

## NATURALNESS AND MARKEDNESS

### 0. *Introduction*

Recent developments in Naturalness (Nness) theory and in Markedness (Mness) theory document a remarkable convergence between these two theoretical approaches to synchronic and diachronic linguistics and point towards a de facto unification of these theories. This is the main topic of the following pages.

#### 0.1. *Terminology*

Any useful discussion of the concepts ‘naturalness’ and ‘markedness’ should begin by acknowledging that in casual usage the words *naturalness* (*more natural, less natural*) and *markedness* (*unmarked, marked*)—as well as *preference* (*more preferred, less preferred*)—may be practically synonymous.

In informal usage, these words are assigned common-sense interpretations and employed in accordance with the principle of cooperation (“You accept my informal terminology, and I will accept yours”). In this usage the distinctions between the concepts is naturally blurred.

Even in the technical literature on these concepts one often encounters the informal use of some of these terms side by side with the strict sense of the others—as when Mness is explicated with reference to (informally understood) naturalness (e.g. Trask 1999), or when Nness is explicated with reference to (informally understood) markedness or simply equated with markedness and preference (e.g. Dressler 2003, Orešnik 2001, 2004).<sup>1</sup>

Nonetheless, Nness and Mness are technical terms which have precise meaning within their respective theories. In those contexts they are used by linguists who are working with an explicit Nness or Mness theory and are developing and testing coherent ways of describing synchronic and/or diachronic data in terms of one or the other of these theories. In this paper I aim to be consistent in observing the technical senses of these terms.

#### 0.2. *Outline*

In the following pages I will contrast the main features of Nness theory and Mness theory (sections 1–2). Next I will turn to the most recent development in Nness theory, the contributions by Orešnik (2001, 2004), which aim to establish a syntax of Nness values; Orešnik’s findings will be compared with some well established patterns of

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<sup>1</sup> The practical synonymy of *naturalness*, *markedness*, and *preference* in casual usage might suggest it would be useful to discuss and contrast the three theories together. But despite some similarities which set Nness Theory and Preference Theory apart from Mness theory, there are important differences between them which would require a separate comparison of Preference Theory and Mness Theory. That may be the topic of a future paper.

Mness syntax (section 3). Section 4 will consider the use of Nness and Mness in accounts of variation and change. Section 5 sums up the comparison of Nness and Mness and shows that the phenomena Nness theory is intended to account for are better accounted for in terms of Mness theory. Section 6 offers some concluding remarks.

### 1.0. *Nness theory and Mness theory contrasted*

#### 1.1. *Nness scales*

In Nness theory all distinctions in language are viewed as scales. Entities on each scale differ in Nness, the end points of each scale being *more natural*, respectively, *less natural*.

The terms *more natural* and *less natural* might seem to imply the existence of standards of comparison: “X is more or less natural than Y”; thus Dressler (2003: 461). The theory does not define any such standards; what is actually compared are relative values on each Nness scale, all values being understood as natural (just as on a scale from more salty to less salty all points are salty).

The terms *more natural* and *less natural* make it possible to avoid the logically contradictory terms *natural* and *unnatural*; *unnatural* cannot seriously be predicated of anything in a ‘natural’ language (though the word occurs occasionally in theoretical writings). But at the same time the predicates *more natural* and *less natural* emphasize the ideas that Nness is relative, and that all distinctions in language are scalar, that is, logically contrary.

#### 1.2. *Mness relations*

Mness theory, in the Prague School tradition, was concerned mainly with binary oppositions. But evidence of Mness can in fact be observed in distinctions of all types in language, contradictory, contrary, converse, and orthogonal, binary and n-ary, scalar, hierarchical, and scalar-hierarchical (cf. Lyons 1977: 270–311; Andersen 2001b: 38–47). Entities that form a binary paradigm (an opposition) have opposite Mness values. Entities that comprise a scalar paradigm (a gradation or a cline) have different degrees of Mness. (Gradations and clines are sometimes misnamed ‘hierarchies’.) A hierarchical paradigm can be pictured as a branching diagram with two or more tiers of binary unmarked (U) and marked (M) branches, or represented by an equivalent string of bracketed, labeled, U and M opposites, e.g. [singular<sub>U</sub> : [plural<sub>U</sub> : dual<sub>M</sub>]<sub>M</sub>]; [[east<sub>U</sub> : west<sub>M</sub>]<sub>U</sub> : [north<sub>U</sub> : south<sub>M</sub>]<sub>M</sub>]; ... [one<sub>U</sub> : two<sub>M</sub>]<sub>U</sub> : three<sub>M</sub>]<sub>U</sub> : four<sub>M</sub>]<sub>U</sub> : five<sub>M</sub>]<sub>U</sub> : six<sub>M</sub>]<sub>U</sub> ... A scalar-hierarchical paradigm such as the whole numbers combines Mness scales such as a sequence of units or a sequence of tens (where each number is unmarked in relation to the following one) with the hierarchical relations of units, tens, hundreds, etc. (where each rank is unmarked in relation to the next higher rank).

The terms *unmarked* and *marked* are unfortunate in that they seem to imply an exclusive relation, contradictory (as in *married*<sub>U</sub> vs. *unmarried*<sub>M</sub>) or contrary (i.e. scalar, as in *happy*<sub>U</sub> vs. *unhappy*<sub>M</sub>). Most theoreticians of Mness from Jakobson (1932) to Battistella (1996) in fact have tried to explicate the unmarked vs. marked relation as a ‘contradictory, but asymmetrical relation’—which is logically incoherent

(contradictory relations being symmetrical). Andersen (2001b: 39–40) analyses the desperate logical straits of the explications in Jakobson ([1932] 1971b: 3, 14).

The paradox of the ‘asymmetrical exclusive oppositions’, in which one entity is often able to substitute for the other (e.g. present<sub>U</sub> ‘historical’ for past<sub>M</sub> tense, *lion*<sub>U</sub> for *lioness*<sub>M</sub>) was first resolved by Hjelmslev ([1939] 1970: 87). He pointed out that such substitutions are possible when the reference potential of an unmarked entity (e.g. generic time, a lion regardless of sex) *includes* the reference potential of the marked entity (past time, female lion); as a consequence of this inclusion, an unmarked term may function as the hypernym of its marked counterpart (e.g. *that lion is a lionness*) and substitute for it when no precision is called for (e.g. *We saw a lion with three cubs. It’s quite possible you’ll see lions around there*).

Hjelmslev further suggested that an exclusive opposition can be understood as an inclusive relation with some of its reference potential unutilized. Andersen (2001b; 42–45, with diagrams) develops this idea and demonstrates how logical contradiction can be understood as a special case of contrariety, and contrariety, as a special case of logical inclusion. The remarkable fact that Mness is manifested not only in logical inclusions (‘present tense’, *lion*), but also in exclusive oppositions, which are logically symmetrical (Lyons 1977: 308), as in the other examples above, is interpreted as evidence that all distinctions are cognized first as inclusions (e.g.  $y_M$  is a kind of  $x_U$ ), and that in the life of the individual and the community, these primitive asymmetries survive any later, more precise logical analysis.

### 1.3. Scales and relations

The inclusive (hyponymic) character of Mness relations explains three properties they have that are important to note. First, Mness distinctions are asymmetrical. Secondly, they can be non-scalar as well as scalar, exclusive as well as inclusive. And thirdly, an unmarked term can substitute for its marked counterpart. These are key properties of Mness relations that have been known since the earliest contributions to Mness theory (Hjelmslev 1928, 1939; Trubetzkoy 1933, 1958; Jakobson 1932, 1936), but which it has not been possible to offer an explicit, logically coherent account of till recently. The last of these properties, substitution, is crucial for an understanding of the dynamics of linguistic variation and change. See further below (section 4.2).

By contrast, (i) Nness relations are allegedly all scalar; (ii) they are logically exclusive and hence symmetrical; and (iii) the only explanation for the apparent fact that in change, more natural items tend to replace less natural items is an (implicit, inherently circular) preference for whatever is labeled *more natural*. We return to this matter below (section 5).

## 2. Values

### 2.1. Nness values

In language descriptions, Nness theory assigns Nness scales to any and all distinctions and by this means interprets (a) relations between content (meaning) entities, (b)

relations between expression (form) entities, and (c) mappings between content entities and their respective expressions.

The value ‘more natural’ is assigned, for instance, to greater morphosemantic transparency (compositionality), greater morphotactic transparency, the more invariant expression, more diagrammatic constructions, and biunique signs, whereas their opposites are considered ‘less natural’ (Dressler 2003). Mayerthaler (1981) offers a list of Nness scales, considerably expanded by Orešnik (2001, 2004).

A fundamental tenet of Nness theory is that all Nness scales and values are founded in extralinguistic reality, the physical or cognitive substratum of language (Dressler 2003). Orešnik (2004: 14–15) offers a list of ten criteria for identifying Nness values, including general items such as the principle of least effort (processing ease), prototypicality, cognitive simplicity, and relative frequency, several of which may be simultaneously relevant. Besides universal Nness values the theory recognizes that Nness values may be defined in relation to individual language types, as well as language-specific systems (Dressler 2003).

## 2.2. *Mness values*

Mness theory assumes that every member of a community ascribes Mness values to all the elements of the linguistic and other cultural systems that form his or her cultural competence. Specifically, in the grammar, Mness values are ascribed to paradigms of stylistic and sociolinguistic variants, to features of grammatical and lexical categories—and combinations of features—of content and of expression, as well as to the correlative environments that are referred to in rules of distribution. In addition, Mness values are assigned to diverse syntactic parameters, e.g. branching direction, as well as to techniques of synthesis.

Since Mness values are understood as cognitive values, they are not all determined by the physical factors of language processing, but may be ascribed with varying degrees of independence of the physical substratum of language.

Here it may be useful to recall the different origins of the Nness and Mness concepts. Unlike Nness theory, which had its beginnings in a fairly concrete approach to phonology (Stampe 1972), Mness was first recognized and thematicized against the background of cultural rituals observed and described by the anthropologist Lévy-Bruhl (1910, 1922); cf. Hjelmslev (1928: 257–259). The key aspect of Mness that was first identified was that of substitution (termed *participation*), to which we return in section 4.2. After Mness was (re)discovered by Trubetzkoy in 1930, Jakobson (1985: 162–163) immediately saw the importance of Mness for the fields of anthropology and history of culture; he pointed to examples of change in cultural values and emphasized that individual members of a culture may differ in the values they ascribe even to such fundamental categories as life and death. “I am sure many cultural phenomena ... which at first blush may appear identical differ precisely by the fact that what is marked in one system is evaluated as unmarked in the other.” (Letter to Trubetzkoy, 26 Nov. 1930; my translation, HA.) In accordance with this broad conception, the examples in

Andersen (2001b: 24–35) span the gamut from ritual to literary composition to phonetic variation.

Undoubtedly, there are Mness values that are universal on every level of structure—phonology, syntax, lexicon, pragmatics, cultural values and customs. The extent to which Mness values can be freely ascribed to elements of language remains an open question. But Mness shift, a change that typically occurs during the progression of a change, is a good example of the relative freedom with which speakers assign at least stylistic values to linguistic elements. Besides, systems may differ in the way identical categories are ranked hierarchically, alternative rankings resulting in different values. Mness values that are not universal are presumably ascribed in the process of grammar formation (or grammar revision) on the basis of inferences from observed usage. We return to this question in section 4.2.

Nness theory has made important advances in the inventorization of Nness scales and through the distinction of universal, typological, and language-particular conditioning of Nness values. These advances in Nness theory suggest how open questions regarding Mness values may be approached in the future.

### 3.0. *The syntax of values*

It is on the question of how values of different Nness scales or Mness categories are *combined* that the two theoretical approaches have converged in recent publications. This topic deserves a somewhat detailed exposition.

#### 3.1. *'Natural' Nness syntax*

In two recent monographs, Orešnik (2001, 2004) analyses a considerable number of concrete examples of variation and alternation in different languages and identifies regularities in the way values of different Nness scales are combined. The 2001 volume presents 258 examples drawn from some fifty languages. The 2004 volume presents 307 examples, all but a few of them from English.

The theoretical framework differs slightly, but significantly, between the two books, but the manner of presentation is the same. Orešnik presents his generalizations as “assumptions” and then works through the examples, one by one, demonstrating that—granted specific assumptions regarding the Nness scales that are relevant to each example—the generalizations are borne out, justifying a final “Q.E.D.”

A great strength of Orešnik’s approach is its explicitness, which demands the specification of whatever Nness scales are assumed relevant. Unfortunately the aim of providing the amplest possible exemplification has made it impossible to discuss alternative possible interpretations, which in some instances would have been desirable.

3.1.1. In Orešnik (2001: 12), the generalizations are formulated separately for content scales (“semantics”; abbreviated >sem, <sem, i.e. more natural, less natural with respect to semantic content) and expression scales (“coding”; abbreviated >sym, <sym). The chief generalizations regarding these are that in content or expression combinations, Nness values tend to be aligned, whereas in mappings between content

and expression, opposite values tend to be combined: (i) >sem tends to be associated with another >sem and <sem with another <sem; (ii) >sym tends to be associated with another >sym and <sym with another <sym; but (iii) >sem tends to be associated with <sym and <sem with >sym.

Here are a few examples.

*Combinations of content values.* In German, attributive adjectives are inflected, predicative adjectives are not. It is assumed that it is more natural for adjectives to be inflected for case than not, and more natural for adjectives to be attributive than predicative. Hence, if there is a difference between the use of inflected and uninflected adjectives in German such that one kind occurs in attributive and the other in predicative position, the assumptions predict that (1) it is the inflected use that tends to predominate in attributive position, and (2) it is the uninflected use that tends to predominate in attributive position (2001: 71). These and other Nness scales in other examples might have to be defined in relation to system or type specific values. However, Orešnik does not make reference to these levels of grammar organization, but tacitly assumes that universal Nness values apply everywhere.

*Combinations of expression values.* In French, the normal negation is *ne ... pas*, but *ne* occurs in fixed expressions (as in *il n'importe* 'it does not matter'). It is assumed that *ne ... pas* is a more natural coding of negation than *ne*, and that nonformulaic expressions are more natural than formulaic ones. Hence, if there is any difference between the two variants of negation such that one is used in formulaic usage and the other not, (1) it is *ne ... pas* that tends to be used in nonformulaic expressions, and (2) it is *ne* that tends to be used in formulaic expressions (2001: 49).

*The mapping between content and expression.* In English, lexical expressions like *once* and phrasal expressions like *four times* covary. It is assumed that the type *four times* is more natural (because more transparent) than the type *once*, and that any low number is more natural than any nonlow number. Hence if there is any difference between low and nonlow numbers in multiplicative numerals (plicative) such that one kind uses the pattern *four times* and the other the pattern *once*, (1) it is the nonlow numbers that tend to use the pattern *four times* and (2) it is the low numbers that tend to use to pattern *once*.

This is thought to illustrate iconic coding. However, this understanding of iconicity is difficult to accept. In an iconic relation one would expect an association between equal degrees of Nness in content and expression. It seems doubtful that the assumed association of more natural content with less natural expression and vice versa would be generally valid. But valid or not, where it is found it would surely not be iconic, but countericonic.

There will be more to say about this example in the next section.

3.1.2. In Orešnik (2004) the descriptive framework has been changed somewhat. Distinct terms and abbreviations for semantic and coding scales have been abandoned; instead, all scales are termed Nness scales (abbreviated: >nat, <nat). And at the same time, the straight, iconic mapping between content and expression just mentioned (in

section 3.1.1) has been tacitly adopted, so that it is now assumed that in all correlations between Nness values (in content–expression mappings as well as in content–content and expression–expression syntax) >nat is associated with >nat and <nat with <nat. Orešnik justifies this move by referring to Andersen’s (2001b) principle of Mness agreement, which will be described in section 3.2. This is a significant step in the rapprochement between Nness and Mness theory.

The radical change in Orešnik’s view of mappings between content and expression may entail revisions of some of the 258 examples in the 2001 book. Here we will look at the one example that is analysed in both volumes, the contrasting interpretations of the English plicative types *once* and *four times*. This example is instructive in several respects.

First of all, it highlights an unstated assumption behind Orešnik’s analyses.

In the 2001 version, the phrasal type *four times* is considered more natural (>sym) in terms of transparency. In the 2004 version, lower numerals are still more natural (>nat), but now it is the lexical type *once* that is more natural (>nat)—by the principle of least effort. The fact that the same data are now assigned a different interpretation points to an implicit, overarching assumption in Orešnik’s approach: synchronic states are assumed to be maximally natural. It is this assumption alone that dictates the choice of the transparency principle in 2001 and the economy principle in 2004 for the interpretation of the given *once* vs. *four times* variation.

But this assumption of maximal synchronic Nness is hardly defensible. If every system and subsystem were indeed maximally natural, what would motivate language-internal change, or “grammar-initiated” change, as Dressler (2003) calls it?

Secondly, the revised interpretation of the example agrees poorly with recent changes and synchronic variation in modern English.

The point with lexicalization is that it codifies ready-made expressions for what is frequently said. Hence, when *once* and the analogous *twice*, *thrice* were lexicalized (in Old English), the relevant Nness correlations were presumably between the lower numbers (>nat) and synthetic, lexical expressions (*once*, *twice*, *thrice*; >nat) and of the higher numbers with analytic, phrasal expressions (*four times*; <nat).

This lexicalization would be a manifestation of Nness in terms of economy of expression—which is the scale of values Orešnik (2004) ascribes to the modern synchronic state.

But the recent history of the language shows a development away from that state of affairs: *thrice* has been superseded by *three times* and *twice or thrice* by *two or three times*; synchronically, *twice* covaries with *two times*, *once or twice* with *one or two times*, and *once more* with *one more time*. If the phrasal expressions were ‘less natural’, why would they be innovated for the (more natural) lower plicatives, and why would they be so acceptable to the speakers of the language? On the surface of things, it might appear that the speakers are giving up economy of expression. But at the same time, the innovated phrasal expressions represent a gain in transparency. Hence, as far as universal Nness is concerned, there is no net gain to be seen.

And so it seems that a different approach is called for. For one thing, since the variation is part of the synchronic modern state, it cannot be left out of the picture. For another, if one wishes to understand the innovations that have given rise to the contemporary variation and the direction of that variation, one needs a dynamic conception of synchrony. We return to this issue in section 4.2.2.

### 3.2. *Mness syntax*

The idea that there would be constraints on combinations of Mness values has emerged independently in the work of several scholars since the first definition of Mness in the 1930s. Here I will focus on two of these constraints and mention some additional correlations.

#### 3.2.1. *Asymmetric mappings*

The first of the constraints was discovered by Brøndal (1943: 105), who termed it “compensation”. Since Brøndal it has become clear that asymmetric mapping is a more general principle, which is manifested in a number of relations in grammar, some of which are well known as syncretism, allomorphy, neutralization, and allophony.

Brøndal inferred his principle of “compensation” from mappings between content and expression: often fewer distinctions are made in a marked category than in the corresponding unmarked category. Some examples: In English personal pronouns, the ‘third person’<sub>U</sub> distinguishes three genders in the singular<sub>U</sub>, but none in the plural<sub>M</sub>; the ‘first person’<sub>U</sub> distinguishes two numbers, but the ‘second person’<sub>M</sub> does not. (Here I assume the traditional hierarchy [third<sub>U</sub> : [first<sub>U</sub> : second<sub>M</sub>]<sub>M</sub>]; see Orešnik 2004: 16.) In Russian, imperfective<sub>U</sub> verbs distinguish general<sub>U</sub> and prospective<sub>M</sub> (sub)aspects (traditionally ‘present’ and ‘future’ ‘tenses’: *rabotaj-u* ‘I work, I am working’ vs. *bud-u rabotat* ‘I’ll work, be working’), but perfective<sub>M</sub> verbs do not (*po-rabotaj-u* ‘I (will) do some work’). Such asymmetries often arise through observed historical developments. Thus French has a present<sub>U</sub> vs. imperfect<sub>M</sub> tense distinction which is fully productive in the indicative<sub>U</sub> mood, but in the subjunctive<sub>M</sub> is in a state of decline, the imperfect<sub>M</sub> being superseded by forms of the present<sub>U</sub> (Kragh 2006; see further section 4.2).

Homologous asymmetries can be seen in morphology and phonology. Syncretism is more widespread in marked than in unmarked categories (e.g. fewer distinct case forms in the dual than in the plural or singular). Allomorphy is often more in evidence in unmarked than in marked categories, that is, unmarked categories are more hospitable to subsidiary lexical or grammatical indexes (e.g. Russian nouns have three declensions in the singular, but just one in the plural). Marked phonological features are typically compatible with fewer subordinate distinctions than the corresponding unmarked features (e.g. fewer nasal than oral vowels). Unmarked phonemes often display greater allophonic variation than corresponding marked phonemes. See Greenberg (1966) and the analysis in Andersen (1989: 31–38).

### 3.2.2. *Mness agreement*

The principle of Mness agreement is used throughout Orešnik (2004) as the basis for combining >nat elements with >nat elements and <nat elements with <nat elements (see below). It was first described for poetic language (Jakobson 1960) and was then observed in phonology and termed markedness assimilation (Andersen 1973). It was subsequently generalized and interpreted as a cognitive preference for combinations and concatenations of elements that are homogeneous, that is, show agreement in Mness, which is typically in evidence when category values are assigned by rule. Mness agreement governs the structure of ritual and other customs, of narrative structure and of various poetic devices (e.g. grammatical parallelism, meter, alliteration, rime), the distribution of grammatical categories over foregrounded and backgrounded text portions and in grammatical concord and agreement, and the distribution of morphological variants in allomorphy and of phonetic features in allophony. Its ubiquity leaves little doubt that Mness agreement is fundamental to all types of human semiotic behavior; see Andersen (2001b: 24–30, especially 29).

Mness agreement is manifested as well in linguistic change, where the principle ensures the orderly progression of change events: innovated variants spread gradually, gaining acceptance first in environments with the same Mness value and only subsequently in environments with the opposite value. Typically, assimilatory (backgrounding, or reductive) innovations spread first to unmarked environments, whereas dissimilatory (foregrounding, or elaborative) innovations spread first to marked environments; see Andersen (2001b: 30–37, 2001c), the other contributions in Andersen (2001d), and the analyses in Andersen (2001a). The dynamic that drives such gradual developments, in which newer variants replace older variants, will be the topic of section 4.2.

### 3.2.3. *Mness reversal and Mness complementarity*

The investigation of Mness syntax leads to the identification of occasional examples in which normal Mness values are reversed, for instance, in a category that is combined with the marked term of a superordinate category, as well as examples that appear to breach the principle of Mness Agreement by showing a concatenation of elements of opposite Mness value. In the interest of brevity, these will not be discussed here. For some discussion and references, see Battistella (1996), Orešnik (2004: 19).

## 4.0. *Variation and change*

### 4.1. *Mness: static systems and diachronic correspondences*

Orešnik's account of the English plicatives (section 3.1) brings to mind a major criticism that was raised against Saussure's static conception of synchrony. This was one of several aspects of his theory that were early rejected by the Prague School. As Jakobson ([1929] 1971a: 19) pointed out, a synchronic description cannot ignore changes that are in progress in a language, for as a change proceeds, its intermediate stages are part and parcel of the language as variants with different stylistic or social value. Thus, variation is an essential element both of diachronic change and of

synchronic states. To acknowledge this fact, one needs a dynamic conception of synchrony, and one needs to include in any synchronic description whatever variation is observed.

So far synchronic variation has not been a major concern of Nness theory. The recent account of Nness theory in Dressler (2003), for example, makes no mention of variation at all. The reason for this may be a superficial, expository one such as a need to conserve space. But it may also have to do with the fact that the very existence of variation conflicts with one of the central principles of Nness, the one meaning–one form principle. Be this as it may, all change in the perspective of Dressler (2003), regardless of its motivation, is spoken of without reference to intermediate stages, as simple diachronic correspondences between different language states.

On the other hand, Nness theory has formed an explicit understanding of the different levels of structuring in language by relativizing the concept of Nness in the notions of system-defined, type-defined, and universal Nness. In Dressler's view, type-specific Nness acts as a filter and elaboration on universal Nness, and language-specific or system-specific Nness acts as a filter and elaboration on type-specific Nness. "In this way, each lower level filter can specify and even overturn preferences of the preceding higher-order level" (2003: 469).

This understanding has its roots in twentieth-century structuralism. Sapir (1921: 122) distinguished between the language system and its groundplan or type. Coseriu (1968) formed a more articulate conception of levels of structuring, distinguishing the norms, the functional system, and the type of a language, and he explained how, in system-motivated changes, the norms gradually come to embody the productive rules of the system, and in type-motivated changes, the system comes to conform ever more consistently to the structuring principles of its type.

These concepts are essential to a Mness-theoretic account of variation and change.

#### 4.2. *Mness: actuation and actualization*

In a Mness theory of variation, change is initiated (actuated) when an innovated form is introduced into speech and enters into variation with an existing form, that is, becomes a member of a paradigm of variants; change is actualized through the adoption of the innovation by increasing numbers of speakers and its gradual extension to ever more environments and the complementary curtailment of the inherited form in one environment after another.<sup>2</sup>

The key notion in a Mness account of variation and change is substitution, for from its initiation to its completion, a change consists in the gradual, orderly substitution of an innovated form for an inherited one. Let us consider two simple examples.

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<sup>2</sup> In the limiting case of a neologism for a new concept, the new expression is integrated in a lexical paradigm and can be said to enter into a paradigm of variants only in the sense that it is distinct from a possible paraphrase.

#### 4.2.1. *A system-motivated change*

In an example such as Eng. *weav-ed* ~ *wove*, the formation *weav-ed* is formed according to the productive rules of the system and hence is unmarked, from a morphological point of view, as it has been since the first time it was produced. The traditional *wove* with its irregular stem and zero tense suffix is marked. The innovated formation, being unmarked, will be accepted earlier in new senses (where it does not substitute for the inherited form) than in received ones, earlier in the speech of younger than older speakers, earlier in speech than in writing, earlier in informal than in formal speech and writing, earlier in prose than in poetry, etc. and in the normal course of events will spread from these to the corresponding marked categories of usage; cf. Andersen (2001b: 30–37, 2001c).

But its generalization is not guaranteed. It depends on the values ascribed to the variants in the norms of usage. The deviant, innovative form might at first be marked in relation to the accustomed, received one. As its novelty wore off it might be evaluated as unmarked (a Mness shift) by more and more speakers and allowed to completely supersede the received form, as has happened with *strived* for *strove*, *thrived* for *throve*, and earlier with *helped* for *holp* and with other originally strong verbs. But if enough speakers were to adhere to the received norms and continue to evaluate the traditional form *wove* as norm-wise unmarked and the innovation *weav-ed* as marked, the innovation, despite its clear motivation in the productive rules, would not be generally adopted, and the initiated change would be either arrested or reversed. If it were arrested, the two variants might become frozen in distinct stylistic usages or lexicalized in distinct functions (cf. *AHD*, s.v.); if it were reversed, future generations would have only textual (including dictionary) evidence of a stylistic variation that existed for some time.

#### 4.2.2. *A type-motivated change*

In the examples *thrice* > *three times*, *twice* ~ *two times*, and *once* ~ *one time*, the situation is different. First of all, here we are not dealing with irregular and regular morphological formations, but with expressions that represent distinct techniques of formation, viz. fusion and analysis. Secondly, there has never been a time when both these formations were not in use for the low plicatives, as they are to this day whenever *times* is modified: *three additional times*, *two separate times*, *one other time*. In other words, this change does not consist in the creation and extension of a new variant, but in the curtailment and eventual loss of an inherited one. It would be more accurate to write it as (*three times* ~ *thrice*) > *three times*.

As mentioned in section 3.1.2, Orešnik (2004) considers the lexical expression in *once*, *twice* more natural (because it correlates with the low plicatives). But to capture both the creation of the lexical formations in Old English and their gradual demise, which can be observed in the modern variation, the language historian will surely relate it to the typological shift in the language from synthetic to analytic. Thus in Old English, the adverbial use of the flective genitive of ‘one’ was lexicalized and extended

to ‘two’ and ‘three’ except where *time* had to be used. But as the ancient values of the synthetic<sub>U</sub> and analytic<sub>M</sub> techniques of expression changed to analytic<sub>U</sub> and synthetic<sub>M</sub>, *thrice*, *twice*, *once* became marked in relation to *three times*, *two times*, *one time*, and the unmarked plicative variants were made to substitute for the marked ones in one environment after another. The change has run its course with *thrice* and is evidently well under way with *twice* and *once*.

This is a change of a common type I have called *paradigm reduction*. In a change of this kind, a paradigm (here of expression variants) is reduced to a single, unmarked term, typically in a marked (simultaneous or contiguous) environment, in accordance with Brøndal’s principle of compensation (see section 3.2). In the case of the plicatives, one would expect to see the marked (lexical) variants eliminated in the order *thrice*, *twice*, *once*, that is, following the relative markedness of the numerals ... [one<sub>U</sub> : two<sub>M</sub>]<sub>U</sub> : three<sub>M</sub> ..., as appears to be the case. Another example of paradigm reduction is the loss of the imperfect subjunctive in French, mentioned in section 3.2, in which a grammatical paradigm is reduced. For some more examples of paradigm reduction, see Andersen 2006a, 2006b, 2007.

Orešnik (2001: 18) explicitly declines to consider historical explanations. But the relevance of this change to Orešnik’s account of the modern synchronic state is not that one needs to know the history of the language to describe it, but that when one integrates synchronic variation into a synchronic description, the nature of the variation may indicate clearly, as in this example, which variant is unmarked and on its way in, and which is marked and on its way out. In a Mness-theoretic description there would be no doubt about the importance of this sort of information.

### 5.0. *Nness as a kind of Mness*

We can now return to the comparison between Nness and Mness that was begun in section 1 to see in what sense Mness theory appears to account better than Nness theory for phenomena that are central to linguistic synchrony and diachrony.

#### 5.1. *Nness scales vs. Mness relations*

Consider first the fact that Nness theory holds that all linguistic distinctions are scales. Whatever the origin of this idea, it is clearly not derived from a careful consideration of the types of relations that are actually to be observed in language, nor from the works of scholars who have studied these, e.g. Lyons (1977).

Mness theory by contrast recognizes the actual panoply of observable relations in language and has developed an understanding of them which includes scales. At the same time Mness theory explains why a variety of relations appear to be easily accommodated by the alleged scales of Nness theory even though there is no sliding or step-wise scale, say, between *male* and *female* (contradictories), *parent* and *child* (converses), or *north* and *south* (antipodal). The reason for this is that all such relations can be conceptualized as varieties of contraries with virtual (unrealized) intermediate areas or steps. The exposition in Andersen (2001b) shows that a converse relation is a variety of contradiction, a contradiction a variety of contrariety, and a contrariety a

variety of inclusion. This is tantamount to a revision of the traditional classification of these logical relations; see table 1.

Since nothing prevents degrees of Mness from being ascribed to entities on a scale, and Mness values can be ascribed to contradictory and converse opposites as well, it follows that Mness is a more general concept than Nness. It subsumes it.

Table 1. Different views of the logical relations observed in language

The tradition	Andersen (2001b: 47)
I. Inclusion	I. Inclusion
II. Exclusion	A. Contrariety
A. Contrariety	1. Contradiction
B. Contradiction	a. Conversion
C. Conversion	

### 5.2. *Symmetry vs. asymmetry*

Nness theory assumes that linguistic relations are asymmetrical, so that any entity with the predicate *more natural* will be valued more highly than any *less natural* entity on the same scale. The theory does not explain where this assumed asymmetry comes from. It is not to be seen in the logical relation between *more natural* and *less natural*, for if this is a scalar, contrary relation, it is logically symmetrical. One might suppose that the asymmetry resides in the positive connotations of the lexeme *natural*. But *natural* is merely a metalinguistic cover term for a variety of real relations in language, and it would be a mistake to take this term too literally, for in the final analysis it might then be found to be meaningless. The difficulty with Nness scales arises from the logical relation they manifest, which is at variance with what the theory claims.

This is where Mness theory provides a superior conceptual tool, for asymmetry is inherent in the relation of inclusion, and the cognitive primacy of inclusion entails a principled explanation of the fact that asymmetrical values are ascribed also to exclusive relations in language. In fact, it explains why Nness theoreticians (like some earlier Mness theoreticians; cf. section 1.2) have thought that a logically symmetrical relation (here the contrariety of scales) could be asymmetrical. By clearing up a conceptual conflict that cannot be resolved within Nness theory Mness theory proves superior to Nness theory.

### 5.3. *Asymmetry and substitution*

Finally, as was shown in section 4.2, the concept that is key to an understanding of the initiation and actualization of change is substitution. The entire course of a typical change consists in an innovated expression gradually substituting for an inherited one in all the contexts in which it can occur, at first encroaching on it and in the end superseding it. There is no corresponding notion in Nness theory.

Substitution is the aspect of Mness that was first recognized by Lévy-Bruhl (1910, 1922), who observed what he called the “participation” of certain (unmarked) elements in the function proper to their (marked) opposites. Mness theory explicates

this substitution by clarifying that the greater extension or functional potential of an unmarked term can include that of the corresponding marked term; cf. Andersen (2001c).

### 6. Conclusion

The comparison between Nness theory and Mness theory that has been made in the preceding pages points up some serious inadequacies of Nness theory such as this is presented in the most recent technical literature.

Nness theory's odd idea that all linguistic relations are scales makes it impossible for the linguist who applies this theory to attain descriptive adequacy in the face of the actual variety of, say, semantic relations. This may seem a minor point, but precisely by imputing the symmetry of scales to all relations in language the theory is a severe handicap in accounts of both synchrony and diachrony: it leads the practitioner to produce static descriptive statements of synchronic language data and static statements of correspondences in diachrony. This is equally evident in Orešnik's (2001, 2004) numerous examples of synchronic variation and in Dressler's (2003) explanation of the effects of type-specific and system-specific Nness values relative to universal Nness values. By denying the existence of genuinely asymmetric relations—such as hyponymy—Nness theory is unable to describe the typical dynamic relation between incoming and outgoing synchronic variants, let alone the dynamic relation of substitution without which no variation could arise or eventuate in change.

On the other hand, despite these limitations, scholars working within the Nness framework have made significant advances in identifying and inventorizing Nness scales and in demonstrating that Nness values are not simply universal, but in any language may be defined in relation to traditionally established balanced structural patterns on the levels of type or system. It is only fair to acknowledge the results that have been achieved by scholars working with this theory and the extent to which its predictions have been subjected to empirical testing (Andersen 2005: 163).

The recent advances in the study of value syntax made by the Slovenian Nness group under the leadership of Orešnik show that linguists working with Nness and Mness concepts define similar goals and achieve comparable results. This is a good indication that in time, despite the differences in their initial assumptions, the confrontation with enough real language data will make their theories converge.

### References

- AHD* = *The American Heritage Dictionary of the English Language*, ed. by Anne H. Soukharov et al. (Third edition), Boston–New York–London: Houghton Mifflin, (1992).
- Andersen, Henning (1973), “Abductive and deductive change”, in: *Language*, 49, 567–595.
- Andersen, Henning (1989), “Markedness theory: the first 150 years”, in: Olga Mišeska Tomić Ed. *Markedness in synchrony and diachrony*, 11–46 (Trends in Linguistics).

- Studies and Monographs, 39), Berlin: Mouton de Gruyter. [NB: This article is shot through with incoherent and distorted sentences and other errors. A corrected version is available from andersen@ucla.edu.]
- Andersen, Henning (2001a), "Introduction", in: Andersen (2001d: 1–18).
- Andersen, Henning (2001b), "Markedness and the theory of linguistic change", in: Andersen (2001d: 19–57).
- Andersen, Henning (2001c), "Actualization and the (uni)directionality of change", in: Andersen (2001d: 225–248).
- Andersen, Henning, Ed. (2001d), *Actualization* (Current Issues in Linguistic Theory 219), Amsterdam–Philadelphia: Benjamins.
- Andersen, Henning (2005), Review of Brian D. Joseph and Richard D. Janda Eds. *The Handbook of Historical Linguistics*. Malden, Mass.–London–Melbourne–Berlin: Blackwell Publishing. 2003. *Diachronica* 22, 155–175.
- Andersen, Henning (2006a), "Grammation, regrammation, and degrammation: tense loss in Russian, in *Diachronica*, 23, 231–258.
- Andersen, Henning (2006b), "Periphrastic futures in Slavic. Divergence and convergence", in: Kerstin Eksell and Thora Vinther Eds. *Change in verbal systems. Issues in explanation*, 9–45, Bern: Peter Lang.
- Andersen, Henning (2007), "Grammaticalization in a speaker-oriented theory of change", in: Thorhallur Eythorsson Ed. *Historical Linguistics and the Theory of Grammar. The Rosendal Papers*, (Studies in Language Companion), Amsterdam–Philadelphia: John Benjamins. To appear .
- Battistella, Edwin L. (1996), *The Logic of Markedness*, Oxford: University Press.
- Brøndal, Viggo (1943), *Essais de linguistique générale*, Copenhagen: Munksgaard.
- Coseriu, Eugenio. ([1965] 1968), "Sincronía, diacronía e historia", in: *Actos del XI Congreso Internacional de Lingüística y Filología Románicas*, vol. 1, 269–283, Madrid, 1965. Republished as "Synchronie, Diachronie und Typologie" in his *Sprache. Strukturen und Funktionen. XII Aufsätze zur allgemeinen und romanischen Sprachwissenschaft* (Tübinger Beiträge zur Linguistik, 2), 91–108, Tübingen: Gunter Narr.
- Dressler, Wolfgang U., Willi Mayerthaler, Oswald Panagl and Wolfgang U. Wurzel (1987), *Leitmotifs in Natural Morphology*, Amsterdam–Philadelphia: John Benjamins.
- Dressler, Wolfgang U. (2003), "Naturalness and morphological change", in: Brian D. Joseph and Richard D. Janda Eds. *The Handbook of Historical Linguistics*, 461–471, Malden, Mass.–Oxford–Melbourne–Berlin: Blackwell.
- Greenberg, Joseph H. (1966), *Universals of Language. With special attention to feature hierarchies* (Janua Linguarum, Series Minor, 59), The Hague–Paris: Mouton.
- Hjelmslev, Louis (1928), *Principes de grammaire générale* (Det kongelige Videnskabernes Selskab. Historisk-filologiske Meddelelser, 16, 1), Copenhagen: Høst og Søn.
- Hjelmslev, Louis ([1939] 1970), "Notes sur les oppositions supprimables" in *Travaux du Cercle linguistique de Copenhague*, 8, 51–57. Republished in his *Essais*

- linguistiques*, (Travaux du Cercle linguistique de Copenhague, 12), 82–88 (Second edition), Copenhagen: Nordisk Sprog- og Kulturforlag.
- Jakobson, Roman ([1929] 1971a), *Remarques sur l'évolution du russe comparée à celle des autres langues slaves* (= *Travaux du Cercle Linguistique de Prague*, 2). Republished as Jakobson (1971a: 7–116).
- Jakobson, Roman ([1932] 1971b), “Zur Struktur des russischen Verbums”, in: *Charisteria Gvilelmo Mathesio quinquagenario a discipulis et Circuli Linguistici Pragensis sodalibus oblata*, 74–84. Prague: Cercle Linguistique de Prague. Republished as Jakobson (1971b: 3–15).
- Jakobson, Roman ([1936] 1971b), “Beitrag zur allgemeinen Kasuslehre: Gesamtbedeutungen der russischen Kasus”, in: *Travaux du Cercle linguistique de Prague*, 6, 240–288. Republished as Jakobson (1971b: 23–71).
- Jakobson, Roman (1960), “Linguistics and poetics”, in: Thomas A. Sebeok Ed. *Style in Language*, 350–377. Cambridge, Mass.: M.I.T. Press.
- Jakobson, Roman (1971a), *Selected Writings*, vol. 1. *Phonological Studies*, 7–116 (First edition, 1962), The Hague: Mouton.
- Jakobson, Roman (1971b), *Selected Writings*, vol. 2. *Word and Language*, The Hague: Mouton.
- Jakobson, Roman, Ed. (1985), *N. S. Trubetzkoy's Letters and Notes* (= *Janua Linguarum*, Series Major 47), Berlin–New York–Amsterdam: Mouton.
- Kragh, Kirsten (2006), *Le remplacement de l'imparfait du subjonctif par le présent du subjonctif considéré dans une perspective de grammaticalisation*, Dissertation, Copenhagen: University of Copenhagen
- Lévy-Bruhl, Lucien. (1910). *Les fonctions mentales dans les sociétés inférieures*. Paris: Felix Alcan. English translation by L. A. Clare (1922), *How Natives Think*, London: George Allen & Unwin.
- Lévy-Bruhl, Lucien (1922), *La mentalité primitive*, Paris: Felix Alcan. English translation by L. A. Clare (1923), *Primitive Mentality*, London: George Allen & Unwin and New York: Macmillan.
- Lyons, John (1977), *Semantics*, vol. 1–2, Cambridge: University Press.
- Mayerthaler, Willi (1981), *Morphologische Natürlichkeit*. Wiesbaden: Athenaion. English translation by Janice Siedler (1988), *Morphological Naturalness*, Ann Arbor: Karoma.
- Orešnik, Janez (2001), *A Predictable Aspect of (Morpho)syntactic Variants. Predvidljiv vidik (obliko)skladenjskih dvojníc* (Slovenska Akademija znanosti in umjetnosti. Razred za filološke in literarne vede, 58), Ljubljana: Narodna in univerzitetna knjižnica.
- Orešnik, Janez (2004), *Naturalness in (Morpho)syntax. English Examples. Jezikovna naravnost v (obliko)skladnji. Angleški zgledi* (Slovenska Akademija znanosti in umjetnosti. Razred za filološke in literarne vede, 61), Ljubljana: Narodna in univerzitetna knjižnica.
- Sapir, Edward (1921), *Language. An Introduction to the Study of Speech*, New York: Harcourt, Brace & World.

- Stampe, David ([1972] 1979), *A Dissertation on Natural Phonology* (Ph.D. dissertation, University of Chicago), New York: Garland
- Trask, Larry (1999), *Dictionary of Historical and Comparative Linguistics*, Edinburgh: University Press.
- Trubetzkoy, Nikolaj S. (1933), “La phonologie actuelle”, in: *Journal de psychologie* 30, 219–246.
- Trubetzkoy, Nikolaj S. 1958. *Grundzüge der Phonologie*, Göttingen: Vandenhoeck & Ruprecht. English translation by Christiane A. M. Baltaxe (1969), *Principles of phonology*, Berkeley–Los Angeles: University of California Press.