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Linguistics

1993

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Review of *Deconstructing Morphology: Word Formation in Syntactic Theory*, **by Rochelle Lieber**

Digital Object Identifier (DOI)
10.1017/S0022226700000414

REVIEWS

Rochelle Lieber, *Deconstructing morphology: word formation in syntactic theory*. Chicago and London: University of Chicago Press, 1992.

Despite its title, *Deconstructing morphology* has no connection with Derridean critical theory (though Lieber's theory does stand in opposition to what one might, taking further terminological liberties, call the 'logocentrist' view of morphology). In her preface, Lieber explains that

> this book is the outgrowth of a conviction I have harbored for a number of years that the forms of morphological rules within lexicalist theories of morphology have been too suspiciously similar to the forms of syntactic rules for this similarity to be coincidental. It is an attempt to take seriously the notion that the rules of word formation ARE in fact the rules of syntax and to work out this idea in some detail.

The conviction that principles of morphology can, in one way or another, be reduced to those of syntactic theory is not new (cf. the work of E. Williams, E. O. Selkirk, M. Baker, R. Sproat, D. Pesetsky, N. Fabb, M. Halle, A. Marantz and others); nevertheless, *Deconstructing morphology* is, to date, the most thoroughgoing attempt at a categorical justification of this stance. Lieber adopts Government and Binding as the syntactic foundation for her wide-ranging discussion, but insists that her main premise – that there are no purely morphological principles, hence no morphological component – is logically independent of any commitment to Chomsky's particular theory of syntax. Since the focus of her discussion is on the analysis of productive morphology, she begins with a prologue ('On productivity', 1–9) detailing an empirical technique developed by Harald Baayen for measuring morphological productivity; but because it requires a large, rich corpus, Lieber is not actually able to apply this measure to most of the languages under scrutiny in her discussion.

In chapter 1 ('The interface between morphology and syntax', 11–25), Lieber examines a range of evidence against the Lexicalist Hypothesis, concluding that it must be abandoned in favour of the assumption that morphology and syntax are regulated by a single, modular system of principles operating both above and below the word level. Thus, in chapter 2 ('Head theory and principles of construction', 26–76), Lieber argues that the same X-bar parameter settings that determine the structure of phrases determine the internal structure of words as well; in particular, she asserts that the ordering of heads with respect to complements, specifiers and modifiers is uniform across words and phrases within a given language. Evidence for this claim is presented from Tagalog, English, French and

Dutch. The presumption that all words are headed and that affixes can serve as heads is, of course, a matter of continuing disagreement (Zwicky, 1985; Bauer, 1990). Even more problematic, however, is Lieber's presumption that a word's non-head constituents can be neatly classified as complements, specifiers or modifiers. because word structure is assumed to exhibit recursion at the X^0 level, word-internal complements, specifiers and modifiers cannot be distinguished hierarchically (i.e. according to the bar level of their mother and sister nodes); Lieber therefore distinguishes them by fundamentally semantic criteria. She herself acknowledges, however, that there is no coherent semantic characterization of specifiers (38f.); some non-head constituents (e.g. the *happi-* in *happiness*, the *fruit* in *fruity*) are therefore classified as specifiers essentially by default, because their semantic function is not obviously that of either a complement or a modifier (55). The procrustean character of this analysis raises doubts about the alleged parallelism of word structure to phrase structure; indeed, this analysis forces her to assume that heads such as *-ness* and *-y* are subcategorized for their specifiers, an assumption without precedent in the domain of syntax.

The claim that the ordering of heads is determined by the same 'licensing conditions' both in words and in phrases is, on the face of it, at odds with the contrast between the head–complement order of the VP *drive a truck* and the apparent complement–head order of the synthetic compound *truck-driver*. Lieber proposes to resolve this problem by deriving *truck-driver* from the two-word sequence *driver truck* through the operation of Head Movement (without whose application *truck* would violate the Case Filter). But even if Head Movement is assumed to apply in the formation of synthetic compounds, why must it REORDER the two constituents of such a compound (rather than maintain the order prescribed by the relevant licensing condition)? Lieber asserts that

> English synthetic compounds can appear to violate the Licensing Condition for complements and can be derived via movement only because they are a word formation type that has maintained its productivity since an earlier period in the history of English when this Licensing Condition was in fact set differently.... What is remarkable in the history of English is that the synthetic compounding pattern was so productive that it did not change after the parameter settings for English changed (62–63).

But this stance would seem to undermine Lieber's central thesis: what is the 'type' or 'pattern' at issue here if not an independent morphological principle of the language? Once Head Movement is invoked to account for that existence of aberrant 'patterns', the claim that words and phrases are subject to the same licensing conditions loses much of its empirical content.

In chapter 3 ('Feature percolation and inheritance', 77–120), Lieber discusses the principles by which morphosyntactic feature specifications are

transmitted to an expression from its constituents. She distinguishes between Head Percolation (the wholesale transmission of an entire set of feature specifications from a head constituent) and Backup Percolation (the piecemeal transmission of individual feature specifications from a non-head). This in turn serves as a basis of distinguishing derivation from inflection: because derivational affixes may be heads, they may participate in Head Percolation; inflectional affixes, by contrast, are uniformly non-heads, and therefore only participate in Backup Percolation. These assumptions are exemplified by means of a detailed analysis of Vogul verbal inflection. The details of this analysis, however, raise doubts about Lieber's approach. In order to account for the fact that the dual object suffix -$a\gamma$ must precede the first person singular subject agreement suffix -m (as in tot-s-$a\gamma$-^um 'I brought (dual object)'), Lieber assigns -m a subcategorization restriction which requires not only that it attach to a tense-marked verb stem but that it be word-final; the latter type of requirement, however, has no clear parallel in the domain of syntax, where subcategorization restrictions are generally assumed to mention neither linear ordering nor properties such as phrase-peripherality. Moreover, although the matter is not explicitly addressed, one must apparently also interpret the subcategorization restriction on -$a\gamma$ as requiring it to be NON-final; otherwise, Lieber's rules wrongly supply tot-s-$a\gamma$ as a preterite, dual-SUBJECT form (whose value for the feature of person is supplied by default). Technical details such as these reinforce the conclusion (Stump, 1992, 1993) that subcategorization frames are ill-suited to the description of position class phenomena, raising further doubts about the alleged parallelism of morphology to syntax. Chapter 3 concludes with a tentative discussion of inheritance (the transmission of an argument structure from a base to its derivative). Lieber argues convincingly that inheritance is distinct from percolation, and suggests that the pattern of inheritance associated with a given derivational affix can be deduced from the way in which that affix changes the Lexical Conceptual Structure of its base.

In chapter 4 ('Binding, barriers, and X⁰', 121–153), Lieber argues that an individual morpheme within a larger word may receive its own referential index and may therefore be independently subject to the principles of Chomsky's Binding theory; for instance, the *Reagan* in *Reaganite* is shown to function as an R-expression (subject to principle C), and the *self* in *self-contempt*, as an anaphor (subject to principle A). She takes pains to account both for the fact that some words genuinely act as 'anaphoric islands' and for the fact that speakers differ in the extent to which they tolerate co-reference with a sub-lexical morpheme. She also examines the consequences of assuming that Move-α can apply below the word level, arguing that a wide range of undesired movements can in fact be excluded by a modified formulation of the Empty Category Principle (ECP). The argument is flawed, however; having adopted Chomsky's assumption that one segment of an adjunction structure does not qualify as a barrier (144), she tacitly assumes

the opposite in subsequent discussion (147ff.). In a brief account of bracketing paradoxes, she argues that the ECP excludes Pesetsky's strategy of resolving such paradoxes by means of movement and instead proposes to resolve them 'autolexically' by allowing an affix to carry distinct sub-categorization restrictions for morphological and prosodic structure. Like many other recent accounts, Lieber's proposal does not generalize to morphosemantic mismatches that do not involve string-vacuous bracketing alternatives; cf. Stump (1991) for an alternative account which does so generalize.

In chapter 5 ('Beyond affixation and compounding', 154–196), Lieber discusses the ways in which her theory might accommodate such non-concatenative phenomena as discontinuous affixes, conversion, consonant mutation, umlaut, reduplication and Semitic root-and-pattern morphology; drawing on the principles of autosegmental phonology and prosodic morphology and making liberal use of zero affixes, she argues that non-concatenative morphology in effect reduces to ordinary concatenative morphology and therefore poses no problem for her theoretical position. Regrettably, the kinds of morphological issues which are most relevant to evaluating Lieber's position and the kinds of morphological phenomena which are potentially the most problematic for it are not addressed anywhere in the book. To the extent that these issues and phenomena have been widely commented on in the literature, some attempt to come to terms with them ought to have been made in this book; the credibility of Lieber's stance is diminished by her failure to do this.

For example, recent work (by A. Carstairs-McCarthy, P. H. Matthews, W. U. Wurzel, Zwicky, myself and others) suggests that a language's morphology includes rules and principles governing the structure of inflectional paradigms. Because rules and principles of this sort have no analogue in the domain of syntax (or phonology), their existence would clearly run counter to Lieber's main hypothesis; but the question is not raised, nor is the relevant work of any of the aforementioned researchers even cited. There is, moreover, a now quite substantial body of research favouring a 'realizational' approach to inflectional morphology over morpheme-based approaches such as Lieber's; the central idea underlying the realizational approach is that a word's morphosyntactic feature content is not built up cumulatively from those of its component inflectional markings (as in Lieber's version of the morpheme-based approach) but, instead, is itself assumed to determine the sequence of operations by which the inflectional markings are spelled out. The kinds of evidence used to motivate the realizational approach are well known, and the lack of any mention of them in Lieber's book is conspicuous.

One kind of evidence favouring the realizational approach is the fact that a word's inflectional markings may underdetermine its morphosyntactic feature content while its feature content nevertheless fully determines its

REVIEWS

inflectional form. For instance, Macedonian first person singular past-tense forms (imperfect and aorist) lack any marking for first person and singular number, as the paradigm of *padn-* 'fall' in table 1 shows; moreover, one

	PRESENT	IMPERFECT	AORIST
1SG	padn-am	padn-e-v	padn-a-v
2SG	padn-e-š	padn-e-še	padn-a
3SG	padn-e	padn-e-še	padn-a
1PL	padn-e-me	padn-e-v-me	padn-a-v-me
2PL	padn-e-te	padn-e-v-te	padn-a-v-te
3PL	padn-at	padn-e-a	padn-a-a

Table 1
Finite forms of Macedonian *padn-* 'fall' (Lunt, 1952: 73–74)

cannot simply assume that 'first person singular' is the default person/ number specification for Macedonian verbs, since second and third person singular aorist forms likewise lack any person/number marking. In order to account for the morphosyntactic feature content of *padnav* 'I fell' under the assumptions advocated by Lieber, one would have to treat this form as *padn-a-v-∅*, where ∅ is a zero morpheme contributing the specification 'first personal singular'. Under the realizational approach, by contrast, no such analysis is forced; see Stump (1994) for a realizational account of Macedonian verbal inflection. Proponents of the realizational approach to inflection have also emphasized the difficulties which the phenomena of overlapping and extended exponence pose for morpheme-based approaches to inflection; see, for example, Matthews's (1974: 141ff.) well-known discussion of Ancient Greek *elelýkete* 'you had unfastened'. The inflectional system of a heavily agglutinating language such as Vogul allows Lieber to present the morpheme-based approach in its best light, but an extended fragment of Ancient Greek verb inflection would have been much more informative, since heavily fusional morphology is where the real challenge to Lieber's theory lies. As they are formulated and interpreted, Lieber's feature percolation conventions (92, 111) actually exclude the possibility of extended exponence.

   Deconstructing morphology concludes with chapter 6 ('The interface with phonology', 197–203), a brief discussion of the consequences of Lieber's hypothesis for phonological theory; she shows that this hypothesis is incompatible with the principles of level ordering and bracket erasure, both central to recent work in Lexical Phonology. The book is remarkably free of typographical errors; in addition to a list of references, it includes separate

author, language and subject indices. The criticisms offered here cannot detract from what Lieber has accomplished: a detailed and admirably coherent case for the hypothesis that the principles of morphology are all reducible to independent principles of grammar. Ultimately, though, many readers will find the precision of her discussion actually uncovers the weaknesses of this hypothesis.

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