

## Two Morphological Notes: A Sharp and a Flat

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Article abstract

The purpose of this note is to discuss the possibility of relating the lexicon as a unique address and eliminating exceptionality from morphology, both somewhat threatened by some current proposals.

## TWO MORPHOLOGICAL NOTES: A SHARP AND A FLAT\*

Rajendra Singh

### 1. On not deriving the lexicon

In the beginning was the word

\_\_\_\_\_ God

Recent developments in generative grammar, Fanselow (1988) correctly points out, make it necessary not only to adequately describe a linguistic regularity but also to identify the module (both within the «mind» and within «formal» competence) responsible for it. The fact that «semantic» facts concerning scope or binding appear to be reducible to syntax and the fact that regularities in the domain of word-semantics appear to be consequences of general principles of our conceptual system (cf. Jackendoff 1983) suggest, according to Fanselow, that «the organizational architecture of the human mind will not necessarily mirror the traditional partitioning of linguistics» (p. 95). Phonology, the Lexicon, Morphology, Syntax, and Semantics, in other words, may have to be thought of somewhat differently. What has been thought of as Semantics may, for example, have to be divided

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\* Two anonymous reviewers correctly point out that this note is a bit too terse. I apologize for writing only a note and not an article, but I believe even a terse note is not entirely out of place in a special issue, as my readers are likely to know most of the literature I refer to as well as I do, except perhaps the commercials. I am grateful to both my reviewers and the editor of this special issue to have heard what I have to say despite the opacity imposed by the brevity of this note and for helping me clarify what should have been clarified even in the briefest of notes.

The fact that this two-note note is in English must be blamed squarely on O.M. Time. Work on it was in part supported by an FCAR grant.

One of the stable components of grammar has been the lexicon, though precisely what is in the lexicon has always presented serious empirical and conceptual problems, at least since Panini's *Dhatupath* (cf. Benson 1990). The earlier generative tradition, beginning with Lees (1960), held syntax responsible for its non-primitives. Following Chomsky (1970), it was replaced by another tradition according to which the non-primitives were derived with the help of lexicon-specific word formation rules (cf. Halle 1973, Aronoff 1976 and Kiparsky 1982, amongst many others). This latter tradition finds itself faced with certain empirical problems, duly noted as early as Aronoff, that have led Pesetsky (1985) and Sproat (1985), for example, to propose some radical departures. The most radical of these is the proposal by Pesetsky that grammars may not contain a uniquely identifiable address traditionally referred to as the lexicon. The purpose of this note is to consider the possibility that this proposal may not be warranted.

Chomsky's (1970) treatment of nominalizations in English has been, it should be obvious, interpreted in two ways. Amongst the adherents of what I shall call the weak interpretation, Chomsky's demonstration is taken to mean, as Fanselow (1988) puts it, that the formation of complex words should not be accounted for by syntactic rules and principles. Those subscribing to what I shall call the strong interpretation take it to mean, as Bauer (1983, p. 75) puts it, «all nominalizations (and, by implication, all compounds and derivatives) are listed independently in the lexicon, i.e. they are treated as if they were fully lexicalized or simple lexemes». It is the weak interpretation that allows Aronoff (1976) to see his word-based morphology, and Mohanan (1982) to see his lexical phonology and morphology, as not only consistent with but also as a consequence of Chomsky (1970). Jackendoff (1975) must, however, be seen as subscribing to the strong interpretation. In as much as they admit and allow the derivation of complex words by non-syntactic word formation rules (WFR), most contemporary lexicalist versions of morphology clearly subscribe only to the weak interpretation. Partly because our view of syntax has changed considerably and partly because lexicalist models of morphology have had more than modest success, a return to the sort of position taken by Lees no longer seems possible.

One can, however, entertain the possibility of extending the mechanisms, rules and principles proposed for syntax beyond their usual sphere of application. According to Selkirk (1982), for example, the lexicon can be derived by extending the  $\bar{X}$  schema «below» syntax. Words, in other words, have an  $\bar{X}$ -type syntax.

Faced with «bracketing paradoxes» of the sort that have become familiar in lexicalist models, Pesetsky argues for the application of both *Move  $\alpha$*  and binding theory in complex words and for the elimination of a uniquely identifiable locale in the grammar called the lexicon.

The  $\bar{X}$  proposal, it is obvious, does not deny that there is a unique address «lexicon» in the grammar; it merely says that it can, and perhaps should, be described in  $\bar{X}$  terms. Given that non-head elements are generally not maximal projections below syntax, that word structure exhibits no interesting configurations comparable to specifier-adjunct-complement in syntax, and that the process of head-identification in syntax and word formation cannot be considered analogous (cf. Lieber (1980 and Fanselow 1988)), it is difficult to accept the proposal that extends  $\bar{X}$  «below» syntax.

Problems, however, remain for this weakly lexicalist theory of word formation. Pesetsky and Sproat address these problems directly and argue for the integration of word formation into syntax. Pesetsky also argues for the elimination of the lexicon as a separate, unique component, a bold move that deserves full attention and close scrutiny. His proposals deserve full attention because their logic seems compelling and close scrutiny because the lexicon as a component of grammar has rarely been challenged.

It should be obvious that Pesetsky's and Sproat's arguments are relevant only for the weak lexicalist position, the position that sees the lexicon as a joint set of underived, lexical primitives, some of which may be independently occurring words, and derived morphologically complex words. Whether the derivation of the latter involves only morphological operations of word-formation or phonological rules in addition to these is in principle irrelevant here. Although the weak lexicalist position assumes that the lexicon is derived by applying morphological and lexical phonological rules to underlying representations and that both the syntax and the phonology of words is different from phrasal syntax and phrasal phonology, it is not necessary to subscribe to the phrasal phonology  $\neq$  word-phonology equation in order to maintain the weak lexicalist stance. A number of alternatives are possible, and some of them are exemplified in studies such as Aronoff and Lieber. As what is common to all weak-lexicalist interpretations of the lexicon is the assumption that it is largely a product of WFR's, we shall not devote much attention to matters pertaining to what is generally referred to as lexical phonology.

The discussion above shows that the sorts of objections raised against the weak lexicalist position hinge crucially on the interpretation of morphology as a set of rules, subject to constraints such as *Elsewhere* and *Level Ordering*, that derive morphologically complex forms from morphologically simplex forms. They would lose all their import if morphology were regarded as a set of generalized redundancy rules projected by or extracted from an underived lexicon, a lexicon consistent with the strong interpretation of Chomsky (1970). A strong lexicalist account of the lexicon does not view it as having been derived by WFR's: it views it as a stock of words a speaker can be legitimately said to possess. It views morphology as a system of rules that can be utilized to analyze known words should their analysis be needed or to generate words, fashioned after available ones, needed to meet specific needs such as having forgotten a word or having to coin one, etc. (cf. Ford and Singh, in press).

Although it is possible to save weakly lexicalist morphology from the onslaught of syntactic considerations of the sort Pesetsky, Sproat, Roeper (1987), and Randall (1987) bring up, by attempting, as Fanselow (1988) does, to reduce them to semantic (general conceptual) considerations, it is not obvious how such attempts can meet the objection against the identifiability of «lexicon» as a unique address in grammar. It can however be met by the strong lexicalist position in a straightforward manner, and that manner can even reap the fruits of attempts such as Fanselow's.

## 2. On exceptionality in morphology

A theory of language should provide an evaluation measure that prefers grammars with few exceptions to those with many exceptions. That is, the grammar that points out the most regularities should be preferred. In terms of the only evaluation measures that have been proposed so far — those that map generality inversely into length — we would expect exceptions to count more than nonexceptional cases. Thus, all other things being equal, the grammar with the greater number of exceptions would have the greater length.  
(George Lakoff 1970, p. 14)

Whereas recent developments in phonology and syntax seem to satisfy what might be called Lakoff's Preference (cited above), contemporary morphology still thrives on exceptionality and irregularity. This is particularly surprising because

the lexicon has traditionally been supposed to be the repository of exceptions and if morphology captures the regularities in the lexicon, it is not clear what the status of exceptions to this store-house of exceptions is or can be (cf. Singh, *in press*).

An adequate theory of morphology should minimize the need to have exceptions. This can be achieved in a theory, such as the one sketched out in Ford and Singh (*in press*), that builds on a generalized version of Jackendoff's (1975) redundancy rules and leaves suppletion out.

According to Ford and Singh, morphological relationship requires both formal and semantic similarity and is best captured by the rule-schema  $[X]_{\alpha} \leftrightarrow [X']_{\beta}$  where  $X$  and  $X'$  are words, «'» is the formal difference between  $X$  and  $X'$ , and  $\alpha$  and  $\beta$  are categories. This independently motivated formulation, it should be obvious, provides a metalanguage for morphology that largely eliminates the need to have exceptions.

Some examples might be useful. Given morphological rules like the ones in (1) and (2), the need to have exceptions to plural formulation in French and German, for example, largely and perhaps even entirely disappears<sup>1</sup>:

- (1) a.  $[X]_{Nsg} \leftrightarrow [X]_{Npl}$   
       b.  $[Xal]_{Nsg} \leftrightarrow [Xo]_{Npl}$   
       c. etc.

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1. An anonymous reviewer, echoing Halle (cf. Singh and Martohardjono 1988), asks: «What empirical facts about word-formation does this sort of grammar account for» and «Does the strong position simply amount to giving up any attempt to extract general principles of word formation?» The central empirical fact this sort of grammar accounts for is that speakers do not coin words which their lexica do not license. As far as the other empirical «facts» the generative tradition is replete with are concerned, they are better referred to, as Ford (personal communication) puts it, as *capta*. I do not, unfortunately, know of any empirical «facts» substantial counterexamples to which have not been pointed out within the generative tradition itself. After all, Pesetsky's own proposal is an attempt to deal with facts that cannot be included within the «empirical facts» now «established» by the mini-tradition of lexical morphology (cf. Aronoff and Sridhar 1983). Although I am aware of the methodological import of the reviewer's questions, I do not think it is necessary to worry about *capta* taken to be «facts» by this or that tradition. The full range of the facts of the matter is, I believe, appropriately accounted for by grammars such as (1) and (2). Most of the allegedly empirical facts I believe the reviewer has in mind are dictionary-facts and not lexicon-facts. The distinction is important for according to what I shall refer to as Ford's test if one has to consult a dictionary to determine if a given sequence is a possible word, the exercise (of looking it up) is necessarily redundant.

The same reviewer further asks: «Are all the rules in (1) and (2) of an equal status in the grammar, or are some less marked, say, than others?» Since I do not know what «marked» means (cf. Desrochers 1990), all I can say is that «potentially 'yes'» but «actually 'no'» because their application is constrained by processing and frequency considerations and that when such considerations are not involved there is no way to predict which option will be taken. The structural complexity of a rule is a transparent enough index of its actualization potential and when two rules have the same complexity and frequency pull one is as likely to apply as the other, apparently the case with German plurals listed in (2), despite the pedagogical emphasis on one of them (cf. Phillips and Bouma 1980).

- (2) a.  $[X]_{\text{Nsg}} \leftrightarrow [Xs]_{\text{Npl}}$   
 b.  $[X]_{\text{Nsg}} \leftrightarrow [Xn]_{\text{Npl}}$   
 c.  $[X]_{\text{Nsg}} \leftrightarrow [X]_{\text{Npl}}$   
 d.  $[X]_{\text{Nsg}} \leftrightarrow [Xə]_{\text{Npl}}$   
 e. etc.

Groups of words that exhibit no formal similarity or constitute unique pairs are examples of suppletion, something outside morphology, and not of exceptions to anything<sup>2</sup>.

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2. An anonymous reviewer suggests that I am eliminating exceptions by stipulating that they be eliminated and brings up what s/he sees as the «morphological relationship» between English *go* and *went*. Now, *go* and *went* are undoubtedly related but what that relationship has to do with morphology escapes me. Morphology is that sub-type of lexical relatedness which requires both semantic and formal relationship. The lack of former rules out morphological relatedness in the case of English adjective /red/ and past tense verbal /red/ and the lack of latter rules it out in the case of *go* and *went*. Examples like *kill* and *murder* and *good* and *well* show that, contrary to textbook assumptions, suppletion, even in its strong form, is not unknown outside «inflection». The definition of morphology that includes the former but excludes the latter remains incomprehensible to me despite its very respectable ancestry. The point here is that I am not ruling out what is generally called suppletion in order to eliminate exceptions but that what appears to me to be the proper conceptualization of morphology does not allow its inclusion. It is, of course, possible to disagree with that conceptualization, as most Paninians, including Bloomfield and his successors like Halle do, but I can't take on the entire structuralist tradition in a brief note. The interested reader is referred, to repeat a commercial, to Ford and Singh (in press).

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