THE SCIENCE OF LANGUAGE

AN INTRODUCTION TO LINGUISTICS

John P. Hughes
St. Peter's College
and
Columbia University

RANDOM HOUSE NEW YORK

PREFACE

A scholar who was a wit of sorts once said that the only justification for a scholarly book is the possibility of a second edition. He must have spoken from experience. If my experience is at all typical, anyone who has produced a "learned" work must, as he commits it to print, be painfully aware of its potential shortcomings: detailed explanations that may prove unnecessary, brevity where the reader may want more detail, and above all, a style that may be muddy where it had looked crystal-clear or dull where it had been considered interesting, or—worst of all—that turns out to be *too* readable, for then the book may be termed "slick" and never taken seriously.

I confess my own consciousness of all this, as well as of the fact that not much is said in these pages that has not been said before. However, this was done knowingly, and I trust that my readers, understanding my purpose, will judge the book by the criteria I used in writing it: *completeness* and *teachability*.

The aim of this work is to put into the reader's hands a single volume presenting the fundamentals of all the topics comprised by the science of linguistics. It seeks to be reliable, yet interesting; scholarly, yet not pedantic; readily intelligible, yet not a popularization. It is the outgrowth of more than twenty years of teaching, many of them devoted to linguistics. I trust that this experience is reflected in the organization of the material (which has proved effective with both undergraduate and graduate classes) and that instructors as well as students will find the book a helpful teaching aid.

In order to heighten teachability, important information is often repeated in different contexts and subjects are informally outlined at points preceding those in which they are fully treated. This has been done deliberately because I have found it effective in actual practice. Consequently, the text contains numerous cross-references and a very ample index to facilitate finding all mentions and discussions of a particular topic.

I want to thank Mr. Laurence Urdang and Mrs. Leonore Hauck of Random House for their unfailing patience and helpfulness; Dr. Arthur Abramson and the Haskins Laboratories for their kind co-operation in providing several of the illustrations; the Very Rev. James J. Shanahan, S.J., former President of St. Peter's College, for granting the sabbatical leave without which this book could not have been completed; and my wife, for her constant inspiration.

John P. Hughes

Ardnashee Farm
Ottsville, Pennsylvania

CONTENTS

PART ONE

Chapter *Page*

I. Fundamental Notions About Language 3
1. The definition of language, 4
2. The nature of "meaning," 8
3. Language and thought, 9
4. The nature of words, 14

II. Further Basic Linguistic Concepts 19
1. Native language and first language, 19
2. "Living" and "dead" languages, 21
3. Linguistic change, 22
4. Dialects and accents, 23
5. The origin of language, 30

III. A Brief History of the Study of Language, I: *The Pre-Scientific Period* 34
1. Ancient peoples; Hebrews, Hindus, Greeks and Romans, 34
2. The Middle Ages, the Renaissance, and the Eighteenth Century, 45

IV. A Brief History of the Study of language, II: *The Periods of Scientific Linguistics* 51
1. "Comparative Philology" (1786–1870), 51
2. The "Neogrammarians" (1870–1925), 59
3. The Structuralists (1925–1950), 63

V. The World's Languages: Europe and Asia 73
1. Geographical & genetic classification, 74
2. Typological basis of language classification, 76
3. Indo-European and its descendants, 81

4. Non-Indo-European languages of Europe and India, 87
Basque and non-IE languages of India, 89
Finno-Ugric and Altaic, 92
5. The Sino-Tibetan languages, 93
6. Japanese, 95
7. Other languages of Asia, 96

VI. THE WORLD'S LANGUAGES: AFRICA, THE PACIFIC, THE AMERICAS 101
1. The Semitic languages, 101
2. The "Hamitic" languages, 104
3. Central and southern African languages, 105
4. The Malayo-Polynesian languages, 107
5. Other languages of Asia and the Pacific, 108
6. The American Indian languages, 109

VII. LANGUAGES AND WRITING 116
1. Ideographic "writing," 116
2. Pictographic writing, 121
3. Syllabic writing, unlimited and limited, 123
4. Alphabetic writing, 125
5. The wanderings of the alphabet, 130
6. The "perfect" alphabet; the phonetic alphabet, 140

PART TWO

VIII. PREFACE TO THE SCIENTIFIC DESCRIPTION OF LANGUAGE 145
1. The concept of "utterance," 146
2. The parts of language, 147
3. Formant and morpheme, 149
4. Tools of analysis: commutation, 151
5. Message morphemes and structural morphemes, 152
6. Immediate constituents, 154

试读结束：需要全本请在线购买： www.ertongbook.co

IX. The Structure of Transferred Utterances 156
1. "Immediate" and "transferred" utterances, 156
2. Establishing basic structural patterns, 157
3. Structural word classes: "parts of speech," 161
4. Exocentric and endocentric structures, 163

X. The Structure of Immediate Utterances 169
1. Incomplete utterances, 169
2. The fractional nature of incomplete utterances, 170
3. Monomorphemic structures: imperative and vocative, 174
4. Quasi-imperatives and interjections, 176
5. The structure of questions and negatives, 177

XI. Complex Syntactic Structures 183
1. The sentence structure as a unit of higher forms, 183
2. Connective and substitution signals, 184
3. Infixation of one S in another, 186
4. The "reduced sentence" structure, 187
5. The structure of interruptions and exclamations, 189

XII. The Structure of Words (Morphology) 194
1. Why we have words, 195
2. The identity of the word, 196
3. Patterns of word structure: Compounds, 197
4. Derived words, 200
5. Root, stem and ending, 201
6. Inflections, "agreement," and correlative words, 203
7. The history of the word (etymology), 205

XIII. The Physical Element in Language (Phonetics) 210
1. Outline of the history of phonetics, 210
2. The two branches of phonetics, 211

3. A sketch of articulatory phonetics, 212
4. Outline of acoustic phonetics, 221
5. The nature of syllables, 229
6. "Prosodic" features, 233

XIV. THE ATOMS OF LANGUAGE (PHONEMICS) 239
1. The phoneme, 239
2. Identifying the phoneme, 242
3. Phonemic systems, 246
4. The dynamics of phonemic systems, 249
5. Juncture, 252

XV. FRONTIERS AND APPLICATIONS OF LINGUISTICS 258
1. Frontiers of linguistics, 259
2. Linguistics and the teaching of languages, 262
3. The language laboratory, 267
4. Other applications of linguistics, 270

APPENDIX A. A MODEL STATEMENT OF PHONOLOGY 277
APPENDIX B. A MODEL STATEMENT OF "GRAMMAR" 283
BIBLIOGRAPHY 285
INDEX 297

FIGURES AND ILLUSTRATIONS

1. Thought and word, 10
2. Word and meaning, 10
3. Content range among languages, 12
4. Thought, expression, and translation, 13
5. The scope of linguistics, 15
6. Medieval Italian dialect groups, 24
7. Isoglosses and dialect areas, 27
8. Development of the formula for describing a language, 42
9. Grimm's Law, 54
10. Indo-European reconstructions, 56
11. Typological classification, 78
12. Indo-European migrations, 84
13. Indo-European and its descendants, 85
14. Superimposition of Indo-European languages, 86
15. Inflecting and analytic structure, 88
16. Prehistoric cave drawing, 117
17. An Indian pictographic message, 118
18. Conventionalized symbols, 120
19. Semitic alphabets, 126
20. Egyptian alphabetic characters, 128
21. The Sanskrit alphabet, 131
22. Greek alphabets, 133
23. The Gothic alphabet, 135
24. The runic alphabet, 135
25. Slavic alphabets, 136
26. Latin uncial writing, 138
27. Old English handwriting, 139
28. The organs of speech, 213
29. Basic consonants, 216
30. The International Phonetic Alphabet, 219
31. Basic vowels, 220
32. The vowel triangle, 220
33. Sound as a wave motion, 222
34. Pitch and loudness, 222

35. Sound on film, 224
36a. Sound spectrograms: natural, 226
36b. Sound spectrograms: artificial, 227
37. The vowel triangle plotted acoustically, 228
38. Consonantal vowels and syllabic consonants, 231

THE SCIENCE OF LANGUAGE

试读结束：需要全本请在线购买： www.ertongbook.cc

PART ONE

Chapter I

Fundamental Notions About Language

Only the most absolutely vital things can be completely ignored. We are conscious when we walk or sit down; yet we could live for decades without doing either. A splinter in the finger may dominate a whole day. But breathing—if any of us went for as much as three minutes without breathing, he would be dead. Do we therefore spend a great deal of time noting and checking the condition of our breathing? We do not. As a matter of fact, we never so much as give breathing a thought. For it is the sort of thing we must either not think of at all, or think of all the time.

Language falls into this category. If not necessary to life, it is certainly necessary to *human* life. Civilization is certainly not possible without it. All sciences depend upon it; all education is conducted through it. It may be necessary for human thought—indeed, some hold that language *is* thought. The material result of all this is, of course, that (until recently, at least) nobody has thought about language. Also, everybody has thought himself an authority on all linguistic matters, which exemplifies another axiom: when there is not —or is not known to be—a formal science of a subject, everyone regards himself as entitled to an opinion, however ill-founded or irrational it might be. Where there are no scientists, there are no laymen.

But it is at last beginning to be generally realized that there *are* professional scholars who devote themselves to the study of what language is and of how it works, and that there *is* a science (albeit one of the younger sciences) concerned with these subjects: a science which has replaced many traditional old wives' tales with a body of experimentally established facts about this most vital of human activities,

and which has finally answered questions about it that for a thousand centuries had been asked without receiving serious, well-founded, or proven answers.

This science is beginning more and more frequently in more and more places to be mentioned—sometimes with respect, sometimes with hatred—under the name of "Linguistics."[1] For the workers in this new field no really satisfactory name has yet become current; *linguisticist,* which might seem logical, is not used, while *linguist,* which is widely used, also means merely a person who speaks several languages, whether he studies language scientifically or not.

This book is intended both as a first book for a person who wishes to begin the training necessary to becoming a professional linguist, and as an outline of the subject for the interested amateur who wishes to be better informed about it, but has no intention of entering the field. Fortunately, because of the nature of the science, it is possible to do justice to both classes of readers without slighting either. The subject matter of most sciences, if presented for a serious student, rapidly becomes distant from first-hand experience except for one who can spend many hours in the laboratory and has a thorough grasp of advanced mathematics, but the subject matter of linguistics is really just under everyone's nose (literally and figuratively), once one has been prompted to look.

Thus, to whichever category our reader belongs—be he learned dilettante or future professional linguist—his starting point will be the same. How, indeed, could one begin a science of language except with the question: What is language?

1. The definition of language

The definition of our subject is typical of many parts of it, for it seems like a simple, everyday thing, but upon closer inspection proves quite subtle. We all use the term "language," and feel that we have a clear idea of the sense in which we use it. But the difficulty of arriving at a clear and precise definition becomes apparent when you either collect and compare the definitions given in several dictionaries, or try to write one yourself.

Here are some dictionary definitions of language:

. . . any means of expressing thought. (Charles L. Meader in the *Encyclopedia Americana*)

. . . any means of communication between living beings. . . . In its developed form language is decidedly a human characteristic. (Otto Jespersen in *Encyclopædia Britannica*)

Audible, articulate human speech as produced by the action of the tongue and adjacent vocal organs. . . . The body of words and methods of combining words used and understood by a considerable community, especially when fixed and elaborated by long usage; a tongue. (*Webster's New International Dictionary*, 2nd ed.)

The reader will perhaps agree that none of these gives a really clear concept. But if we turn to the definitions of language offered by linguists, we still do not find the perfect definition, though perhaps we come a little closer. Here are two definitions of language by linguists:

. . . a purely human and non-instinctive method of communicating ideas, emotions and desires by means of a system of voluntarily produced symbols. (These symbols are . . . auditory and . . . produced by the . . . "organs of speech.") (Sapir, *Language*, 1921, Chapter I)

. . . the primary and most highly elaborated form of human symbolic activity. Its symbols are made up of sounds produced by the vocal apparatus, and they are arranged in classes and patterns which make up a complex and symmetrical structure. The entities of language are symbols, that is, they have meaning, but the connection between symbol and thing is arbitrary and socially controlled. The symbols of language are simultaneously substitute stimuli and substitute responses and can call forth further stimuli and responses, so that discourse becomes independent of an immediate physical stimulus. The entities and structure of language are always so elaborated as to give the speaker the possibility of making a linguistic response to any experience. (Archibald A. Hill, *Introduction to Linguistic Structures*, 1958, p. 9)

Having weighed—specifically or by implication—several definitions and found them unsatisfactory, it is obviously very poor strategy to come forward with a definition of one's own. Nevertheless, it must be attempted if no other can be adopted. Without undertaking any comparisons, therefore, we merely state that, throughout this book, the term *language* will be understood to mean:

A system of arbitrary vocal symbols by which thought is conveyed from one human being to another.

Please note carefully the elements of this definition:

Language is a *system*. This means that it is a sort of code or set of rules, and each item is what it is by virtue of its place in the system. This concept was expressed by the linguist De Saussure in the term *tout se tient* ("everything hangs together")[2] and has become a basic principle of modern linguistics, in contrast to an older, more atomistic approach[3] under which each linguistic phenomenon was studied in complete isolation. Many important implications follow from De Saussure's principle, as will be shown later.

Language is *arbitrary*. It will be shown in a number of connections (see especially Chapter III, 1) that there is no intrinsic necessity for any word to mean what it does, or for any language to have the structure it has. Certain sequences of sounds have certain meanings only by virtue of the agreement of a certain community, which can, under certain conditions, revoke its consent to established rules and set up new ones. Language is, in fact, always democratic, whatever the form of government under which its speakers live.

Language is *vocal;* that is, it is made up of the sounds which can be produced by the organs of speech[4] in human beings. By putting this term into the definition we arbitrarily rule out of our scope any kind of communication between nonhuman beings (e.g., animals). Now, the writer is a dog owner and dog lover, and will not yield to any of his readers in conviction that his own dogs apparently in some way "understand" certain words (or at least certain sounds within such words), and are able to communicate to him, with uniformity and efficiency, certain "ideas" of theirs. But in the long run the dispassionate observer must admit that the "language" in use between species of animals, or between animals and humans, is fundamentally different from what we refer to as the French or German "language." Let us by all means have as much research into animal "language"—

or that of bees—as can be undertaken; but to try to include this, or several other kinds of communication sometimes so called, in a theory of language would force us into extremely superficial and useless generalities. Usually, indeed, the term "language" is applied to these latter, not because the essence of language is recognized in them, but merely to draw an *analogy* with what is originally and properly called *language,* namely, human speech.

Language is *symbolism.* You have seen high-powered cars and trucks come to a screeching stop before a red light. The light has no power to stop them, whatever its color, nor to take any reprisals if they ignore it. But because the drivers recognize the light as a *symbol* of a policeman's command, they obey it—or rather the command which it symbolizes. A runaway horse, not appreciating this symbolism, would not stop. (Would he stop for a policeman? Possibly, in the sense that any man who seized his reins might stop him; but certainly not because the man is a policeman. For the policeman's uniform is a further symbol: it symbolizes the authority which the state has vested in him.) It is clear that symbolism is the philosophic foundation which makes language possible;[5] investigation along this line may do something toward clearing up that age-old riddle, the origin of language. It would seem evident that the power to symbolize and to appreciate symbols is a prerequisite to language, and that any species of beings lacking this power must develop it before they can develop language, properly so called.

Language is a *vehicle of thought.* The most important implication here is that thought is *something distinct from the language used to convey it.* You will find that this is taken for granted by a great many linguists, but denied by many psychologists, who operate on the assumption that both the thought and the word are ultimately the same thing—an electric voltage in the brain, a particular routing of nerve impulses, or some such phenomenon. If this latter view is correct, the acquisition of a new language might call for a whole new set of units and patterns of thought; thus each new language should be harder to learn.

Probably it is this philosophy which underlies the view, long prevalent in American schools, that learning another language is a difficult mental exercise, not to be imposed on youngsters until their minds are well developed—and then only on the exceptional student, lest

struggling with several languages preclude or limit mastery in any. Doubtless the psychologists can cite research studies tending to demonstrate this. Yet linguists will take their oath that, whatever learned studies may have been done, such hypotheses are contrary to the facts of their first-hand experience. Many are the linguists born in Europe who from earliest childhood spoke three to five languages, yet today speak English (learned, perhaps, as a sixth language) better than a majority of monolingual American college graduates—as the teachers of the latter would be first to admit. Consider, too, that a merchant sailor named Jozef Korzeniowski learned English well enough to write classic English fiction (under the name Joseph Conrad), and that Oscar Wilde learned French well enough to write a play in that language for Sarah Bernhardt[6]—without apparent detriment to his English style.

The last element of our definition merely reaffirms what has already been pointed out—namely, that we (arbitrarily, if you like) exclude all kinds of communication among animals or other nonhuman beings, as well as any communication among humans that does not employ *vocal* symbols, from the concept of "language" insofar as it is treated in this book.

2. The nature of "meaning"

We are now ready to explore some of the corollaries of the definition of language. First of all, it seems simple enough to equate what we have described as the *thought,* which is distinct from but expressed (or symbolized) by language, and the term "meaning," which is frequently used but not very exact.

What is "meaning"? With very strict observation, you will find that in practice we use the term in two principal ways: If someone asks me "the meaning" of a word in another language, I give him a word in his language which (in my judgment) expresses "the same thing" as that word. If he asks me "the meaning" of an English word, I give him another word or combination of words in English which says "the same thing."

Observe that we never, therefore, know "the meaning" (whatever it may be) directly, but only *through* a symbol—a word or linguistic expression. Hence, I have no way of knowing your meaning except

试读结束：需要全本请在线购买： www.ertongbook.cc