Practical Guide to
Syntactic Analysis

2nd Edition

Georgia M. Green
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To our children,
who have reinforced our beliefs about
the powers of explanation.

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PREFACE TO THE SECOND EDITION

This second edition clarifies the prose in a few passages that were less than clear, and updates some of the theory discussion. More noticeably, it includes an appendix containing an annotated list of syntactic phenomena common in languages across the world, with examples from English. The descriptions there have been framed to be as theory-neutral as possible, so that their utility may outlast the inevitable shifts in syntactic theory. Students who seek theory-specific analyses of particular phenomena are encouraged to take advantage of class discussions. The new appendix also includes, for the first time, information about pragmatic correlates of a number of syntactic constructions.

The publication of the appended reference guide is dedicated to all of our skeptical colleagues who said it couldn't be done: description of syntactic phenomena with virtually no procedural metaphors.

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PREFACE

This book is intended as a resource for students of syntax at all levels, supplementary to their textbooks and class discussions. It takes for granted that the student has a basic understanding of why one might want to describe natural language within the general framework of generative grammar. It offers:

1. A thorough discussion (Chapter 1) of the fundamental assumptions of the study of syntax, at a level of detail which facilitates seeing the forest as well as the trees.

2. Guidance in doing and presenting syntactic analysis (Chapters 2-4). The discussion of argumentation and presentation is applicable not just to syntax, but to phonology, pragmatics, and semantics as well, and probably much more generally. This will still be useful long after analyses published this year are out of date.

3. A brief account of the so-called Standard Theory (Chapter 5), and how the major current frameworks for syntactic description have evolved to differ from it (Chapters 6-7). For more detail on their motivation and the sorts of accounts and analyses they offer, the reader is referred to the original works describing these theories.

   This book does not provide a glossary of technical terms in syntax. Such a glossary would no doubt be desirable in a guide of this sort. Unfortunately, the technical terms in contemporary syntactic theory tend to be very unstable and short-lived; how linguist X defines a term in a certain paper may differ from the way linguist Y uses it in a different paper. As a consequence, unless a glossary recapitulated the history of terms as well as the range of meanings of terms, it would be likely to generate more confusion than enlightenment. We urge readers to use their wits to track down what particular linguists mean by the terms they use, and to keep in mind that it isn't always possible to tell exactly what a term is being used to refer to–sometimes writers fail to say exactly

what they mean by some term that figures crucially in their analysis. It is not an acceptable practice, but it sometimes happens anyway.

The sections may be usefully consulted in any order.

Although this book contains discussion of the evolution of various descriptive devices, intended to enable the reader to form a context for understanding both current and older issues in the linguistic literature, it does not describe the motivations for classical transformational grammar, the mathematical foundations of it, or the history of generative grammar. It is certainly not intended to be a comprehensive history of syntactic thought, even of syntactic thought of the last 20 years.[1]

Some of the topics discussed (e.g., cyclic rule application, global rules) may seem at first out of date. We feel it is important to include them insofar as they provide a means for understanding the context in which subsequent theoretical proposals were made, and for appreciating their antecedents. The increasing frequency with which previously abandoned approaches to a variety of problems have been unwittingly resurrected in recent years speaks volumes about why the older literature needs to be kept accessible.

Acknowledgments

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[1]For a detailed analysis of the syntactic constructions of English, the reader is referred to McCawley (1988). Newmeyer (1986), Harris (1993), and Huck & Goldsmith (1995) provide a variety of colorful accounts of the development of syntactic theory up to about 1985; Sells (1985) provides detailed descriptions of three approaches current at that time.

NOTATIONAL CONVENTIONS USED IN THIS BOOK

Italics mark cited expressions.

Single quotes (' ') enclose meanings of forms.

Double quotes (" ") enclose quoted expressions.

Bold face marks important expressions whose meaning is explained or implied in the text.

An asterisk (*) marks an expression being claimed to be ungrammatical.

CONTENTS

1 WHAT A GRAMMAR IS, AND ISN'T

Why is linguistic theory so widely misunderstood that in a 1989 collection of essays called *Reflections on Chomsky* (George 1989), a chapter could be titled "How not to become confused about linguistics"? Generative linguistic theory as it has grown out of the work of Noam Chomsky (1955, 1957, 1965, 1975, 1981, 1986a) has profound implications not only for linguistics, but also, insofar as it has important things to say about the human mind and human nature, for other domains of inquiry, including psychology and philosophy. So it is no surprise that it has provoked impassioned reactions, both pro and con, not only in linguistics but in several neighboring fields. But the critiques are often wide of the mark, since they are based on a thorough misunderstanding of the foundations of generative theory (see George 1989). These same misunderstandings are often found among beginning students of linguistics.

It may be that part of the problem is the difficult writing style of Chomsky and some of his followers. But we suspect that a greater part of the blame is due to critics' failure to consider carefully the whole picture of the generative approach, in particular the view of mind that it is based on. And we have no doubt that many misconceptions are due to an unfortunate choice of metaphorical terminology on the part of linguists who use generative theory. The purpose of this chapter is to bring these problems into the light, in order to reduce the likelihood that the student will be distracted by these misconceptions.

We begin by discussing the goals of linguistic theory, and how the concept of a grammar fits into the framework of those goals. We then discuss some common metaphors that may mislead the unwary student, and some criticisms of generative grammar that have a certain superficial appeal, but turn out to be misguided when they are examined closely.

1.1   Goals of Linguistic Theory

To properly understand generative grammar, and what counts as valid criticism of work in that framework, it is essential to understand the theoretical goals that are being pursued. Chomsky's position on the goals of linguistic theory is by far the dominant one in the field. The most important point of his position is this: the goals of linguistic theory are psychological. Language is a mental phenomenon, to be studied as such, and theories of language are to be considered as psychological theories. So the object of study is the human mind, and it is the nature of the human mind as reflected in the acquisition and use of language that provides the central questions of the field. This approach to the scientific study of language is by now so common-place that it is hard to imagine things being otherwise. But Chomsky's immediate predecessors in American linguistics had a quite different position, one in which language was (at least in theory) studied as a kind of natural object, and questions of mind were to be avoided at all costs. Even now there are theories with quite different goals. For some varieties of Montague grammar (Montague 1970, 1973; Dowty, Wall, and Peters 1981), for example, questions of psychology are largely irrelevant. Katz (1981) proposes a Platonic approach to the study of language, which rejects Chomsky's psychological goals. But most syntacticians, at least if pressed, would admit to being Chomskyan in their theoretical goals, though perhaps differing with Chomsky (and each other) on other points.

For such an approach to linguistics, it is not language (whatever is meant by that slippery term) but **knowledge of language** that is the central phenomenon to be studied and explained. The term generally used to refer to that knowledge is **grammar**. But to fully appreciate the details of the Chomskyan program, it is necessary always to keep in mind Chomsky's goals and assumptions about the mind, including especially these:

(1) THE MIND IS INNATELY STRUCTURED. For Chomsky, the mind is not a blank slate, but a highly structured organ whose structure is determined in large part by genetically governed (though poorly understood) properties of the brain. This position differs sharply from the widely held position that the brain and mind have little innate structure, but are shaped almost entirely by experience. More specifically, it is Chomsky's view that:

(2) THE MIND IS MODULAR. According to this Modularity Hypothesis, the human mind does not consist of a single all-purpose structure, but has sub-parts that are specialized in function for particular cognitive and perceptual domains. This structure is presumed to reflect (perhaps indirectly) physical properties of the brain. It is an open question—to be settled by scientific

means, not a priori philosophical ones—whether the modularity hypothesis is correct, and if it is correct, what substructures the mind contains. The modularity position does not imply (this is an important point) complete modular autonomy in operation: since most cognitive tasks humans face are not purely of one kind or another, most things we do presumably involve the interaction of several faculties. The existence of such interaction is not in itself a threat to the modularity hypothesis. Sadock (1983) elaborates insightfully on this point.

(3) THERE IS A DISTINCT MODULE FOR LANGUAGE. Among the faculties hypothesized to make up the mind, Chomsky argues, is one specific to language. There are two important points to keep in mind here. First, the modularity hypothesis does not depend on the existence of a language faculty; the mind could be modular without there being a language faculty, though of course if there is a language faculty the mind is *ipso facto* modular. Second, it should be clear that something like Chomsky's position has always been implicit in the study of language (though perhaps not consciously in the minds of the investigators) in that grammarians have generally approached language as something that can reasonably be isolated for study apart from other human activities or artifacts. If what we call language is really inherently inseparable from other mental abilities, then the study of language makes no more sense as a coherent science than the study of knowledge of things made in Michigan. Chomsky's position on the modularity of language provides a coherent rationale for this traditional isolation of language for study.

(4) LANGUAGE ACQUISITION IS THE CENTRAL PUZZLE FOR LINGUISTIC THEORY. Just what functions the hypothesized language faculty has is an open question; for Chomsky, the primary purpose of the language faculty is for learning language. It might serve this function either by being a learning mechanism itself, or by somehow interacting with a learning mechanism to determine the course of language learning. For Chomsky, the language faculty and its function are the central concern of linguistic theory, and understandably so. To the linguist who has looked in depth at the awesome complexity of the grammar of any language, it seems a miracle that a small child could master such a system in such a short time. Explaining this apparent miracle is the problem of **explanatory adequacy**, which is for Chomsky the central goal of linguistic theory. The explanation is to be given by investigating the language faculty, to determine its structure and contents, and how it makes it possible for a child to learn a human language. Chomsky's position is that the language faculty is structured in such a way that the child, when faced with the **primary data** of language presented by the senses, has a very limited set of options available for constructing a grammar consistent with those primary data. So

the child's choices in the language learning task are narrowly constrained by physical properties of the brain, which are in turn determined by the child's genes. (These brain structures are not fully formed at birth, but it is genetically predetermined that they will develop eventually if the physical development of the child follows its normal course, just as with many other genetically determined properties.)

Given this picture of things, it follows that two children faced with roughly similar linguistic experience are bound to come up with similar grammars, insofar as their language faculties are similar. And insofar as the language faculty is a reflection of genetically determined properties of the brain, two normal children should have roughly similar language faculties, if we assume no more genetic variation there than in other genetically determined properties.

This general position is known as the Innateness Hypothesis. Its essence is that every human is genetically endowed with the potential to develop certain brain structures which influence the course and outcome of language acquisition, by in effect setting limits on what kind of grammar a child can construct when faced with the data of linguistic experience. A theory that provides an account of this innate structure, and thus an explanation of how language can be learned, achieves the Chomskyan goal of explanatory adequacy. And it is the Innateness Hypothesis that makes the study of **universal grammar** relevant for linguistic theory. Given that the inherited biology of the brain strongly guides language acquisition in certain directions, we should expect to find consequences of such biological facts in terms of properties all languages share, or strongly tend to share. And certain properties should be rare or nonexistent because the inherited language faculty makes it very difficult or impossible for a human to learn a language with those properties. So detailed analysis and comparison of the grammars of a significant variety of languages is a crucial source of potential data on the structure of the language faculty.

That is not to say, though, that all universal properties are of equal importance for this view of language. There may well be properties all languages share that have no relevance to the goal of explanatory adequacy (that is, the goal of discovering the workings of the innate language faculty). For example, it is very likely that every language has a word meaning what the English word *mother* means. This fact is most likely to be explained in terms of human needs: mothers are biologically and psychologically very important in all human cultures, and languages tend to have words for referring to things that are important to language users. Although this putative universal tells us something profound about human nature, it tells us nothing about the language faculty, so it is not a significant fact in the approach to universal grammar that pursues the goal of explanatory adequacy.

(5) SYNTAX IS FORMAL. Another crucial aspect of Chomsky's view is that language is represented in the mind, and to be studied by the linguist, as a formal system. There is a potential source of confusion here in the use of the term *formal*. This is a position on the NATURE of LANGUAGE, and it is important not to confuse it with the methodological principle that THEORIES of language should be framed in some interpreted formal system. The latter sense of the expression *formal syntax* has to do with what counts as a useful theory, and is entirely independent of the nature of language. In principle, one could have a fully formalized theory of language that described language in terms of communicative function (there is no such theory at present, but that is beside the point—there could be such a theory). The essence of the former sense of *formal syntax* (sometimes referred to as *the autonomy of syntax*) is that principles of syntax have to do just with matters of linguistic form, and are independent (in the mind, hence also in the correct theory) of matters of meaning or communicative function. This is not a methodological point, it is a position (possibly incorrect) on the facts. Obviously the primary function of language is for communication. At some level of description, at least in a theory of linguistic performance, there must be principles of language use framed in terms of notions like purpose, intention, belief, communicative act, presupposition, and so on. Nonetheless, the standard position on syntax is that its description can be given purely as a matter of linguistic form, with no use of communicative/functional terms like those just mentioned. If it should turn out that our mental representation of syntax is in terms of properties of meaning and communicative function, then the formal view of language is wrong, and over the years a number of linguists have argued for exactly this conclusion. So far, though, their arguments have not been persuasive enough to win many converts.

(6) KNOWLEDGE OF LANGUAGE ITSELF IS MODULAR. Consistent with the modular view of mind, the standard position on grammar (i.e., the mental representation of language) is that it too is subdivided into components (which, of course, may interact in complex ways in performance). To a certain extent these components correspond to the traditional division of grammatical study into phonology, lexicon, morphology, syntax and semantics. The syntactic component itself is divided into various subcomponents consisting of different sorts of rules or principles. But there is disagreement on where the boundaries are; is the passive construction, for example, best described in the lexicon, or in the syntax? If in the syntax, by base rules or transformation? Theoretical controversies of this sort are common, and can be of crucial importance, since they often relate directly to hypotheses of universal grammar.

In this view of language, then, it is the human mental representation of language—a grammar—that is the object of study. Part of the linguist's task is to infer what the form and content of this mental representation are—to construct a model of the mental representation, the linguist's grammar—and by various means to construct a theory to explain why the grammar has the properties it has, and how it could be learned, by forming a theory of the innate language faculty. But, consistent with the modular view of mind, it is assumed that the grammar does not give a complete account of linguistic behavior. Such a complete account requires understanding other parts and functions of the mind, and how they interact with knowledge of language.

1.2   Some Common Criticisms of Generative Grammar

A number of criticisms of generative grammar arise from misunderstanding its expository metaphors. Often the problem is the (mistaken) assumption that a grammar is intended as a model of the native speaker's speech processes. This is a common interpretation of generative grammar, in spite of the pains taken by Chomsky and many others to make it clear that it is not a correct interpretation. A grammar represents (or models) what native speakers know about their language that allows them to correctly pair representations of sentences with meaning representations. It is no more intended to account for how speakers actually produce sentences which they intend to convey particular notions than a theory of motion is intended as instructions for getting from Boston to Chicago. Thus, grammars are intended to represent the principles that the language learner learns, and the adult native speaker knows, which define the set of well-formed sentences of a language and associate with each sentence one or more structural descriptions. How these principles are employed in actual language use on particular occasions is not well understood, despite occasional claims to the contrary.

Critics of generative linguistics sometimes take this separation of **competence** (the principles of grammar) and **performance** (the employment of competence in the use of language) as an argument against the generative approach. Such criticisms usually involve one of five common complaints:

(1) that the identification of grammar with principles of performance is the most reasonable hypothesis *a priori*, and the burden of proof is on whoever proposes the separation of competence and performance

(2) that a distinction between competence and performance is counter-intuitive

(3) that any theory with such a separation is flawed in principle