Dumping Lexicalism

Edwin Williams

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1 The Lexical Hypothesis

The Lexical Hypothesis is about the organization of the grammar into modules. It suggests that the system of words in a language is independent of the system of phrases in a language in a particular way. It is independent of it, but communicates with it through a narrow channel—the “top-level” properties of words. The system of words determines what the words of a language are, and what their properties are. The system of phrases determines how words form phrases, based on the properties of words.

The essence of the hypothesis is the separation of the two systems and the asymmetric relation between them. The word system determines that construct + -ion is a singular Noun pronounced “constrUkshn”. The phrasal system can use that information to build the phrase “my construction” because all it needs to know is that “constrUkshn” is a singular Noun. No feature of the behavior of construction in the phrasal system can depend on
the fact that construction is built from construct, for example, even though that property of the word was crucial to the building of construction by the word system. Perhaps most of the information about the structure of a word as determined by the word system is “hidden” from the phrasal system, so we have information encapsulation. Moreover, the channel of communication is asymmetrical, by virtue of the fact that phrases are made out of words, but not vice-versa.

The encapsulation prevents analyses. It narrows the scope of word/phrase interaction. For example, the parts of a word are not accessible in the phrasal system, nor even whether the word has parts. From this flows many mundane but important facts, such as the following: although how can modify complete, as in (a), it cannot do so when complete is a part of completeness, as in (b):

(1)  a. How complete are your results?
    b. *How completeness do you admire?
    c. [how complete]-ness do you admire?
    d. What degree of completeness do you admire?
    e. How complete a record do you admire?

The reason that (b) fails is that (c) is impossible; in (c), a “rule” of the phrasal system, the rule that adjoins (or merges) how has accessed a part of a word, the left part of completeness. (d) and (e) are included to show first that the question that (b) means to ask is a reasonable one (that is, it
is the same as (d)), and second that adjectives can be targeted by how in a nominal environment (the object of (e)), so (b) has no ready explanation apart from what is afforded by the Lexical Hypothesis.

So, the phrasal system doesn’t know that the adjective complete is a part of completeness. The lexical derivation is “encapsulated”, that is, hidden from outside view. If the channel of communication between the lexical and phrasal systems is narrow enough, the Lexical Hypothesis will make a strong mark on language just by virtue of this encapsulation. But in fact there is another feature of the arrangement: the word system and the phrasal system are different in their internal properties as well.

The systems are not entirely different. They share a vocabulary (Noun, singular, etc.) and some important notions (derivation, head). But some properties are not shared. The phrasal system has a property that I will call “delayed resolution” that is not found in the word system.

Phrasal anaphors, for example, need close-by antecedents, but the antecedent needn’t be a sister:

(2) John told stories about the destruction of himself

The anaphor is contained in a number of phrases that do not contain the antecedent (PP, N’, NP, PP, NP, VP). Such a situation cannot arise in the lexical system; corresponding lexical anaphors must find their antecedents in the immediate constituent in which they are introduced. That is shown by the following examples:
(3)  a. self destruction.
    b. [self destruction] stories
    c. John told self destruction stories
    d. John told stories about the destruction of himself
    e. John told stories about one’s destruction of oneself.

In (a), the antecedency of self- is immediately resolved by being identified with the agent of the predicate destruction, to which it is immediately attached. Of course, in (a) there are no other available antecedents anyway. But there are in (b), and yet the same narrow choice is enforced. In (b) self- could in principle take as its antecedent an argument of stories, for example, the “teller” argument, yielding a different interpretation. But in fact the arguments of stories are not available as antecedents of self-; as a result, (c) is unambiguous, having only an interpretation parallel to (e); the interpretation indicated in (d) is not possible. Simply put, self- cannot take a distant antecedent. Himself, on the other hand, as (d,e) show, can take a near or a distant antecedent. Quite specifically, it appears that self- must take as its antecedent one of the arguments of the word that it is immediately attached to.

I think that this illustrates a fundamental difference between the lexical and phrasal systems. The lexical system has no delayed resolution, but the phrasal system does. This is responsible for some gross differences between the two systems—the phrasal system has no movement—no NP movement,
no WH movement, no QR. The relations it instantiates are therefore a subset of the relations instantiated in the phrasal system, as it has only those which are not underpinned by “delayed resolution”. So it has the “argument of” relation, and the adjunct relation, but not the other relations of phrasal syntax. The property of “immediate resolution” was called “lexical atomicity” in Williams (1981); this term is dropped here as it collapses two different notions, the atomicity of words in the phrasal system, and the atomicity of units within the word system. The distinction is drawn here for expository reasons only, but of course one can imagine a system which as one, but not the other, of these two properties.

If we look at adjuncts we find another manifestation of the limitations imposed by the Lexical Hypothesis. Many prefixes in the word system mirror adjuncts in the phrasal system; e.g., re- means approximately what again means. But we find sharp limits on how the meaning of re- enters into the meaning of the sentence in which it occurs:

(4)  
   a. John re-washed the dishes on Tuesday (not ambiguous)  
   b. John again washed the dishes on Tuesday (ambiguous)

re- in (a) cannot include on Tuesday in its scope, in that the presupposition invoked by re- does not include the time adverb. So (a) means that a dish washing precedes the event announced in (a), but not necessarily a Tuesday dish washing. (b) on the other hand is ambiguous, in that on Tuesday can be a part of the presupposition associated with again.
This difference between *re-* and *again* is a direct reflection of the Lexical architecture. The full story on *re-* and, for that matter any other prefix, is that it can have scope only over the arguments of the item that it adjoins to in the word system. Why the arguments and not the adjuncts? Because the arguments of a lexical item are represented on the item itself in some way, but adjuncts are not. When a word prefixed with *re-* is used in a sentence, its scope is already fixed in the lexical system. The word *again* enters in the phrasal system, and so can interact scopally with other elements in the phrasal system.

A theory in which *re-* and *again* are treated in fundamentally the same way, with only some superficial difference forcing one to be a bound morpheme and the other not, will not have any explanation of the difference in behavior. What is needed is an explanation of why the prefixal status should be connected with the difference in scope behavior. The Lexical Hypothesis provides that.

We find a further difference between the two systems in their internal syntax. In many languages, English for example, we find that the head is positioned differently in the two systems. English words are head-final, whereas English phrases are head-initial. While there is no necessity that such differences exist, they underline the deep joint that the Lexical Hypothesis identifies. Added to the other differences, we have the following set of properties that appear to robustly correlate with one another:

(5) The word system provides input objects to the phrasal system (asym-
(6) The objects of the word system are atomic in the phrasal system (atomicity)

(7) The word system and the phrasal system can have different internal syntax (internal constitution)

(8) The word system is subject to a condition of “immediate resolution” (locality, or word-internal atomicity) which is irrelevant in the phrasal system.

Now, either this is not the situation, or we need something like the Lexical Hypothesis. That at least was the position of Williams (1981) and Disciullo and Williams (1986), and it is the position I would like to take as the reference point in the present discussion.

The arguments against the Lexical Hypothesis, so understood, consist in showing that there is some slippage between the different notions of word; for example, that the domain in which “immediate resolution” holds is different from the domain in which head-finality holds. But there have really been no serious systematic effort to carry out such refutation; that is, to show that at least one of the properties in (5)-(8) diverges from the rest in nontrivial ways.
2 “The Lexicon” is irrelevant to the Lexical Hypothesis

I have carefully used the terms word system and phrase system instead of the more usual designations morphology/lexicon, syntax. I have avoided these later terms because they are misleading about the nature of the things they refer to. Furthermore, the literature on the Lexical Hypothesis has inflamed the confusion inherent in the terms, especially the literature that opposes the word/phrase distinction.

“Syntax” is simply too general a term to use in this context. Both words and phrases have syntax—that is, they have parts, and there are rules and principles for putting the parts together and for determining the properties of the resulting constructs. To narrowly use the term “syntax” as the name of the rules of phrasal composition may be useful in some contexts, such as when the discussion is about phrasal syntax; but it is simply a source of confusion to use it that way in a discussion of the lexical/phrasal interface.

Unfortunately a lot of the discussion of the Lexical Hypothesis turns on the confusion that the terminology gives rise to. So Marantz (1997), for example, opposes syntax to the lexicon, which he calls “a place”: “words are created in the lexicon...by processes distinct from the syntactic processes of putting morphemes/words together”; what is troubling in this remark is not the doubts expressed about the clear empirical question (are the processes the same or not?), but rather the phrase “in the lexicon”. There is no “in
the lexicon” any more than there is a “in the syntax”. The problem is, the phrase tends to identify the storage-place for idiosyncratic information with the word system.

Disciullo and Williams (1987) tried to clear this up, apparently unsuccessfully. We invented the term “listeme” to designate items in the storage house specifically in order to emphasize the lack of any privileged connection between that notion of lexicon and what I am here calling the word system. We made the further point that the storage place contained phrases as well (“idiomatic” phrases), and speculated that if anything, there were probably more phrases than words there. In fact, further types of items need to be listed as well. English has a sizable number of intonation patterns, and they have properties, even meanings. They must be listed. So, there is absolutely no reason to maintain any special connection between the word system and the lexicon conceived of as a list of memorized forms with their properties.

The real question has not changed since D&W. It is whether there are two systems (the word system and the phrase system) with a narrow interface, or a single system, a question independent of the so far meaningless question of what structure or properties the list, or lists, of listemes might have. ¹

¹As a consequence of the difference in what the unit of insertion is, the lexicon of course plays a different role in DM.
3 Distributed Morphology

Marantz (1997) writes, “Distributed Morphology (DM) is...the alternative that allows us to dump lexicalism once and for all” and, “lexicalism is dead, deceased, demised, no more, passed on...”. What exactly is different about DM, and what about it makes it better than a theory with the Lexical Hypothesis? I think that there is less distinctive about it that is claimed for it, but in the end, what makes it distinctive is its denial of the Lexical Hypothesis.

3.1 What is not distinctive about Distributed Morphology

Harley and Noyer (1999) present what they call the three distinctive properties of DM:

(9)  a. Late Insertion

b. Underspecification

c. Syntactic Hierarchical Structure All the Way Down

Neither Late Insertion nor Underspecification are distinctive—both have been parts of previous accounts, including Lexical ones. Late Insertion was a feature of Generative Semantics, and of the work of den Besten (1977); it is also necessarily a feature of nonderiviational theories such as Koster (1986) and Brody (1995). Underspecification (and its companion, Competition), are
truly ancient ideas, used in a modern treatment of inflection in, for example, Williams (1981).

That leaves (c). I have already said that there is no argument over the point of whether words have syntactic structure or not, in the general sense. Everybody says so, and has said so for 25 years. So the only point of discussion can be over whether words and phrases have the same syntactic structure; and this indeed seems to be what H&N have in mind: “elements within syntax and within morphology enter into the same types of constituent structures (such as can be diagrammed through binary branching trees)” (p. 3). Likewise, as mentioned earlier, Marantz characterizes Lexicalism as the hypothesis that “words are created in the lexicon...by processes distinct from the syntactic processes of putting morphemes/words together.” (p. 201).

The contentful interpretation of (c) is in fact the explicit denial of the Lexical Hypothesis—under (c), the structure of a Sentence is a structure that has morphemes as its terminals, instead of words.

H&N supply a further trio of distinguishing features: DM is piece-based, uses competition, and uses impoverishment. The first refers to the notion that the syntax of words takes morphemes as basic, rather than “morphological operations”. Since that is the traditional view, and only rejected in some particular works (such as Anderson (1992)), it is surely not distinctive. The other two notions, competition and impoverishment, were both features of the already mentioned inflectional theory of Williams (1981).
3.2 What is distinctive about DM

So we are left with this central idea whereby DM distinguishes itself:

(10) Phrases are built (directly) out of morphemes, with no intervening notion of word

There are a several consequences of (10). First, the properties (5 - 8) that were cited in section 1 as characteristic of words cannot be—there are no units which are opaque to syntactic operations, no domain within which “delayed resolution” is not possible, no principle of asymmetric construction.

From this point of view, DM is the null hypothesis. That is, everyone must say that sentences are built out of morphemes. The Lexical Hypothesis says, sentences are built out of morphemes indirectly: first build words, then build phrases from them, which is to add something substantive, and possibly wrong, to the null hypothesis. But then it is nonsensical to say that DM is “the alternative that allows us to dump Lexicalism once and for all”. Rather one should say, “there are some empirical problems with the Lexical Hypothesis, so we must retreat to DM”.

3.2.1 Idioms are not things

Another consequence of (10) is that there can be no list of composed words—words literally do not exist, so there can be no list of them. Likewise, there can be no list of phrasal idioms either—by (10), the only unit of “insertion” is the morpheme. Idiomatic or noncompositional meaning is consequently
handled in a different way: as Marantz says, “The Encyclopedia lists the special meanings of particular roots, relative to the syntactic context of the roots, within local domains” (1997, section 1) and Harley and Noyer (1999) give the following example: “the encyclopedia entry for “kick”, for example, will specify that in the environment of the direct object ‘the bucket’ ‘kick’ may be interpreted as ‘die’” (p. 4).

A traditional view of idioms is that they are “things”; that is, linguistic units. For example, “to get one’s goat” is a VP listed in the lexicon, thusly:

\[(11) \quad [\text{get [X’s goat]}]_{NP} V P : \text{“to make X mad”}\]

The idiom, a VP, itself has a meaning. This idiom has a “free” position in it, a position which is referenced by the meaning of the idiom; this free position gives the idiom the meaning that a transitive verb would have. Perhaps someday there will be a theory about what a word meaning can be; it can then be determined whether the meanings of phrasal idioms can fall under the same theory.

The situation is quite different in DM. Idioms are not things. Rather, idiomatic meaning arises because

\[(12) \quad \text{roots may have special meanings in the (syntactic) context of other elements within a locality domain. (Marantz (1997) section 2.2)}\]

Thus the remark about kick meaning die. The DM story about “kick the bucket” is incomplete in an important respect. When kick means die, “the bucket” means “nothing”, otherwise “the bucket” would violate the
theta criterion (as it would in “die the bucket”). This presumably takes another contextually determined rule for special meanings, which in the environment of kick, the and bucket have no meaning. Somehow, these rules must be coordinated in such a way that they all apply at the same time, or none at all, since it is only when ‘kick’ means ‘die’ that bucket means nothing, and vice versa. These awkwardnesses all stem from the idea that idiomatic meanings can all be fixed on the “roots” that occur in the idiom, and not on the idiom itself; and that stems from the decision that the lexicon(s) in DM do not list any derived forms, and that in turn stems from the decision that morphemes are the sole units of insertion.

If, on the other hand, idioms are things (in fact, insertable things) then the coordination of these aspects of meaning lies simply in the fact that the idiom itself has a meaning, rather than its parts. This is not to say that the parts might not have meaning themselves, making the idiom partially compositional; the difference between “cross those bridges” and “kick the bucket” is exactly that, as suggested in Williams (1994)—the former has a compositionally assigned theta structure, the latter does not.

Since DM has special rules where Lexicalism has things, there is another potential difference in the treatment of idioms. Rules that operate over some stretch of linguistic material are subject to locality constraints, so we would expect to find locality effects in the assignment of special meanings in DM. In Lexicalism the analog to locality constraints on idiomatic meaning would be a constraint on the sheer size of the idiom; but since the idiom is listed
once and for all, there would be no principled reason for it to be smaller than a given size, though of course general constraints prefer the short to the long. In particular, it seems that nothing like “subjacency” can be enforced, because of examples like the following:

(13) to dance on X’s grandmother’s grave: “to show disrespect for X”

Although I cannot think of idioms like this, this one seems very learnable and useable to me, and so I submit it as relevant; if I am wrong, you may dance on my grandmother’s grave.

Marantz in fact suggests a locality constraint on assigning *die* to *kick* and the like. He suggests that the “little v” that introduces the agentivity of the clausal subject is a barrier to the assignment of special meaning—that is, no idiomatic meaning can have the target of the rule (“kick”) on one side of “v” and the context (“the bucket”) on the other.

He finds two consequences: first, there should be no agentive VP idioms with fixed (that is idiomatic) subjects, and cites *the shit hit the fan* as an example of a fixed subject idiom which has a non-agentive subject. But it seems to me that in the following:

(14) The cat has got your tongue: “You are speechless”

that the cat is an agentive acquirer and keeper of your tongue, and so “v” occurs within the idiom; or rather, in DM terms, between the morpheme to which a special meaning is assigned (*got*?) and some part of the triggering context (*the cat*). At least, if this is not such a case, then I don’t know what
such a case would look like, and do not know what the prediction is meant to be.

The other consequence is that an idiom should not include an embedded agentive subject as an open position. The following would seem to be such a case, with *me* as the embedded agentive subject of *do it*:

(15) The devil made me do it: “I am not responsible for doing it”

A further argument can be given that idioms are “things”. The idioms discussed so far all have, in DM, a head verb which undergoes the assignment of a special meaning in a context. But in fact there is at least one idiom which has an empty verb, and hence no verbal root, in it:

(16) a. \([V this!]_{VP}\): “as far as V-ing goes, screw you!”

    b. Format this!

    When uttered, the idiom is accompanied by the middle-finger gesture, which occurs in its literal meaning. What is the special meaning assigned to here? Not to whatever occupies the empty V position—whatever that verb is, it also occurs in its literal meaning in the idiom (see paraphrase). But then to what? DM does not have a story to tell. Such cases strongly support the notion that idioms are things, and are assigned meanings as wholes, even where the meaning is partly supported compositionally. But if so, then idioms are surely candidates for insertion.

    And if idioms are things (insertable things), then so are complex words,
because the arguments are the same, and if they have any unpredictable properties they (the things) must be listed with a specification of those properties.

### 3.2.2 The Fragmentation of Competition

A further consequence of the way in which DM goes about denying the Lexical Hypothesis is a narrowing of the domain in which the principle of competition has play, a narrowing that excludes important applications of the principle.

Every grammatical model these days has some notion of competition—two forms vie for a certain role, and, on general grounds, one wins, excluding the other from that role. Its ancient roots are well known. Its role in modern morphology begins with Aronoff’s Blocking and Kiparsky’s Elsewhere principles. Competition implies competitors, and while the rules of competition are usually simple ("most specific", “best”) the selection of the competitors, and for that matter, the issue to be competed over, are difficult, and essentially unidentified. In any case though, the role competed for must admit more than one form.

As already mentioned, Williams (1981) applies competition to inflectional morphology in a particular way. Inflectional features are ranked \( F_1, \ldots, F_n \). Forms are assigned to particular values of particular sets of features (eg to \( [+F_{12}, +F_{17}] \)). If \( F_k \) is the lowest feature marked on a morpheme \( M \), and there are no morphemes marked just like \( M \) but with values for lower features specified, then \( M \) is the form used for all configurations which are consistent with the marking on \( M \). In a given language, particular feature-sets are identi-
fied for spellout independent of particular verbs; these I called “entry points”.

So, for example, English verbs would have the following description:

\begin{enumerate}
\item Feature hierarchy: Tense > number > person
\item Entry points: [+3 +singular +present] [+past] [+present]
\item Forms:
  \begin{enumerate}
  \item talks [+3 +singular +present]
  \item talked [+past]
  \item talk []
  \end{enumerate}
\end{enumerate}

For a configuration that calls for [+2 +singular +present], for example, the form chosen is talk, according to the selection principle; it has no features, but is nevertheless the most specified form that matches; and so forth. See Williams (1981) for further application.

This system uses competition, underspecification, and, to use a term that has become popular in DM, impoverishment: any case in which a language has an entry-point that is not fully specified is a case of impoverishment. Hence, for example, [+past] is an entry point which has this property, and so there is no expression of lower features in the past tense.

I think any theory will have some analog of these ideas, it just seems inescapable. As it turns out, the hard problem is to demarcate the arenas in which competition, etc., will play out. DM has competition, but I think that the structure of DM, especially what follows from the denial of the Lexical Hypothesis, prevents it from addressing anything like the full range
of applicability of competition in language. Essentially, if there are no listed complex words or listed complex phrases, then lexical insertion will always be of morphemes. But this means that if insertion is the locus of competition, that competition will always be a competition of one morpheme with another. DM advocates hew to this principle in a thoroughgoing way, but it is a great obstacle to achieving an understanding of many things.

For simple cases, it doesn't matter. Where Williams (1981) had run competing with runs, DM will have -Ø (the null morpheme) competing with -s. But for any other cases the DM setup precludes analysis in terms of competition, leading to a proliferation of other grammatical devices.

In a large number of cases, a lexical readjustment rule must be postulated in order to account for what otherwise could be treated as a case of competition. The English more/-er/better allomorphy is representative.

There are three ways to form the comparative of an adjective: adjoin more in the phrasal system, adjoin -er in the word system, or have a special form (e.g. better). The -er adjunction is subject to a prosodic constraint: the adjective must be less than two full syllables. By general principles, we can rank these possibilities in terms of generality:

(18) a. more A
    b. A-er, with prosodic constraint
    c. special form for A

Under the Paninian dictum “use the most specific form” (a)>(b) be-
cause (a) has a constraint that (b) does not have; (b)>(c) because special forms are clearly less general than even restricted rules. On general grounds, then, we can predict that if there is a special form, then that form is the comparative, no matter what; if the adjective is short and there is no special form then \textit{A-er} is the comparative; if an adjective is not short and there is no special form then \textit{more A} is the form. So, *\textit{gooder} because (b)>(c); *\textit{more tall} because (a)>(b); and so forth. In other words, to predict the outcomes, all we need is the \textit{existence} of \textit{more} and its properties, the \textit{existence} of the morpheme \textit{-er} with its properties, and the \textit{existence} of special forms.

Unfortunately for DM, the competition in (18) is not a competition between morphemes; it is in fact a competition between full forms: \textit{more good/gooder/better}. So DM cannot treat it as a competition. Rather, special context dependent rules must create the \textit{-er} forms and even the special forms from the “basic” \textit{more A} case (Embick and Noyer (2001); Marantz (1997)). The operations of these rules is not governed by competition, and so the various outcomes must be stipulated. In other words, there is no explanation from the existence of various items. In fact, in DM, the morpheme \textit{-er} does not exist as a lexical item of any kind; rather, it is introduced by a readjustment rule. This is an odd conclusion for an approach that advertizes itself as “piece-based”. But in fact, \textit{-er} is just like other morphemes in its behavior, except in its role in these special competitions.

It is important to note that the notion of “exist” that is needed for the competition theory of these forms does not entail membership in a closed list
of items. *Glopper* exists, for the purposes of competition, if *glop* exists and -er exists, and in fact it will be the chosen form even if it has never been used before. So existence and listedness are not the same concept.

What I have just outlined about the comparative applies equally to a host of other cases that are naturally treated by competition among existing items. Many intransitive/causative pairs have the same form (e.g., *boil* intrans. / *boil* trans.); for some (*rise*) the transitive form is different (*raise*). In a competition theory, the existence of *raise*, as a special form, will block the transitive use of *rise*; in DM, *raise* arises from the application of a special context dependent allomorphy rule (Marantz (1997)). Similar conclusions arise for *goed/went*.

Another case: *yesterday* beats *the day before today*, making the latter expression almost unusable. Here, we have a lexical item (perhaps complex: *yester-day*) beating a nontrivial phrase; clearly such things will lie outside the bounds of DM, except as special rules of allomorphy. But if there is a special rule of allomorphy for this, then we must ask, could a language have a word like *yesterday* that was *not* the result of a special rule of allomorphy? It would be language in which there was a word meaning *yesterday*, but at the same time *the day before today* was well-formed in general contexts. I think the DM theory is unable to explain why such languages could not exist.

The restriction of competition to morphemes has a further unwelcome consequence. It forecloses the possibility of relating grammatical competition to the broader semantic notions that fall under Grice’s theory. There is an
enormous similarity between the Paninian maxim, “use the most specific form” and the Gricean maxim “use the most informative mode of expression”. The similarity is so great that for some cases it is impossible to know which is operative. As Horn (1989) points out, we have ten fingers, but if I tell you that John put a finger in his ear, no one imagines that he put a thumb. Why? Grice’s answer: if he put a thumb in, I should have said so, instead of using the less informative finger. Panini’s answer: in a meaning context appropriate for thumb, thumb beats out finger because finger/thumb. If I had to choose, I would say that this was Gricean rather than Paninian; that is, it is the same reasoning that forbids saying Some of you passed the exam when it is true that All of you passed the exam. But perhaps we should consider the possibility that the Paninian principle is a projection of the Gricean principle onto grammar. If it is, then the Paninian principle cannot be limited to refereeing morpheme vs. morpheme contests. As DM stands, all applications of the Paninian principle which are not morpheme vs. morpheme contests must be recast as one or another kind of rule of special allomorphy, turning gold into clay.

3.2.3 Allomorphy Run Wild

An analysis of nominalization in Marantz (1997) shows the enormous role played by allomorphy rules. There Marantz seeks to explain the fact that destroy, but not grow, has a transitive nominalization (John’s destruction of the city vs. *John’s growth of tomatoes). The explanation is built on the
fact that *destroy* denotes events with external agents, whereas *grow* denotes events with only an internal agent (something inside of the plant). The transitive use of *grow* and *destroy* both rely on the presence of “little v”, the bearer of the subject’s agentivity:

(19)  
\[ \text{a. } [v \ [\text{destroy} . . . ]] \]
\[ \text{b. } [v \ [\text{grow} . . . ]] \]

Marantz supposes further that the roots *destroy* and *grow* are categoriless; the category of the VP is determined by v, not the verbal root. Being categoriless, these roots can also occur in a nominal environment, but in a nominal environment, neither v nor anything else with its properties occurs, by stipulation, so we have:

(20)  
\[ \text{a. } [\text{NP 's} \ 'D \ [\text{destroy}]]_{DP} \]
\[ \text{b. } [\text{NP 's} \ 'D \ [\text{grow}]]_{DP} \]

The absence of v in NP leaves nothing to assign agentivity to the possessive, so the two should be treated similarly, but of course they are not similar. To explain the difference, Marantz appeals to a well known property of the possessive, namely, that it can range over a large range of relations, and in this case in particular, it can be understood to instantiate a relation between the possessor NP and the “external agentivity” role of the head Noun. This would be an innocent stipulation, except that at the same time, it is stipulated that the possessive CANNOT instantiate the relation otherwise denoted by v. If it could, then again the two cases would have to come
out the same, and the explanation is lost. But, apart from the matter at
hand, there is no particular reason to make such a sharp discrimination in
what relations the possessive can instantiate. It is hard not to conclude that
the sought explanation lies hidden in this stipulated discrimination.

Marantz notes break, a further case like growth:

(21) *John’s break of the dishes

And he hypothesizes that break, like grow(th), has a meaning that determines
that it will enter syntax with no implied agent, so agentivity can come only
from v. The same objection that applies to the DM analysis of grow applies
here as well.

But in fact, there another kind of explanation for the observed facts. If
we survey the English nominalizing affixes, it turns out that most of them do
not produce transparent transitive nominalization of the kind like destruction. The ones that do include -ion, -ing, and -ment:

(22) a. the destruction of the city
    b. the containment of the oil
    c. the killing of Mary

But other affixes, (-ence, -0, “devoicing”) do not:

(23) a. *the endurance of the play
    b. *the breath of the air (where air is breathed)
    c. *the kick of John (where John gets kicked)
So perhaps what needs explanation is not growth, but destruction, and -ion in particular.

Marantz accounts for the transitivity of the nominal gerund (22c), by positing that -ing nominalization has v in it. This is peculiar, though, because these gerunds have no other verbal properties; in particular, they do not have unmediated direct objects (and so differ from verbal gerunds), and take adjectives instead of adverbs:

(24) a. John’s *recent/recently killing Mary)
   b. John’s recent/*recently killing of Mary

Furthermore, there is a blocking relation between -ion and -ing: if a verb has an -ion nominalization, it does not have a nominal gerund nominalization:

(25) a. ?the constructing of the natural numbers,
   b. ?the eradicating of the mice

On the view that -ion and -ing occur in different contexts this blocking is unexpected. Furthermore, as detailed below, -ion is not even a morpheme, and so the blocking is in fact impossible to state in DM when it is filled in with the further assumptions that Marantz has made about these nominalizations. As far as I can tell there is absolutely no reason to give -ion and -ing such radically different treatment, even in the context of DM.

The -0 nominalization is particularly damaging to the hypothesis of categoriless roots. kick is like destroy, in that it denotes an event with an
external agent, but it does not nominalize like destroy. Rather, it nominalizes like growth, or even more pointedly, like break. In fact the real generalization seems very surfacy, and not related to the semantic type of verb involved at all: -θ-nominalization is among those nominalizers in English that do not produce transparent transitives, regardless of what verbs they attach to.

Most likely the -th doesn’t produce transparent transitives either, though there are too few cases to tell for sure. About growth itself, we can note the following—there is a new use of transitive grow which simply means “increase”, as in “grow the economy”. In this new use grow denotes an event with an external agent, like destroy; but it still lacks a transitive nominalization:

(26) *Bush’s growth of the economy.

Some synonyms of this use of growth have transitive nominalizations, but some do not, and again, it seems to be the affix that explains the difference:

(27) a. *Bush’s increase of the economy

b. Bush’s augmentation of the economy

Oppositely, cultivate, comparable in meaning to transitive grow, does have a transitive nominalization, probably because it takes the right kind of affix, not because of what it means:

(28) John’s cultivation of tomatoes
Similar remarks apply to Marantz’s explanation of *John’s raise of cattle—the -θ-nominalizer is not among the very few English nominalizers that are transparently transitive.

If this review of the arguments is correct, there is no reason to accept any part of Marantz’s analysis of nominalization. But the arguments aside, there is a strong reason not to accept the way the analysis is implemented. The notion that destroy is categoriless, and gets its category in syntax, leads Marantz to include destroy/destruction among the cases of allomorphy: destruction is the way destroy is “spelled” in the environment of D. There is a little bit of confusion with this particular example, because everyone must acknowledge the destruct/destroy allomorphy, but Marantz’s proposal is about something different; all cases of V-ion, including ones with no obvious root allomorphy, are treated as allomorphic, e.g., construct/construction. The upshot is that -ion is not a morpheme, but is an unanalyzable subpart of various allomorphs, the allomorphs of some roots appearing in the D context. In the light of -ion’s unexceptional behavior as a suffix, I think this is an unacceptable conclusion on grounds quite independent of how growth of tomatoes is analyzed.

4 The Clitic/Affix distinction

There is a raw fact about bound forms that every theory must get: some clearly attach to the heads of the expressions that they are relevant to (the
affixes) and some others attach to the edges of expressions that that they are relevant to, or in fact sometimes to the edges of expressions that they are not relevant to (the clitics). The plural vs. the possessive is the simplest contrast in English: the plural of a NP is formed by pluralizing its head, whereas the possessive of a NP is formed by attaching ’s to the right edge of the constituent:

\[(29) \quad \begin{align*}
    a. & \quad \text{the boys on the corner} \\
    b. & \quad \ast \text{the boy on the corners} \\
    c. & \quad \text{the boy on the corner’s hat} \\
    d. & \quad \ast \text{the boy’s on the corner hat}
\end{align*}\]

The distinction seems inescapable, so the only question is, how are you going to implement it. Lexicalism has classically implemented the distinction as a difference between the word system and the phrase system. DM clearly cannot do that, and so needs a different means of implementing it. We will take up each in turn.

### 4.1 The Clitic/Affix distinction under The Lexical Hypothesis

Bound forms, that is, forms needing phonological hosts, are found in both the word system and the phrase system. Success is achieved if the different behaviors of the two kinds of bound forms are rightly characterized by virtue of the membership in one or the other system.
Specifically, under Lexicalism, one expects various properties of bound forms to correlate according to the principles (5)-(8). Words are subject to the principle of “immediate resolution”, phrases are not; words are right-headed, phrases are not. Constructs of the word system are opaque to the phrase system, constructs of the phrase system are not. These distinctions offer a rich set of possibilities to falsify Lexicalism, which says that any given unit must line up consistently on one or the other of these divides. In the absence of Lexicalism, there is no reason to think that any particular bound form will have more than a random relation to these ways of dividing things up.

Note carefully that there is NOTHING to do with idiosyncrasy or idiomaticity that distinguishes the bound forms in the word system and the bound forms in the phrasal system. As in the previous discussion, the listed-ness of some finite number of not-completely-rule-governed forms is a general feature of language having no particular relation to wordhood.

As an example, consider the two bound negative elements, -n’t and un-. un- is a word system prefix, and -n’t is a phrasal level bound morpheme. N’t does not really modify the thing that it is attached to, and in fact bears no consistent scopal relation to its host. It is always suffixal; but when it attaches to can it is semantically subordinate to its host, and when it attaches to must, it is superordinate to its host: can’t means “not[can]” whereas mustn’t means “must[not]”. Clearly, the relative scopes are sorted out in phrasal syntax, not in word structure. Un-, on the other hand, has a uniform effect on its host—it
“immediately” negates it. By “immediately” I mean that no other items can be interpretively interleaved between the prefix and its host. Consequently, we find the kinds of distinctions cited in section 1:

(30)  a. John was unafraid of anyone

       b. John wasn’t afraid of anyone

       c. John wasn’t afraid because anyone scared him

       d. *John was unafraid because anyone scared him

Put simply, the scope of -n’t is some stretch of the sentence in which it occurs; but the scope of un- is just its host. The problem with (d) is un- cannot have scope over the because clause, because such clauses are not part of the argument structure of the host, and so are unavailable when the lexical rule attaches the prefix to the host. Hence, the Negative Polarity item cannot be licensed.

From the point of view of the Lexical Hypothesis, the first distinction entails the second. that is, if a bound form bears no fixed interpretive relation to its host, then it follows that its scope is determined in phrasal syntax; if its scope is determined in phrasal syntax, then its scope can potentially be the whole sentence. This entailment crucially depends on the Lexical Hypothesis, and without the Lexical Hypothesis, this alignment of properties is accidental.

The mechanism that the word system uses to connect heads to their projections is X-bar inheritance and the distribution of affixes is determined
by this. The distribution of clitics must be accomplished differently. Nothing in the Lexical Hypothesis determines how that should proceed, but in fact there have been a number of suggestions. To my mind the most interesting is the proposal of Klavens (1985), a proposal that stems from the widely recognized import of “second position” for clitics. Specifically, Klavans proposes that there are three parameters governing the distribution of clitics. Assuming that a clitic is attached in the phrasal system to a unit defined in that system, there are three choices that must be made to determine the actual realization of the clitic: it attaches either on the left edge or the right edge of the phrase; it attaches either to the left or right of the element that is on the edge it is attaching to; and it will be phonologically dependent either to the left or the right. Ignoring the last parameter, this gives us four positions for clitics in a phrase:

\[(31) \ [1 \text{ leftmost element} 2 \ldots 3 \text{ rightmost element} 4]\]

Position 2 is Wackernagel’s position. Position 4 is the position of the English possessive affix.

The important feature of the placement with respect to edges is that there will be no assumption that the clitic is related at all (semantically or any other way) to what turns out to be its phonological host. In “the boy in the corner’s hat,” there is nothing possessive about *corner*.

So, if we think of bound forms as occurring in two species, one of which targets heads and the other of which targets edges, Lexicalism instantiates that distinction in this way: X-bar inheritance, both in the word system
and in the phrase system, licenses affixes; but something like Klavans’ edge placement parameters licenses clitics in the phrasal system.

4.2 The Clitic/affix distinction in DM

The characterization of clitics vs. affixes in E&N and other DM literature is partly forced by the abandonment of Lexicalism, and is partly not, and at least for the purposes of evaluating the abandonment of Lexicalism, it is worthwhile to separate things out a bit. The part that is forced derives directly from the notion that morphemes are the units of insertion. In Lexicalism, a Nominative noun is derived by the word system, and is inserted into syntax as the head of what ultimately becomes a nominative NP, by virtue of inheritance in X-bar, however that is effected. So certain affixes ride on the ‘head/whole’ relation that is the essence of X-bar. Clitics do not do this—a clitic maybe attached to a phrase, but has no particular relation to the head of it.

In DM, the mechanism of X-bar inheritance through heads is put aside, but the difference between affixes and clitics is empirically robust, and must show up in any theory. The developers of what looks like the main line of DM have offered a ‘timing’ account of the difference: rules before morpheme insertion target heads, and rules after morpheme insertion target edges. The principal rule of pre-insertion morphology is lowering—it moves an item at the edge of a phrase onto the head of the phrase. This is “affix hopping”; in the DM literature it has also been called “merger”; in some varieties of
Minimalism it corresponds to “covert” raising. The principal rule of post-insertion morphology is called by E&N “Local Dislocation”. It corresponds closely in its effects with the treatment of clitics in Klavans (1985).

It is not a logical, or even empirical, necessity in DM that pre-insertion movement target heads and post-insertion movement target edges. It is possible to give up Lexicalism, and still make the head/edge distinction, but not instantiate it as the pre-/post- insertion distinction; one could simply have two different kinds of rules. The DM account is more interesting than this, because it ties properties together, and the most interesting arguments for DM capitalize on this. There is a further unforced development: it is even possible to give up Lexicalism (that is, to assume that sole unit of syntactic insertion is the morpheme) and still use X-bar inheritance for the positioning of what have traditionally been called affixes. That is, one might assume that the deep-structure (or derivation under merge) of (a) was (b):

\[(32) \quad \begin{align*}
  \text{a. } & \text{John discouraged Mary} \\
  \text{b. } & \text{[John [[discourage + ed]_V]Mary]_{VP} ]_S}
\end{align*}
\]

where V, VP and S inherit the property of tensedness from the affix -ed by X-bar inheritance. I assume, though I have never seen it discussed, that DM intends to entirely give up inheritance in favor of lowering; otherwise, there is an unattractive duplication of mechanisms in the system. But the main point I want to make is that the decision about what the unit of insertion is is conceptually independent of whether the phrase/head relation is instantiated
by inheritance or lowering.

To return to the clitic/affix distinction: in both views, clitics are to be treated differently from affixes, in a fundamental way, and in both cases, it is a timing issue. In Lexicalism the difference is between the word system and the phrase system: affixes are attached to words and determine their properties (by inheritance; though not necessarily), whereas in the phrasal clitics are attached to edges of the units of phrasal system. In DM clitics are also distinguished by timing: clitics are distributed by post-insertion rules, and affixes by pre-insertion rules.

So we actually have three questions at play here:

(33) a. What is the unit of insertion in the phrasal system (insertion)
    b. How is the phrase/head relation established (inheritance/lowering)
    c. How is the clitic/affix distinction instantiated. (timing wrt insertion)

Although these are logically distinct questions, I think the most interesting arguments for DM turn on the particular bundle of answers that is associated with DM: ((a): morphemes; (b): lowering; (c): pre/post insertion) and so will treat the bundle as though it were a single empirical proposition. The bundling gives sharp differences in expectations, and is therefore worth taking seriously.

E&N give a couple of simple arguments for the DM1-3 bundle, based on some real facts in need of explanation. The arguments fail, but for empirical
First, as mentioned in an earlier context, *smartest* is derived in DM by movement from *most smart*. Since the application of the rule is governed by features of the phonology of the target (c.f. *intelligentest*) the relevant rule must be post-insertion, and so must be the the Dislocation rule, and not the lowering rule. This predicts that it does not target the head of the AP, but rather its edge; hence, it cannot derive (a):

(34)  a. *Mary is the [amazingly smartest] person

    b. Mary is the most [amazingly smart α] person

*amazingly* blocks the movement of *most* to the position marked by α. Hence, the example is explained.

However, the explanation is flawed in the following way. Other Germanic languages like Swedish and German have the same superlative morpheme *-est* but without the prosodic limitation (so, for example, *intelligentest* is grammatical). There is no necessity therefore for the relevant rule to be the lowering rule. Since lowering is not subject to intervention effects, examples like (a) are expected to be grammatical in those languages, but they are not:

(35) Example from Scandinavian

So the explanation does not stand, though the observed fact remains an interesting one. I think a further additional fact is:

(36) *Mary is very amazingly smart.
This example is easy to explain if we understand “amazingly” to occupy the specifier position of the adjective, thus excluding very from it. But then most in (34b) is not occupying the adjective specifier position either, and so will not be equivalent to the affix, which is limited to degree specification. But if it is not in the specifier, where is it, and how is it interpreted? I think some idea about it can be gotten from examples like the following:

(37)  a. John is more sad than tired
    b. *John is sadder than tired

In saying (37a), one is not specifying the degree of sadness involved, but rather the applicability of the term sad in the first place, as compared with the applicability of another term. In this kind of interpretation, one is speaking metalinguistically, and one is reminded of Horn’s “metalinguistic” uses of negation (“This isn’t warm, its hot”). Here, as in the superlative case, the affixal form is barred. But in this case it cannot be attributed to the intervention of an adverb. Rather, it must follow directly from the meaning that the comparison is not one of degree intensity, but rather of applicability. What we would have in (34b) then is another case of “metalinguistic comparison”, and what it really says is, “Mary is the person to whom the term “amazingly smart” is most applicable.

Another argument E&N give for their particular implementation of the clitic/affix distinction is based on the interaction of lowering and rules of phrasal syntax. They argue that lowering cannot “feed” movement rules of
the phrasal syntax, and give the following as an example (p. 562):

(38)  
\[
\begin{align*}
&\text{a. and Mary played her trumpet} \rightarrow \\
&\quad \ast \text{and [played her trumpet]} \text{ Mary t}
\end{align*}
\]

\[
\begin{align*}
&\text{b. and Mary T play her trumpet}
\end{align*}
\]

By their hypothesis, at the time of VP movement the structure is the one in (b), in which T is not incorporated into the VP, and so (a) is underivable.

However, the observed restriction only obtains with Tense; all of the other applications of lowering do feed this kind of VP movement:

(39)  
\[
\begin{align*}
&\text{and Mary was -en [see drooling]} \rightarrow \text{and Mary was seen drooling} \rightarrow \\
&\quad \text{and [seen drooling]}_{VP} \text{ Mary was}
\end{align*}
\]

The -en affix (or some abstract featural equivalent of it) targets see in (39) in exactly the same way that T targets play in (38), so there is no reason to expect a special behavior. So again, explanation is lacking.

I want to conclude this section by bringing to light a unique prediction of DM that has a chance of being true. Both Lexicalism as we are taking it, and DM as E&N are taking it, have two kinds of rules for the affix/clitic distinction, and this rule-distinction aligns itself with the architecture of the grammar differently in the two theories. The prediction I have in mind stems from the fact that DM does not allow any chaining together of applications of these rules. There is no such thing as lowering an item to a head position once, and then lowering it again to a different (lower) head position. It also
does not allow a chaining together of Dislocations. And especially, it does not allow a Dislocation, followed by a lowering, as in the following:

(40)  
   a. $\alpha \begin{array}{c} \ldots \llbracket a, y b \rrbracket_{y_0} \ldots X \ldots \rrbracket \quad \rightarrow \quad \text{Dislocation}$
   b. $\begin{array}{c} \ldots \llbracket a y b \rrbracket_{y_0} \alpha \ldots X \ldots \rrbracket \quad \rightarrow \quad \text{lowering}$
   c. $\begin{array}{c} \ldots \llbracket a \llbracket y \alpha \rrbracket \ldots X \ldots \rrbracket \quad \rightarrow \quad \text{Dislocation}$

The derivation here is barred by the timing implicit in the architecture—the pre-insertion lowering cannot apply after the post-insertion Dislocation. This is in fact quite an interesting prediction, and I think should be investigated. The upshot is that according to DM, an affix can attach to a phrase or word that it is not semantically related to, but it cannot be realized on the head of that phrase.

Strictly speaking the Lexicalism we have discussed here does not allow this either, but a slight adjustment in Klavans’ conception of clitics would allow it. In connection with her second parameter, if instead of saying that the affix could be attached either to the left or the right of the edge element, one said that it simply had to be realized on that element, then nothing would prevent inheritance from the head of that first element counting as such a realization, in addition to left or right attachment. This would be the equivalent of chaining a lowering to a Dislocation in DM.

E&N do not discuss this prediction, but a different analysis than the one they give of Bulgarian definite clitic would at least raise the question. The definite article is realized as a suffix according to the following pattern:
(41)  a. N-suffix
    b. A-suffix N
    c. Adv A-suffix N

Somewhat arbitrarily, E&N conclude that the definite affix is a lowering affix, instead of a Dislocation affix; on the basis of the first two facts it could be either. It seems to be the third fact which forces their hand—if Dislocation can target only words, and not phrases, then (c) must be taken to show that the repositioning rule is not Dislocation. But if it is not Dislocation then it must be lowering, and that leads to the unusual conclusion that in an [A N] combination, the A must be the head. On what grounds can this be justified? It cannot be that modifiers are always heads with respect to their modifiees, as in the same example, we must take the A as the head in the [Adv A] combination; but the disanalogy between the two modifications does not seem worry the authors.

If, on the other hand, these facts were analysed in terms of the DM rule of Dislocation, we might develop a situation in which DM makes the already mentioned unique prediction. For (c) we must allow that Dislocation target phrases (as well as words); Schutze’s(1994) analysis of Serbo-Croatian seems to call for this anyway. Then the rule which positions the Bulgarian definite could be Dislocation, rather than lowering. In the examples given it is impossible to tell whether the suffix is on the A or on the AP, and so we can draw no conclusion. But suppose other cases were clear, and we found,
for example, patterns like the following:

(42)  [Adv A-suffix PP] N

The generalization would then be, the affix is realized on the head of the first element, and that is an impossible description in DM.

A similar case, but unfortunately no more determinate, is the distribution of “strong” Adjective marking in German. There are two inflections for adjectives, a “weak” one which doesn’t show case marking and a “strong” one which does. The two are distributed according to the following pattern:

(43)  a. $A_{\text{strong}} A_{\text{weak}} N$

b. $\text{det}_{\text{strong}} A_{\text{weak}} N$

c. $\text{det}_{\text{weak}} A_{\text{strong}} N$

d. NP is $A_{\text{weak}}$

The generalization is that the “strong” feature attaches to the first element in the NP which can bear the feature (i.e., excluding the weak determiners). The (c) case stands in the way of a strict edge-attacking rule—it is attacking not the absolutely first item in the NP, but rather the first “relevant” one. The case markings associated with strong marking show up as suffixes on the adjective, and one can raise the question whether the affix is realized on the head of the AP, or the last element; if the last element, then we have an attack on the head of the first element, impossible in DM. Unfortunately, as in Bulgarian, it is hard to distinguish these two possibilities, as
in prenominal position modifiers must be head-final anyway, and it is only
preminominally that Adjectives take strong endings.

4.2.1 “Movement after Syntax”

The somewhat paradoxical-sounding title of the E&N article “Movement af-
fter Syntax” stems from the mild abuse of terminology already alluded to.
Since the word system and the phrase system are not distinguished, the term
“syntax” is given a different use in their theory, and in DM generally: “syn-
tax” is what happens before lexical insertion, and (part of) “morphology” is
what happens after lexical insertion. But, as we have seen, there must be
movements before and after lexical insertion, hence the title.

An idea of the richness of the model can be gotten from the following
diagram of it:

(44) The DM Model in E&N:

features→syntax→morphology→insertion→more morphology→phonology
↑↑↑↑↑
raising fusion conditions Dislocation readjustment
fission on insertion filters
dissociated
morpheme
insertion

41
The complexity of the model allows for two different kinds of abuse. First, provisions are easily added to it that recapture parts, but only arbitrary parts, of the Lexical Hypothesis. And second, at several joints in the model there are implicit general rule and filter writing systems for composing of language-particular descriptions, and these systems are of large, or at least unknown, power. Disassociated morpheme insertion, conditions on insertion, and late readjustments and filters are all categories of variation of the most general type.

4.2.2 Recapturing the Lexical Hypothesis

In the course giving analyses of various affix/clitic interactions in terms of this model, E&N make a series of surprising proposals having no other purpose than to nullify the main idea of DM, the idea that, as Harley and Noyer wrote, word structure is “syntax all the way down”. I will discuss now the various analyses and proposals offered by E&N that lead me to this conclusion.

For example, the Latin conjunction -que appears after the first word of the second conjunct. E&N’s use of a Dislocation operation after “syntax” approximates Klavans’ (1991) analysis of the same phenomenon.

(45) a. Latin -que: [X Y]-que [W Z] → X Y W-que Z

   b. boni pueri -que bonae puellae → boni pueri bonaeque puellae

   ‘good boys and good girls’

The problem is with the word word. There are not supposed to be any
words in DM. But *morpheme* cannot be substituted for *word* because of the following:

(46) boni pueri bona-eque puellae → boni pueri bon-que-ae puellae

Here, *que* has been put inside of the word *bonae*.

In a Lexicalist theory this cannot arise. *-Que-* is a bound form of the phrasal system, like the English possessive *-'s*, and so, by the Lexical Hypothesis, cannot see inside of words. The case endings are added in the word system, and so are invisible in the phrasal system, except for their effects on the properties of the word they are a part of.

E&N add a principle to DM which simulates this effect. They define two notions, Maximal Word (MWd) and Submaximal Word (SWd). A MWd is an $X^0$ not dominated by other $X^0$s, and a SWd is an $X^0$ that is dominated by other $X^0$s. They then propose, “when an MWd is moved by Local Dislocation it adjoins to an adjacent MWd, and when an SWd is moved, it adjoins to an adjacent SWd.” Another way to put this is, “a part of a word can move within a word, but cannot move out of that word, and nothing can be moved into a word.” Oddly, the principle occurs in the middle of a paragraph of text in the paper and is never given a name; let’s call it the *Maximal Word Principle*.

But the *Maximal Word Principle* is the Lexical Hypothesis. It is the part we called *atomicity* of words in the phrasal system (see (5-8)). The MWP (just like the Lexical Hypothesis) allows an effective partition of “syntax” into two parts: the part below maximal $X^0$s, (what we have called *the*
word system), and a part above; and these will communicate in the narrowest possible way—via the top level properties of maximal X°s. It is somewhat disappointing to learn that at least this version of DM does not deny the Lexical Hypothesis, but has instead demoted part of it from a speculation about the architecture of the system to an unnamed locality restriction, one of series in fact, including Marantz’ locality condition on the assignment of “special meanings” discussed in section 3.2.1 and further conditions discussed below.

It is important to realize that the SWd/MWd distinction and the MWP are needed in addition to the lowering/Dislocation distinction, and the architectural positioning of insertion in DM, which were themselves meant to do the work of distinguishing affixes (-ae) from clitics (-que).

Moreover, the MWP depends on a very particular interpretation of phrase structure, one not compatible with bare phrase structure, as complex X°s must be distinguished from other projections of X, a distinction that bare phrase structure has the virtue of doing without. So, for example, Head-to-head movement derives complex X°s, not complex Xs. E&N even use the term “terminal” to refer to a complex X° (p. 574, definition of Subword); but of course these are not terminals in the theory, and as it is the main idea of the theory that such things are not terminals, it is a revealingly inapt designation.

By the Lexical Hypothesis, the atomicity of words in syntax carries over to the atomicity of subunits within words (5-8). The rule of Dislocation in
DM, on the other hand, denies the atomicity of subparts of words, since it can move morphemes into subparts of words from without. But in fact there indubitably are opaque parts of subwords. In their treatment of Lithuanian reflexives E&N acknowledge that, and expose the apparatus needed to account for it (string vacuous Dislocation); but the resulting system no longer has the local character that they intend.

E&N describe Dislocation as an operation that can only work between two “string adjacent” elements, and in fact they call it “Local Dislocation” to emphasize this aspect of the rule. But in fact even such a narrow rule could potentially operate ambiguously, as in the following:

\[(47) \quad [X [SWd1 [SWd2 aSWd3 α b] β] c γ]\]

The rule could target any one of the positions α, β, or γ, as SWd1, SWd2 and SWd3 are all string-adjacent to X. I judge from the discussion of various cases that H&N have in mind a rule that would target only SWd3, the smallest of the items string-adjacent to X, so in the following I will assume that that is what they intend.

But in the analysis of the Lithuanian reflexive morpheme, E&N outline a technique whereby in fact a locally Dislocated element may be repositioned into any spot in the interior of the word that you would like, and any notion of locality is gone.

The reflexive in Lithuanian is an affix in the verb form. E&N assume that it starts out life as a phrasal direct object, but is inserted into the verb
form by a rule (and so is a “disassociated morpheme”). After the reflexive is inserted into the verb form, it is then moved into the verb by the rule of Dislocation. The puzzle that then arises is why it moves over some affixes, but never in such a way as to separate the V from the tense affix:

\[
(48) \quad -si \quad [V \ T] \rightarrow *V + si \ T
\]

E&N’s answer to this is to propose a language particular readjustment: “we propose that T in Lithuanian always undergoes string-vacuous Local Dislocation, adjoining to its left neighbor V” (p 580):

\[
(49) \quad [V * T] \rightarrow [[V_0 \ V] \ + \ T]
\]

But this is not enough by itself, as it is not at all clear why -si could not still move between V and T, since the relevant rule is Dislocation, and si is adjacent to V. That requires a further stipulation: namely, that the resulting structure must be understood as a single SWd, and not as two. Why? “Because SWd status is defined before Local Dislocation” (p. 580), and in addition, the rules apply cyclically.

This is an arbitrary stipulation, and it doesn’t actually work. Why

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2There is no reason given for this conclusion; the alternative of course is that the reflexive is simply an affix that attaches to the verb like the others, especially since it appears that the reflexive only attaches to verb forms it is relevant to (that is to say, that it is an argument of).  

3E&N say, “Because SWd status is defined before Local Dislocation, if the SWd T\( ^0 \) ⊓-adjoins to the SWd V\( ^0 \) as in (57), the result is a single complex SWd and not two SWds.” But in fact there are three SWds here, T, V, and [T V], and in particular, V’s
is SWd status determined before Local Dislocation, but not recalculated after? And how are SWds that arise after dislocation to be distinguished from original ones? SWd is defined purely configurationally, and so there is no way to prevent the configurational definition determining a new set of SWds after Dislocation, and so a kind of “gamma marking” will be needed to enforce the exclusive privilege of the original set of SWds. This inelegance has one clear purpose: it gives us the capacity to create opaque subdomains in words, but at will, not in a general way.

But the resulting apparatus now yields some surprising and I think unanticipated results. Specifically, it is possible now to “Locally Dislocate” an item X into any arbitrarily chosen position in the following word, so long as one is allowed the mechanism of string vacuous Dislocation. For example, suppose one wanted to move \( \alpha \) to \( \beta \) in the structure (a) below—first one would do the restructurings indicated in (b) and (c), and then the way is paved for \( \alpha \) to move to \( \beta \):

\[
\begin{align*}
(50) \quad & \text{a. } [\alpha \ [a \ [b[c \ \beta \ [d \ [e \ f]]]]] \rightarrow \text{restructuring} \rightarrow \\
& \quad \text{b. } [\alpha \ [a \ [\{b \ c\} \ \beta \ [d \ [e \ f]]]]] \rightarrow \text{restructuring} \rightarrow \\
& \quad \text{c. } [\alpha \ [\{a\{b \ c\}\} \ \beta \ [d \ [e \ f]]]]
\end{align*}
\]

Here “\( \{\} \)” braces are used to mark constituents which contain no SWds, according to the stipulation of the previous paragraph.

The net result is that “Local” Dislocation, which sounds like a con-

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SWd status must be erased, so let us so assume.
strained operation (only the immediately adjacent element) operates in an environment that guarantees the availability of arbitrary movement operations into words.

I do not want to pretend that it follows from Lexicalist principles that the reflexive cannot appear between T and V in Lithuanian. I have suggested elsewhere what I think are the right mechanisms for expressing such restrictions (Williams (2003), Williams (forthcoming)), and I will not repeat them here, except to say that the atomicity of the derived units of the word-system, even for further derivation in the word-system, is axiomatic. Essentially, the word system defines not just words but other objects as well (including for example, the roots and stems of Selkirk (1981)), and the V+T unit of Lithuanian would be a small, directly derived unit in such a system, and given the atomicity of units in the word system it must remain intact in further derivation. The H&N device for mimicking that atomicity in fact reduces the “adjacency” property Local Dislocation, its only property, to vacuity. Perhaps this is what E&N mean when they say that the Lithuanian reflexive “provides an important showcase for the interaction of Local Dislocations at the SWd level.” (p. 578).

4.2.3 Language particular rules and filters

All analyses in linguistics involve both principles and stipulations. The analyses are given to illustrate and add support for the principles, but the stipulations are needed to get things off the ground, in that one must make
sometimes arbitrary choices about things that lie outside the focus of interest. But a number of the analyses presented in E&N are unsettling in that one has the impression that the character of the phenomena being described arises almost entirely from the stipulations, and not at all from the DM principles. Furthermore, when the stipulations are language-particular they imply that the theory must contain one or more rule-writing systems for stating them, systems with perhaps large descriptive power of their own, and so we cannot judge what space of possibilities the offered analyses find themselves in. I will discuss two such cases below. In both, it seems that such rich descriptive adjuncts to the primary DM principles are needed, but they are not sketched, or in fact acknowledged.

In the analysis of Swedish determiners, four language-particular requirements are stipulated:

\[(51)\]

a. The head N must be marked with definiteness when D is [+def].

b. \(D_{\text{def}}\) must have a host.

c. N moves to D if possible.

d. D-marking on N is in some cases “a ‘disassociated morpheme’, a kind of agreement”

These are needed to explain why in a [Det N] construction the det shows up as a suffix on the N (N-en), but if an adjective intervenes, you get both the affix and the determiner: [D-en A N-en]. The problem with these stipulations is not that there are so many of them for one simple contrast. The real problem
is that each of them is language-particular, and there is no indication given of what the descriptive power is of the system from which they are drawn. And while the four stipulations pretty much characterize the two facts, they pretty much make the principles of DM redundant. Furthermore, the suffix -en turns out the be ambiguous in the analysis, even though it is obviously phonologically and semantically the same element: it is the determiner itself in [N-en], but it is an agreement morpheme in [Det A N-en]. Maybe this is the right analysis. But if even if it were, an analysis in which two facts are explained by four language-particular stipulations and a suspicious ambiguity cannot be put forward as evidence for DM, or anything else.

The analysis of English do-support proceeds in the same way. Here are the language-particular stipulations:

(52)  
a. T must be in an immediately local relation with v  
b. v is *syntactically* merged onto T when T does not have a vP complement

The problem as usual is why do-support only applies when needed; i.e.,

(53)  *John did go

This is the fact that provoked Chomsky’s (1991) “Some Economies of Derivation and Representation”. Useless do is not allowed.

But E&N declare that do-support is not “a morphological rescue strategy”. The reason is a further stipulation, this time presumably universal, but stipulation nevertheless:
“On the assumption that morphology interprets the output of syntax, v is simply not the type of object that Morphology can insert” (p 586)

These three stipulations are in the service of explaining a single further fact of interest: that *do-support is impossible with constituent negation:

*He did always not agree

The two language particular stipulations in (52) cover ordinary *do support; if T is moved to C, then (a) is violated, and so (b) rescues it. Likewise when Neg intervenes between T and v. So the interesting case is the last one, the context of the stipulation 54. But to explain it, further intricate stipulations are needed, so that the notion that anything has been explained evaporates. It goes like this: constituent negation is not a phrase, but just a “head”; as a “head”, it intervenes on the lowering path from T to v:

\[
[T \{DP \{Neg^0[v \ VP]\}\}]
\]

Lowering always targets heads, but the presence of the “head” Neg “prohibits successful lowering” (p. 589). That is, Neg, as a “head”, prevents T from lowering to v. This language plays on the notion of head as an absolute and head as a relative term (as in *head of*). But in fact, it doesn’t really work; it simply predicts that T should attach to Neg. So a further stipulation is required to prevent that: [T+Neg] is “a morphologically illegitimate object” (p. 589). That is a odd thing to say of a construction derived by the one’s own rules and principles of morphology applying to the morphemes of English. It
implies that there is a notion of “morphological legitimacy” that lies beyond the rules and principles under discussion.

So an explanation of the fact of interest (55) is arrived at, but only by invoking an unnatural “absolute” notion of head (in place of “head of”), in addition to the language particular stipulations.

Again, I don’t want to pretend thatLexicalism predicts the fact of interest. I think though that the fact can be naturally linked to the original “economy” example:

(57) a. John did go
b. John did [not go]

(a) is out for some reason, maybe Chomsky’s original economy idea: do is not needed. Perhaps (b) could fall under the same explanation. There are two alternatives to (b):

(58) a. *John not went
b. John didn’t go

(a) is ungrammatical because not never precedes T, for whatever reason that is. That leaves (b). At first glance (b) would not seem to be incompetition with (57b), because the negations are not the same. But in fact maybe they are the same; maybe constituent negation is exactly the same thing as Sentential negation, only lower down in the functional hierarchy. If that were correct, then “John did [not go]” would have exactly the same status as John did go–useless do.
I don’t want to press the point too much about this analysis, as I mean simply to gesture towards a different sort of approach to the fact of interest. Rather, I want to raise this question, How can a theory gains support from an analysis of a single new fact, when that analysis includes two language particular stipulations, an eccentric definition of “head”, and an unexplored filter of “morphological legitimacy”? And of course the constant question, what is the character of the further unexplored morphological capacities must be postulated to provide a source for the stipulations in the first place? Would it be possible, for example, for a language to have a stipulation that is the opposite of the second one, a stipulation that would read, “v is syntactically merged onto T when T has a vP complement”? From the point of view of DM as elaborated by E&N that would seem to be no more complicated than the one that is invoked. But from the point of view of an “economy” account of these things, it would of course make no sense at all.

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