INTRODUCTION TO

Linguistic Structures

FROM SOUND TO SENTENCE IN ENGLISH

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For M. B. H.

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FOREWORD

This book is intended for students on the college or graduate level, whether their interests are primarily in the English language or in linguistics. It presupposes no prior knowledge of language analysis, so that it may well be made the text for a first course in linguistics or for the course in the English language now offered by many English faculties. On the other hand, there is no reason that it should not be used in classes which follow the type of introductory course offered in a number of institutions under the rubric "General Linguistics." It is designed for those who wish to know something of the structure of the native tongue; it is neither a textbook of composition nor a manual for the teaching of composition. Equally, it is not a text for learners of English as a second language nor a handbook for teachers of English to foreigners. While it is none of these things, it presents the fundamentals necessary to all of them. It is therefore a book which may be of use to many types of students—those who wish to pursue linguistics as a profession, those who wish to know enough of the science to be able to use it in studying and teaching English and other languages, and those who wish merely to add breadth to a liberal education by examining the most important of human symbolic activities.

The description of English which forms the body of the book is not intended as a complete reference grammar. The results of linguistic investigation since 1933 have been so considerable that it is necessary to make the first task that of redrawing the broad outlines of language study on newer lines, before attempting exhaustive description of all details. Linguistics has also produced so much new knowledge of the use and structure of English that it is doubtful if a work intended to be as definitive as Poutsma's *Grammar of Late Modern English* is any longer to be undertaken by a single scholar. Though not exhaustive at any stage, the book moves through the hierarchy of English structure, from the smallest elements, sounds, up to the largest elements, sentences. There is a balanced amount of attention to each level, so that the result is unified. In this, the book differs from previous attempts to apply newer techniques to English, the most notable of which treats primarily sounds and another of which treats syntax only. In attempting a balanced description of English, the author has been not unmindful of an accusation almost as old as language science—that linguists die before completing a description of the vowel *a*.

Readers of such monumental works on English as the grammars of Jespersen and Luick will miss the copious apparatus of footnotes and bibliography which have become traditional in historical treatments of language. In a structural description, rigorous analysis occupies much the place of experimentation in laboratory sciences. Step-by-step exposition of analytical procedure becomes all-important. The results of analysis are deprived of their full importance if presented without the steps by which they were reached, since a healthily growing science is one in which students should participate and to which they should contribute. It is not a body of facts to be memorized.

The absence of reference to many great scholars, European and American, who are not interested in structural techniques is not a sectarian insistence that a single group are the sole possessors of the truth. At this stage of language science, no point of view, no set of techniques, and no conclusions can be categorically designated right to the exclusion of all others. Each must be pursued until its possibilities are exhausted, and must then be judged in the agora of scholarship by the totality of its results. It is in this spirit that controversial matters have been handled. They have been frankly faced, and it is the author's belief that in science, decisions must always be made. Yet all decisions are tentative and capable of being upset by new evidence or by better interpretation of the evidence already at hand. In all those matters where interpretations are both variant and important, the endeavor has been to present both the evidence and the alternatives.

A book such as this could not have been written without a heavy debt to other scholars. The primary debt has been to the Linguistic Society of America and the scholars who have taken part in its meetings and contributed to its journal, *Language*. To one group of scholars, who have been both friends and linguistic mentors, I owe even more, as the pages of this book make evident. These men are George Trager, Henry Lee Smith, Jr., Bernard Bloch, and Martin Joos. To W. Freeman Twaddell, Robert P. Stockwell, and Werner Winter I am indebted for reading the manuscript. It is scarcely enough to pay them the usual thanks for fruitful suggestions. These three careful scholars have contributed in large measure to whatever virtues the book may have, not at all to its faults. To many students I also owe a debt, often for objections raised with determination and defended with skill. Together with all linguists of my generation I owe a pervasive debt to Bloomfield and Sapir, without whose work this book and all of American linguistics would be impossible.

A. A. H.

Austin, Texas
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1.... WHAT IS LANGUAGE?

1. Some basic assumptions

The subject of linguistics presents an initial difficulty because the word which designates it is unfamiliar. The word can easily be defined as the scientific analysis of language, but it is doubtful if such a definition is meaningful to anyone who lacks familiarity with this kind of analytic activity. It is far better to begin by defining language, since language is closer to the reader's experience. Yet even the definition of language presents unsuspected difficulties and needs preliminary discussion before it is attempted directly.

If a group of educated speakers are asked to define the language they are using, the reply will probably be "All the words and sentences used to express our thoughts." The definition is satisfactory in everyday situations, since long practice has made plain what is meant, and consequently most hearers know how to respond accurately. But for all that, the definition is not sufficiently accurate to be the basis for analysis. Terms like "words and sentences," which seem transparent to a speaker of a Western language, would be more misleading than enlightening if applied to some languages. Moreover, there are phenomena similar to language which this definition does not identify. Most important, the definition identifies language activity by thought. Language activity can be observed, and is therefore subject to verification. Thought can be observed only by subjective introspection, and so is not subject to verification. Language activity is therefore more knowable, thought less knowable. Obviously a definition must define the less knowable by the more knowable if it is to cast light. In what follows, such a definition will be attempted. There must first be a warning, the need for which will be clearer as we advance. A definition is not a description. A definition gives only those characteristics which have diagnostic value for recognition. A description attempts to give all characteristics, preferably in the order of their importance. A definition necessarily leaves out much and may make use of relatively trivial characteristics, but it is not to be condemned for that reason.

Most professional students of language proceed from a few assump-

tions, one of which is that the fundamental forms of language activity are the sequences of sounds made by human lips, tongues, and vocal cords—the phenomena usually distinguished by the narrower name of "speech." Though this first assumption may seem like a truism, it is important, since many who accept it verbally still act as if they did not believe it. Some few even deny it. There are only two reasons for questioning the assumption. Writing has great permanence and great prestige. Further, the basis of our education is training in the manipulation of written symbols of ever-increasing complexity. Highly literate people, and those who would like to be literate, are therefore apt to think of writing as the real center of language and of speech as peripheral and derived—often badly—from the written forms.

There are a number of facts which should settle this question of priority. First, speech reaches back to the origins of human society; writing has a history of only about seven thousand years.[1] Also, no contemporary community of men is without language, even though it is probably still true that most of the world's several thousand language communities remain in the preliterate stage, without benefit of alphabet or even picture symbol. Individual members of literate communities, furthermore, learn their language some years before they learn to read or write it; and adults, even adults who are professional writers, carry on a good deal more speech activity in daily living than activity involving writing. The final fact is that all writing systems are essentially representations of the forms of speech, rather than representations of ideas or objects in the nonlinguistic world. There are exceptions to this statement, like the Arabic numbers which work independently of the words for numbers in the Western languages. The exceptions, however, are in a minority disproportionate to the majority of symbols which always indicate the forms of language. The point can be driven home by a pair of simple examples. The symbol for *one* in Japanese writing is a single stroke, that for

[1] The great antiquity of language, as compared with writing, is a reasonable assumption, but it is often presented without evidence. To arrive at the conclusion that language is older than writing, linguists and anthropologists start from the observed fact that in modern communities, all organized cooperative activity rests firmly and necessarily on language as the means of controlling and directing interaction. This being so in all observed communities, it is assumed by archaeological anthropologists that when remains of past communities show material evidence of social organization, these remains are those of communities which possessed language. Communities which show such evidences of social organization also show artifacts or other evidences which are much older than the remains of any communities which show evidences of even primitive systems of writing. It is possible that early human communities possessed some other form of highly organized communication, such as the gesture language which has been occasionally proposed since the days of Locke (cf. Max Müller, *Lectures on the Science of Language*, London, 1862, p. 31). But though possible, such a nonvocal symbol system is unlikely. Language is now a universal activity; it is an extra and unnecessary hypothesis to suppose something else.

two two strokes, and so on. It might be thought that such a symbol has no relation to the Japanese word for *one* (*ichi*) but represents instead the nonlinguistic idea of "oneness." Actually the occurrence of the single stroke is correlated with the occurrence of the word. It occurs not only in the number but also in such forms as *ichiji, primary*. The Japanese symbol, therefore, has a quite different range from the letter sequence *one* of English, which is not used in the dissimilar word *primary*. The one-stroke symbol corresponds with the occurrence of the Japanese word *ichi*, proving that the one-stroke symbol is a representation of the word (though an understandably pictorial one), and not a direct representation of the idea of oneness.

Written symbols can be understood, furthermore, insofar as they fit into a linguistic structure, even when they refer to nothing in the nonlinguistic world. Thus, if an English text should have the sentence "He *sprashes* it," the second word could immediately be recognized as a verb in the third person singular and as a sequence of sounds quite in accord with English structural habits, though it represents nothing in the outside world at all. For the purposes of this book, therefore, the linguist's assumption that language is a set of sounds will be adopted. It is no contradiction of this assumption that the sounds can be secondarily translated into visual marks, grooves on a wax disk, electrical impulses, or finger movements.

Linguists assume that the description and analysis of language must begin with description of the sounds and their patterning and that description of meaning must be put off until the first task is done. Such an attitude is often misunderstood to be a denial of meaning, but this is not true. The linguist's desire to put off analysis of meaning is no more than an application of the principle of working from the more knowable to the less knowable, and though linguistics has not as yet had very striking results in semantic analysis, it can be hoped that the next few decades will see results of real value in semantics.

2. The defining characteristics of language

Working with the assumptions given above, linguists can offer a set of five defining characteristics which serve to set off language from other forms of symbolic behavior and to establish language as a purely human activity. Often animal communication will have one or more of these five characteristics, but never all of them.

First, language, as has been said, is a set of sounds. This is perhaps the least important characteristic, since the communication of mammals and birds is also a set of sounds. On the other hand, the system of communication

which is in some ways most strikingly like language, that of bees, is a set of body movements, not sounds. It would be easy, further, to imagine a language based on something else than sound, but no human language is so constructed. Even the manual language of the deaf is derived from the preexistent spoken language of the community.

Second, the connection between the sounds, or sequences of sounds, and objects of the outside world is arbitrary and unpredictable. That is to say, a visitor from Mars would be unable to predict that in London a given animal is connected with the sound sequence written *dog*, in Paris with the sequence *chien*, in Madrid with *perro*. The arbitrary quality of language symbols is not infrequently denied, for a number of reasons. Sometimes the denial is based on nothing more than the notion that the forms of one's native language are so inevitably right that they must be instinctive for all proper men. Sometimes the denial is more subtle. It is often maintained that all language, even though now largely arbitrary, must once have been a systematic imitation of objects by means of sound. It is true that there are some imitative words in all languages, but they are at best a limited part of the vocabulary. It is easy to imitate the noise of a barking dog, for instance, but difficult if not impossible to imitate a noiseless object, such as a rainbow. Though imitative words show similarity in many languages, absolute identity is rare. A dog goes "bow-wow" in English, but in related languages he often goes "wow-wow" or "bow-bow." The imitative words do not, after all, entirely escape from the general arbitrariness of language. The imitative origin of language appears, therefore, at worst unlikely and at best unprovable. The same injunction holds for theories of language origin which speculate that it is an imitation of facial or other gestures.

If it is assumed that language is arbitrary, what is meant by the statement? Just that the sounds of speech and their connection with entities of experience are passed on to all members of any community by older members of that community. Therefore, a human being cut off from contact with a speech community can never learn to talk as that community does, and cut off from all speech communities never learns to talk at all. In essence, to say that language is arbitrary is merely to say that it is social. This is perhaps the most important statement that can be made about language.

In contrast, much of animal communication is instinctive rather than social. That is to say, all cats mew and purr, and would do so even if they were cut off from all communication with other cats. On the other hand, some animal communication seems to share the social nature of human speech and is therefore learned activity. A striking example is the barking of dogs, which is characteristic only of the domesticated animal, not of dogs in the wild state. Similarly, the honey dances of bees may not be

altogether without an arbitrary element. It is also likely that when more is known of the cries and chatterings of the great apes in the wild state, a considerable social element in their communication may be found. Nor should it be thought that all human communication is social. A part of our communication consists of instinctive reactions which accompany language, like the trembling of fear or the suffusion of blood which accompanies anger. Yet even in the nonlinguistic accompaniments of speech, the tones of voice and the gestures, it is now clear that there is more of arbitrary and socially learned behavior than had at one time been supposed.

Third, language is systematic. I cannot hope to make this statement completely clear at this point, since the whole of this book is devoted to an exposition of the system of language. However, some observations may now be made about the system of language. As in any system, language entities are arranged in recurrent designs, so that if a part of the design is seen, predictions can be made about the whole of it, as a triangle can be drawn if one side and two angles are given. Suppose there is an incomplete sentence like "John —s Mary an —." A good deal about what must fill the two blanks is obvious. The first must be a verb, the second a noun. Furthermore, not all verbs will go in the first blank, since it requires a verb whose third person singular is spelled with *-s* and which can take two objects (that is, not such a verb as *look* or *see*). Nor will all nouns fit in the second place, since an initial vowel is required, and the noun must be one which takes an article. There is no difficulty in deciding that the sentence could be either "John gives Mary an apple" or "John hands Mary an aspirin," but not "John **gaves* Mary an **book*."[2]

Another observation that can be made about language systems is that every occurrence of language is a substitution frame. Any sentence is a series of entities, for each of which a whole group of other entities can be substituted without changing the frame. Thus the sentence "John gives Mary an apple" is such a substitution frame. For *John* there can be replacements like *he*, *Jack*, *William*, *the man*, *her husband*, or many others. For the verb, entities like *buys*, *takes*, *offers*, as well as the alternatives *hands* or *gives*, may be used. This characteristic of extensive substitutability for all parts of any language utterance is of some importance in that it enables us to say that parrots, no matter how startlingly human their utterances may be, are not carrying on language activity. A parakeet may produce the sentence "Birds can't talk!" with human pitch, voice tones, and nearly

[2] In this book, an asterisk placed before a form means that it is believed to be impossible. In historical treatments of language, on the other hand, an asterisk before a form indicates that it has been reconstructed by comparison but is not actually recorded. These two uses of the asterisk should not be confused.

perfect sounds. But the bird never says "Dogs can't talk!" or "Birds can't write!" His utterance is a unit, not a multiple substitution frame.

Still another characteristic of language systems is that the entities of language are grouped into classes, always simpler, more predictable, and more sharply separated than the infinite variety of objects in the world. For instance, a whole series of objects is grouped under the single word *chair*, and *chair* is put into the large class of nouns. In dealing with objects in the outside world it may be difficult to decide whether something is a chair, a stool, or merely a rock. In language, we think of nouns and verbs as quite separate and are apt to say that the one class represents things, the other events. But in the outside world, as the physicists tell us, it is often hard to decide whether an object is best described as thing or as event.

To return once more to the defining characteristics of language, the fourth characteristic is that it is a set of symbols. That is to say, language has meaning. In this form the statement is a platitude and does not distinguish language from other activities which are also symbolic. The nature of language symbols turns out to be rather different from the symbols of other types of communication. The simplest nonlinguistic symbol can be defined as a substitute stimulus. Pavlov's famous dogs, fed at the sound of a bell, eventually began to drool at the sound of the bell even when no food was present. The dogs were responding to a substitute stimulus. Nonlinguistic symbols can also be substitute responses, and these can also be taught to animals. A dog who learns to "speak" at the sight of food has learned such a substitute response. In human speech, however, one of the most striking facts is that we can talk about things which are not present, and we can talk about things which ordinarily produce a strong physical reaction without experiencing that reaction. For instance, I can talk about apples even though there are none in the room, and I can talk about them without always making my mouth water, even when I am hungry. This type of language, which occurs without an immediately present stimulus or response, is called "displaced speech," and it is obviously of great importance. It is what enables man to know something of the past and of the world beyond the limited range of his vision and hearing at a given moment.

The crucial fact in producing this almost miraculous and purely human effect seems to be that a given language entity can be both substitute stimulus and substitute response, and can also be a stimulus for further language responses or a response to other language stimuli. I can talk about apples when they are absent because "something reminds me of them." That is, I can make language responses to what is before me, and these language

responses can stimulate the further response *apple* without any direct physical stimulus to my vision, touch, or smell. *Apple* can call forth still further language entities, like *pear* or *banana*, in an endless chain; these entities are also both stimuli and responses. When human speakers do this, they are setting up what philosophers call a "universe of discourse." The ability to make connected discourse within the symbol system is what enables men to talk at length, and profitably, about things they have never seen. By means of language men make elaborate models of distant experience and eventually test their accuracy by acting upon them. All that is known of animal communication leads to the supposition that precisely what is absent from it is the kind of symbolic activity here described, symbolic activity connected not merely with experience but with all parts of the symbol system itself. We believe, in short, that animals are incapable of displaced speech.

The paragraphs above are rather general, so that a concrete example may be helpful. Let us suppose that two speakers of English are together in a room. One of them is cold. A direct response for him would be to close the window.

Instead of this he can use the substitute response, which is also substitute stimulus: "John, please close the window for me." John can either close the window or reply with a further substitute: "Just a minute. Wait until I finish this page." Such a reply may produce acceptance or may lead to a discussion of John's procrastinating character, of the fact that his parents did not discipline him properly in youth and that modern young people are generally rebellious and unmannerly. To all of this John may reply that modern times are marked by progress and the disappearance of old taboos. In the meantime the window may have been quietly closed, or completely forgotten in the warmth of discussion. What is important is that each speaker has begun reacting, not to the immediate situation, but to the other speaker's language and to his own. And in so doing, each has been building a model of general social conditions, of wide scope and ultimately of some value, even in a random and unchecked conversation of the sort described.

We are now ready to turn to the last defining characteristic of language, the fact that it is complete. By this is meant that whenever a human language has been accurately observed, it has been found to be so elaborated that its speakers can make a linguistic response to any experience they may undergo. This complex elaboration is such a regular characteristic of all languages, even those of the simplest societies, that linguists have long ago accepted it as a universal characteristic. Nevertheless, in early books about language, and in the descriptions by linguistically untrained travelers today,