Local Constraints vs. Economy

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This monograph belongs to a literary species that flowers every time Chomsky comes up with a new proposal and has as its aim to show that what is proposed is woefully inadequate on empirical and theoretical grounds. This kind of literature has a pedagogical role to play in theoretical linguistics and card-carrying syntacticians should read the book. However, over the years Chomsky's versions of syntactic theory have become so irrelevant to natural language processing that computational linguists can safely skip this book and the one it is a response to, Chomsky (1995).

But, as it is not a long book, some computational linguists might be interested in reading the first chapters as a quick summary of early minimalism and the fourth chapter as an introduction to the HPSG treatment of *wh*-constructions. After a brief introductory chapter, the authors summarize the Chomsky 1995 version of global economy in Chapter 2. In Chapter 3, they discuss two versions of local economy, that proposed by Collins (1997) and the one developed by Yang (1997). They contrast the Minimalist Program model with what they call the incremental interface correspondence model, which is exemplified in several recent linguistic frameworks, from Montague grammar to LFG, to GPSG, to TAGS, to cite only a few. In Chapter 4, they compare an account of *wh*-constructions in Iranian Arabic according to a local version of economy to one based on an HPSG local-constraint approach. The last chapter addresses issues of theory construction in general.

The general argument developed in the second chapter is somewhat awkward: the authors want to show that the three main economy principles proposed by Chomsky (Procrastinate, the Smallest Derivation Principle, and "Have an Effect on Output") are unnecessary. They do this mainly by showing that other, more GB-like, mechanisms could account for the same data. Given the limited amount of data discussed (a lot of the discussion centers on the contrast between *There seems to be somebody in the room* and **There seems somebody to be in the room*), it would be rather astonishing if this were not the case. We get here the familiar *dialogue des sourds* where one party points out descriptive problems and alternatives whereas the other party is arguing about "explanatory" adequacy. The discussion allows the authors to make a couple of points about the computational complexity of the Minimalist Program proposal that would certainly help scare away practically minded computer linguists, but as I said above, I do not think they will be tempted. It makes also the usual points about Chomsky's sloppiness and vagueness.

The third chapter looks at attempts to replace global economy by local economy, a move that could help alleviate the computational problem. Johnson and Lappin show that the proposal made by Collins does away, by and large, with the economy approach as such and actually proposes local constraints, and that the proposal by Yang is empirically and formally inadequate in that it proposes a metric that leads to contradictory rankings. The authors then propose their own explicit account of raising and expletive constructions in an incremental correspondence model. In general, I sympathize with the authors' complaints about the lack of rigor and explicitness of syntactic work by the current followers of Chomsky. But I have to admit that to compare a fully developed mature theory, such as HPSG, to something that cannot be more than a sketch, such as minimalism, on the grounds of descriptive adequacy strikes me as a bit facile. The discussion, however, brings out some valuable points about the oddities of minimalist theory construction with respect to interpretable and noninterpretable features, a distinction that in a derivational approach needs to be made before the information to make it is available.

The fourth chapter discusses some *wh*-constructions in Iranian Arabic, a language that has *wh*-words both in sentence initial position and in situ. The HPSG account given seems adequate; minimalism as it stands seems to get into contradictions in the face of this set of facts. The authors do a good job in summarizing the main points of the HPSG approach for those of us that might have some trouble keeping all the various features and their behavior straight.

In the last chapter, Johnson and Lappin address more-general issues. They point out that while Chomsky always stresses Universal Grammar as determined by biological properties of the brain, optimality of design as proposed in minimalism is rarely a characteristic of biological systems. This is a short chapter and it is rather anecdotal, but it raises important questions. The meager results of forty years of syntactic theory constructions by bright and enthusiastic practitioners lead one to suspect that there is something fundamentally wrong with the way the problem is being looked at: to assume that simplicity and parsimony are part of universal grammar might just be misguided. A degree of redundancy and independence of subparts might be the necessary characteristics of a robust and continuously evolving system such as language, and theories such as minimalism might be more harmful because they are philosophically misguided than because they are descriptively inadequate.

References

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