

A Common Basis for Syntax and Morphology: Tri-level Lexical Insertion

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1. Introduction: An integrated view of syntax and morphology

The uncertain place of morphology in generative grammar is not without ironic implication. The main goal of the generative enterprise has always been to elaborate a cross-linguistic syntactic theory, yet a phenomenon at the center of the best traditional syntactic descriptions, namely bound morphology, remains largely peripheral to the domain of notable generative achievements. Thus, the success of a generative approach in analyzing constructions involving morphology such as different types of passives, causatives, nominalizations, and agreements is noticeably less than in more purely syntactic areas such as long distance movement, binding theory, and underlying word order. In general, current syntactic theory has failed to characterize the notion of “possible bound morpheme” or “possible construction signaled by bound morphology.”

Consequently, many linguists have proposed developing some sort of autonomous morphology. This approach finds pre-theoretical support in several phenomena apparently specific to morphology, such as stricter linear ordering conditions within words, headedness distinct from syntax, the traditional distinction between inflection and derivation, stricter phonetic formation constraints on bound morphemes (e.g., English suffixes cannot begin with consonant clusters), and their characteristic “high functional loads.” Rubrics such as the “Strong Lexicalist Hypothesis,” Lapointe’s (1979) “Lexical Integrity Hypothesis,” Di Sciullo and Williams’ (1987) “Atomicity Thesis,” and Anderson’s (1992) “A-morphous Morphology” take the apparent failure of syntax to explain morphology almost as an *a priori* desideratum.

Certain researchers, among whom I place myself, find this state of affairs unsatisfactory. Baker (1988), for example, has developed one fruitful framework for integrating inflectional morphology and syntax. At a more general level, Borer (1997), in her lectures on morphology at the University of Nantes, cites

Lieber (1992: 21): "... a truly simple theory of morphology would be one in which nothing at all needed to be added to the theory of syntax in order to account for the construction of words." Borer then goes on to argue for the a priori "desirability of reducing morphology to syntax."¹

The goal of unifying the two sub-fields, however, does not require that morphology be entirely explained in terms of current theories of *phrasal syntax*, which have developed without serious attention to the internal structure of words. Two areas of syntactic analysis which are still relatively undeveloped and are plausibly the most relevant for morphology concern (1) productive processes of syntactic compounding and (2) a clearer picture of conditions which relate the permanently stored lexicon to syntax.² Sections 2 through 5 here treat the first of these and Sections 6 through 8 the second.

Word-internal syntax (or perhaps better, grammar) consists more or less of these two areas taken together. Without increased effort in these areas, it is a non sequitur to hold that a failure of purely phrasal (word-external) syntax to explain morphology necessitates abandoning Lieber's goal and embracing some theory of autonomous morphology. What I wish to show here is that a proper incorporation into syntactic theory of principles for compounding and lexical insertion both overturns some widespread ideas about syntax and at the same time renders superfluous much of what is taken as autonomous morphology.

2. The syntactic basis of word formation

The simple model of phrasal syntax on which I will base my discussion is the model elaborated by Speas (1990: section 2.2). A maximal phrase XP with head X^0 is just the highest phrase X^1 with a head X which does not further project.³ I use a "bare phrase structure" framework to this extent, but I do crucially maintain a difference between a word projection X^0 and a phrasal projection X^1 .

1. I would not object to turning this statement around; one can equally well claim that many phenomena seen as syntactic should be subsumed under properly expanded morphological analysis. A traditional conception of *grammar* comprises both syntax and morphology. Much that is assumed to be morphological or syntactic can and should be seen as more general *grammatical* phenomena with effects both within words (morphology) and external to words (syntax). Therefore it is virtually impossible to study one without the other. What remain as really autonomous parts of syntax and morphology are in my view very limited in number.

2. The theory of lexical insertion need not remain indefinitely at the level of Chomsky's (1965, 1970) innovative but tentative proposals relating *syntactically unanalyzed* heads of phrases to their phrasal complements.

3. Speas provides empirical arguments that an adjunction of @ to a maximal projection should result not in a configuration [X_P XP – @], which is formally excluded under her model, but rather in [X_P X^1 – @].

The four lexical categories are N, V, A, and P. In addition to the lexical category projections NP, VP, AP, and PP, the clausal projection IP (Chomsky 1986) is the largest “extended projection” of V and Abney’s (1987) DP is the largest “extended projection” of N. The largest projection of an A is itself an AP and similarly the largest projection of a P is a PP. Partly following Fukui and Speas (1986), I call these four projections “closed” when they cannot serve as a phrasal head of a larger projection.

(1) **Closed Projection**

A maximally extended projection of a lexical category is a **closed** projection. All other projections are termed **open**.

Certain basic syntactic units, namely phrases Y^1 , are “larger” than words (X^0) in that Y^1 occur outside X^0 but cannot occur within them. The restriction can be expressed as in (2).⁴

(2) **Domain Size Restriction**

No phrase Y^1 occurs within an X^0 (word).

Thus, even though productively formed compounds can be quite complex as in (3a), they do not, outside of fixed phrases and language play, contain phrasal projections (3b):⁵

- (3) a. [_N [_N [_N [_A nuclear] [_N physics]] [_N student]] [_N discount]]
 [_N [_A [_N stress] [_A free]] [_N vacation]]
 [_N [_N [_A [_N America] [_A n]] [_N history]] [_N [_V teach] [_N er]]]
 [_N [_A [_N ozone] [_A [_V preserve] [_A ing]]] [_N device]]
 [_N [_N [_{NUM} ten] [_N foot]] [_N boat]]

This example is productive compounding, as shown by:

*a new ten foot (*big) boat.*

4. Chomsky’s (1986) structure-preservation is a special case of (2) restricted to the transformational component. The restriction is more general, however; words may contain X^0 but not phrases Y^1 , as seen in (3).

5. Some pedagogical grammars of English refer to “quotational compounds,” ranging from fixed phrases such as “*do it yourself*” store to nonce formations such as a “*gosh I don’t want trouble*” type of guy. The point of quotes in punctuation is that they indicate awareness that a generally non-embeddable construction is being used for effect in performance or even in the permanent lexicon. Thus, **Mary murmured oh how cruel Bill is to herself* vs. *Mary murmured, “oh, how cruel Bill is” to herself*. Whenever compounds contain phrases as in (3), they are only acceptable as quotational in this sense. That is, they are grammatically ill-formed in embedded positions.

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