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Introduction

The Minimalist program in linguistic theory pushes the fundamental ideas of the principles and parameters (or "Government–Binding") framework towards their logical conclusion. It is vitally concerned, as was its immediate predecessor, with the fundamental question of language acquisition: How can the young child faced with a bewildering array of chaotic, yet seemingly radically incomplete, input arrive so rapidly at a state of complex linguistic knowledge? The principles and parameters two-part answer was that (i) much, or even most, of the knowledge is present prior to any experience; and (ii) the system of knowledge is much simpler than it superficially appears. It is the second aspect that directly forms the basis for much Minimalist theorizing.

There is not yet anything resembling an articulated Minimalist theory of language. Rather, there is an intuition about the way to approach the problems of language: that a strategy questioning complexity and stipulation, and pursuing "perfection," has at least a fighting chance of succeeding. This intuition is reflected in the recurring argument from "conceptual necessity": all else equal, language will employ just those devices needed to connect sound with meaning, and no others.

In interesting respects, this strategy has rather ironically led to a revival of much earlier generative perspectives. One striking example of this is the return to generalized transformations in the sense of Chomsky (1955), and the concomitant dismissal of D(eep)-structure (along with the Chomsky (1965) argument for it). On the other hand, and at the opposite extreme, the strategy has led to strikingly new innovations in grammatical description, such as the notion of feature movement as the fundamental (singular) transformational operation, with all "larger" movement being a consequence of pied-piping. Even here, there is a key aspect of an earlier approach, since

the relevant notion of pied-piping is an extension of a device introduced by Ross (1967). Below, I will discuss other key respects in which the modern Minimalist idea of feature movement leads to syntactic analyses almost eerily similar to much older ones.

If there is a leading technical idea in Minimalism, it is that movement is a last resort, taking place only when triggered by a driving force. This idea is not actually new in Minimalism (though the extreme emphasis on it is). Chomsky (1986b) discusses the "last resort" character of movement, and hints at basing an analysis on it. Much earlier still, Chomsky (1965) alluded to a related development:

> . . . it has been shown that many of the optional singulary transformations of Chomsky (1955; 1957; [1958]) must be reformulated as obligatory transformations, whose applicability to a string is determined by presence or absence of a certain marker in the string. (p. 132)

Minimalism has been concerned to make Last Resort precise. Chomsky (1993) states the phenomenon in terms of morphological requirements that need to be satisfied (Case primary among them) and formulates the constraint as Greed, by which Last Resort is always "self-serving":

(1)   Move α applies to an element α only if morphological properties of α itself are not otherwise satisfied.

Last Resort is one of my major concerns in chapters 3, 4, and 6, where I argue for a revision of Greed which I call Enlightened Self Interest (ESI). Under ESI, as under Greed, movement is driven by the need for a morphological requirement to be satisfied. The difference is that the requirement can be either one of the moving element (as with Greed), or one of the position it is moving to (for example, the head of which it will become the specifier). In my discussion, I follow Chomsky's claim that covert movement is involved in English existential constructions, but I argue that the agreement properties evidencing the movement can be better understood in terms of ESI than in terms of Greed. I also argue that a complication in the definition of Greed necessitated by successive cyclic A-movement is avoided once Greed is replaced by ESI. Chomsky in his recent Minimalist work, as in Chomsky (1995b), apparently accepts the arguments against Greed, and, in fact, rejects it even more completely than ESI does. While Greed required that only deficiencies of the moved item drive movement, and ESI has deficiencies of the moved item or the target driving movement, the Chomsky (1995b) proposal, "Suicidal Greed," insists that only the **target** is relevant. Most of the arguments I offer in this book against Greed, and for ESI, are

actually not incompatible with Suicidal Greed, since, almost entirely, the arguments show that movement can be for the (sole) benefit of the target.

The unifying theme of this book, abstract morphosyntax, is based on the leading idea just discussed, Last Resort, since satisfaction of Last Resort depends on abstract morphology (one is tempted to write "Morphology" by analogy with "Case"). Chapters 6, 8, and, to a lesser extent, 7, explore the intriguing proposal of Chomsky (1995b) that if movement is for satisfaction of morphological properties ("formal features"), then, all else equal, movement should be of just formal features, for trivial reasons of economy: it is more economical to move less material than to move more. Chomsky argues that when more than just the formal features of an item move, it is via "pied-piping." Typically, when movement is overt, an entire X^0 (head movement) or XP (phrase movement) moves. Chomsky suggests that this is for Phonetic Form (PF) reasons:

> For the most part – perhaps completely – it is properties of the phonological component that require such pied-piping. Isolated features and other scattered parts of words may not be subject to its rules, in which case the derivation is canceled; or the derivation might proceed to PF with elements that are "unpronounceable," violating FI [Full Interpretation]. (pp. 262–3)

Chomsky goes on to suggest that from this point of view, covert movement would be expected to be restricted to feature raising. The consequences for the computational system, and for the Logical Form (LF) interface, of this restriction are explored in various ways in chapters 6–8. Before summarizing those issues, I should point out that Chomsky's conception of LF movement slightly departs from the purest form of the economy argument. That is, one would a priori expect that only the feature that is needed for checking of the target feature (the "attractor") would move. But Chomsky claims that **all** of the formal features raise:

> When the feature F of the lexical item LI raises without pied-piping of LI or any larger category α, as always in covert raising, does it literally raise alone or does it automatically take other formal features along with it? There are strong empirical reasons for assuming that Move F automatically carries along FF(LI), the set of formal features of LI. We therefore understand the operation Move F in accord with [(2)], where FF[F] is FF(LI), F a feature of the lexical item LI.

[(2)]   Move F "carries along" FF[F]. (p. 265)

I will not pursue this question here, except to note that it clearly merits further theoretical and empirical investigation.

Under the assumption that covert movement is just of formal features, the effects of covert movement take on a rather different character than in earlier theories. For example, the longstanding problem of "low" scope for the associate of the expletive *there* finally receives a satisfactory solution. To capture the agreement facts in (3), Chomsky (1986b) had proposed that the argument literally replaces the expletive in the LF component.

(3)   a.   There is/*are a man in the room
      b.   There are/*is men in the room

But almost immediately, it was observed that this gives incorrect scope for (4).

(4)   There are not many students in the room

In (4), *many students* necessarily has scope under negation, but, by hypothesis, its LF is identical to that of (5), which allows (perhaps even requires) **high** scope for *many students*.

(5)   Many students are not in the room

To address this problem, Chomsky (1991) proposed that the associate does not actually **replace** *there*; rather, it adjoins to it. Chapters 3 and 4 develop this idea, but also point out some difficulties with it (though without fully addressing those difficulties). Chomsky's (1995b) LF feature movement provides a much more adequate account, in that the agreement facts are still captured, but no longer at the expense of incorrect predictions about scope. Instead of the entire associate moving, just its formal features move, the semantic residue (including those properties relevant to scope) remaining below.

LF movement (at least of the feature-driven variety, arguably the only type) then does not create new scope configurations. An interesting question is whether it creates new binding configurations. Chomsky (1995b) claims that it does, but provides little evidence. In chapters 6 and 8, I provide extensive evidence that such raising does **not** create new binding configurations (nor other "licensing" configurations known to depend on c-command). I argue on this basis that such binding and licensing depends (as scope does) on more than just formal features. Ironically, this leads to a classic GB conclusion, and one that is, on the face of it, strongly anti-Minimalist. The conclusion is that S(urface)-structure is, in effect, crucial for matters of scope and binding. In chapter 2, that conclusion borders on paradox, since the Minimalist program rejects surface structure as a significant

level, just as it rejects D(eep)-structure. The conceptual argument is the same in both instances: neither level is an "interface" level in the way that Logical Form and Phonetic Form arguably are; hence the postulation of either takes us well outside the bounds of conceptual necessity. Further, the conclusion seemed a technical paradox as well, since there are numerous longstanding empirical arguments that certain requirements, binding conditions among them, must be satisfied at S-structure. Thus, the assumption of that chapter that covert movement is, just like overt movement, of whole categories leads to a bizarre state of affairs whereby the LF level has little or nothing to do with scope or binding. The feature movement theory renders the conclusion much more natural: LF **is** the level relevant to scope and binding, but LF is not relevantly different from S-structure (or, more accurately, from what would have been S-structure in a framework with that level of representation).

Chapter 2 argues that movement with scope and binding effects must be overt, but provides no clear way to instantiate this conclusion. That chapter argues, as Postal (1974) had, that overt subjects of infinitival clauses ("Exceptionally Case Marked" subjects) are higher in the structure than would be expected given their thematic roles. Going further than Postal, the chapter argues that even direct objects in simple transitive clauses are higher than would be expected. Both direct objects and, more strikingly, ECM subjects can bind into (and take scope over) relatively high items in the clause. The (Minimalist) theory of feature movement virtually demands a central element of the pre-GB (in fact, pre-Extended Standard Theory) account: overt movement for ECM subjects. Chapters 6 and 8 develop such an account, based on the theory of clausal structure articulated by Koizumi (1993; 1995). The position that the NP raises to is [Spec(ifier), Agr(eement)$_o$], a structural position first motivated by Chomsky (1991), though Chomsky assumed the movement to be covert. Chapter 7 provides additional evidence for an overt movement account based on the Pseudogapping ellipsis phenomenon, as exemplified in (6):

(6)   John hired Bill, and Mary will Susan

I argue that Pseudogapping is VP ellipsis, with the remnant, *Susan* in (6), having raised out of the VP. It is hard to see how covert movement (i.e., feature movement) could create a new ellipsis configuration. Note, too, that once the crucial movement must be overt, another long discarded analysis becomes available: a deletion account of ellipsis. This, too, is explored in chapter 7.

Most of this book is concerned with abstract nominal morphology and the consequences of a Minimalist approach to the topic for phrase structure,

movement, scope, binding, and ellipsis. Chapter 5 considers **verbal** morphology, and, in one respect, reaches a conclusion parallel to that of many of the other chapters: that a relic from an earlier era of syntactic analysis receives new motivation within modern syntactic theories. In the first decade of transformational generative grammar, virtually all derivational and inflectional morphology was taken to be transformationally produced. Arguably the most influential (and most successful) generative analysis ever put forward was the account of English verbal inflectional morphology of Chomsky (1955; 1957). Alongside this, there were also numerous transformational treatments of derivational morphology. A major change in perspective was triggered by Chomsky (1970). In that work, Chomsky argued for a "lexicalist" analysis of derivational morphology, by which, for example, *destroy* and *destruction* are both listed in the lexicon, instead of the latter being transformationally derived from the former. Chomsky (1991) continued to assume a non-lexicalist account of verbal morphology, and formulated an economy-based development of Pollock's (1989) account of English vs. French (an account that was itself an updating of that of Emonds (1978)). Chomsky attempted to derive certain distributional properties involving adjacency via the Empty Category Principle (ECP) interacting with an elaborated theory of overt and covert X^0 movement. Chomsky (1993), in introducing an explicitly Minimalist approach to syntax, argues instead for a strictly lexicalist point of view: even inflectional morphology is lexical. In chapter 5, I show that there are difficulties with the Chomsky (1991) analysis, and possibly more severe ones with the strictly lexicalist analysis of Chomsky (1993). I argue for a hybrid theory incorporating a partial return to Chomsky (1955; 1957), whereby English main verbs are associated with their inflectional morphology in the course of the derivation, by a process demanding linear adjacency (rather than satisfaction of the ECP).

   I conclude this introduction by emphasizing a point I made at the outset: there is not yet anything close to a Minimalist theory of language. The outlines of an approach are beginning to dimly emerge, but we are very far from being able to confidently proclaim any Minimalist details of syntactic theory. The chapters of this book (or the chapters of Chomsky (1995c)) make this clear. All are informed by a general Minimalist perspective, but there are numerous changes, with seemingly self-evident technical details of one stage rejected at the next. And often there is no clear a priori basis for concluding that one of the analyses is "more Minimalist" than another. Is it more or less Minimalist to argue for overt raising to [Spec, Agr$_o$]? To the extent that Minimalist work has provided some insight into the nature of language (and it surely has), there is some reason for optimism that we are on the right track. It will take some time before we can tell whether the optimism is fully justified.