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Possible and probable languages: A generative perspective on linguistic typology

By Frederick J. Newmeyer

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This is a book about linguistic typology, approached from an atypical direction. This book is also about the division of labor between formal and functional theories of linguistics, particularly syntax, as they each relate to linguistic typology.

Newmeyer writes to a broad audience on technical material from diverse approaches. He does an excellent job of expressing ideas within each of the theories in a way that someone unfamiliar with that theory can understand, without looking down on them. This makes the book quite readable.

This book has 5 chapters. Chapter 1, On the Possible and the Probable in Language, seeks to address the very basic question, "What does it mean to say that some grammatical feature is possible or impossible, or probable or improbable?" (p. 1). Newmeyer argues that what is possible in language is constrained by grammar, while what is probable is constrained by usage factors. He briefly addresses the difficulty of knowing the difference between possible and probable: is the lack of a logically possible construction in any attested language the result of it being impossible (e.g. in Universal Grammar) or the result of it being (highly) improbable? Even more challenging is explaining the improbable. As groundwork for what follows, Newmeyer lays out two different approaches to addressing these sorts of questions that have been taken in linguistics.

Chapter 2, Parameterized Principles, looks at how generative theory, specifically Chomskyan versions of generative theory, attempt to account for typological variation. The simplified story is that Universal Grammar (UG) is assumed to have "hard-wired" parameters, which a child learning a language "sets" based on observation of the language. In this view, these parameters thus constrain what is possible in language.

In chapter 3, Parameters, Performance, and the Explanation of Typological Generalizations, Newmeyer argues that the parameter-setting models (PSM) are ill-suited to explain typological

variation, presenting eight specific arguments demonstrating the deficiencies of PSM. These include: descriptive complexity in PSM; the fact that binarity (a staple in PSM) poorly accounts for numerous empirical facts; the proliferation of parameters required to account for all observed variation leads to an unwieldy (and consequently implausible) number of parameters; hierarchical organization of parameters (a la Baker 2001) is incapable of representing the parametric choices that the child is hypothesized to make; the clustering of properties resulting from a single parameter setting is not nearly as robust empirically as claimed in the literature; the distinction between parameters settings and rules has no effect on the innateness of grammatical principles; there are significant unresolved learnability issues with parameters; and language change does not necessarily move from marked parameter settings to unmarked, as would be expected. I find some of these arguments stronger than others, but the cumulative effect of all these together presents a strong case against PSM.

Before moving on concerning Newmeyer, I want to comment briefly on Baker (2001). This book is not written for a technical audience, but aims to present some interesting ideas about the nature of language to a general audience. I very much appreciate this book, and have recommended it to many. Although Newmeyer ultimately rejects Baker's approach to parameters—not only with regards to the specifics of Baker's proposal, but also the very idea of a hierarchical structure of parameters—he gives Baker credit for being the only person to follow through on some commonly held ideas in generative grammar with a specific proposal.

Newmeyer continues the chapter by affirming his conviction that grammatical theory is valid and important in and of itself. His ultimate claim is that grammatical theory is independent of typology:

> …I am not going to argue that typology lacks theoretical interest or importance. If a particular feature is manifested in 90 per cent of languages in a properly constructed sample, then that is a fact in need of explanation. If feature A is correlated with feature B significantly greater than chance would predict, then that too is a fact in need of explanation. But crucially, it does not follow that the explanation of such facts needs to reside within grammatical theory. That is, it might be wrong to derive the overwhelming preference for the feature that shows up in 90 per cent of all languages from a principle, or a set of interacting principles, within generative grammar. And similarly, the implicational relationship between A and B could fall out from the interaction of the grammatical module with others involved in the totality of language, rather than from the internal structure of grammatical theory itself.

And indeed, that is precisely what I will argue. It will be my conclusion that grammars do not encode typological generalizations, either directly or indirectly. (p. 104)

Newmeyer then supports this claim with specific examples. He concludes this chapter by outlining how a theory of performance based in processing is able to handle typological variation. He bases this on the work of Hawkins (1994, 2004). The claim is that "much of grammar can be thought of as a conventionalization of performance preferences" (p. 119). Hawkins (2004) proposes three efficiency principles: minimize domains, minimize forms and maximize online processing. Each of these serves to make processing of linguistic information more efficient.

Newmeyer's position in chapter 3 leads to the conclusion that the role of formal syntax should be diminished in an account of typological facts. In Chapter 4, In Defense of the Saussurean View of Grammar, Newmeyer argues against a complete rejection of generative grammar, as might result from the position that there is no role for purely structural principles in linguistics. He argues "in favor of the classical Saussurean position with respect to the relationship between knowledge of language and use of language, providing evidence in support of the idea that the mental grammar contributes to language use, but that usage, frequency, and so on are not represented in the grammar itself" (p. 128) .

Newmeyer discusses "usage-based models of grammar," tracing them back to Generative Semantics originating in the late 1960's. About that time, sociolinguists also proposed models in which statistical facts about were incorporated into grammatical rules (Labov 1969, 1972). Within a decade, Generative Semantics had all but disappeared. Many of the ideas of Generative Semantics have reappeared recently in the guise of Cognitive Linguistics. Newmeyer believes that more linguists around the world do cognitive linguistics than generative grammar, and that many functional linguists share many views of cognitive models. Even within generative grammar, some syntacticians have incorporated some of these ideas, in particular those utilizing Optimality Theory (see below). Also among the number of those espousing a usage-based model are the great majority of psycholinguists, as well as those involved in natural language processing.

Newmeyer discusses the appeal of usage-based models, pointing first to the mounting evidence that significant aspects of grammar are indeed motivated by considerations of use. Grammars are shaped in part by performance considerations. It is also increasingly evident that speakers are sensitive to the frequency of grammatical forms. Pulling people further from classical generative models is the contrast between sentences produced by generative grammars and actual utterances.

Newmeyer goes on to argue, however, that formal and functional accounts of a phenomenon are not incompatible:

> …since properties of grammars are functionally motivated, grammar and use are necessarily inextricable. Such a view seems to assume that once a system is characterized as discrete and algebraic, a functional explanation of that system (or its properties) becomes impossible. But that is simply not true. Indeed, it seems only to be linguists who have this curious idea. In every other domain that I am aware of, formal and functional accounts are taken as complementary, rather than contradictory. (p. 135)

In discussing the disparity between what formal grammars generate and the actual utterances speakers make, Newmeyer points out that generative grammar treats grammar as a cognitive phenomenon. He then goes on to present evidence that full argument structure, i.e. the output of generative grammar, is mentally represented, even in cases in which it is only partially expressed in actual speech. The arguments Newmeyer gives include typological, canonical word order, the distribution of *get* (as an exemplar of a verb taking multiple frames), ellipsis (which I found to be one of the most compelling arguments), child speech (also quite compelling), and introspective judgments. Newmeyer is quick to point out that the mental grammar is only one of many systems

that affect usage. Again, he takes a balanced approach in which different approaches are complementary rather than competing.

Having shown that generative grammar plays a valid role in accounting for language, although with limitations in scope, Newmeyer also challenges some commonly held beliefs among typologists about the scope of that endeavor. He argues that grammars are not, in fact, "tailor-made to serve language users' 'needs'," as held by many functionalists. He also argues that pressure to reduce ambiguity in speech is not an important factor in grammatical change. Languages can "get by" with a great deal of ambiguity just fine, and the "usefulness" of less ambiguity simply does not provide pressure for language change. In support of this position, he looks at reflexives, differential object marking, subject-object ordering, and some constructions in Irish that are systematically ambiguous in rather significant ways, yet are fully tolerated, and have been for centuries. Newmeyer continues with additional challenges to some typological beliefs: Probabilistic information from corpora does not give useful insight into the grammar of individual speakers. Grammars are quite stable; they are not "fragile, fluid and temporary objects." Newmeyer's final section has to do with the "evolutionary origins of grammar," arguing that these lie in conceptual structures rather than in communication. I found this one of the least convincing sections on a number of levels (i.e. not only because of my position on evolution). In all, though, Newmeyer presents a convincing case for his apportionment of the burden of labor between formal and functional approaches.

Chapter 5, The Locus of Functional Explanation, addresses one final question: "How direct is the linkage between functional pressures and the typological distribution of formal elements that represents a response to those pressures?" (p. 174).

Newmeyer distinguishes two views, atomistic functionalism (AF) and holistic functionalism (HF). In AF "there is a direct linkage between properties of particular grammars and functional motivations for those properties" (p. 174). In HF "there is no direct linkage between external functions and grammatical properties. The influence of the former on the latter is played out in language use and acquisition and (therefore) language change and is manifested only typologically" (p. 175). Newmeyer believes that much of mainstream functionalism believes in AF, though in varied ways. Newmeyer also attributes a belief in the AF position to generative approaches utilizing Optimality Theory.

Newmeyer looks at the issue of deciding between AF and HF, noting a number of challenges, including "the dubious empirical content of the claim that every element of grammar has a functional explanation" (p. 179). Newmeyer uses language change as a testing ground for AF and HF, concluding that HF is more plausible. He briefly deals with some other factors weakening the AF position (overgeneralization, dysfunctional consequences, competing motivations). I found this whole discussion less convincing and less relevant than other sections of the book, although perhaps a dyed-in-the-wool functionalist would feel otherwise.

Newmeyer concludes this last chapter of the book with a severe critique of AF in the features that are specific to Optimality Theory (OT). In spite of the sound argumentation earlier in the book concerning the weaknesses of AF and the partitioning of formal and functional theories into what they each best give an account of, I found this section least convincing of all, I think partly

because Newmeyer's characterization of OT for syntax is different from my understanding of it. (I don't practice OT myself, but there is some use of it within Lexical-Functional Grammar (LFG), so I'm a little familiar with it. Of course, Newmeyer seems to treat LFG as a functionalist theory, while I would place it in the non-Chomskyan generative camp. Certainly, it has elements of both.) I had the impression that he was arguing against only one possible version of applying OT to syntax, and generalizing it too broadly. It was a disappointing end to an otherwise very interesting book.

Overall, I found this book quite interesting. I would summarize the main theme as generative grammar accounts for what is possible in language while typology accounts for what is probable in language. Both are valid research agendas. They complement each other, rather than compete with each other. I find that all too often, practitioners of these two approaches reject the other approach instead of embrace what there is to learn from it. Newmeyer makes a strong case for cooperation and appreciation.

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