

***Prolegomenon to a Theory of  
Argument Structure***

**Kenneth Hale & Samuel Jay Keyser (2002)**

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**Prolegomenon to a Theory of Argument Structure.** KENNETH HALE, and SAMUEL JAY KEYSER. [Linguistic Inquiry Monograph Thirty-Nine.] Cambridge, MA: MIT Press, 2002. Pp. x, 281.

“Ah,” I hear many exclaim, “the book is finally out.” *The* book? Well, yes, I suppose it was just a matter of time that the extremely influential ideas espoused in Hale & Keyser (1993) were made more explicit, refined a little, and presented collectively in a monograph. But this book is quite a bit more than *the* H&K (and sometimes even differently so). In fact, H&K 1993 serves as a precursor, the outset for the present monograph, and the ‘prolegomenon’ that H&K develop here is arguably more than the preliminary, introductory character the name suggests — one consequence, I believe, is that some of the criticisms leveled against H&K 1993, which is the real prolegomenon, can be discarded or at least might have to be rethought in the new light that clothes their extended theory of lexical argument structure. This monograph contains mostly new, follow-up work, the culmination of a few years’ collaborative research (see e.g. Hale & Keyser 1998, 1999b, 2000), and it offers so much more than H&K-1993-plus-something. On second thought, maybe I am the only one who is surprised (though looking at current literature citing, even building on H&K, one can find so many more references to H&K 1993 than any of the follow-ups); but I am pleasantly surprised and feel that the program has become more sophisticated.

It would be beyond the scope of a review to try to deal with the many empirical and conceptual/theoretical consequences of H&K in any interesting detail. Hence I will try to impart some of my enthusiasm, but also subtle criticism, of the monograph in the following paragraphs by putting things in a wider perspective, written by someone who has no particular stakes in the issues. My own work is not concerned with the finesses of argument structure (Baker 1988, Grimshaw 1990), or the issue whether there should be syntactic decomposition (Fodor 1998, Fodor &

Lepore 1999), problems of under- and especially overgeneration (Culicover & Jackendoff 2003, Panagiotidis, to appear), mixing of morphology and syntax (on a more extreme version of which, see Distributed Morphology of Halle & Marantz 1993 and subsequent work), and so on — with the exception that I am very sympathetic to what I take to be one major *potential* breakthrough of the H&K-approach to grammar: a principled way of getting rid of Theta Theory.

Remember that the original H&K predates (or rather coincides with the advent of) the Minimalist Program (MP; Chomsky 1995, 2000). Within the earlier manifestation of the Principles-and-Parameters framework (P&P), Government and Binding Theory (GB; Chomsky 1981), language was perceived as highly modular, in relation to both the external systems of the mind/brain (whether Chomskyan or à la Fodor 1983) and the architecture of grammar itself. The latter comprised a number of linguistic modules, such as the ECP, the Control Module, Case Theory, Trace Theory, and so on — and Theta Theory. One consequence of the abolishment of D-structure in MP that has (initially) not been explored too deeply is the concomitant dubious role that any notion of a Theta Theory plays in the grammar: either there is a stage in the (beginning of the) derivation at which thematic relations must be licensed and thematic relations are taken to be quite different from the other formal properties of the system (and we have some D-structure-like entity) or thematic properties are derived, preferably in a fashion that resembles the licensing of other grammatical properties (Case, agreement, and so on, viz. formal features); for recent criticism and discussion, see Hornstein 2001 and related work (summarized comprehensively with a slightly different agenda in Grohmann 2003:chap. 2). H&K 1993, and subsequently the present monograph, was the first attempt to get rid of the modular role Theta Theory played (see e.g. the GB-minimalistification approach of P&P taken in Hornstein, Nunes & Grohmann. to appear for a brief historical genesis).

But despite the perhaps widespread belief that this is really what H&K achieve (Harley 2002), I share my doubts with Uriagereka (1999) who rightly points out that, while the later installments of minimalism (Chomsky 2000 and subsequent work) adopt the H&K-approach in lieu of Theta Theory proper or a D-structure level of representation, both Chomsky and H&K basically ignore much recent work that treats theta-roles not as roles, but as features (Lidz & Idsardi 1998, Manzini & Roussou 2000, Hornstein 2001, and inspired research). This need not be bad. Yes, thematic roles are treated differently from features — but they’re also treated differently from their module-internal character of previous approaches (which already saw some moving and shuffling with Baker’s 1988 UTAH, the Uniform Theta Assignment Hypothesis; see Baker 1997 for revisions that are not entirely unaffected by H&K 1993). The H&K-approach aims at deriving thematic properties, rather than taking them as primitives of linguistic systems, among other things by capitalizing on the restricted number of actual thematic roles and, in particular, the structural configurations in which they appear. It is the latter that H&K tease apart by decomposing lexical argument structure.

So, let’s take a look at the H&K-monograph from the beginning. In fact, as we learn from the “Preface” (pp. ix-x), the collaboration between H and K goes back way further than the above-mentioned “a few years”: 18 years, when the MIT Lexicon Project was inaugurated in 1983, connect Samuel Jay Keyser’s and the late Kenneth Hale’s research activities. The brief preface is, of course, quite moving written shortly before *and* after H’s untimely death. (H&)K do a good job revisiting some aspects of the fruitful collaboration (and friendship) in the two pages, followed by a more personal note from K to H and the reader; for a more intense and complete obituary, see Keyser 2003.

The monograph itself can be thought of as being bibliographically splits into three parts. The first third is a collection of H&K’s follow-up work on the “original”

paper, presenting its main ideas, but going beyond as well. It comprises three chapters which lay out the theoretical framework that (a) refines (and hence takes precedence over) H&K 1993 and (b) is explored (and refined) further in the subsequent chapters. These three chapters have appeared as separate articles with the same titles, as listed in the preface (though the pre- and published versions differ to some extent; H&K 1998, for example, additionally contains some of what later, supported by H's own and co-authored work, turned into chapter 4). The second part combines a collection of H's work on native American languages relevant to the syntax of argument structure, some co-authored with a number of people (excluding K). These are also acknowledged in the preface. And finally we get brand-new stuff, four chapters that tackle particular issues, empirical and theoretical in scope. Precursors of these chapters have either appeared as working papers contributions or simply circulated as manuscripts (from the period between 1998 and 2000, though at least one chapter is going to appear in an edited volume). They all address some pertinent issues of the theory — sorry, prolegomenon — presented earlier. In fact, one may hold (this reviewer does) that these chapters are the really sexy part of the book: the theory is laid out on the table, the native American facts support empirically some of the wackier assumptions, and then H&K turn to some very interesting properties of the system. Let's take a closer look at the contents of the book.

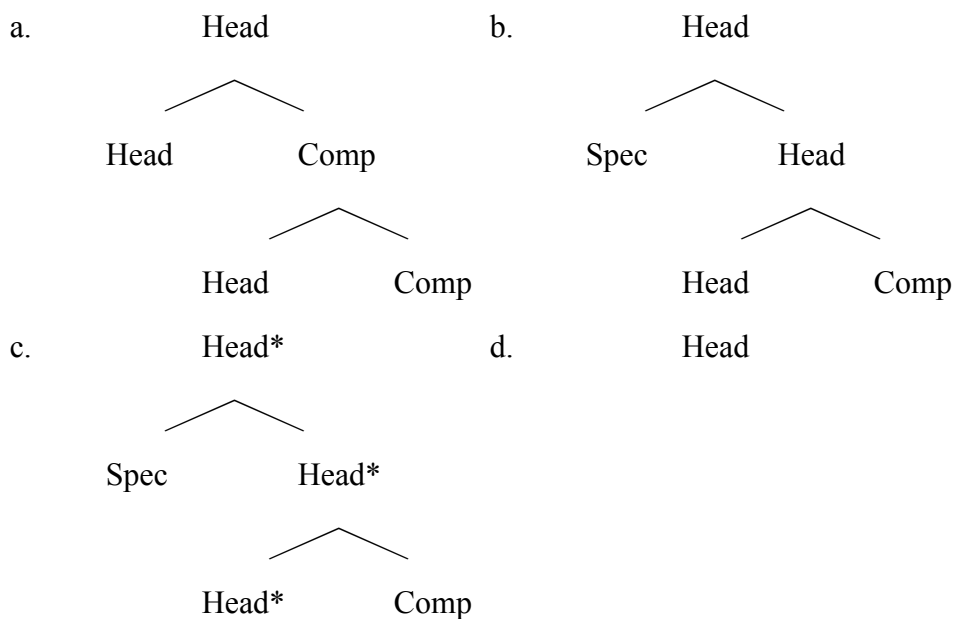
Chapter 1 presents “The Basic Elements of Argument Structure” (1-27). This chapter appeared as part of Hale & Keyser (1998) and basically updates H&K 1993. The guiding intuition H&K pursue in their search for a theory of argument structure is to look closely at “the syntactic configurations projected by a lexical item” (1), i.e. their definition of argument structure, yielding a syntactic process of derivational morphology (and beyond). In a nutshell, this program pursues the following four basic types of argument *structure*, taking the latter literally in the sense of l(lexical)-

syntax espoused here, i.e. the syntactic realization of Lexical Argument Structure (H&K: 13), fitting “[t]he fundamental relations of argument structure” (12) given in (1). (By the way, the LFG-reminiscent terms/conceptions “Lexical Argument Structure” and “Lexical Relational Structure” of H&K 1993 do not seem to play such a major role anymore as to warrant acronymical abbreviation.)

(1) *The structural types of lexical argument structure*

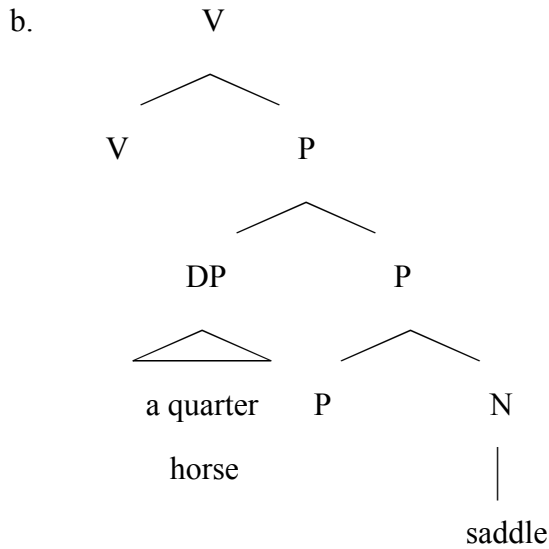
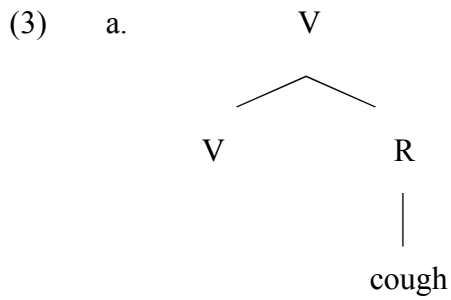
- a. Head-complement: If  $X$  is the *complement* of a head  $H$ , then  $X$  is the unique sister of  $H$  ( $X$  and  $H$  c-command one another).
- b. Specifier-head: If  $X$  is the *specifier* of a head  $H$ , and if  $P_1$  is the first projection of  $H$  (i.e.,  $H'$ , necessarily nonvacuous), then  $X$  is the unique sister of  $P_1$ .

(2) *The structural types of lexical argument structure*



Argument structure thus understood “interacts with other linguistic systems, including the following” (5):

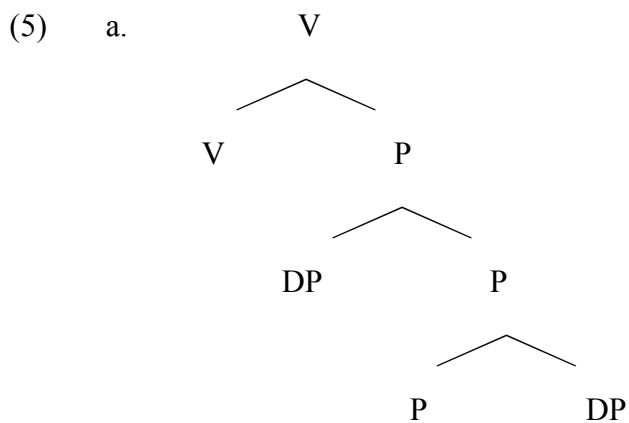
- *conflation*, “the phonological instantiation of light verbs in denominal constructions” (21), and *selection* (shown in (3), the main topic of chapter 3);

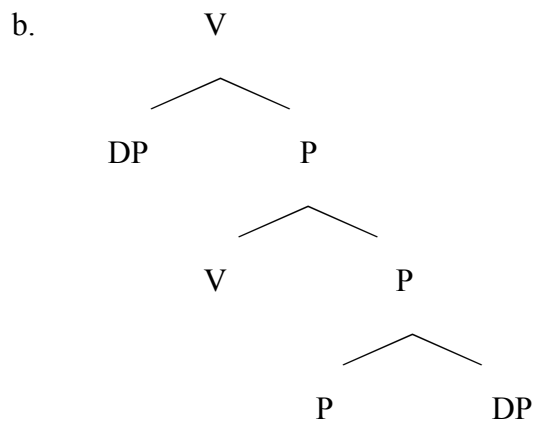


• *merge* and *obviation*, that is, issues revolving around transitivity alternations such as (4), where “[t]he transitive alternant results from ‘immediate gratification’ of the specifier requirement of P, as shown in [(5a)]; and the intransitive variant results from ‘delayed gratification’ of that requirement, as shown in [(5b)]” (24, chapter 2);

(4) a. The kids splashed mud on the wall.

b. Mud splashed on the wall.





• *active* and *stative*, especially an integration of adjectives into the H&K-framework originally outlined in 1993, “where [H&K] are concerned in large part with the question of stativity and its ‘source’ and proper representation in grammar” (26), a discussion that, as the chapter title suggests, explores potential relations between I-syntax/argument structure and the aspectual system (ultimately denied or made out orthogonal, chapter 7).

“Bound Features, Merge, and Transitivity Alternations” (29-45) are the concerns of chapter 2 (Hale & Keyser 1999b). This chapter essentially explores further the structural implications of the system, namely that argument structure needs more than just complement and specifier relations (as in (1) above). In fact, by integrating more recent views of the operation Merge (Chomsky 1995, 2000), H&K, among other things, update their previous (i.e. 1993) account of verbs like *spur* or *smear* (cf. *\*Spurs put on Leecil*, *\*Saddle soap smeared on my chaps*) in that the complement of this verbal head is not a full P-projection with a specifier, but the result of simple Merge between P and its complement (in previous X-bar-theoretic terms, P’); this is the structural type (2c) from above yielding e.g. *We put spurs on Leecil* and *Leecil smeared saddle soap on my chaps*.

A theory of “Conflation” (47-103), “the ‘fusion of syntactic nuclei’” (47), is presented in chapter 3 (Hale & Keyser 2000). In spirit similar to incorporation, conflation differs in at least one important point: “a verb cannot ‘conflate’ with the

specifier of its complement” (103), ultimately because conflation relates a head and its complement due to its selectional nature. Although H&K partially retract the full applicability of conflation in their system, it is worth pointing out that Harley (2002, 2003) suggests quite the opposite, namely to expand its application. She develops conflation in such a way as to constitute *the* theory of head movement in a system without head movement: since, as has been widely observed, head movement as a syntactic process is — or at least might be: see Hornstein, Nunes & Grohmann, to appear for discussion and references — at odds with minimalist assumptions (such as Checking Theory or, especially, the Extension Condition of Chomsky 1995), it should be abandoned and its effects derived from non-syntactic properties, viz. head movement as a “PF-phenomenon” (phonological in nature; Chomsky 2000). Harley employs conflation to do exactly this in a principled manner which, if head movement is indeed to be banned from syntax proper, would be a truly beautiful result certainly beating other, rather vague notions of this “PF-phenomenon.”

The empirically rich chapter 4 deals with “A Native American Perspective” (105-157) on argument structure. As H&K humbly put it, the “purpose [of this chapter] is merely to lend a certain degree of cross-linguistic perspective to this work” (105). H&K discuss mainly the transitivity alternation in four “Native American linguistic traditions” (105), the genetically and/or areally quite different languages Navajo (Athabaskan), Ulwa (Misumalpan), Tohono O’odham [Papago], and Hopi (both Uto-Aztecan).

The final part of the book deals with interesting extensions of the system. For example, H&K’s approach also has something to say “On the Double Object Construction” (159-188), much beyond the initial remarks from H&K 1993, which they do in chapter 5. The complex structure assumed — integrated in a discussion of depictive secondary predication — is essentially one that takes (2b) the complement of (2a), where the goal is P’s specifier and the theme its complement. Chapter 6

presents “*There*-Insertion Unaccusatives” (189-203), an integration of *there*-insertion in H&K’s (lexical) argument structure that builds on Moro’s (1997) analysis of an underlying small clause predication structure. “Aspect and the Syntax of Argument Structure” (205-225) is the concern of chapter 7 which, as mentioned above, investigates stativity. H&K reach the well-founded conclusion that “aspect is orthogonal to argument structure” (224), something that not everybody may agree with, but which makes sense in more than one way; H&K offer some arguments. Chapter 8 is “On the Time of Merge” (227-248) and offers an exciting finale of the monograph (in this reviewer’s opinion). It demonstrates once again that one important appeal of the H&K-approach is its success in understanding particle-framed vs. verb-framed languages, and they tackle some intricate properties of verb-particle structures in English in this chapter, postponed in earlier work (H&K 1993, 1999b, 2000). Building on more recent work (e.g. den Dikken 1995), H&K embark on an intriguing discussion of one property of the system not yet explored: when does “Merge [take place] in relation to the specifier requirement of lexical and functional heads” (228)? Among other things, the answer has something important to say on the structure and derivation of (6a) vs. (6b):

- (6) a. She put her saddle up on the fence.  
b. She put her saddle up.

If this brief teaser captures the reader’s interest, I can only recommend reading the book as soon as possible. The more critical reader of this review may be disappointed in me not raising some more obvious problems for H&K. In recent years we have seen more than one serious attack against H&K 1993, such as the “impossible-words” argument of Fodor & Lepore (1999), for example, to which H&K reacted (1999a), or other instances of apparent overgeneration of the system (as in the denominal verbs *father* and *mother*, or the exact reason why the verb *carpet* only has the meaning it does, as opposed to a host of other imaginable

interpretations, raised by Culicover & Jackendoff 2003, also Kiparsky 1997, and discussed further from a different perspective in Panagiotidis, to appear), or simply the long-standing observation that nominalizations are simply quite unpredictable (Chomsky 1970). Frankly, I want to leave discussions of this nature to the specialists — and to more space than a review allows.

Moreover, there are ample positive outcomes that brought theoretical thinking further. While some may lament the blind following of accepting Larson's (1988) work ("it assumes and extends the use of Larsonian VP-shells, taking it as a result" — Culicover & Jackendoff 2003: 12), I believe the H&K approach does much more than that. Among many things (and chapter 5 of this book does quite a bit more), the H&K-approach offered original evidence for and integration of the light verb *v*, which has become an integral part of current theorizing (Chomsky 1995, 2000, and most of the work done in MP). This, in turn, led to a potentially interesting discussion, in which some maintain the functional character of *v* (the standard view), and others take it lexical (as Baker 2003: 37 puts it, "for me, it is *v*, a lexical head, distinct from anything found in nonverbal predication") — a potential debate that H&K seem to carefully avoid to put their stakes on, interestingly. And I already mentioned Harley's (2003) extension of Conflation, which is, in my view, a serious step forward for the head-movement-as-a-PF-phenomenon camp.

As is standard with MIT Press/Linguistic Inquiry Monographs, the comprehensive section "Notes" (249-259) follows the entire main text. It's a shame really, for readability I would always prefer footnotes (and as quite a few reviews and notices printed in *Language* confirm, I'm not alone). The compact "References" (261-267) are followed by an excellent "Index" (269-281) which, for a change, is indeed very helpful. The book as a whole is quite clear and the material well presented. At times I wish the authors had put more care in presenting their structures; it is not always clear, for example, whether a given structure is to be

accounted for or ruled out — and since the book contains a large number of structures, this makes it difficult to browse through. Maybe this was done on purpose: the reader is surely forced to read the entire thing. But this effort is rewarded with flowing prose and interesting ideas.

Since I don't know the origins of the title, I can only speculate. H's legendary humbleness would probably have ruled out a more forthcoming title; in addition, I suspect that H&K were not particularly adamant about abandoning their collaboration stretching the best of 18 years. If other events wouldn't have interfered we might have even been in the lucky position to learn more about the fruitful ideas coming from this team. We can only hope that H's spirit lives on and that future research, with or without K, will tackle some of the issues further. The ideas projected in Harley (2002), to single out just one scholar who takes the H&K-project seriously (and there are many others), certainly seems to fit the bill. At the end of the day, everyone has to see for him- and herself how much they like H&K's program, and which parts will survive and inform future research. Personally, I think there are many. Not to tread on the co-author's own fruitful and prolific toes, as a posthumous book publication, *Prolegomenon* constitutes a wonderful celebration of the legacy Kenneth Locke Hale.

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