Linguistics for Non-Linguists

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LINGUISTICS
FOR NON-LINGUISTS

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Chapter 1

Introduction

The title of this book, *Linguistics for Non-Linguists*, delimits both its scope and audience. Let me say something about each one. The primary audience for which this book is intended are people who are not linguists, but who feel they need some familiarity with the fundamentals of linguistic theory in order to help them practice their profession. This includes specialists in such fields as speech-language pathology, experimental phonetics, communication, education, English as a second language (ESL), composition, reading, anthropology, folklore, foreign languages, and literature. The common thread among these disciplines is that, in one form or another and at one time or another, they all deal with language. For example, a researcher in business communication might try to characterize how different managerial styles are reflected in the way that managers give directions to their employees, noting that some managers give instructions like *Type this memo* while others say *Could you type this memo?* A kindergarten teacher might observe that students give more correct responses to questions like *Which of these girls is taller?* than to questions like *Which of these girls is shorter?* A composition instructor might encounter a student who writes *I wanted to know what could I do* rather than *I wanted to know what I could do*. An ESL teacher might have a student who writes *I will taking physics next semester*, rather than *I will take* or *I will be taking physics next semester*. A speech-language pathologist might attempt to evaluate a child who says *tay* for *stay*, but never *say* for *stay*. In each case, these specialists have encountered phenomena that cannot be thoroughly understood without some familiarity with concepts and principles from linguistic theory.

Realistically speaking, however, there are several practical reasons that may have prevented these specialists from acquiring a background in basic linguistic theory. First, courses in linguistics are relatively rare

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in colleges and universities, and are virtually nonexistent in high schools. Even universities that have such courses generally do not require them of all students. Second, each university curriculum (especially a professional curriculum) quite naturally tends to focus its students' attention on the central concerns of its discipline. Of course, the more courses required of students within their discipline, the fewer they can take from fields outside of their major. Such factors often prevent students in allied areas from being exposed to linguistics. Third, once people complete their formal education, it is often difficult, if not impossible, for them to supplement their knowledge with formal coursework, especially in an unfamiliar area. Finally, linguistics, at least at first glance, appears to be incredibly complicated. Articles and books on the subject are often filled with charts, tables, diagrams, and notation that seem to be uninterpretable, and many people react by running in the opposite direction. In short, there are a number of practical reasons for this gap in the flow of information between linguistics and other fields that deal with language. This book is an attempt to solve this problem, at least in part. It is specifically designed to convey a basic understanding of linguistic theory to specialists in neighboring fields, whether students or practicing professionals.

As for its scope, this book is essentially a primer in linguistics: a short work covering the basic elements of the subject. As such, it is not meant to substitute for an exhaustive linguistics text or for an introductory course in linguistics. Rather, this book is best viewed as a sort of ''pre-text''—a work that might be read before taking up a more comprehensive text or before taking a basic course in linguistics. Alternatively, it might be used as supplementary reading in an introductory course.

The book is organized as follows. Chapters 2 through 6 cover the theoretical areas of pragmatics, semantics, syntax, morphology, and phonology, respectively. Chapters 7 through 9 cover the applied areas of language variation, language acquisition, and the neurology of language. Each chapter is divided into four parts: text, exercises, answers to the exercises, and supplementary readings. The text of each chapter focuses on a handful of the basic ideas in that area of linguistics; I have not tried to cover each subject in breadth or in detail. Also, I have made an effort to make explicit the reasoning that lies behind each area discussed. Each chapter begins with a set of observations that can be made about that subject, and the rest of the chapter constructs a partial theory to account for the original observations. Throughout the text, I have tried to emphasize the fact that linguistic theory is a set of categories, rules, and principles devised by linguists in order to explain observations about language. (More on this subject later.)

The exercises and answers at the end of each chapter are included as a means for you to check your understanding of the discussion in the

text. Consequently, the questions are in most cases discrete rather than open-ended. That is, each question has a specific answer or range of answers within the framework of the chapter (for example, "Would a child exposed to English be more likely to acquire the meaning of *long* or *short* first? What principle accounts for this?"). The supplementary readings at the end of each chapter consist of an annotated list of several articles and books that I have found useful in introducing others to the field. I have made no attempt to cover each field exhaustively or to restrict the readings to the latest findings, since each of the eight areas covered here has numerous textbooks and primary works devoted to it. However, anyone interested in pursuing one of these areas can at least begin by consulting the supplementary readings at the end of that chapter.

Obviously, an introductory book such as this has several potential limitations. First, there are entire subdomains of linguistics that are not included—language change, writing systems, animal communication, and psycholinguistics, to name just a few. My reason for omitting these areas is that my primary purpose is to focus on the central concepts of linguistic theory in the simplest and most straightforward way possible. The experience of having taught linguistics for 10 years convinces me that students and professionals from neighboring fields are most often in need of a solid grounding in the core areas of pragmatics, semantics, syntax, morphology, and phonology. Once they have a basic understanding of these areas, they have little trouble in mastering the applied areas that overlap with their own field of specialization. I have included chapters on language variation, language acquisition, and the neurology of language, three applied areas which seem to me to be of the most importance to the greatest number of neighboring fields.

Second, this book is limited by my own understanding and interpretation of the field of linguistics. This is a factor that should not be underestimated. No one can study an academic field without incorporating some of his or her own prejudices into a view of that field, and certainly I am no exception. For example, my own views of the field of linguistics are biased toward the work of Noam Chomsky, who is undoubtedly the most influential linguist alive today. Consequently, most of this book is written from the perspective of **generative grammar,** a view of language which Chomsky began developing 30 years ago. (Some of the properties of this theory are discussed in detail in Chapter 10.) In short, it is wise to keep these limitations in mind as you read this book. It represents neither all there is to know about linguistics nor the only way of looking at the field.

Having discussed the audience and scope of this book, let's now turn to its primary subject matter—linguistic theory. There are two questions central to an understanding of this field. First, what do linguists study? And second, how do they go about studying it? Let's take these questions

one at a time. First, one common understanding of linguistic theory is that it is the study of the psychological system of unconscious knowledge that underlies our ability to produce and interpret utterances in our native language. It is not the study of how human beings actually produce speech with their vocal mechanism, nor is it the study of speech itself. Thus, we need to distinguish three different domains: (1) the psychological system of language; (2) the means of implementing this system (the vocal tract); and (3) the product (speech).

An analogy may help clarify the distinction among these three areas. In talking about computers, specialists differentiate at least three domains: software, hardware, and output. The software (or program) is essentially the mind of the machine; it is the set of instructions that tells the machine what to do. The hardware is the machine itself; it is the physical mechanism that carries out the instructions contained in the software. The output is the final product that comes out of the hardware; it is the tangible result of the software having told the hardware what to do. Thus, in a very loose sense the psychological system of language is like the software; it is essentially the mind of the system; it provides the instructions. The vocal mechanism is like the hardware; it is the physical system that implements the language. Speech is like the output; it is the final product of the vocal tract, the tangible result of the language faculty having told the vocal tract what to do. This analogy is illustrated in Figure 1-1. Thus, linguistic theory is the study of the psychological system of language. Consequently, the vocal tract and speech are of interest to linguists to the extent that they shed light on this psychological system: the internalized, unconscious knowledge that enables a speaker to produce and understand utterances in his or her native language.

Now that we have some idea of what theoretical linguists study, let's consider how they study it. At this point, our computer analogy breaks down. If a computer specialist wants to study the software of a particular
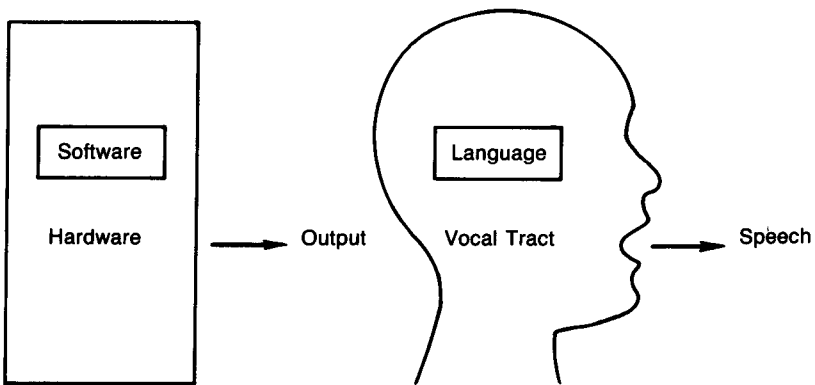
Figure 1-1. Analogy between computer system and linguistic system.

computer system, he or she can access it and examine it directly (by requesting the hardware to produce the software as output) or question the person who designed it. In other words, an understanding of how the software works is part of the conscious knowledge of the person who designed it, and consequently it is directly accessible to anyone who wants to examine it. Language, on the other hand, is not so easily accessible. First, knowledge of language is unconscious in the sense that speakers of a language cannot articulate the rules of that language. Moreover, although linguists can examine the vocal tract and the sounds it produces, they cannot examine language directly. Rather, they must approach the properties of this psychological system *indirectly*.

There are a number of methods that linguists use to infer properties of the system. Some linguists look at language change; they compare different historical stages in the development of a language and try to infer what properties of the system would account for changes. Other linguists look at language pathology; that is, they compare normal language output to that of aphasic patients (people with brain damage that has disrupted normal linguistic functioning) and try to infer what properties of the system would account for such abnormalities. Still others look at language universals—features that all human languages seem to have in common— and try to infer what properties of the system would account for these similarities. The list of approaches goes on and on.

Here, however, we will discuss in some detail another common method that theoretical linguists use to infer properties of language: investigating speakers' judgments about sentences. Under this method, the linguist asks informants (native speakers of the language under investigation) questions such as the following: Is utterance X an acceptable sentence in your language? Does utterance X have the same meaning as utterance Y? In utterance X, can word A refer to word B? And so on and so forth. Consider, for example, the following sentences.

(1)   John thinks that Bill hates him.
(2)   John thinks that Bill hates himself.

The linguist might present (1) and (2) to some informants and ask them to judge the two sentences for acceptability. In response, the informants would undoubtedly say that both (1) and (2) are perfectly acceptable. That is, both are completely unremarkable; people say such things day in and day out, and they go completely unnoticed. (In contrast, note that sentences such as *Him thinks that Bill hates John* and *John thinks that himself hates Bill* are remarkable; that is, speakers of English do not typically produce such sentences.) After having determined that both (1) and (2) are acceptable, the linguist might ask the informants the following questions. (The expected answers appear in parentheses.) In (1), can *him* refer to *John*? (Yes.) Can *him* refer to *Bill*? (No.) In (2), can *himself* refer to *John*?

(No.) Can *himself* refer to Bill? (Yes.) Do sentences (1) and (2) have the same meaning? (No.)
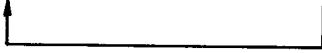
Having gathered these data, the linguist would then try to infer the properties of the internal linguistic system of the informants that would account for these judgments. For example, the linguist might hypothesize that English contains at least two kinds of pronouns: personal pronouns (e.g., *him*) and reflexive pronouns (e.g., *himself*). Moreover, the linguist might hypothesize that a pronoun may have an **antecedent** (i.e., a preceding word or phrase to which the pronoun refers). Finally, the linguist might infer that the antecedents of these two types of pronoun have different distributional properties; that is, the antecedent for a personal pronoun and the antecedent for a reflexive pronoun cannot occupy the same position within a sentence. In order to determine exactly what the distributional limitations are on these antecedents, the linguist might construct some related sentences (e.g., *John hates him, John hates himself*, and so on) and present them to informants for different types of judgments. This process would continue until the linguist had formed a picture of what the psychological system of the informants looks like, at least with respect to the distribution of antecedents for personal and reflexive pronouns.

There are several points to note about this method of inquiry. First, if the linguist is a native speaker of the language being studied, the linguist himself can, and often does, serve as both informant and analyst. In the previous example, any native speaker of English would be able to determine that (1) and (2) are both acceptable, but that they have entirely different meanings. Moreover, any native speaker of English would be able to trace these differences in meaning to the fact that in (1) *him* can refer to *John* but not to *Bill*, and in (2) *himself* can refer to *Bill* but not to *John*. In a clear-cut example like this, there is no need to present these sentences to thousands, hundreds, dozens, or even two speakers of English. The linguist can be reasonably certain in advance that they would all judge the sentences in the same way. Second, the linguist, in forming a picture of the internal linguistic system of the informant, is in essence constructing a **theory** of that system. That is, concepts such as personal pronoun, reflexive pronoun, antecedent, and distribution are not directly observable in the utterances themselves. Rather, the linguist *hypothesizes* such concepts to account for the observable fact that speakers of English can make such clear-cut judgments about sentences like (1) and (2). In short, the linguist uses the directly observable judgments of the informant (i.e., the data) to draw inferences about the unobservable internal system that governs such judgments (i.e., to construct a theory). This procedure can be schematized as follows.

OBSERVABLE DATA➤LINGUIST─────────➤ THEORY

| Speaker's judgments of acceptability, sameness of meaning, reference, and so forth. | Makes hypotheses about internal structure of speaker's psychological linguistic system. | English has two kinds of pronouns, whose antecedents have different distributions. |

This, of course, is not a complete theory of English; it is not even a complete theory of the distribution of antecedents for personal and reflexive pronouns in English. After all, the linguist in this hypothetical example has not determined where the antecedent for each type of pronoun can occur, but simply that they cannot occur in exactly the same positions within a sentence. The point of this example has been to illustrate one central goal of linguistics: constructing a theory about the unobservable, based upon observable data. And one type of data that linguists commonly use is the judgments of informants.

Having drawn a distinction between data and theory, let's pursue our example further and try to construct a more precise theory of the distribution of antecedents for personal and reflexive pronouns. The sentences in (1) and (2) are repeated in (1a-b) and (2a-b), but here I have incorporated the judgments of our hypothetical informants. (An arrow indicates the antecedent of a pronoun, and an asterisk indicates an unacceptable sentence.)

(1a)   *John* thinks that Bill hates *him*.

(1b)   *John thinks that *Bill* hates *him*.

(2a)   *John* thinks that Bill hates *himself*.

(2b)   John thinks that *Bill* hates *himself*.

Each of these structures is to be interpreted as follows.

(1a)   is acceptable, if *John* is the antecedent of *him*.
(1b)   is unacceptable, if *Bill* is the antecedent of *him*.

(2a)   is unacceptable, if *John* is the antecedent of *himself*.

(2b)   is acceptable, if *Bill* is the antecedent of *himself*.

How can we explain these observations? That is, what principle accounts for the distribution of antecedents for personal and reflexive pronouns? There is no foolproof method for knowing where to begin. We simply have to start with an educated guess and see how accurately it accounts for our observations. We can begin by noting that each of our sample sentences is complex; that is, it contains more than one clause. In fact, each of our sample sentences has exactly two clauses. Moreover, within each sentence, the dividing line between the two clauses comes precisely between *thinks* and *that*. The sentences in (1) and (2) are repeated once more, with a vertical line separating the clauses in each sentence.

(1a)   *John* thinks | that Bill hates *him*.

(1b)   *John thinks | that *Bill* hates *him*.

(2a)   **John* thinks | that Bill hates *himself*.

(2b)   John thinks | that *Bill* hates *himself*.

Now, if we consider just the examples in (1), it is clear that the personal pronoun *him* requires an antecedent *outside* of its clause. Note that in (1a), which is acceptable, the antecedent for *him* is in a different clause; but in (1b), which is unacceptable, the antecedent for *him* is in the same clause. Likewise, if we consider just the examples in (2), it is clear that the reflexive pronoun *himself* requires an antecedent *inside* of its clause. Note that in (2b), which is acceptable, the antecedent for *himself* is in the same clause; but in (2a), which is unacceptable, the antecedent for *himself* is in a different clause.

At this point, we might abstract away from the particular data in (1) and (2) and propose the following general theory governing the antecedents of personal and reflexive pronouns:

— The antecedent for a personal pronoun *cannot* be within the clause containing the pronoun.

— The antecedent for a reflexive pronoun *must* be within the clause containing the pronoun.

The next step would be to test our theory on additional examples containing personal and reflexive pronouns. If our theory predicts speakers'

judgments about these other sentences, then it gains strength. If, on the other hand, it makes incorrect predictions, then we need to go back and revise the theory.

Let's consider a few other examples. The sentence *Mary lies to herself* is acceptable if *herself* refers to *Mary*; likewise, this sentence is unacceptable if *herself* refers to someone other than *Mary*. Both of these judgments are predicted by our theory: *herself* is a reflexive pronoun and thus must have an antecedent within the same clause, in this case *Mary*. Consider another example. The sentence *Mary lies to her* is acceptable only if *her* refers to someone other than *Mary*. Once again our theory predicts this judgment: *her* is a personal pronoun and thus cannot have an antecedent within the same clause; since *Mary* is in the same clause as *her*, it can't serve as the antecedent.

Both of these examples fit within the theory we have constructed, but what about a sentence like *John thinks that Mary hates himself*? This sentence is unacceptable regardless of whether *himself* refers to *John* or *Mary*. Our theory correctly predicts that *himself* cannot refer to *John*, since *himself* is reflexive and *John* appears in a different clause. However, our theory incorrectly predicts that *himself* should be able to refer to *Mary*, since *Mary* is in the same clause. The problem, of course, is that *himself* can refer only to words designating a male, and the word *Mary* normally designates a female. Thus, we would have to revise our rule to stipulate that pronouns and their antecedents must match in gender. This process of testing and revising the theory goes on until the theory predicts the data (in this case, speakers' judgments) exactly.

There are several points worth making about this process of theory construction. First, we have been able to account for some fairly puzzling phenomena (e.g., why can't *him* refer to *Bill* in *John thinks that Bill hates him*?) with two simple and apparently exceptionless statements concerning the distribution of antecedents for personal and reflexive pronouns. Second, in the process of devising these statements (or rules), we had to try several guesses (or hypotheses) before we hit upon one that seems to provide a reasonable explanation (or theory) of the data in (1) and (2). (In fact, the theory we ended up with is still not precise enough to predict every judgment a speaker can make about the distribution of antecedents for pronouns in English. For example, our revised theory, as it stands, cannot explain why *he* can refer to *John* in a sentence like *After he came home, John ate lunch.* Here the "antecedent" follows the pronoun, thus violating our theory.) Third, and most importantly, our theory is made up of categories (e.g., pronoun, antecedent, clause, gender) and rules (e.g., a reflexive pronoun must have an antecedent within the same clause) which are not part of the data themselves. Rather, these categories and rules are products of our own creation that enable us to account for the fact that speakers of English interpret sentences such as (1) and (2) in a specific, limited, and uniform manner. In short, this is what linguistic theory is all about: We try to form a theory of a psychological system that we cannot

observe directly, by examining the superficial manifestations of this system (i.e., speakers' judgments about utterances).

This idea of trying to model what we cannot directly observe by drawing inferences from what we can observe is not restricted to linguistic theory. In 1938, the physicists Albert Einstein and Leopold Infeld wrote a book entitled *The Evolution of Physics*. In it they had this to say:

> In our endeavor to understand reality we are somewhat like a man trying to understand the mechanism of a closed watch. He sees the face and the moving hands, even hears its ticking, but he has no way of opening the case. If he is ingenious he may form some picture of a mechanism which could be responsible for all the things he observes, but he may never be quite sure his picture is the only one which could explain his observations. He will never be able to compare his picture with the real mechanism and he cannot even imagine the possibility of the meaning of such a comparison. (p. 31)

These physicists are essentially describing the same position that theoretical linguists are in: They are trying to formulate hypotheses about the structure of what they cannot observe, based upon what they can observe. In studying language, linguists cannot observe a speaker's mind. They can, however, observe the speaker's judgments about sentences. On the basis of these observable judgments, linguists can construct a theory of the unobservable psychological system that underlies these judgments. Moreover, they will never know for sure if their theory is correct; all they can do is continue to test it against an ever-expanding range of data and revise it as necessary.

To summarize, this book is intended to provide specialists in fields neighboring linguistics with a basic introduction to the principles and methods of linguistic theory. Under one common definition, linguistic theory is the study of the psychological system of language; that is, of the unconscious knowledge that lies behind our ability to produce and interpret utterances in a language. However, since this system cannot be observed directly, it must be studied indirectly. One common method is to infer properties of the system by analyzing speakers' judgments about utterances. The goal of this enterprise is to construct a theory of the psychological system of language. This theory is composed of categories, relationships, and rules, which are not part of the directly observable physical world. We will take up the topic of theories again in the final chapter.

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