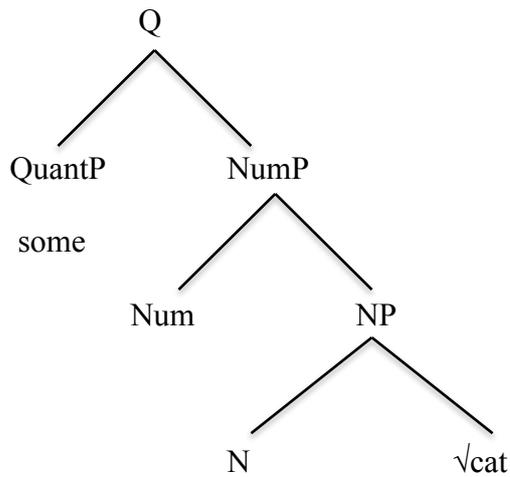**Review of David Adger, 2013, *A Syntax of Substance*, Cambridge, MA: MIT Press, 189pp.**

The standard view in current syntactic theory is that Merge generates binary hierarchical structures that are labeled by the lexical items that function as heads. This approach characterizes Bare Phrase Structure (Chomsky 1995), where all syntactic structure is created based on lexical and functional items that are merged into the structure. These items are also responsible for assigning labels to structures.
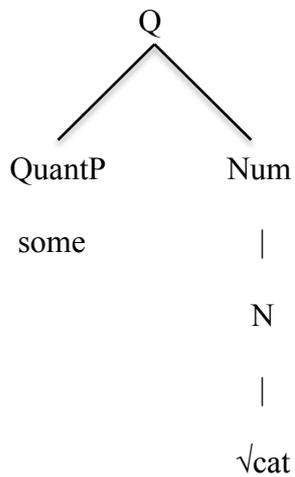
The core thesis in David Adger's *The Syntax of Substance* is that syntactic theory is structured such that structure building is entirely separated from the labeling of structure (cf. Hornstein 2009). That is, labeling is exocentric and not endocentric. Therefore, Adger also argues that there are no true functional heads qua lexical items. Standard Merge and Self Merge together create structure, and the labels are assigned on the basis of a (set of) universal sequences of functional categories (cf. Cinque 1999, Starke 2001, Adger 2003, Williams 2003). This is a revised conception of Grimshaw's (1991) notion of extended projections. Adger's new theory rules out roll-up derivations and remnant movement, contrary to a lot of work that has made use of these operations in the past 20 years. The resulting theory is therefore highly constrained, a great virtue in my opinion.

In addition, Adger makes use of Brody's (2000) 'telescoped' structures. As an example, compare the standard (1) with the telescoped structure in (2).

(1)

```
                    Q
                   / \
              QuantP   NumP
               some    / \
                    Num   NP
                          / \
                         N   √cat
```

(2)

```
                 Q
                / \
           QuantP  Num
            some    |
                    N
                    |
                   √cat
```

In (2), there is no independent head for any category except the root (p. 2). The structure in (2) is thereby simpler, given that its labels are generated exocentrically.

Another core theoretical contribution concerns the syntax of roots. Adger follows much recent work in assuming the existence of roots, but he departs from a lot of work in arguing that roots cannot merge with complements (phrases). This forces a separation of arguments from their apparent heads, and Adger follows work by Borer (2005), Ramchand (2008) and others who argue in favor of the importance of syntactic structure in determining argument structure configurations.

On the empirical side, Adger explores the ramifications of his theory in the domain of relational nouns. He looks at a range of language families, including Celtic, Germanic, Polynesian, Romance and Semitic, and argues that the interaction of the syntax of APs, PPs and N motivates a syntax where the apparent inherent relationality of certain nouns is a structural property and not a lexical property. If true, this provides important evidence for 'thematic separation' in the nominal domain. Alongside the evidence in the verbal domain (Schein 1993, Borer 2005, Lohndal 2012), we then have quite solid evidence that nouns and verbs do not encode argument structure as part of the lexical information that is available to the syntax.

Adger also proposes a new typological generalization that he dubs PP Peripherality (p. 7).

(3)   *PP Peripherality*

When (intersective) AP modifiers and PP 'complements' both occur to one side of N inside a noun phrase, the PP is separated from the N by the AP.

This generalization captures the fact that PP complements appear further away from the head noun than most AP modifiers. Adger's theory predicts this, unlike standard accounts (e.g., Chomsky 1970).

The book consists of seven chapters, including a good introduction that summarizes the book.

'Labels and Structures' is the title of the first substantial chapter. Here, Adger explains why Bare Phrase Structure. He especially focuses on problems with specifiers. The particular issue he is concerned with is what he terms 'The Specifier

Problem', which relates to how a label is determined when two phrases merge. In the chapter, he poses two related questions that he then goes on to answer (p. 18).

(4)   a.   *The Specifier Problem*: In $\{\alpha, \beta\}$, where neither α nor β are lexical items, how is the label to be determined?

       b.   *The Labeling Problem*: Is there a unified labeling algorithm that will suffice for all cases, and if so, what is it?

Adger's diagnosis is that the problem relates to heads, not labels. This is where he argues that labels are exocentric. The rest of the chapter outlines the technical machinery that Adger needs. At times I suspect the discussion will be rather abstract for many readers, and a few more examples illustrating how the theory is applied to natural language examples would have been welcome.

Chapter 3, 'Syntactic Interpretation', resolves a problem created in chapter 2, namely that complement and specifier are not structurally distinguished by derivational timing. Adger defines what he calls i-specifiers and i-complements. These are interpreted relations that hold between mothers and daughters (p. 39). The definitions are such that an i-specifier can only be defined when an i-complement has already been defined. In this chapter, Adger also rules out roll-up derivations and replaces such derivations with base-generated structures.

In chapter 4, 'Puzzles in the syntax of relational nominals', Adger turns to the main empirical domain of this book, namely relational nominals. He starts out by discussing the apparent similarities in complementation patterns between verbs and nouns, which many scholars have argued shows that the mapping of argument structure of nominals and verbs takes place in a parallel fashion. Then he turns to

discussing the optionality of 'arguments' of relational nominals. Adger presents the

following generalization (p. 61):
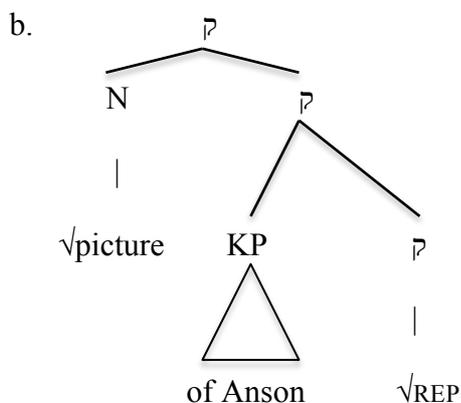

(5)   *Optionality Generalization for Relational Expressions (OGRE)*

        Across languages, relational nominals systematically take their apparent

        arguments optionally, in contrast to verbs, which vary idiosyncratically in

        whether any particular argument is optional.

He also argues that a type-shifting approach is untenable because it makes wrong

predictions about entailments. The second half of the chapter then makes the claim

that the relationality of nouns should reside in functional and not lexical structure.

        'The PP Peripherality Generalization' in (3) is the topic of chapter 5. In

chapter 4, Adger argues that the functional structure involves a light nominal that

introduces a functional category ק. This category is responsible for encoding

relationality and for the introduction of prepositional case-marking morphology. So

the structure of (6a) is as in (6b) (p. 91) (√REP names the 'representation' relation).

(6)   a.   picture of Anson

        b.   ק
                           ┌────┴────┐
                           N   ק
                           | ┌──┴────┐
                        √picture KP   ק
                                 /\ |
                                / \   √REP
                               /____\
                             of Anson

This structure is later revised to include further details (see p. 132 for the full structure). The chapter has a lot of very interesting data that Adger uses to motivate his analysis. He also develops a new analysis of determiner phrases. The analyses are well motivated and well presented, which makes the chapter easy to read and evaluate.

However, what Adger does not do in chapter 5, is to argue against a remnant roll-up derivation where PPs start out low and then move to their surface position. In chapter 6, 'The Etiology of the PP Argument', he provides such an argument. The evidence is drawn from binding effects and how such effects relate to linear order. At the end of this chapter, there is also discussion of PP Peripherality in head final constructions.

Chapter 7 briefly concludes the book.

This book has a lot of very interesting ideas that are likely to shape the future of generative syntax. I think that Adger does a terrific job at motivating the ideas, and even though I might have a few quibbles about some of the details (e.g., exactly what the relationship between specifiers and complements are – see Lohndal 2012 for some discussion), I find the overall theory extremely interesting and thought-provoking.

Works Cited

Adger, David. 2003. *Core Syntax*. Oxford: Oxford University Press.

Borer, Hagit. 2005. *Structuring Sense*. 2 vols. Oxford: Oxford University Press.

Chomsky, Noam. 1970. Remarks on Nominalization. In *Readings in Transformational Grammar*, ed. by R. A. Jacobs and P. S. Rosenbaum, 184-221. Waltham, MA: Ginn-Blaisdell.

Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: The MIT Press.

Cinque, Guglielmo. 1999. The Syntax of Adverbs. Oxford: Oxford University Press.

Grimshaw, Jane. 1991. Extended projections. Ms., Brandeis University.

Hornstein, Norbert. 2009. *A Theory of Syntax*. Cambridge: Cambridge University
Press.

Lohndal, Terje. 2012. Without Specifiers: Phrase Structure and Events. University of
Maryland doctoral dissertation.

Ramchand, Gillian. 2008. *Verb Meaning and the Lexicon: A First Phase Syntax*.
Cambridge: Cambridge University Press.

Schein, Barry. 1993. *Plurals and Events*. Cambridge, MA: The MIT Press.

Starke, Michal. 2001. Move Dissolves into Merge. University of Geneva doctoral
dissertation.

Williams, Edwin. 2003. *Representation Theory*. Cambridge, MA: The MIT Press.

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