

THE PLURALITY SPLIT¹

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0. Abstract. In this paper, I will define a notion of split plurality, present in many of the world's languages, whereby the feature of plurality will be shown to divide the class of nouns in a language into two types, one for which the opposition of plurality is significant, the other for which it is somehow neutralized. The examples given will show that in many ways the split does not seem to be arbitrary or language specific, but rather seems to follow a well-defined hierarchy of features based on likelihood of participation in the speech event.

1. Split Plurality. Plurality is probably a universal linguistic category. Consider for example Greenberg's universal number 42 (1968, p. 96): "All languages have pronominal categories involving at least three persons and two numbers." However, although plurality seems to be present as a category in all languages, it is not always present to the same degree. One can say that plurality splits² a language in that it is a significant opposition for certain categories but irrelevant for others. In particular, it splits the category of noun³ such that for some nouns, plurality is distinguished from singular, while for others the distinction may be irrelevant (t.i. it becomes neutralized). Such a split may occur with respect to any of the mechanisms used to mark plurality, of which verb-argument concord, noun-modifier concord, direct marking of a noun, and direct marking of the noun phrase seem to be the four principle types. Where any one of the mechanisms for expressing plurality is neutralized for a subset of nouns, I will say that a split has occurred. Thus, if one subset of nouns contrasts singular and plural by means of verb concord and the remaining nouns do not (t.i. they take singular verb concord only), a split is defined. If one subset of nouns obligatorily takes plural concord and the other optionally takes it, I will consider this another case of splitting, where the second subset of nouns manifests optional neutralization of the plurality opposition. Is there any pattern in the way plurality splits nouns? I think the answer is yes. I will now examine some examples of split plurality, illustrating the various definitions I have made so far, and attempting to establish just what the unifying pattern is.

2. The Data

2.1. Verb Concord Splits. The following are examples of splits defined by the facts of number agreement between verbs and their arguments.

2.1.1. Georgian. (Kartvelian: Caucasia)(Vogt 1938)⁴. Georgian expresses number concord between subject and verb. If the subject is an animate being in the plural, then the verb is plural. If the subject is a plural thing, then the verb is singular. A plural verb with an inanimate subject imputes animacy to the inanimate (X, p.157). The verb also agrees in number with the first and second person pronouns (X, p.14ff). Thus, in terms of subject-verb concord, Georgian nouns are split by the feature of +/-animate.

2.1.2. Turkish. (Altaic: Turkey)(Lewis 1967). What follows is true of at least those nouns which take the native Turkish plural, -ler. The Turkish situation seems to be very similar to the Georgian. The traditional rule of grammar is that "inanimate plural subjects took a singular

verb, plural verbs being used with animate subjects or with inanimates personified or considered as individuals" (p.246). First and second persons also agree in number with the verb (pp. 106-107). There are at least two sets of exceptions to the above general statement which are instructive for they illustrate the types of independent factors which may skew the plurality data. First, inanimates can take plural verbs if the distance between subject and verb is great (p.246). Second, factors of politeness allow the use of a plural verb with a singular third person or second person subject as a sign of respect, and the substitution of first person plural for first person singular as a sign of modesty (p.247). The second factor at least is probably quite widespread in the world's languages and no doubt follows certain universal principles.

2.1.3. Sonsorol. (Malayo-Polynesian: Sonsorol Island in Micronesia) (Capell 1969). There is no formal change to mark number in the noun (p.58). However, "a verbal pronoun between a subject noun and its verb will determine number, provided the noun refers to a living person" (p.59). In addition, "Objective pronouns added to the verb anticipate a noun object and give the number through the form of the suffix...This, again, is limited [to the cases where] the object is personal"(p.59). Here one sees a split based on the feature +/- living human. Verbs with first or second person subjects and objects also distinguish singular and plural (pp.23,38).

2.1.4. Classical Greek. (Indo-European: Greece)(Buttman 1833; Jelf 1861). Classical Greek presents a particularly interesting example of split plurality. Normally, a predicate must agree with its subject in number and person. There are numerous exceptions to this general rule, however, one of which is especially pertinent to this discussion. The nominative of the neuter plural commonly takes the verb in the singular. Buttman observes however that writers prefer a plural verb when the subject is removed from the verb (see section 2.1.2. for a similar fact about Turkish) or when the subject denotes animated beings (p.354). Jelf adds that a plural verb can also be used when "the notion of individuality is meant to be prominently brought forward" (p.42). He also states that "When the neuter plural signifies or stands for names of persons or animate things, and the notion of individuality is intended to be expressed, the verb is in the plural" (p.43). A final relevant observation by Buttman is that "Some dialects connect also a verb Singular in particular instances with masculine and feminine Plurals which relate to things" (p.354). It appears that there are two conflicting forces. One is to split the expression of plurality between masculine or feminine nouns as opposed to neuter nouns, that is, a split which is based on formal grammatical categories of nouns only vaguely related to actual gender or animacy. At the same time, there is a tendency to split the nouns on the basis of animate versus inanimate, independent of grammatical gender. This situation makes sense from an historical viewpoint if we assume that at one time Greek gender was a semantically linked category based on biological sex and on animacy. Inanimates did not take plural agreement (which, I am claiming, is a very common phenomenon in the world's languages). As gender became more arbitrary, the agreement rule tended to retain its natural distribution in terms of animacy. However, certain dialects also grammaticalized the agreement rule in terms of neuter gender. With the natural basis of the agreement rule

gone, it is then not surprising to find that agreement regularizes so that all plural subjects take plural verbs, as in modern Greek⁵.

2.2. Noun-Modifier Concord Splits. The following is an example of a split which is defined by facts of number agreement between nouns and their modifiers.

2.2.1. Ponca. (Siouan: U.S.A.) (Boas and Swanton 1911). In Ponca "We have to distinguish between inanimate and animate articles; and the latter are differentiated as subjective and objective, singular and plural" (p.939). There are some troublesome details; for example, animate subjects in motion do not distinguish number. There are also examples of inanimates taking animate articles when they are performing typically animate acts (pp.941-942). However, most of the exceptions seem to involve metaphorical extension of the normal employment of the articles in order to impute animacy where it is not normal.

2.3. Noun Marker Splits. The following are examples of splits defined in terms of the overt morphological marking of nouns for plurality.

2.3.1. Maori. (Malayo-Polynesian: New Zealand) (Krupa 1968; Biggs 1961).

In Maori, grammatical number is usually expressed by means of particles, possessive pronouns, and determinatives (Krupa pp.74-75). However, personal pronouns are marked for number; "-(r)ua is the suffix of the dual number, -tu is the suffix of the plural number" (Krupa p.75)⁶. There is also a "small group of syntactic nouns" (Krupa p.75) which are internally inflected for number (Krupa p.75, Biggs p.25): (in the order singular/plural 'gloss') wahine/waahine 'woman, wife'; tuahine/tuaahine 'sister of a male'; tuakana/tuaakana 'older sibling of same sex'; tungaane/tuungaane 'brother of a female'; matua/maatua 'parent'; tupuna/tuupuna 'grandfather, ancestor'; tangata/taangata 'man, human being'.

Notice that all but two of these are terms of consanguinal kinship. The other two denote 'man' and 'woman' and the term for 'woman' apparently can mean 'wife' (as in many other languages), an affinal kin relation. There is also a set of five adjectives which have special optional plurals formed by reduplication: nui/nunui 'big, great'; roa/roroa 'long, tall'; kino/kikino 'bad, evil'; pai/papai 'good'; riki/ririki 'little, small'. There seems to be no relationship between this set of adjectives and a nominal hierarchy⁷.

2.3.2. Orokaiva. (Binandere: East coast of New Guinea) (Healey, Iso-roembo, Chittleborough 1969). The Orokaiva noun is generally not inflected (p.46). There are three groups of exceptions, t.i. nouns for which plurality is marked: (a) "A few nouns pluralize by compounding two nouns which are near synonyms", a kind of semantic reduplication. The examples given are words for 'houses' and 'friends'. (b) "A few nouns pluralize by one of various types of reduplication." Here the examples are 'sins' and 'feasts'. (c) "Many of the kinship terms have plural forms. Some use reduplication and some use one of several plural suffixes." Examples given are namei/na-namei 'my brother', du/du-emone 'sister', aja/aja-mane 'mother', mama/mama-ha 'father', and ai/ai-riri 'wife'. The Orokaiva evidence is inconclusive. Unfortunately, a complete accounting of all nouns which can be pluralized is not available. However, the description does indicate that there is one semantically identifiable class which can be pluralized, kinship terms. In the pronouns, Orokaiva distinguishes number for all persons (p.63).

2.3.3. Gudandji. (Wambayan: Northern Territory of Australia) (Aguas 1968).

In his discussion of noun morphology, Aguas (p.5) gives the following suffixes: (a) [-ma] "may mark a noun for plural number. In the present corpus it was confined to non-human plural animate things". (b) [-man] "may mark a noun for plural number. In the present corpus this was confined to humans." Here it is interesting that the marking of plurality is subdivided first on whether or not plurality is marked (+/-animate) and second on how it is marked (+/-human). Gudandji pronouns seem to distinguish number for all persons (p.7).

2.3.4. Kpelle. (Mande subgroup of Niger-Congo: Liberia)(Welmers 1969). Kpelle has a suffix, -ḡá, which can be used with most free nouns. The meaning is plural-like, but Welmers stresses the fact that it is not a typical plural. He describes it as selective and glosses it as 'here and there' or 'scattered members of a group'. "A few personal nouns, however, have irregular forms which may ultimately be related to forms with -ḡá, but which function more like straightforward plurals..." (p.77). Four examples are given of these personal nouns, apparently an exhaustive list: nūu/nūa 'people', surōn/sinā 'men', nēnī/nēyā 'women', lōlon/nīapele 'children'. "All other personal free nouns are compounds" (p.77). Furthermore, there is a class of dependent nouns which is a class of inalienably possessed nouns normally occurring in possessed form (p.80). Of these dependent nouns, only those which refer to persons (primarily kinship terms) have plural forms (p.82). Thus, whether free or dependent, personal nouns have a morphologically marked category of plurality as opposed to non-personal nouns. Possessive pronouns distinguish plurality in all persons (p.74). Thus the split in Kpelle seems to be based on the feature +/-personal, which is probably equivalent to +/-human.

2.3.5. Logbara. (Central Sudanic subfamily of Chari-Nile: Uganda) (Crazzolaro 1960). "In Logbara, only nouns indicating kinship have distinctive forms for the plural, and these are fairly regularly used in practice" (p.17). There are also a few other nouns (all human?) which have special plural forms. Examples given are words for 'friend', 'owner', 'proprietor' (p.19). The personal pronouns distinguish number in all persons in their absolute form, but number is neutralized in third person short forms (p.42). The split in Logbara seems to depend on the feature +/-kin.

2.3.6. Kwakiutl. (Wakashan subfamily of Mosan: Northwest coast of North America)(Boas 1911). In Kwakiutl, "The idea of plurality is not clearly developed. Reduplication of a noun expresses rather the occurrence of an object here and there, or of different kinds of a particular object, than plurality. It is therefore rather a distributive than a true plural" (p.444). Boas does say that such forms seem to be developing a plural sense, though older speakers disparage such usage (p.444). In the pronouns, there is obligatory plurality marking only in the first person, which also distinguishes inclusion versus exclusion of addressee. Second and third persons may optionally distinguish plurals with a special suffix, -x·da^εx^u, "which probably originally meant 'people'" (pp.444,550). This suffix is only used for emphasis and does not occur with inanimate nouns. Kwakiutl, although it may not have a well-defined concept of plurality, certainly yields a complex picture with respect to the plurality split. The split occurs on the basis of +/-human with respect to reduplication of the noun. However, if obligatory verb agreement is the criterion, the split is at +/-first person.

Finally, if potential verb agreement is used as a guide, the split is apparently at +/-animate.

2.3.7. Tongan. (Malayo-Polynesian: Tonga)(Churchward 1953). Ordinarily, the plural of a noun (which is opposed to a dual) is marked by preposed words such as kau, fanga, 'ū, ngaahi (p.28). If plurality is clear from context, the use of these markers is optional (p.31). However, there is a small set of nouns which have special plural forms (p.33). Ten are given as examples: 'Afio/'Afifio 'Majesty', 'eiki/hou'eiki 'chief, lord', fefine/fafine~fefine 'woman', motu'a/mātu'a 'parent, elderly person', finemotu'a/finemātu'a 'elderly woman', tehina/fototehina 'male's younger brother or female's younger sister', tuofefine/tuofāfine 'male's sister', tamasi'i/tamaiki 'child', mokopuna/makapuna 'grandchild', takanga/tākanga 'companion'. Several adjectives also take special plural forms; I have given them in footnote 7. Notice that all the nouns which can be pluralized refer to humans, and that about half refer to kin. The subject and object pronouns all have distinct singular, dual and plural forms (p.126). However, in reference to a duality or plurality of inanimates, the use of the third person dual or plural is optional (p.128). The split in Tongan is sporadic but seemingly based on +/-human.

2.3.8. Bini. (Niger-Congo: Nigeria)(Dunn 1968). Plurality of nouns is generally not marked in Bini, but rather "derived either from the context or else affected by the use of quantifiers such as 'few' or 'many'" (p.207). There are a few nouns which have a special plural form indicated by vowel change: òkpia/ìkpia 'man', òmò/émò 'child', òkhuò/ìkhuò 'woman', àtən/ètən 'relation', -/ìbìlekà 'kids'. The pronouns distinguish plurality in all three persons.

2.3.9. Tlingit. (Na-Dene: Southeastern Alaska)(Swanton 1911). There is a suffix, q̄, or q̄i which occurs with either "animate or inanimate objects, but more often the latter" (p.169), and resembles a plural; however, Swanton argues that it is not a true plural since it is not obligatory and it can be used in singular contexts. He calls it a "collective suffix". In addition there is another method of indicating plurality peculiar to terms of relationship. hAs, the third person plural pronoun, is placed after the noun (examples given are 'aunt' and 'uncle'). Some terms of relationship take a suffix van instead. This suffix may cooccur with the collective (examples given are 'brother-in-law', 'younger brother', and 'wife')(p.169). Independent pronouns distinguish number in all persons. However verbal pronouns, which indicate agreement with verb arguments, apparently do not distinguish plural in the third person (p.170). Thus there is a split between kin and non-kin on the basis of noun marking and between third person and non-third person in verb agreement.

2.3.10. Hupa. (Na-Dene, Athapaskan subfamily: Northwest coast of the U.S.A.)(Goddard 1911). "Only a few Hupa nouns change their form to indicate the plural. They are those which classify human beings according to their sex and state of life, and a few terms of relationship" (p.109). The following is a list of all such plural nouns Goddard had found: keLtsan/keLtsun 'virgin, maiden', tsūnmesLōn/tsūnmesLon 'a fully grown woman', xūxai/xūxaix 'a child', hwittsoi/hwittsoixai 'my grandchild', nikkil/nikkilxai 'your younger brother', xōLtistce/xōLtistcexai 'his sister'. Number seems to be distinguished for pronouns of all persons (p.147-148).

2.3.11. Coos. (Penutian: Oregon)(Frachtenberg 1922). "The only substantives that form a plural by means of a specific plural suffix are the terms of relationship" (p.375). In addition to the kin terms, there is also "a number of nouns and adjectives that show in the plural a formation which is distinct from the singular form" (p.374). This group is of irregular nature. The following list is given though it is not made clear whether or not it is complete; ā'la/hī'le 'child', hū'mā'k'e 'woman', tō'mīl/te'mā'le 'old man', dū'mīl/tī'mīl 'man', mā/mēn 'human being', k'nes/k'enē 'yese' 'hunchback', tsā'yux^u/tsāyā'ne 'small', tce'xet/tce'nixet 'short', qal/kaLē'mka 'tall', alī'maq/alī'maq 'big', tcītc/tītcā'ne 'kind, manner' (see footnote 7 concerning the adjectives). Of the nouns, all are human with the possible exception of tcītc. With this group of irregular plurals, the use of the plural form is optional (p.375). The pronominal situation is complicated. There seems to be a dual and plural distinction in the personal pronouns (p.321). However, number of the subject as indicated in verbal suffixes is neutralized (p.351).

2.3.12. Tamil. (Dravidian: Southern India)(Arden 1969; Andronov 1969). In the preface to the fifth edition of Arden, Clayton gives a list of the main characteristics of the Dravidian languages, which includes the fact that "Neuter nouns are rarely pluralised" (p.iii). Neuter in this case refers to "All nouns denoting inanimate substances and irrational beings" (p.iii). For Tamil, in particular, the division is between rational (high-caste) and irrational (no-caste) nouns. The latter class includes the words for 'infant' and 'child' (Arden p.74). The rational nouns include gods and goddesses. In fables, animals are sometimes personified and treated as rational nouns. Andronov describes the Tamil situation as follows (p.65): "The expression of plural number by means of... suffixes is not always obligatory. Most regularly the suffixes of the plural are used in masculine and feminine nouns. In neuter nouns the number frequently remains not expressed (especially in Classical and in Colloquial Tamil)." He adds that neuters are generally not marked for plural when plurality is clear from context (p.65). Independent pronouns and verbal pronouns distinguish number for all persons (Arden p.138), though in the future tense of verbs, the neuter ending "is the same both in the Singular and in the Plural" (Arden p.140).

2.4. Summary. The data I have presented above is represented in Table 1. I have summarized some data in the tables which, due to limitations of space, I have not been able to describe in this paper. A summary of Table 1 in terms of splitting features is given in Table 2. Notice that split plurals are not unusual. They occur in a wide variety of languages, whether by variety one means genetic, geographic, or typological. Yet the splits are in most cases quite similar. Also, the splits can be manifested by any of the various means of expressing plurality overtly. However, the most common mechanism used for a split is noun morphology (in my data at least).

3. The Hierarchy

3.1. Description. Two important facts emerge upon examining the data given in section 2. First of all, as should already be apparent, when plurality splits a system, the split is in terms of one of a small number of semantic features. The principal of these features are +/-animate, +/-human, +/-kin. Second, the features are all related hierarchically.

<u>Language</u>	<u>V/A Concord</u>	<u>N/M Concord</u>	<u>N Marker</u>	<u>NP Marker</u>
Bini			Xs:I	
Chamorro ¹⁹			Xs:I	(X)
Chitimacha ⁸	X, Xs:l	(X)	Xs:(K+[H])	
Coos			OPTs:K+[H]	
Gudandji			Xs:A	
Cl. Greek	Xs:N~A		X	
Georgian	Xs:A		X	
Haida ⁹			Xs:(K+[H])	
Hupa			Xs:I	
Kpelle			Xs:H	
Kwakiutl	Xs:l OPTs:A		Xs:H	
Logbara		X	Xs:K+([H])	
Maidul ¹⁰	(Xs:l)		OPTs:I	
Mandarin Chinese ¹¹			(OPTs:H)	
Maori		X,OPT	Xs:I	
Orokaiva	X	X	Xs:[K]	X
Ponca		Xs:[A]		
Quiche ¹²			OPTs:H	OPT
Sonsorol	Xs:HL		-	
Tamil			OPTs:R	
Tarascan ¹³	(Xs:A)	(Xs:A)	Xs:A	
Teton ¹⁴				Xs:A
Tlingit	Xs:l,2		(OPT) Xs:K	OPT
Tongan			Xs:I~A	
Turkish	Xs:A		X	

Key: The symbol to the left of a colon indicates whether there is obligatory (X), optional (OPT), or no (-) use of the four listed mechanisms to mark plurality. Parentheses indicate that the data or my interpretation of it is unclear. Brackets indicate that there is irregularity. If there is a split (s), the controlling feature is given after the colon: +/-neuter (N), +/-kin (K), +/-human (H), +/-rational (R), +/-animate (A), +/-human living (HL), +/-speaker (l), +/- speech event participant (l,2), irregular split (I). A blank means that I do not know what happens.

TABLE 1: Summary of Languages Exhibiting Split Plurality

That is, they form a set of features s_i, \dots, s_j such that if plurality is distinguished for $+s_k$ nouns in a language L with respect to a particular mechanism, then it will be distinguished for $+s_{k-1}$ nouns (i, j, k are integers greater than or equal to 1). The features for which evidence was found in section 2 are arranged in such a hierarchy in Table 3. I am now in a position to propose the following universal tendencies which seem to control the behavior of split plurality:

- (1) In a language L, if there is a semantic feature s_i such that all

<u>Splitting Feature</u>	<u>Example Languages</u>
+/-speaker	Kwakiutl, Chitimacha, Maidu
+/-speech event participant	Tlingit
Irregular split	Bini, Chamorro, Hupa, Maidu, Maori, Tongan
+/-kin	Maori, Orokaiva, Haida, Tlingit, Coos, Logbara, Chitimacha
+/-rational	Tamil
+/-human living	Sonsorol
+/-human	Kpelle, Kwakiutl, Mandarin Chinese, Quiche
+/-animate	Georgian, Turkish, Kwakiutl, Classical Greek, Tarascan, Ponca, Teton, Gudandji, Tongan
+/-neuter	Classical Greek

TABLE 2: Summary of Features Controlling Split Plurality

nouns marked $+s_i$ distinguish plurality and no nouns marked $-s_i$ distinguish plurality, then s_i will either be one of the features given in Table 3 or it will be consistent with them.

- (2) In L, if $-s_i$ nouns distinguish plurality, then $+s_i$ nouns distinguish plurality, for any s_i in the hierarchy.
- (3) In L, if $+s_i$ nouns distinguish plurality, then $+s_j$ nouns distinguish plurality for all $j \leq i$, where s_i and s_j are in the hierarchy.
- (4) In L, if $-s_i$ nouns do not distinguish plurality, then $-s_k$ nouns do not distinguish plurality, for all $k \geq i$, where s_i and s_k are in the hierarchy.

There are at least two problematic points which I have ignored in the statement of (1)-(4). First, there are a couple features which are aberrant. Inonsorol, the split is given as based on +/-human living, which may not fit the hierarchy depending on what the precise specification of "human living" is. And in Greek, the split is controlled by the non-semantic feature +/-neuter, a grammatical category not incorporatable into the hierarchy since +human nouns may also be +neuter. The second problematic point involves the "fit" between the personal pronouns and the lexical nouns. The split of the third person pronoun is not always controlled by the same features as the split of the lexical nouns. Very often grammars do not help clarify this point. Nevertheless, I will make the following conjecture:

- (5) Whenever there is a split in the lexical nouns, the split in the third person pronoun (if there is one) will be at the same place or lower down in the hierarchy.

3.2. Organizing Principal. I am at a loss as to what the motivation is for the relationship I have just described between plurality and the hierarchy in Table 3. I am not even sure what the organizing principle of the hierarchy alone is. Although it looks very much like it is defined on the basis of animacy, I believe that it can better be described as encoding likelihood of participation in the speech event. Thus, the speaker is always and the addressee virtually always involved in the speech event. Of third person nouns, one is most likely to talk to someone who is rational and human, then to someone who is human, then to an animal; and one is

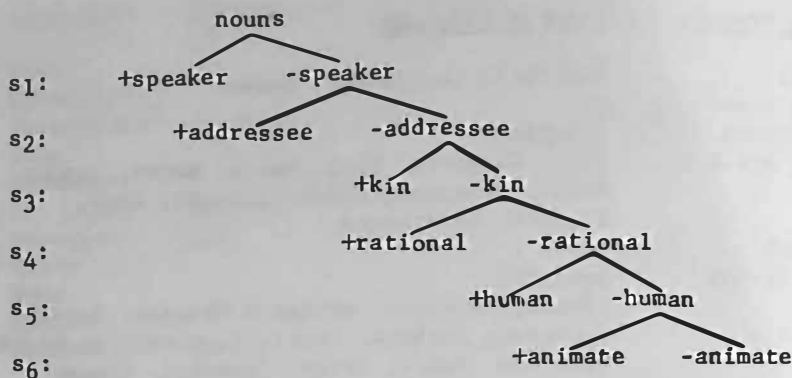


TABLE 3: Hierarchy of Features Controlling Plurality Splits

probably least likely to communicate with an inanimate object (under normal conditions). Whether kin are more likely to be communicated with than any other group in a universal sense is not clear. This would potentially vary from culture to culture. In the U.S.A., communication is probably most likely with the immediate family, which constitutes mother, father, and siblings when young, and then shifts to spouse and children after marriage. Thus is raised the interesting possibility that the defining principle of the hierarchy is dependant on the culture involved for interpretation, at least in its finer detail.

3.3. Irregular Splits. A good number of my examples of plurality splits involve not all nouns of a certain semantic class, but rather a closed subset of said semantic class (I refer here to those languages listed under irregular split in Table 2). Recall the Maori example (see section 2.3.1). There are seven nouns which can be pluralized by a regular process of stem modification. These are glossed as 'woman, wife', 'sister of a male', 'older sibling same sex', 'brother of a female', 'parent', 'grandfather, ancestor', 'man, human'. All of these are human, and all but one are kin terms. This pattern is by no means unusual. A comparison of all my cases of such irregular splits reveals that there is a subset of human nouns which are found very frequently in such situations. There are two basic groups within this subset. On the one hand, terms referring to very close kin are involved. However, no rigid hierarchy can be established to predict which kin terms will actually occur. When there is an irregular split, the pluralizable kin terms are a random selection of the more unmarked kin (in Greenberg's sense, 1966, ch.5)¹⁵. The other type of human noun usually found in irregular splits consists of very general terms for humans such as 'human being', 'man', 'woman', 'child'. This set is so limited, I am not convinced that any more general characterization than a list is possible. There is some evidence that what is involved is a lexical set describing people in terms of sex and age, with the least marked elements being the most plurality stricken¹⁶. With regard to these two sets and their participation in irregular splits, it must be stressed that no neat systematic statements can be made. There are often items in the irregular split nouns which are not elements of either the kinship terms or the human sex/age group terms. Nevertheless, the nouns in an irregular split are far from an arbitrary subset of all nouns, but rather have the characteristics specified above.

4. Exceptions. Unfortunately, the relation between the hierarchy I have described in section 3 and the marking of plurality is not consistent with all data at my disposal. The perceptive reader may already have noticed that English violates nearly everything I have said so far. In standard modern English, the distinction of plurality in the second person pronoun is neutralized though it is found in all other categories of the plurality hierarchy. This is a flagrant violation of the universals I proposed in 3.1. However, I think there is at least a plausible explanation. Parallel to the tendency to mark plurality according to the hierarchy, there is a tendency for languages to use the second person pronoun as a sign of respect, distance, politeness, etc., thereby tending to neutralize the plurality distinction in the second person pronoun. Nevertheless, the plurality hierarchy is not completely ignored. In many forms of spoken English, there is a distinction between singular and plural second person pronouns. A variety of forms are used for this purpose: [yɪnz] 'you'ns', [yɪz] 'you's', [jɔw] 'y'all', [juw, gayz] 'you guys'. Thus the plurality hierarchy is reinstated. Curiously, even in such dialects, the polite plural principle may again be operative. So, 'y'all' is reportedly used even when referring to one addressee. Can we next expect [jɔ'wɔw]? Another blatant exception to my claims is demonstrated by English verb agreement, where the verb (in the present tense forms of most verbs) distinguishes plurality only in the third person. It is generally accepted that English is just plain weird with respect to the third person singular verb form (in general the verb form least likely to have an overt marking). Furthermore, there is a significant group of nouns in English which do not distinguish singular and plural morphologically, the game plurals. Contrary to the predictions one would make on the basis of the hierarchy, these are all animate, non-human. They seem to refer to animals which can be hunted or caught for sport¹⁷. Thus one can say

(6) Look at all those elk, tuna, deer, bear, quail, buffalo...

Another exception involves Zuni (isolate: New Mexico, U.S.A.) (Bunzel 1938), where nouns referring to plants and animals do not distinguish plurality, but human and non-living nouns do. I have no explanation for this clear counterexample. Perhaps the most typical kind of exceptional languages are those like Acooli (Nilotic division of Southern Branch of Eastern Sudanic: Uganda) (Crazzolara 1955, pp.40-41), where there is a class of nouns which can be pluralized, of which only a part seem in accord with my proposals. The exceptions are so numerous as to call into question the rule. Such exceptions are very important to any theory. In this case they demonstrate that the hierarchy controlling split plurality is not an absolute constraint on possible languages. On the other hand, I have found very few exceptions in proportion to cases where there is either no split or where the split conforms to my hierarchy. I am thus convinced that the hierarchy accurately describes a strong preference among linguistic systems. Like highly marked phonological systems, I would expect systems which do not conform to the hierarchy to be "unstable" linguistic types and consequently rare.

5. Explanation. It is natural to look for explanation when dealing with linguistic facts. However, explanation is a question of degree. In a sense, split plurality is explained by the hierarchy on which it works. Such an explanation is all I can provide, but I will mention two possible directions of inquiry which may lead to more satisfactory, t.i. more

general, explanations.

5.1. Markedness¹⁸. It is tempting to try and treat split plurality in terms of markedness theory. This would be a more general explanation in the sense that it would make split plurality a subcase of a more general phenomenon. After all, neutralization of a distinction in certain environments is a classic argument for markedness. However, the plurality split does not seem to conform to most conceptions of markedness. Consider for example, the fact "that distinctions existing in the unmarked member are often neutralized in the marked categories" (Greenberg 1966, p.27). This would lead one to suspect that the higher categories in the hierarchy (f.e. first person) are less marked than those at the bottom (f.e. inanimates). However, there is independent reason to believe that first and second persons are marked with respect to third person (f.e., distinction of gender is more common in the third person) (see Greenberg 1966, p.44). Greenberg (1966, p.40) also claims that neuter is the most marked gender, masculine the least marked. There is some conflicting evidence. Two of his examples given to support the marked character of the neuter actually involve inanimate (Algonquian) and irrational (Dravidian) and seem to be based on split plurality. Silverstein (1973) on the other hand treats inanimates as well as non-humans as unmarked in his analysis of split ergative systems. It appears that if treatment of split plurality in terms of markedness is to be at all fruitful, it must be in terms of markedness within certain contexts. A further weakness of the markedness approach is that it does not explain the relationship of plurality to only certain categories (those in the hierarchy). Thus, my evidence suggests that a system would not split on the basis of masculine versus feminine, or on the basis of shape categories, or on the basis of case, although all such splits should be equally possible if markedness were the explanatory principle.

5.2. Hierarchies. Despite the fact that the treatments of markedness seem to be contradictory, the hierarchy Silverstein (1973) proposes to explain split ergativity is in many respects similar to the one controlling split plurality. In his hierarchy, $s_1 = +/ -tu$, $s_2 = +/ -ego$, $s_3 = +/ -proper$, $s_4 = +/ -human$, $s_5 = +/ -animate$ (cf. Table 3). He describes the motivation of this hierarchy as "a continuum of the referential world of 'animacy' as potential for action" (p.20). Are the similarities between this hierarchy and that controlling plurality coincidental? Corum (1973) has also suggested that a similar hierarchy was at work in the development of the genitive-accusative case in the Slavic languages. An animacy-like hierarchy is probably operative in many linguistic processes. If there is actually only one hierarchy involved, then showing that the split plural hierarchy is another manifestation of this hierarchy would be explanatory.

6. Non-split Plurality. With the insight gathered from the above treatment of split plurals, the behavior of plurality in systems which do not show a split begins to take on new significance. I will attempt to briefly illustrate what I mean.

6.1. Plural Allomorphs. It is not unusual in languages which mark the plural of nouns morphologically to use several different means (allomorphs). For example, in Fula (West Atlantic branch of Niger-Congo: West Africa) (Arnott 1970, pp.81-86, 75, 389-392), -be pluralizes class 1 (referring to single human beings), -kon pluralizes classes 3-5

(diminutives), -ko pluralizes class 8 (augmentatives), and -de/-di pluralizes classes 9-23 (a large variety of classes referring to various non-humans). Here one sees that human and non-human mark their plurals differently. In Gudandji (see section 2.3.3), although there is a split based on +/-animate, within the animates there are two plurals, one for +human, one for -human. Such examples suggest the following conjecture:

- (7) When the plural allomorphs of nouns are morphologically conditioned in a language, and the conditioning depends on whether the word belongs to one or another semantically transparent class, the class will often be defined in terms of the features in the split plural hierarchy.

An important consequence of this conjecture, should it prove viable, is that more evidence becomes available for defining the fineness of the hierarchy.

6.2. Irregular Plurals. There also seems to be evidence that even when plurality is fully expressed in the nominal system, those plurals which are irregular have a special status. Consider English ablaut, -en, and suppletive plurals: man/men, woman/women, mouse/mice, goose/geese, foot/feet, tooth/teeth, louse/lice, ox/oxen, brother/brethren, child/children, person/people. Is it accidental that all but two are animate, and that included are the words for 'man', 'woman', and 'child', which, as I observed above in section 3.3, are usually included in irregular splits? Cases such as this lead me to make the following conjecture:

- (8) Irregular plural formation is more likely to occur with nouns high in the split plurality hierarchy.

Notice that implicit in this conjecture is the claim that the distinction between singular and plural pronouns will tend to be most "irregular" and indeed this seems to be true.

7. Consequences for Historical and Comparative Work. I have attempted to demonstrate that what might have looked like a peculiarity at first, turns out being a vital principle which permeates many of the languages of the world. The resulting notion of natural plurality system, just like the concept of natural phonological system, provides ~~the~~ historical linguist with criteria to judge possible reconstructions. ~~what is~~ eventually needed is a model of what I call the natural history of plurality (and eventually of other linguistic systems). For example, how does expression of plurality arise? ~~How~~ does it change in time? How does it interact with other systems? A rich conception of such natural histories will provide a valuable tool for comparativists. Hopefully this study will contribute to such a natural history of plurality.

8. Coda. Let me conclude with a question. Assuming, as I think one should, that a theory of language must be required to account for typological facts of surface morphology, how does the data I have presented fit into our current theories of language? In particular, it seems to me that the ability to handle such facts will be a crucial test of the adequacy of generative grammar or its several avatars as theories of language. As Rick Blaine so aptly put it,

"Are my eyes really brown?"

--Casablanca

Footnotes

1. Work on this paper has been possible due to the generosity of my parents. I have benefitted from many discussions with my colleagues and teachers at the University of Chicago, in particular, Bob Hoberman, Peggy Egnor, Howie Aronson, Paul Friedrich, Jim Fox, Jerry Sadock, Michael Silverstein, John Parrish, Erwin Ramer, Joseph Pentheroudakis, and Slayer of Enemy Gods.
2. Not only my title, but much of my conception and treatment of split plurality has been heavily influenced by Silverstein's (1973) provocative treatment of split ergative systems.
3. I am using the word noun as a universal category label, which I think is a reasonable position. For the purposes of this paper, the term, noun, also includes the personal pronouns. I agree however that the concept of plurality for the pronouns is not precisely that found in lexical nouns and perhaps should be treated separately.
4. Whenever I cite data from a language, I give genetic affiliation and approximate location of the language in parentheses, followed by the source of the data. I do not mean to commit myself to a particular opinion about genetic affiliation; I want only to give the reader some idea of what languages I am dealing with.
5. This explanation differs somewhat from that expressed by Meillet (1967 p.66): "Owing to the fact that Greek still knows the famous rule ta zōa trekhei (coexistence of a singular verb with a subject in the neuter plural) in the classical period and that the same rule is found exactly observed in the Gāthās of the Avesta, we know that the form called 'nominative-accusative plural neuter' of Indo-European is in reality an ancient collective". I am not an Indo-europeanist; there is probly enough additional evidence to support Meillet's analysis. I merely wish to point out that the facts of plural agreement alone do not force the conclusion that the neuter plural is historically a collective. One might even note that similar facts seem to be true of Turkish and Georgian and that the optional agreement of neuter plurals in classical Greek might be traceable to an areal characteristic of the Eastern Mediterranean.
6. The occurrence of a dual with personal pronouns raises the question of the relationship of the dual to the hierarchy I am attempting to establish. Although I am not addressing that problem here, my first guess would be that the dual will also split along the same hierarchy as the plural. Bob Hoberman informs me however that such is not the case in Hebrew.
7. One could suppose however that there might be some sort of hierarchy of plurality among adjectives. There is some evidence that adjectives of size are most likely to be pluralizeable. See the Coos data in section 2.3.11, for example. In Tongan, the following six adjectives have special plural forms (Churchward 1953, p.35): motu'a/'old', lahi/lalahi/'big', si'i/iiki/'small', lōloa/loloa/'long', nounou/nonou/'short (in length)', pukupuku/pupuku or pukupuku/'short (in height)'.
8. Swadesh 1946, pp. 318, 319, 321, 327.
9. Swanton 1911, p.260.
10. Dixon 1911, pp.708, 710, 713, 714.
11. Chao 1968, pp. 244-245.
12. Brasseur 1961, p.37; Fox 1966, pp. 75, 77, 89.

13. Nájera 1944, pp. 24, 26-28, 32, 42; Basalenque 1886, p. vi.
14. Boas and Swanton 1911, p.932.
15. Several of my colleagues, notably Jerry Sadock and Jim Fox, have observed that the kin terms in an irregular split may have relevance for the particular culture involved. For example, the relevant nouns in Hupa all seem to refer to 'low status kin' (see section 2.3.10).
16. Whether such a lexical field is well-motivated, and whether markedness is well-defined on it, I do not know.
17. This class of English nouns was first brought to my attention by Howie Aronson. I do not have any satisfactory description of what is going on.
18. This discussion of markedness depends on Greenberg 1966, especially chapter 3 (this book has the nicest general treatment of markedness that I know of). As Greenberg points out (cf. p.33), there is good reason to expect that a universal definition of marked categories is possible. Thus, it makes sense to claim that plural is marked and singular is unmarked independent of any particular language or context. I realize, however, that there is still much to learn about markedness.
19. Topping 1969, p.59; von Preissig 1918, pp. 8, 16.

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