NUMBER NEUTRALIZATION IN OLD ENGLISH: FAILURE OF FUNCTIONALISM?

FRANS PLANK
Universität Konstanz

1. *Outline of the functionalist view*

1.1. To a considerable extent case marking and other relational coding abide by a general functional principle of formal economy. Instead of transparently reflecting each and every relational distinction, coding devices tend to be employed strategically so as to guarantee, at minimal formal expense, the distinguishability only of those grammatical relations which would otherwise be too difficult to distinguish by the addressee. Where the danger of relational ambiguity is obviated by semantic, pragmatic or formal properties of a clause or by its context, additional formal marking of the nominals in relation is in principle superfluous.

Functional relation coding may manifest itself in two ways. One is the optional use of markers of particular grammatical relations: nominals in a given grammatical relation accordingly remain unmarked unless their semantic content, pragmatic value, or formal properties make extra distinctive or even identifying marking appear advisable in view of potentially confusing similarities to the semantics, pragmatics, or form of co-occurring nominals. Thus, for example, nominals in the direct-object relation in numerous languages receive special relational marking only if they are animate and/or definite, i.e. if they are similar to, hence could without distinctive marking be mistaken for, transitive subjects, which typically, and in some languages invariably, are animate and definite. In its other manifestation functional relation coding is strictly grammaticized, hence does not allow for variation according to the functional needs of particular nouns in particular uses. However, insofar as declension classes in the relevant languages tend to differ in how many and which relational distinctions they

observe or neutralize, the assignment of nouns to declension classes providing for those relational distinctions which a noun is most likely to need on account of its semantic content and syntactic and pragmatic potential turns out to be an analogue of optional relation marking. A familiar example are neuter declensions in Indo-European, which, unlike other declensions, have always systematically lacked distinctive inflections for the subject and direct-object relations: on account of their semantics, neuters were, and statistically still are (wherever the neuter gender has survived), less likely than masculines and feminines to occur as agentive or experiencing transitive subjects, hence were/are usually identifiable as direct objects when co-occurring with a transitive verb and an animate nominal, rendering distinctive case morphology for neuters largely redundant for these relations.

The cross-linguistic distribution of these two manifestations of functional relation coding coincides with familiar typological distinctions. Analytic languages and languages with agglutinative nominal morphology prefer optional marking, viz. economy of use, whereas languages with cumulative ('inflecting') nominal morphology tend to economize systematically, by means of selective neutralization and methodical assignment of nouns to declension classes. This distribution does not come unexpected. Assuming the validity of 'Skalička's Law' (so far unexplained), according to which genuinely morphological declension classes are confined to languages with cumulative nominal morphology (cf. Skalička 1979: 21), languages of other morphological types simply lack the prerequisites to economize systematically. Cumulative morphology, on the other hand, is inherently resistant to economy of use, because with cumulative markers the several inflectional categories concerned cannot be manipulated independently. For example, if case is cumulated with number, nouns must be marked for case even if their grammatical relation is predictable, whenever the marking for number happens to be functionally desirable. Moreover, it is only in cumulative paradigms that neutralizations of paradigmatic distinctions are bound to reduce the amount of inflectional forms to be memorized, whereas agglutinative paradigms typically do not benefit numerically from selective neutralization. For example, to distinguish four cases and two numbers with cumulative markers of number and case, eight markers are needed (per declension); with separate markers for number and case, only six markers suffice for the same distinctions. The neutralization of number for one case reduces this amount by one in the cumulative paradigm, but calls for an extra marker in addition to the two which uniformly distinguish

number with the other cases in the agglutinative paradigm (cf. Carstairs 1984, Plank 1986). Therefore, if the aim is to economize, cumulative morphology should opt to economize on formal resources (i.e. systematically), whereas agglutinative morphology gains greater advantage by economizing on the use of the resources available.

Explanations of patterns of relation coding in such functional terms as such are panchronic: all languages ought to be functionally well-behaved at all stages of their history. They acquire diachronic significance, however, insofar as they provide guide-lines for the restructuring of patterns of relation coding which, for one reason or another, have fallen foul of functional standards or, at any rate, permit of improvements along functional lines. One reason why the relation coding of a language may have become functionally non-optimal is that the principle of functional economy does not reign entirely unchallenged but is in constant competition with the uneconomic, but safe, tendency towards invariable and transparant formal identification of all grammatical relations (cf. Plank 1983). Another occasion for the functional principle to become effective in diachronically noticeable manner is the impairment or even attrition of relation marking caused by phonetic developments, necessitating some renovation or reorganization of the language's formal apparatus (cf. Plank 1979). The postulate that relation-coding expenditures be limited to what is functionally essential can obviously be seen as a contribution to the 'constraints problem' (cf. e.g. Weinreich/Labov/Herzog 1968), even though it still needs to be spelled out in more detail and also to be evaluated relative to other, potentially conflicting, optimality principles to gain full explanatory force. In addition to ruling out developments which are impossible, however, we also want to predict which are (un-)likelier than others. There are empirical reasons to believe that the functional principle indeed delineates such preferences of morphosyntactic change, within some absolute limits yet to be defined precisely.

1.2. In spite of the recent preoccupation with grammatical relations, other major categories likewise demand functional explanations. The focus in this paper is on number, specifically on the distinctive or non-distinctive encoding of the paradigmatic oppositions subsumed under this grammatical category.

Evidently these paradigmatic oppositions themselves are functionally motivated. It is hardly an arbitrary fact about human languages that the

most familiar number oppositions are those between singular and plural (or also singulative and collective), which may be augmented by a dual and more rarely also by a trial or a paucal, whereas grammatical number paradigms including, say, a viginti-dual or a nonaginta-trial are unheard of. Languages often provide lexical means (viz. numerals) to count 22 or even 93, but the grammaticization of number invariably begins with the smallest whole number in contrast to all numbers higher than one. Considering that genuine grammaticization implies the more or less obligatory marking of any relevant word for the paradigmatic category concerned, this is not surprising: under normal communicative circumstances speakers continuously face the necessity to distinguish between individuals (the preferred topics of human discourse), pairs, relatively small, and relatively large groups of participants in the actions, experiences, etc. talked about, whereas occasions are on the whole much rarer where some degree of numerical precision is crucial when reference is being made to large groups (say, of 22 or 93). Of course, since there usually exist numerals to distinguish all small as well as many large quantities, one may further wonder why number should be grammaticized at all. The availability of two number systems, a lexical and a grammatical one, differing greatly in their distinctive capacities, can no doubt be criticized as uneconomical; but this functional disadvantage of grammatical number would seem to be counterbalanced by functional advantages, such as the utility of this category for signalling syntagmatic connectedness (i.e. agreement).

In the present paper the paradigmatic infrastructure of number as such is not at issue; what we are concerned with here is the question of the strategic employment of formal devices differentiating those number oppositions which are recognized in a language. When we claim that number marking, in a certain language, is governed by a functional principle of formal economy, we expect to find, very generally speaking, that number distinctions are made *only* with those words, specifically nouns and pronouns, and *only* in those syntactic and semantic-pragmatic uses of these words where such distinctions are communicatively relevant and are not inferable from the linguistic or situational context. This common economy motive notwithstanding, it is appropriate to distinguish several particular functional requirements which can be accommodated under this overall heading.

Firstly, the functionality postulate is apt to define a lexical-semantic pattern. On account of their lexical semantics, some words ought to show

greater inclination than others to exhibit distinctive number marking, because meanings differ in the extent to which they are susceptible to quantification and to which explicit quantification is likely to have communicative priority. The hierarchy of words lexically predestined to partake in overt number oppositions is headed by those which deictically identify speaker and addressee(s), the prototypical individuals and the inevitable participants of all speech acts, and the groups in which they are included. After 1st and 2nd person pronouns come other pronouns and nouns referring to persons, especially those close to the speaker (in particular his kin), and other rational beings. Moving further down this hierarchy, other animates then are followed by referents which are individually perceived by sight and touch, rather than by hearing, smell, or taste. These concrete nouns in turn outrank nouns identifying non-countables (i.e. entities quantifiable in terms of their mass rather than of natural individual units) and various kinds of abstract notions. At the bottom are non-nominal words, including verbs, adjectives, and adverbs, which are least inclined to, if not categorically incapable of (cf. notions such as iteration, often expressed with verbs), number marking except by virtue of syntactic rules of agreement. There is no dearth of cross-linguistic attestations of selective number marking in accordance with a lexical hierarchy of roughly this kind (cf. e.g. Thomson 1912: 78f., Schmidt 1926: 316, Royen 1929: 609ff., Jensen 1952, Forchheimer 1953: 11ff., Moravcsik 1978: 352f., Krifka 1979, and especially Smith-Stark 1974). And the form such patterns tend to take, after all, is not very remarkable, given that the grammatical category of number has to do with quantification and, in fact, counting: countability presupposes individuation, and different concepts in our perceptual and cognitive domains obviously differ in the extent to which they can be conceived of as individuated, and presumably also in the extent to which this individuation is likely to be useful information under normal communicative circumstances. Marking all words alike for number (autonomously, that is, rather than by agreement) surely is an effort no language will impose upon its speakers.

Secondly, functional number marking is apt to follow a discourse pattern. Number differentiation may be of greater or lesser interest for the message to be communicated depending on whether a nominal (or rather its referent) is in the foreground or background of discourse. For present purposes it suffices to point up two ingredients of these complex notions, one referential, the other syntactic. Overt number differentiation, accordingly, is likely to be communicatively more relevant (a) with nominals of

specific reference than with non-specifically or generically referring nominals, and (b) with nominals in the grammatical core relations of subject and object (which typically host referents already established or about to be established as topic) than with nominals in adverbial relations (which typically serve to add various kinds of circumstances accompanying the actions, states, changes of states, experiences etc. of the protagonists). There evidently is some correlation between referential and relational foregrounding/backgrounding, both of which, furthermore, are prone to be influenced, albeit not strictly determined, by the lexical hierarchy. The referential pattern of selective number marking too has a plausible rationale: usually more attention is paid to precise referential identification and also re-identification with foregrounded than with backgrounded referents, and number specification no doubt contributes to this goal. A fair amount of empirical support of the patterns predicted by (a) and (b) is implicit in Hopper & Thompson's (1984) cross-linguistic survey of the discourse circumstances favouring the maximal categorial differentiation of nouns and verbs, which shows number marking to be highly sensitive to deviations from cardinal nominality. Among the not very numerous studies which systematically reveal such patterns in individual languages, mention should be made of Song (1975) and Unterbeck (1985) dealing with Korean (cf. also Biermann 1982).

Thirdly, functional number marking is apt to follow a pattern defined by straightforward redundancy considerations. Number marking on nouns accordingly should be superfluous if the information it would provide is available elsewhere, either from the linguistic or the situational context. As to the linguistic context, number marking on nouns can be made redundant (a) by numerals and other quantifiers, or (b) by other words inside or outside noun phrases capable of signalling number distinctions, lexically or by virtue of rules of agreement. The influence of the redundancy factor should be considered supplementary to that of lexical-semantic and/or discourse factors. Since noun phrases which contain high-ranking nouns and/or are referentially and relationally foregrounded are most deserving of distinctive number marking, redundancy considerations may well prove decisive here; but if noun phrases contain low-ranking nouns and/or are in the referential and relational background, the demand for distinctive number marking of nouns is less urgent, regardless of its possible non-redundancy. Actual examples where number distinctions are dispensed with if syntagmatically redundant, especially due to the presence of quantifiers, are not difficult to

find, although I am not aware of systematic cross-linguistic studies of such patterns. Much rarer seem situationally sanctioned omissions of redundant number distinctions; presumably there simply are not too many situations which could unmistakably reveal to an addressee which number specification the speaker has in mind (except with unique referents in the relevant universe of discourse).

On the analogy of relation coding, functional number marking could be expected to take either of two forms, viz. economy of use or systemic economy.

We indeed do find quite regularly, in particular (if not exclusively) in analytic languages and in languages with agglutinative nominal morphology, that number marking is not obligatory for all potentially relevant lexical items under all referential, syntactic, and contextual circumstances, but instead is employed sparingly in accordance with patterns like those outlined above. Where number does not need to be differentiated, these languages commonly use nominals in their basic forms, which also express the singular where overt number differentiation is called for. At least with nouns which typically refer to pairs or other multitudes, however, a non-singular form may be more basic, hence most appropriate if the intention is not to specify number. If number differentation is not obligatory for all nouns in all their uses, doubts may arise as to whether number in fact is genuinely grammaticized in such languages. There indeed often are further indications that it is not, at least not in the sense of being a paradigmatic category comparable to the major inflectional categories of languages with cumulative morphology. One property which number generally appears to lack when it is optionally rather than obligatorily marked on nouns is its utilization for purposes of noun-phrase-internal agreement.

In the other conceivable manifestation of functional number marking, all relevant lexical items invariably ought to be marked for one or another number under all referential, syntactic, and contextual circumstances. Declension classes, however, ought to differ from one another in the extent to which they supply distinctive number inflections, and lexical items ought to be strategically distributed among these classes so as to ensure the expressibility only of those number distinctions which are likely to be required in view of the meaning and the referential and syntactic potential of a lexical item, and also in view of number distinctions likely to be apparent from the context. Thus, ideally, pronouns and nouns ranking high on the lexical hierarchy should be found in declensions which do not neutralize number dis-

tinctions, in particular in those case forms (presupposing nouns also inflect for case, which is no cross-linguistic necessity, but common enough in languages with genuinely morphological declension classes) which code referents in the foreground of discourse, in particular in the absence of contextual number differentiation. Number neutralization conversely should prevail in the declensions of the lower-ranking nouns and perhaps pronouns, and with higher-ranking ones in the forms they take when in the background of discourse, and in general when number differentiation is reasonably certain to be achieved by the context.

However, even taking into account that only a minority of languages boast genuine declension classes (as well as the allegedly correlating property of predominantly cumulative nominal morphology), it turns out, perhaps surprisingly, that with number marking systemic economy is cross-linguistically much less conspicuous than economy of use, and in particular never asserts itself as consistently. This asymmetry is also observable with relation coding, though apparently on a smaller scale.

Sporadic subpatterns of selective number differentiation in accordance with the requirements of systemic economy certainly are not too difficult to detect. In German, for instance, masculine and neuter nouns often lack the distinctive plural suffix *-n* (except in the dative) which is obligatory with feminines of the appropriate declension, and thus avoid syntagmatically redundant number differentiation because definite articles with masculines and neuters, but not feminines, already distinguish the plural from the singular (cf. Masculine *der - die Leiter* 'the (Sg.-Pl.) leader(s)' (Nom.), *den - die Leiter* (Acc.), *des Leiters - der Leiter* (Gen.); Neuter *das - die Messer* 'the (Sg.-Pl.) knife/knives' (Nom./Acc.), *des Messers - der Messer* (Gen.); but Feminine *die Leiter - die Leitern* 'the ladder(s) (Sg.-Pl.)' (Nom./Acc.), *der Leiter der Leitern* (Gen.)). Another subpattern in German can be defined in lexical and discourse terms, disregarding contextual redundancy. The weak masculine declension, including numerous nouns referring to humans and large animals (e.g. *Gatte* 'husband', *Riese* 'giant', *Zeuge* 'witness', *Bote* 'messenger', *Erbe* 'heir', *Knabe* 'boy', *Ochse* 'ox', *Löwe* 'lion', *Affe* 'ape'), provides for distinctive plural marking by means of *-n* in the nominative case only, encoding the foreground grammatical relation of subject. An inflectionally otherwise quite similar strong declension, typically including nouns ranking lower on the lexical hierarchy (such as *Karpfen* 'carp', *Balken* 'beam', *Bogen* 'bow', *Kuchen* 'cake', *Schnupfen* 'catarrh'), forgoes segmental singular-plural differentiation entirely, showing final *-n* also in the

nominative singular (cf. *Gatte* - *Gatten* Nom.Sg. Nom.Pl., *Balken* Nom.Sg./Pl.).

It is uncommon, however, for such patterning to pervade the entire structure of declensional paradigms. What tends to be encountered instead, in particular in languages with rich inflectional systems, are fairly reliable number distinctions with more or less all classes of nouns under more or less all referential, syntactic, and contextual circumstances. In fact, number neutralizations are often outnumbered by case neutralizations, irrespective of whether or not they are explicable functionally. Latin is rather typical here. Keeping case constant, we find no number neutralization except (a) in the nominative/vocative of 3rd declension vowel-stem feminines in *-ēs* (e.g. *vulpēs* 'fox(es)'), which alternatively tend to have distinctive *-is* in the nominative singular, (b) in the nominative/vocative of 5th declension masculines and feminines (e.g. *diēs* 'day(s)', *rēs* 'thing(s)'), and (c) in the nominative of the masculine and feminine relative pronoun (*quī*, *quae*) — which does not exactly add up to an overall picture with unmistakably functional contours. Keeping number constant, certain Latin declensions, on the other hand, are rich in case neutralizations. The usual explanation of such widespread asymmetries is that *semantic* paradigmatic categories, such as number, are inherently more important than, or 'dominate', *syntactic* ones, such as those concerned with relation coding (cf. e.g. Hjelmslev 1935: 107f., Møller 1937, Georgiev 1973, Boeder 1976: 121, Mignot 1978). If number differentiation really were inherently too important to take risks by relying on the principle of functional economy, one of course wonders why economic selective number differentation is cross-linguistically so popular when it is a matter of the optional use of number markers. As we shall see later (§ 4), there indeed are good reasons why functional number marking is likelier to manifest itself through economy of use than through systemic economy.

The functional principle can hardly claim absolute cross-linguistic validity, then: not all languages apparently are maximally economic with their number-marking resources. On the other hand, though, there will certainly be no language which is systematically dysfunctional in its number marking either, in the sense of employing distinctive number markers only with those words and only in those referential and syntactic circumstances where number differentiation is communicatively irrelevant and contextually predictable.

Turning again to the diachronic dimension, the panchronic law that

number marking may never be fully dysfunctional, and ideally ought to conform to reasonable standards of functional economy, evidently serves to constrain linguistic change. It should also be capable of forecasting the course changes are likely or unlikely to take. The obvious positive prediction is that, unless there are strong forces tending in the opposite direction, functionally motivated patterns of number marking will be innovated or, if already in existence, will not be traded in for nonfunctional or even dysfunctional ones, whenever the number marking of any language undergoes change for whatever reason.

This prediction is indeed borne out by various morphological changes pertaining to number, often among other nominal categories. In the two German examples outlined above, for instance, the present-day patterns are the results of morphological developments. Many feminine nouns which used to be members of the strong declension in Middle High German, with neutralization of nominative/accusative singular and plural but distinct singular (*diu*) and plural (*die*) forms of the definite article, acquired weak case-number desinences in the plural which distinguished the plural from the singular after number had been neutralized with the articles; significantly, abstract feminines were more reluctant innovators than concrete feminines, which outrank them on the lexical hierarchy (cf. Paul 1917: 78f., Møller 1937). Similarly, the present distribution of weak and strong masculines is not the original one: originally weak masculines ranking low on the lexical hierarchy tended to join the strong declension with desinence (or rather stem-formative) *-(e)n* in the singular as well as in the plural, while many high-ranking masculines stayed in the weak declension, with *-n*-less nominative singular (cf. Paul 1917: 38f.).

Other relevant historical developments, especially in languages which might be expected to practise systemic economy, do not lend themselves to functionalist interpretations as readily as these two German ones. A comprehensive survey of number neutralization in Old English in the following two sections is intended to illustrate difficulties of the functional principle to assert itself synchronically (§ 2) and diachronically (§ 3) — difficulties which in fact seem endemic in languages belonging to the same morphological type as Old English.

2. *Number neutralization in Old English: The system*

2.1. Number neutralizations in Old English are not as rare as in Latin, and

indeed are about as frequent as case neutralizations. Considering in this section only main West-Saxon forms as given in Campbell (1959), and postponing the discussion of all variations and changes to the following section, there is a relatively long list of paradigms of nominal parts of speech, also including a few individual lexemes with idiosyncratic inflectional properties, which lack distinctive number inflections for particular cases and (with adjectives, pronouns, demonstratives and the definite article) particular genders and/or declension types.

(1) Genitive Singular = Genitive Plural
   a. Strong declension masculine and feminine *u*-nouns (e.g. *suna* 'son(s)', *dura* 'door(s)')

(2) Dative Singular = Dative Plural
   a. Strong declension of masculine and neuter adjectives (e.g. *wīsum* 'wise, *tilum* 'good')
   b. Masculine and neuter demonstrative pronoun (*þissum* 'this/these')
   c. Masculine and neuter demonstrative/definite article (*þǣm/þām* 'that/those, the')
   d. Masculine and neuter 3rd person pronoun (*him* 'him/them')
   e. Strong declension neuter *a*-noun *hēafod* 'head' and athematic feminine noun *meoluc* 'milk' (with 'locatival' singular *hēafdum* and *meolcum*, however, alternating with regular *hēafde* and *meoloc(e)*)

(3) Accusative Singular = Accusative Plural
   a. Strong declension feminine *ō/jō/wō*-nouns (e.g. *giefe* 'gift(s)', *synne* 'sin(s)' *sinwe* 'sinew(s)')
   b. Strong declension heavy-stem feminine *i*-nouns (e.g. *dǣde* 'deed(s)')
   c. Weak declension masculine and feminine nouns (e.g. *beran* 'bear(s)', *tungan* 'tongue(s)')
   d. Strong declension of feminine adjectives (e.g. *wīse, tile*)
   e. Weak declension of masculine and feminine adjectives (e.g. *wīsan, tilan*)
   f. Feminine demonstrative pronoun (*þās* 'this/these')
   g. Feminine demonstrative/definite article (*þā* 'that/those, the')
   h. Feminine 3rd person pronoun (*hī(e)* 'her/them')

(4) Nominative Singular = Nominative Plural

a. Feminine 3rd person pronoun (*hēo* 'she/they')

(5) Nominative/Accusative Singular = Nominative/Accusative Plural

a. Strong declension heavy-stem neuter *a/ja*-nouns
(e.g. *word* 'word(s)', *rungol* 'star(s)', *werod* 'troop(s)', *cynn* 'race(s)')

b. Strong declension neuter *wa*-nouns
(e.g. *searu* 'device(s)', *cnēo(w)* 'knee(s)')

c. Strong declension light-stem masculine *i*-nouns
(e.g. *wine* 'friend(s)')

d. Strong declension heavy-stem neuter *i*-nouns
(e.g. *geswinc* 'toil(s)')

e. Strong declension feminine *i*-nouns *ǣ* 'law(s)' and *sǣ* 'sea(s), lake(s)'

f. Minor declension masculine and feminine nouns of relationship (*brōþor* 'brother(s), *mōdor* 'mother(s)', *dohtor* 'daughter(s)', *sweostor* 'sister(s)' — i.e. all except *fæder - fæd(e)ras 'father(s)'*)

g. *Minor declension disyllabic masculine nouns in -nd-*
(e.g. *hettend* 'enemy/enemies')

h. Minor declension dental stems
(e.g. *mæg(e)þ* 'maiden(s)')

i. Strong declension of heavy-stem neuter adjectives
(e.g. *wīs*)

j. Strong declension of heavy-stem feminine adjectives with final *-h*
(such as *hēah* 'high': *hēa*)

(6) Nominative/Accusative/Genitive Singular = Nominative/Accusative/Genitive Plural

a. Minor declension athematic feminine noun *ēa* 'water, river'

(7) Nominative/Accusative/Genitive/Dative Singular = Nominative/Accusative/Genitive/Dative Plural

a. 3rd person possessive pronouns (unlike 1st and 2nd person possessives, *his* Masc./Neut.Sg., *hire* Fem.Sg., and *hira* Pl. are not declined for case and number)

This survey includes only *pure* number neutralizations; that is, neutralizations are disregarded where number is not the only inflectional category involved. This excludes from consideration paradigmatic forms which

simultaneously neutralize case as well as number distinctions. Relevant examples are the identity of genitive/dative singular and nominative/accusative plural of weak-declension masculine, feminine, and neuter nouns and adjectives (e.g. *beran, ēagan* 'eye(s)', *tungan, wīsan* (cf. 3c/e)); of dative singular and nominative/accusative plural of *u-nouns (e.g. suna, dura* (cf. 1a)) and of athematic nouns (e.g. *fēt* 'foot/feet', *bēc* 'book(s)'); and of instrumental singular and nominative/accusative plural of strong-declension masculine adjectives (e.g. *wīse, tile*). Also excluded as impure are number neutralizations across genders and/or declension types with nominal elements other than nouns. Relevant examples here are the neutralization of feminine singular and masculine/neuter plural of the accusative 3rd person pronoun (*hīe* (cf. 3h)); of masculine/neuter singular and feminine plural of dative demonstratives, definite article, 3rd person pronoun, and strong-declension adjectives (*þissum, þǣm/þām, him, wīsum* (cf. 2b/c/d/a)); of feminine singular and masculine/neuter plural of accusative demonstratives, definite article, 3rd person pronoun, and weak-declension adjectives (*þās, þā, hīe, wīsan* (cf. 3f/g/h/e)); of feminine singular and neuter plural of nominative strong-declension adjectives (e.g. *wīs, tilu*); of feminine/neuter weak-declension singular and masculine/feminine strong-declension plural of nominative adjectives (e.g. *wīse, tile*). Such multiple ambiguous paradigmatic forms are usually disambiguated by their syntagmatic context. In fact, the contextual disambiguation of any one inflectional category with respect to which such forms are ambiguous in syntagmatic isolation — case, gender, declension type, or number — suffices to render them fully unequivocal, which drastically minimizes the risk of actual number ambiguities. Provided ambiguities within context are systematically excluded, such complex neutralizations must be seen as assets from the point of view of functional economy, because they reduce the amount of distinct paradigmatic forms which need to be memorized considerably without increasing the potential of misunderstandings.

Returning to pure number neutralizations, the question, then, is whether the more than 25 instances listed above also reveal patterns that can be made sense of from the functionalist perspective outlined in the previous section. This number of more than 25 pure number neutralizations, incidentally, reduces to about 15, if inflectional paradigms which are listed separately for different parts of speech under (1)-(7) (e.g. 2a/b/c/d) are only counted once.

2.2. It seems not very promising, at first sight, to search for lexical-semantic patterns. True enough, 1st and 2nd person pronouns, heading the lexical hierarchy, consistently distinguish the plural from the singular in all cases, and in fact also from the dual, which further number category is not found with any other words in Old English. Also, among the possessive pronouns, those of 1st and 2nd person inflect like strong-declension adjectives and accordingly distinguish singular and plural possessions (except with the neutralizations characteristic of this declension type: (2a), (3d), (5i)), whereas the lower-ranking 3rd person possessives do not inflect at all (7a), although genitives of personal pronouns serve as possessives for all three persons alike. Further, in the five instances where number neutralizations pertain to individual nouns rather than entire declension classes (2e, 5e, 6a), the nouns concerned are not from the higher ranks of the lexical hierarchy. From the glosses provided above it could seem that none is animate; but this is partly inaccurate: *hēafod* (2e) also means 'leader, originator' in addition to 'head, top, high ground, source, capital', and *ǣ(w)* (5e) 'lawful wife' in addition to 'law, custom, rite, marriage'. However, if these two nouns are used to refer to humans, their meanings predestine them to singular reference (groups commonly having one leader, and husbands a single wife), where overt number distinctions are almost superfluous. (There in fact is one plural occurrence of *ǣ(w)* with human reference on record: *betwux twām ǣwum* (Ælfric, Hom.) 'between two married people'; the noun here happens to be in the dative, where plural is distinguished from singular.)

But apart from these three patterns that can be functionally motivated, the incidence of number neutralization in noun and pronoun paradigms does not seem to correlate significantly with the position of the nouns and pronouns affected on the lexical hierarchy. It hardly could, since the classes in terms of which number is said to be neutralized or distinguished — viz. declension and gender classes (ignoring further phonologically defined subclasses) — appear not to be semantically homogeneous. Thus, it is easy to find, in Old English, high-ranking nouns and pronouns, referring to persons and other animate beings, which in one case or another lack distinctive number inflections, just as there are numerous low-ranking nouns with consistently number-distinctive inflections. (Certain of these nouns belonging to paradigms unaffected by number neutralization may be highly unlikely to exploit their inflectional potential: Some kinds of abstract nouns in particular are confined to singular uses. Such patterning may be explicable from a

functionalist perspective; but our present concern are paradigm structures rather than limitations on morphosyntactic uses of lexical items.) However, even if declension and gender classes in Old English clearly are not perfectly homogeneous semantically, they are not totally heterogeneous either, at least in statistical terms, and thus may yet warrant a closer look at initially unsuspected lexical-semantic patterns of number neutralization.

Among the strong declensions, there is only one subclass which is entirely free of number neutralization: masculine *a/ja/wa*-nouns. This large subclass is too heterogeneous to be definable as a semantic class; nevertheless, about 30% of its members are animate nouns identifying persons or animals. The percentage of animates among all other strong declensions or declensional subclasses, all of which show an instance of number neutralization, is much lower: only about 10% of neuter *a/ja/wa*-nouns (5a/b) are animate, less than 10% of *ō/jō/wō*-feminines (3a) (in fact, less than 5% of *ō/wō*-feminines; derivatives in *-en(n)* denoting human or animal females account for a higher proportion of animates in the *jō*-subclass), about 15% of masculine and feminine and close to 0% of neuter *i*-nouns (3b, 5c/d), and about 15% of masculine and 0% of feminine *u*-nouns (1a). (These calculations are based on the lists of nouns provided in the major grammars, in particular Wright & Wright 1914, Brunner 1965, and Campbell 1959.) One might object to such calculations on the grounds that declension classes are not closed because their membership can be increased by word-formation. Taking into account word-formation, however, strengthens rather than invalidates our conclusion: derivatives denoting animates (such as the nomina agentis in *-ere* or personal nouns in *-ling* and also *-ing*) tend to belong to the *a*-declension masculines, whereas derived abstract, collective and other non-personal and non-concrete nouns preferably join other strong-declension and gender classes. Strictly speaking, there *are* animate derivatives in strong-declension classes other than the masculine *a*-nouns: Colectives in *ge-* (which are not exclusively animate), and diminutives in *-incel* and *-en* are neuter *a*-nouns, and motional formations in *-en(n)* are feminine *jō*-nouns. But this derivational patterning again fits in nicely with the overall picture: on a finer-grained lexical hierarchy, collectives are no doubt outranked by individuals, small beings by large ones, and females by males. As to the Old English strong declensions, we may conclude, then, that selective number neutralization is functionally reasonably well motivated insofar as it affects the noun classes with the lower proportions of animate members. A similar conclusion could be

drawn if we calculated the percentages of concrete vs. abstract nouns in the various strong classes, although concretes are in general much more numerous than animates.

In the weak and the minor declensions, however, analogous functional predictions fail completely. More than 50% of the numerous masculines, and slightly less than 30% of the many feminines, of the weak declension are animate, but their inflectional paradigms do not consistently distinguish plural and singular (3c). Since there are only three weak-declension neuters, all inanimate, the complete absence of number neutralization from this subclass should not be overestimated. Nouns following the minor declensions are not very numerous either, but it seems more significant that number neutralization here is found with the nouns of relationship (5f) and the nouns in *-nd-* (5g), all of which are highly animate identifying exclusively persons, viz. relatives and agents (the disyllabic masculines in *-end* are nomina agentis). Athematic nouns, on the other hand, consistently distinguish number (with the two exceptions mentioned in (2e) and (6a)), although few of them are animate (*mann* 'man' among the masculines and some animal names among the feminines).

Considering the distribution of nouns among the three genders, it is safe to assume that the percentage of animate, and especially human, nouns is higher among masculines and feminines than among neuters. Consequently, number neutralizations should be more characteristic of neuters than of masculines and feminines. Extending this prediction to gender-agreeing co-constituents of nouns, the neuter paradigms of adjectives, demonstratives and the definite article should be richer in number neutralizations than their masculine and feminine paradigms. When we count how many of the pure number neutralizations listed above in (1)-(7) affect each gender, the results do not square with this expectation at all: Both among nouns and gender-agreeing determiners, feminines are the most frequent victims of neutralization, and masculines are hit at least as often as neuters.

2.3. It is even more difficult to discern anything like a consistent discourse pattern of functional number neutralization in Old English. Among the very few pieces of unambigiuously positive evidence are the masculine/feminine and neuter interrogative pronouns *hwa* 'who?' and *hwæt* 'what?', not listed above, which do not distinguish number in any of their five case forms: they can be used to ask for any number of referents, including zero, but clearly lack specific reference. Some independently used indefinite pronouns (including the interrogative-derived *hwa/hwæt* 'someone/something,

anyone/anything', *āwiht* 'something/anything', *man* '(some-)one') likewise renounce number distinction; and while indefiniteness is not in principle incompatible with specific reference, these indefinites hardly refer specifically in their most common usages. The (inflecting) 3rd person reflexive possessive *sīn* 'his/her, their', often replaced by the corresponding (but uninflecting) general possessives *his/hire/hira*, occurs with singular as well as plural coreferents; this number neutralization too seems functionally plausible insofar as reflexives, even though they may have specific reference, always refer derivatively, via the link to their coreferent nominal, rather than autonomously, and thus are not themselves referentially foregrounded.

The specific or non-specific/generic reference of nouns is a matter of actual use, whereas declension-class membership is a more permanent (if not entirely immutable) property of lexical items. A pattern with nouns distinguishing or neutralizing number depending on their kind of reference, therefore, cannot really be attained directly even by the most judicious distribution of nouns among the various, more or less number-distinctive declension classes, if nouns from all declensions in principle admit of all kinds of referential uses. Such a functional pattern can at best come about indirectly, insofar as the different inherent referential and syntactic *potentials* of nouns may be exploited in assigning them to the alternative declension classes. Thus, nouns ranking highest on the lexical hierarchy (persons and other animates) would seem to have the greatest potential to be used with specific reference, and also to occupy the grammatical core relations, especially that of (transitive) subject, the foreground relation most strongly favouring specific referents. Hence, declension classes hosting high proportions of animates ought to be least inclined to neutralize number, especially for those cases which code (transitive) subjects.

To what extent does Old English conform to such an indirect discourse pattern of functional number marking? Concerning animacy, whatever functional patterns can be uncovered, they lack consistency, as shown previously (2.2). Concerning relational foregrounding, the evidence is rather inconclusive — and in one important respect could not be otherwise, on account of the nature of the Old English case system.

The nominative is the only case exclusively coding foreground relations (disregarding its use with presumably not-so-foregrounded predicate nominals and appositives); and declensions where number is exclusively neutralized in the nominative are indeed rare. The single relevant instance,

however, is no noun paradigm but the feminine 3rd person pronoun *hēo* 'she/they' (4a), whose referential potential (often, though not exclusively, animate (co-)referents, almost exclusively specific reference) is not exactly that of a prime candidate for number neutralization. The quantitative comparison of number neutralizations for the various cases, then, faces a first obstacle insofar as case distinctions too may be neutralized with both numbers. If we count the number neutralizations with the neutralized nominative/accusative(/genitive) among those affecting the case of the foreground subject relation, and simultaneously among those affecting the respective other cases not coding subjects, as seems plausible, the number of noun and pronoun paradigms with number neutralization for the subject case increases to 10, as opposed to 20 where number is neutralized for non-subject cases. This majority seems no longer so overwhelming as to be interpretable as optimally confirming functionalist predictions. A second, presumably more serious obstacle is the failure of Old English cases (with the partial exception of the nominative) to be neatly separable into foreground and background cases in the first place. Not only the accusative, but also the genitive and dative may code foreground object relations. While these cases differ from the nominative in not being eligible for subjects, some noun phrases in particular in the accusative or dative in fact are prototypically topical, specifically in impersonal constructions. These same cases, on the other hand, may also code background adverbial relations, on their own and in conjunction with prepositions. These combinations of case functions systematically preclude the selective allocation of number neutralizations to cases coding background relations.

If we rest content, therefore, with an opposition of nominative (the almost exclusively foreground case) versus all other cases (which combine foreground with perhaps predominant background functions), we could seek further confirmation of the above functionalist prediction by comparing declensions with relatively high and low proportions of animate members. The only noun declension with a substantial animate membership which neutralizes number only in the genitive, dative, and/or accusative but not in the nominative, as seems functionally reasonable, is the weak one (3c). On the other hand, some noun declensions, if minor ones, which are rich in animates dysfunctionally neutralize number only in the nominative/accusative but not in the genitive or dative (5f/g). The noun declensions with fewer or no animate members (1a, 2e, 3a/b, 5a/b/c/d) distribute their number neutralizations evenly among the nominative(/accusative) and the

other cases, which is presumably not against the functionalist prediction, even though neutralizations here could be expected to be more numerous. In the pronoun paradigms number neutralizations in the dative (2b/c/d) and accusative (3f/g/h) clearly outnumber those in the nominative (4a); but since these are 3rd person pronouns, which may refer to animates as well as inanimates, this subpattern should perhaps not be regarded as drastically dysfunctional.

Summing up, selective number neutralizations in Old English inflectional paradigms, thus, presumably do not add up to an overall picture that resembles the predicted indirect discourse pattern very closely. To sceptics, the resemblance may appear so slight as to be essentially accidental.

2.4. Assuming that number marking on nouns and pronouns can be made redundant if the same number distinctions are drawn elsewhere in the syntagm, one obvious class of co-constituent to look to in Old English are finite verbs. Conspicuously, these avoid any number neutralization in all tenses and moods in all conjugation classes (while showing much person neutralization, especially in the plural — which could suggest a 'dominance' of number over person). Since finite verbs agree in number (and person) with subjects, they would seem to render additional number distinction within subject noun phrases themselves superfluous. This reasoning, however, is only valid inasmuch as noun phrases are identifiable as subjects independently of the information supplied by verb agreement (e.g. by virtue of their linear position or their case marking). If verb agreement itself is crucially relied on in the coding of the subject relation, the absence of overt number distinction from subject noun phrases would entail the danger of subjects not being identifiable as such in the first place. In Old English, noun-phrase ordering is not strictly relationally determined, and nominative case markers are often syncretic with the accusative (in particular in the plural); verb agreement, thus, in fact takes the lion's share of the responsibility for subject identification. Therefore, since subjects are not always recognizable independently of the congruent overt number marking of the finite verb and one co-occurring noun phrase, it is functionally reasonable of Old English not to neutralize number consistently in all nominative forms of all possible noun-phrase constituents. Such selective number neutralizations in case forms of nominals agreed with in number by verbs apparently are not attested in other languages either, because whenever verbal number agreement is as well-developed as it is in Old English, other coding

devices usually do not guarantee reliable relational identification on their own.

This is not to deny that in languages such as Old English there may be occasions where overt number marking of noun phrases as well as, by virtue of agreement, on verbs is not necessary as a safeguard against relational ambiguity. But as with specific reference, this would again be a matter of actual uses of nouns and other noun-phrase constituents. And since elements from all nominal paradigms are in principle eligible to occur in subject phrases, and may randomly co-occur with non-subjects of the same or of different number, not even the most judicious distribution of nominal items among declension classes which observe or neutralize number for subject or other relational forms can possibly take care of such changeable functional needs in any reliable manner. Likewise, many, if not all, nouns are in principle capable of combining with numerals and other quantifiers, which thwarts any attempt to avoid redundant number marking of nouns when co-occurring with such lexical quantifying expressions by means of strategic declension-class assignments. Possibly concrete nouns are likelier than other to combine with individual-counting quantifiers, hence show redundant number distinction more frequently than non-concrete nouns when they are members of non-neutralizing paradigms; on the other hand, it would have been functionally unwise if Old English therefore had chosen to admit more number neutralization in declensions with high proportions of concrete members, because concrete nouns after all also occur *without* quantifiers rendering additional number marking redundant. (Incidentally, while nouns expressing units of time, length, weight, money or other measure units may drop their — redundant — plural markers when preceded by a numeral in Middle, and less liberally also Modern English (cf. e.g. ME *fyve barell ter, ModE two pound ten*), such 'unchanged' plurals are unattested in Old English (cf. Ekwall 1912, Jespersen 1949: 57-63). Note that in such contexts even languages with cumulative case-number morphology, such as German (Plank 1981: 142-148), may resort to economy of use.)

If several co-occurring elements within noun phrases can carry number marking by virtue of agreement, this creates an enormous potential for redundancy. As there are various grammatical co-occurrence restrictions between these elements inflecting for number — nouns, adjectives, and demonstratives or articles must also agree in gender and case; adjectives, moreover, inflect differently depending in particular on the presence (weak) or absence (strong) of a demonstrative or definite article —, it

should be possible to cut down on syntagmatic redundancy in a principled manner, viz. by distributing number neutralizations judiciously, i.e. complementarily, among the paradigms of the co-occurring elements. Since nouns may occur unaccompanied by adjectives and (especially in Old English poetry) articles/demonstratives, and adjectives and demonstratives in turn without nouns, the constituency of noun phrases is to some extent variable. The actual incidence of syntagmatic redundancy of number marking, thus, is to some extent again a matter of particular uses of the nominal elements concerned. The structures of inflectional paradigms, on the other hand, are not freely adjustable to particular syntagmatic necessities; they might be expected, though, to be geared to the most typical expressive requirements of the various noun-phrase constituents.

Now, do number neutralizations in Old English conform to the functional ideal of being distributed complementarily over the inflectional categories and paradigms of nouns, adjectives, and demonstratives and definite articles?

Since demonstratives/definite articles only neutralize number in the dative when masculine and neuter (2b/c) and in the accusative when feminine (3f/g), these are the only categories where the weak adjective inflection should be distinctive. In actual fact, the weak adjective declension neutralizes number in the accusative of the masculine and feminine paradigms (3e), thus exhibiting not nearly as many neutralizations as would be licensed by redundancy considerations, while admitting one, with feminines, lacking such justification. The strong adjective declension, where number neutralizations are not made redundant by demonstratives/definite articles, neutralizes number with the same category combinations as demonstratives/definite articles, viz. masculine/neuter dative (2a) and feminine accusative (3d) (and in addition with neuter nominative/accusative of heavy stems (5i)). It may be asking for too much generosity to regard this difference between weak and strong adjective inflections vis-à-vis the paradigms of demonstratives/definite articles as a functionally significant distribution of number neutralization. More significant, at any rate, are certain differences between noun paradigms on the one hand and adjective and demonstrative/definite-article paradigms on the other.

Thus, number neutralization in the dative is found with masculine and neuter strong adjectives (2a) and demonstratives/definite articles (2b/c) (and also the 3rd person pronoun of these genders (2d)); nouns never neutralize number in the dative, disregarding the exceptional cases of *hēafdum*

and *meolcum* (2e). What slightly detracts from the functional optimality of this subpattern is that feminine nouns too distinguish the dative plural from the singular, even though here distinctive demonstratives/definite articles would license neutralization. A further functional drawback could seem to be that with adjectives dative number neutralization is confined to the strong declension: in noun phrases consisting of demonstrative/definite articles, weak adjective, and masculine/neuter noun, dative plural is luxuriously distinguished from singular twice, by the noun as well as the weak adjective (cf. *ðǣm ādligan menn* vs. *ðǣm ādligum mannum* 'to the sick man/men'), whereas in noun phrases consisting of strong adjective and masculine/neuter noun, dative plural is more economically distinguished from singular only once, by the noun (cf. *ādligum menn* vs. *ādligum mannum* 'to some sick man/men'). This is no absolutely superfluous inflectional luxury, however, because weak adjectives are much likelier than strong ones to occur in noun phrases lacking a lexical noun, on account of their association with demonstratives and definite articles which predestines them to uses in nominalizations and pronominalizations where Modern English requires the 'prop word' *one(s)*; hence weak adjectives, *ceteris paribus*, need number-distinctive inflections more urgently than strong ones (cf. *ðǣm ādligan* vs. *ðǣm ādligum* 'to the sick one/ones').

Number neutralization in the genitive is only found with masculine and feminine nouns of the *u*-declension (1a) (and with athematic feminine *ēa* (6a)). Distinctive singular and plural inflections for the masculine and feminine genitive of demonstratives/definite articles and adjectives would thus suffice to guarantee that noun phrases which happen to host nouns from these classes include at least one element distinguishing number, provided they also include one of these determining elements. Demonstratives/definite articles and adjectives indeed never neutralize number in the genitive. In part, this pattern no doubt makes functional sense. It could be criticized, however, as overemphasizing security: since no neuter nouns ever neutralize genitive singular and plural, they always duplicate the number distinction of co-occurring determining elements; and whenever masculine and feminine demonstratives/definite articles and adjectives co-occur with genitive nouns other than those from the *u*-declension, which do not neutralize number, number is also distinguished by more than one word in the noun phrase. This latter kind of redundancy is unavoidable, though, because, unlike gender and case, declension-class membership is no agreement feature, and neutralizations, therefore, cannot be distributed com-

plementarily among the inflectional paradigms of nouns and their noun-phrase co-constituents.

Number neutralization in the nominative/accusative affects nouns of all genders, if feminines (5e/f/h, 6a) considerably less so than neuters (5a/b/d/h) and masculines (5c/f/g/h). Only a subclass of neuter adjectives and a fairly small group of feminine adjectives likewise neutralize number in the nominative/accusative. But demonstratives and definite articles do not. It seems perhaps risky for this neutralization to take place in the strong adjective declension rather than in the weak, where demonstratives and definite articles would compensate for the adjectives' and nouns' lack of distinctiveness. Nevertheless, the complementary relationship between number-neutralizing nouns and adjectives and number-distinguishing demonstratives/definite articles is functionally most felicitous in cases such as nominative and accusative, which predominantly code the syntactic foreground relations of subject and direct object, which tend to be definite (especially subjects in their capacity as topics), hence to be accompanied by demonstratives or definite articles. Given the frequent presence of number-distinctive definiteness markers in subject (and perhaps also direct-object) noun phrases, one indeed wonders why number is not neutralized in the nominative of more classes of nouns and adjectives! It is probably no coincidence that number neutralization affects the nominative of nouns and adjectives only if this case is syncretic with the accusative, i.e. when a case marker is not limited to encoding the primary syntactic relation of subject.

All these instances of functionally more or less judicious patternings of number neutralizations in the paradigms of noun-phrase constituents are counterbalanced by the distribution of number neutralizations in the accusative. Among nouns, the victims here are all major feminine declensions (3a/b/c) (except the *u*-nouns, all feminines of which, however, show influences from the *ō*-declension). Feminine adjectives too neutralize number in the accusative, both in the strong and the weak declension (3d/e); and so do feminine demonstratives and definite articles (3f/g). This clearly is to exaggerate paradigmatic economy; consequently, accusative noun phrases indeed are commonly ambiguous as to number when their head noun is feminine. Only here does Old English need the aid of such accidental factors as the non-linguistic context, co-referential feminine pronouns (other than accusative and nominative ones, which likewise neutralize number (3h, 4a)), or the linguistic context of distinctively number-marked subjects agreeing with verbs but differing in number from the accusative object in the same clause,

in order to curb a systemic potential for number ambiguity.

It is only fair to conclude, then, that Old English does not live up to functional ideals in this respect either, despite some traces of functionally sensible distributions of number neutralizations among the inflecting members of syntagms. What is in fact not so ideal about the overall pattern is that these functionally sensible distributions are also found with the dative and genitive rather than predominantly with relational-foreground cases, specifically the nominative, as might have been expected on account of the more urgent demand for number distinction, hence of the greater importance of redundancy considerations, in the relational (and also referential) foreground. Returning briefly to our earlier observation that number neutralizations in Old English are not as rare as in Latin, syntagmatic redundancy considerations may, nevertheless, prove instructive.

If a language with number inflection requires nouns to be accompanied by articles, redundancy considerations lead us to expect a division of the labour of number distinction between these two obligatory co-constituents of noun phrases, provided articles too inflect for number. If an inflecting language lacks articles, the burden of number distinction within the noun phrase rests on nouns alone, occasionally perhaps aided by optional co-constituents such as adjectives or demonstratives. This could account for the scarcity of number neutralization in the noun paradigms of Latin, which lacks articles. It is a controversial issue whether Old English, on the other hand, possesses genuine definite articles rather than merely two kinds of demonstratives. Evidently, the demonstrative which could be ascribed article function was extending its range of occurrence during the Old English period, even though it may not have become obligatory wherever a definite article would be required today. And even at the early stages where genuine articlehood is more doubtful, Old English nouns certainly were accompanied by the number-inflecting demonstrative precursor of the definite article more frequently than nouns in Classical Latin. On syntagmatic redundancy grounds, the resistance to number neutralization in nominal paradigms (i.e. in those of nouns or alternatively of articles) should generally be weaker in languages like Old English than in articleless languages such as Latin. And indeed it often is; compare, for example, Icelandic, German, or Old Irish, which are essentially like Old English, with Russian or Lithuanian, resembling Latin. The correlation is less perfect in West Greenlandic Eskimo, which lacks articles and resists number neutralization in the unpossessed noun paradigm (except with the equative case), but

admits much number neutralization with possessed nouns (where forms regularly differ for singular and plural of possessors but rarely of possessions). Even more problematic is Ancient Greek, which has inflecting articles (like Old English), but almost completely resists number neutralization (like Latin). This explanatory attempt also has implications for diachrony, and these are not unproblematic either. Evidently, there should be some correlation in the relative chronology of the appearance of the phenomena which are claimed to be related. Old English noun paradigms clearly show more number neutralization than those of Primitive Germanic, practically all of which can be reconstructed as distinguishing singular and plural for all cases. The neutralizations considered above, however, largely reflect prehistoric, and often not even genuinely Old English developments. The claim that such increases in non-distinctive number marking are made possible due to the syntagmatic co-presence of number-distinguishing articles suggests that definite articles or their precursors too must have evolved in prehistoric West Germanic or even Primitive Germanic times.

2.5. Looking back at the (somewhat idealized) overall synchronic situation of number marking in Old English, no general definite conclusion pro or contra functionalism seems justified. There are number neutralizations which can plausibly claim some functional rationale, but their full pattern is hardly consistent with the lexical-semantic, the discourse, and/or the redundancy standards of systematically economical number differentiation.

3. *Number neutralization in Old English: Change and variation*

3.1. Old English inflectional morphology is no static and uniform system, but shows considerable variation in time and across dialects, and even manuscripts. The following survey (factually based on the standard handbooks, especially Campbell 1959 and Brunner 1965, and, for textual attestations, on Bosworth & Toller 1898/1972) records those variations and changes which either innovate or eliminate pure number neutralizations during the Old English period, and examines their functional significance. The functionalist view would be confirmed if the clear majority of these developments turn out to lead to improvements in terms of the standards of judiciously economical number marking. The ultimate reasons or causes of the various types of such neutralizing or deneutralizing developments are, thus, not at issue here, even though functional optimality might conceivably

be appealed to, as a kind of 'covering law', in causal, or perhaps rather teleological, explanations of at least some of them.

3.2. Borrowing is the first type of change to be taken into consideration. The single relevant instance is the borrowing, in late West-Saxon, of Old Norse *þei-r* 'they' replacing the nominative/accusative demonstrative *þā*. In fact, what is borrowed is not the number-marked form but only the stem, to which is added the pronominal nominative/accusative plural ending *-e*. This adapted plural form *þæge* contrasts in the nominative with singular *se/sēo/þæt* (masc./fem./neut.), just as the replaced demonstrative *þā* did. In the accusative, *þæge* contrasts with singular masculine *þone* and neuter *þæt*, as *þā* did before; but since *þæge*, despite its originally plural ending, also replaces accusative singular feminine *þā*, number remains neutralized in the accusative of the feminine demonstrative, as it was before with *þā* (3g).

Since this number neutralization is no innovation vis-à-vis the system of §2 but merely appears in a new guise after the borrowing, its functional evaluation remains unaltered. Its major drawbacks are failures to conform to the discourse and the redundancy pattern: an item is affected by the neutralization which represents, or is part of, referentially and often also relationally foregrounded noun phrases; and number is neutralized with a feminine form in the accusative, with which gender and case number ambiguities are most likely not to be resolved by the inflection of noun-phrase co-constituents. These disadvantages could have been eliminated if the borrowed and adapted form *þæge* had been limited in its use to the plural (formally, after all, it was plural), rather than replacing *þā* in the (feminine accusative) singular as well as the plural. It seems that the two functional drawbacks can hardly have been felt to be utterly detrimental, or otherwise this convenient remedial action would have been taken. But there is also a functional reason that might be adduced in defense of the retention of this number neutralization: its victim is no item from the very top of the lexical-semantic hierarchy, the feminine demonstrative being capable of referring, alone or as part of a noun phrase, to (female) animates as well as inanimates.

3.3. The single relevant instance of the replacement of lexemes by native substitutes is that of the 3rd person (mainly) reflexive *sīn*, which is largely superseded by the genitives of the 3rd person personal pronouns serving as general possessives. Unlike its substitutes (*his/hire* vs. *hira*), *sīn* occurs with

singular as well was plural coreferents; unlike the adjectivally inflecting *sīn*, its genitival substitutes do not agree in number (nor in case and gender) with their noun-phrase co-constituents.

As was pointed out previously (2.3), reflexives are not themselves referentially foregrounded, hence should be apter than their coreferents to neutralize (referential) number. Insofar as they are not found in subject relation, reflexives are not relationally foregrounded either. Moreover, to the extent that their coreferents distinguish number, distinctive (referential) number marking of reflexives would be syntagmatically redundant. On these three grounds, the replacement of invariable (except as to agreement) *sīn* by *his/hire* (with singular coreferents) or *hira* (with plural coreferents) would seem to be functionally rather unfortunate. Note, however, that the replacing genitival possessives in fact are no genuine reflexives, hence may appear in subject noun phrases and may have coreferents in a wider range of grammatical relations and not necessarily in the same clause. Thus, it is functionally more useful for general possessives than for reflexives to agree in number (and other categories) with their coreferents, if only to aid in the identification of these coreferents. The increase in paradigmatic distinctiveness accompanying the replacement of *sīn* by contrasting *his/hire* vs. *hira* is functionally not unreasonable, then, if the somewhat different grammatical roles of these possessives are taken into account. The simultaneous decrease in paradigmatic distinctiveness, insofar as the replacing genitives show no number agreement with noun-phrase co-constituents, is difficult to evaluate in functional terms. The relevant factor here is syntagmatic redundancy. With the full range of adjectival agreement inflections, *sīn* was bound to repeat number contrasts already made elsewhere in its noun phrase. *His/hire/hira*, on the other hand, are maximally economical in that they forgo number agreement for all cases (cf. 7a). Functionally, this radical solution could be criticized as overshooting the mark, because it pays no regard to the paradigms of potential noun-phrase co-constituents also neutralizing number for particular cases, which creates a potential for actual ambiguities if noun phrases happen to consist of possessives and further elements without distinctive number inflection.

3.4. When certain lexical items retain inflections that are lost with most others, the continuities deserve as much attention as the changes. An example of this is the retention of what seems to have been a locative or instrumental singular ending *-um* with *hēafod* and *meoluc*, of all nouns. As this

-um was used in dative function, the singular of these two nouns could coincide with the plural in this case (cf. 2e). It did not have to, though, as these nouns also had the regular dative singular ending *-e* (*meoluc* also *-Ø*) that was distinct from plural *-um*

Insofar as *meoluc* 'milk', a mass noun, ranks rather low on the lexical-semantic hierarchy, it must be considered an ideal victim of number neutralization. The hierarchical rank of *hēafod* is more difficult to determine, because (as mentioned previously, 2.2) this noun has human ('leader, originator') as well as inanimate reference ('source, top, capital, beginning'), apart from referring, most commonly, to the most prominent body part of humans and animals. It may be significant, though, that the dative singular form *hēafdum* does not seem to be found where the noun means 'leader, originator', while it is quite common with the body-part meaning. What also conforms to functional expectations is that number is here neutralized with the dative, specifically with the dative when governed by prepositions, i.e. with noun phrases in the relational background. *Hēafod* is in general likelier to be referentially foregrounded than *meoluc*, hence unlikelier on these grounds to fall a prey to number neutralization. Nevertheless, the prepositional phrases where singular *hēafdum* tends to occur often do not refer to specific independent entities, but rather, much like local adverbials, to the upper part of specific individuals. Moreover, as each of these individuals commonly has only one head, number distinctions with this body-part noun would often be redundant. Thus, in typical examples such as *Swā swā hēo on dæg dēþ/ bufan ūrum hēafdum* (Leechdoms) 'as by day it does above our head(s)', *Hnigon mid hēafdum him tōgēanes* (Genesis) 'they bowed (with) their head(s) toward him', *ðone stān ðe æt his hēafdum læg* (Cura Pastoralis) 'the stone that lay at his head', no harm is done by the absence of morphological number distinctions: if reference is made to several individuals, *hēafdum* is automatically assigned plural reading; if a single individual is at issue, *hēafdum* is assigned singular reading. As concerns strictly morphological redundancy, it could seem that the feminine *meoluc* could easier afford dative number neutralization than neuter *hēafod*, because strong-declension adjectives, demonstratives and the definite article neutralize dative singular and plural when neuter (2a/b/c) but not when feminine. However, when occurring in the non-distinctive dative number form *meolcum* (Anglian *milcum*), this feminine noun is usually unaccompanied by a determiner that would resolve the number ambiguity morphologically (cf. *welig on meolcum* 'rich in milk', *wyl on meolcum* 'boil

in milk', *be ðāra wildeora meolcum* 'from the milk of the wild animals'). From what has been said above, it follows that neither *meoluc* nor *hēafod* actually are in great need of morphological resolutions of number ambiguities: being a mass noun, *meoluc* will generally be singular; and with the body-part noun *hēafod*, number will usually be implied by the number of bodies being referred to. Our third functional factor of syntagmatic redundancy, thus, is hardly relevant here, in the first place.

All things considered, the particular nouns which idiosyncratically retain the singular inflection *-um*, and the particular case where this morphological archaism causes number neutralization, fit functional patterns reasonably well.

3.5. Of the types of morphological changes that pertain to more than a few individual lexical items, intraparadigmatic analogy will concern us first. There are numerous instances where inflections are extended at the expense of others within one paradigm, and, as a result, number distinctions are neutralized or deneutralized.

3.5.1. With feminine *ō/jō/wō*-nouns singular and plural coincide in the accusative (cf. 3a, *giefe* 'gift(s)' etc.). There is, however, some fluctuation even in West-Saxon, insofar as the etymologically regular accusative plural ending *-e* tends to be replaced by *-a*, the regular nominative plural ending of this declension. This extension serves to deneutralize accusative singular (*giefe*) and plural (*giefa*, alternating, however, with *giefe*).

Since less than 10% of the *ō/jō/wō*-feminines are animate (cf. 2.2), this class is not one where number neutralization should be avoided most urgently on lexical-semantic functional grounds. That number is deneutralized with the accusative case is functionally perhaps not implausible: while not as characteristic of relationally foregrounded noun phrases as the nominative, the accusative, often coding direct objects, is not the most typical background case either; and none of the more typically background cases in this declension neutralizes number. The strongest functional motivation for this morphological extension, however, comes from syntagmatic redundancy considerations. Recall from 2.4 that it is precisely with feminines in the accusative case that strongly and weakly declined adjectives, demonstratives and the definite article fail to distinguish number (3d-g). In fact, feminine strong-declension adjectives too prefer the distinctive ending *-a* in the nominative/accusative plural in West-Saxon, i.e. in syntagmatic contexts without preceding demonstrative or definite article. The

intraparadigmatic levelling of the nominative and accusative plural of *ō*-feminines, with the nominative being extended, thus contributes substantially to the avoidance of an excessively economical disregard for number distinctions within entire noun phrases. On the other hand, the categorical distinction of singular and plural in accusative feminine noun phrases could be criticized as unnecessarily uneconomical, since contextual factors or the low rank of many feminines on the lexical-semantic hierarchy may well render an overt number distinction superfluous. What one might ideally expect here is that the number-distinctive accusative plural ending *-a* and non-distinctive *-e* alternate strategically rather than randomly, in the dialects where these two variants co-exist. Some of the available evidence is indeed amenable to such a functional interpretation. For example, *ides* 'female, virgin', one of the not so numerous animate *ō*-feminines, consistently takes *-a* in the accusative plural, unlike most inanimates. With *gyden* 'goddess', *-a* seems preferred in contexts where number distinction is not syntagmatically redundant: cf. *ōþ he gemētte ðā graman gydena* (Alfred, Boethius) 'until he met the$_{sg=pl}$ fierce$_{sg=pl}$ goddesses', *Castalidas nympas þā mānfullan gydena* (Vocabularies, ed. Wright) 'the$_{sg=pl}$ evil$_{sg=pl}$, goddesses'.

3.5.2. The Old English singular *-e* of the *ō*-declension feminines does not regularly continue Primitive Germanic *-ôz*, but seems to have been influenced by other inflections in this paradigm, specifically the accusative plural. There are occasional remnants of the phonologically regular genitive singular ending *-a* (perhaps significantly in particular with abstract nouns in *-ð(u)* and *ung/-ing*), but innovated *-e* clearly predominates, and quite consistently distinguishes the genitive singular from the plural, which regularly ends in *-a* (exceptionally, especially in late West-Saxon, also in *-ena*).

There are no obvious functional motivations of this paradigm-internal development. The nouns concerned generally rank low on the lexical-semantic hierarchy (lowest presumably abstract nouns, which are most prone to retain the neutralization, and thus yield at least a subpattern that makes functional sense); the genitive is no typically foreground case; and number is likely to be morphologically distinguished by noun-phrase co-constituents of feminines in the genitive.

3.5.3. Intraparadigmatic levellings on a larger scale are characteristic of various kinds of abstract feminines of the *ō*-declension. Thus, pure *ō*-nouns with the Germanic abstract suffix *-iþō*, apart from often dropping their final *-u* analogically, may extend, already in early texts, this nominative singular

-u (or *-o*) to all singular cases as well as the nominative/accusative plural. Similarly abstract nouns of the Germanic *īn*-declension, which were inflectionally associated with the *-ð(u)* abstracts and likewise extended nominative singular *-u* (or *-o*) to all other singular cases and the rarely used nominative/accusative plural. As a result, number was neutralized in the nominative and accusative. Abstract nouns in *-ung/-ing* extended, already in early West-Saxon, the regular ending *-a* of the genitive singular and nominative plural to the accusative and dative singular and the accusative plural, thereby neutralizing number in the accusative.

It is in perfect accordance with the lexical-semantic pattern that abstract nouns should be most inclined to number neutralization. What is functionally less optimal is that the prototypical foreground case, the nominative, is affected by the neutralization (not with the *-ung/-ing* abstracts, though), and concomitantly the accusative, while the more typically background cases continue to distinguish number. In terms of syntagmatic redundancy, this loss of distinctiveness could seem potentially harmful because at least in the accusative feminine determiners do not distinguish number either. But since the abstract nouns at issue are only rarely in the plural, the risk of actual ambiguities is tolerably infrequent.

3.5.4. A few feminine *wō*-nouns (**clēa* 'claw' and especially *þrēa* 'affliction') drop their final *-w*, as is phonologically regular after long vowels and diphthongs, and often extend this uninflected nominative singular form to all singular cases and the nominative, accusative, and genitive plural.

The resulting number neutralization in potentially all cases except the dative is functionally not unreasonable. *þrēa* ranks low on the lexical-semantic hierarchy and should not occur in the plural very frequently; and with the higher-ranking body-part noun **clēa*, number should normally be predictable from the reference to the claw-possessing body or bodies, even independently of co-occurring feminine determiners which may also neutralize number. What is again disturbing, as so often before and afterwards, is that numbers are kept distinct with a typically background case, the dative, where feminine determiners consistently distinguish numbers as well.

3.5.5. With masculines and feminines of the weak declension numbers are neutralized in the accusative (3c). Germanic still had ablaut variations of the thematic element, but Old English extended *-an* to all singular cases except the nominative (and neuter accusative) and all plural cases except

the dative (in the genitive phonological developments lead to *-ena*). The masculine noun *oxa* 'ox' partly resisted this extension and often retained the vanishing-grade theme *-n* in the genitive and dative plural (*oxna, oxnum*) and, with parasitic vowel and umlaut, also in the nominative/accusative plural (thus *oexen/exen* in Mercian and Northumbrian).

Even though the noun which exceptionally avoids number neutralization in this way ranks relatively high on the lexical-semantic hierarchy, its idiosyncratic diachronic behaviour still appears somewhat coincidental from the functional perspective, insofar as more than 50% of the weak-declension masculines are also animate (of which many are human) but develop regularly. The evidence available to me does not suffice to determine whether the number-distinctive forms *oexen/exen* are systematically preferred whenever it is not obvious from the context whether the noun is intended to be singular or plural. Some occurrences of *oexen/exen* suggest such an interpretation, as does the apparently complete avoidance of these form with accompanying numerals.

3.5.6. Many of the changes in the weak declension in late Northumbrian are due to phonological developments (loss of final *-n*, coalescence of unaccentuated vowels). Morphological levelling too seems involved when the neuters acquire the ending *-u/-o* in all singular cases and in the nominative/accusative plural.

This number neutralization in the nominative and accusative is functionally appropriate insofar as the few weak neuters affected are all low-ranking names of dual body-parts (viz. *ēage* 'eye', *ēare* 'ear', *wange* 'cheek'), which most frequently occur in the plural, and, if they happen to be in the singular, can rely on determiners for overt number distinction.

3.5.7. With athematic nouns (except short-stem feminines) numbers are distinguished in the nominative/accusative only by umlaut. With *neaht/nieht* 'night', however, umlaut has lost entirely its systematic significance because the mutated or the unmutated stem-vowel can be extended to any case, with certain differences depending on dialect.

That of all nouns in this class *neaht/nieht* should be the one that dispenses with number distinction most radically, is not surprising from a functionalist viewpoint. This noun ranks not very high on the lexical-semantic hierarchy, but above all, since nights are a culturally salient counting unit, is frequently accompanied by numerals which render morphological number distinction redundant. What is functionally again inconvenient is

the retention of number distinction with the typically background cases of dative and genitive. It is noteworthy, though, that this distinctive inflectional potential is not fully exploited, because in non-referential, adverbial uses in prepositional phrases the uninflected, or at any rate singular, forms are strongly preferred (e.g. *on niht(e)/næht* rather than *on nihtum* 'by night').

3.5.8. The tiny class of dental stems has been listed above (5h) as showing number neutralization in the nominative and accusative. The final *-þ* in the nominative and accusative singular is, however, due to analogical extension. Some nouns of this class also occur without this extension, hence may distinguish the plural from the singular in these cases (*hæle - hæleþ* 'hero(es)'; *ealu* 'ale' - plural *ealoþ* unattested); *mæg(e)þ* 'maiden(s)' does not, nor does *mōnaþ* 'month(s)', which has joined the *a*-declension, but may retain an uninflected nominative/accusative plural.

This pattern is definitely counterfunctional. A high-ranking noun, *mæg(e)þ*, gives up number distinction by way of *þ*-extension, while a lower-ranking one, *ealu* does not obligatorily extend *-þ*. The other high-ranking noun, *hæle*, which remains capable of distinguishing numbers, actually does not depend on this morphological distinction so urgently: it is masculine and can often rely on number-distinctive determiners, while *mæg(e)þ* is feminine, and with this gender determiners consistently neutralize numbers in the accusative. (But see also 3.6.7 and 3.7.1 for further discussion of this class.)

3.5.9. The feminine 3rd person pronoun has identical singular and plural forms in the accusative (*hī(e)*, 3h) and the nominative (*hēo*, 4a). Among the alternative forms in the plural, there are always ones which are not matched by regular forms, viz. *hēo* in the accusative and *hī(e)* in the nominative. Many texts, however, do not systematically choose among these alternatives so as to avoid number neutralizations completely. What adds to this is that in various texts the regular nominative singular form *hēo* (or *hīo*) can also be used in the accusative singular, and/or the regular accusative singular form *hīe* vice versa in the nominative singular, coinciding again with the otherwise potentially distinctive plural alternants.

From a functionalist perspective, not much is to be said for such number neutralizations in the accusative and also nominative of the 3rd person feminine pronoun. One might have expected that more attention be paid to reliable number distinctions with such referentially and relationally

foregrounded forms, which often enough refer to female animates and, being feminine, may be in coreference with noun phrases likewise neutralizing number when accusative.

3.5.10. Functionally more appropriate is another development in the paradigm of 3rd person pronouns. Masculine and neuter pronouns generally neutralize number in the dative (*him*, cf. 2d), but in late West-Saxon one often encounters a distinctive dative plural *heom*, presumably formed in analogy with nominative/accusative and genitive plurals *hēo* and *heora*. In the Mercian Rushworth Gospels, however, *heom* is also extended to the dative singular, so that numbers neutralized with this referentially (if not relationally) foregrounded form often referring to animates.

3.5.11. Turning to adjectives, heavy-stem neuters with final *-h*, unlike the corresponding feminines (cf. 5j), regularly distinguish nominative/accusative singular (e.g. *hēah* 'high') and *h*-less plural (*hēa*) in the strong declension. Frequently, however, the singular form with *-h* is extended to the plural.

Many of these adjectives, even when neuter, typically co-occur with animate nouns (e.g. *fāh* 'hostile', *flāh* 'deceitful', *gemāg* 'depraved', *scēoh* 'shy', *tōh* 'tough', *wōh* 'crooked'). Thus, number neutralization is innovated with constituents of noun phrases whose referents tend to rank high on the semantic hierarchy. Equally unwelcome from the functionalist perspective are the facts that nominative/accusative noun phrases are affected, which are frequently in the relational foreground, and that distinctive number marking on the adjectives here is often not syntagmatically redundant because many neuter nouns also neutralize numbers in the nominative/accusative (cf. 5a/b/d, 6a) and strong-declension adjectives are typically unaccompanied by demonstratives or the definite article. The only functional excuse may be that indefinite noun phrases tend not to be referentially foregrounded.

3.5.12. It has already been mentioned (3.5.1) that strong-declension feminine adjectives often extend the regular nominative plural ending *-a* to the accusative plural, regularly encoded by *-e*, and thereby deneutralize number in this case, the accusative singular ending being *-e* (3d). Conversely, however, *-e* is also found in the nominative plural in this paradigm, regularly contrasting with nominative singular *-Ø* (heavy stems) or *-u* (light stems). Already in early West-Saxon and in the Vespasian Psalter, *-e* is also extended, presumably from the accusative singular of feminines and/or the

nominative singular of masculines and neuters, to the nominative singular in the feminine strong declension and here replaces *-Ø/-u*, especially with *jō/ja*-adjectives and among these in particular with present participles. (For further, extraparadigmatic extensions of *-e* see 3.6.8.) Hence number is potentially neutralized in the nominative.

Functionally this extension of *-e* is undesirable insofar as many of the adjectives affected typically combine with animate nouns and insofar as a case is affected which almost exclusively codes foreground relations. This extension is functionally unobjectionable insofar as strong-declension adjectives usually are not part of referentially foregrounded noun phrases and insofar as feminine nouns rarely neutralize number in the nominative, rendering number distinctions in accompanying adjectives usually redundant.

3.5.13. Masculine and neuter adjectives neutralize number in the dative in the strong declension (2a). In Northumbrian, however, the instrumental ending *-e* often replaces dative *-um* in the singular, distinguishing it from dative/instrumental plural *-um*.

Since the dative typically codes background relations, since strong-declension adjectives typically occur in referentially backgrounded noun phrases, and since masculine and neuter nouns always (i.e. with the idiosyncratic exceptions of (2e)) distinguish dative singular and plural themselves, this morphological effort towards greater distinctiveness seems functionally rather superfluous on all counts.

3.5.14. In the weak (as in the strong) adjective declension, *-ra* usually encodes genitive plural (except in early West-Saxon, where *ena/-ana* is used instead), distinguishing it from singular *-an*. Intraparadigmatic levelling seems to be involved when *-an*, the most common weak ending, sporadically replaces *-ra* in the genitive plural in late West-Saxon.

Functional support for this neutralization comes from the fact that the genitive typically codes background relations. On the other hand, weak adjectives are typically definite, and tend to be part of referentially foregrounded noun phrases. As to syntagmatic redundancy, strong-declension masculine and feminine *u*-nouns also neutralize number in the genitive (1a); but this class is small and most of its members tend to join other declensions without number neutralization in the genitive. And determiners and the definite article also safeguard against number ambiguity in the genitive.

3.5.15. In late texts, *-an* sometimes also replaces *-a* in the nominative sin-

gular of the weak declension of masculine adjectives.

Thus, number is neutralized with the prototypical case for foreground relations — which this time is functionally perhaps no serious offence because number is neutralized in this paradigm with the other cases as well. As to referential foregrounding, number neutralizations seem functionally less well motivated in the weak than in the strong declension of adjectives. In this case too, demonstratives and the definite article usually take care of number distinction, even if the nouns accompanying a weak masculine nominative adjective in *-an* occasionally (cf. 5c) do not.

3.5.16. In late Northumbrian, adjective declensions are in a state of confusion. One aspect of this is the frequent appearance of endingless adjectives in all cases and genders. Their appearance is not entirely random, however, insofar as endingless forms are preferably used in the singular rather than the plural, and are more common, and earlier, in the strong than in the weak declension.

Evidently, the preferred limitation of zero inflections to the singular can be regarded as an attempt to maintain adjectival number distinctions. On syntagmatic redundancy grounds, this was more urgent in the strong declension since this is the paradigm for adjectives unaccompanied by demonstratives or the definite article, which mostly remained number-distinctive. It is, therefore, understandable that the strong declension took the lead in this development. Except with the masculine/neuter dative and feminine accusative, where demonstratives and definite article neutralize number, no such functional motivation can be claimed for the weak declension. And in fact, endingless forms here seem restricted to the nominative and accusative masculine and neuter. The tendency, especially in the strong declension, to extend zero marking to all singular cases but to no plural cases can also be criticized, however, as overemphasizing safety at the expense of economy, insofar as number distinctions are maintained even with cases typically coding background relations.

3.6. Number distinctions may also be morphologically neutralized or deneutralized as a result of the extension of particular inflections from one paradigm to another. Since many paradigms in Old English only differ with respect to some inflectional categories while utilizing the same exponents for other categories, the partial refashioning of one paradigm on analogy with another may cause their complete merger. Thus, rather than giving rise to new, mixed paradigms combining inflections from two or more

sources, individual extraparadigmatic extensions may lead to the absorption of one paradigm by another. Another interpretation of this process would be say that all nominals formerly belonging to a separate paradigm have joined one of the existing other paradigms. It seems appropriate, however, to restrict this latter interpretation to instances where original inflectional patterns continue to exist as at least partly separate paradigms, having randomly lost some but not all of their original membership. But for present purposes we need not go to any lengths justifying particular paradigm distinctions.

3.6.1. In late Northumbrian the distinctively plural nominative/accusative ending *-as* of masculine *a-* nouns is extended to the neuters of this declension, and also to other declensions. Within the *a*-declension, masculine and neuter paradigms thus merge, providing heavy-stem neuters with distinctive number inflections (*-Ø* vs. *-as*) in the nominative/accusative, which this class otherwise often lacked (cf. 5a/b). (But see also 3.9.4 on further number deneutralizations with neuters.)

Of course, any reduction of paradigmatic variety as such is economical, and Northumbrian generally goes furthest in this respect. Nevertheless, the extension of number-distinctive nominative/accusative plural *-as* to *a*-declension neuters is functionally not without blemish, insofar as number is here deneutralized with a subclass (the heavy stems) where the functional necessity of distinctive number marking is not really so pressing. Recall that only about 10% of the members of all *a*-declension neuters, and about the same percentage within the heavy-stem subclass, are animate. (The percentage of concrete nouns is much higher, though.) Furthermore, with the exception of strong-declension heavy-stem adjectives (5i), determiners of nominative/accusative neuter nouns regularly do not neutralize number. But there is also the functional asset that number is deneutralized with the relational-foreground case, the nominative, and that noun phrases in this case will be referentially foregrounded as well.

3.6.2. In the synchronic section, light-stem *i*-declension masculines were listed as neutralizing nominative/accusative singular and plural (*wine* 'friend(s)', cf. 5c). Even early texts, however, already extend the number-distinctive nominative/accusative plural ending *-as* from the *a-* to the *i*-declension, effectively merging the two paradigms. The final *-e* in the nominative/accusative singular, which could still seem a distinctive feature of a separate *i*-declension, is paralleled by *ja*-masculines (such as *ende*

'end'), and eventually in fact disappears with many light stems in late Northumbrian. Heavy masculine *i*-stems take *a*-declension *-as* even more consistently than light stems; without this extension, their phonologically regular form would be endingless in the nominative/accusative plural as well as in the singular. The only masculines which almost unfailingly retain the original *i*-declension nominative/accusative plural in *-e* (< *-i*) are a considerable number of national names (such as *Engle* 'English', *Mierce* 'Mercians') and a few other animates (viz. *liede* 'men', *lēode* 'people', *ielfe* 'elves', and, at least in early West-Saxon, nouns in *-ware*, such as *burgware* 'citizens').

From the functionalist perspective this earlier extension of *a*-declension *-as* is as mixed a blessing as the later Northumbrian one that was just evaluated (3.6.1.). The only, hardly significant, differences are that the animacy ratio of about 15% among *i*-declension masculines is slightly higher (but so is the ratio of abstract nouns, which are exceptionally numerous among *i*-stem masculines), and that of masculine determiners only weak-declension adjectives neutralize number in the accusative (3e), which is, however, generally compensated for by demonstratives or the definite article. Where the present development proves functionally quite judicious is in the selection of nouns that resist the extraparadigmatic extension of *-as*. Although all of them rank high on the lexical-semantic hierarchy, hence should be the last to neutralize number on this count, they have one common semantic property which should render them particularly liable to number neutralization on redundancy grounds: They are invariably typical group nouns. As such nouns are normally used to refer to groups (most often national or regional ones) rather than to separate individuals, distinctive number inflections presumably are no first priority.

3.6.3. It was possible, but not necessary, for heavy-stem feminines of the *i*-declension to neutralize accusative singular and plural (*dǣde* 'deed(s)', cf. 3b). The phonologically regular uninflected accusative singular (*dǣd*) is also attested, but is frequently replaced, already in early West-Saxon and in the Vespasian Psalter, by the inflectional form with ending *-e*, coming from the paradigm of the *ō*-stems. The phonologically apparently regular accusative plural in *-e* in turn is largely replaced, in early West-Saxon and in Kentish, by an inflectional form with ending *-a*, another extension from the *ō*-stems, the paradigm with which the feminine *i*-declension tended to coincide.

The avoidance of number neutralization in the accusative of these *i*-

stem feminines by taking over inflections of the *ō*-declension both in the singular and plural is functionally not unwise because feminine determiners regularly neutralize number in this case. The percentage of animates among *i*-stem feminines, on the other hand, is not so remarkably high (about 15%), nor are such accusatives so obviously predestined to referential and relational foregrounding, as to provide additional functional motivation for the avoidance of number neutralization.

3.6.4. The main distinctive feature of the *u*-declension is the ending *-a* in the genitive and dative singular, which causes number neutralization in the genitive, where *-a* is also found in the plural (1a). This singular *-a* began to be replaced quite early by the genitive and dative inflections of the non-feminine *a*-declension (*-es*, *-e*) or the feminine *ō*-declension (*-e*, *-e*), depending upon the gender of the *u*-stems. Other inflectional differences being at best minor, *u*-stem masculines and feminines are thus largely absorbed by the *a*- and the *ō*-declension respectively. Neither of these paradigms neutralizes number in the genitive; in the *ō*-declension, the accusative singular may coincide with the plural (cf. 3a).

As the genitive is no typical relational-foreground case, the original *u*-declension number neutralization should not have been particularly inappropriate in this respect, and maybe more appropriate than the potential number neutralization in the accusative which feminines trade in by following the pattern of the *ō*-declension. If we grant that genitive noun phrases are often referentially foregrounded, this would be one parameter with respect to which this deneutralization is functionally useful. On syntagmatic redundancy grounds, it again proves fairly superfluous, because all genitive determiners consistently distinguish the plural from the singular. There is in fact no textual evidence to suggest that the non-distinctive *u*-declension singular is preferably employed in the presence of determiners, and the distinctive *a*- or *ō*-declension singular preferably in their absence, whenever nouns vacillate between these inflectional paradigms. On account of its animacy ratio, too, this class, especially its feminine subclass (which is practically without animates), would well seem capable of tolerating some non-distinctive number marking. Since the absorption of *u*-stems by the *a*- and the *ō*-declension was gradual, one might expect that animates were the first to abandon the number-neutralizing inflectional pattern. But the proportion of animates and also concretes among the masculine nouns leaving the *u*-declension is hardly higher than among its original members. Among the many masculines that have left the *u*-declension without a trace already in

prehistoric Old English, a few are animate (*ār* 'messenger', *beofor* 'beaver', *esol* 'ass'), but by far the most, including deverbal abstracts in *-oþ*, are inanimate (Wright & Wright 1914: 190f.). Conversely, at least one animate, *sunu* 'son', is among the masculines that conform to the *u*-declension longest.

3.6.5. The nominative/accusative plural of the nouns of relationship was, phonologically regularly, endingless, hence coincided with the nominative/accusative singular (5f). But this paradigm was reshaped, either by taking over the nominative/accusative plural suffix *-as* from the *a*-declension masculines (which in fact was regularly used with *fæder* even in early West-Saxon), or by innovating a nominative/accusative ending *-u* (or *-o/-a/-e*), presumably on analogy with *a*-declension neuters (which occurs regularly with the remaining masculines and feminines and also their originally neuter *ge*-collectives in late West-Saxon and elsewhere, with *fæder* only in Northumbrian), or, rarely, by extending the mutated stem-vowel from the dative singular to plurals.

This number deneutralization is functionally welcome because the nouns of relationship all refer to animates, in fact persons, and because it benefits the prototypical relational-foreground case, the nominative, in which case these personal nouns, moreover, will usually be referentially foregrounded as well. Syntagmatic redundancy considerations favour this deneutralization only as far as the accusative of feminine nouns of relationship is concerned: in all other case/gender configurations determiners can be relied on for number distinction. But it should also be noted that these nouns often remain undetermined, and when determined tend to be accompanied by possessives, which show number agreement only in the 1st and 2nd person (cf. 3.3). Anyway, regardless of morphological number distinctions, the danger of actual ambiguity seems relatively slight with *fæder* and *mōdor* on account of the kind of relationship they denote: when reference is made to a child or group of children, there will usually be a single individual holding the relationship of father or mother. It is, therefore, perhaps surprising that of all nouns of relationship *fæder* deneutralized number first and most consistently. This reasoning, however, disregards that *fæder* also means 'ancestor' or 'patron'; with these meanings, overt number distinction is generally less redundant than with that of 'male parent'.

3.6.6. In the paradigm of the disyllabic masculine nouns in *-nd-* the ending-

less nominative/accusative plural, which coincided with the singular (5g), could be replaced by forms in *-as* on analogy with the *a*-declension (already in early West-Saxon), or by forms in *-e* on analogy with the strong adjectival declension, or (occasionally in late West-Saxon texts) by forms in *-ras* (cf. *wealdend* Nom./Acc.Sg. - *wealdendras* Nom./Acc.Pl. 'ruler(s)'), with *-r-* extended from the genitive plural (*wealdendra*) and *-as* taken over from the *a*-declension. Monosyllabic nouns in *-nd-* regularly distinguish the nominative/accusative plural from the singular by mutation (e.g. *frēond — frīend* 'friend(s)'), like athematic nouns; but there are also unmutated plural forms coinciding with the singular, and (in Northumbrian) plurals in *-as* as with disyllables.

Masculines in *-nd-* are semantically as homogeneous a class as the nouns of relationship: they are all more or less transparent nomina agentis, hence animate, and thus deserving of distinctive number marking, especially in the relational-foreground case and when referentially foregrounded (which nominative noun phrases commonly are). On redundancy grounds, these deneutralizations were hardly a vital necessity, since weak-declension adjectives, which are the only masculine determiners to neutralize number in one of the cases concerned (the accusative), are usually accompanied by a number-distinctive demonstrative or definite article.

3.6.7. Dental stems may avoid number neutralization in the nominative/accusative, entailed by the extension of final *-þ* to the singular (cf. 3.5.8), by taking over the plural ending *-as* from the *a*-declension. It seems that masculine *hæle(þ)* 'hero' is the only dental stem to avail itself of this opportunity and simultaneously retain inflectional characteristics of this small class. Once *hæleþ* is also attested with nominative/accusative plural in *-e* on analogy with the *i*-declension.

As an animate member of the dental stems, *hæle(þ)* is particularly worthy of distinctive number marking, especially with a relational-foreground case and when referentially foregrounded. As a masculine dental stem, it is less deserving because number is likely to be distinguished by at least one co-occurring determiner of this gender and of these cases. Actual occurrences of the alternative plural forms indeed indicate that redundancy here is no very powerful factor: in *Hæleþ hātene wǣron Sem and Cham* (Cædmon) 'the heroes were named Shem and Ham', the original dental-stem plural could be explained as due to the presence of number-distinctive participle, verb, and complements; but in the same text, in *hæleþ as hearmōde* 'warriors stern-minded', an *as*-plural also occurs in the com-

pany of a number-distinctive adjective.

3.6.8. In the strong declension of heavy-stem neuter *a*-/*ō*-adjectives (and of originally light-stem *ja*-/*jō*-adjectives), the nominative/accusative plural is endingless and coincides with the singular (5i). In the Vespasian Psalter, the nominative/accusative plural ending *-e* of masculine (and feminine) strong-declension adjectives is extended to neuter participles, in early West-Saxon and more frequently in late West-Saxon, late Northumbrian, and Kentish also to other neuter adjectives. With originally heavy-stem *ja*-/*jō*-adjectives, this extension of *-e* to the neuter nominative/accusative plural leads to number neutralization rather than deneutralization, because here plural *-u* used to contrast with singular *-e*.

Considering that neuter nouns may also neutralize number in the nominative and accusative (5a/b/d), and that strong-declension adjectives are unaccompanied by number-distinctive demonstratives or definite articles, this deneutralization makes some sense in syntagmatic redundancy terms, while the neutralization with originally heavy *ja*-/*jō*-stems could seem too risky. Also, since the nominative is involved, which codes the foreground relation of subject, hence typically also referentially foregrounded noun phrases, number deneutralization deserves better functional grades than neutralization. Conversely, since neuter adjectives are unlikelier to combine with animate nouns than their masculine and feminine counterparts, number neutralization could appear more desirable than deneutralization on these functional grounds.

3.6.9. In late Northumbrian, *-an* is replaced as the nominative/accusative plural ending of the weak adjectival declension by *-e*/*-a*/*-o* of the strong declension. Unless the singular forms are endingless (which they frequently are), the weak-declension nominative plural may, thus, coincide with the singular in *-a*/*-e*.

This neutralization is sanctioned by number-distinctive nominative demonstrative and definite articles, which usually accompany weak adjectives. Less fortunately, this neutralization affects constituents of definite, nominative, hence relationally and referentially usually foregrounded noun phrases.

3.7 Within Old English as a whole, but also, though naturally to a more limited extent, within individual dialects and even texts, innumerable nouns change, or vacillate between, inflectional paradigms, the paradigms as such

remaining unaltered. It would be a formidable task to evaluate all instances of variable paradigm memberships, accompanied or not by variations of gender, which bear upon the present issue, i.e. which involve paradigms differing in the distinctive or non-distinctive marking of number for particular cases. An exhaustive documentation would have to include a great number of nouns; moreover, attention would have to be paid to as many uses of the relevant nouns as possible (i.e. as are textually attested — which may be distressingly few), in order to uncover patterns of potential functional significance. It seems, however, that a few examples of paradigm changes in fact suffice to indicate what the outcome of a fuller survey would be like.

3.7.1. For masculines, the large *a*-declension is a favourite paradigm to join. As was pointed out previously (3.5.8 and 3.6.7), both dental-stem masculines, for example, show affinities to this declension, *mōnaþ* 'month' more strongly than *hæle(þ)* 'hero'. Since dental stems may extend their final dental to the nominative singular, this intraparadigmatic levelling being obligatory with *mōnaþ* (dentalless *mōna* 'moon' has become a separate, weak-declension noun), number distinction is threatened for this case. A distinctive nominative/accusative plural ending, viz. *-as*, is supplied by the *a*-declension.

Due to its higher rank on the lexical-semantic hierarchy, *hæle(þ* should tend towards the *a*-declension more readily than *mōnaþ*. But it does not: *hæle(þ)* retains more inflectional characteristics of dental stems than does *mōnaþ*, whose only remaining dental-stem property is an optional nominative/accusative plural form without *-as*. The expectation that the *a*-declension plural should predominate, with both nouns, in referentially and relationally foregrounded noun phrases (in particular subjects), and the dental-stem plural in the referential and relational background (in particular in prepositional phrases and adverbial accusatives), likewise is not confirmed by the scant evidence available. What seems functionally well motivated is that *mōnaþ* has retained a dental-stem plural coinciding with the singular at all: as a familiar time-counting unit, this noun is likely to be frequently accompanied by a numeral, rendering additional morphological number distinction superfluous. The textual distribution of the plural forms *mōnaþ* and *mōn(a)þas*, however, does not neatly conform to the functional redundancy pattern; on the contrary, number-neutralizing and number-distinctive plurals appear to vary freely both in the presence and the absence of numerals, and similarly of other number-distinctive determiners.

3.7.2. The *a*-declension was a favourite destination also for neuter nouns. For example, *cealf* 'calf' and *lamb* 'lamb' of the neuter stems in Indo-European *-es/-os*, which have the formative element *-r-* in the plural, preceding neuter *a*-declension inflections, in late West-Saxon also inflect like heavy-stem *a*-declension neuters, i.e. drop the plural formative *-r-* and, as heavy stems, also the nominative/accusative plural ending *-u*, both plural and singular thus being endingless in these cases. Alternatively, *cealf* also takes the number-distinctive masculine nominative/accusative plural ending *-as* in late West-Saxon. (Number-distinctive plurals with the formative *-ur-/-or-/-er-*, but, like heavy-stem *a*-declension neuters, without plural ending *-u* are found in the Vespasian Psalter and in Northumbrian.) *Cild* 'child', usually following the (heavy-stem) neuter *a*-declension, hence lacking an ending in the nominative/accusative plural, also shows traces of the *es/os*-declension, including an early West-Saxon nominative plural *cild(e)ru*, distinct from the singular. (Alternative distinctive plural forms are masculine *cildas* and in Northumbrian, *cildo*, with the ending familiar from light-stem neuters.) Also according to the *es/os*-declension are the following distinctive plurals with formative *-(V)r-: lēower* 'hams', *brēadru* 'crumbs', *hǣmedru* 'intercourses', *speldra* 'torches' (only genitive attested), and possibly a few others. Of all *es/os*-neuters, *ǣg* 'egg' seems to be most faithful to this paradigm; all attested nominative/accusative plurals, at any rate, take the form *ǣgru*.

It runs counter to functional expectations that *cealf, lamb,* and *cild*, three animate nouns, may follow the *a*-declension, which neutralizes number with the relational-foreground case, the nominative, while inanimates, and most consistently *ǣg*, retain the original number-distinctive nominative/accusative inflection, even when it is syntagmatically redundant (as in *þrēo ǣgero* 'three eggs', *Genim gebrǣdde ǣgru* 'take fried eggs'). This class was never rich in animates, but earlier departures from it seem to have been functionally more judicious: Of the *es/os*-neuters which had earlier joined the light-stem *i*-masculines or the heavy-stem *i*-neuters, where number is neutralized in the nominative/accusative, apparently none was animate; of the *es/os*-neuters which had joined the *a*-declension, often by way of extending the plural formative *-(V)r-* to the singular, some were animates, but these always ended up in paradigms distinguishing the nominative/accusative plural from the singular, viz. among light-stem neuters (plural *-u*) or else among masculines (plural *-as*).

Now, since the above animates *cealf, lamb,* and *cild* were vacillating

between distinctive and non-distinctive nominative/accusative plural inflections, this potential could also be expected to have been exploited strategically, with distinctive plural alternants being preferred when these nouns are relationally and referentially foregrounded and/or number distinction is not syntagmatically redundant. With *cealf* the tendency clearly is to overemploy distinctive plurals, irrespective of the backgrounded status of noun phrases and of contextual number disambiguations. It should not be overlooked, however, that in most uses there is at least one functional parameter which could justify the choice of the distinctice form: In *Ne onfō ic nā of ēowrum hūse cealfas* (Libri Psalmorum) 'I shall not accept of your house calves', for example, the referentially backgrounded non-subject accusative noun phrase would, without distinctive plural, be ambiguous as to number; in *Me ymbhringdom mænige calfru* (Libri Psalmorum) 'many calves surrounded me', the referentially backgrounded noun phrase containing *cealf* is syntagmatically (by verb agreement and determiner) disambiguated as to number, but is subject and thus in the relational foreground; in *Hē ðā cealfas to cūum lǣdde* (The Shrine) 'he led the calves to cows', the non-subject accusative noun phrase shown to be plural by the definite article is referentially foregrounded. With *lamb*, the tendency rather seems to be to employ the non-distinctive plural form whenever justifiable by more than one functional factor. But there are also instances of distinctive plurals where the majority of factors do not require them, especially in particular dialects. Thus, in *Ic ēow sende swā swā lamb betwux wulfas* (Gospel St. Luke) 'I send you like lambs among wolves', *lamb* is neither relationally nor referentially foregrounded, and only the absence of number-distinctive determiners could conceivably justify the choice of distinctive noun plurals such as *lomboro* or *lombor* — which in fact appear in Northumbrian manuscripts. The use of the non-distinctive plural of *cild* resembles that of *lamb* rather than *cealf*, but there is at least one instance of the distinctive *es/os*-inflection without any functional motivation: *Gē sint giet cilderu* (Cura Pastoralis) 'you$_{pl}$ are$_{pl}$ still children' — but then, predicate nominals are not the most backgrounded of all syntactic relations, either.

3.7.3. Many light-stem feminines of the weak declension may alternatively inflect according to the *ō*-declension, chiefly in West-Saxon but also elsewhere. What they thus gain are potentially distinct accusative singular (*-e*) and plural (*-a/-e*) forms, which always coincide (*-an*) in the weak declension.

Only one animate noun among numerous inanimates, *faþu* 'aunt',

seems to profit from this change of paradigm, which is otherwise functionally sensible insofar it benefits a case possibly coding foreground relations and a gender where determiners neutralize number in this case. No functionally judicious use, however, seems to have been made of this alternation between the weak and a strong declension. There are number-distinctive strong accusatives that are syntagmatically redundant (e.g. *Weorpað þus manige spada* (Gregory, Dialogues) 'Throw thus many spades'), as well as non-distinctive weak accusatives that cause ambiguity (e.g. *gyf þū peran wille* 'if you want a pear/pears' — at least the object here is not referentially foregrounded).

3.7.4. Of the two *i*-declension feminines with endingless nominative/accusative singular and plural (5e), *sǣ* 'sea' may also be masculine, taking the number-distinctive nominative/accusative plural form *sǣs*, while *ǣ* 'law' may analogically reintroduce stem-final *-w* (which is not attested in the nominative/accusative plural) and add the *ō*-stem accusative singular ending *-e*, with the resulting singular form *ǣw* Nom. and *ǣwe* Acc. then differing from the regular plural *ǣ*. Forms with *-w* are also attested for *sǣ*, but not in the nominative and accusative.

Since *sǣ* is often employed with generic rather than specific reference (as in phrases such as *on/tō sǣ* 'at/to sea', where the opposition is with land or water inland), the availability of forms not distinguishing number seems quite appropriate. And in fact the number-distinctive masculine forms appear preferably when reference is made to particular seas or lakes, and an additional stimulus for the plural *sǣs* occasionally is the absence of contextual number distinctions (as in *and þæra wætera gegaderunga hē hēt sǣs* (Genesis) 'and the accumulations of the waters he called seas', *On syx dagum Crist geworhte heofenas and eorþan, sǣs and ealle gesceafta* (Exodus extracts prefixed to Alfred's Laws) 'in six days Christ created heavens and earth, seas and all creatures'). Since *ǣ* often refers collectively to the whole body of human or divine laws, or to the institution of marriage as such, rather than to particular regulations, or particular married women, the absence of a distinctive plural here was hardly disastrous from the functional perspective. My impression is that number-distinctive singular forms *ǣw* and *ǣwe* are indeed preferably used in referential circumstances admitting singular-plural oppositions.

3.7.5. The athematic feminine form *ēa* 'river, water' is used as nominative/accusative/genitive singular and plural (6a), but alternatively has number-

distinctive genitive singular (*ē/ēe, īe*, early West-Saxon *ēas* with analogical ending from a non-feminine paradigm) and nominative/accusative plural (late West-Saxon *ēan*, on analogy with the weak declension).

On the evidence available, no functionally judicious use seems to have been made of these inflectional alternatives (in the dialects where they were possible). For example, *ēa* is frequently accompanied by plural quantifiers, but forms which redundantly distinguish and which economically neutralize number vary randomly in these constructions.

3.7.6. In general, changes from strong declensions to the weak are rarer than vice versa. An example are several derivational formations of the *jō*-declension: motional derivatives in *-en(n)*, all referring to females; nouns in *-es(s)*, most of which also refer to females; and in *-et(t)*, some of which refer to animals. In the accusative of these feminine *jō*-stems, the plural, if in *-e* rather than *-a* (cf. 3.5.1), coincides with the singular; but so it does when these derivatives inflect according to the weak declension (Acc.Sg./Pl. *-an*).

This number neutralization is particularly unfortunate with these classes of nouns: Nearly all of those which may inflect weakly rank high on the lexical-semantic hierarchy, referring to humans or animals; when in the accusative, they may be relationally and referentially foregrounded; and feminine determiners also neglect number distinction in the accusative. Nevertheless, they gain nothing from their change of paradigm. Rather on the contrary, they forfeit the chance of opting for the distinctive accusative plural alternant *-a* afforded by the *jō*-paradigm. Wisely, therefore, they do not seem to have given up their original paradigmatic affiliation completely. And there in fact are sporadic indications that paradigmatic alternatives are chosen strategically. In an example such as *oþ he gemētte ða graman gydena ðe folcisce men hātaþ Parcas* (Alfred, Boethius) 'until he met the fierce goddesses whom common people call Parcae', the referentially and relationally foregrounded object noun phrase with female reference would be ambiguous as to number (provided the proper name *Parcas* is not automatically recognized as a plural) if the weak plural form *gydenan* had been chosen.

3.7.7. Unlike most other *u*-declension masculines, which are absorbed by the neutralization-free *a*-declension (cf. 3.6.4), *magu* 'youth, son, servant' and *sunu* 'son, young (of animals)' may also inflect weakly, and thus trade in number neutralization in the accusative for neutralization in the genitive. It should be added, though, that of *magu* an *a*-declension nominative/accusative plural *magas* is also attested, while with *sunu* attested weak

forms seem to be confined to the plural and the nominative singular.

In two respects these two potential desertions to the weak declension are functionally ill-advised. It is odd that animate nouns, of which the masculine *u*-declension has only a few, should tend towards the neutralizing weak declension, while inanimate *u*-masculines prefer the non-neutralizing *a*-declension. And it is unfortunate that the accusative is endangered by number neutralization, which has stronger claims to relational foreground status than the genitive. It is only gratifying, therefore, that *magu* and *sunu* did not find a permanent home in the weak declension.

3.7.8. This representative selection suggests that functional considerations are of limited value as predictors of paradigm changes of Old English nouns. In most instances where nouns change, or fluctuate between, inflectional paradigms differing in the incidence of number neutralization, it is in fact possible to point up one or the other functional parameter with respect to which the change or variability can be considered an improvement. Equally numerous, however, are changes which appear functionally unmotivated or even detrimental in one or the other respect, and instances of inflectional variability which is not exploited strategically. There certainly are no large-scale developments of classes of nouns joining precisely those paradigms which suit them best as far as the distinction or neutralization of number is concerned. (As far as relation coding, in particular, case marking is concerned, such large-scale redistributions of nouns among declensions which best, i.e. most economically, meet their expressive requirements are no rarities; cf. Plank 1979 on Old French.)

3.8. The last type of morphological change that must be taken into account here are categorial reinterpretations. In fact, it is only the neuter plural ending *-u* which, with certain nouns, has been reinterpreted as a feminine singular ending.

In the *i*-declension, some heavy-stem nouns (many in *ge-*) fluctuate between the feminine (Nom./Acc.Sg. *-Ø*, Nom./Acc.Pl. *-e/-a*) and the neuter gender (Nom./Acc.Sg. *-Ø*, Nom./Acc.Pl. *-u/-o*, more rarely also regular *-Ø*). Most nouns of this class are abstract; at least one is concrete or even animate (*wiht* 'creature, thing'). A few are attested only in the plural and may be true Pluralia tantum (*giftu/gifta* 'marriage', *gehyrstu/gehyrste* 'ornaments', *gedryhtu* 'fortunes'); on account of their meaning, it seems understandable that such nouns are liable not to enjoy full number oppositions. With other nouns of this class, and significantly only with abstracts (such as

gebyrdu 'birth, parentage, nature, condition', *gecyndu* 'kind, quality, origin, generation, race', *gewyrhtu* 'deed, merit', *oferhygdu* 'pride'), never with concretes (*wiht*, also *gecynd* when meaning 'genitals' or 'offspring'), the neuter plural form in *-u* is reinterpreted as a feminine singular form, and is then not declined for case and number, like feminine abstracts in *-u* of the original *īn*-declension (cf. 3.5.3).

The plural *līget(t)u* of the *ja*-declension neuter *līgett* 'lightning' was likewise reinterpreted, already in the Vespasian Psalter, as a feminine singular form, but was then declined for case and number according to the feminine *ō*-paradigm, where accusative singular and plural may be neutralized (when the plural is in *-e* rather than *-a*). Unlike the *i*-neuters above, *līget(t)u* is no abstract noun, but may be regarded as a collective since it typically does not refer to individual flashes of lightning (although it may do so, being countable, unlike its Modern English equivalent) but to a whole series of them. When reference is made to individual flashes of lightning, the neuter plural in *-u* or a masculine bye-form in *-as* is preferred; cf. *Đā flugon ða lēgetu swylce fȳrene strǣlas* (Blickling homilies) 'then the flashes of lightning were flying like flashes of fire', *sceotiende fȳrene līgettas* (Ælfric, Lives of Saints) 'shooting fiery flashes of lightning'.

The functional evaluation of these reinterpretations is entirely positive. It is hardly a coincidence that only abstract and collective nouns, and none from the higher ranks of the lexical-semantic hierarchy, experience a reinterpretation of plural forms as singular and concomitantly lose, at least partly (*līget(t)u*), their inflectional ability to distinguish number, even with relational-foreground cases and without the possibility of determiners distinguishing number in their stead. It is, thus, quite appropriate for these nouns to be reinterpreted as feminines, since it is with this gender that determiners most consistently fail to distinguish number in the nominative and accusative. The only thing that might be criticized as functionally non-optimal is that not more *ja*-neuters in *-e(t)* follow the example of *līget(t)u*: Being collectives or abstracts, many of them would have been equally amenable to number neutralization.

3.9. Patterns of distinctive and non-distinctive number marking may also be interfered with by phonological change. What also deserves attention under this rubric is the possibility of certain number exponents resisting regular phonological change or being analogically restored.

3.9.1. A few phonological changes in late Old English suffice to imperil

much of its nominal inflectional morphology, most visibly in Northumbrian. One of them is the loss of final alveolar nasals, *-m* having previously merged with *-n*. This change by itself manages to neutralize number in the nominative of weak-declension masculine nouns and adjectives.

This neutralization for phonological reason affects a highly animate class of nouns (more than 50% of the weak masculines being animate) and the prototypical relational-foreground case. The major functional excuse of this development is that masculine demonstratives and the definite article, and also strong-declension adjectives, continue to distinguish number in the nominative. In the dialects where final nasals do not delete obligatorily (as they do in late Northumbrian), no systematic attempt seems to have been made to delete or retain them strategically, so as to use contrastive plurals in *-n* only or preferably with high-ranking nouns when these are in the referential foreground and number marking is not syntagmatically redundant.

No such systematic attempt has been made either to differentiate accusative singular and plural of weak-declension feminines and masculines by selectively retaining final *-n* in either number. Accusative noun phrases are relationally less foregrounded than nominative ones, but at least with feminines there are here no number-distinctive determiners that could compensate for the loss; and weak-declension feminines too are relatively rich in animates (almost 30%).

3.9.2. Other morphologically disastrous phonological developments affect unaccentuated vowels. Their original variety is severely reduced, fairly early, by a weakening of the distinction between the back vowels *a, o, u* as well as of the front vowels *æ, e, i* in all dialects, which is followed, in the 11th century, by some confusion among the remaining front vowel *e* and the back vowel alternatively spelled *a/o/u*. By itself and in conjunction with the loss of final *-n*, this phonological trend leads to massive number and case neutralization.

For example, prior to the loss of final nasals, the coalescence of back vowels neutralizes number in the dative of weak nouns and adjectives, where the singular used to be in *-an* and the plural in *-um*. The dative is no prototypical relational-foreground case, but, functionally less fortunately, many weak nouns rank high on the lexical-semantic hierarchy, and masculine and feminine determiners all neutralize number in the dative. In West-Saxon, singular *-an* and plural *-um* did not coincide across the board; rather, number-distinctive *-um* was retained longer with nouns (and strong-declension adjectives, where masculines and neuters had *-um* both in the

singular and the plural in the first place) than with weak-declension adjectives, which for a while avoided the danger of number ambiguities quite economically, by having only one number-distinctive word per dative noun phrase with a weak-declension masculine or feminine noun and a weak-declension adjective plus definite article/demonstrative.

In the other instances of number neutralization due to the coalescence of unaccentuated vowels and loss of *-n*, the functional record is in the balance. Number distinctions are neutralized and maintained with relational-foreground and background cases, in noun paradigms rich and poor in animates, and with little regard for a complementary distribution of neutralizations among nouns and adjectives. There is some welcome decrease in syntagmatic redundancy; but at least in noun phrases with demonstratives or definite articles, the danger of number ambiguity does not increase, because the existing number distinctions of these words fall largely outside the scope of the relevant phonological reductions. (The occasional replacement of the nominative singular masculine definite article *se* by *þe* in Mercian and Northumbrian draws it suspiciously close to the plural *þā*, even though the number distinction still survives the impact of reductive phonology.)

3.9.3. It is the inflectional segment *-s* which most successfully resists phonological attrition. Its unchanging presence guarantees the functionally desirable number distinction with the nominative/accusative of the *a*-declension masculines, a high animate class and one that is the goal of many nouns leaving their original paradigms. But since final *-s* also figures in the genitive singular ending of masculines and neuters of the *a*-, *i*-, athematic, *-nd*-, and *es/os*-paradigms and of the strong adjectival paradigm, a number distinction subsists for the same reason which is functionally less desirable: the case concerned, the genitive, is relationally less foregrounded; some of the noun classes concerned are rather poor in animates; and number is redundantly distinguished twice by these nouns as well as an accompanying strong adjective (or demonstrative/definite article).

3.9.4. Since final high vowels play a considerable role in the inflectional system of West Germanic and also in Old English, the loss of some of them under certain phonological conditions in Primitive Old English inevitably alters paradigm structures. Most relevant here is the loss of (syllable-) final short *-u* in unaccented syllables after a long syllable or two short syllables, but not after a single short syllable or a long syllable followed by an unaccented short syllable. For ease of reference the stems after which *-u* is regu-

larly apocopated are here called heavy, and those after which *-u* regularly remains light. (See Keyser & O'Neil 1983 for a recent attempt at a maximally general formulation of the rule of high vowel deletion.) The situation is somewhat complicated by epentheses and syncopations of unaccented medial vowels which may convert heavy stems into light ones and vice versa, by other deletions of stem-final unaccented vocalic segments before vowels (rendering the distribution of *-u* and *-Ø* at the phonological surface opaque with some stem classes), and last but not least by analogical disturbances of regular phonological developments. It is on account of the less than strict phonological regulation of the (dis-)appearance of inflectional *-u* that functional influences should be particularly likely to make themselves felt here.

There is a striking difference between nominal and verbal paradigms with regard to final short *-u*. As a verbal inflection marking 1st person singular present indicative, *-u* (or *-o*) is always retained, or perhaps analogically restored, regardless of the length of root syllables, especially in dialects other than West-Saxon (where *-e* appears instead). This differential treatment of verbal and nominal *-u*, whatever its reasons (Keyser & O'Neil 1983 assume that the verbal ending in fact was non-high, i.e. /o/ rather than /u/, when high vowel deletion applied), does not make much functional sense. Even though personal pronouns were not as obligatory in Old as in Modern English, all person and number distinctions in the present indicative paradigm would have been maintained if 1st person singular *-u/-o* (or West-Saxon *-e*) had been deleted. The danger of an endingless 1st person singular indicative being confused with the regularly endingless 2nd person singular imperative seems negligible. It is in nominal rather than verbal inflections that *-u* codes distinctions which may not be syntagmatically redundant, and here it is much more liable to disappear.

As to nominal paradigms, *u*-apocopation causes number neutralization in the nominative/accusative of heavy-stem neuter *a/ja*-nouns (5a) and certain *wa*-nouns (5b), of heavy-stem neuter *i*-nouns (5d), and of heavy-stem strong-declension neuter adjectives (5i), the corresponding light stems of all of which retain nominative/accusative plural *-u*. Without causing number neutralization, final *-u* is also apocopated in the nominative singular of heavy-stem feminine *ō/jō/wō*-nouns, in the nominative/accusative singular of heavy-stem masculine and feminine *u*-nouns, in the nominative/accusative singular of heavy-stem feminine athematic nouns, in the nominative/accusative plural of certain neuter stems in Indo-European *-es/-os* (which

retain the plural formative *-(V)r*), and in the nominative singular of heavy-stem strong-declension feminine adjectives. Where there are corresponding light stems, these again retain final *-u*. Except with adjectives, where *-u* is regularly deleted whenever the phonological conditions on *u*-apocopation are met, regardless of whether they are feminine singular or neuter plural, the regularity of *u*-apocopation is not quite independent of the inflectional value of *-u*. When *-u* marks the plural of neuter nouns, there is a tendency to retain, or restore, this vowel even if stems meet the conditions on apocopation. On the other hand, when *-u* is the final segment of the nominative (/accusative) singular of feminine nouns, apocopation in general applies more regularly. Abstract *ō*-feminines with the Germanic suffix *-iþō* (such as *strengþ(u)* 'strength'), the inflectionally similar abstracts from the original *īn*-declension (such as *hǣl(u)* 'health'), and the rarely attested mass noun *egenu* 'chaff' appear to be the only ones to irregularly retain *-u*, at least optionally. Considering that it is a relational-foreground case, the nominative, which is threatened with number neutralization when apocopation effaces the neuter plural inflection *-u*, while inflectional distinctions remain intact when the victim is feminine singular *-u*, it is functionally reasonable to inhibit or compensate phonological reductions in the first case more strongly than in the second.

With plural neuter nouns *u*-apocopation is liable to underapply, but not to overapply. That is, plural *-u* is not phonologically irregularly apocopated with light-stem neuter nouns, except perhaps with originally trisyllabic plurals with long root syllable (such as *hēafodu/hēafudu* 'heads'), whose medial vowel should regularly be syncopated (yielding also attested forms such as *hēafdu*) but is probably misanalysed as epenthetic, the underlying stem (e.g. /hēafd/) thus qualifying as heavy. Light-stem adjectives, on the other hand, are prone to lose, phonologically irregularly, their final *-u*, monosyllabic ones in Northumbrian and Mercian (more readily with feminine singular than neuter plural *-u*), and polysyllabic ones (such as *micel(u)* 'great', *hefig/hefigu* 'heavy') also elsewhere and earlier. Since plural *-u* is simultaneously extended to many heavy-stem neuter nouns, most frequently in late West-Saxon and late Northumbrian, this amounts to an increase in syntagmatic economy, number as a result being distinguished only once in noun phrases consisting of a neuter noun and a strong adjective. Uneconomic again is the late West-Saxon tendency to use *-u* also with heavy-stem adjectives (both feminine singular and neuter plural).

The phonologically regular number neutralization with heavy-stem *a/*

ja/wa- and *i*-declension neuters affects a relational-foreground case, but is otherwise not without functional merits. Recall that only about 10% of *a/ja/wa*-neuters and virtually no *i*-neuters are animate, the percentage of concrete nouns being substantially higher at least in the former classes. Moreover, when these nouns are accompanied by determiners other than heavy-stem strong-declension adjectives (and irregularly *u*-dropping light adjectives), distinctive number marking on the noun itself is syntagmatically redundant. Since the distinctive plural marker *-u* may be retained, or restored, in defiance of the 'sound law' of high vowel deletion, or more accidentally as a concomitant of reanalyses of heavy stems as light owing to the existence of inverse rules of medial vowel syncopation and epenthesis, the neuters concerned are provided with alternative, distinctive (*-u*) or non-distinctive (*-Ø*) plurals. This variability creates a potential which might also be exploited to optimize Old English number marking along functional lines.

Firstly, the rate of irregular *u*-retentions or restorations might be expected to be significantly higher with higher-ranking than with lower-ranking neuter nouns. This is not confirmed by the available evidence. For example, among the heavy monosyllabic pure *o*-stem neuters which irregularly take plural *-u* in late West-Saxon are many inanimates as well as most of the few animates of this class; but among those which do not are animate *bearn* 'child' and *dēor* '(wild) animal'. Among the originally trisyllabic plurals with short root syllable, which should regularly drop plural *-u*, non-concrete *yf(e)lu* 'evils' is among the earliest to appear with *-u*, and another abstract, *forlig(e)r* 'fornication, adultery', is among those which most consistently have distinctive plurals in *-u*. Another noun from this class, *setl*, has the distinctive plural *setlu* more often when it is inanimate, meaning 'seat', than when it is animate, viz. in the compound *weardsetl* 'guard', where plural *weardsetlu* is in fact unattested. The plural of *hēafud* randomly varies between *-u* and *-Ø* when it is inanimate, meaning 'head, top, etc.'; the single attestation of an animate nominative/accusative plural of this noun, however, is *hēafda/hēafdu* 'leaders/superiors'. The neuter *ja*-stem derivatives in *-en(n)* and *-et(t)* mostly retain or restore plural *-u* (e.g. *fæstenu* 'fasts', *þiccet(t)u* 'thickets'), presumably irregularly, but none of them is animate and few are concrete. There are likewise few concrete and no animate nouns among the *wa*-stems, which tend to innovate distinctive plurals by retaining stem-final glides (e.g. *searwu*, as opposed to number-neutralizing *searu* 'devices') or final *-u* (e.g. *cnēowu*, instead of *cnēo(w)* 'knees'). In

general, there is no subclass of neuters where the rank on the lexical-semantic hierarchy allows predictions about the likelihood of nouns to take (phonologically irregular) distinctive plural marking *-u*.

Secondly, irregular *u*-retentions or restorations might be expected to be significantly more frequent in relationally foregrounded than backgrounded noun phrases. This is disconfirmed by a comparison of subject and prepositionally governed noun phrases containing relevant neuter nouns and perhaps adjectives in the nominative and the accusative case respectively. The evidence available suggests that distinctive *u*-plurals are about as frequent alternatives with backgrounded prepositional accusatives as with foregrounded subject nominatives.

Thirdly, irregular plurals in *-u* might be expected to be significantly more common in referentially foregrounded noun phrases than in the referential background. There are, however, no indications that specific reference particularly encourages the use of *u*-plurals. Typical examples of referentially backgrounded objects occur in more or less fixed combinations with verbs: as cognate objects or objects of semantically very general prop verbs (e.g. *weorc(u) wyrcan/dōn* 'perform works/operations'), as 'instrumental' body-part objects of verbs of movement (e.g. *his cnēow(u) bīegan* 'to bow one's knees', *hēaf(u)du/ hēafud wecgan* 'to shake the heads'), or as parts of idiomatic verb-object combinations without literal meaning (e.g. *hēafud(u) ūp āhebban* 'to take courage', *hēafud(u) hebban (wið)* 'to feel proud/to be defiant to'). In such contexts, *u*-plurals are about as frequent as elsewhere.

The absence of number-distinctive determiners, numerals, or other quantifiers, lastly, does not recognizably boost the use of irregular *u*-plurals either. There are no indications that distinctive plural marking which is contextually redundant or number neutralization which may cause actual ambiguity are systematically avoided by selective utilization of final *-u*.

The conclusion that these functional factors, individually in combination, do not exert much influence here could be challenged as being distorted by too global a look at the data base. It is the initial assumption of considerable variability in the use of plural *-u* which could be criticized as being largely illusory, valid only for Old English as a whole, but not for individual dialects or texts, which are more or less consistently either *u*-avoiding or *u*-overusing with all neuters or particular subclasses. This relativistic position is supported for early texts by the record of phonologically regular and irregular nominative/accusative plurals especially of

polysyllabic neuters in Dahl (1938: 66-72, 92-94, 111-113, 115-116). But what is also obvious from Dahl is that there indeed is some variability, at least in some neuter subclasses, even in early texts, especially in the 9th century Mercian Vespasian Psalter and Hymns and especially with originally trisyllabic pure *o*-stem plurals with a long root syllable (such as *hēafud(u)*). Upon inspection of these texts, some variants turn out to be functionally arbitrary or even dysfunctional. In the Vespasian Hymns, for example, the number-distinctive *hēafudu* occurs in a prepositional phrase, while non-distinctive *hēafud* is direct object, thus relationally more in the foreground, all other things being equal. But there are also some traces of functional motivation. In the Vespasian Psalter, for example, non-distinctive *hēafud* is found in a prepositional phrase, with non-literal meaning (*ofer hēafud ūr* 'superior to us'), with disambiguating quantifier (*monigu*), as instrumental object of a verb of movement (*hrisedon hēofud heara* '(they) shook their heads'), and never as nominative subject. But since there usually are not enough occurrences of relevant forms in individual texts, such comparisons are bound to remain impressionistic. Even if the above entirely negative conclusion may have to be partly revised in their light, the essential point remains: The distribution of neuter plural marking *-u* and *-Ø* was partly variable in some early and especially in later texts, and was not, or at least not optimally, exploited for functional purposes.

3.10. The changes and variations described in this section evidently have not rendered Old English number marking thoroughly dysfunctional. But neither have they led to dramatic functional improvements upon the system as outlined in the previous section (§ 2). Some traits of that system which have remained invariable were functionally felicitous in one or the other respect; others could conceivably have been improved on by judicious modifications. Particularly bad predictors of morphological change and variation and of 'analogical' disturbances of phonological change are those parts of the functional principle which stipulate that a low rank on the lexical hierarchy and relational backgrounding should be most favourable to number neutralization: a small majority of the developments and variations recorded in § 3 change the system of number inflection for the worse rather than the better in these respects. The above analyses could certainly be refined upon by taking into account more delicate lexical-semantic distinctions; but the ensuing improvements of the predictive value of the hierarchical ranking of nouns seem negligible. With respect to the func-

tional requirement of syntagmatic economy and the toleration of non-distinctive number marking in the referential background, the improvements equal or slightly outnumber the impairments. (It is perhaps significant that the long-term development of number marking in the later history of English was primarily in the direction of greater syntagmatic economy, with at most one inflectional number marker per noun phrase.) While not strictly speaking disconfirming the functionalist view, this net result does not exactly inspire confidence in its diachronic explanatory potential either. All things considered, it is temping to conclude that the relevant changes in Old English were functionally random rather than principled.

4. *The functionalist view qualified*

Perhaps disappointingly, the strongly universalist position that functional economy is a major influence on number marking in all languages is undermined by the synchronic and diachronic results obtained for Old English, where patterns of number neutralization are functionally often arbitrary. The conclusion could, thus, seem inevitable that functional influences on number marking vary unpredictably from language to language. This would obviously deprive the functionalist view of much of its intuitive appeal, which rests on its general, rather than merely language-particular, validity. It may, however, be rash to concede total cross-linguistic unpredictability on the strength of the Old English evidence. The less than impressive performance of functional factors in accounting for number neutralizations in this language need not perforce discredit the functionalist view entirely; it may, on the contrary, prove instructive in highlighting the structural conditions conducive to more consistently functional number marking.

Note, first of all, that a language like Old English, where number is expressed cumulatively with case and perhaps further inflectional categories (such as gender and declension type), is likely to economize systemically, if it is to economize at all. Economy of use, i.e. the non-use of markers for particular categories if not absolutely demanded by the communicative circumstances, is less viable with cumulative morphology, because here the various categories which are formally cumulated cannot be manipulated (i.e. be marked or remain unmarked) independently of one another (cf. 1.1). Economizing on the use of the formal resources available, as familiar from agglutinative and analytic languages, is relatively straightforward, insofar as it is exclusively the circumstances of *actual*

occurrences of nouns or other words which decide for or against the use of particular distinctive markers. Economizing on formal resources themselves is inherently more intricate, because *potential* occurrences of nouns and other words have to be taken into account when deciding on the functionally appropriate allocation of these words to a more or a less distinctive inflectional paradigm. And there is the rub, as far as Old English and structurally similar languages are concerned.

One basic functionalist assumption is that the utility of number distinction is contingent on the hierarchical rank of a noun. In Old English, however, there are numerous examples of nouns whose hierarchical rank is potentially variable on account of the range of meanings (animate and inanimate, concrete and abstract, countable and uncountable, etc.) which they are able to express. If the declension-class membership of nouns is to be determined once and for all (as it usually is, at least synchronically), the functionally ideal solution of assigning such nouns to several, differently distinctive declension classes is precluded.

Taking for granted that overt number distinctions are more important in the relational foreground (specifically with the core relations of subject and direct and indirect object) than in the relational background (specifically with oblique objects or adverbials), and that nouns and pronouns from the higher ranks of the lexical hierarchy have the greatest potential of actually appearing in the relational foreground, the ideal systemically economic solution is prevented by the relational category with which number is cumulated, viz. case. The relational potential of virtually all cases (with the possible exception of the nominative) includes the coding of background (especially prepositional) and foreground relations (cf. 2.3). Thus, if number is neutralized with the genitive, dative, or accusative, in the paradigms of high- and low-ranking nouns, this is functionally justified for background uses of these cases, but overdoes functional economy for foreground uses of the same cases, especially with higher-ranking nouns. There is no way out of this dilemma short of reorganizing the case system, so that number neutralizations could be limited to exclusively background-coding cases.

The referential potential of nouns is at least partly contingent on their hierarchical rank and their relational status, with high-ranking nouns in the relational foreground being those most likely to be referentially foregrounded (in particular, specific rather than generic). But since the ties between referential and relational foregrounding in Old English are only probabilistic rather than being strictly grammaticized, the risk of exaggerat-

ing functional economy by admitting number neutralization with all (relational, hence often also referential) background cases, especially in the declensions of lower-ranking nouns, is considerable. And there is again the difficulty of virtually no Old English case being limited to background function. The cumulation of markers for number and referential categories (such as specific/generic) would create better conditions for functionally judicious neutralization patterns.

If several noun-phrase co-constituents are marked for number and also agree in inflectional categories cumulated with number, it is in principle possible to distribute number-distinctive and number-neutralizing markings economically, i.e. complementarily, among the respective paradigms. It is, however, difficult to determine in advance which nouns, under which syntactic circumstances, will actually occur with number-marking determiners, adjectives, demonstratives and also articles being no obligatory noun-phrase constituents. Even if determiners would render distinctive number marking on nouns syntagmatically redundant under certain circumstances, there is always the danger that none will be present. This redundancy factor is, thus, difficult to exploit systematically in the structuring of paradigms. Moreover, if there are demonstratives or definite articles agreeing in number with nouns, there is even the danger of functional requirements contradicting one another. On the one hand, nouns from the higher ranks of the lexical hierarchy are most deserving of distinctive number marking in foreground relations when they are referentially foregrounded; on the other hand, it is precisely under these circumstances that nouns are most likely to be accompanied by demonstratives or definite articles (in languages which have such constituents), and perhaps also to be agreed with by verbs, with these number-distinctive agreement forms rendering distinctive number marking of nouns themselves redundant. (This difficulty may account for the less than perfect correlation between the existence of definite articles and the frequency of number neutralizations mentioned in 2.4.)

The moral of the lengthy demonstration of the functional unaccountability of many number neutralizations in Old English, thus, is not that the functionalist principle lacks universal validity as a major determinant of the structure and structural change of number paradigms. It is, rather, that there are particular structural conditions which predictably prevent the functional principle from displaying its full force. Old English is not the only language to possess these counterfunctional properties of extensive lexical polysemy, cumulation of number with cases vacillating between

foreground and background status, and noun-phrase-internal number agreement. Most are shared by other languages with cumulative nominal morphology, whose only change of economizing would be to economize systemically. In languages with agglutinative morphology, as well as in analytic languages, the functional principle typically faces no comparable abstacles. Here number markers are manipulable independently of other categories, are uninfluenced by the vagaries of noun-phrase-internal agreement (there typically is none), and, above all, can be used or omitted as required by the *actual* context of use of a noun, regardless of its morphosyntactic, semantic, and pragmatic *potential*. No wonder economy of use, rather than systemic economy, is the universally prevalent guise of functional number marking.

REFERENCES

Biermann, A. 1982. "Die grammatische Kategorie Numerus". In H. Seiler & C. Lehmann, eds., *Apprehension. Das sprachliche Erfassen von Gegenständen*, Teil I, 229-243. Tübingen: Narr.

Boeder, W. 1976. "Morphologische Kategorien". In K. Braunmüller & W. Kürschner, eds., *Grammatik. Akten des 10. Linguistischen Kolloquiums*, Band 2, 117-126. Tübingen: Niemeyer.

Bosworth, J. & Toller, T.N. 1898/1972. *An Anglo-Saxon Dictionary*. 2 vols. Oxford: Oxford University Press.

Brunner, K. 1965. *Altenglische Grammatik (nach der Angelsächsischen Grammatik von E. Sievers)*. Tübingen: Niemeyer, 3rd edn.

Campbell, A. 1959. *Old English Grammar*. Oxford: Clarendon Press.

Carstairs, A. 1984. "Outlines of a Constraint on Syncretism". *Folia Linguistica* 18, 73-95.

Dahl, I. 1938. *Substantival Inflexion in Early Old English. Vocalic Stems*. Lund: Gleerup.

Ekwall, E. 1912. *On the Origin and History of the Unchanged Plural in English*. Lund: Gleerup.

Forchheimer, P. 1953. *The Category of Person in Language*. Berlin: De Gruyter.

Georgiev, V.I. 1973. "Interdependenz von Syntax und Morphologie". In G. Redard, ed., *Indogermanische und Allgemeine Sprachwissenschaft*,

59-65. Wiesbaden: Reichert.

Hjelmslev, L. 1935. *La catégorie des cas. Etude de grammaire générale*. Première partie. Aarhus: Universitetsforlaget.

Hopper, P.J. & Thompson, S.A. 1984. "The Discourse Basis for Lexical Categories in Universal Grammar. *Language* 60, 703-752.

Jensen, H. 1952. "Die sprachliche Kategorie des Numerus". *Wissenschaftliche Zeitschrift der Universität Rostock, Reihe Gesellschafts- und Sprachwissenschaften* 1;2, 1-21.

Jespersen, O. 1949. *A Modern English Grammar on Historical Principles. Part II: Syntax, Ist volume*. London: Allen & Unwin.

Keyser, S.J. & O'Neil, W. 1983. "Exceptions to High Vowel Deletion in the Vespasian Psalter and their Explanation". In M. Davenport, E. Hansen & H.F. Nielsen, eds. *Current Topics in English Historical Linguistics*, 137-164. Odense: University Press.

Krifka, M. 1979. "Zur pragmatischen Fundierung der grammatischen Kategorie des Numerus". Term paper, Universität München.

Mignot, X. 1978. "Homonymies entre les désinences casuelles du latin". *Langages* 50, 45-50.

Møller, C. 1937. "Zerfall und Aufbau grammatischer Distinktionen. Die Feminina im Deutschen". In *Mélanges linguistiques offerts à M. Holger Pedersen*, 365-372. Aarhus: Universitetsforlaget.

Moravcsik, E.A. 1978. "Agreement". In J.H. Greenberg et al., eds., *Universals of Human Language. Volume 4: Syntax*, 331-374. Stanford: Stanford University Press.

Paul, H. 1917. *Deutsche Grammatik. Band II, Teil III: Flexionslehre*. Halle: Niemeyer.

Plank, F. 1979. "The Functional Basis of Case Systems and Declension Classes: From Latin to Old French". *Linguistics* 17, 611-640.

-----. 1981. *Morphologische (Ir-)Regularitäten. Aspekte der Wortstrukturtheorie*. Tübingen: Narr.

-----. 1983. "Transparent versus Functional Encoding of Grammatical Relations: A Parameter for Syntactic Change and Typology". *Linguistische Berichte* 86, 1-13.

-----. 1986. "Paradigm Size, Morphological Typology, and Universal Economy". *Folia Linguistica* 20, 29-48.

Royen, G. 1929. *Die nominalen Klassifikations-Systeme in den Sprachen der Erde. Historisch-kritische Studie, mit besonderer Berücksichtigung des Indogermanischen*. Wien: Anthropos.

Schmidt, P.W. 1926. *Die Sprachfamilien und Sprachenkreise der Erde*. Heidelberg: Winter.

Skalička, V. 1979. *Typologische Studien*. Braunschweig: Vieweg.

Smith-Stark, T.C. 1974. "The Plurality Split". In M.W. La Galy et al., eds., *Papers from the 10th Regional Meeting*, 657-671. Chicago: Chicago Linguistic Society.

Song, S.C. 1975. "Rare Plural Marking and Ubiquitous Plural Marker in Korean". In R.E. Grossman et al., eds., *Papers from the 11th Regional Meeting*, 536-546. Chicago: Chicago Linguistic Society.

Thomson, A. 1912. "Beiträge zur Kasuslehre, IV". *Indogermanische Forschungen* 30, 65-79.

Unterbeck, B. 1985. "Überlegungen zum Plural im Koreanischen". *Linguistische Studien* A 126, 75-92.

Weinreich, U., Labov, W. & Herzog, M.I. 1968. "Empirical Foundations for a Theory of Language Change". In W.P. Lehmann & Y. Malkiel, eds., *Directions for Historical Linguistics*, 95-195. Austin: University of Texas Press.

Wright, J. & Wright, E.M. 1914. *Old English Grammar*. Oxford: Oxford University Press, 2nd edn.