

YAFEI LI, *X<sup>0</sup>: A Theory of the Morphology-Syntax Interface*. Cambridge, MA: MIT Press, 2005. x + 222 pp.

*Reviewed by* JOSHUA BOWLES

In the monograph *X<sup>0</sup>: A Theory of the Morphology-Syntax Interface*, Yafei Li attempts to take two conflicting underdetermined theories (the Lexicalist Hypothesis (LH) and Uniformity of Theta Assignment Hypothesis (UTAH))<sup>1</sup> of the morphology-syntax interface and fuse them together. Motivating this move to synthesis is, Li argues, the fact that conflicting syntactic (UTAH) and morphological modularity (LH) positions are simultaneously true. His goal is to establish the ground for a better explanation of the relationship between word formation and syntax by way of a common factor between the two respective theories. But two things stand in his way: (i) the combining of two underdetermined theories does not *a priori* equal a better theory; and (ii) the essential difference between these two theories rests on the assumption of a logically (and biologically?) independent module for morphology, and the ontological choice between the two is either yes or no. Regarding (i), a theory that is the result of synthesizing the explanatory successes of two theories is subject to the usual tests of falsifiability and explanation of the data, which Li seems to accomplish. As for (ii), by assuming some aspect of the LH, Li is forced to propose a separate module for morphology, which he states explicitly many times. For some, the acceptance of an independent module for morphology puts him in the LH camp. For others the camp boundaries are not so clear.

Li takes, in his own words, “two mechanisms typically viewed as conflicting alternatives..., head-movement in syntax and lexical word-formation operations [and proposes they] are actually the co-existing and interactive factors” of a single interface (p. x). This is a powerfully minimal move, if correct. The monograph is an exploration of Li's basic idea organized into an introduction and five chapters.

The introduction, titled “The Morphology-Syntax Mapping Hypothesis,” consists of Li's general framework and philosophical argument for the interface mechanism that has the same name as the title of this section: (MSMH). Here is his definition for it:

- (1) If morphological components X and Y are in a word W and there is a relation R between X and Y, then R is reflected in syntax if and only if
- a. R is thematic, and
  - b. The representation of R in syntax obeys all syntactic principles
- (p. 4).

Accordingly, a complex form of X-Y may be in head position as a lexically indecomposable form that projects to its own phrase, or it may require more complicated syntactic structure to represent the relation between X-Y. This amounts to visibility conditions for syntax: lexically indecomposable items are visible to syntax as a whole, and thus, MSMH predicts that lexical compounds of the X-Y type will only have internal thematic relations *iff* they are part of a syntactic structure. In other words, complex heads

---

<sup>1</sup> Typically the UTAH, and much of Baker's work, has a parallel in the more general theory of Distributed Morphology (DM). See Halle and Marantz (1993), Embick and Noyer (2007). Baker (2003) also provides a discussion on the relationship of his work to the DM model of Halle and Marantz.

that are inserted by LH mechanisms will not have word internal thematic relations (pp. 4-5).

Chapter 1 is titled “Verb Incorporation.” Much of what motivates Li in this chapter and in his research generally is the notion that just because data can be accounted for by syntax doesn’t mean that one has to account for it syntactically (p. 54). In some sense he rejects the dogma of syntactic origin for many linguistic phenomena. He claims that an LH and MSMH account can be as elegant as a syntactic one. He also claims that this account can be more restrictive than a syntactic one; in particular, Baker’s (1988) Uniformity of Theta Assignment Hypothesis (UTAH). He begins by looking at verb incorporation (VI) in verb-based causatives, applicatives, and Chinese resultatives. In his analyses Li adopts Grimshaw’s (1990) argument structure with Williams’ (1994) theta-role co-indexing for binding relations as his basic LH structure. Stemming from the analysis of morphological causatives as bi-clausal based on the binding properties of reflexives, Li turns his attention to inflectional morphology in general (p. 33). His result is that arguments against LH inflection by Baker (2002) only apply to LF feature checking for T and do not substantiate a justifiable rejection of a Lexicalist approach in general. He then moves to applicative constructions and argues against a specific approach of monoclausal projection as a form of preposition incorporation (pp. 40-54). Next, Li discusses resultatives in Chinese, arguing that a syntax only approach, while feasible, should not *a priori* be the only one. Technical issues aside, Li’s most forceful argument is

“...showing that a specific instance of movement can happen is not enough to justify that it does happen – there may be undiscovered constraints and/or factors that end up barring the claimed movement. ...efforts must be made to uncover all the constraints on the operation” (p. 59).

The major result of chapter one is that the MSMH allows VI to map to a bi-clausal structure while simultaneously constraining resultative compounds to a single VP structure (pp. 59-60). UTAH does not specifically constrain these resultatives. The MSMH, like the UTAH, can map word-internal thematic relations to the syntax but the former has two advantages: word-internal thematic relations only map to the syntax if they are “legitimate,” and non-thematic word-internal relations are restricted from occurring in the syntax. In other words, both the UTAH and MSMH equally predict the bi-clausal nature of VI due to word-internal thematic relations mapped into the syntax. But only the MSMH explicitly restricts non-thematic word-internal relations: resultative compounds in Chinese are explicitly mapped to the syntax as indecomposable lexical units on the presumption of the LH, which the UTAH lacks.

In chapter 2, “Adjective Incorporation,” Li contrasts the behavior of causatives with an adjectival root to the causatives with a verb root in chapter one. He points out that de-adjectival causatives seem to be monoclausal based on the binding behavior of reflexives. He then goes on to prove by contradiction that causatives with an adjectival root will violate known principles of syntax if allowed to project bi-clausally. That is, a thematic relation between the adjective and the causative will violate (1b) above. Adjective incorporation is not reflected by syntactic structure, and thus, must be inserted into the syntax as a complex head by LH mechanisms enhanced by the MSMH. Li concludes by proposing that if UG does contain something like the UTAH then the role

of that hypothesis is to locate *where* to map theta-roles. This leaves the more fundamental role of *when* to map theta-roles to the MSMH because it is more selective than UTAH about the "conditions under which semantic relations among morphemes are represented in syntax" (pp. 106-107), as generally defined in (1a-b) above.

Turning to chapter 3, "Noun Incorporation," Yafei Li applies the same standard of the MSMH to noun incorporation (NI) that restricts all NI to the thematic object. Most importantly he claims to have de-mystified Baker's (1996) Morphological Visibility Condition (MVC) for polysynthetic languages by stating his own Parameter of the Lexicon (POL) (p. 120). The POL defines boundaries for thematic operations based on three elements: an *m-lexicon*, *morphology*, and *syntax*. The latter two are "what they are normally assumed to be" (p. 120) and the *m-lexicon* is the collection of all morphemes. The difference between a polysynthetic language and a non-polysynthetic one, Li claims, is the difference of whether or not the morphology and syntax are part of the thematic operations or not. In polysynthetic languages the *m-lexicon* is identical to the lexicon, while in non-polysynthetic languages the lexicon contains the *m-lexicon* and the *morphology*. Next, by stipulating a type of earliness principle that states that thematic operations have to occur at the earliest level of postlexical derivation Li claims to have de-mystified the MVC (pp. 121-122). Emerging from this is an explanation of NI: in Mohawk the morphological module is the earliest level of derivation after the lexicon and so thematic operations may take place within it as well as the syntax (i.e. morphology and syntax are visible to LF). In English, NI is not common because only the syntax may contain thematic operations based on POL. Li states that his theory has an advantage over purely "syntactic" or purely "lexicalist" approaches in that his can account for a wide variety of data (NI and VI) that "guarantees the right mechanisms will apply only when needed" (p. 157). He also re-states his claim that an alternative (i.e. not syntactic head movement) explanation of NI can be formulated. After highlighting the MSMH advantages Li then points out the possibility that any theory for NI may be underdetermined. That is, "whatever data one approach can explain, the other can as well" (p. 157). Instead of being disappointed by such a possibility, Li finds the result inspiring within the general framework of linguistic investigation of UG.

In chapter 4, "From X-Bar Theory to the Lexicalist Hypothesis," Li proposes a Modified Linear Correspondence Axiom (MLCA), which revises Kayne's (1994) original Linear Correspondence Axiom (p. 160). The result is a head-final structure (Object Verb) for universal order, which is the opposite of Kayne. The head of the phrase must dominate a morpheme with phonetic content otherwise MLCA imposes no inherent restriction. Head-initial structures are derived by head movement to a phonetically empty head: MLCA operates only on overt (pronounceable) syntax; constituents at LF are not visible to it. The LH is derived from the MLCA because the latter shows that syntactic well-formedness of phrasal structures does not include morphologically complex heads, for which a separate LH component is needed. LH is responsible for word formation because the syntax is *not responsible* for morphological merger by way of head movement. Although one may have spell-out of linearly adjacent morphemes in syntax (pp. 164-167). The rest of the chapter is made up of specific applications or consequences of the MLCA to head-initial/head-final structures, the C system, causativization in head-final languages, cliticization, and adjuncts.

Chapter 5 is titled “Philosophical Thoughts on Linguistic Research.” It is very short (pp. 187-190) and summarizes the motivations, insights, and general results of the monograph. Yafei Li is aware that his position is not likely to find favor because most linguists are committed to their particular theory (“syntactic” or “lexical”). He provides general references to other sciences and their successes in synthesizing the explanatory successes of two theories into one unified theory. He claims that his MSMH shows that separate morphology and syntax modules interact smoothly and explain the data in an efficient and elegant way. On the whole I have to agree with him. But the real test of a theory is time.

The text is well written and Li’s arguments are solid and based on a good amount of data (for a work this short). He uses data from a diverse field of languages that represent multiple and distant language families. I found only a few typos: page 35 where one of two T-bars should simply read T; and page 41 where the gloss in example (46a) is “break” but it should read as “bread.” Overall the monograph is well organized and insightful. Li captures many disparate phenomena under one explanation and is able to communicate these complex findings in a readable way. Anyone interested in the relation between morphology and syntax, head-movement and word-formation, thematic roles, or argument structure would not be disappointed by this book, whether they agree with the author or not.

*Department of Linguistics*  
*University of Utah*  
255 S. Central Campus Dr., Rm 2300  
Salt Lake City, UT 84112-0492  
[bowles.j.ling@utah.edu](mailto:bowles.j.ling@utah.edu)

## REFERENCES

- Baker, Mark. 1988. *Incorporation: A theory of grammatical function changing*. Chicago: University of Chicago Press.
- Baker, Mark. 1996. *The polysynthesis parameter*. New York: Oxford University Press.
- Baker, Mark. 2002. “Building and merging, not checking.” *Linguistic Inquiry* 33: 321-328.
- Baker, Mark. 2003. *Lexical categories: Verbs, nouns, and adjectives*. Cambridge: Cambridge University Press.
- Embick, David, and Rolf Noyer. [to appear] “Distributed Morphology and the Syntax/Morphology Interface.” *The Oxford Handbook of Linguistic Interfaces*. Eds. G. Ramchand and C. Reiss.
- Grimshaw, Jane. 1990. *Argument structure*. Cambridge, MA: MIT Press.
- Halle, Morris, and Alec Marantz. 1993. “Distributive Morphology and the pieces of inflection.” *The view from building 20*. Eds. Kenneth Hale and Samuel

Jay Keyser. Cambridge, MA: MIT Press. Pp. 53-109.

Kayne, Richard. 1994. *The antisymmetry of syntax*. Cambridge, MA: MIT Press.

Williams, Edwin. 1994. *Thematic structure in syntax*. Cambridge, MA: MIT Press.