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TRANSITIVITY ALTERNATIONS OF THE
ANTICAUSATIVE TYPE

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1. Introduction

1.1. Examples and general characterization

This paper is concerned with anticausative verbs (or verb-forms), or shortly, **anticausatives**. What I mean by this relatively little known term is shown by the following examples, where one morpheme in each case is marked as "ANTIC" (for "anticausative"):

- (1) (a) Die Frau öffnet die Tür.
GERM "The woman is opening the door."
(b) Die Tür öffnet sich.
ANTIC
"The door is opening."
- (2) (a) Annem kapi-yi aç-ti.
TURK mother:my door-ACC open-PAST
"My mother opened the door."
(b) Kapi aç-il-di.
door open-ANTIC-PAST
"The door opened."
- (3) (a) Aip̄pau distair-id p̄ata niujo wein p̄ans balgins (Lk 5,37)
GOTH lest burst-3SG ART new wine ART skin=bags:ACC
"Lest the new wine burst the skin bags."
(b) Aip̄pau distaur-n-and balgeis (Matth.9,17)
lest burst-ANTIC-3PL skin=bags:NOM
"Lest the skin bags burst."
- (4) (a) Shawarar nan ta dama Audu.
HAUS thing this TM worry Audu
"This matter worries Audu."
(b) Audu ya dam-u da shawarar nan.
Audu TM worry-ANTIC with thing this
"Audu worries about this matter."
(SMIRNOVA 1981:259-60)
- (5) (a) Devuška sloma-la palk-u.
RUSS girl(F) break-PAST:F.SG stick-ACC
"The girl broke the stick."
(b) Palk-a sloma-la-s'.
stick(F)-NOM break-PAST:F.SG-ANTIC
"The stick broke."
- (6) (a) K̄hamin t̄sat̄san-um e droš̄ə. (KOZINCEVA 1981:94)
ARME wind blow-PTC AUX flag
"The wind is puffing up the flag."

- (b) Droš̄ə t̄sat̄san-v-um e k̄hamuc.
flag blow-ANTIC-PTC AUX in:wind
"The flag is puffing up in the wind."

- (7) (a) Édesanyám felold-otta a gyógyszer-t.
HUNG my:mother dissolve-PAST ART medicine-ACC
"My mother dissolved the medicine."
(b) A gyógyszer felold-ód-ott.
ART medicine dissolve-ANTIC-PAST
"The medicine dissolved."
(DEŽĚ, MAKAN' & XRAKOVSKIJ 1969:128)
- (8) (a) Sā fa'i lo'u nifo e le fōma'i. (MOSEL 1985:100)
SAMO PAST break my tooth ERG ART doctor
"The doctor pulled my tooth out."
(b) 'o le'ā mā=fa'ifa'i nifo.
FUT ANTIC-break:PL tooth
"My teeth are about to break off!"

In (1) through (8), the semantic relation of the verbs in (a) to the verbs in (b) is much like the relation of causatives to their corresponding non-causatives. But what is marked here is not the causative member of the pair, but the non-causative member, whence the term "anticausative".

Such causative/non-causative pairs with a marked non-causative are quite frequent in the languages of the world. However, so far they have not received sufficient attention in general and typological linguistics¹, a fact which is also manifested in the absence of a generally recognized term for this phenomenon (cf. section 2.). This paper therefore deals with the most important properties of anticausatives (particularly semantic conditions on them), their relationship to other areas of grammar as well as their historical development in different languages. The grammatical domain of transitivity, valence and voice, where the anticausative belongs, takes up a central position in grammar and consequently the present discussion should be of considerable interest to general-comparative (or typological) linguists.

1.2. Intransitivization vs. inactivization

(1) through (8) above are examples for **morphological transitivity alternations**, i.e. the verbs in (a) and (b) form **transitivity pairs**, where both members contain the same root and the transitivity/intransitivity is marked by grammatical morphemes. On the other hand, there are **lexical transitivity alternations**, like *kill/die*, or Russian *žet'* "burn(tr.)" / *goret'* "burn(intr.)", where the two members are related semantically in the

¹This may be related to the fact that anticausatives as a distinct category do not exist in either Latin or English.

same way as transitives and anticausatives in (1) through (8), but the difference is marked by means of different roots.

Morphological transitivity alternations (or oppositions) can be either **equipollent** or **privative**. In equipollent alternations both alternants are symmetrical, i.e. in most cases both are marked, e.g. by means of root affixes

- (9) (a) mat-av-el "break(tr.)" (NEDJALKOV 1969:108-109)
 PASH TRANS
 (b) mat-ed-el "break(intr.)"
 INTR

or root ablaut

- (10) (a) kreĩpti "turn(tr.)"
 LITH (b) krỹpti "turn(intr.)"

or different auxiliary verbs or "generic verbs", e.g.

- (11) (a) bizar avun "bore"
 LEZG make
 (b) bizar řun "be bored"
 become
- (12) (a) rdilyki-pinyi "break(tr.)" (GUERSSEL et al. 1985)
 WARL hit
 (b) rdilyki-ya "break(intr.)"
 come

or different person endings, e.g.

- (13) (a) πνίγ-ει "s/he is drowning(tr.)"
 MGRE 3SG:ACT
 (b) πνίγ-εται "s/he is drowning(intr.)"
 3SG:MID

Finally, we may say that equipollent alternations include alternations where both alternants are unmarked, as in English.

- (14) (a) She broke the stick.
 ENGL (b) The stick broke.

Verbs like English *break* can be called **labile** verbs (as proposed by U.MOSEL²).

With privative transitivity alternations there are two possibilities. Either the transitive member is marked and the intransitive member is unmarked, in which case we are dealing with an ordinary causative/non-causative relationship. On the other hand, the intransitive member may be marked and the transitive member unmarked, and then we have a transitive/anticausative alternation. Let us assume the following preliminary definition: "An anticausative is the marked member of a privative morphological transitivity alternation."

If this definition were sufficient, one could say that the anticausative is simply a **derived intransitive** (cf. BABBY 1975, CRANMER 1976), formed by means of a **detransitivizing** morpheme. However, the definition is incomplete. The term "anticausative" (instead of, e.g., "antitransitive", "detransitive") was chosen deliberately, because the relation between transitive and anticausative is the same as the relation between causative and intransitive. That is, the anticausative not only has no grammatical object, but the object/undergoer of the transitive becomes the grammatical subject of the anticausative, just as the subject of the intransitive becomes the object/undergoer of the causative. Put differently, the anticausative does not only involve the deletion of the actor (just as, reversely, the causative involves the addition of an actor), but the undergoer also becomes a subject (just as, reversely, the subject of the intransitive loses its subject status in causatives). We are dealing, then, not with a general, unspecific intransitivization, but with that particular type of intransitivization in which the actor is deleted and the undergoer becomes a subject.

The type of intransitivization that involves deletion of the undergoer, is also a frequent phenomenon, known by the name of **indefinite object deletion**. In many cases, indefinite object deletion does not entail consequences for the verb morphology, cf.

- (15) (a) She is eating an apple.
 ENGL (b) She is eating.

but is also often signaled on the verb, e.g.

- (16) (a) A vavina i kita ra bul. (MOSEL 1984:14-15)
 TOLA ART woman she beat ART child
 "The woman beat the child."
 (b) A vavina i kikota.
 ART woman she beat:INTR
 "The woman beat (someone or something)."

A similar phenomenon is **antipassivization**, which occurs particularly in ergative languages. These cases can be said to involve a privative morphological transitivity alternation, and yet it is clear that they are very different from anticausatives.

²The term "labile" was used originally in Caucasian linguistics (cf. NICHOLS 1984:195) and is adopted and used for Samoan in MOSEL 1985.

The difference between indefinite object deletion and anticausative formation once again shows clearly that two types of intransitives have to be distinguished: inactives vs. agentives (in a different terminology, unaccusatives vs. unergatives). That this differentiation is relevant also for languages whose case marking pattern is not of the active type, has been shown by the discussion in Relational Grammar and Generative Grammar (cf. PERLMUTTER 1978, HARRIS 1982, BURZIO 1981, 1986, HAIDER 1985). According to these two syntactic theories, the differences can be explained if one assumes that the surface subject of unaccusatives is in the object position in the underlying structure, cf. (17):

- (17) (a) (underlying structure) [e]_{NP} [arriva Luisa]_{VP}
 ITAL (b) (surface structure) [Luisa]_{NP} [arriva [e]_i]_{VP}

In unergatives, however, the surface subject is also the subject underlyingly:

- (18) [Luisa]_{NP} [telefona]_{VP}

Whatever explanatory value such formal descriptions may have, it is interesting that the structure (17)(a) is exactly the same as that of an anticausative after only the actor has been deleted. To finish the derivation, the undergoer must be "promoted" to subject, and this "promotion" is the same for unaccusatives and anticausatives. Thus, one could identify anticausativization and morphologically marked "unaccusativization" of transitive verbs. Those who do not like this admittedly clumsy term³ may speak of "inactivization". What is decisive is that there are two rather different types of transitivity alternations: First, the transitive/unergative⁴ alternation (with antipassivization, in the broad sense, as the corresponding derivational operation); second, the transitive/unaccusative⁵ alternation (with anticausativization as the corresponding operation). Now we can state the final definition: "An anticausative is the marked member of a privative morphological transitive/inactive alternation."

1.3. Anticausative vs. passive

I have still to specify the difference between anticausative and passive. If the above definition is interpreted broadly, passive would fall under anticausative. The passive can be said to be intransitive, too, it is marked

³Cf. CHVANY 1985, who proposes the term "argative" instead of "unaccusative" or "ergative" (which is, confusingly, often used for the same thing, cf. BURZIO 1981, 1986, KEYSER & ROEPER 1984). This seems to make sense, though chances are not very high that it will be accepted.

⁴Or: transitive/intransitive-active.

⁵Or: transitive/inactive.

with respect to the corresponding active in most cases, and the undergoer becomes the subject in most passives, too. These notional similarities are often reflected in a similar morphological marking, cf. section 4.2. However, there is an important difference. In the passive, the actor is not in the subject position, but it can often be expressed in an actor phrase, and in any case the existence of an actor is implied in a passive clause. In the anticausative, however, the actor is completely eliminated, not only syntactically, but also semantically, and the process is presented as going on spontaneously.⁶ This semantic distinction is often quite subtle, but it is decisive.

Moreover, there exists in many languages a potential passive which is clearly distinct from the canonical passive semantically, and often also syntactically. See the following examples:

- (19) Ruwan nan ba zai shaw-u ba (SMIRNOVA 1981:262)
 HAUS water this NEG FUT drink-PASS NEG
 "This water is not drinkable."

- (20) Αυτό τό ψωμί δέν τρώγ-εται
 MGRE this ART bread NEG eat-3SG.MID
 "This bread is not edible."

- (21) Dieses Buch verkauft sich nicht/gut/nur in Unibuchläden.
 GERM "This book doesn't sell/sells well/sells only in university
 bookstores."

- (22) ENGL Bureaucrats bribe easily.

Such potential passives are often marked like ordinary passives. E.g., the suffix *-u* in Hausa is used also for statal passives, and the middle inflection in Modern Greek may also mark reflexive and passive. In German there is reflexive marking, while English uses exclusively syntactic means. What is common to all these constructions is, besides the potential meaning, the semantically implied actor, even if it cannot be expressed overtly.

Since an actor is implied in the potential passive, it has a very high lexical generality too, as compared with the anticausative. See below 3.2., 4.2.

⁶SIEWIERSKA 1984:77 makes the same point:

"Although passive clauses need not have or in some languages cannot have a specified agent, the existence of some person or thing bringing about the situation is implied... Anticausative constructions conversely express a situation which appears to be brought about spontaneously."

2. On the term "anticausative"

2.1. History of the term and possible alternatives

The term "anticausative" was introduced by NEDJALKOV & SIL'NICKIJ 1969. NEDJALKOV & SIL'NICKIJ 1969 is the introductory article in a collection of articles on causative constructions from the Leningrad Typological School (XOLODOVIČ (ed.) 1969). This is a programmatic article, but it also contains a typological classification of many different phenomena in the area of transitivity alternations with examples from many languages, including quite a few rather exotic ones, as well as some universal hypotheses. Let me quote the parts which are most important for the definition from the English translation (NEDJALKOV & SILNITSKY 1973):

"The subject of this paper is the *typology of the causative opposition* $V_i:V_j$, where V_i designates the constant s_j (i.e., some state), and V_j designates cs_j (i.e., a state, but one which has already been caused). The verbs V_i are non-causatives, and the verbs V_j are their causatives. V_i and V_j are connected by a semantic derivation relation: V_j is "formed" from V_i by adding an additional meaning c .

2. V_i and V_j form various types of *formal oppositions*, of which the following are the most important.

2.1. *Directed or derivational oppositions*. Here one of the members of the opposition is formally derived from the other, which is demonstrated by the fact that this member of the opposition has an additional derivational morpheme... From the point of view of the direction of the derivation, two subtypes can be discerned.

2.1.1. The member of the opposition that is causative in meaning is formally marked by means of a *causative* morpheme, i.e. $V_i \rightarrow V_j$...

2.1.2. The member of the opposition that is non-causative in meaning is formally marked by means of an *anticausative* morpheme, i.e., $V_i \leftarrow V_j$...

10. The causative member of an opposition which is formally marked by means of a *causative affix* will be said to be either a *morphological* or a *lexical causative*. The non-causative member of an opposition which is formally marked by means of an *anticausative affix* will be said to be an *anticausative*."

It can be seen that this definition is very similar to the one given above, except for some minor terminological divergences (non-directed vs. directed opposition = equipollent vs. privative opposition). However, one difference is that for NEDJALKOV & SIL'NICKIJ the two members of a transitivity pair are related via a "semantic derivation", which consists in the addition of a causative meaning c . Thus, the term "anticausative" suggests that this causative meaning is subtracted, as it were, in anticausatives. But this seems to be too literal an interpretation. A subtractive meaning would be a glaring contradiction to the principle of isomorphism of meaning and form, and it is not easy to see how languages could afford such a contradiction. Below (3.4., 5.3.) some more

considerations will be discussed which indicate that it is preferable to use the neutral notion of *transitivity alternation*, without committing oneself on the question which alternant is semantically primary. Moreover, NEDJALKOV & SIL'NICKIJ's definition is not as explicit syntactically as mine. The fact that causatives are always transitive and non-causatives that are derived morphologically from transitives are almost always intransitive and always have the undergoer in the subject position (that is, they are never impersonal), is not expressed in their formulation and could also be a coincidence.

Why is such a relatively new term necessary? The phenomena described by it have not gone completely unnoticed in the past, and have sometimes been labeled with a term of their own. Authors of descriptive grammars, in particular, have often created terms ad hoc for their individual languages, without being aware that very similar phenomena exist in other languages too. Such cases clearly demonstrate that a comparative investigation from the point of view of general linguistics is needed. However, the terms that have been used so far are all inappropriate for some reason or other.

(1) The most widespread term seems to be *inchoative*. But this term already has a different meaning, as any dictionary of linguistic terminology will tell us, cf. DUBOIS et al. 1973:252: "On appelle inchoatif une forme verbale propre à indiquer le début d'une action qui va progresser..." Very early this term was used in Gothic grammar for the forms in *-na-*, see example (3) and 3.2. below (KIECKERS 1960)¹. Within the modern, American-dominated tradition, this term was apparently used first by LAKOFF 1970:32ff., 98ff., but there only cases like *thicken* (derived from *thick*) are called inchoatives. However, such derivations should rather be called *fientives*, since here not the beginning of a state, but the transition into a state (the "becoming" or "growing") is described. It appears that inchoative was transferred from such cases to anticausatives, which, like fientives, describe the transition to a state. But anticausatives are not derived from the state expression, but from the transitive transition expression. "Inchoative" is used, e.g. in NAPOLI 1974, GUERSSEL et al. 1985, EVERAERT 1986.

(2) Very often the term *middle* is used, e.g. in BABBY & BRECHT 1975, KEENAN 1985, HAIDER 1985, ERBEN 1972. It has the shortcoming of not telling much and being polysemous (just like the Classical Greek inflectional category *Middle*, from which it is derived). More recently, it has been quite popular, meaning "potential passive" (as in sentences like (21), (22) above; see, e.g., KEYSER & ROEPER 1984, FELLBAUM 1986, HAIDER 1985), which only adds to the terminological confusion. A variant is *middle passive* or *mediopassive* (FOLEY & VAN VALIN 1984, DESCLÉS 1986).

(3) Further, the term *pseudopassive* can be found (DERBYSHIRE 1985:90). This term does not seem to be completely inappropriate, as

¹In works on Gothic the synonyms *ingressive* (HEMPEL 1953) and *inceptive* (LLOYD 1979) can be found.

anticausative and passive have quite a lot in common. However, the prefix "pseudo-" could mean anything and should be avoided because it is always a sign of the labelers' helplessness.

(4) The term **derived intransitive** was mentioned above (1.2.); it is too broad, since it includes all sorts of antipassives.

(5) SHIBATANI 1985 simply uses the term **spontaneous**, which describes the meaning with respect to the transitive construction quite well, but does not distinguish anticausatives from nonderived verbs with spontaneous meaning.

(6) SIEWIERSKA 1984:169 adds some more terms that have been used in the literature:

"Many clauses which have been labeled *passive*, *notional passive*, *middle*, *pseudo-reflexive*, *quasi-reflexive* or *illogical reflexive*... appear to be in fact anticausatives."

If one uses a relatively new term one should take into account not only the appropriateness from a factual and a linguistic point of view, but also from a social point of view, that is, the chances of the new term to become more widespread. Although "anticausative" was not coined in the mainstream American-dominated linguistic tradition, it already has a fairly wide distribution there. It was taken over, apparently independently, by MASICA (1976:56ff. and 176f.), by BABBY (1983:70ff.), by MORENO (1984, 1985), and, above all, by COMRIE (1981:161, 1985:325, BORG & COMRIE 1984:122). Following COMRIE, it is used by SIEWIERSKA 1984:77ff., and apparently also MARANTZ 1984, an influential MIT dissertation. Therefore it seems justified to adopt this term.

In Soviet linguistics, in particular within the Leningrad Typological School, the term is still very popular, though in a slightly modified shape (**decausative**)(for the reasons see the following subsection). The existence of such a term has clearly a favorable effect in that now there is evidence for anticausatives in quite a few languages where the phenomenon was apparently overlooked more or less before, cf. the collections of articles XOLODOVIČ (ed.) 1974, XRAKOVSKIJ (ed.) 1978, 1981, NEDJALKOV (ed.) 1983, 1987.

2.2. "Anticausative": Grammatical morphology or grammatical meaning?

It is not quite easy to remain consistent in the use of the term, because many semantic, syntactic and morphological (derivational and inflectional) factors are involved. Already in NEDJALKOV & SIL'NICKIJ 1969 a certain confusion can be observed. On one hand, oppositions of the type $V_i : V_j$ are defined *semantically*: V_i designates a "state" (i.e., a state of affairs, or a situation) s_j , and V_j designates a caused "state" cs_j , i.e. V_j is derived semantically from V_i by adding a meaning *c*. On the basis of this semantic criterion $V_i v$ is a non-causative, while V_j is a causative (§1).

But then the *formal* means in a derivational opposition are described by the terms "causative" and "anticausative" (§2). Only in §10 are these terms used for the verb pairs (by means of a conjunction of formal and semantic criteria): V_i in $V_i <- V_j$ is an anticausative, while V_j in $V_i \rightarrow V_j$ is a causative.

In principle, there is no reason to object to a systematically ambiguous use of "(anti)causative" as (1) "the marked member of a derivational opposition $V_i : V_j$ ", and (2) "the formal means that mark this opposition". In the case of "causative", there won't be any practical difficulties, because the morphemes that have causative meaning often have this as their only or at least as their main function. With "anticausative" the situation is different. The morphemes that have anticausative meaning very often, even systematically, show other meanings as well, like reflexive (and reciprocal), potential passive, passive, indefinite object deletion. BABBY 1983:72 objects to NEDJALKOV & SIL'NICKIJ on similar grounds:

"The hypothesis that the basic meaning of *-sja/-s'*² is anti-causative and that all its other uses are somehow secondary, derived from its anti-causative meaning, or due to "polysemy of anti-causative morphemes" is wrong for the same reason it is wrong to claim that, for example, the basic meaning of *-sja/-s'* is passive, and all its other meanings are derived from it... In Babby 1975... I argued rather that the only syntactic function of *-sja/-s'* is to mark reduced valency..."

As BABBY notes, all these functional-semantic categories probably have something in common with anticausative and with each other, but in most cases they are so clearly distinct that different categories have to be set up. The frequency of their common expression is not explained until the next step. I use "anticausative" for a type of (derivational-)grammatical meaning, i.e. a semantic category that is expressed by a morphological category (much like other terms in *-ive*, like perfective, passive, inceptive). By extension, "anticausative" can be used for verbs marked with this particular category with anticausative meaning (anticausative = anticausative verb), just as a verb showing a causative or perfective derivation can be called a "causative" or a "perfective". I will be careful in using the term for morphological categories. Often traditional or etymological terms (like "middle", V./VII./VIII. stem, reflexive, etc.) are quite appropriate for formal categories, because the marking is also language-particular.

Also NEDJALKOV & SIL'NICKIJ notice that "anticausative morphemes" are often polysemous. They use the additional term "decausative" to refer to the anticausative meaning proper. Since it turned out that it does not make very much sense to refer to morphemes as "anticausative", only "decausative" is used now in the Leningrad Typological School.

²*-sja/-s'* is the reflexive postfix of Russian, which also serves to mark anticausatives, as in (5) above.

2.3. Different uses of "anticausative"

The definition given above (1.2.) and the limitation to a type of derived semantic alternation that need not necessarily have a unique morphological correlate seem to be the best way of using the term. Just in this sense it is currently used in the Leningrad School, where it is most widespread at present (in the form "decausative"). But as NEDJALKOV & SIL'NICKIJ's definition is not completely clear, the term was taken over with slightly different meanings.

SIEWIERSKA 1984 and MARANTZ 1984 include labile verbs among anticausatives. But as these do not show any marking at all, they could equally well be regarded as causatives. So it is best to say that they are neither.

MORENOS 1984, 1985 uses a still broader notion of anticausative. Besides "synthetic anticausatives" (= my anticausatives) he not only has "lexical anticausatives" (= labile verbs), but also "analytic anticausatives", i.e. passives. According to him, these three means of expression represent an "anticausative diathesis". Even if it may be useful to consider these three together as some sort of natural class, this use deviates too much from the original definition.

3. Semantic restrictions on anticausatives

3.1. Lexical generality, semantic change and relevance

The anticausative is subject to certain semantic restrictions. Anticausatives do not exist for every verb for semantic reasons, just as there are some nouns that do not have a plural, some adjectives that do not have forms of comparison and some verbs that do not have all aspect forms. In other words, the degree of **lexical generality** of anticausative formation is not very high. This is because the anticausative, like plural, comparison and aspect, is a grammatical (or derivational) category which causes a considerable **semantic change** on the element to which it is applied. BYBEE 1985:16-17 discusses the connection between the degree of semantic change effected by a morphological category and its lexical generality:

"By definition, an inflectional category must be applicable to all stems of the appropriate semantic and syntactic category and must obligatorily occur in the appropriate syntactic context. In order for a morphological process to be so general, it must have only minimal semantic content. If a semantic element has high content, i.e. is very specific, it simply will not be applicable to a large number of stems."

The degree of semantic change is determined by the degree of relevance of the category to the meaning of the stem. BYBEE 1985:13 defines relevance in the following way: "A meaning element is relevant to another meaning element *if the semantic content of the first directly affects or modifies the semantic content of the second.*" On the correlation between semantic change, relevance and lexical generality BYBEE writes (1985:17):

"Most potential categories that are highly relevant to verbs are not general enough to attain inflectional status. The reason for this is that high relevance tends to *detract* from generality. Because relevant categories produce derived words that are more distinct in meaning from their bases than the ones produced by less relevant categories, the combinations of relevant notions tend to be lexicalized."

That transitive/intransitive alternations are often lexicalized has been noted above (1.2.). Another consequence of a high degree of relevance may be that the grammatical category simply cannot be applied to all potential stems, as is the case with plurals, aspects etc. On the other hand, grammatical morphemes of case, tense and agreement are not subject to such restrictions, since they have a syntactic function and are not so relevant to the meaning of the modified element. BYBEE 1985:24 sets up a hierarchy of grammatical categories of the verb on which these are ordered according to the degree of relevance for the verb meaning. This hierarchy was established both deductively (by semantic analysis, p. 20-24)

and inductively (by a survey of the verbal morphology of 50 maximally nonrelated languages, p.24-33):

- (23) valence > voice > aspect > tense > mood > number agreement > person agreement > gender agreement

The anticausative is part of *valence* and hence is very relevant to the modifying verb.¹

As has been hinted at above in the quotations from BYBEE, there is a very strong connection between lexical generality, relevance and inflectional vs. derivational expression. Inflectional expression is not possible in the case of a very relevant meaning and, consequently, a low degree of lexical generality. This applies to anticausative formation, too, and it is therefore *almost always derivational*. This implies that anticausatives are often more or less strongly lexicalized, i.e. the form of expression or the meaning display certain idiosyncrasies. A good example for semantic idiosyncrasies are German reflexive verbs, which are often used for the standard anticausative meaning (as in (1) above), but which sometimes are not related semantically at all to their nonderived bases, cf. *einsetzen* "to put in" / *sich einsetzen* "to defend", *übergeben* "to transfer" / *sich übergeben* "to vomit", etc.

Although the anticausative is a derivational category, it is of interest not only for verbal lexeme formation and verbal semantics, but also for sentence grammar, because it has an intimate morphological and semantic relationship to other, more inflectional and syntactic categories, see below section 4.

In what follows I will deal with the semantic restrictions to which the formation of anticausatives is subject, and these can be quite strong, as noted above. Trivially, anticausatives can be formed only from transitives, like almost all detransitivizing categories, but this is certainly a restriction. This point is stressed by COMRIE 1981:161:

"While the genuine derived causative may be a productive process, the derived anti-causative will not be, since one cannot iteratively reduce the degree of transitivity of a predicate: once it is intransitive, that is necessarily the end of the process."

But even with transitive verbs the lexical generality of anticausatives is restricted in two ways.

¹Cf. BYBEE 1985:20

"Valence-changing categories such as transitive, intransitive and causative are highly relevant to the situation described in the verb stem, since the situation expressed by the verb stem changes according to the number and role of the participants in the situation."

3.2. "Unspecific change of state" as a condition for the transitive / inactive alternation

On the one hand, there are semantic restrictions in the possibility of forming a transitive/inactive alternation (or a causative/non-causative alternation) in the first place. Because in anticausatives the process is presented as going on spontaneously, only such actions can be anticausativized which can conceivably come about without an initiating actor. First it seems to be necessary for the transitive verb to denote a change (or affectedness) in the undergoer, i.e. to be highly transitive, cf. HOPPER & THOMPSON's (1980:252-253) parameter (I), "affectedness of the object": "The degree to which an action is transferred to a patient is a function of how completely the patient is AFFECTED." This same restriction also applies to the resultative (see NEDJALKOV (ed.) 1983, 1987), e.g. the German "passive of state". HELBIG & BUSCHA 1979:2.1.6.5.3. write on this:

"...das Zustandspassiv kann nur von solchen transitiven Verben gebildet werden, die zugleich ein Vorgangspassiv bilden können und die semantisch einen so starken Grad der Affiziertheit des Akkusativobjekts ausdrücken, daß ein bleibendes Resultat, eine Art Qualitätsveränderung...überhaupt ermöglicht wird."

Incidentally, the resultative does not permit an actor phrase either, just like the anticausative (at least in most cases, see NEDJALKOV & JAXONTOV 1983: §9.2.).

However, the anticausative is still more restricted than the resultative. For a change in the undergoer to come about spontaneously, the change may not be effected with too specific means. Thus, all actions are excluded which imply specific instruments or methods, like *bite*, *cut*, *dig*, *grind*, *sow*, *thresh*, *build*, *prepre*, *paint*, *operate*, *revise* etc. The following formations are impossible:

- (24) Der Hund beißt das Mädchen. -> *Das Mädchen beißt (sich).
 "The dog is biting the girl." "The girl is biting."
 (25) Ayşe schneidet das Papier. -> *Das Papier schneidet (sich).
 "Ayşe is cutting the paper." "The paper is cutting."
 (26) Mehmet wäscht das Auto. -> *Das Auto wäscht (sich).²
 "Mehmet is washing the car." "The car is washing."

(The reflexive *sich* in (24) through (26) is in parentheses because beside the *sich*-anticausative there is also the equipollent nonmarked alternation, i.e. labile verbs, like *rollen*, *zerbrechen*, *verbrennen*, *schmelzen*, *beginnen*, *trocknen*, etc. This class even seems to be productive to a limited degree, see fn.2) The unacceptability of (24) through (26) is clearly due to the specific semantic features ((24): "with the

²It is very telling that the sentence *Die Wäsche wäscht*. ("The laundry is washing.") is at least marginally acceptable if it is understood that the laundry is being washed in a washing machine, because here a conscious controlling actor is not apparent. Language treats complicated technical processes in the same way as natural processes, where there is no conscious actor either, as in *Die Wäsche trocknet*. ("The laundry is drying.")

teeth", (25): "with a sharp instrument", (26): "with soap or other specific methods"), which is demonstrated by the acceptability of sentences with similar, but nonspecific meaning:

- | | |
|--|--|
| (27) Das Mädchen verletzt sich. | "The girl gets injured." |
| (28) Das Papier zerreit. | "The paper tears apart." |
| (29) Das Auto säubert sich bei Regen selbst. | "The car gets clean by itself when there is rain." |

A distinction very similar to the one drawn here between **unspecific** and **specific change of state** is found in a different context in NEDJALOV & JAXONTOV 1983:1.1.1., who distinguish between **natural** and **secondary** states:

"Nezavisimo ot sposoba vyraenija ix v jazyke sostojanija deljatsja na estestvennye (napr., "leat", "ponimat", "byt' bol'nym") i vtoričnye (napr., "byt' zavjazannym", "byt' svarennym", "byt' postroennym", "byt' napisannym"). Estestvennoe sostojanie moet vzniknut' kak by samo soboj, bez elanija sub'ekta ili drugogo dejstvjueego lica; vtoričnoe vseda javljaetsja rezul'tatom ego-to soznatel'nogo dejstvija ili dejatel'nosti."³

Apparently transitive/inactive pairs are possible with exactly those verbs that express a change of state whose result is a natural state in the sense of NEDJALOV & JAXONTOV. If this is true, it is easily explained why in many languages there are similarities between anticausatives and fientives (see below, 4.5.), and why factitives easily form anticausatives (see below, end of this section): Fientives and factitives are derivatives of adjectives, and adjectives nearly always denote natural states.

In Gothic there is a verbal category formed in *-na-* that turns transitives into anticausatives. It is not ambiguous, as anticausative-marking elements in many other languages and has neither reflexive nor passive or potential passive meaning. Cf. KIECKERS 1960:247:

"Aus der intransitiven Bedeutung dieser Klasse entwickelt sich im Gotischen zuweilen eine passivische; doch ist diese Verwendung unmöglich, wenn bei der passiven Konstruktion der Vollzieher oder Veranlasser der Handlung zum Ausdruck gebracht wird."

Thus, Gothic is a good language to test which verb meanings can be anticausativized. The following anticausatives are attested in Gothic texts:

bi-auk-n-an	"increase(intr.)"	bi-aukan	"increase(tr.)"
dis-skrit-n-an	"tear(intr.)"	dis-skreitan	"tear(tr.)"

³Independently of their mode of expression in language, states are divided into natural (e.g. "lie", "understand", "be sick") and secondary states (e.g. "be tied up", "be cooked", "be written"). A natural state can arise by itself, as it were, without the wish of an actor or another acting person; a secondary state is always the result of someone's conscious action or activity."

us-gut-n-an	"be poured out"	giutan	"pour"
fra-lus-n-an	"get lost"	fra-liusan	"lose"
ga-luk-n-an	"close(intr.)"	ga-lūkan	"close(tr.)"
us-luk-n-an	"open(intr.)"	us-lūkan	"open(tr.)"
and-bund-n-an	"be unbound"	and-bindan	"unbind"
ga-þaurs-n-an	"be withered"	ga-þairsan	"wither"
dis-taur-n-an	"tear(intr.)"	dis-tairan	"tear(tr.)"
us-bruk-n-an	"break out(intr.)"	brikan	"break(tr.)"
ufar-haf-n-an	"exalt oneself"	hafjan	"raise"
ga-skaid-n-an	"separate(intr.)"	skaidan	"separate(tr.)"
and-let-n-an	"separate=die"	af-letan	"leave"
fra-qist-n-an	"perish"	fra-qistjan	"destroy"
ga-frisaht-n-an	"take form"	frisahtjan	"depict"

Especially interesting is the verb *andbundnan* "to get loose". This verb can be anticausativized only if it has the prefix *and-* "loose". The simplex verb *bindan* "to bind" has too specific a meaning and always implies an actor, hence there is no **bundnan*.

The number of anticausatives in Gothic is not very high, which is in part due to the fact that the language is attested in only a small corpus, and that there are certain purely morphological restrictions (anticausatives cannot be formed from verbs of the very productive second weak class). On the other hand, the semantic restrictions described above are so great that the anticausative could not become a fully productive, inflectional pattern.

However, this does not mean that anticausative formation has to be an unproductive process. The productivity of English labile verbs is a good example that demonstrates this point. To be sure, the inactive members of these pairs are not anticausatives according to my definition (see above, 1.2., 2.3.), but in the present context only the semantic conditions for transitive/inactive alternations are discussed. KEYSER & ROEPER 1984:389 (who use BURZIO's term "ergative" instead of "unaccusative") note the high productivity of the labile verb class:

"First we wish to observe that the Ergative Rule is, in fact, a rule. We take productivity to be sufficient evidence in favor of this claim. One way to argue for the productivity of ergative formation is to demonstrate that new forms constantly arise. This seems to be particularly true of bureaucratic and scientific English. Consider, for example, the following forms:

(28) alkalize, alkalize, Americanize, anatomize, automatize, capitalize, centralize, channelize, demagnetize, demilitarize, demobilize, equalize, federalize, generalize, harmonize, hybridize, liberalize, localize, magnetize, materialize, mechanize, militarize, mobilize, neutralize, normalize, organize, oxidize, polarize, pressurize, regularize, reorganize, revitalize, stabilize, standardize, synchronize, urbanize, Reaganize.

In suitable circumstances they all allow both transitive and intransitive verb forms. The following are illustrative.

- (29) a. We generalized the solution.
b. The solution generalized.

- ...
 g. The Republicans want to Reaganize the country.
 h. The country refuses to Reaganize.

...Note that not all verbs undergo ergative formation, however: *We penalized John, *John penalized.; We terrorized the community, *The community terrorized....*"

It can be seen clearly from these examples that although the pattern is highly dependent on the verb semantics, it is productive, and certainly not only in scientific or bureaucratic English. That most (but not all, cf. *Reaganize*) examples are taken from this area is simply due to the suffix *-ize*, which is most productive in these styles.

In German, too, anticausative formation is a productive process. Anticausatives seem to be relatively restricted with nonderived verbs, cf.

(30) sich entwickeln	"develop"	sich bilden	"form"
sich heben	"rise"	sich senken	"sink"
sich verschieben	"shift"	sich hinziehen	"protract"
sich spalten	"split"	sich sammeln	"gather"
sich teilen	"divide"	sich trennen	"separate"
sich schließen	"close" ...		

With nonderived verbs, there are many labile verb pairs that block anticausative formation. However, anticausatives are formed productively from factitive derivatives. Such anticausatives of factitives can be regarded as secondary fientives:

(31)			
sich verdunkeln	"become dark"	sich verdicken	"become thick"
sich verflüssigen	"become liquid"	sich verbessern	"become better"
sich verengen	"become narrow"	sich verdünnen	"become thin"
sich verhärten	"become hard"	sich erheitern	"become light"
sich aufklären	"become clear"	sich erhöhen	"become higher"
sich erkälten	"catch a cold"	sich verstärken	"become stronger"
sich erneuern	"become new"	sich beruhigen	"become calm"
sich verändern	"change"	sich vergrößern	"become larger"
sich erweitern	"become wider"	sich verkürzen	"become shorter"
sich füllen	"fill"	sich leeren	"become empty"
sich erhellen	"become bright"	...	

This list could be extended arbitrarily. In view of the large number of reflexive verbs with anticausative meaning it is remarkable that the *Duden* grammar does not even mention this class in the 3rd edition (GREBE et al. 1973) and in the 4th edition (DROSDOWSKI (ed.) 1984:110) only six examples of reflexive/non-reflexive pairs are given, only two of which can be regarded as anticausative pairs (*sich ängstigen* "to be scared", *sich ärgern* "to be angry"). In HELBIG & BUSCHA 1979:2.1.6.6.1.4., however, this type of reflexive is recognized and discussed briefly.

3.3. The "outside force" as a condition on anticausative alternations

In the preceding subsection we have seen that the change effected on the undergoer must not be too specific for a transitive/inactive alternation to become possible. However, in order that it is precisely the anticausative that is chosen to express this alternation, a further condition has to be fulfilled: The outside effect must be regarded as the normal case. If, on the other hand, a process normally goes on without any manipulation from outside, causative marking is preferred, i.e. the transitive member of the pair is marked (because it is the more unusual), while the intransitive is unmarked, e.g. German *senken* "to sink(intr.)", with the causative *senken* "to sink(tr.)"⁴. This is the case whenever the intransitive member is not inactive or unaccusative, which often means that it does not have *agentive* or *atelic*⁵ meaning and does not denote any change at all, e.g. *trinken* "to drink", with the causative *tränken* "to give (animals) something to drink". Of course, with verbs that denote an (unspecific) change, an anticausative alternation is, in principle, always possible. However, it will be favored if the above condition is fulfilled.

JACOBSEN 1985 nicely demonstrates this with examples from Japanese. First he observes:

"Markedness theory leads us to predict that experiential normality will somehow be reflected in linguistic normality... In the case of change predicates we would expect those sorts of change normally associated with a single entity to be somehow simpler in their intransitive usage than in their transitive usage, and vice versa for those sorts of change normally associated with an outside force."

Then he goes on to give Japanese examples of transitive/anticausative pairs (32), of transitive/inactive pairs where both members are marked (33), and of causative/intransitive pairs (34).

(32)			
kiru/kireru	"cut/be cut"	oru/oreru	"break (a stick)"
kudaku/kudakeru	"smash"	saku/sakeru	"tear"
muku/mukeru	"peel"	waru/wareru	"break (an egg)"
nuku/nukeru	"pull/come out"	yaburu/yabureru	"tear, break"
nugu/nuguru	"take/come off"	yaku/yakeru	"burn"

(33)			
ageru/agaru	"raise/rise"	mitukeru/-aru	"find/be found"
atatameru/atatamaru	"warm up"	oeru/owaru	"finish"
atumeru/atumaru	"gather"	sageru/sagaru	"lower"

⁴Synchronically this is an equipollent alternation of the ablaut type, but *senken* did have causative morphology at an earlier period, cf. Proto-Germanic **sank-j-a-*, where the suffix *-j-* and the root vowel *a* uniquely signal the causative.

⁵It is with atelic verbs that a meaning difference between "inactive" and "unaccusative" appears. Atelic intransitives like *sleep*, *cough*, *cry* are semantically inactive, but they are not unaccusatives (PERLMUTTER 1978). Since anticausatives are always telic, it would be more exact to call such alternations "transitive/unaccusative alternations".

butukeru/butukaru	"run into"	sizumeru/-aru	"quiet down"
hazimeru/hazimaru	"begin"	tasukeru/-aru	"help/be helped"
hirogeru/hirogaru	"spread out"	tomeru/tomaru	"stop"
katameru/katamaru	"harden"	tukameru/-aru	"catch/be caught"
kaeru/kawaru	"change"	tuyomeru/-aru	"make/get strong"
kimeru/kimaru	"decide/be decided"	yowameru/-aru	"make/get weak"
mageru/magaru	"bend"		
(34)			
aku/akeru	"open"	sizumu/sizumeru	"sink"
husu/huseru	"lie/lay down"	tatu/tateru	"stand"
doku/dokeru	"move/get away"	sodatu/sodateru	"grow/raise"
itamu/itameru	"hurt"	susumu/susumeru	"advance"
narabu/naraberu	"line up"	tuku/tukeru	"attach"
kagamu/kagameru	"bend (one's back)"	tizimu/tizimeru	"shrink"
kurusimu/-eru	"suffer"	ukabu/ukaberu	"float"
muku/mukeru	"face"		

JACOBSEN notes that the verbs in (32) predominantly express destruction and violence, i.e. processes where normally an outside force is responsible, whereas the verbs in (34) mainly denote animate motion, which is typically a self-induced change. The cases in (33) are in the middle between the other two, they denote changes that occur with or without the influence of an outside force.

The same conclusion that Jacobsen draws from his data can be obtained from a far more extensive comparative investigation on which NEDJALCOV 1969 reports. He recorded the morphological type of expression for the four transitivity pairs *laugh / make laugh*, *boil (intr.) / boil (tr.)*, *burn (intr.) / burn (tr.)* and *break (intr.) / break (tr.)*. He distinguishes the following types of formal oppositions:

(A) suppletive	(S)
(B) non-suppletive:	
(I) directed:	
(1) causative	(K)
(2) causative-instrumental	(I)
(3) anticausative	(A)
(II) non-directed:	
(1) conversive (=labile verbs)	(N)
(2) alternating (=ablaut type)	(C)
(3) substitutive (both members marked)	(Z)

NEDJALCOV gives the following table of his results:

	K	N	A	S	Z	C	I	total
laugh/make laugh	54	-	-	-	6	-	-	60
boil(intr.)/boil(tr.)	36	9	2	7	4	1	1	60
burn(intr.)/burn(tr.)	19	14	8	14	2	3	-	60
break(intr.)/break(tr.)	9	19	22	-	5	3	2	60
total	118	42	32	21	17	7	3	240

The verbs are ordered in such a way that the presence of an outside force becomes increasingly probable as one goes down from top to bottom. It can be seen clearly that anticausative marking increases while causative marking decreases. NEDJALCOV does not seriously attempt to explain his results with semantic considerations (rather, he is concerned with a demonstration of the utility of the statistical-probabilistic method), but they find a natural explanation in the concepts developed above.

3.4. Conclusion

To summarize the semantic restrictions to which anticausatives are subject I will set up the following scale of verb meaning types, where four points are identified and each is illustrated with a German example:

	(1)	(2)	(3)	(4)
change:	specific	unspecific	unspecific	none
outside force:	necessary	typical	untypical	very untypical
examples:				
transitive:	<i>beißen</i>	<i>spalten</i>	<i>versenken</i>	---
intransitive	---	<i>sich spalten</i>	<i>versinken</i>	<i>lachen</i>

(1) through (3) can easily be used transitively. The transitive meaning of type (1) verbs is too specific for a corresponding intransitive-inactive formation to be possible. Verb types (2) through (4) denote unspecific changes of state, so intransitive alternants are possible and, in principle, also anticausative formation. In type (4) verbs, however, involvement of an outside force is so unlikely that often not even morphological causatives are possible here (cf. German *lachen / causative zum Lachen bringen*). Transitive/inactive pairs are most likely to appear in type (3) and (2) verbs. In principle, such pairs can be formed by anticausatives as well as by causatives.⁶ In general causative marking seems to be more

⁶Or, of course, by any of the equipollent alternation types of 1.2.

frequent in the languages of the world than than anticausative marking (see MASICA 1976:100-107). However, anticausative marking is favored if the process that is denoted typically goes on without the involvement of an outside force, as in (2).

These are only rather crude principles which are, of course, subject to variation and individual interpretation in particular languages. Especially the question as to what counts as a specific and what as an unspecific change of state seems to be answered differently in different languages, cf. the Japanese intransitives *kimaru* "be decided", *tasukaru* "be helped", *tukamaru* "be caught", which cannot be rendered by English intransitives. However, in the case of *mitukaru* "be found" German behaves like Japanese: *sich (an)finden*.

Even if the above principles do not allow us to make very precise predictions, they do seem to point in the correct direction. Once again they show the high degree to which grammatical categories and their type of formal expression depend on (partly very specific) semantic conditions, and how much could be overlooked if the meaning of grammatical element is neglected.

3.5. Anticausatives with cognitive-psychological meaning

The anticausative verbs that were discussed in 3.2. through 3.4. almost invariably have concrete physical meaning, and also the notions "change of state" and "outside force" are to be understood in this sense. It is certainly typical for transitive verbs to denote concrete, physical affectedness, but there are also transitives denoting cognitive or psychological affectedness. Anticausatives can be formed from them, too, but in German at least they show some peculiarities. I have not investigated this particular topic for other languages, but it appears that as far as European languages are concerned, they are also very similar to German.

One peculiarity is exemplified by the verb *erinnern* "remind". Besides the direct object (a person P_U) there is still another object (a thing or state of affairs S), which is added with the preposition *an*: P_A *erinnert* P_U *an* S (" P_A reminds P_U of S "). In the anticausative, this prepositional object is preserved: P_U *erinnert sich* *an* S . (" P_U remembers/recalls S ..")

With some verbs, S can be in the position of P_A in the transitive alternant: P_A *interessiert* P_U *für* S . / S *interessiert* P_U / P_U *interessiert sich für* S . A similar behavior is shown by *begeistern (für)*, *beschäftigen (mit)*.

With quite a few verbs, especially verbs denoting emotions, only the monotransitive use is possible. Besides P_U *freut sich über* S , there is only S *freut* P_U not $*P_A$ *freut* P_U *über* S . Other verbs which behave like these are *wundern*, *aufregen*, *amüsieren*, *ängstigen*, *langweilen*, *erschrecken*, *betrüben*, *entzücken*, *genieren*.

With *ärgern* (similarly with *täuschen*) both S *ärgert* P_U and P_A *ärgert* P_U are possible, but in the latter construction the meaning is different, which is also manifested in the impossibility to express S ($*P_A$ *ärgert* P_U *über* S .)

Thus, the following four classes can be distinguished:

- | | | |
|---------------------------------|--|--|
| (1) --- | P_A <i>erinnert</i> P_U <i>an</i> S | P_U <i>erinnert sich</i> <i>an</i> S |
| (2) S <i>begeistert</i> P_U | P_A <i>begeistert</i> P_U <i>für</i> S | P_U <i>begeistert sich für</i> S |
| (3) S <i>wundert</i> P_U | --- | P_U <i>wundert sich über</i> S |
| (4) S <i>ärgert</i> P_U | (P_A <i>ärgert</i> P_U) | P_U <i>ärgert sich über</i> S |

A further peculiarity is that all these verbs can have a purely stative meaning in the first and third constructions. This would not be surprising in anticausatives (see also 4.4.), but here it is probably due to the meanings of these verbs because the (quasi-)transitive constructions of the first column can be stative too.

4. Other meanings of anticausative-marking morphemes

As was noted above (2.2.), anticausative-marking morphemes in most languages do not only have this meaning. NEDJALOV & SIL'NICKIJ 1969: §23 list ten other meanings that "anticausative morphemes"¹ may often have. COMRIE 1985:1.3. also notes such "parallels in marking valency change". In this section these various other meanings will be presented and their relation to the anticausative meaning will be discussed. It appears that these meanings can best be represented on a "map" of semantic space on which each morpheme may code a continuous area, and diachronic meaning extension does not happen in leaps.

4.1. Anticausative and reflexive

The connections between anticausative and reflexive are particularly prominent. The anticausative with reflexive marking is well known from three European language families: Slavic, Romance and Germanic:

(35)	(a) palić/palić sie	"burn(tr.)/burn(intr.)"
POL	(b) golić (sie)	"shave (oneself)"
(36)	(a) izmenit'/izmenit'sja	"change(tr.)/change(intr.)"
RUSS	(b) pričesyvat'(-sja)	"comb (oneself)"
(37)	(a) réveiller/se réveiller	"wake(tr.)/wake(intr.)"
FREN	(b) (se) voir	"see (oneself)"
(38)	(a) rompere/romper-si	"break(tr.)/break(intr.)"
ITAL	(b) guardar(-si)	"look at (oneself)"
(39)	(a) verdiepen/zich verdiepen	"make/become deep"
DUT	(b) (zich) beschrijven	"describe (oneself)"
(40)	(a) hræða/hræða-sk	"frighten/be frightened"
ONOR	(b) klæða (-sk)	"dress (oneself)"
		(NEDJALOV & SIL'NICKIJ 1969:41)

However, this type of reflexive/anticausative marking, at which a reflexive pronoun signals reflexivity, does not seem to be very common. Much more common is anticausative and reflexive marking by means of a stem affix (Examples 42, 43 and 48 are from NEDJALOV & SIL'NICKIJ 1969: §23):

(41)	(a) emel/emelkedik	"raise/rise"
HUNG	(b) fésül/fésülködik	"comb/comb (oneself)"
(42)	(a) kotr-el/kotr-v-el	"crash(tr.)/crash(intr.)"
ARME	(b) lva-l/lvac-v-al	"wash/wash (oneself)"
(43)	(a)jaxšila-moq/jaxšila-n-moq	"ameliorate(tr.)/ameliorate(itr)"
UZBE	(b) kij-moq/kij-in-moq	"dress/dress (oneself)"
(44)	(a) xarš-avs/i-xarš-eba	"cooks(tr.)/cooks(intr.)"
GEOR	(b)k'azm-avs/i-k'azm-eba	"decorates/decorates her/himself"
(45)	(a) amwir/emwir-ek	"crumple(tr.)/crumple(intr.)"
PONA	(b) apwin/epwin-ek	"wash the face/wash one's face" (REHG 1981)
(46)	(a) bayyana/ta-bayyana	"make clear/become clear"
ARAB	(b) labbasa/ta-labbasa	"dress/dress (oneself)"
(47)	(a) ramano/ne-ramano	"he-turned-round(tr.)/(intr.)"
HIXK	(b) "	"he turned round/he t. himself r." (DERBYSHIRE 1985:91)
(48)	(a) paska-/paska-ri-	"open(tr.)/open(intr.)"
QUEC	(b) riku-/riku-ri-	"see/see oneself" (COLE 1982:92)
(49)	(a) (j)yld'/ph-yld'	"open(tr.)/open(intr.)"
NIVX	(b) vetaud'/ph-fetaud'	"dress/dress (oneself)"

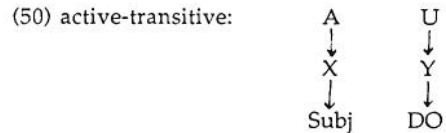
These languages are so different in area and genetic affiliation that the generalization seems justified that this is a very frequent type. This list could probably be extended arbitrarily.

In order to explain the same marking for both reflexive and anticausative it is necessary to consider what both constructions have in common semantically. For this purpose I will use "diathesis schemata" similar to those used in XRAKOVSKIJ 1981. XRAKOVSKIJ distinguishes three levels of units, not only the semantic and syntactic levels, but also the referential level, at which the participants are located:

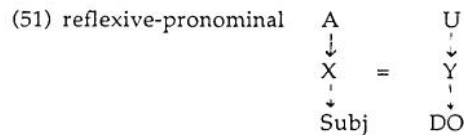
¹Above (2.2.) I have given the reason why I prefer not to say "anticausative morphemes". Instead I will say "anticausative-marking morphemes".

LEVEL	UNITS	EXAMPLES
semantic level	roles	actor, undergoer,... ²
referential level	participants	X,Y,...
syntactic level	actants	subject, direct object,...

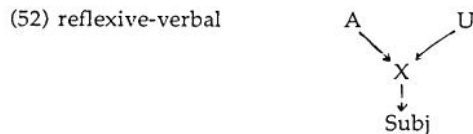
Thus, in a simple active transitive clause, we would have the following schema:



If participants X and Y are identical, in many languages, a reflexive pronoun is used. We then obtain the following schema:



Very often, however, reflexivity is marked by a verbal affix, so that we get a different voice. In the formalism used here, this can be represented by substituting a single X for X=Y. Since only one arrow can be drawn from each element, only one actant, the subject is allowed now:



In most cases the difference between (51) and (52) seems to be that reflexive verbs can denote only the most typical self-affecting actions (those that do not need *oneself* in English, like *dress*, *comb*, *shave*, *wash*). Consider the following examples from Russian and Modern Greek³:

²XRAKOVSKIJ uses the terms *sub"ekt* and *ob"ekt*, which are peculiar to Russian. Since Russian always uses native terms for "subject" and "object", these latinized words are free to be used for generalized semantic roles. They are rather precise equivalents of *actor* and *undergoer* in FOLEY & VAN VALIN 1984.

³Thanks to NIKOLAOS PANTELIDIS for native speaker judgments of the Greek examples.

(53) RUSS	MGRE	
umyvav'sja	πλένεται	"wash (oneself)"
pričesyvat'sja	χτενίζεται	"comb (oneself)"
odevat'sja	ντύνεται	"dress (oneself)"
brit'sja	ξυρίζεται	"shave (oneself)"

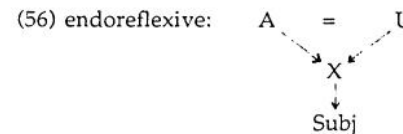
Less typical reflexive actions often cannot be expressed in this way, cf.

(54)	RUSS	MGRE
"describe oneself"	*opisyvat'sja	*περιγράφεται
"compare oneself"	*sraivnavat'sja	*συγκρίνεται

Instead, the reflexive pronoun must be used in these languages:

(55)RUSS	MGRE
opisyvat' sebja	περιγράφει τόν εαυτό της
sraivnavat' sebja	συγκρίνει τόν εαυτό της ⁴

Now reflexivity may go one step further and be realized on the top level, i.e. not only are the participants X and Y identical, but in a certain sense also the bearers of the semantic roles: A=U (of course, this does not mean that A and U cease to be different roles). Let me call this type of reflexivity **endoreflexive**. It will have the following schema:



In reflexive verbs of the standard type, the action refers back ("is bent back", from Latin *reflectere*). Participant X (A) is identical with participant Y (U), but this has no effect on the kind of action: whether someone combs her/himself or is combed by someone else does not make any difference as far as the kind of action is concerned. This is different with reflexives like German *sich hinsetzen* ("sit down"): Here the action does not get outside in the first place, but remains, so to speak, within the actor, who is necessarily identical to the undergoer (hence "endo-"). Whether someone sits down by her/himself (*sich hinsetzt*) or is sat down by someone else (*wird hingesetzt*), makes a big difference for the kind of action. Endoreflexives are often body motions, e.g. *sich bewegen*

⁴Of course, there are differences here between different languages; e.g. Modern Greek seems to use its middle more extensively for reflexive meaning, consider, e.g.

(i) RUSS	MGRE	
*prodavat'sja	πουλιέται	"sell oneself"
*bit'sja	χτυπιέται	"beat oneself"

(67) HUNG	ver-öd-ni	"be beaten"
(68) ARME	gr-v-el	"be written"
(69) UZBE	sakla-n-moq	"be preserved"
(70) GEOR	i-c'er-eba	"be written"
(71) PONA	dilip-ek	"(thatch) be repaired" (REHG 1981)
(72) ARAB	ta-rabbā	"be brought up/raised"
(73) HIXK	ne-ramano	"he was turned round" (DERBYSHIRE 1985:91)

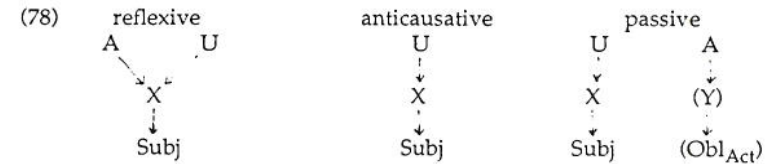
But there are also languages in which the anticausative-marking morpheme has only passive meaning, but no reflexive meaning, e.g.

(74)	(a) jiq' / ji-j-q'-ik	"drown(tr.)/drown(intr.)"
TZUT	(b) ch'ey / ch'e-j-y-ik	"beat/be beaten" (DAYLEY 1985)
(75)	(a) sokor- / sokor-iv-	"lose/get lost"
EVEN	(b) tyre- / tyre-v-	"press down/be pressed down"
(76)	(a) vunj- / vunj-ik-	"break(tr.)/break(intr.)"
SWAH	(b) it- / it-ik-	"call/be called"

As was noted above, the meanings of anticausative and passive are quite similar, the main difference being that with the passive an actor is implied and can often be expressed overtly. The schema will be as follows:

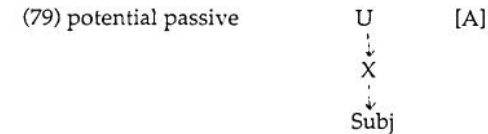


As can be seen from examples (64) through (73), there are quite a number of languages in which one and the same morpheme has reflexive, anticausative and passive meaning. In other languages a morpheme has only reflexive and anticausative meaning (German, Quechua, Nivkh, see (48)-(49)), and yet in other languages it has only anticausative and passive meaning ((74) through (76), and Turkish). There do not seem to be any languages in which one morpheme has reflexive and passive meaning, but no anticausative meaning. This seems logical if one looks at the sequence of the corresponding schemata.



Apparently reflexive and anticausative as well as anticausative and passive are adjacent in semantic space, i.e. they are separated only by minimal meaning differences, whereas there is no direct path from reflexive to passive, and it will always lead via anticausative. This central position between reflexive and passive underlines the importance of the anticausative, although it is subject to quite strong semantic restrictions and would not be expected to play such an important role.

Now there seems to be a further intermediate stage between anticausative and passive: the potential passive. For this I assume the following schema:



Here the square brackets mean that the actor is implied but cannot be expressed. The assumption that it is located between anticausative and passive is supported also by the following facts: There are a number of languages where the anticausative-marking morpheme may have potential passive meaning, but no passive meaning, e.g. German, and apparently also Hausa and, to a large extent, Swahili. The assumption that the passive meaning develops from the reflexive meaning via the potential passive meaning, becomes more plausible if one bears in mind that in some languages (e.g. Russian, French) the reflexive-marked passive is limited to certain tense-aspect forms (present, imperfective). This strongly reminds one of the potential passive, which because of its generic and modal meaning occurs only in the present tense and imperfective aspect.

4.3. Anticausative and indefinite object deletion

According to NEDJALKOV & SIL'NICKIJ 1969:§23, anticausative-marking morphemes can also signal indefinite object deletion. They give the following examples:

(80)	RUSS kusat' / kusat'-sja	"bite s.th./bite"
(81)	HUNG gunyol-ni / gunyol-od-ni	"mock s.o./mock"
(82)	GEOR k'ben-s / i-k'bin-eba	"bites s.th./bites"

In these cases it would seem, in fact, correct to assume a general detransitivizing function of the morpheme in question. However, this type seems to be very restricted, both with respect to the lexical distribution (in Russian there are only half a dozen examples) as well as the combinability with tenses and aspects. The verbs in Russian can only be used in the present tense, and they tend to have potential meaning, i.e. they serve, like the potential passive, to describe stable properties of their subjects (e.g. *Sobaka kusaetsja*. "The dog bites."). This can be illustrated by the following schema, which shows clear similarities to the potential passive:

(83) indefinite object deletion: A [U]
 ↓
 X
 ↓
 Subj

On the whole, this type seems to be rather marginal.

4.4. Anticausative and resultative

Certain similarities between anticausative and resultative were mentioned above (3.2.). It seems that in several languages anticausatives have stative/ resultative meaning in most cases. E.g., in Swahili, the *-ik-* form seems to occur frequently in the perfect. (84) and (85) are from BRAUNER & HERMS 1979:28.1.:

(84) nyumba i-me-harib-ika
 SWAH house(CL9) CL9-PERF-destroy-ANTIC
 "The house is destroyed." (German: "Das Haus *ist* zerstört.")

(85) ki-kao ki-me-maliz-ika
 SWAH CL7-session CL7-PERF-finish-ANTIC
 "The session is finished."

It is not surprising that together with agentivity also dynamism is lost, since both are correlated with transitivity (cf. HOPPER & THOMPSON'S parameter H. (kinesis) and B. (agency)).

MARANTZ 1984 divides anticausatives into "stative" and "inchoative" (=dynamic) anticausatives on equal terms. However, such a step seems hardly justified, and his examples (Russian *naxodit'sja*, French *se trouver* "be (found)") are lexicalized and not a productive pattern.

4.5. Anticausative and fientive

Anticausative-marking morphemes are sometimes also found with two further types of derivatives that are not mentioned in NEDJALKOV & SIL'NICKIJ.

One is the fientive. Just as causative morphemes sometimes serve to form factitives from adjectives (basically with the same meaning, "X causes Y to Z", only that Z is not a verb, but an adjective), anticausative-marking morphemes may be used to form fientives from adjectives, i.e. verbs with the meaning "X becomes Y", where Y is an adjective.⁷ Examples are:

(86) full-n-an "become full" <- fulls "full"
 GOTH mikil-n-an "become great" <- mikils "great"

(87) saf-ik- "become clean" <- safi "clean"
 SWAH kamil-ik- "become perfect" <- kamili "perfect"

(88) ince-l-mek "become thin(ner)" <- ince "thin"
 TURK boş-al-mak "become empty" <- boş "empty"

(89) c'itl-d-eba "becomes read" <- c'iteli "read"
 GEOR cf. ANTIC/PASS šen-d-eba "is built" <- a-šen-eps "builds"

In Gothic the formation in *-na-* is used, which was discussed above (3.2.). So even in Gothic the anticausative-marking morpheme is polysemous, although the otherwise frequent reflexive and passive polysemy does not occur there. In Turkish the fientive is formally a little different, but the similarity is evident. In Georgian there are two passive/anticausative formations, with a prefix *i-* and a suffix *-d-*, and only the latter is used for fientive formation.

4.6. Anticausative and inceptive

"Inceptive" means "action commences". However, some languages have inceptives only from verbs of state (see BYBEE 1985(M):100), and in this case the meaning is rather "state commences". The similarity to the fientive meaning is obvious and explains why often inceptive and fientive are not distinguished (and called "inchoative"). Inceptive meaning of anticausative marking morphemes can be found in Georgian (see 90) and in Old Norse, which is closely related to Gothic, and forms inceptives in the same way as anticausatives and fientives are formed in Gothic (see 91):

⁷The term "fientive" is not used often, but there is no generally accepted term for such derivatives either. "Inchoative" is often used, but this term really means something else, see 2.1.

(90)	miqvar-d-eba	"I fall in love"	<- miqvars	"I love it"
GEOR	mc'qur-d-eba	"I get thirsty"	<- mc'quria	"I am thirsty"
(91)	sof-n-a	"fall asleep" <- sofa	"sleep"	
ONOR	pag-n-a	"fall silent" <- pegja	"be silent"	

Now one might think that only morphemes with fientive meaning can also have inceptive meaning and that inceptive is only a special sort of fientive. But the following examples from Spanish and Hebrew show that inceptive meaning is possible also with reflexive or passive morphemes and consequently there must be some direct connection to anticausative.

(92)	dormir-se	"fall asleep" <- dormir	"sleep"
SPAN			
(93)	ni-škan	"lie down" <- saxen	"lie, live"
HEBR	cf. ni-xtav	"be written" <- katav	"write"

It might be at least of anecdotal interest that in Esperanto, too, the anticausative-marking morpheme *-iĝ-* forms fientives and inceptives:

(94)	(a) komenci	"start(intr.)" (antic.)	<- komenci	"start(tr.)"
ESPE	(b) pal-iĝ-i	"go pale" (fient.)	<- pala	"pale"
	(c) sid-iĝ-i	"sit down" (incept.)	<- sidi	"sit"

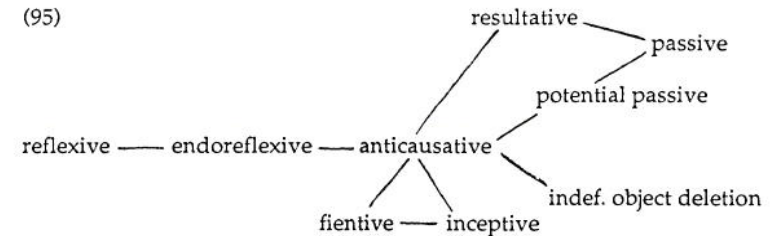
It is remarkable that Esperanto shows the same pattern here as Georgian and Ancient Germanic, which is not represented in any modern European language. Apparently here the inventor of Esperanto had an intuition without a direct model but well in keeping with the possibilities of natural language.

4.7. The semantic map

Let us now consider the mutual relations of the grammatical meanings discussed in 4.1. through 4.6. together. I will use the method of L. ANDERSON 1982, in particular the "map" of semantic space. In BYBEE 1985(M):195-96 we read:

"A universal study of grammatical meaning, then, could proceed as follows: working within a general area of semantic space (much as in L. Anderson 1982), a number of very specific grammatical functions can be identified on the basis of meaning and contextual factors... Relations among these very specific functions can be studied, again following L. Anderson 1982, by determining cross-linguistically which functions can be covered by the same grammatical marker, and by studying the diachronic extension of a marker from one function to another. If we understand the nature of a relation of similarity between specific grammatical functions, then we are closer to understanding the nature of grammatical meaning."

I propose the following semantic map for the grammatical functions discussed so far:



The terms in (95) stand for grammatical meanings or functions. They are not intended to refer to morphological categories or form types, as these may express several (adjacent) meanings. They do not refer to verb meanings either. An anticausative verb is not different in its meaning from an ordinary inactive verb, and a resultative verb is not different from a stative one. The only difference is that in anticausatives and resultatives this meaning is conveyed by grammatical (derivational) morphology.

The evidence for the middle line in (95), from reflexive to passive was discussed above (4.2., see (78)). This line is not sufficient for the other grammatical meanings, and it is necessary to introduce an additional dimension. (Note that eventually even more dimensions are required; for my purposes, however, two dimensions will do.) The meanings resultative, indefinite object deletion and fientive, inceptive, are much less central. It is quite obvious that resultative is related, apart from anticausative, to passive (as well as perfect, see NEDJALKOV & JAXONTOV 1983), and that fientive and inceptive are related to each other.

It is very interesting that one and the same map comprises grammatical meanings of very different status. On the right and on the left margins there are meanings (*reflexive, passive*) that have mainly syntactic function, are not relevant to the verb meaning and may therefore be expressed inflectionally. As one goes toward the middle, however, the meanings become more relevant and the categories become more derivational. The fact that functions of different grammatical status may occur adjacent in semantic space is a further confirmation of the view that the transition from inflection to derivation is gradual. At the upper and lower margins (*resultative, inceptive*), the domain of valence and voice even touches the domain of aspect.

What remains to be treated is the diachronic evidence for this map. Selected aspects of this will be the topic of the following section.

5. On the diachrony of anticausative-marking morphemes

An investigation into the possibilities of historical change of all the grammatical meanings in section 4. would be well beyond the scope of this paper. I will confine myself to some observations regarding the diachrony of the more central functions (*reflexive, anticausative, passive*) in some of the better known Indo-European languages.

First let us consider the three main marking types of anticausatives and related meanings:

(1) Marking by means of a reflexive pronominal clitic, e.g. in German and Dutch, in the West and South Slavic languages and in the Romance languages.

(2) Marking by means of a postfix (postinflectional affix), i.e. an affix in the last position of a word, following agreement markers for person and number or, in the case of participles, for case and number. This marking type occurs in the East Slavic languages, in the Baltic and the Scandinavian languages.

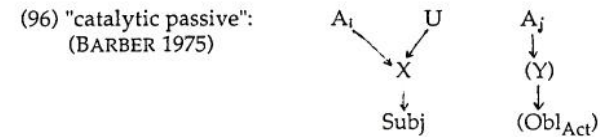
(3) Marking by means of a stem affix, i.e. an affix that is attached directly to the verb stem. Additional affixes (e.g., for aspect, tense, mood or agreement) may occur outside of it. This is by far the most frequent marking type, although in Europe it seems to be confined to the Finno-Ugric and Turkic languages.

5.1. Markers of reflexive-pronominal origin

The diachrony of marking types (1) and (2) is fairly well-understood. The usual process of grammaticization (LEHMANN 1982) leads to semantic generalization and formal reduction of a lexeme (here the relative pronoun) that was autonomous semantically and syntactically before. In marking type (1) the formal reduction has stopped at the stage of cliticization, whereas in type (2) the (formerly) pronominal element has become bound to the verb.¹ The semantic generalization in this case is the meaning extension to anticausative, potential passive and finally passive. Note that it must proceed in this order and no function may be omitted (see 4.8.), as is required by the model (4.7.). The degree of semantic generalization seems to be similar in both marking types on the whole, but it seems that one difference can be found: Where the formal reduction has reached the stage of postfixation, the semantic content must include passive meaning, while with cliticization it may be that the meaning extension stopped at potential passive (as in German).

¹An interesting intermediate stage is represented by Lithuanian. Here the element *-si* is bound to the verb (judging from the spelling, at least, e.g. *leñkia* "bends", *leñkiasi* "bends itself, bows"), but its position is still variable: if the verb has a (likewise bound) preverb, then *-si-* is placed between preverb and stem: *išsileñkia* "bends out". This nicely illustrates the non-discreteness of the boundary between (1) and (2).

BARBER 1975 discusses this change from reflexive to passive in French. Her or his explanation is similar to mine, insofar as s/he, too, draws schemata to represent the semantic similarities and dissimilarities and uses a linking construction to explain the transition from reflexive to passive. But this link is not anticausative (s/he completely overlooks this important function of "middle", i.e. reflexive, morphology), but rather the so-called "catalytic passive", a concept of dubious status, which would be represented approximately as in (96) and is said to have the meaning "X her/himself causes the action to happen on her/him (by Y)".



This is of course the second of the two logically possible ways to bridge the difference between (51) (reflexive) and (77) (passive), if only the smallest possible changes are admitted from one stage to another one. It may be that the English *get*-passive has a similar meaning, but such passive meanings are very rare and unusual, as opposed to the widespread anticausative. BARBER even cites an anticausative example from French that precisely supports my hypothesis:

(97) Les portes se ferment à deux heures.
FREN

But his/her (very forced) translation "the doors get themselves closed at two o' clock" is misleading. (On the diachrony of reflexives, see also CROFT et al. 1987, which was unfortunately not accessible to me)

In view of the widespread use of the type of diachronic development discussed right now one may be tempted to regard this as a paradigm case for the development of voice systems, as does BARBER 1975. In fact, however, this type does not seem to occur outside of Europe, a linguistic area of considerable genetic and typological uniformity, and thus is a special feature of the Indo-European languages of Europe.²

5.2. Stem affixes

Much more usual than marking types (1) and (2) is type (3), marking by means of a stem affix. This is not surprising if one considers the principle of iconic ordering of affixes according to their relevance to the verb meaning, discussed in BYBEE 1985(D):24:

²HANS-JÜRGEN SASSE informs me (p.c.) that a similar extension of the reflexive marker occurs in Somali, in Boni and other East Cushitic languages. The above statement would thus have to be qualified.

Classical Greek. Choosing examples only from Indo-European languages is hard to avoid, since their history is better known than that of all other language families. The great geographical diversity of these languages should ensure that the examples may be generalized.

Gothic. The Gothic anticausative formation in *-na-* has already been mentioned in 3.2. and 4.5. The affix *-na-*³ goes back to a Proto-Indo-European present tense stem suffix (originally infix) *-n-* whose original meaning is impossible to identify because the few lexemes that show the same formation in several languages and may therefore be regarded as old show hardly any similarities of meaning. Somehow this suffix was extended to more and more verbs with intransitive meaning, until it could be formed regularly and productively for two of the most important verb classes in Gothic. On this matter, see MEID 1967:§186,2. It is interesting how MEID views this process:

"Produktiv blieb die Bildungsweise im Germanischen nur im Rahmen der vierten schwachen Klasse, die als lebendiger Typ nur noch im Gotischen, erstarrt auch noch im Altnordischen existiert."

Although all evidence indicates that it was only in Gothic that this formation became so productive, whereas Old Norse preserved the older situation, MEID describes the process in the reverse way, as he apparently only knows *derivational-lexical fading* and lacks the concept of *lexical-derivational expansion*.

Sanskrit. The passive in Sanskrit must have arisen in a very similar way. It is formed by means of a stem suffix *-y-* that goes back to another Proto-Indo-European present tense stem suffix without any clearly recognizable meaning. Like *-n-*, it was used with a number of stems that are apparently chosen randomly. It is different from Gothic in that it is marked in addition by middle endings (of the sort as in (14) above) and is still restricted to the present stem, which means that it does not occur in perfect or aorist forms (but it is not limited to the present tense, as there is a past tense formed from the present stem). BURROW 1959:353 describes the process in the following way:

"The passive in this form is an Indo-Iranian innovation based on the fourth present class, particularly with middle inflection: *jāyate* 'is born', *pācyate* 'becomes ripe, cooked', *tāpyate* 'becomes hot', etc. Since a number of these verbs had differently formed transitive presents beside them (*tāpati* 'heats', etc.), they could easily form the nucleus from which the passive system developed."

As a linking element between the original intransitive meaning and the passive use we may assume the anticausative meaning. MARANTZ

1984:190-91 cites the following examples that show that the *-y-* suffix may have passive as well as anticausative meaning:

- (100) (a) *caitr-ena kusul-o bhid-y-ata*
 SANS Chaitra-INSTR grain=holder-NOM.SG break-PASS-3SG.PAST
 "The grain holder was broken by Chaitra."
 (b) (*svayameva*) *kusul-o bhid-y-ata*
 (of=itself) grain=holder break-PASS-3SG.PAST
 "The grain holder broke (of its own accord)."

Armenian. Modern Armenian has a passive stem suffix *-v-* that has great lexical generality, like the Sanskrit suffix discussed just now, and even greater paradigmatic generality, as it occurs in all tenses and aspects, whereas the Sanskrit passive is limited to the present stem. On its origin see KARST 1901:§350-58. In Classical Armenian a passive may be said to exist only insofar as one of the four present conjugation types (*-a-*, *-e-*, *-i-*, *-u-*), the *-i-*-type, which comprises mainly intransitive verbs, is often used to form passive verbs corresponding to verbs of the *-e-*-class, e.g. intransitive *erew-i-m* "I appear" (with no **erew-e-m*), and passive *ber-i-m* "I am carried", formed from *ber-e-m* "I carry". The limitation to one conjugation class reminds one of Gothic, and the origin is quite parallel to that of the Sanskrit passive: the Proto-Indo-European present suffix **-j-* (SCHMITT 1981:136). But Armenian has chosen a different way to attain lexical generality, as described in KARST 1901:297:

"In der alten Sprache machte sich besonders bei den Stämmen auf *-a* und bei denen auf *-u* der Mangel eines eigentlichen, bestimmten Ausdrucks für das Passiv fühlbar. Diesem Mangel abzuhefen, ward in mittelarmenischer Zeit von den Präsensstämmen auf *-u* nach Analogie der Präsensstämme auf *-e* ein neuer passiver Präsensstamm derart gebildet, dass an den charakteristischen Stammvokal *-u* des *u*-Stammes noch der charakteristische Stammvokal *-i* der sog. passiven Konjugation angefügt wurde... Dieses Passiv nahm allmählich so überhand, dass man irriger Weise den Vokal *u* bzw. den ihm entsprechenden Konsonant *v* für den eigentlichen Charakter des Passivs ansah und daher den Verbis aller Konjugationen einfügte."

To sum this up: first a conjugation marker (*-i-*) is reinterpreted as a passive marker and extended to an additional conjugation type (*-e- -> -i-; -u- -> -ui-*), which then leads to a reinterpretation of this conjugation type marker as a passive marker for all verbs. The situation, then, is quite similar to Gothic and Sanskrit, only more complicated. However, the meaning is still more comprehensive: The *v-* forms may not only have anticausative and passive meaning, but also reflexive meaning (cf. above (6), (68), (41), as well as KOZINCEVA 1981 and HAIG 1982).

Classical Greek. In Classical Greek the situation is most complicated, unclear and there is the least agreement among historical linguists, but let me briefly present the relevant facts. Besides the middle inflection involving special person agreement markers (as can still be found in Modern Greek, see (14) above), there are two "passive" stem affixes in the

³More exactly, the formation type that includes root ablaut in the case of strong verbs and forms a separate inflection class (the fourth weak class).

aorist, -η- and -θη-, to which the ordinary active person endings are attached. Clearly -η- is the older form, while -θη- is the productive form that is used with regular verbs and is evidently more recent. Although both have traditionally been called "passive", there is a difference of meaning: forms with the suffix -η- often have a purely intransitive meaning (χαίρω "I am glad" -> ἐχάρην "I was glad", ῥέω "I flow" -> ἔρρῳην) or, with transitive verbs, anticausative meaning (καίω "I burn(tr.)" -> ἐκάην "I burnt(intr.)", φαίνω "I make apparent" -> ἐφάνην "I appeared") or reflexive meaning (τρέπω "I turn" -> ἐτρέπην "I turned (myself)"). Forms with the suffix -θη-, however, tend to have passive meaning, although also passive meaning with -η- and anticausative meaning with -θη- occur. In school grammars -θη- is considered the regular passive of the aorist, which reflects this tendency (but hardly does justice to the complicated facts).

The origin of the η-suffix is unclear, which again reminds us of the η- and j- suffixes in Gothic, Sanskrit and Armenian. But there are a number of parallels in other Indo-European languages, where ē occurs in intransitive verbs (e.g. Latin *sedēre* "sit", Old Church Slavonic *bŭdĕti* "be awake", Old Saxon *thagĕn* "be silent"). Still unclearer is the origin of -θη-, but there is only one theory that takes the close relationship to the suffix -η- into account. It says that -θ-, too, was originally a sort of stem extension of some intransitive verbs that gradually expanded, like the Armenian -u-, to cover more and more verbs. Thus the suffix -η- was strengthened to -θη-, and the clearer marking facilitated the meaning extension from originally purely intransitive to anticausative, reflexive and passive, just as -i- was strengthened in Armenian to -ui-, -v(i)-. PERNEE 1984:95 summarizes this:

"Le sens propre des aoristes en -ην est intransitif, et non passif... Quant aux aoristes en -θην, comme ἐποιήθην, ils sont constitués à l'aide d'un élargissement en -θ-: ἐμίγην "j'ai été mêlé" -> ἐμίγηθην (=ἐμίγη-θ-ην)... L'aoriste en -θην s'apparente, entre autres, au présent en -θω: ἀ δαλέγω, transitif "j'enflamme (qqch.)", s'oppose δαλεγεθω, intransitif, qui envisage l'aboutissement de l'action, "je flamboie" (= "je suis en flammes")."

These four cases thus show great similarities among each other, and it may be assumed that they exemplify a frequent diachronic source for anticausative / passive / reflexive stem affixes. What is important is that here the process of meaning extension does not start from reflexive (as in 5.1.) or passive (cf. 5.2.), but from anticausative, or, to be more precise, from intransitive verbs that are reinterpreted as anticausatives. The process of lexical expansion makes it possible for the anticausative to play such an important role in the development of passive and reflexive markers although itself it is subject to strong semantic restrictions.

Finally we note that this source of markers, too, conforms to map (95). Wherever a marking type originates, its extension appears to remain within the limits represented by (95).

ABBREVIATIONS

LIST OF ABBREVIATED LANGUAGES

ARAB	Arabic
ARME	Armenian
DUT	Dutch
ENGL	English
ESPE	Esperanto
EVEN	Evenki
FREN	French
GEOR	Georgian
GERM	German
GOth	Gothic
HAUS	Hausa
HEBR	Hebrew
HIXK	Hixkaryana
HUNG	Hungarian
LEZG	Lezgian
LITH	Lithuanian
MGRE	Modern Greek
NIVX	Nivkh (Gilyak)
ONOR	Old Norse
PASH	Pashto
POL	Polish
PONA	Ponapean
QUEC	Quechua
RUSS	Russian
SAMO	Samoan
SANS	Sanskrit
SPAN	Spanish
SWAH	Swahili
TOLA	Tolai
TURK	Turkish
TZUT	Tzutujil
UZBE	Uzbek
WARL	Warlpiri

ABBREVIATIONS OF
GRAMMATICAL CATEGORIES
USED IN INTERMORPHEMIC
TRANSLATIONS

ACC	accusative
ANTIC	anticausative
ART	article
AUX	auxiliary
ERG	ergative
F	feminine
FUT	future
INSTR	instrumental
INTR	intransitive
MID	middle
NEG	negative
NOM	nominative
PASS	PASSIVE
PAST	past
PL	plural
PTC	participle
SG	singular
TM	tense marker
TRANS	transitive

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