A. AUFSÄTZE

On Markedness in Morphology *

1. Introduction

Throughout the history of linguistics, it has been common to speak of certain morphological elements as m a r k i n g, or being m a r k s of, particular grammatical categories, as when it is said that in English -s is the mark of the third singular present. It is also natural to refer to certain linguistic elements, or even systems, as m a r k e d in the sense of standing out, of being notable or worthy of remark, as when it is said that morphological trial forms (as in many Austronesian languages) are marked, because the occurrence of such forms is unexpected, uncommon, and striking. Within the Prague School of linguistics this second locution, probably not unmixed with aspects of the first, has been elevated to a piece of technical terminology, one that is central in the works of Trubetzkoy, Jakobson, and others (for a somewhat different development of the Prague School ideas, see Shapiro [1969]). And the Prague School notion, somewhat transformed, has been made a part of the generative framework. The literature thus contains many uses of the terms *mark* (noun), *mark* (verb), and *marked* (adjective), or their equivalents in other languages. But there are in fact several different concepts traditionally lumped together under the heading of markedness.

My purpose in this paper are (in section 2) to catalogue these concepts — I will, in fact, distinguish seven senses of markedness —, to illustrate them with examples from familiar languages, and to recall some of the parallels (when they exist) between markedness in morphology and markedness in phonology, phonology being the original domain of the concept(s) of markedness. Then (in section 3) I will consider some principles that connect the

various senses and thereby permit us to offer evidence as to which morphological categories are marked in the sense of the Prague School. Much that I have to say here is not new, but builds directly on discussions in chapters 3 and 4 of Greenberg (1966), in Schane (1970), and in chapter 6 of Comrie (1976). I will not be examining the factual bases for these or other traditional treatments of markedness; my aim is not to defend this framework but to analyse some of its structure.

One final point. An important feature of this framework is that it concerns itself almost entirely with tendencies rather than strict regularities, so that there are many apparent counterexamples to the principles I discuss, these resulting from the effects of other tendencies that conflict with the tendencies relating to markedness. In pursuing my rather modest ends I disregard such complexities for the sake of exposition, though while doing so I admit that each case calls for further analysis and that the weight of these cases taken together needs careful assessment.

2. Senses of markedness

2.1. Material markedness

I begin with an essentially pretheoretical notion of markedness already mentioned, the one employed when it is said, for instance, that English noun plurals show a mark, -*s*, lacking in singulars. That is, one set of forms contains a morpheme or sequence of morphemes expressing some category or combination of categories. If there is a parallel set of forms lacking this material, then it may be said to lack the mark (though the parallel forms might well bear different marks, as in the German present tense verb forms *ich gehe, du gehst, er geht*, etc.).

What is at issue here, then, is the existence of some ma ter ial mark for, or expression of, content (Greenberg pp. 26–7, Comrie p. 114). It is evident that some content is signalled by the absence of such a material mark, that is by a morphological zero sign (Jakobson 1939) – as in the German first and third singular past tense form *ging* as contrasted with the second singular form *gingst* and the first and third plural form *gingen*.

Forms may be materially marked to various degrees. The English form *lionesses*, for instance, has two material marks, one indicating sex and one indicating number.

2.2. Semantic markedness

Next I consider another essentially pretheoretical notion, this time one of a semantic character. It is exemplified in the assertion that both the English lexical items *mare* and *stallion* are marked with respect to the word *horse*, in the sense that *mare* and *stallion* are semantically more complex, more informative, more specific, than *horse*; *mare* and *stallion* have a se ma n tic

mark lacking in *horse* (Greenberg p. 25, citing Jakobson 1957; Comrie pp. 112–4).

As with material markedness, forms may be semantically marked to various degrees. The English word *filly*, for instance, is doubly marked semantically, for both sex and youth.

The phonological parallel to a semantic mark in morphology is an added articulatory gesture. In this sense, voiced consonants have a mark (the vibration of the vocal cords) and voiceless consonants lack this mark. Since in the phonological cases there is no question of content being signalled by marks, privative phonological oppositions like these also correspond to material markedness in morphology.

2.3. Implicational markedness

Now I turn to a central aspect of the Prague School notion of markedness as the less normal or expected state: universal implicational laws relating certain categories. For instance, the dual number is said to be (universally) marked with respect to the plural, in that the existence of a dual category in a language implies the existence of a plural category, while the reverse implication does not hold. More generally: the dual number is (universally) marked with respect to the plural in that the number of distinct forms shown by the dual in a language is never (or, in a weaker form: very rarely) greater than the number of distinct forms shown by the plural in that language.

The usual formulation of implicational markedness follows from this generalisation, for if there is at least one dual form in a language the general principle requires that there be at least one plural form, and this is all that the usual formulation says.

From generalised implicational laws of the form: number of distinct forms in category A ≤ number of distinct forms in category B (which identifies A as the implicationally marked category), we can derive not only the ordinary implicational laws but also three other predictions:

(a) implicationally marked forms will tend to show fewer irregularities than implicationally unmarked forms (Greenberg p. 29, Comrie pp 114–5): in German, the dative plural of nouns (which is at least doubl¹ marked implicationally) is -(e)n throughout, while the (less marked) dative singular and accusative plural both show several suffixe depending on gender and declensional class; and the second perso plural of verbs (also at least doubly marked implicationally) is forme from an unaltered stem, while the (less marked) third person singula shares the ending -(e)t but often shows a special stem – thus, fro¹ *sehen* in the present, *ihr seht* but *er sieht*.

(b) marked categories will tend to show more **syncretism** (syncretization), more instances with identical realization, than unmarked categories (Greenberg p. 27, Comrie p. 115): in English the genitive singular and plural are identical for all nouns with regular plurals, while the nominative singular and plural are nearly always distinct, this difference corresponding to the greater implicational markedness of the genitive case as opposed to the nominative.

(c) marked categories will tend to show more **defectivation**, more gaps or missing forms, than unmarked categories (Greenberg pp. 29–30): the English genitive plural, which is doubly marked implicationally, is missing for some irregular nouns (*/eet's* *mice's*, *geese's*), while there is a genitive singular and a nominative plural form for essentially every noun for which these forms would make sense.
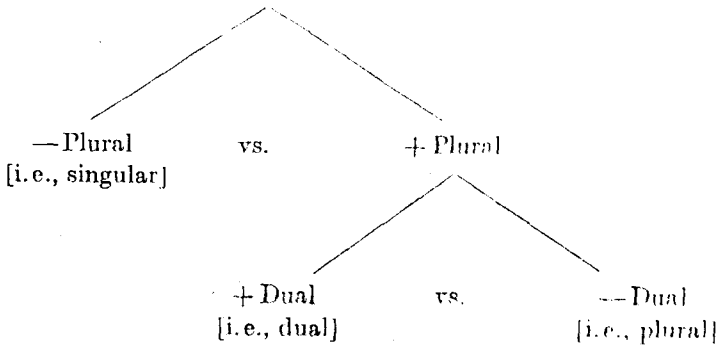
In all three cases, the number of distinct forms in the implicationally marked category is less than the number of distinct forms in the unmarked category – via greater irregularity in the unmarked category or via syncretism or defectivation in the marked category.

The phonological parallels to implicational markedness in morphology are also universal implicational relationships, like that obtaining between fricatives and stops (the number of fricatives in a language never exceeds the number of stops in that language, so that if a language has fricatives it also has stops, though the reverse implication does not hold).

It is important to stress that implicational markedness concerns categories in general (or categories in certain sorts of contexts), rather than particular instances of categories – although the term *marked* may be used in this latter sense derivatively. That is, strictly speaking, it is the category plural that is marked, with respect to the category singular, and not (for example) the English form *birds* with respect to the form *bird*. Implicational markedness is then clearly a matter of abstract rather than concrete marks. However, the extent to which implicational markedness is genuinely universal, rather than language-particular (as material and semantic markedness clearly are), is a complex matter, and at the risk of belabouring some very familiar matters I will now engage in a diversion that is ultimately designed to shed some light on the question of universality.

I begin by making the simplifying assumption that the categorial distinctions we are talking about are binary in character, for instance singular vs. plural. It is then convenient to represent the opposed categories by the name of the implicationally marked category (here, Plural), with the marked category indicated as the positive pole (+ Plural) and the unmarked category as the negative pole (— Plural). The result is a feature ± Plural, parallel to phonological features like ± Consonantal, ± Voiced, and so on. Apparently nonbinary distinctions often resolve themselves naturally into

combinations of binary distinctions: thus, singular vs. dual vs. plural is
naturally resolved into two binary distinctions:

```
                    ╱╲
                   ╱  ╲
                  ╱    ╲
                 ╱      ╲
     —Plural     vs.     + Plural
    [i.e., singular]       ╱╲
                          ╱  ╲
                         ╱    ╲
                  + Dual   vs.   —Dual
                 [i.e., dual]   [i.e., plural]
```

Entire paradigms can then be summarized with respect to markedness,
by indicating for each combination of features the appropriate number of
(abstract) marks. As an illustration, consider a hypothetical language Germ-
krit, with three grammatical numbers as in Sanskrit and the four grammatical
cases of German – nominative, genitive, dative, and accusative. I have
already considered the breakdown of the three numbers into two binary
oppositions. These four cases might be analysed (on both syntactic and
strictly morphological grounds) as the product of two binary oppositions,
± Oblique and ± Objective, as indicated in the following table:

	(singular) —Plural	(dual) + Plural, + Dual	(plural) + Plural, — Dual
(nominative) —Oblique, —Objective	0	2	1
(genitive) + Oblique, —Objective	1	3	2
(dative) + Oblique, + Objective	2	4	3
(accusative) —Oblique, + Objective	1	3	2

(The figures in the table indicate the number of abstract marks, in this
analysis, for each combination of categories.)

Note that in addition to making claims about degrees of markedness, this
analysis makes specific claims about the internal relationships of the cate-
gories involved. In particular, it says that the nominative and dative are
both closely related to the genitive and accusative, but that the nominative

and dative are less closely related to one another, as are the genitive and accusative.

Two questions immediately arise, both with respect to this style of analysis and to the distinctive feature analyses of phonology on which this morphological analysis has been patterned: first, what is the character of the abstract features in such an analysis ? and second, which of the poles of such a feature is the positive one ? What makes these questions critical is that the more freedom we have in choosing feature sets and polarity assignments, the easier it is to give the appearance of universality to what are in fact language-particular arrangements. I am examining in the body of this paper some reasons one might have for choosing one pole of a feature as the marked, or positive, one. But even if such assignments are utterly clear, their significance can be undercut by play in the system of features itself. The Germkrit example at hand would be reduced to near vacuity, for instance, if the set of features available in the theoretical framework included a third feature by which the nominative and dative cases together were opposed to the genitive and accusative cases. For then there would be three distinct sets of feature breakdowns for the fourcase system, hence three different potential types of four-case systems in the languages of the world – in which case it becomes only too easy to find one that will fit the facts of whichever language we happen to be looking at.

I conclude that implicational markedness may be taken to reflect universal relationships to the extent that the features by which this type of markedness is described are chosen from a suitably restricted universal set, and only to this extent.

2.4. Abstract syntactic markedness

The first three types of markedness concern aspects of language that are relatively open to direct investigation: from morphological analysis we can conclude which forms in a language are materially marked and to what degree; from semantic analysis we can determine which forms are semantically marked and to what degree; and from crosslinguistic comparisons of systems we can induce implicational laws concerning grammatical categories. However, there is at least one sense of markedness that is intimately related to a particular description of a language. This is the usage, common in generative linguistics, by which it is said, for instance, that English has a rule that marks verbs as agreeing in person and number with their subjects, and, in line with this way of putting things, that the verb in an English clause that has a subject is marked for person and number. These abstract syntactic marks may be realised in various ways: in this sense of markedness, the German *ich ging* is as marked as *du gingst*, while the English past tense and past participial *put* have marks that the infinitive *put* lacks. Such

marks may be represented in various ways in formal grammars – sometimes by grammatical segments or formatives affixed to other elements (for instance, TNS, NU, REFL, EMPH, CASE, *to, ing*), sometimes by features associated with those elements (for instance, $\pm$ Refl, $\pm$ Pl, $\pm$ Def, $\pm$ Count $\pm$ Past, $\pm$ Affix)[1] – and they may arise in several different ways in the operation of grammars, at least in the following ways:

(a) as inherent lexical marks: the English nouns *man* and *boar* are inherently marked as to sex, as are *woman* and *sow*, while *person* and *pig* are unmarked in this respect; most English nouns are inherently unmarked with respect to number, but *people* is inherently marked as plural.

(b) as marks of obligatory morphosyntactic categories: though very few English nouns have inherent number, they must, in general, be categorized as either singular or plural (because the distinction is overtly expressed in the morphology of nouns and because it is needed for syntactic purposes, as in the selection of verb forms, determiners and anaphoric pronominal forms): similarly, nouns referring to human beings must, in general, be categorized as referring to women or to men (for the purposes of anaphora, so as to permit both *My cousin behaves herself* and *My cousin behaves himself*). Which mark must be chosen in a language is a matter of the morphology and syntax of that language. How these marks are chosen for any particular utterance is a matter of what the speaker wishes to convey as the relevant features of the situation he is talking about, not a matter of grammatical determination at all; from the point of view of grammatical description, the choice between one mark and another is "free".

(c) as marks established by agreement rules: for instance, the English deictic determiners *(that/those, this/these)* pick up a mark of number from the noun they modify.

(d) as marks established by government rules: for instance, the pronominal objects of verbs and prepositions in English are marked as instances of an accusative case category.

(e) as marks positioned by attachment rules[2]: the English negative indefinite pronouns *nobody, nothing*, etc. are often analysed as resulting

---

[1] The fact that I have cited a particular formative or feature does not necessarily mean that I endorse it as part of an adequate description of the grammar of English. Nor does the fact that I cite two different treatments for the same mark – REFL and $\pm$ Refl, for example – mean that I think that formatives and features are mere notational variants of one another (I incline to the belief that both representations are required, at different levels of structure).

[2] The classic example of this sort of analysis in generative grammar is the treatment of the perfect, progressive, and passive verb forms in English which (following Chomsky's *Syntactic Structures*) are often analysed as resulting from

from the attachment (or incorporation) of a NEG that has its origin in a presentential or hypersentential element, so that *I saw nothing* has as a remote structure something on the order of

NEG [*I saw something*].

2.5. Productive markedness

Implicational markedness concerns categories across languages. But the notion of markedness is often applied to language-particular categories like declension or conjugation classes and to categories with significant language-particular aspects, like gender classes. What is appealed to in these cases is, at least in part, the p r o d u c t i v i t y of the classifications in question – roughly, the relative numbers of items in the individual classes and the extent to which these classes tend to pick up new members in word invention and borrowing, or by encroaching on other classes. It is on the basis of such criteria that it can be said that the third, fourth, and fifth declensions of Latin are marked with respect to the first and second declensions, or when the English ablaut plural and past classes are labelled as marked with respect to the suffixed plural and past classes.

Productive markedness is one of the types of markedness for which it is common to have, within a language, the relative markedness of two categories differ in different contexts (see Comrie pp. 118–22 for a more extensive discussion of this issue). Thus, in German the (productively) unmarked declensional category for feminine nouns is the plural with *-en*, while the unmarked category for nonfeminines is the plural with *-e*.

2.6. Stylistic markedness

One way in which an element of some language can stand out or be re-markable is by being associated with a particular register, style, social dialect, or regional variety of the language – that is, by not being usable by all speakers in all contexts. Instances of s t y l i s t i c markedness are most prominent in phonology and in syntax, but there are a moderate number of morphological examples from the familiar languages. Thus, in English *dreamt* is stylistically marked with respect to the neutral form *dreamed,* since *dreamt* is associated with formal or poetic speech. And *snuck* is stylis-

---

formatives (EN, ING, and EN, respectively) that are themselves associated with preceding auxiliaries (*have, be,* and *be,* respectively) and are suffixed to the verb by a special transformation of Affix–Hopping. However, the most obvious and straightforward treatment of the facts involves rules of government (perfect *have* governing the past participial form of a following verb, progressive *be* governing the present participial form, and passive *be* governing the past participial form).

tically marked with respect to *sneaked*, since *snuck* is associated by informal or jocular speech, or with particular regional and social varieties.

2.7. Statistical markedness

A final sense in which it can be said that a particular category stands out – a sense that Greenberg (pp. 66–70) suggests is fundamental in morphology, syntax, and lexicon – is statistical: instances of that category are rarer than instances of others, in the frequency of tokens belonging to that category in texts within a language, or in the frequency of types belonging to that category in the lexicon of that language (Greenberg pp. 31–2, Comrie pp. 116–7). Dual forms are clearly statistically marked in Sanskrit, where they are much less common than plurals or singulars. Presumably similar differences in frequency obtain in all other languages with a morphological dual number.

The phonological parallel is direct: marked segments are less frequent in the discourses, and in the lexicon, of a language than their unmarked counterparts.

3. Connections among the senses, and further implications

3.1. Iconicity

Of the two pretheoretical notions of markedness, one – material markedness – concerns form, while the other – semantic markedness – concerns content. Now form and content, and therefore material and semantic markedness, are connected by (in the words of Anttila 1972: 92) "the iconic tendency for semantic similarity to be reflected by formal similarity", and, more generally, by a tendency for semantic content to be expressed by material form. From such a tendency towards iconicity in morphology, we would expect zero expression of semantically unmarked categories and overt, or nonzero, expression of semantically marked categories.

The principle of iconicity is then what Greenberg (p. 33) calls a second level hypothesis about markedness, as against empirically derived universals; second level hypotheses express connections between empirically derived universals. As Greenberg remarks in this regard, that it should be possible to frame second level hypotheses at all about what is marked and unmarked points to "a vast amount of orderliness in language phenomena" (p. 33).

The principle of iconicity posits some tendency for morphological realization of semantic content to be preferred to purely lexical realization – symbolically, for relationships like

(I)   morphemes: X   X + Y   (i.e., *pig—piglet*)
      semantic content: α   α + β

to be preferred to relationships like

(II) morphemes: X   Z   (i.e., *horse—colt*)
      semantic content: α   α + β

though it permits both types. The principle is also consistent with the non-existence of semantically complex items in contrast with semantically simpler ones:

(III) morphemes: X   –   (i.e., *snake*, with no cor-
      semantic content: α   α + β   responding term for the
                                                 young)

But as (I) should be preferred to (II), so (III) should be vastly preferred to

(IV) morphemes: --   Z   (as if English had *colt*,
      semantic content: α   α + β   but no *horse*)

And, of course, conflicting material and semantic markedness should be highly disfavoured:

(V)   morphemes: X + Y   X   (as if English had *colt*,
      semantic content: α   α + β   plus something like *col-
                                                 ton* for the adult)

Though I have illustrated these points with examples from the lexicon and from derivational morphology, the iconic tendency is even stronger in inflectional systems, and inflectional systems are the sets of forms most commonly treated in discussions of markedness.

In any case it follows from what I have said that if a language is going to lack a category distinction, the forms that appear can be expected to be the semantically unmarked ones, as in (III) as opposed to (IV). And if a language lacks a category distinction in part, but not all, of some form class then again the forms that appear can be expected to be the semantically unmarked ones, again as in (III) rather than (IV), so that the distinct forms in the semantically unmarked category should outnumber the distinct forms in the marked category, but not vice versa. Thus, from the iconic principle we predict a correlation between implicational markedness and semantic markedness.

I have so far used the principle of iconicity to connect material, semantic, and implicational markedness. In what follows I will use the terms *marked* and *unmarked*, without modifiers, to refer to this complex of senses. I do

this with the understanding that the three types of markedness are not coextensive; I assume, however, that in any particular instance the weight of the evidence from morphological structure, semantics, and universal implicational laws will point towards one pole of an opposition as the marked one.

3.2. Neutralization

By reasoning similar to that just given for the crosslinguistic comparison of categories, we can argue from the principle of iconicity that when there are contexts in a language in which only one member of a pair of opposed categories appears we should expect that the form that appears will be the unmarked member. Or, as it is usually put: it is typically the unmarked form that appears in positions of neutralization (Greenberg pp. 28–9, Comrie p. 116). Greenberg gives as an example the many languages in which only the singular form of nouns appears after cardinal numbers. The analogy with phonology is straightforward: the classic example, from Trubetzkoy, is the appearance of voiceless obstruents for both voiced and voiceless obstruents in word-final position in many languages.

On the same basis we should be able to make specific predictions about which syncretisms are likely in a paradigm: representatives of more marked categories should tend to be eliminated in favour of forms representing less marked categories. Given the sort of feature analysis I outlined earlier in section 2.3, it should then be the case that this levelling should favour forms distinct in a single feature. The phonological parallel is again evident: more marked sounds tend to be eliminated in favour of less marked sounds (front rounded vowels by front unrounded vowels, for instance), and such reductions in the phonological inventory of a language typically replace a sound that is marked with respect to some phonological feature by the corresponding sound that is unmarked with respect to that feature (so that ü is replaced by i rather than e, ö by e rather than i or æ, etc.).

In both the morphological and the phonological cases, my reference to levelling is intended to cover diachronic and synchronic processes equally. The diachronic predictions are clear. The synchronic predictions are of syncretisms, for instance the identity of the German neuter accusative and nominative forms. Let us return to the hypothetical language paradigm of section 2.3 for a more detailed example. In Germkrit the dative dual is the most marked category, so that we would expect it to be more likely to be eliminated than, for instance, the dative singular or the nominative dual. Referring now to the feature relationships: if the dative dual is going to be levelled it should be eliminated in favour of one of the categories distinct from it in a single feature – the genitive dual, the accusative dual, or the dative plural.

Now let us return to neutralization proper, where the levelling between forms takes place only in certain grammatical contexts in a language, rather than across the board as in syncretisms. Neutralization provides a link between (implicational) markedness and abstract syntactic markedness (section 2.4): it will typically be the representative of the (implicationally) unmarked category that appears in the absence of an abstract syntactic mark. The somewhat peculiar behaviour of the English interrogative word *who* for some speakers can perhaps be understood in the light of this principle.

Who as the subject of a sentence invariably takes singular verb agreement for a sizable number of American English speakers: *Who was at your party?* rather than **Who were at your party?* The facts seem even clearer for phrases with interrogative *who* as head: *Who from America was at dinner?* **Who from America were at dinner? Who else is going to compete? *Who else are going to compete? Whoever leaves boots on the staircase?! *Whoever leave boots on the staircase?!* On this basis we might be inclined simply to say that *who* was a singular pronoun. However, *who* is compatible with both singular and plural anaphoric pronouns (in particular, reflexive objects), as well as with both masculine and feminine anaphoric pronouns: *Who shaves himself/herself/themselves every morning?* The natural way to account for these American English data is to let *who* bear no abstract syntactic mark for number; it will then be compatible with pronouns referring to either sex and to either number, and the verb will exhibit what we might call a g r e e-m e n t b y d e f a u l t, in which an unmarked form – here, the singular – shows up. Compare the discussion in Schane (pp. 293–4) of why French interrogative and indefinite pronouns appear to be masculine singular.

A related phenomenon is a g r e e m e n t a p o t i o r i (Greenberg p. 31, Schane p. 291), where a conflict between different categories is resolved in favour of the unmarked category: Spanish *El hijo y la hija son buenos* 'The boy and the girl are good', French *Le garçon et la fille sont petits* 'The boy and the girl are small', both with m a s c u l i n e plural predicate adjectives. As Greenberg (pp. 20–1) points out, this grammatical phenomenon is related to the lexical phenomenon he calls d o m i n a n c e, after the usage of the Arab grammarians: as when Spanish *los padres*, meaning both 'the fathers' and 'the parents', shows in its second meaning the dominance of the masculine over the feminine gender.

The case of dominance leads directly to what is probably the most striking semantic property of unmarked forms, namely their ability to be understood in either of two ways, either g e n e r a l l y / i n c l u s i v e l y, so as to encompass the meaning of a corresponding marked form (as in *los padres* meaning 'the parents'); or s p e c i f i c a l l y / e x c l u s i v e l y, so as to contrast with or oppose the meaning of a corresponding unmarked form (as in *los padres* meaning 'the fathers', in contrast with *las madres* 'the mothers')

(Greenberg pp. 25–6, 28; Comrie pp. 112–4; Schane p. 291). Marked forms show no such ambiguities.

3.3. Other correlations

I turn now to the remaining senses of markedness. First, productive markedness. This is obviously quite closely connected to lexical frequencies, hence to statistical markedness. Much the same is true of stylistic markedness. The stylistically most neutral forms occur by definition in the widest variety of contexts, hence are necessarily more frequent than stylistically marked forms.

As for statistical markedness itself, note that the occurrence of unmarked forms in positions of neutralisation contributes to the text frequency of these forms in a language. There is also some contribution from the great text frequency of irregular forms, which (as I pointed out in section 2.3) are more likely to belong to unmarked than marked categories.

It is well known, however, that frequencies are one of the less reliable guides to markedness (see especially the discussion by Comrie). As Comrie points out, frequency effects are associated to some degree with what speakers want to talk about. There is a compound here, in fact, of at least two factors, both quite independent of language: the relative frequencies of certain beings, objects, events, or whatever in the experience of human beings (thus, in the world around us perceptible groups of exactly two objects are considerably less frequent than groups of more than two), and the relative degrees to which certain things, objects, and so on are significant or salient to human interests (thus, the activities of adults are, other things being equal, of greater interest to human communities at large than the activities of children). One would expect, on these grounds alone, that dual forms would have a lower text frequency than plural forms, in a language with a regular dual/plural distinction; and that lexical items referring to children would occur less frequently in texts than lexical items referring to adults, in a language with a well-developed vocabulary in this area.

It is also true that there is some tendency for markedness to correspond to social or cultural marginality (hence conspicuousness), as in the marked character of the feminine as opposed to the masculine gender, of inanimate as opposed to animate gender, of diminutive forms and so on. Some other indicators correlate with this: thus, when no other factors govern the ordering of linguistic forms these tend to occur with the less marked (or culturally more central) form preceding the more marked (or culturally more marginal) form, as in fixed expressions like *Mr. and Mrs.* and *parents and children*, of the type examined by Cooper and Ross (1975). There is also some indication that unmarked forms are psychologically more salient than marked forms: in free association tests there is some tendency for marked terms to be

responded to with unmarked ones, but no reverse tendency (Greenberg pp. 53–5).

Finally, there are two often-used indicators of markedness whose efficacy clearly depends upon the greater complexity, in several of the senses already elaborated on, of marked forms than of unmarked forms: in historical change marked forms tend to be eliminated in favour of unmarked forms; and marked forms tend to be acquired by children later than the corresponding unmarked forms.

4. Some concluding remarks

In the foregoing sections I have chosen to treat as different senses of markedness what many have seen from the outset as manifestations of a single phenomenon. Indeed this is the spirit in which Greenberg, Schane, and Comrie approach the subject, as do the writers they build their discussions on. There is some question about what is the most central aspect of markedness in morphology and lexicon – Jakobson pointing to the possibility of ambiguity in the unmarked term of a pair, Greenberg relying on frequency instead – but most writers on the topic begin with the assumption that they are dealing with various symptoms of a single condition. So as not to prejudice the matter, I have explored these phenomena individually and then considered their interrelations.

I have argued that these different senses of markedness are connected to one another in intricate ways. In this discussion I have largely disregarded a number of issues whose importance I do not wish to slight: the different distribution of markedness in different contexts, different weights of markedness (some singly marked categories seeming more marked than other singly marked categories), the degree to which markedness is or can be language-particular, the fit between morphological and syntactic categories, the extent of the parallels between lexicon, derivational morphology, and inflectional morphology.

What I have stressed in this brief analysis is the significance of a tendency towards iconicity, especially in inflectional morphology, in an account of the connections among the various types of markedness in morphology.

The Ohio State University　　　　　　　　　　Arnold M. Zwicky
Department of Linguistics
Dieter Cunz Hall of Languages
1841 Millikin Road
Columbus, Ohio 43210

References

Anttila, Raimo. 1972. An introduction to historical and comparative linguistics. New York: Macmillan.
Bierwisch, M. and K. E. Heidolph (eds.), 1970. Progress in linguistics. The Hague: Mouton.
Comrie, Bernard. 1976. Aspect. Cambridge University Press.
Cooper, William and J. R. Ross. 1975. World order. Chicago Linguistic Society Parasession on Functionalism 63–111.
Greenberg, Joseph. 1966. Language universals. The Hague: Mouton.
Jakobson, Roman. 1939. Signe zéro. Mélanges de linguistique offerts à Charles Bally. Geneva. Reprinted in Jakobson 1971: 211–219.
—. 1957. Shifters, verbal categories, and the Russian verb. Dept. of Slavic Languages and Literatures, Harvard Univ. Reprinted in Jakobson 1971: 130–47.
—. 1971. Selected writings II: word and language. The Hague: Mouton.
Schane, Sanford. 1970. Phonological and morphological markedness. In Bierwisch and Heidolph 1970: 286–94.
Shapiro, Michael. 1969. Aspects of Russian morphology. Cambridge, Mass.: Slavica Publishers.