲawa* and *mini* correspond to the Ngamini auxiliary *parka*, and *ɲura* corresponds to *marka*.
4. This is the same function as the Ngamini auxiliary *wiri*. *windri*, the Yandruwandha verb cognate with Ngamini *wiri*, has a quite different function as an auxiliary. It is discussed after *warra*.
5. *yindri*, the reflexive/reciprocal marker, can have the same function; see Paper 75.
6. Compare Ngamini *wara* 'to throw', used as an auxiliary to mark past tense. This usage in Ngamini may result from generalisation of an earlier usage similar to the Yandruwandha.
7. Wangkumara also uses the same morpheme (*pa*) to denote action directed upwards and (with future tense only) action in the morning. Thus *ɲinapa* 'stand up!', *ɲanyi yanɲaparra* 'I'm going in the morning'.
8. Note that rules must be formulated in such a way that when a verb stem of the form $C_1 V_1 C_2 V_2$ is reduplicated and nominalised by suffixation of *ini*, with deletion of the stem-final vowel of the verb, the result is not $C_1 V_1 C_2 V_2 C_1 V_1 C_2 ini$ but $C_1 V_1 C_2 i C_1 V_1 C_2 ini$.
9. This may contain a bound form of the free morpheme *purra* 'always, all the time'. However, it does not denote past habitual but only far past.

94. Dhirari

Peter Austin

Introduction

This paper deals with an almost extinct language of the Lakes District of South Australia usually known as Tirari, but phonemically spelt as *ɲiɲari*.¹ Dhirari was once spoken on the eastern shore of Lake Eyre and has for many years been believed to be extinct, but some years ago Mrs L. A. Hercus was able to contact and record a speaker living at Farina in the far north of South Australia.² The data corpus now consists of some twelve field tapes and work with this speaker is still continuing.

Dieri and Tirari

Analysis of the available data shows that Dhirari and the language geographically adjacent to it, Diyari (Dieri), are dialects of one language. They share a common morphology and syntax and differ in vocabulary by less than 10 per cent. In both dialects nouns and non-singular pronouns are inflected in a nominative-ergative pattern while singular pronouns have separate forms for transitive subject, transitive object and intransitive subject functions. Sentences show a strong tendency to be verb final with the order of subject and object in the sentence being specified by the following rules:

- (i) if both subject and object are of the same morphological class (either noun or pronoun) then the subject precedes the object;
- (ii) nouns always precede pronouns regardless of syntactic function.

The verb in Dhirari consists of a verbal base plus an obligatory auxiliary verb *buɲi* plus, optionally, one of a class of auxiliaries which specify the tense of the verb. The etymology of *buɲi* is not known (it was originally thought to be related to *buɲi* 'to fall' but recent research has shown that not to be the case) but it is found as a copula in sentences which are normally verbless equationals in Diyari, as for example in:³

- (1) T *gangu biɲa buɲi-ɲda*
boy big *buɲi*-PART
'The boy is big.'

the corresponding Diyari sentence is:

- (2) D *nawu-baɲa gangu biɲa*
he this boy big

This means that Dhirari verb affixes can be divided in two categories, firstly, those which are affixed to the verb stem and secondly those which are affixed to *buɲi*.

A. Verb stem affixes

Affixes which may be attached to the verb stem in Dhirari are the reflexive and reciprocal, the forms of which are as follows:

(a) Reflexive (REFL) has the form *-ɲari-*, is attached directly to the verb stem and must be followed by the participial desinence (see below). An example of its use is:

- (3) (a) T *wada ɲani ɲanɲa-ɲari-ɲda buɲi-ɲda*
not I hit-REFL-PART *buɲi*-PART
'I didn't hit myself.'

this compares with Diyari:

(3) (b) D *wada ɲani nanra-ɟaɹi-yi*

(b) Reciprocal (RECIP) is of the form *-mali-*, is also attached directly to the verb stem and must be followed by the participial desinence. An example of its use is:

(4) *ɲalra yaɟa-mali-ɲda buɹi-yi*
we-dual talk-REFL-PART *buɹi*-PRES
'We are having a row.'

(c) Participial (PART) has two alternatives: *-da* after a stem containing an intervocalic nasal plus stop cluster; *-ɲda* elsewhere.

The selection of a particular alternant takes place after the operation of the Phonological Rule of Consonant Cluster Simplification, which can be roughly stated as:

$$\phi \rightarrow d \left\{ \begin{array}{l} l \\ n \end{array} \right\} \text{---} \check{r}$$

A verb stem with a participial desinence must be followed by *buɹi* in one of its tense or mood forms.

B. Buɹi and its affixes

The tense and mood affixes attached to *buɹi* are as follows:

(a) Imperative (IMP). In Diyari the basic form of the imperative is *-a+NUMBER MARKER+mayi*, which is added to the verb stem or stem plus reflexive or reciprocal subject to the following two phonological rules:⁴

$$\begin{array}{c} V \rightarrow \phi / \text{---} + V \\ [\alpha F] \quad \quad \quad [\alpha F] \\ \phi \rightarrow y / \quad V \quad + \text{---} \quad V \\ \quad \quad \quad [+high] \quad \quad \quad [-high] \end{array}$$

The NUMBER MARKER indicates the number of persons addressed: *-ɸ-* for singular addressee; *-lu-* for dual addressee; *-ni-* for plural addressee.

Thus we find:

(5) D *waba-mayi! wiɹi-yamayi!*
go-IMP enter-IMP
'Go away! Get in there!'

As we would expect the phonetically realised form of the imperative in Dhirari is *-yamayi* attached to *buɹi*, as in:

(6) T *niɲa dama-ɲda buɹi-yamayi!*
him cut-PART *buɹi*-IMP
'Cut it out!'

There is a strong imperative *-awu* in both dialects:

(7) (a) D *wabawu! wiɹiyawu!*
'Go away! Get in there'

(7) (b) T *wabaɲda buɹiyawu! wiɹiɲda buɹiyawu!*

(b) Present tense (PRES). The marker of the present tense is *-yi* attached to *buɹi*. In Paper 91 on Diyari [Dieri], Capell notes that there is a modal suffix *-ai* added to the stem and called by him 'Indicative Tenseless'. Our work on both dialects suggests that there may have been some confusion here resulting

from a very common use of the present tense *-yi* in narratives, regardless of the time reference intended. A common linking device in Dhirari stories is:

(8) T *ɲaɟani ɲani waba-ɲda buɹi-yi*
then I go-PART *buɹi*-PRES
'And then I went to ...'

In other conversational situations *-yi* has a distinct present tense reference.

(c) Recent past (PAST). In referring to recent events or to past events in general this tense is used. It is manifested as *-ya* attached to *buɹi*, and an example is:

(9) T *nawu ɟiga-ɲda buɹi-ya maɹi-nru*
he return-PART *buɹi*-PAST Marree-ABL
'He came back from Marree.'

(d) Future (FUT). The future tense is marked by *-la* on *buɹi*. In Diyari *-la* is attached to the verb stem which is then followed by one of the future tense auxiliaries, normally *ɲana-*. Dhirari has no auxiliary verbs specifying future tense. An example of the use of *-la* is:

(10) T *yawaɹa ɲaya-ɲda buɹi-la miɲa ɟana yaɟa-ɲda buɹi-lali*
language hear-PART *buɹi*-FUT what they say-PART *buɹi*-PURP
'We will listen to what they say.'

(e) Possibility (POSS). In his paper Capell makes note of a 'Dehortative Modal Suffix' of the form '*jadi*' and this appears to be a reference to one of the functions of the affix we call 'possibility'. POSS is phonologically *-yaɟi* and has two semantically related functions:

(i) used in a simple sentence to speculate about future events which may not be felicitous. It corresponds roughly with English 'might', as in

(11) T *gaɲa wiɹi-ɲda buɹi-yaɟi*
people enter-PART *buɹi*-POSS
'Someone might walk in.'

The implication in this case is that someone's walking in would not be nice and might, for example, disturb one's sleep.

(ii) to warn of the possible consequences of an action or state of affairs:

(12) T *ɲabu-ri-ɲda buɹi-yamayi ɲaɟu yina-ɲa danra-ɟa*
silence-INT VERB-PART *buɹi*-IMP I-ERG you-ACC hit-PART
buɹi-yaɟi
buɹi-POSS

'Shut up or I'll belt you!'

The sentence which precedes the sentence in which *-yaɟi* occurs contains an imperative or conditional verb in all cases of this use of POSS. This seems to be the reason why Capell named the affix 'dehortative'.

(f) Continuous (CONT). Sentences which describe action carried out over a period of time have *buɹi* marked with the participial desinence *-ɲda*. An example is (3a) above. Although the situation is not yet fully clear and is the subject of continuing investigation, it appears that attributive relative clauses also have the *buɹi* of their verb complex marked with the participial, as in:

(13) T *wada ɲaɟu ɲaɲda-ɟa buɹi-yi wima niɲa-baɹa yunru*
not I-ERG like-PART *buɹi*-PRES song him-this you-ERG
wanɟa-ɟa buɹi-ɲda
make-PART *buɹi*-PART

'I don't like the song that you sing.'

(g) Purposive 1 (PURP1). The verb of a complement sentence whose subject is coreferential with the subject of the main sentence and which marks purpose or intention has *-lali* attached to its *buři* auxiliary. For Diyari the corresponding inflection is *la* attached to the stem, this being the same affix as is found for the future tense forms (corresponding to Capell's '-la imperfective'). The purposive may be used:

- (i) where the verb of the matrix sentence is imperative
 (14) (a) T *yini waba-nda buři-yamayi dana-na nayi-nda buři-lali*
 you go-PART buři-IMP they-ACC see-PART buři-PURP1
 'You go and look after them.'

compare with Diyari:

- (14) (b) D *yini wabamayi dana-na nayila*
 (ii) where the verb of the matrix sentence is a verb of motion:
 (15) (a) T *hayani waba-nda buři-yi miđa nayi-nda buři-lali*
 we go-PART buři-PRES country see-PART buři-PURP1
 'We are going to see the country.'

Diyari has:

- (15) (b) D *hayani wabayi miđa nayila*
 (iii) where the verb of the matrix sentence is transitive and the subjects of both verbs are coreferential

- (16) T *nađu mani-nda buři-nda diga-lga-nda buři-lali*
 I-ERG take-PART buři-PART return-TR VERB-PART buři-PURP1
 'I picked it up to return it.'

Since the verb 'to want' is transitive we have:

- (17) T *yunru napda-da buři-nda niņa yagalga-nda buři-lali*
 you-ERG want-PART buři-PART him ask-PART buři-PURP1
 'You want to ask him.'

which contrasts with (20) below.

(h) Purposive 2 (PURP2). A purposive complement sentence whose subject is not coreferential with the subject of the main sentence has its verb marked by *-yaři* in Dhirari and *-nađu* in Diyari. Capell terms this desinence 'intention' and analyses it as '-na+ndu'. Examples of its use are:

- (i) where the verb of the main sentence is intransitive
 (18) T *nani yingaju yađa-nda buři-yi yunru nyuyama-nda*
 I you-DAT say-PART buři-PRES you-ERG understand-PART
buři-yaři
buři-PURP2
 'I'll talk to you so you can understand.'

- (ii) where the verb of the main sentence is transitive
 (19) T *qanali buga yingi-da buři-la đayi-nda buři-yaři*
 they-ERG food give-PART buři-FUT eat-PART buři-PURP2
 'They will give her food to eat.'

The verb 'to want' falls under this category:

- (20) T *nađu yiną napda-da buři-yi yini naganu waraba-nda*
 I-ERG you-ACC want-PART buři-PRES you me-DAT teach-PART
buři-yaři
buři-PURP2
 'I want you to teach me.'

- (i) Complement (COMP). A complement sentence where the subject is not

identical to the subject of the main sentence and which does not express intention or purpose has its verb complex marked with *-yani* in Dhirari and *-nani* in Diyari. In some cases these correspond to English poss-ing complements and four groups can be distinguished:

- (i) a verb of perception in the main sentence
 (21) T *nađu naga-nda buři-ya nani wilabina diřiři yađa-nda*
 I-ERG hear-PART buři-PAST she old woman dhirari speak-PART
buři-yani
buři-COMP
 'I heard the old lady talk diřiři.'

contrast this with the Diyari example:

- (22) D *nađu nayi-yi miņa gunu waba-nani*
 I-ERG see-PRES what one go-COMP
 'I saw something going.'

(ii) other transitive verbs in the main sentence

- (23) T *nađu qanana warara-nda buři-yi naganu nura-ni*
 I-ERG them-ACC leave-PART buři-PRES my-GEN camp-LOC
nama-nda buři-yani
 sit-PART buři-COMP
 'I left them sitting in my camp.'

(iii) conditional sentence complements

- (24) T *dana wagaya-nda buři-yani nulu yagalga-nda buři-yi*
 they come-PART buři-COMP he-ERG ask-PART buři-PRES
 'If they come he asks them.'

(iv) sentence complements introduced by *wiđu* 'when'

- (25) (a) T *nambu nani bali-nda buři-yi wiđu nulu nana*
 almost I die-PART buři-PRES when he-ERG I-ACC
mađa-nda buři-yani
 bite-PART buři-COMP
 'I nearly died when he bit me.'

This compares with the Diyari sentence:

- (25) (b) D *nambu nani balina wiđu nulu nana mađanani*

C. Other auxiliary verbs

As stated above, *buři* in the Participial form can be and often is followed by a further auxiliary verb which specifies more exactly the time at which an event occurred. Two auxiliaries which are fairly common in all speech situations are:

- (i) *wanđi* (original meaning 'to search') marking distant past as in
 (26) T *nađu naganu miņa-ni buři-nda buři-nda wanđi-yi*
 horse my hole-DAT fall-PART buři-PART AUX-PRES
 'My horse fell down a hole.'
- (ii) *wara* (original meaning 'to throw') marks recent past, of the order of days or a week ago
 (27) T *yunru guru-yali mani-nda buři-nda wara-yi*
 you stealth-INSTR take-PART buři-PART AUX-PRES
 'You stole it (the other day).'

Two further auxiliary verbs were elicited but they have never been heard in free speech or in narratives. They are:

(iii) *baŕa* (original meaning 'to be') marks less recent past, of the order of a week or fortnight previously

- (28) T *gaŕini ŋaŕani bali-ŋda buŕi-ŋda baŕa-ya*
 grandmother my-GEN die-PART buŕi-PART AUX-PAST?
 'My grandmother died a week ago.'

(iv) *waba* (original meaning 'to go') marks perfective, an event which has been completed already

- (29) T *gaŕini ŋaŕani bali-ŋda buŕi-ŋda waba-ya*
 'My grandmother has already died.'

It is interesting that two instances of *waba* in the present have been noted in the Diyari corpus, but with a durative, habitual sense:

- (30) D *wada ŋani walgaŕa-li ŋana-ŋa waba-yi*
 not I sadness-INSTR be-PART AUX-PRES
 'I am not lonely.'

- (31) D *nawu bilŕa ŋurara-ŋa waba-yi*
 he possum sleep-PART AUX-PRES
 'The possum sleeps (in a hollow tree).'

Comparative note

The following observations can be made about the dialects which make up the Dhirari-Diyari-Ngamini group:

- Dhirari shows a development over Diyari and Ngamini by transferring some of their verb stem affixes to an auxiliary verb.
- Diyari is more complex than Dhirari as it has auxiliaries for the future tenses.
- Ngamini is more complex than Diyari as it has auxiliaries for various types of motion connected with event described. (See Paper 92 by Breen for details.)

NOTE: Our work on Diyari has shown that Capell's claim that 'The auxiliaries can be used as full verbs by themselves with other auxiliaries but not with themselves' does not hold and that sentences involving *wanŋina wanŋiyi* 'searched', *warana warayi* 'threw', and *ŋanaŋa ŋanayi* 'will be' are all perfectly acceptable and used frequently. Similarly, his statement that 'there is a tense that is formed by the combination of two aspect markers: *nani jada-na-la*' has been disproved by the Diyari informants.

Notes

- The segmental phonemes of Diyari and Dhirari are:

CONSONANTS

	BILABIAL	LAMINO-DENTAL	APICO-DENTAL	LAMINO-PALATAL	APICO-DOMAL	VELAR
Stop	<i>b</i>	<i>ɖ</i>	<i>d</i>	<i>ɟ</i>	<i>ɖ</i>	<i>g</i>
Nasal	<i>m</i>	<i>ɳ</i>	<i>n</i>	<i>ɲ</i>	<i>ŋ</i>	<i>ŋ</i>
Lateral		<i>l</i>	<i>l</i>	<i>l</i>	<i>l</i>	
Trill			<i>ɽ</i>			
Flap			<i>r</i>			
Continuant				<i>y</i>	<i>ɣ</i>	<i>w</i>

VOWELS

	FRONT	BACK
High	<i>i</i>	<i>u</i>
Low		<i>a</i>

- I wish to thank Mrs Hercus for the loan of her fieldtapes and for her valuable suggestions and help with the preparation of an earlier draft of this paper, which has been substantially rewritten following my own fieldwork on Dhirari. Thanks are also due to Mr Ben Murray without whose help and patience nothing would be known of his *gaŕini*'s language.
- In order to identify the dialect from which the example sentences are drawn, sentences preceded by T are Dhirari, and those preceded by D are Diyari.
- Notice that the imperative of the reciprocal and reflexive will always be *ya*+NUMBER MARKER+*mayi* in Diyari.

95. Wangaybuwan

Tamsin Donaldson

Wangaybuwan, spoken in western New South Wales, divides active verbs into nine semantically distinct classes (eight transitive, one intransitive) through the system of roots it employs in the formation of compound verbs which qualify other verbs.

English evaluates the performance of actions either with an adverb ('She dug the burrow *energetically*'); or with an evaluative verb which takes a complement specifying the action being evaluated ('She *failed to* dig the burrow'). If the evaluation is made without specifying the action evaluated, the dummy active verb 'do' is used ('She did it *energetically*', 'She failed to do it'). Wangaybuwan has a set of a dozen bound morphemes which are obligatorily verbalised to form compound verbs. Half of these form a subset of 'evaluative' bound morphemes which evaluate the performance of actions. They are verbalised either by the addition of a semantically empty dummy verb-root which marks the resulting form as transitive or intransitive (*-ma-l* TRANS 'do', *-ma-y* INTRANS 'do/move'); or by the addition of one of a set of eight transitive compound verb-forming roots which give some information as to the type of action being evaluated, without specifying it precisely (for example *-ga-l* TRANS 'do piercing action'). The following examples illustrate the verbalisation of the morpheme *gunu-*, which evaluates an action as *energetically* performed, first with *-ma-l*, then with *-ga-l*. (The past form of verbs with the conjugation marker *l* involves dropping the *l* and the final vowel of the root, and adding *-iyi*.)

- winaru gunumiyi*
 woman-ERG energetic action-DO-PAST
 'Woman did (it) energetically/went hard at it.'
- winaru gunungiyi*
 woman-ERG energetic action-PIERCE-PAST
 'Woman pierced energetically.'

Compound evaluative verbs, whether formed with *-ma-l*, *-ma-y*, or one of the eight 'type-of-action' roots, may either stand alone as the only verb in the sentence (as in (1) and (2)); or they may play an adverbial role, qualifying other verbs (with monomorphemic roots) which fully specify the action being evaluated, for example:

Table 1: Classification of Wangaybuwan verbs by compound verb-forming roots

VERBS	
PREDICATE ADJECTIVES AND STATIVE VERBS NOT qualified by evaluative verbs	
ACTIVE VERBS qualified by evaluative verbs	
TRANSITIVE VERBS qualified by evaluative verbs formed with either: <i>-ma-l</i> 'do'	
INTRANSITIVE VERBS qualified by evaluative verbs formed with: <i>-ma-y</i> 'move'	
or ONE of the following:	
1	<i>-ma-l</i> 'do with hand'
2	<i>-giyama-l</i> 'do with fire'
3	<i>-Dinna-l</i> 'hit'
4	<i>-bi-l</i> 'do away'
5	<i>-Da-l</i> 'do with mouth'
6	<i>-Di-l</i> 'do with foot'
7	<i>-ga-l</i> 'pierce'
8	<i>-ya-l</i> 'speak'

(3) *winaru mingga gunumiyi bagiyi*
woman-ERG burrow-NOM energetic action-DO-PAST dig-PAST
'Woman dug burrow energetically.'

or

(4) *winaru mingga gunungiyi bagiyi*
woman-ERG burrow-NOM energetic action-PIERCE-PAST dig-PAST

which cannot be translated any differently from (3), though *gunungiyi* predicts that the verb qualified will refer to an action that involves 'piercing'—in this case 'digging'. (When an evaluative verb qualifies another verb, both have the same transitivity and carry the same inflections.)

Since any verb may be qualified by evaluative verbs formed with only one of the eight 'type-of-action' roots, these subdivide transitive active verbs into eight classes, as shown in Table 1.

Classes of verbs qualified by evaluative verbs formed with each of the roots

Notice that *-ma-l* occurs twice in Table 1, once as the semantically empty transitive root 'do', and again as one of the eight 'type-of-action' roots. This means that verbs belonging to semantic sub-classes 2–8 can all be qualified by evaluative verbs formed either with *-ma-l*, or with a root specific to their class alone (like the class 7 verb *baga-l* 'dig' in (3) and (4)); while roots belonging to semantic sub-class 1 can be qualified *only* with evaluative verbs formed with *-ma-l*.

Syntactic verb classes

-ma-y 'move'

Intransitive active verbs, for example *bibuwa-y* 'run', *biru:bi-y* 'bend over', *walga-y* 'climb'.

-ma-l 'do'

All transitive verbs.

Semantic sub-classes of transitive verbs

1. *-ma-l* 'do with hand'

This class contains all those verbs which do not conform to the semantic specifications for qualification by evaluative verbs formed with any of the other roots 2–8. Although it is a residual class and the verbs which belong to it are more diverse than those belonging to the other classes, there are positive semantic criteria for assigning verbs to it, associated either closely or at some remove with the notion 'do with hand'. Class 1 includes the following:

Verbs of making (manufacturing): for example *ma-l* 'make', *nibi-l* 'net/knot'.

Verbs of receiving:

(a) verbs of taking/holding, where the hand is used to retain the object or bring it closer to the agent (as opposed to verbs of class 4 which involve moving it further away) for example *mama-l* 'take' and now 'buy', *mi:ma-l* 'hold tight', *waruma-l* 'pick up'.

(b) verbs of perception, where organs such as eyes, ears, rather than the hand, 'take in' the object without physically moving it, for example *ya:-y* 'see', *winaya-l* 'hear'.

(c) verbs of intellection, which deal with information received, for example *di-rba-y* 'know/recognise', *winaya-y* 'think about/remember'.

2. *-giyama-l* 'do with fire'

Both *-giyama-l* and *-Dinma-l* end in *-ma-l*. This would suggest sub-varieties of 'handling' verbs. Both classes of verb indicate types of instrument used to affect the object. With class 2 the instrument is fire. Examples of verbs of this class are *wiri-y* 'cook', *banga-l* 'burn'.

3. *Dinma-l* 'hit'

With class 3 verbs the instrument strikes the object and is normally either the hand or something held in the hand as in *binjdji-l* 'hit with closed fist/punch', *marbi-l* 'hit with flexible object/switch'. However there are 'hitting' verbs which do not specify an instrument. The Wangaybuwan equivalent of English 'kick', which specifies the foot as instrument, is *qina:ngu buma-l* (foot-INSTR hit). *buma-l* being a hitting verb that does not specify an instrument, it is qualified by evaluative verbs formed with *-Dinma-l*, not *-Di-l* 'do with foot', even when the reference is to an act performed with the foot.

4. *-bi-l* 'do away'

In English 'give' is opposed to 'receive', 'take'. Class 4 verbs are opposed to class 1 'taking/holding' verbs. 'Give' does not quite convey the criterion for class 4, which is somewhat broader—the action should involve getting rid or letting go of the object, moving it away from the agent. Examples of class 4 verbs are *nyu-y* 'give', *wana-y* 'throw'.

5. *-Da-l* 'do with mouth'

This class includes verbs indicating any activity carried out with the mouth except those involving speech (class 8), for example *qa-l* 'eat', *na:ru-y* 'drink', *nyga-l* 'swallow', *djinjdja-l* 'lick'.

6. *-Di-l* 'do with foot'

Examples of class 6 verbs are *gaya:ngdi-l* 'go in search of', *mawa-l* 'tread on/crush', *yaba-l* 'track'.

7. *-ga-l* 'pierce'

Like class 2 and 3 verbs, class 7 verbs involve an instrument. With class 7 verbs the instrument used penetrates the object (yamstick, needle, spear, axe, etc.). As with class 3 verbs the instrument used may be a body part. The failure of a dog to mount a reluctant bitch was described with an evaluative verb formed with *-ga-l*. Examples of class 7 verbs are *baga-l* 'dig', *wurana-l* 'sew', *qu-r* 'prick (with any degree of intensity, from spearing to writing)'.

8. *-ya-l* 'speak'

Examples of class 8 verbs are *niya-l* 'speak', *binba-l* 'rouse on/shout at', *gula-y* 'sing/call out to'.

Three principles play a part in this classification:

- (i) association of actions with a particular part of the body;
- (ii) subdivision of actions which affect the object according to the type of effect on it, which depends on the type of instrument used;
- (iii) subdivision of actions which move the object according to the direction of movement with respect to the agent.

The final syllable of monomorphemic verbs of the L conjugation prompts a historical speculation.

The polysyllabic verbs of the L conjugation fall into two quite distinct

morphological groups, the compound verbs (all transitive), and the monomorphemic verbs (approximately 80 per cent transitive). However, the phonological differences between the final syllables of the two types of verbs are not as great as might be expected, given this difference in morphology. The total range of phonological possibilities for the last syllable of a Wangaybuwan root ending in a vowel is summarised in the formula CV(:), where C is one of 15 consonants, V one of 3 vowels. There are thus 90 possible final syllables. In monomorphemic verb roots of the L conjugation the possibilities are systematically reduced to 14. There are no final vowels with length. There is no final *u*. Only 7 consonants appear in the final syllable, *b ɖ g m ŋ w y*. (If an eighth consonant, *ŋ*, is added, this list is precisely the list of permissible morpheme-initial consonants.) Of the 14 possible combinations of these 7 consonants with *a* or *i* only 10 actually occur. Among these 10, 6 are homomorphous with the 6 bound monosyllabic compound verb-forming roots. (Note too that the 2 polysyllabic compound verb-forming roots, *-giyama-l* and *-Dinma-l*, though not analysable in that *-giya* and *-Din* do not occur elsewhere as morphemes, end in *-ma-l*, homomorphous with the monosyllabic compound verb-forming root *ma-l*.)

This homomorphism is striking. It is clear from a glance at the examples given of verbs belonging to semantic classes 1–8 that the final syllable of a transitive verb of the L conjugation is not predictable from its semantic class; in other words it carries no predictable meaning. Nonetheless, there are a number of instances where a verb does end with a syllable homomorphous with the compound verb-forming root appropriate to its semantic class, for example *baga-l* 'dig', *gaya:ngdi-l* 'go in search of'.

There are also instances of other elements occurring elsewhere in the verbal system which show homomorphism with the final syllables of polysyllabic verbs. Such elements include:

- (i) all three free monosyllabic verb roots of the L conjugation;
- (ii) transitive derivational affixes attached to intransitive verb roots;
- (iii) derivational affixes which indicate actions associated with the action or state referred to by the verb root to which they are attached. (These derive stems belonging to the Y conjugation with the same transitivity as that of the root.);
- (iv) transitive verbalisers of non-verbal stems and loan verbs from English;
- (v) intransitive verbalisers of non-verbal stems and onomatopoeic representations of sounds.

Table 2 sets out the forms involved, with glosses as appropriate. Also of interest, in view of the semantic association between some of the compound verb-forming roots and particular parts of the body, is the homomorphism between some final syllables of L verbs and the initial syllables of some body part nouns. The final column of Table 2 illustrates this.

The conclusion suggested (though not proven) by the evidence is that the final syllables of L verbs that are synchronically monomorphemic, and even sometimes intransitive, originated as transitive verb-forming auxiliaries; auxiliaries which were either bound monosyllabic roots, as in the synchronic compound verb system, or free monosyllabic verbs which have since been lost as independent L verbs (except for three), leaving traces of their former auxiliary function only.

Table 2: Homomorphism between final syllables of L conjugation monomorphemic polysyllabic roots and forms elsewhere in the verbal system

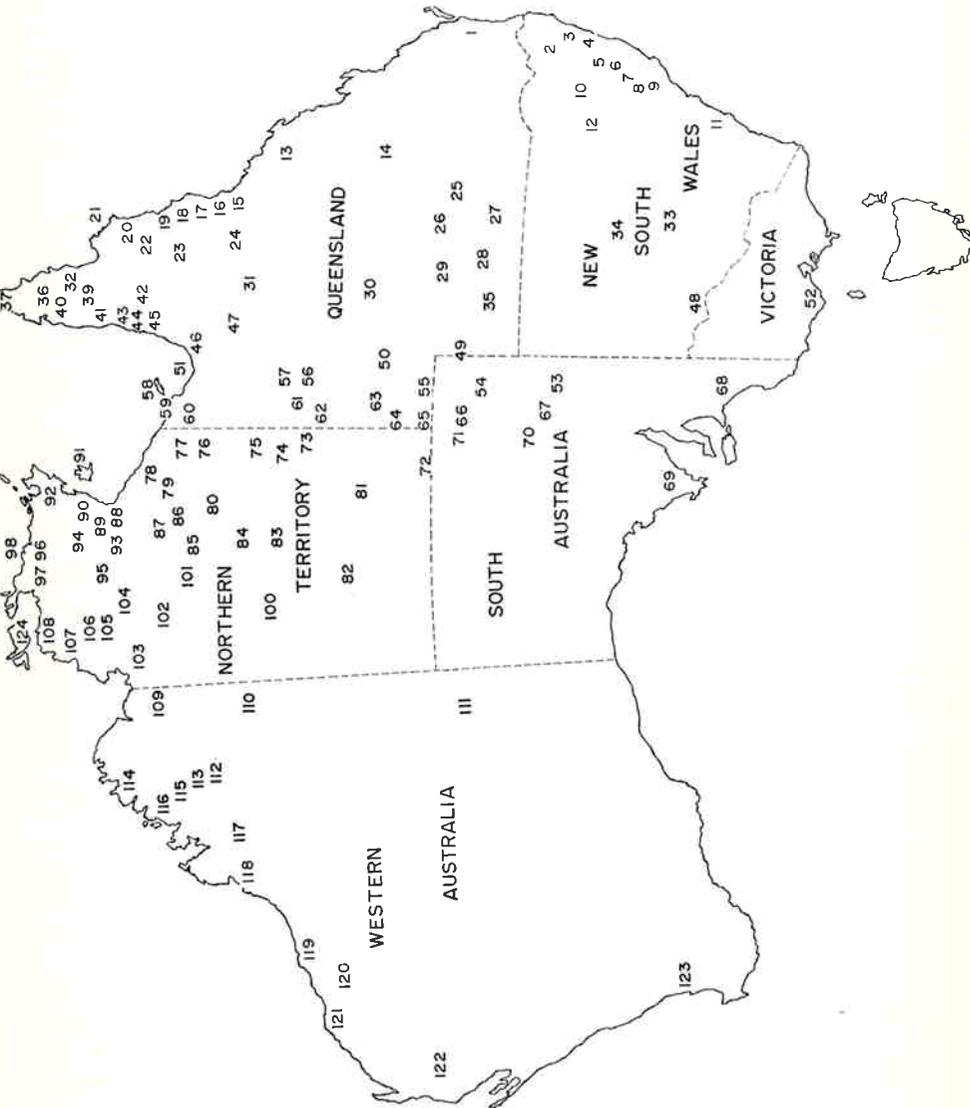
FINAL SYLLABLES	BOUND MONOSYLLABIC ROOTS	(1) FREE MONOSYLLABIC ROOTS	(2) TRANSITIVE AFFIXES	(3) NEUTRAL AFFIXES	(4) TRANSITIVE VERBALISERS	(5) INTRANSITIVE VERBALISER	BODY PART NOUNS
- <i>ma-l</i>	'do with hand'	'do/make'	×		×		<i>ma:ya</i> 'hand'
- <i>bi-l</i>	'do away'						
- <i>Da-l</i>	'do with mouth'	'eat'		- <i>Da-y</i> 'eating/ drinking'			<i>ɟala:y</i> 'tongue'
- <i>Di-l</i>	'do with foot'						<i>dina:</i> 'foot'
- <i>ga-l</i>	'pierce'	'be'					
- <i>ya-l</i>	'speak'						
- <i>ba-l</i>			×		×	×	
- <i>ŋa-l</i>							
- <i>wa-l</i>				- <i>wa-y</i> 'on the move'			
- <i>mi-l</i>				- <i>mi-y</i> 'watching'			<i>mi:l</i> 'eye'

Index of Australian Languages

The approximate locations of Australian languages dealt with in this volume are shown in Map opposite. To the left of each language name in the index below is a reference number that can be found on the map.

Languages are identified in the index by the spelling used most frequently in the volume. Variant spellings are only given when they involve some radical difference. The reader will be able to identify variant representations of language names if he bears in mind that voiced and voiceless stops can in most cases be used interchangeably (*p* and *b*; *t* and *d*; *k* and *g*); the palatal semivowel may be represented sometimes as *y* and sometimes as *j*; lamino-palatals may be shown as *dy*, *dj* or *d̥*, and lamino-interdentals as *dh* or *d̪* (and similarly for nasals and laterals); a long vowel may be shown as *a*: or as *ā* or as *aa*.

References are to page numbers.



Map Number

- 93** Alawa 12, 181–9, 233, 257–63, 301–2, 304, 308, 410, 505–15, 616, 620, 708–42
- 74** Alyawara 300, 302, 304
- 73** Andegerebinha 294, 624
Anewan *see* Nganjaywana
- 91** Anindilyaugwa 617, 626
- 82** Anmatjera 416
- 72** Arabana-Wangganguru 229, 263–6, 295, 301, 303, 467–71, 474, 598, 616, 621, 745
- 81** Aranda 45, 127–8, 302–4, 421
- 67** Atjnjamathanha 12, 45, 265, 303–4, 534–44, 549–50
- B- *see also* P-
- 5** Baanbay 19–49
Babaram *see* Mbabaram
- 28** Badjiri 336
- 35** Bāgandji (including Guṇu dialect) 229–31, 265–6, 301, 307, 350–2, 471, 598
- 2** Bandjalang (including Gidabal dialect) 12, 19–49, 115, 125–6, 160, 300, 302–3
Bidha-Bidha *see* Pitta-Pitta
- 14** Bidyara 106, 292, 295, 300, 302–4, 339, 624
- 79** Binbinga 390–6, 432–7
- 8** Birbay 42
- 13** Biri 266–9, 302, 304
Biyalgeyi, name for Flinders Island language, *q.v.*
- 61** Bularnu 250–7, 293–5, 331–6, 340, 586–90, 624
- 113** Bunaba 619

Map Number

- D- *see also* T-
- 97** Dalabon 129, 177, 199, 304, 503
- 97** Dangbon 619
- 11** Darawal 621
- 71** Dhirari 12, 126–7, 160, 308, 616, 745, 757–63
- 66** Diyari (= Dieri) 12, 313, 598, 616–8, 621, 742–5, 750, 757–63
- 19** Dja:bugay 301, 307, 315, 321–9
Djadjala, dialect of Western Kulin, *q.v.*
- 92** Djambarbuyngu 300
- 105** Djamindjung 390, 396–401, 421, 437–41, 616, 619–21, 698–704
- 6** Djangadi 19–49, 240–1, 300, 303
- 85** Djingili 301, 314, 390–6, 432–7
Duungidjawa, dialect of Waga-Waga, *q.v.*
- 17** Dyrbal (including Giramay, Mamu and Ngadyan dialects) 3–6, 8, 12, 38, 115–6, 120, 142, 149–63, 167–9, 174–5, 213, 222, 241–4, 298, 300, 302–3, 307–9, 313–4, 408, 411–3, 421, 486–93, 601–8, 632
- Encounter Bay language, dialect of Yaralde, *q.v.*
- Enindhiljagwa, *see* Anindilyaugwa
- 10** 'Enneewin' 19–49
- 21** Flinders Island language 225–9, 300, 302–3, 308
- G- *see also* K-
- 7** Gadjang 19–49

- Map Number
- 57** Galgadungu 292, 295, 301–2, 304, 421–2, 438, 440, 462, 464–6, 473, 475, 485–91
Gambera, dialect of Wunambal, *q.v.*
- 10** Gamblamang 19–49
- 12** Gamilraay 19–49
- 118** Garadjari 302
- 77** Garawa 297, 382–90
- 50** Garuwali 745
- Gidabal, dialect of Bandjalang, *q.v.*
- 112** Ginijan 619
- Giramay, dialect of Dyrbal, *q.v.*
- 45** Gog-Nar 292, 295, 302–3, 462, 621–4
- 45** Gogo Bera 278, 281
- 86** Gudandji 295, 390–6, 432–7
- Gugada, dialect of Pitjantjatjara, *q.v.*
- 66** Gugadj 294–5
- Gugu-Badhun, dialect of Warungu, *q.v.*
- 22** Gugu-Yalandji 203, 307
- 4** Gumbaynggir 19–49, 119, 128–9, 239–42, 303, 308, 313
- 96** Gunbalang 301–2, 619
- 42** Gundyen 421
- 25** Gungari 624
- Gunin, dialect of Wunambal, *q.v.*
- 26** Gunja 624
- Guṇu, dialect of Bāgandji, *q.v.*
- 97** Gunwinjgu 181–9, 297, 301–4, 393, 616, 619–20, 623, 704–8
- Gungay, dialect of Yidip, *q.v.*
- 92** Gupabuyngu (see also Yuulngu) 300, 302, 313
- 101** Gurindji 13, 104
- 20** Guugu-Yimidhir 160, 203, 242, 307–8
- 70** Guyani 265
- Iwaidja see Yiwadja
- K- see also G-
- 83** Kaititj 3, 98–104
- Kalkatungu see Galgadungu
- 51** Kayardilt 551
- Kulin see Western Kulin
- 30** Kungkari 624
- 32** Kuuku Ya?u 208–11, 301, 329–31, 450–2
- 108** Laragia 626
- 58** Lardil 12, 104, 489, 550–84
- 40** Linngidhigh 27, 104
- 38** Mabuiag 104
- Map Number
- MaḍiMaḍi, dialect of Western Kulin, *q.v.*
- Madjay, dialect of Yidip, *q.v.*
- 106** Malak-Malak 301, 620, 674, 683, 687–9
- 53** Maljanjaba 230, 471
- Mamu, dialect of Dyrbal, *q.v.*
- 117** Mangala 618
- 95** Mangarai 620
- 88** Mara 181–9, 410, 514, 616, 620, 708–42
- 106** Maramanandji 674, 680, 689
- 106** Maranunggu 301, 620, 673–91
- 10** Marbal 19–49
- 106** Marengar 674, 680–9
- 29** Marganj 292, 624
- 106** Marithiel 674, 680–3, 689
- 106** Matngala 674, 688–9
- 98** Maung 617, 620, 626
- 47** Mayagulan (including Ngawun dialect) 292, 295, 624
- 23** Mbabaram 2, 23–4, 31, 41
- 63** Midhaga 616, 624, 745, 749
- 109** Miriwung 584–6, 616, 619, 623, 646–53
- 102** Mudbura 617–8
- Mulluk-Mulluk, see Malak-Malak
- 107** Murinjpaṭa 287–90, 303, 328, 405–8, 441–4
- 27** Muruwari 244–9, 301, 308, 342–7, 472–5
- Narrinyeri, alternative name for Yaralde, *q.v.*
- Ngaanyatjara, dialect of Pitjantjatjara, *q.v.*
- Ngadjan, dialect of Dyrbal, *q.v.*
- 103** Ngaliwuru 390, 396–401, 421, 437–41, 621, 698–704
- 97** Ngalkbon 185
- 65** Ngamini 295–6, 336, 616, 745–50, 756, 762
- 94** Ngandi 8, 176, 189, 735–42
- 106** Ngangikurungur 401–5, 616, 620, 685–6, 689, 691–8
- 10** Nganjaywana 2, 19–49
- 10** Ngarbal 19–49
- 115** Ngarinjin 181–9, 282, 301, 303–4, 615–9, 622–9, 638
- 121** Ngarluma 104, 113, 489, 492, 583
- 87** Ngarngu or Ngarndji 390–6, 432–7
- Ngawun, dialect of Mayagulan *q.v.*
- Ngulibardu, dialect of Nyangumarda, *q.v.*
- Njungar, see Wadjug

- Map Number
- 104** Nungali 390, 396–401, 437–41, 621, 698–704
- 90** Nunggubuyu 8, 176–89, 393, 409–11, 444–6, 449, 605, 608–10, 735–42
- 119** Nyangumarda (including dialects Ngulibardu and Wanyarli) 2, 12, 51–77
- 15** Nyawaygi 240, 307–8
- Nyayimil, dialect of Yuulngu *q.v.*
- 42** Ogh Unjdjan 452–6
- P- see also B-
- 69** 'Parnkalla language' 265
- 111** Pitjantjatjara (including Ngaanyatjara and Gugada dialects, = 'Western Desert language') 160, 301, 303, 308, 313, 322, 396, 416–7, 421–3, 427–31, 473–4, 486, 488, 616–9, 622, 624, 667–73
- 62** Pitta-Pitta 291–2, 295, 301–3, 336, 423, 597, 624
- 106** Pungupungu 674, 683–5, 689
- 97** Rembarnga 12, 301–3, 493–505
- Riratjingu, dialect of Yuulngu *q.v.*
- 92** Ritharngu (see also Yuulngu) 172–5, 285–7, 372–80, 410, 446–50, 601–2, 735–42
- T- see also D-
- Tasmanian languages 23, 46
- Thangu, sub-group of Yuulngu *q.v.*
- 122** Thargari 300–3, 488
- 43** Thayorre 621–3
- 124** Tiwi 41
- 106** Tyeraity 673–4, 687–9
- 37** Uradhi 416
- 123** Wadjug (= Njungar) 421, 623–4
- 106** Wadyiginy 674, 683–5, 689–90
- 1** Waga-Waga (Duungidjauw dialect) 6–7, 106–11
- 75** Wagaya 292–5, 304, 340–2, 590–4, 624
- 100** Walbiri 3–4, 12, 41, 79–105, 300–3, 313, 421, 462, 488–93, 617–8, 623
- 110** Walmadjari 13–4, 205–8, 301, 307, 313, 616, 618, 653–67
- 80** Wambaya 390–6, 432–7
- 34** Wangaybuwan 13, 231–8, 301, 307–8, 348–50, 474–82, 616, 621, 763–8
- Wanggangu, dialect of Arabana-Wanggangu *q.v.*
- 62** Wangga-Yudjuru 336, 597, 624
- 49** Wangkumara 336–9, 624, 756
- Wanyarli, dialect of Nyangumarda *q.v.*
- 76** Wanyi 292, 295, 297
- 16** Wargamay 240–1, 307–8
- 9** Warimi 42
- 61** Warluwara (including dialects Gambera and Gunin) 250–7, 293–6, 301–3, 307, 331–6, 340, 486, 586–90, 624
- 89** Warndarang 181–9, 410, 514, 616, 620, 708–42
- 84** Warramunga 104
- 24** Warungu (including Gugu-Badhun dialect) 40, 214–29, 248, 300–4, 307–8, 421, 456–64, 473
- Wemba-Wemba, dialect of Western Kulin *q.v.*
- Wergaia, dialect of Western Kulin, *q.v.*
- 'Western Desert language' see Pitjantjatjara
- 48** Western Kulin (including dialects Djadjala, MaḍiMaḍi, WembaWemba, Wergaia, Woiwuru, Wudjubalug) 233, 249–50, 266, 297, 300, 303, 306–8, 314, 623
- 39** Wig-Munggan 455
- 41** Wik Me'nh 416
- 33** Wiradhuri 203, 234, 236, 307, 617, 621
- Woiwuru, dialect of Western Kulin, *q.v.*
- 116** Worora 282, 619, 625, 638
- 52** Wudjawuru 623
- Wudjubalug, dialect of Western Kulin *q.v.*
- 114** Wunambal 282–5, 301, 303, 424–7, 474, 616, 619, 626, 629–46
- 56** Yalarnnga 292, 295
- 64** Yaluyandi 336, 745
- 54** Yandruwantha 295–6, 335–6, 594–7, 616, 745, 750–6
- 31** Yanga-Mbara 462
- 59** Yanggal 551
- 78** Yanyula 313, 616
- 78** Yanyuwa 301, 304
- 68** Yaraide (= Narrinyeri, including

Map Number	Map Number
'Encounter Bay language' 222, 230-1, 307-8, 413	44 Yir Dhangedl 270, 281
55 Yawarawarka 745	44 Yir Yorond 269-81, 300, 302-3
3 Yaygir 26, 45	99 Yiwadja 301, 304, 393
18 Yidij (including Gungay and Madjay dialects) 4-6, 8, 212-4, 242-3, 248, 301, 306-8, 315-29, 342-3, 406, 413	10 Yugambal 19-49
120 Yintjipanti 113	93 Yugul 735
36 Yinwum 30-1	60 Yugulta 8, 190-200, 300, 303, 422-3
	92 Yuulngu (see also Ritharngu and Gupabuyngu; includes Riratjingu, Nayimil and Thangu) 301, 352-82, 410, 516-34, 544-9, 735-42

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