

Review of *A Syntax of Substance*, by David Adger
Linguistic Inquiry Monograph Series
MIT Press
ppi-x; 1-189.

Daniel L. Everett
deverett@bentley.edu

In one of the greatest introductory books ever in the social sciences, John Lyons (1968) introduced a problem for Chomsky's Transformational Generative Grammar, namely, how to ensure that a phrase had the right kind of "head." Thus in rules of the familiar type in (1), Lyons asked what guarantees that Noun Phrases (NPs) are headed by Nouns (Ns), Verb Phrases by Verbs, and so on:

- (1) a. NP --> X N Y
 b. VP --> X V Y
 c. etc.

In other words, Lyon pointed out that the theory as then formulated had no way to block rules like those in (2):

- (2) a. NP --> X V Y
 b. VP --> X N Y

While we may all "know" that verbs should not be the heads of NPs, the theory lacked any way to guarantee this. I refer to this as "Lyons' Problem."

Chomsky (1970) responded shortly thereafter with "X-bar theory," an idea originally proposed by his BA, MA, and PhD thesis supervisor, Zellig Harris (Harris 1946; 1951, chapter 16). Subsequently, Ray Jackendoff (Jackendoff 1977) published an eponymously titled book and Lyons' Problem was considered solved. If phrase structure rules take the form in (3), where 'X' is a set of features, e.g. [+N, -V] 'Noun;' [-N,+V] 'Verb;' [+N,+V] 'Adjective;' [-N,-V], 'Preposition;' then all manifestations of 'X' will share the relevant features and the phrasal head will always be of the same type as the phrase it heads, what Bloomfield (1933) called "endocentricity."

- (3) XP --> A X B

Endocentricity has ever since remained a central tenet of Chomskyan theories. It was, for example, considered a major breakthrough in the 1980s when the last recalcitrant exocentric structure, S(entence), the very start symbol of the Phrase Structure component of the theory, was argued to be endocentric by Ken Hale (1983) and others. The other central tenet of Chomskyan theory is "binary branching," the idea that no phrase can have more than two immediate constituents (Wells (1947) and Kayne (1984)).

Yet X-bar theory fell out of favor in Chomskyan theory because it was considered to be unnecessary, something that should be derived rather than stipulated. Adger's book

is another attempt to derive the consequences of X-bar theory, while assuming binary branching. In other words, in the intervening five decades since the first statement of Lyons' Problem, Generative Grammar has not solved the problem, in any of its forms. Adger's *A Syntax of Substance* is an acknowledgement that this theory hasn't yet successfully determined how best to label phrases (and as his book is so new, it hardly represents a consensus among generativists).

Ironically, in the nearly fifty years since Lyons (1968), most linguists learned a different lesson from the one that Chomsky – and Adger – urges upon us, namely, that it is seriously, profoundly wrong to dissociate form from meaning. Once meaning is made a theoretical primitive (e.g. in functionalist theories or my own culture-based theory of grammar, Everett (2012)), Lyons' Problem simply disappears. For example, in Role and Reference Grammar (Van Valin and La Polla 1997) phrases are all exocentric – they are headed by a syntactic-semantic *Nucleus*, N. This N is the form-meaning composite around which the phrase is constructed. In Everett (2005 and 2008) I demonstrated that this N is able to solve problems in the phrase structure of Wari' (Everett and Kern 1997) that are intractable for Chomskyan theory, with its assumptions of endocentricity and binary-branching.

Adger's book cheerfully ignores the vast intervening literature since Lyons (1968) and the idea that the central problem of his current book doesn't even exist in other theories, as he champions the additional, most crucial of all, Chomskyan idea that the nature of syntactic structures is independent of meaning. The consequence is that fifty years later, Adger and his colleagues are still grappling with problems of the mid-20th century that are nowadays of little relevance to the majority of linguists, psychologists, philosophers, linguistic anthropologists, and anthropological linguists. It borders on the surreal to see this insularity and lack of progress.

A Syntax of Substance is organized in six chapters, each reflecting a tired issue of the past. The first is the theory of labeling, which we just discussed. The remainder of the book explores the consequences of this first chapter: syntactic and semantic interpretation of phrases, relational nominals, "PP peripherality" and "the etiology of PPs." There are interesting ideas in all of these chapters. Yet many of the issues addressed in them, especially interpretation, the positioning of phrases relative to the phrase or word nucleus, have been addressed more perspicaciously by Van Valin (see the references to Van Valin and LaPolla 1997) and others in the 1980s.

Once we take meaning to be a driver of syntactic structures, we not only provide simpler and better solutions (Goldberg (2006), Croft (2001); Givon (1984), etc.) but we also allow for culture to play a role in the grammar as the driver of meaning and the constrainer of structure (Everett 2012).

Adger's book is an excellent exemplar of current Chomskyan theory, the so-called Minimalist Program (Chomsky 1995). And Adger is one of its cleverest (in both the American and British senses of "clever") proponents. Ignoring its lack of acknowledgement of meaning and other approaches to the problems at its center, it also demonstrates the failure of Chomskyan theory to avail itself of the standard quantitative methodologies of the social sciences, a serious shortcoming of this entire approach to grammar (see Schutze (1996) and Gibson & Fedorenko (2013), among others on why this is a problem).

The author sums up his conclusions in statements like (p167): "I have proposed that the labeling of syntactic structures is exocentric [though the phrases remain endocentric, DLE]: structure is built by Merge and the labels of that structure are given by independently specified sequences of categories." Virtually no linguist outside of the Minimalist Program will find this to be a result of any relevance to their own research. I suspect that this book will likely have an important impact in form-based, i.e. formal, theories of linguistics and be almost completely ignored by linguists who take meaning as the foundation of form. This has been typical of linguistics since at least the work of Generative Semantics in the 1970s (Lakoff 1971) – a divided field where different groups fail to engage. But anthropologists are likely used to that.

References

- Bloomfield, Leonard. 1933. *Language*. New York: Henry Holt.
- Chomsky, Noam. 1970. Remarks on Nominalization. In Roderick A. Jacobs and Peter S. Rosenbaum, Readings in Transformational Generative Grammar, Ginn and Company, Waltham, MA. pp184-221.
- Chomsky, Noam. 1995. The Minimalist Program, MIT Press.
- Croft, William. 2001. *Radical Construction Grammar*, Cambridge University Press, Cambridge.
- Everett, Daniel L. 2005a. 'Periphrastic pronouns in Wari', *International Journal of American Linguistics*, 71:3, 303-326.
- Everett, Daniel L. 2005b. 'Cultural Constraints on Grammar and Cognition in Pirahã: Another Look at the Design Features of Human Language,' a CA article in *Current Anthropology* 76: 4, 621-646
- Everett, Daniel L. 2008. 'Wari' Intentional State Construction Predicates,' In: Robert Van Valin (ed.), *Investigations of the Syntax-Semantics-Pragmatics Interface*, John Benjamins Publishing Company, Amsterdam.
- Everett, Daniel L. 2012. *Language: The Cultural Tool*, Pantheon Books (Random House USA) and Profile (UK).
- Everett, Daniel L. and Barbara Kern. 1997. *Wari': The Paacas-Novos Language of Western Brazil*, Routledge, London.
- Gibson, E. and E. Fedorenko. 2013. The need for quantitative methods in syntax and semantics research. *Language and Cognitive Processes*, 28(1-2), 88-124.
- Givon, Talmy. 1984. *On Understanding Grammar*. Academic Press.
- Goldberg, Adele. 2006. *Constructions at Work: the nature of generalization in language*. Oxford University Press, Oxford.
- Hale, Kenneth L. 1983. Warlpiri and the Grammar of Non-configurational Languages. *Natural Language and Linguistic Theory*, 1:5-47.
- Harris, Zellig S. 1946. From Morpheme to Utterance. *Language*, pp161-183.
- Harris, Zellig S. 1951. *Methods in Structural Linguistics*, University of Chicago Press.
- Jackendoff, Ray. 1977. *X-bar Syntax*. MIT Press, Cambridge, MA.
- Kayne, Richard. 1984. *Connectedness and binary branching*. Dordrecht: Foris.
- Lakoff, George. 1971. On generative semantics. In D. D. Steinberg & L. A. Jakobovits (Eds.), *Semantics: An interdisciplinary reader in philosophy, linguistics and psychology* (pp. 232–296). Cambridge: Cambridge University Press.

- Lyons, John. 1968. *Introduction to Theoretical Linguistics*. Cambridge: Cambridge University Press.
- Schutze, Carson. 1996. *The Empirical Base of Linguistics*. University of Chicago Press.
- Van Valin, Robert and Randy LaPolla. 1997. *Syntax: Structure, Meaning, and Function*. Cambridge: Cambridge University Press.
- Wells, Rulon. 1947. Immediate Constituents, *Language*. pp81-117.