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MARKEDNESS AND THE THEORY OF LINGUISTIC CHANGE

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> L’opposition dans les faits linguistiques n’est pas un schéma que la science introduit pour maîtriser les faits, et qui resterait extérieur à ceux-ci. Son importance dépasse l’ordre épistémologique: quand la pensée linguistique range les faits d’après les principes d’opposition et de système, elle rencontre une pensée qui crée ces faits mêmes. (Pos 1938:245)

0. *Introduction*

0.1 *Preamble*

To our structuralist predecessors our generation of linguists owes a rich heritage of technical vocabulary we use every day.[1] Much of this vocabulary was created for specific purposes, in specific structuralist theories, and was provided with more or less precise definitions, most terms even being defined, in true structuralist fashion, in relation to other terms. But in contemporary linguistics many of these lexemes have lost their status as terms and are used as common-parlance words. Among these is the term *markedness*, and the correlative terms *marked* and *unmarked*, which were coined (first in Russian and German; see below) and defined by Trubetzkoy and Jakobson in 1930 (cf. Jakobson 1985:162). That these lexemes are now common-parlance words is shown by the fact that they are used entirely in accordance with the principle of cooperation—you can use the word *markedness* freely without anyone demanding that you define what you mean by it. And if asked, most linguists are quite content with an informal characterization of, say, *unmarked* that equates it with approximate synonyms such as *simple*, *common*, *basic*, *default*, *elsewhere* and easily agree on a shared understanding of *markedness* as ‘relative complexity or frequency’ or, on a more abstract level, ‘a sort of asymmetrical relation’.

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0.1.1. An early indication that *markedness* had changed status from technical term to everyday word is, perhaps, Joseph Greenberg's monograph *Universals of Language* (1966). Here markedness is treated as a 'found object': it is described as a "Protean notion" that is acknowledged as being familiar to everyone, but thought to be badly in need of a definition. In other words, the monograph starts not from the understanding that markedness is a formal principle that DEDUCTIVELY explains a variety of observed phenomena in language—which was the way Trubetzkoy and Jakobson first grasped it—but from the idea that the word *markedness* presumably refers to some characteristic, present in all the different observables that linguists intuitively recognize as instantiations of markedness—a single, unifying criterion that would serve as a guide in determining the markedness attributes of any observed phenomena, and which one might discover through an INDUCTIVE search through the different instantiations of markedness.

As you may recall, Greenberg's search for such a single criterion was not successful, and as a consequence his monograph failed to resolve the conflict between the two predominant attitudes to markedness—in the sixties, when he wrote, as well as now, thirty-odd years later. One of these is to consider *markedness* simply a handy label for a large number of disparate observables; the other is to regard it as a hazy (non)concept that contributes nothing to linguistics. Greenberg, in the end, concluded that markedness attributes can at best be identified on the basis of a number of indications such as these: (a) unmarked terms often occur in positions of neutralization; (b) unmarked terms usually have greater relative text frequency; (c) unmarked terms show more allophonic or allomorphic variability; (d) unpaired phonemes are common in marked phoneme classes, and syncretism, in marked categories; (e) unmarked terms are often indicated by the features of basic allophones in phonology and by agreement a potiori in morphosyntax (1966:58–59). For a detailed analysis and critique of Greenberg's contribution, see Andersen (1989a).

0.1.2. More recent literature on markedness only serves as further illustration that the word has lost its terminological status. For example, to take a linguist who makes extensive use of the word, in Givon's writings—say, the two-volume *Syntax* (1984, 1990)—*markedness* is not given a precise definition, but serves as a cover term for the range of substantive phenomena in which it is manifested, mainly complexity of expression, relative frequency, cognitive complexity (1990:945–966). Battistella's theoretically oriented monograph, *The Logic of Markedness* (1996) reports on numerous definitions and characterisations the word has been given since 1930. In this way, his work is a useful contribution to a history of the lexeme *markedness*. But despite its title,

the monograph does not offer anything like a logical analysis of what markedness is. It does not even analyse the differences between structuralist usage and poststructuralist usage.

0.2 *Issues in 'markedness'*

It seems to me that the existing literature on markedness from Greenberg (1966) to the present conflates a number of issues concerning this notion which can only be clarified if the issues are distinguished and approached one by one.

0.2.1. One issue is the synchronic one of what the word *markedness* means. This issue can be resolved only through an essentially lexicographic expedition through the current literature that would register the actual use to which the words *marked, unmarked,* and *markedness* are put and classify the words' referents. The outcome of such an undertaking would be useful as a purely descriptive stock-taking. It might perhaps be supplemented with judgements by a usage panel, in the style of the *American Heritage Dictionary*, which could establish what are customary (or appropriate), and what are unusual (or inappropriate) uses of these words according to the understanding of a representative sample of practicing linguists. Much of what is in Battistella (1996) can be appreciated as a first step towards such a study.

0.2.2. Another issue is a diachronic one, which calls for an investigation of several strands of development that would trace (a) the history of the words and terms for markedness and (b) the history of the notion.

The former effort would recognize the varying terminology of different schools (e.g., the Copenhagen School's *intensive* vs. *extensive* distinction) and periods (e.g., Gm. *merkmalhaft,* R *priznakovyj* (1930s) > Gm. *markiert,* R *markirovannyj* (1950s and later), both, "marked"; cf. Jakobson 1971a). It would also pay attention to ways of speaking of markedness in the pre-terminological period, say, in nineteenth-century European linguistics or in medieval Arabic linguistics (see, for instance, Owens 1988:199–220).

The history of the notion of markedness would trace different conceptions back in time beyond the explicitly named stages in the recent history of grammatical scholarship. It would pay attention, for instance, to such implicit recognitions of markedness as the organization of morphological paradigms in grammatical texts. Recall the traditional presentation of verb morphology in Latin grammars, where the order of forms in paradigms mirrors the markedness relations of the respective categories in that singular (U) forms precede plural (M) forms, the forms of the present (U) tense precede those of the preterite (M), the paradigms for these two historical (U) tenses precede those for the future (M), the

tenses of the infective (U) aspect are presented before those of the perfective (M), the indicative mood (U) before the subjunctive (M), and so on; cf. Table 1. Comparable principles of organization can be discerned in bilingual Sumerian–Akkadian grammatical texts from Babylon (1900–1600s BC); see Jakobsen (1974). Grammatical texts in other ancient grammatical traditions await exploration.

Unmarked categories	Marked categories
Singular	Plural number
present	preterite tense
historical: present, preterite	future tense
infective	perfective aspect
indicative	subjunctive mood
descriptive moods: indicative, subjunctive	directive mood: imperative
finite forms	nominal and adverbial forms: infinitive; participles, gerundive; supines, gerund

Table 1.

0.2.3. Finally, there is the analytic issue, which calls for an examination of the logical nature of markedness. On this issue, it seems we have been beating about the bush for most of this century. Looking back, one can see that among the structuralists, Hjelmslev alone had a precise understanding of markedness (1939:87; see Section 3.4.4 below), but he had no impact on the mainstream of linguistics at the time. Jakobson, on the other hand, who throughout his scholarly career served as an authority on markedness, consistently defined markedness in logically incoherent terms (cf. Section 3.2). When you compare Givon's characterization of markedness with Greenberg's, and Battistella's with Jakobson's, you have to conclude that the poststructuralist period has produced no advance in the clarity of this notion.

0.2.4. I want to return to the analytic issue at the end of this presentation (Chapter 3), but I think it will be useful to give priority to some examples of the manifestations of markedness in synchrony (Chapter 1) and in diachrony (Chapter 2).

1. *Markedness in synchrony*

Much skepticism has been expressed in this century about the utility of the notion of markedness.

It is my impression that this skepticism has been characteristic, first of all, of linguists who by virtue of their personal cognitive style or academic training

(or both) are skeptical of anything that cannot be directly observed and tend to adopt what you might call a nominalist attitude to language and language description. To anyone who sees linguistic description as essentially a way for the linguist to organize his data—rather than as a hypothesis about the competence of the speakers of the language—markedness can easily seem readily dispensable. But secondly, many linguists who have understood markedness as primarily the difference in relative text frequency of opposites, or as a concept covering this and a number of other observable phenomena, have felt justified in considering the notion (and the word) redundant. A particularly eloquent discussion of markedness from these two points of view is contained in Roger Lass's *On Explaining Language Change* (1980).

I would like to shift attention from the question of the utility of markedness as a theoretical concept in linguistics to the reality of markedness as a principle of cognitive organization that is reflected in human behavior and apparently fundamental to it. It is only in this sense of markedness that we can appreciate the analytic thinking of our Sumerian and Akkadian-speaking colleagues working in applied linguistics almost 4000 years ago. I hope the examples I present here will be understood in this spirit.

1.1 *Ritual*

I begin with an example of the manifestation of dual symbolic classification in ritual.

On the island of Roti (an island southwest of Timor in Indonesia; see Fox 1973), the usual course of events in a funeral can be summed up briefly as follows (bracketed numerals refer to the terms in Table 2). First the coffin is brought to the house of the deceased amidst great uproar [1] and is put down outside the house, parallel to it at its west end. The coffin is then raised, carried under the roof [3], through the forecourt, and up the ladder into the house [5], which stands on piles. The corpse is laid out in the men's [7] (the eastern [9]) half of the house, its head [11] to the east [9] and feet to the west [13]. The corpse is then placed in the coffin with the same orientation, and the mourners are admitted to the house [1]. Subsequently the coffin is brought down into the forecourt, where it may be rested on the east side [9], still with the same orientation [13]. The deceased is then carried out of the house, feet first [12], and in this way the body is conducted in a noisy stampede [1] to the grave. At the side of the grave, which has been dug running east to west [13], the coffin is turned so that the corpse is headed [11] westward [10], and in this position the coffin is lowered into the grave for the decedent's journey to the land of the dead in the west [10].

A different rite is used when someone has died a bad death—by drowning, falling from a tree, being stabbed, gored by a buffalo, or mauled by a crocodile, or in childbirth. The deceased who has died such an inauspicious death [20] is not brought into the house proper, but either placed outside [4] or in the forecourt [6], but in this case on the west side [10]. A woman [8] who has died in childbirth remains in the women's half of the house [10], but the body is laid out north to south [14]. No mourners are admitted to the house [2]. Subsequently the coffin with her corpse is carried down from the house and rested on the west side of the house [10]. The coffin of the inauspicious decedent is then carried out and to the grave, head first [11]. The graves of the "bad dead" are dug running north to south [14], and the coffin is lowered into the grave headed north [16].

Unmarked categories	Marked categories
Ceremony [1]	No ceremony [2]
inside [3]	outside [4]
house [5]	forecourt [6]
man [7]	woman [8]
east [9]	west [10]
head [11]	feet, tail [12]
east—west [13]	north—south [14]
south [15]	north [16]
right [17]	left [18]
auspicious [19]	ominous [20]

Table 2.

I have omitted many interesting details and elements of interpretation, but it is clear enough that the two alternative rites have one thing in common: each is composed almost exclusively of terms that are equivalent in markedness, unmarked in the case of the good death, marked, for the bad death. The few exceptions to this homogeneity in markedness have substantive motivation. This is the case with the orientation of the body when it is carried to the grave: we usually enter this world head first, and so it is "natural" that we should leave it feet first [12]. It is in an inversion of this "natural" order that the "bad dead" are carried to the grave head first [11].

The funeral rites on Roti are one of many examples of ritual behavior in which a series of symbolic elements are concatenated predominantly or wholly on the basis of their markedness values. Similar patterns of rule-governed behavior have been observed and described all over the world since the pioneering work of Herz (1909; cf. R. Needham 1973, 1979; a useful collection of references to the use of dual symbolic terms in ritual and on the typology of

systems of binary symbolic classification can be found in Ivanov & Toporov 1974:259–305; see also Andersen 1991:94–97). Such rule-governed behavior everywhere manifests systems of opposites, correlated as in (2) according to their positive or negative values. In ritual behavior the opposite terms of the given symbolic categories are concatenated in such a way as to maximize syntagmatic combinations that are homogeneous in markedness. In the following I will speak of this homogeneity as 'markedness agreement'.

1.2 *Texts*

Readers who have little acquaintance with ritual behavior in exotic cultures may be more familiar with the complementary categories of *yang* and *yin* that used to regulate formal behavior in traditional China, and which are fundamental to Chinese science and philosophy. Here *yang* (U) is correlated with light, warmth, male, day, sun, heaven, east, south, hard, light, strong, before, above, left, life, noble, joy, wealth, honor, celebrity, love, and profit whereas *yin* (M) is linked with darkness, cold, female, night, moon, earth, west, north, soft, heavy, weak, behind, below, right, death, common, sorrow, poverty, misery, bitterness, ignominy, rejection, loss (J. Needham 1954:293–304). The similar role played by pairs of polar opposites in ancient Greek science is perhaps less well known. The earliest attributed record is probably the *Table of Opposites* of the Pythagoreans—it links limit (U) with odd, one, right, male, at rest, straight, light, good, square, and limitless (M) with even, many, left, female, moving, curved, darkness, evil, oblong. It is remarkable to observe, in the early development of Greek scientific thinking, how much intellectual effort was expended in attempts to reconcile observations in medicine and the natural sciences with the correlations of values that were part of the traditional, implicit understanding of the order of things, and how slow was the process of emancipating observation from these preconceived correlations (cf. Lloyd 1966).

In our own time and culture, the extent to which our everyday behavior conforms to such schemes of binary symbolic values may escape our awareness, but it is no secret to the observant anthropologist (Sahlins 1978). But perhaps these schemes are nowhere more pervasively documented than in our literature, in which semiotic space is organized by such oppositions as up vs. down, above vs. below, distant vs. near, spacious vs. confined, movement vs. immobility, freedom vs. slavery, culture vs. nature, creativity vs. fossilized forms, harmony vs. disharmony (cf. Lotman 1970:275). The deployment of these paradigms of values moulds the composition of the plot, the interaction and development of characters, the selection of settings for the action, and the sequence of themes in the narrative structure (cf. Jakobson & Pomorska 1983:107). The coherence and verisimilitude of the world in which the fictional action occurs is largely—in

trivial literature, entirely—a product of the orderly concatenation of such correlative values.

On the more concrete, linguistic levels of textual organization of literary texts, written as well as oral, we have the poetic constraints of lexical and grammatical parallelism on one hand and, on the other, the categories of phonological parallelism such as meter, rhyme, alliteration, and assonance. These are constraints that produce homogeneous syntagms of lexical or grammatical semantic features or of prosodic or segmental features. In many works, genres, or periods the constraints governing the prosodic and segmental features operate independently of any constraints governing grammatical or lexical ones, and vice versa. But if we tentatively adopt the hypothesis that text organization, like ritual, is governed, to some extent, by a Principle of Markedness Agreement, all we need do is recognise that literature, oral as well as written, poetry as well as prose, conforms to this principle on certain levels of structure in accordance with conventions that may be more or less culture or period specific.

1.3 *Discourse*

Turning from "ritualized speech" to normal (narrative) discourse, we recall that clauses are of varying degrees of transitivity as Hopper & Thomson have demonstrated (1980).

High transitivity (U)	Low transitivity (M)
Two or more participants	One participant
action	no action
telic	atelic
punctual	nonpunctual
volitional	nonvolitional
affirmative	negative
realis	irrealis
agent high in potency	agent low in potency
object totally affected	object unaffected
object individuated	object nonindividuated

Table 3.

As is well known, Hopper & Thomson drew up a list of semantic categories or features (see Table 3) and pointed out that whenever a language has a constraint on the combination of these features in the form of an obligatory pairing of two transitivity features, "the paired features are always on the same side of the high–low transitivity scale" (1980:254). For example, the perfective aspect of action verbs (telic, U) may correlate with the definite object (U), but not

the imperfective (atelic, M) with the definite object (U), nor the perfective (telic, U) with the indefinite object (M).

Interestingly, Hopper & Thomson's wider findings transcend grammar rules: their study of running text shows that there is an overwhelming predominance of high transitivity features in foregrounded text portions and of low transitivity features in backgrounded material. As they put it, "grounding itself reflects a deeper set of principles—relating to decisions speakers make, on the basis of their assessment of the hearer's situation, about how to present what they have to say" (295).

What Hopper & Thomson's results suggest is that in the casting of conceptual representations—prior to the action of any linguistic formation rules (in the sense of Chafe 1971)—humans select and combine conceptual categories (admittedly with a fair degree of freedom of choice and in accordance with their communicative intentions) by and large in an orderly fashion, so that the resulting linguistic representation—by its clustered distribution of unmarked and marked categories—diagrams the distinction between backgrounded and foregrounded material in the speaker's conceptual representation. Backgrounded and foregrounded portions of a text are what they are, and are cognized as such, because they are comprised of largely homogeneous syntagms of features of transitivity. From the encoding point of view, they are formed the way they are, presumably, because wherever the speakers' communicative intentions leave any category unspecified, categories and features are assigned by default in accordance with the Principle of Markedness Agreement.

1.4 *Agreement*

Greenberg mentions, as one of the manifestations of markedness, 'agreement a potiori', the special cases in which agreement conflict is resolved in favor of an unmarked category, as in Sp. *cuello i camisa blancos* (1966:60). Normally linguists describe gender agreement entirely in substantive terms—in terms of specific genders—masculine agreeing with masculine, feminine with feminine, etc. But if the special case of agreement a potiori is to be understood in terms of markedness, then we should recognize that all agreement patterns can be so described, and that in fact it is simpler to describe all agreement patterns in the same terms. If they are so described, it is clear that in normal agreement in case, number or gender, the rules produce syntagms that are homogeneous in markedness, that is, conform to the Principle of Markedness Agreement.

1.5 *Allomorphy*

Similar homogeneous syntagms are generated by rules of allomorphy. An alternation can be thought of as a paradigm of allomorphs comprising one or

more derived (M) allomorphs and one basic (U) allomorph. The contexts across which the allomorphs are distributed form another, correlated paradigm comprising one or more specified (M) environments, defined in phonological, morphosyntactic, or lexical terms, and an elsewhere (U) environment. This being so, the effect of rules of allomorphy is to assign marked allomorphs to marked contexts and unmarked (basic) allomorphs to unmarked (elsewhere) contexts. For examples, see Andersen (1980).

1.6 *Allophony*

It is obvious that rules that assign allophonic features work exactly the same way. To take the most pedestrian of examples, in (some varieties of) American English, for instance, vowels are specified as [+nasal] (M) before [+nasal] (M) consonants and [–nasal] (U) elsewhere (U). And velar plosives are assigned different degrees of the [front] feature (M for velars) before [front] vowels, but none (U) elsewhere (U). Similarly, when a distinctive feature is neutralized, and its opposite values are assigned in complementary distribution: in Russian, for example, the voicing distinction is neutralized in any obstruent followed by another obstruent or by a phrase boundary, a word boundary, or an enclitic boundary. In these environments obstruents are specified as [+voice] (M) when the next following segment is [+voice] (M), but [–voice] (U) otherwise (U), that is, if the next segment is a [–voice] obstruent or a sonorant or a vowel and before pause.

1.7. *Conclusion*

We are led to conclude that in ritual, in the thematic and plot structure of texts, in lexical, grammatical, and phonological parallelism, in the grounding structure of narrative discourse, and in the regularities of morphosyntax, morphophonemics, and phonology, syntagmatic structures are commonly formed in accordance with one and the same Principle of Markedness Agreement.

The manifestation of this principle in allophonic rules was observed by Schachter in (1969). I myself drew attention to the phenomenon in Andersen (1968) and called it “markedness assimilation”. But it seems it was first discovered by František Mareš, who proposed the generalization that in all allophonic change, phonemes develop marked allophones in marked environments (1952).

2.0 ***Markedness in diachrony***

Mareš’s generalization, whether one calls it markedness assimilation or not, is evidently the dynamic counterpart to the synchronic markedness

agreement observed in established rules of allophony. It is natural to ask if the actualization of other kinds of linguistic change can be understood as similarly governed by the Principle of Markedness Agreement. If so, we should be able to observe, in the progession of such changes, that as a linguistic innovation gains currency and is generalized in a language, the process of actualization conforms to the Principle of Markedness Agreement in that the innovated element is favored first of all in marked environments, if the innovated element is marked, but in unmarked environments if it is unmarked.

In fact, it has been known for some time that many kinds of linguistic innovation are actualized, if not in precisely this manner, then at least in part along such lines.

2.1 *Phonology*

In phonology, for instance, allophonic fortition occurs earlier in stops (U) than in fricatives (M), earlier in coronals (U) than in back consonants (M) (Andersen 1972:17; cf. Zabrocki 1934, Back 1989). In velars, palatalization occurs earlier in stops (U) than in fricatives (M), earlier before high (U) than before non-high (M) vowels, earlier before unrounded (U) than before rounded (M) vowels, earlier directly contiguous to the conditioning vowel (U) than across another segment (M), earlier before (U) than after (M) the conditioning vowel, earlier in the narrow domain of the syllable (U) than across syllable boundaries (that is, in the wider domain of the word) (M), earlier in stable environments (U) than in alternating environments (M) (cf. Timberlake 1981, Andersen 1998).

2.2 *Case marking*

In morphosyntax we find similar examples. Timberlake (1977) investigated the Russian change in case marking of direct objects in negative sentences. He found that the older use of the genitive is giving way to the use of the accusative (which is regular in affirmative sentences) in an ordered progression such that the accusative occurs earlier and more widely in proper

	Unmarked categories	Marked categories
(a)	Proper	Common
(b)	human	non-human
(c)	animate	inanimate
(d)	concrete	abstract
(e)	singular	plural
(f)	definite	indefinite

Table 4.

nouns than in common nouns ((a) in Table 4), earlier in nouns denoting humans than in other nouns (b), earlier in animates than in inanimates (c), earlier in concrete nouns than in abstract nouns (d), earlier in singulars than in plurals (e), earlier in definite than in indefinite noun phrases (f). Timberlake was able to subsume these different categories under the abstract semantic label of individuation. But in addition to this substantive characterization, he identified the features favoring innovation as unmarked (p. 162), as in Table 4.

2.3. *Morphosyntax*

In my own study of the development of the Polish enclitic auxiliary paradigm into bound person-and-number markers (1987, 1990), I observed that agglutination of these markers to verb stems occurred earlier in the present tense (of *być* "be") than in the preterite ((a) in Table 5), earlier in the (present or preterite) indicative than in the conditional mood (b), earlier in the first persons than in the second persons (c), earlier in singular than in plural forms (d); the initial displacement of the clitics from Wackernagel's position as they (statistically speaking) drifted rightward in sentences occurred earlier in main clauses than in subordinate clauses (e), earlier in asyndetic clauses than in clauses with a conjunction (f), and earlier when the initial constituent was a lexical NP than when it was a pronoun (g); the concatenation of the earlier enclitics with the former participles, which now are past-tense stems, occurred earlier in main clauses than in subordinate clauses (e), earlier in prose

	Unmarked categories	Marked categories
(a)	Present	Preterite
(b)	indicative	subjunctive
(c)	1st person	2nd person
(d)	singular	plural
(e)	main clause	subordinate clause
(f)	asyndetic	syndetic
(g)	lexical NP	pronoun
(h)	prose	poetry
(i)	expository	artistic
(j)	speech	writing
(k)	casual	formal

Table 5.

than in poetry (h), earlier in expository than in artistic prose (i), and is still more frequent in speech than in writing (j) and more common in casual than in formal style (k).

In Timberlake's study, the data presented a clear choice, in explaining the orderly progression of the change, between a substantive feature, the degree of individuation, and the formal principle of markedness. In the Polish development summed up here, by contrast, which is documented in much more detail, some of the substantive categories are mophological—(a) to (d), some involve features of information structure related to grounding distinctions—(e) to (g), some are genre categories—(h) and (i), one is a distinction between media—(j), and one, between styles—(k). The only generalization that these data will support is evidently that throughout this long drawn-out development, which started perhaps eight hundred years ago, and which is far from completed, unmarked environments have been hospitable to the three kinds of innovation mentioned here earlier than the corresponding marked environments.

2.4 *Different pragmatic motivation*

It is important, however, to distinguish types of change with distinct actualization patterns. In phonology, it has been known for some time that lenition and other obscuration innovations are favored by unmarked environments, whereas clarification innovations are favored by marked environments. Vowel reduction and syncope, for example, arise and gain acceptance first in casual styles, whereas diphthongization and epenthesis arise first in maximally explicit styles (see Dressler & Drachman 1977, Dressler 1980)

Also the established distinction between internally and externally motivated changes is important. Evolutive changes and contact changes appear to follow opposite paths or at least partly different paths of actualization. Romaine, for example, has shown that when *wh*-relativization was adopted into Scots English, it was established first in the most complex (M) styles and in the least frequently relativized syntactic positions (M) in the case hierarchy (1982). Similarly, Fischer, in her study of the accusative-*cum*-infinitive construction in English, has shown that this, too, was manifested in the most salient environments (M) first (1992).

These and similar differences in actualization can be understood in terms of the traditional distinction between grammatical system and usage rules—Coseriu's (1952, 1965) system and norms. If we assume there is a distinction in any speaker's grammar between an internally coherent, structure of productive rules and an additive system of usage rules, then the observed differences in actualization can be understood in terms of the source or motivation of different changes. In the internally motivated, evolutive change, perhaps, the usage rules are gradually adjusted to incorporate an innovation that is unmarked in relation to the productive rules of the core grammar, and which is first admitted to

unmarked environments; only as the innovation loses its novelty does it spread from unmarked contexts to marked contexts. In the externally motivated change, by contrast, usage rules are presumably directly modified to conform to the external model; the innovation is pragmatically motivated and occurs first in the most salient, most monitored, marked environments, from which it may spread, as it loses its novelty, to less salient, unmarked environments.

2.5 *Open questions*

There is much more that we need to learn about actualization, as the following example of lexical borrowing illustrates.

The often-cited English borrowings from Norman French, *beef*, *veal*, *pork*, etc., enter into obvious markedness relations with the native lexemes: the borrowed words for kinds of meat are marked in relation to the unmarked native words, in terms of which they are most naturally explicated; cf. Table 6.

Unmarked categories	Marked categories
Ox	*Beef*
calf	*veal*
pig	*pork*
sheep	*mutton*
deer	*venison*
swan	*cygnet*

Table 6.

In a comparable instance of borrowing, in the Spanish creole of Zamboanga in the Philipines, "where a Filipine and a Spanish-derived form participate in a marked vs. unmarked relation in the same contrast set, the Filipine form designates the marked category: it ... signifies lesser magnitude, shorter distance, worse evaluation, female sex, junior generation, or polarity" (Frake 1971). See Table 7.

Both in Table 6 and in Table 7 we are dealing with what must at first have been stylistic lexical variation. One can understand why in English the Norman borrowings would have been codified as, at first, upper-class, culinary terms. They are an example of "change from above", but their semantic specialization, it would seem, fully explains the modern-day markedness relations. In the case of Zamboangueño, one can correspondingly suppose that the codification of the Spanish borrowings for unmarked categories reflects the fossilized, positive, stylistic valuation of Spanish vocabulary. But why this positive valuation was associated first or only with the unmarked members of the diverse categories

mentioned in Table 7—Was this perhaps a change from below?—must remain an open question, at least for the time being.

2.6 *Conclusion*

In any case, it is clear enough from instances where there is adequate historical evidence, such as the Russian and Polish examples presented in Sections 2.2–2.3 above, that when an innovation is generalized across the

a. Zamboangueño adjectives of polarity, potency, and evaluation	
grande *“large”*	*dyútay* “small”
?álto *“tall”*	*pandak* “short”
lihéro *“fast”*	*mahinay* “slow”
kórre *“fast”*	*páta?* “slow”
mapwérso *“strong”*	*malúya* “weak”
?árde *“bright”*	*?amamalun* “dim”
?apretáo *“tight”*	*haluga?* “loose”
?agúdu *“sharp”*	*mapurul* “dull”
lisu *“smooth”*	*makasap* “rough”
sabróso *“tasty”*	*mata?ban* “tasteless”
dúlse *“sweet”*	*mapa?it* “bitter”
madúru “ripe”	*mihilau* “raw”
mánso “tame”	*ma?ilap* “wild”
buníto “pretty”	*?umálin* “ugly”
limpyo “clean”	*bulin* “dirty”
kláro “clear”	*lubug* “turbid”
*deréč*o “straight”	*tiku?* “bent”
balyénte “bold”	*mahuya?* “shy”
?umilde “modest”	*hambuk* “vain”
byého “old”	*báta?* “young”
nwébo “new”	*da?an* “old”
b. Zamboangueño nouns contrasting in generation, age, or sex	
táta/nána “father/mother”	*?anak* “son/daughter”
lólo/lóla “grandfather/-mother”	?*apu* “grandchild”
soltéro “bachelor”	*dalága* “unmarried girl”
plóres “blossom”	*putut* “bud”
?ohas “mature leaf”	*talbus* “young leaf”
c. Zamboangueño neutral pronouns, singular and plural	
yo “I”	*kanú* : *kitá* “we (EXCL) : (INCL)”
?éle “he”	*silá* “they”
d. Zamboangueño second person pronouns, degrees of respect	
?usté, ?ustédes “2SG, 2PL; polite”	*?ebós, kamó* “2SG, 2PL; familiar”
tu , bosótros “2SG, 2PL; neutral”	

Table 7.

grammatical, lexical, stylistic, and social categories of a language, this may occur as an orderly progression in which the only common denominator for the diverse categories involved is markedness.

There is hardly any way to understand this without assuming, first, that in the case of any successful innovation, the speakers—or a majority of speakers—are in tacit agreement regarding the value they ascribe to the innovative variant vis-à-vis its traditional alternative (cf. Andersen 1989b:23, 25). If they are not, the innovation will not gain currency.

Secondly, one must assume that in speakers' grammars all the different categories that are relevant to the generalization of an innovation are associated with one another in terms of markedness values.

Thirdly, one must assume that it is something like the proposed Principle of Markedness Agreement that allows the innovation to occur earliest in environments with equivalent markedness value and subsequently to gain ascendancy first in such contexts and then, as it loses its novelty, in the complementary contexts with opposite markedness value.

The big question in historical linguistics is how the individual speakers who acquire a community language can know or infer all the multifarious parameters of variation that they need to master in order to function as full-fledged members of the community.

It seems that the orderly progression of such well-documented changes as the Polish one I mentioned in Section 2.3 holds the answer to this question. The progression can be modeled as a series of step-by-step modifications of variable rules, and hence it presupposes the formation and existence—in each speaker's competence, at any time during the progression of the change—of a comprehensive network of association that readily relates unmarked terms with unmarked, and marked with marked terms across categories, in part without regard to the substantive character of the categories, in part, apparently, constrained by reference to the substantive content of some categories.

In supposing that such a network of association is part of every speaker's competence, let us acknowledge that we are not going beyond what has traditionally been assumed. For this has been the standard assumption of grammarians and linguists since antiquity. This assumption is implicit in the ancients' understanding of proportional analogy; it is explicitly described in the 1800s, for instance, by the great neogrammarian theoretician Hermann Paul (cf. [1881] 1970:26–27, 106–109); it is explicated by Ferdinand de Saussure's multidimensional mechanism of "rapports associatifs" (1916:252–263); and it was rediscovered—and restated in semiotic terms—by Roman Jakobson as the "'system of diagrammatization', patent and compulsory in the entire syntactic and morphological pattern of language" ([1965] 1971:357).

But by integrating this understanding with the proposed Principle of Markedness Agreement, I think we can take up the challenge Sapir posed in *Language*, when he insisted on the need to study the intuitional bases of speech and asked the rhetorical question, "How can we understand the nature of the drift that frays and reforms ... [grammatical] patterns" unless we study "patterning as such and the 'weights' and psychic [= cognitive] relations of the single elements ... in these patterns?" (1921:183).

Sapir's rhetorical question implies another question: How can we study "patterning as such" unless we have a theory of the "'weights' and psychic [= cognitive] relations of the single elements" in the patterns we observe? The hypothetical Principle of Markedness Agreement implies precisely such a theory, and it is my hope that in testing this principle we can follow Sapir's lead and gain a better understanding both of the relations among linguistic elements in grammatical space and of the role markedness values play in their selection, combination and concatenation—in synchrony as well as diachrony.

3. *An analytic account of markedness*

As I mentioned above (Section 0.2.3.), there is a need for a conceptual analysis of markedness which has not been filled by previous discussions of the notion. What I have in mind is not the sort of semantic analysis that will naturally develop out of the synchronic investigation of current (common-parlance) usage of the markedness words, which I advocated in Section 0.2.1. This will merely chart the wide range of understandings different linguists have of what markedness is, from the frankly vague notions of *marked* as "linguistically undesirable" or "descriptively costly" to such a precise, but arbitrary suggestion as Kean's "occurring in less than 10% of the languages of the world" (1980).

What is needed, rather, is an analysis that accounts for the intuitive understanding of markedness that is reflected in native speakers' language use (cf. Sections 1.3–1.7) and in linguistic change (Sections 2.1–2.6), and which accounts for the implicit grasp of markedness that is reflected in the ordering of morphological paradigms in various grammatical traditions and for the explicit descriptions of markedness by, for example, Arabic and Western grammarians (Section 0.3.2)—an analysis that accounts for these and other observed manifestations of the intuitive and reflective, implicit and explicit, object-linguistic and metalinguistic recognition of markedness by explaining how markedness fits into the relations among linguistic units and by clarifying the apparent, equal compatibility of the most various logical relations with the "Protean", asymmetrical relation that markedness is.

3.1 *The problem*

It is rather remarkable that so much of the standard literature on the notion of markedness has sidestepped the logical problem the notion poses. I do not wish to belabor this point, but it is hardly possible to appreciate this unless it is illustrated with some concrete examples and some mention of the ways this issue has been ignored in the literature.

If we examine the logico-semantic relations exemplified in the Zamboangueño lexeme pairs in Table 7 we find that they are of several kinds. Some of the lexical pairs are strictly speaking logical contradictories; such are "clean : dirty", "clear : turbid", "straight : bent", as well as the opposition in biological sex in "bachelor : unmarried girl" (an unmarried person is either a male or a female—tertium non datur). Other pairs are logical contraries; among these are "large : small", "tall : short", "fast : slow", "strong : weak", "tight : loose", "sharp : dull", "smooth : rough" (the predicate "not large" does not entail "small"—there is a third possibility, viz. "neither large nor small"); perhaps the language-specific pair "sweet : bitter" and the stages of maturation in "blossom : bud", "mature leaf : young leaf" belong here too. Still other lexical pairs are converse opposites: "father/mother : son/daughter", "grandfather/grandmother : grandchild". Contradictory, contrary, and converse relations are symmetrical in the sense that the assertion of either term entails the denial of its opposite; see the examples in Table 8.a, and contrast the asymmetrical, inclusive relation of hyponymy in Table 8.b.

And yet, in the formation of Zamboangueño, despite their logical symmetry, all these modes of opposition have been treated as asymmetrical.

In the categories investigated by Hopper & Thompson (Section 1.3), similarly, some binary oppositions are contradictory (e.g., telic vs. atelic, realis vs. irrealis), while others are contrary (e.g., agent high in potency vs. agent low in potency); still other categories are viewed as scalar (e.g., individuation) —though this can be analysed into a hierarchy of binary oppositions, as shown by Timberlake (1977) (cf. Section 2.2).

A similar mixture of contradictory and contrary binary and scalar categories come into play in the Polish example (Section 2.3), all of them intrinsically symmetrical, but all of them engaged in the attested diachronic processes on the basis of their asymmetrical markedness values.

3.2 *Roman Jakobson*

Despite the obvious logical diversity of lexical and grammatical relations, and despite the acknowledged invariable asymmetry of markedness, theoreticians who have attempted to explicate the notion of markedness have fairly

consistently tried to present it as a sui generis contradictory relation or to resolve it in terms of contradictory, that is, symmetrical oppositions.

This is true of all of Jakobson's published characterizations of markedness (cf. Andersen 1989a:23–24; Battistella 1996:19–34). In the earliest and most explicit of these Jakobson acknowledges the existence of contrary and

a. Exclusive relations					
i. Contradictory opposites (e.g., A = "male", B ="female")					
x is A	x is B	T—F	x is B	x is A	T—F
x is A	x is not B	T—T	x is not B	x is A	T—T
x is not A	x is B	T—T	x is B	x is not A	T—T
x is not A	x is not B	T—F	x is not B	x is not A	T—F
ii. Converse opposites (e.g., A = "parent of y", B= "child of x")					
x is A	y is B	T—T	y is B	x is A	T—T
x is A	y is not B	T—F	y is B	x is not A	T—F
x is not A	y is B	T—F	y is not B	x is A	T—F
x is not A	y is not B	T—T	y is not B	x is not A	T—T
iii. Contrary opposites (e.g., A = "wide", B = "narrow")					
x is A	x is B	T—F	x is B	x is A	T—F
x is A	x is not B	T—T	x is not B	x is A	T—T
x is not A	x is B	T—T/F	x is B	x is not A	T—T/F
x is not A	x is not B	T—T/F	x is not B	x is not A	T—T/F
b. Inclusive opposites (e.g., A = "flower", B = "rose")					
x is A	x is B	T—T/F	x is B	x is A	T—T
x is A	x is not B	T—T/F	x is B	x is not A	T—F
x is not A	x is B	T—F	x is not B	x is A	T—T/F
x is not A	x is not B	T—T	x is not B	x is not A	T—T/F

Table 8.

contradictory oppositions in meaning, but tries to explicate the asymmetry of markedness as a (contradictory) opposition, not in meaning, but in what the marked and the unmarked members of a grammatical opposition can be used to assert (in his words, *bezeichnen* "denote", *besagen* "signify", *ankündigen* "indicate", *signalisieren* "signal"):

> As he examines two opposed morphological categories, the linguist often assumes that these categories are equals, and that each of them has its own positive meaning: category I denotes A, category II denotes B; or, at least, I denotes A and II denotes the absence or negation of A. In reality the general meanings of correlative categories stand in a different relation to each other: if category I indicates the presence of A, category II does not indicate the presence of A, that is, it does not signify whether A is present or not. In comparison with the marked category I, the general meaning of the unmarked category II is limited to the absence of A-signaling. [My translation; HA]" ([1932] 1971:3; also [1936] 1971:29–30).

But then, when he describes the extensive "use of unmarked forms at the expense of the marked ones (e.g., infinitive for finite forms, present tense for preterite, second person for first ...)", from which one may infer that "the unmarked form represents both of the terms of the opposition in linguistic consciousness" ([1932] 1971:14), Jakobson tries to account for this by adding to the "signalization vs. non-signalization of A" a doubly contradictory relation allegedly implicit in all such oppositions. Thus, on one hand, in a pair such as *lioness* and *lion* (I choose these in lieu of Jakobson's examples, Russ. *oslica* f., *osel* m. "ass", which do not translate well), there is an opposition "signalization of 'female'" vs. "non-signalization of 'female'"; this explains why both *lioness* and *lion* can be used to refer to a female lion. But on the other hand, he says, there is an opposition "non-signalization of 'female'" vs. "signalization of 'non-female'", which explains why *lion* can be used both as a generic term and specifically in reference to a male lion. At this point in Jakobson's explication both the apparent simplicity of the account in the quotation above and the meaning of the ad-hoc term 'signalization' have been severely compromised. And what is worse, the multiple contradictories that have been posited shed absolutely no light on the markedness relations in such simple pairs as *countess* and *count* or *parent* and *child*, in which it is not true that both terms (say, *countess* and *count*) can be used to refer to the designatum of the marked term (a countess), nor that the unmarked term (*count*) can be used both to refer to a male count and as a generic term to refer to any count or countess without specification of biological sex.

Givón achieves as much precision, and with fewer words, when he credits the Prague school linguists with the discovery that "binary distinctions in phonology and grammar were systematically skewed or *asymmetrical*" and explains that "one member of the contrasting pair acted as the *presence* of a property, the other as its *absence*" [his italics; HA] (1990:946). Since Givon does not worry much about precise definitions, he can overlook the fact that the logical relation between presence and absence is contradictory, that is, symmetrical, and hence he does not have to face the logical problem of how a symmetrical relation can be "systematically skewed or asymmetrical".

3.3 *John Lyons*

Lyons (1977) is one of the few in recent times who have appreciated that most lexical "sense-relations", as he calls them, are logically problematic. In recognition of this he carefully separates his presentation of the logical modes of opposition (271–273) from the lexical relations and even introduces separate terminology for lexical relations in order to avoid using for them the standard terms of logic (279).

Thus he decides to reserve the term *antonym* for the contrary opposites in the lexicon and to call the contradictory opposites *complementaries*, because lexical opposites of both kinds differ from their logical counterparts by "manifest[ing] the property of polarity" (279), that is, they combine their logical symmetry with a kind of asymmetry, one term of each such opposition being "positive", the other, "negative". (Lyons does not notice that the terms *positive* and *negative*, too, form a symmetrical opposition.) He notes that the asymmetry of such binary oppositions is manifested in a number of ways. One of these is the irreversible binomials, first described by Malkiel (1959), in which the positive opposite usually precedes its negative counterpart when the opposites are conjoined, as in *men and women*, *ducks and drakes* (contradictories), *good and bad*, *high and low* (contraries), *buy and sell*, *parents and children*, *east and west* (converses), *up and down, right and left* (directionals) (Lyons 1977:276). Another manifestation is the common development (or derivation) of generic terms from positive terms or vice versa. For instance *duck* is both the contradictory opposite of *drake* and the hypernym of *duck* and *drake*, just as *lion* is both the contradictory opposite of *lioness* and the hypernym of *lion* and *lioness*; similarly, *wide* serves both as the contrary opposite of *narrow* and as the generic adjective for the dimension of *width*, *long* is the contrary opposite of *short* as well as the generic adjective for the dimension of *length*, and so on and so forth.

But Lyons's move to establish new, specialized terminology to distinguish the lexical "sense-relations" from the logical modes of opposition is either just a cosmetic cover-up for a reluctance to analyse the "sense-relations" into their constituent logical relations, or it reflects a failure to recognize the need for such an analysis. Interestingly, his discussion of the "polarity" of contradictories and contraries (275) is divorced from his presentation of hyponymy (*cow* : *animal*, *rose* : *flower*, *buy* : *get*, *crimson* : *red*, 291–301) as well as from his discussion of markedness ("semantic marking", 307–311). If these matters had not been separated in the exposition, but their presentation integrated, it might have been clearer that the defining feature of Lyons's "property of polarity" is that exclusive oppositions (of contradiction, contrariness, converseness, and direction) are accompanied by (simultaneously combined with) the asymmetry that is characteristic of the inclusive relation of hyponymy.

3.4 *Analysis*

This is unquestionably a topic that calls for the clear distinction between logical and linguistic relations Lyons drew. But rather than Lyons's separation of the two, the topic calls for the use of the language-independent concepts of logic as tools in the analysis of semantic and other relations in grammar. In the

following I will try to show that the seemingly paralogical character of linguistic relations—the peculiar fact that the linguistic counterparts of the symmetrical modes of opposition are asymmetrical—reflects a hierarchical order among the modes of opposition of normative logic that may be rooted in a universal strategy applied in the cognition of all such relations.

3.4.1. Consider first the difference between contradictories and contraries. From the point of view of normative logic, there is an absolute divide between the two, defined by the entailment of negation (cf. Table 8.a.i–ii)). In reality, however, many relations that are in principle contradictory are practically contrary. For example, strictly speaking every person is either married or unmarried (normatively, tertium non datur). But real life presents us with intermediate states and borderline cases—the union that has not been consecrated, the marriage that has not been consummated (or, in some cultures, which has produced no issue), the spouse that has been widowed or abandoned (and may or may not be at liberty to marry again)—which persuade us to recognize a looser, essentially contrary understanding of the distinction “married” vs. “unmarried”, that is, to acknowledge that there are people who are not ‘really’ one or t’other, but somewhere in between. The contradictory opposition “married” vs. ”unmarried” does not thereby disappear. It remains as a stricter, more principled, or technical sense of the distinction “married” vs. “unmarried”; cf. Figure 1 (a) and (b). If we wish, we can analyse the contrary opposition into a bundle of contradictories, each defined by a separate criterion (“consecrated” vs. “non-consecrated”, “consummated” vs. “non-consummated”, etc.).

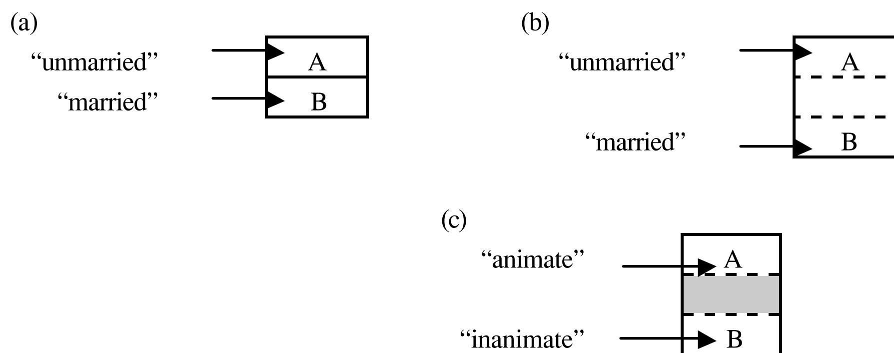

Figure 1: Contradictory opposites construed (a) as contradictory and (b) as contrary; (c) a contrary view of a strict contradiction.

Examples such as this, and they are common, show that for a practical logic, the contradictory and contrary modes of opposition are not miles apart, but

closely related. Indeed, from a practical point of view, true contradictories appear as a species of contraries—they are just those exclusive distinctions in which no borderline case or intermediate state, no 'tertium' is conceivable; cf. Figure 1, (c). This special class probably includes as a subspecies all true converse oppositions (such as the divalent "parent of" vs. "child of") (Lyons 1977: 279–280). Directional opposites (e.g., "up" vs. "down", "in" vs. "out") (Lyons 1977:281–282) are another subspecies. They may be genuinely contradictory (witness the directions of a moving elevator), but are generally contrary (consider "look up" vs. "look down").

3.4.2. Similar considerations may clarify the relationship between exclusive modes of opposition (cf. Table 8 (a)) and inclusive ones (as Table 8 (b)). In normative logic, these are entirely distinct modes of opposition. The exclusive opposites are intrinsically symmetrical, whereas the inclusive ones are intrinsically directed, asymmetrical.

But recall the lexical examples above (Section 4.2) in which the "positive" term (e.g., *duck, wide*) functions both as the contradictory or contrary opposite of the "negative" term (*drake, narrow*) and as the hypernym subsuming both opposites. The language historian knows that in some instances of this kind, a generic term (e.g., *duck, dog*) has been extended to serve as "its own hyponym" ("female duck", "male dog'), as Lyons puts it in his discussion of *dog* and *bitch* (1977:308), while in other instances a specific term has been extended to serve as cover term for itself and its opposite; this is certainly the way Sp. *padres* "parents" is related to Sp. *padre* "father" vs. *madre* "mother" and *hermanos* "siblings", to *hermano* "brother" vs. *hermana* "sister".

Characteristic of all such examples is that one of the terms of an opposition is construed both as superordinate and subsumed, inclusive and included, cf. Figure 2. But in this inclusive construal the contrary or contradictory opposition does not disappear. It remains easily accessible to analysis in terms of the concepts of normative logic.

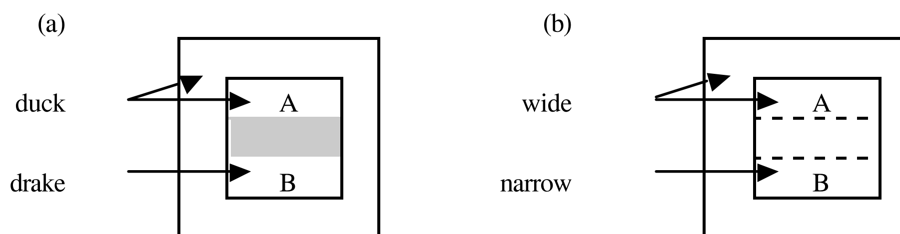

Figure 2: The construal of (a) a contradictory opposition and (b) a contrary opposition as inclusive relations

The normatively contradictory oppositions of grammatical categories work precisely this way, as Jakobson endeavored to clarify (cf. the quotation in Section 3.2 above). Typically, for example, in the oppositions of present tense vs. preterite, the present tense may be used to refer not only to events contemporary with the speech act, but also to events prior to it (the 'present historical'), that is, its reference potential includes both the actual present and its opposite, the actual past, or, to put it differently, it serves as a generic historical tense.

Phonology and morphophonemics abound in closely parallel examples. Any simple alternation between two allomorphs, for instance, is based on a pair of alternants in complementary distribution, that is, with logically contradictory privileges of occurrence—at least in the static view; e.g., Eng. /rayd-/ ~ /rowd-/ "ride", /nayf-/ ~ /nayv-/ "knife". But when there is a synchronic variation between two such alternants, and one views them in dynamic terms, one of them in effect encroaches on the other's privileges of occurrence; cf. the variation /strayv-d/ ~ /strowv-Ø/ "strive; past" or /skarf-s/ ~ /skarv-z/ "scarf; pl.". That is to say, the privileges of occurrence of one alternant include those of its opposite, and in the course of time, this 'generic' alternant may entirely supplant its covariant.

3.4.3. With this last example, perhaps, we come close to the source of the asymmetry of markedness. In terms of normative logic, there is nothing asymmetrical about the two complementary sets of environments to which two covariant allomorphs are assigned. But if they are initially construed as an inclusive opposition, then we can understand why one of the allomorphs would be allowed to substitute for the other and might in time completely replace it.

Similarly with the contradictory and contrary oppositions of grammatical and lexical semantic categories. In and of themselves these form perfectly symmetrical oppositions. But it appears that they are initially construed as inclusive relations. Hence one term in every such opposition is cast as the superordinate, potentially generic, representative of both the terms.

This is true even of those normatively symmetrical oppositions in which it is practically inconceivable (to the speakers of a given language) that the reference potential of one term could include that of the other (e.g., "count" vs. "countess", "parent of" vs. "child of", "east" vs. "west"). Such oppositions appear to be construed first as inclusive, which makes the relation between the two opposites asymmetrical and casts one of the opposites as superordinate. The superordinate term remains a merely virtual hypernym, for there is no use for its generic reference potential. In Hjelmslev's words, such oppositions form inclusive relations in which part of the reference potential is blank (1939:87; see

further Section 3.4.4 below). But the inclusive term retains its status as the superordinate, unmarked term, as witnessed, among other things, by its place in irreversible binomials and perhaps by its greater derivational potential. And its virtual status of hypernym may in time be realized through linguistic innovation, as in the case of Sp. *padres* "fathers" > "parents" and Eng. *fathers* "fathers" in *fore-fathers* "ancestors"; cf. (12).

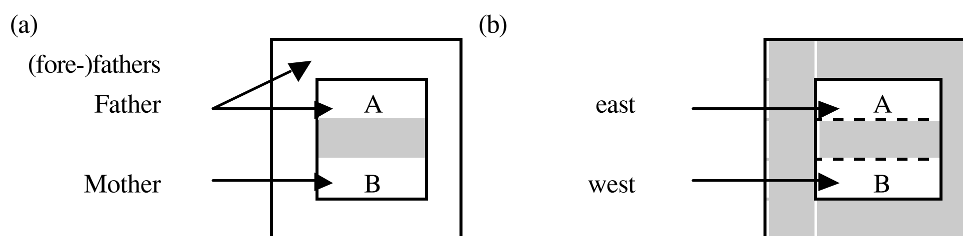

Figure 3: True contradictory opposites construed as inclusive relations, (a) with the generic reference potential realized, (b) a conversity with the generic reference potential latent

3.4.4. In the past, several attempts have been made to explicate markedness in terms of cognitive psychology.

Trubetzkoy, who originated the notion of markedness in phonology (Jakobson 1985:162), was the first linguist to draw the parallel between the distinction marked vs. unmarked and the figure–ground relation of Gestalt psychology (1936). Since then, especially in more recent years, the figure–ground concept has been invoked many times, either directly (e.g., Greenberg 1966:60, Wallace 1982, Givón 1990:947) or through the kindred notions of prototype theory (cf. Lakoff 1987:59–61). This cognitive perspective has been very useful in suggesting the source of the asymmetrical relation between marked and unmarked opposites. But it has done nothing to clear up the mystery of how this asymmetry is imposed on the logically symmetrical modes of opposition, not only the privative (contradictory) ones Trubetzkoy acknowledged, but also other binary distinctions, contrariety, converseness, and direction.

Here I have sketched an account that clears up this mystery, so to say, in three moves.

First, instead of thinking of markedness as an asymmetry that is imposed on other modes of opposition, with which it is essentially incompatible, I hypothesize that markedness arises in the initial cognition of any and all distinctions thanks to the inherently asymmetrical, inclusive relation that obtains between any concept that is formed (M) and the conceptual space that surrounds it (U).

Secondly, from the cognitive priority of inclusion follows its logical primacy. It is only in a subsequent step of analysis that a concept is cognized either as simply included (in linguistic terms, as a hyponym)—in which case the conceptual space that surrounds it is formed as a correlative inclusive, superordinate concept, e.g., [*flower* [*rose*]]—or it is cognized as one of the terms of an included exclusive opposition. In the latter case, some of the surrounding conceptual space may be formed as a hypernym—e.g., [*duck* [*duck* : *drake*]], [*wide* [*wide* : *narrow*]]—or, if it does not correspond to any experience, it may remain blank—[Ø [*east* : *west*]].

Thirdly, I hypothesize that contraries are cognitively prior and logically primary in relation to contradictions. This means that true contradictions are cognized as a species of contraries in which the intermediate area between the two opposites is not supported by experience and hence is not conceptually formed, but remains virtual.

The first of these moves has roots in the thesis of Lévy-Bruhl (1910, 1922), the French anthropologist who was the first to discover the peculiar fact that in ritual, occasionally, one of two symbolic opposites may substitute for its counterpart, a phenomenon for which he coined the term "participation". The illogical character of this phenomenon, which is in open defiance of the law of contradiction, led Lévy-Bruhl to suppose that this observed peculiarity of primitive cultures reflected a prelogical stage of cultural development, and he formulated a theory of the primitive mind that seemed attractive and stimulated discussion for some time, but was soon abandoned (also by Lévy-Bruhl) in the face of evidence that the human capacity for logical thinking is the same in all cultures (Lloyd 1966:3–6). Instead of Lévy-Bruhl's cultural-historical interpretation of "participation" I have here suggested a universal of concept formation, which is much more in agreement with the evidently universal presence of markedness. If markedness is "prelogical", it is so in the sense of being 'preanalytic'.

My second move exploits Hjelmslev's insight that "l'exclusion ne constitue qu'un cas spécial de la participation, et consiste en ceci que certaines cases du terme extensif ne sont pas remplies", that is, "exclusion is merely a special case of inclusion, in which certain of the unmarked term's areas [of manifestation] remain blank" (1939:87). This is what is illustrated in Figure 3. Note that this move logically presupposes the primacy of inclusion. Nothing in experience would motivate an analytic progression from a symmetrical, exclusive relation to an asymmetrical, exclusive one. But the inclusive construal of exclusive relations is easily understood as the result of an initial cognitive "overshoot".

The third and final move takes Hjelmslev's understanding of the relationship between inclusion and exclusion one step further and reveals a

similar relationship between the two chief modes of exclusive opposition, contrariety and contradiction. A contradictory relation can be cognized inside a contrary one, but not vice versa.

These three moves have a number of presuppositions, corollaries, and consequences that cannot be developed here (a few are mentioned in Andersen 1989a: 38–40), but which I hope to return to elsewhere. But to conclude this sketch, let me draw attention to the internal consistency of this account of the modes of opposition, in which a traditional taxonomy of these such as Table 9.a is superseded by the consistently inclusive taxonomy in Table 9.b. Note in Table 9.b how the analytic progression from I. to i. reflects the primacy of inclusion at every single step. In other words, on this metalevel, inclusion is the unmarked mode of opposition, exclusion, the marked, contrariety is unmarked in relation to contradiction, and contradiction, in relation to conversion.

a.	b.
I. inclusion	I. inclusion
II. exclusive oppositions	A. exclusion
A. contrariety	1. contrariety
B. contradiction	a. contradiction
C. conversity	i. conversity

Table 9.

3.5 *‘Markedness’ and Markedness.*

Before we leave this topic it will be useful to confront the theory of Markedness that has been developed here with some of the most widely accepted characterizations of the notion. I will consider just a handful of these: (i) the traditional characterization that comes closest to the understanding that has been presented here (Section 3.5.1); three *manifestations* of Markedness that have often been identified as ‘markedness’, (ii) the (iconic) reflections of Markedness in expressions (Section 3.5.2), (iii) the syntagmatic manifestations of Markedness (Section 3.5.3), and (iv) differences in relative text frequency (Section 3.5.4); and, finally, (v) the frequency of grammatical phenomena in cross-linguistic comparison (Section 3.5.5).

3.5.1 *Markedness as semantic complexity*. Markedness has been analysed here as the distinction in semantic depth that is proper to inclusive relations such as hyponymy. In hyponymy, the hyponym (e.g., “rose” (M)) is semantically more complex than its hypernym (e.g., “flower” (U)), the hyponym has more semantic features (i.e. greater intension or semantic depth) than its hypernym, and correspondingly the hyponym has lesser reference potential (lesser extension or

semantic breadth) than its hypernym. This is the relation that is commonly (a priori) extended both to contrary opposites ("wide" vs. "narrow") and to contradictory opposites ("duck" vs. "drake"), whereby the unmarked term of such logically symmetrical relations, too, may have or may acquire greater reference potential (extension) than its marked opposite (see Section 3.4.3).

Although this understanding of Markedness is based on an analysis of (binary) oppositions, it can easily be extended to clines, the scalar differences that are asymmetrical. Since clines are intrinsically asymmetrical, any two values on a cline are in a relation of inclusion, and consequently points on a cline evince different degrees of Markedness. Although scales whose polar values are contraries are based on exclusive, symmetrical oppositions with equipollent terms, the imputation of Markedness values to their opposites enables us to view them too as clines.

Semantic complexity and similar notions have been recognized as the defining criterium for markedness by many investigators since Trubetzkoy and Jakobson, e.g., Lyons (1970:307), Shapiro (1983:79), Chvany (1985:248), Givon (1990:946), Battistella (1996:56). But note that semantic complexity is logically characteristic only of the relation of true inclusion. such as hyponymy. The terms of exclusive relations are logically equally complex. It is only thanks to the fact that they are cast (a priori) in terms of inclusion that they appear not to be equipollent.

3.5.2 *Markedness reflected in expressions.* The first manifestation of Markedness mentioned in Givon's account (1990:946) is what he calls "structural complexity": "the marked structure tends to be more complex—or larger—than the corresponding unmarked one". Good examples might be Eng. *female* vs. *male* or *woman* vs. *man*, where the complexity in expression mirrors that in content. It is not clear whether Givón's statement distinguishes between meaning (content) and form (expression) or conflates the two. But to the extent that it refers to form (expression), Givón's statement obviously calls for significant hedging. A "larger structure" reflects the marked term of an opposition only provided there is an iconic relation between content and expression—which is not always the case—and, furthermore, only if such an iconic relation does not reflect some other difference between the terms of the opposition. Consider, for example, the Russian polarity adjectives *n'íz-k-ij* "low" (M) vs. *visók-ij* "high" (U), *bl'íz-k-ij* "near" (M) vs. *dal'ók-ij* "distant" (U), *úz-k-ij* "narrow" (M) vs. *širók-ij* "wide" (U), *m'élk-ij* "shallow" (M) vs. *glubók-ij* "deep" (U), where the longer, dissyllabic stem of each pair correlates not with the marked term, but with the term that denotes the unrestricted (typically greater) extension in space.

Lyons speaks about the complexity of expressions as "formal marking" (1977:305), and this notion figures prominently as "constructional iconicity" in morphological naturalness theory (Mayerthaler 1981) and is dubbed "structural markedness" by Croft (1990); cf. also Jakobson (1939, 1965), Greenberg (1969), Haiman (1980). There is undoubtedly a universal tendency for (semantic) markedness values to be(come) reflected in differences in the size of expressions. But evidently Markedness is only one of several dimensions of content that can be represented iconically by the relative size (or complexity) of expressions. If we wish to clarify this area of iconicity between meaning and sound, we need to keep the notions of Markedness and size or complexity of expression distinct.

3.5.3 *Markedness manifested in syntagms*. Just as Markedness may be reflected iconically in simple and complex expressions, so it may be reflected in syntactic properties. Typically, the marked term of an opposition has narrower privileges of occurrence than its unmarked counterpart. One obvious consequence of this is a difference in their relative text frequency, as we will see in the next section.

Here I will mention two principles that govern the regular manifestation of Markedness in sequences. The first of these applies specifically when members of one and the same opposition are concatenated; it sequences them, with some regularity, in the order unmarked–marked. This was observed first by Malkiel in his study of irreversible binomials (1959), and it was acknowledged as a significant manifestation of Markedness by Lyons (1977:276; cf. Section 4.3 above). There appears to be an analogous sequencing regularity in phonology: in diphthongization (more precisely, in primary diphthongization), the opposite values of a distinctive feature come to be juxtaposed in the order unmarked–marked. In earlier work I ascribed this to a 'Principle of Intra-Segmental Variation' informally dubbed the 'principle of unmarked beginnings' (Andersen 1972:23, 43, and passim).

The other prominent syntagmatic manifestation of Markedness is the Principle of Markedness Agreement, the favoring of combinations or concatenations of different features that are homogeneous in Markedness value. This was illustrated above with examples from diverse levels of grammar, ranging from text structure through grammatical agreement to allophonic variation (Sections 1.2–1.7).

In Chapter 1 I characterized the Principle of Markedness Agreement in purely descriptive terms, noting that it produces maximally orderly sequences (see also Andersen 1991). One can imagine that this orderly distribution of default category values to some extent facilitates speech processing, allowing attention to be focued on the meaningful variables.

In addition to these, there are several other sequencing principles that may be stated in terms of Markedness, among them Behagel's laws and the principle that sequences modifiers according to their "essentiality to the head" (Nida [1943] 1964:59) and affixes according to their category affinity (Jakobson [1957] 1971b:146), or "semantic relevance to the meaning of the stem" (Bybee 1983).

3.5.4 *Markedness manifested in text frequency*. In previous discussions of the relation between markedness and frequency, it has often been unclear whether frequency is considered a symptom of Markedness or the source or cause of markedness, and some linguists have simply identified frequency with markedness (cf. Section 1.0). In Greenberg's 1966 study, relative text frequency was identified as one of the most widely attested and reliable criteria of markedness, but Greenberg saw that the differences in frequency often are "merely resultants" of diachronic tendencies, and in the end he conceded that "frequency is itself but a symptom and the consistent relative frequency relations which appear to hold for lexical items and grammatical categories are themselves in need of explanation" (1966:70).

Frequency is one of the three characteristics of markedness mentioned by Givón: "The marked category (figure) tends to be less frequent, thus cognitively more salient, than the corresponding unmarked one (ground)" (1990:947). Note how Givón here establishes the link between frequency and saliency, but sees no need to clarify the relation between markedness and frequency. Frequency is simply part of his 'cluster-definition' of markedness, just as it is of Croft's (1990).

The theory of Markedness that has been developed in this paper views Markedness as in principle independent of text frequency, but explains why some differences in relative frequency arise as a natural consequence of differences in Markedness: since marked terms have lesser reference potential (or more narrowly defined privileges of occurrence) than their unmarked counterparts, their frequency is lower. This is true not only of the terms of logically inclusive oppositions, but also of the terms of exclusive oppositions to which the difference in semantic depth proper to inclusive relations has been imputed a priori. Where there is a correlation between Markedness and text frequency, the latter is a manifestation of the former—that is, relative text frequency is an epiphenomenon.

This does not mean that learners of a language may not infer Markedness values from observed differences in frequency, or that a linguist should not form hypotheses about Markedness values on the basis of frequency observations. But it should be recognized that relative text frequency is determined by a

number of factors, not least the practical, conventionalized communicative needs of speakers. Hence, whatever the Markedness relation between, say, Aorist and Perfect, in some language, or Imperative and Optative, there may not be any clear-cut difference in relative frequency between them, or they may occur with different frequencies in different text types or in different styles. The speakers of a language may have more reliable criteria for Markedness values than the more or less obvious differences in frequency—not least, presumably, those innate assumptions about the internal coherence of grammatical systems which we linguists hope eventually to discover. Furthermore, in considering any putative correlation between Markedness values and relative frequency the historical linguist should envisage the possibility that reanalysis may entail a shift in Markedness values, and that such a shift cannot be reflected in usage immediately, but can only emerge gradually, as the usage rules of the language are adjusted to the underlying system.

If one wishes to understand synchronic variation or diachronic changes in the correlation between Markedness values and relative text frequency, then it is essential to keep the two distinct, and it is totally counterproductive to define one in terms of the other.

3.4.5.5 *Markedness in cross-linguistic comparison*. Since Roman Jakobson observed that unmarked categories are more widely distributed in the world of languages than the corresponding marked ones (1941), cross-linguistic comparison has been used as a source of indications about the markedness of language particular categories. But the words *unmarked* and *marked* have also been used to characterize language categories as more or less wide-spread in the currently known sample of natural languages.

As the concept of Markedness has been defined in this paper, it is understood as an intrinsic characteristic of linguistic oppositions, as values speakers impute to the terms of any and all oppositions in the process of grammar formation. Surely no great harm can come from using the word *markedness* about the linguist's evaluation of the relative unusualness of structural features among the languages we know about. But there may be some advantage, at the very least some pedagogical value, in reserving the words *markedness*, *marked*, and *unmarked* for terminological use. They are certainly not necessary when one describes the cross-linguistic frequency of linguistic phenomena. These can be characterized perfectly well with such honestly impressionistic words as *infrequent*, *uncommon*, *unusual*, or *rare*, or better even—whenever this is possible—numerically with reference to a precisely defined language sample.

4 *Conclusion*

I wanted to make two points in this paper. The first was to show that Markedness, although it is mostly thought of as a synchronic property of speakers' grammars, is a significant conditioning element in the progression of linguistic change. The second was to clarify to some extent how Markedness is related to the diverse modes of opposition on which it appears to be imposed, and to ground the phenomenon independently of the level of observation.

As for the second of these points, it may not seem so important in and of itself. I personally consider it essential, as Chapter 3 of this paper demonstrates. But Markedness is such an easy concept to grasp that its proper logical analysis may perhaps, by some, be considered an academic issue.

In relation to my first point, however, the theory of Markedness takes on some importance. It is simple enough to make observations in the attested progression of linguistic changes, but without a theory of Markedness such observations cannot be conducted in a systematic way. The Principle of Markedness Agreement which has been proposed here provides a basis for making systematic observations of details in the actualization of linguistic changes of all kinds. More than that, if the cognitive underpinnings I have hypothesized for the principle are valid, such investigations will help us proceed to the next step: understanding how the category values of a synchronic language system both define its possible future changes and determine their gradual actualization, or—paraphrasing Sapir (cf. Section 2.6 above)—how the cognitive relations and the 'weights' of the individual elements of language patterns guide and shape the drift that frays and reforms those patterns over time.

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