
Preface

It often takes only a greeting or a short sentence for us to recognize the voice of somebody we know, even through the distortion of a telephone. In fact, people's speech may be as individual and particular as their thumbprints. The voice may be high pitched, lilting, with certain consonants pronounced intensely, perhaps some vowels softened. A person's speech may be described in impressionistic terms, but it contains many cues to indicate where the speaker comes from, what his or her class origins are, and even whether it is Aunt Agatha, Uncle Sam, or the neighborhood butcher. This kind of telltale variation arises as a matter of chance and individual circumstance; a person speaks like a high-pitched New Yorker if he happens to have a high-pitched voice, to have been brought up in New York, and to have retained the essential features of the relevant accent. If things had been different, the same person might have grown up speaking some version or dialect of British English or Japanese. The possibilities are endless. This is the language lottery.

Variation and individuality enable us to know who is at the other end of the telephone line, but for some purposes variation is irrelevant and is actually ignored. We each have our own speech styles, but they meet several strict and invariant requirements. Those requirements enable us to circumvent the variation, to understand each other, and as young children to master our mother tongue when exposed to a bewildering range of expressions and styles. After all, even thumbprints and lotteries conform to certain rules.

The basic specifications for language, which enable us to learn to speak, are genetically given; they are part of human biology, part of what it means to be a human being. Therefore, we speak the way we do not entirely because we happen, say, to have a high-pitched voice and

to have been brought up in New York but also because we are human beings with the usual kind of human genetic equipment. This genetic equipment entails that our speech must fit a certain pattern or template. This is a central tenet of generative grammar, the research program I shall describe in this book. The goal is to find out in some detail what these genetic specifications are.

The central question addressed by this program is: how do children master their native language in the way that they do? Eventually they come to be able to speak and understand speech effortlessly, instantaneously, and subconsciously. How does this happen? Children are exposed to linguistic experiences that involve many styles, moods, variable pronunciations, interruptions, incomplete expressions, and the like. Yet the fact is that language develops in them easily, naturally, and spontaneously, as is obvious to any parent. The problem is that nobody knows quite how this happens.

Be warned: this book is not an introduction to linguistics, nor a survey of a discipline. Many linguists take quite a different tack when they study language. They may be interested in how language may be used by poets, how it is used as a social weapon, how a language can be taught to a foreigner. Linguistics encompasses these interests and many more. This book is much narrower in scope and pursues only the question, what is the genetic, internally prescribed basis of language structure?

I have aimed at giving a taste of one particular research program, showing how it can profit from several kinds of data. The bulk of the data has to do with the description of normal language capacities, but I shall also draw on data about the way that languages change from generation to generation, how children develop language as they grow older, how language may be distorted in the event of brain damage, how sentences are analyzed and processed, how language might have evolved in the species. So one central question, but many kinds of data. I have not pursued analyses in as much depth as one finds in monographs but I have explored a few principles from several points of view; the same principles help to provide explanations even where different kinds of data are involved. By showing how a few principles are interrelated and have a wide range of explanatory power, I hope to have conveyed something of the breadth and coherence of the program.

Throughout the book I lay much stress on the relation between my central goal, to explain how children master their native language, and

the kinds of technical analyses linguists offer, the kinds of strategies they adopt, and the way in which linguists try to revise and improve hypotheses. The relation between the central goal and the analyses offered is often obscured and forgotten in the professional journals, with the result that there is much confusion and misunderstanding. By never letting the reader forget the central goal of this program and by relating it to the specific analyses, I hope that this little book may be helpful to some linguists, whether or not they pursue the particular goal of generative grammar.

The subtitle “Toward a biology of grammars” should put the book on the biology and linguistics shelves in libraries and bookstores. Linguists, biologists, and people in related fields like ethology, psychology, anthropology, and philosophy make up the audience that I have had in mind. By *linguists* I mean people who think about language, regardless of where they happen to be employed and regardless of which goal they pursue when they spin up their own theories (if they do that kind of thing). I have tried to presuppose only minimal thinking about language, of the kind that most people do at school when learning how to parse sentences, but I have introduced some technical flourishes in order to avoid debasing the ideas I am describing and in order to lend a hand to the reader who wishes to go beyond general concerns and into areas of current debate. Since my intended audience is so heterogeneous, different people will skim over different sections, finding some chapters more accessible and interesting than others. Some may be more interested in specific analytical techniques, others in the treatment of meaning, others in more broadly philosophical questions, others in getting a general impression of how to make sense of language from some scientific point of view.

While I am trying to reach a heterogeneous group of people, a much smaller group has been looking over my shoulder. These are the linguists actively engaged in the work that I describe here. I have tried to describe their work accurately and faithfully, because its importance goes beyond passing fashion. But their natural habitat is the professional journal, and I have revamped some of their ideas in the interests, as I see them, of the nonspecialist audience that I want to reach. I have stolen from my colleagues shamelessly and I have not peppered the book with references and descriptions of subtle differences between alternative proposals; I leave that to the textbooks and monographs.

Foremost of the people looking over my shoulder has been Noam Chomsky. He did much of the pioneering work in orienting linguistic

research toward the issue of language acquisition by the child and in construing it in a biological context. He has also dominated its development over the last thirty years, advancing countless technical analyses, debating alternative approaches at many different levels, addressing wider philosophical issues. His work has occupied center stage, and he has helped to shape the work of many others by discussing manuscripts tirelessly and writing innumerable letters. Without his work this program would look very different. My debt to Chomsky is enormous and, if he saw ideas as pieces of personal property, he above all could complain about being robbed in this book. Instead, he read an early draft and gave me much help in making it into a better book.

Sari Hornstein has devoted many hours to protecting the interests of readers with no linguistic training, filtering out pieces of jargon and catching assumptions that might not be entirely evident to nondevotees. Harry Bracken, Peter Coopmans, Hans Gilijamse, Norbert Hornstein, Alex Kacelnik, and John Marshall also read an early draft and gave me useful advice from their different perspectives.

Now let's get our bearings and first ask something nice and easy: what do we know about the nature of life?