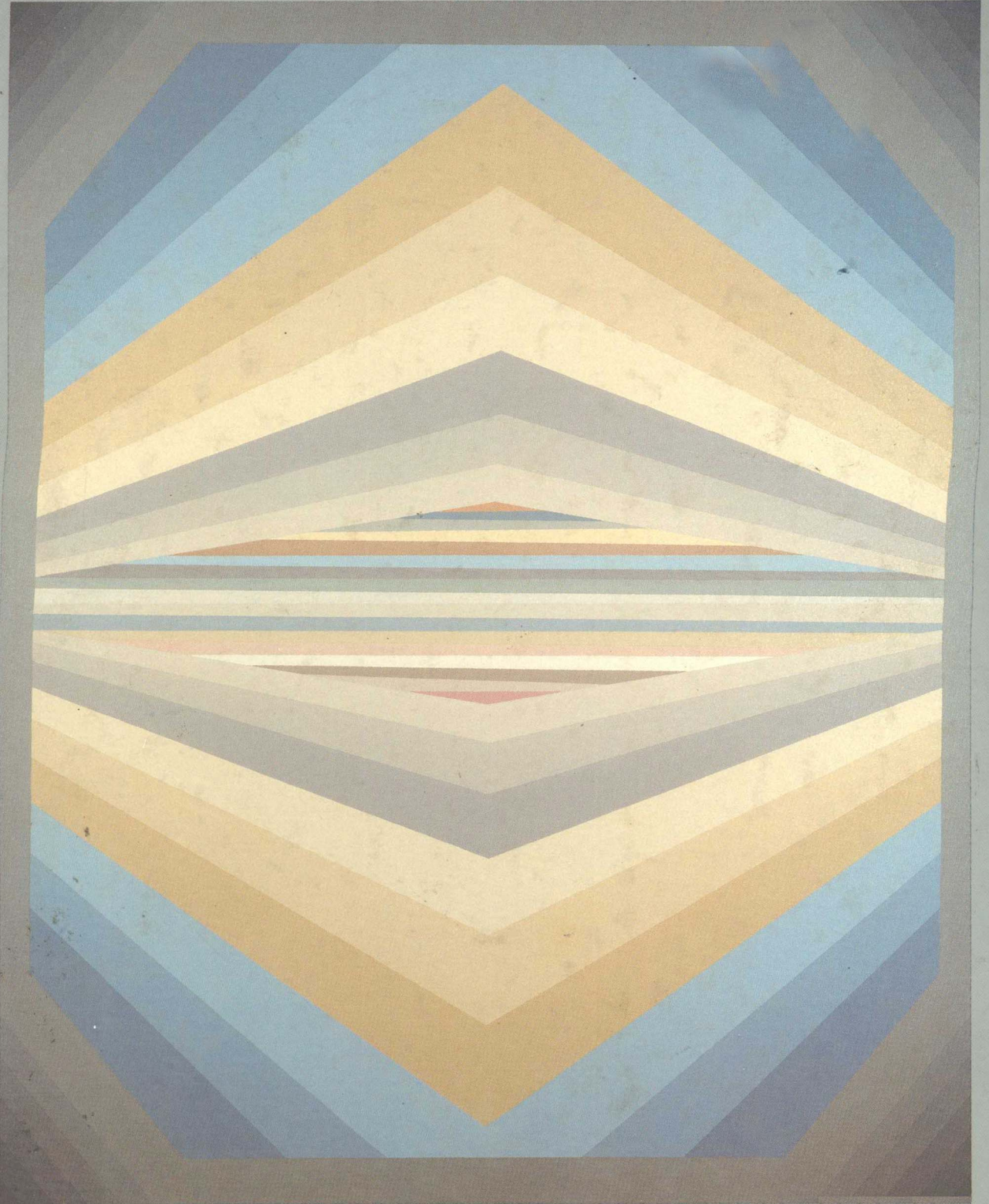# The Development of Language

Jean Berko Gleason

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Edited by
Jean Berko Gleason
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To my daughters and husband—Katherine, Pam, Cynthia, and Andrew—and to the memory of my brother Martin

Preface

This book is intended as a text for upper-level undergraduate or graduate courses in language development, or for use in conjunction with the study of psycholinguistics, cognitive development, developmental psychology, speech pathology, and related topics. No previous study of linguistics on the part of the reader is assumed, and each chapter presents its material along with whatever linguistic background information is necessary to make it accessible.

Until recently, most books on language development have been concerned only with language acquisition by children and have tended to assume that development is complete when the most complex syntactic structures have been attained. We now know that linguistic development, like psychological development, is a lifelong process, so we have set out to illuminate the nature of language development over the life-span. Since development is always the result of an interaction between an organism's innate capacities and environmental events, we take an interactive perspective, one that considers both the innate mechanisms that subserve language and the environmental factors that foster development.

The study of language development has grown so rapidly in the past decade that there are now many specialty areas with their own considerable literature. Fortunately, a number of researchers specializing in the major subfields of this growing discipline have agreed to contribute chapters to this text; the chapters, therefore, are written by authors who not only know their topic well, but are known for their research in it. They present what they consider to be the salient ideas and the most recent and relevant studies in their own areas.

So many different topics are now recognized in the study of language development that it is impossible to include them all in one text that students might be expected to assimilate during the course of a semester or a quarter. We have had to be selective in our choice of major topics and have not attempted to include cross-cultural and bilingual studies that rely on knowledge of several languages. Rather, we have concentrated on topics central to our growing understanding of the processes underlying development.

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Studying Language Development

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INTRODUCTION

Would children invent language by themselves if they never heard it? Is language development in humans unique, or can it be taught to higher primates? Do both linguistic and cognitive development arise from the same intellectual foundation, or are they separate capacities? Are there theories or models that can adequately account for language development? What is it that individuals actually must know in order to have full adult competence in language, and to what extent is the development of linguistic skills representative of universal processes? What about individual differences? What happens to language skills as one grows older—what is acquired, and what is lost? These are some of the questions that intrigue language development researchers and that lie behind the plan of this book.

Young children acquire the major components of their native language in a short time. By the time they are of school age and begin the formal study of grammar, they already know how to vary their speech to suit the social and communicative nature of a situation, they know the meaning and pronunciation of literally thousands of words, and they use quite correctly the grammatical forms—subjects, objects, verbs, plurals, tenses—whose names they learn only in the late elementary years. Language

development, however, does not cease when the individual reaches school age or adolescence or maturity, for that matter. The development process continues throughout the life cycle. The persistent reorganization and reintegration of mental processes that is typical of other intellectual functions can be seen also in language as the changing conditions that accompany maturity lead to the modification of linguistic capacity. This book, therefore, is written from a developmental perspective that encompasses the life-span. Since most investigations of language development have centered on children, this preponderance is reflected in the research reported here. The major questions addressed, however, are not limited to what can be learned from the study of children and, in fact, require the study of mature individuals as well.

This chapter is divided into four major sections. The first provides a brief overview of the *course of language development*, from early infancy to old age. The topics mentioned are treated at length in later chapters of the book. Even though development is described in rather universal terms, there is emphasis on individual differences. The second section presents the unique *biological foundations* for language that make its development possible in humans. The biological factors are necessary, but they are not sufficient to ensure language development, which does not occur without social interaction. The third section describes the major *linguistic systems* that individuals must acquire. No particular linguistic theory is espoused here; instead, descriptive techniques are used that have provided the framework for much basic research in language acquisition. If there is a bias, it is the belief that individuals acquire during their lives an internalized representation of language that is systematic in nature and amenable to study. This does not imply that inner representation evolves in the absence of social contact or without several different types of learning, as discussed in chapter 6 on theories. The final section of this chapter focuses on the *study of language development*: its background and methods.

THE COURSE OF LANGUAGE DEVELOPMENT

Language in Infancy

Human beings begin to acquire language during their first months, long before they say their first words. They pay attention to adult faces and are responsive to the language spoken to them; they take their turn in conversation, even if the turn is only a burble (Snow, 1977; Lieven, 1978). In addition to possessing the social motivations for communication that are evidenced so early in life, there are now data that show that infants are also physiologically equipped to process incoming speech signals. They are capable of, among other things, making fine distinctions among speech sounds, including sounds that are both rare in the world's languages and previously unknown to them (Eimas, 1975; Trehub, 1976).

Midway through their first year, infants begin to babble, to play with sound much as they play with their fingers and toes. While there is considerable controversy over the relation between babbling and later speech (Jakobson, 1968; Oller & Eilers, 1982; de Boysson-Bardies, 1981), most researchers now believe that babbling and early speech are continuous phenomena. At approximately the same time they take their first steps, many infants produce their first words. Like walking, early language appears at around the same age and in much the same way all over the world, irrespective of the degree of sophistication of the society. The relative ease of pronunciation of a language and its degree of grammatical complexity do not appear to affect the age at which children begin to speak (Lenneberg, 1967). The early precursors of language that are evidenced during the first year of life are discussed in chapter 2, "Prelinguistic Development."

Once toddlers have begun to say a few words, the course of language development appears to have some universal characteristics (Brown, 1973). The early utterances are only one word long; the words are simple in pronunciation and concrete in meaning (Stoel-Gammon & Cooper, 1984). They refer to the objects, events, and people in the child's immediate surroundings—words like "hi" and "doggie" and "mommy" and "juice" (Bloom, 1970; Nelson, 1973; Carey, 1982; Clark, 1973). Chapter 3, "Phonological Development," provides a framework for the study of children's growing ability to recognize and produce the sounds of their language. Here, as in other areas of linguistic research, it is important to recognize that different constraints act upon the child's comprehension and production of a particular form. The ways in which individuals relate words to their referents and to their meanings is the subject matter of semantic development. Investigations of children's first words and their meanings, as well as the ways in which early meaning systems become elaborated into complex semantic networks, are discussed in chapter 4, "Gaining Meaning."

The Preschool Years

Sometime during their second year, after they know about fifty words, most children progress to a stage of two-word combinations (Brown, 1973). Words that they said in the one-word stage are now combined into these short utterances, without articles, prepositions, inflections, or any of the other grammatical modifications adult language requires. The child can now say such things as "That doggie," meaning "That is a doggie," and "Mommy juice," meaning "Mommy's juice" or "Mommy, give me my juice" or "Mommy is drinking her juice."

An examination of children's two-word utterances in many different language communities (Brown, 1973; Slobin, 1979) has shown that everywhere in the world children at this age are expressing the same kinds of thoughts and intentions in the same kinds of utterances. They ask for more

of something. They say no to something. They notice something, or they notice that it has disappeared. This leads them to produce utterances like "More milk!" "No liver!" "Hi, kitty!" "All-gone cookie."

A little later in the two-word stage, another dozen or so kinds of meanings appear. For instance, children may name an actor and a verb: "Daddy eat." They modify a noun: "Bad doggie." They specify a location: "Kitty table." They name a verb and an object, leaving out the subject: "Eat lunch." At this stage children are expressing these basic meanings; but they cannot use the language forms that indicate number, gender, and tense. Even in a highly inflected language, such as Hebrew, in which it would be impossible to speak the root word without some of these markers, children settle on one form, which they use indiscriminately: girls, for instance, frequently use the feminine form of words, regardless of the grammatical requirements (Dromi & Berman, 1982). Toddler language is in the here-and-now; there is no tomorrow and no yesterday in language at the two-word stage. What children can say is closely related to their level of cognitive and social development, and a child who cannot conceive of the past is unlikely to speak of it.

As the child's utterances grow longer, grammatical forms begin to appear. In English, articles, prepositions, and inflections representing number, person, and tense begin to be heard. Although the two-word stage has some universal characteristics across all languages, what is acquired depends on the features of the language being learned. English-speaking children learn the articles *a* and *the*, but in a language such as Russian there are no articles. Russian grammar, on the other hand, has features that English does not, such as different past tense endings depending on whether the verb's subject is male or female.

One remarkable finding has been that children acquiring a given language do so in essentially the same order. In English, for instance, children learn *in* and *on* before other prepositions such as *under*, and they learn the progressive form with *-ing* before other verb endings such as the *-ed* of the past. After they learn regular plurals and pasts like *horses* and *skated*, they create some regularized forms of their own, like *mouses* and *eated*.

Researchers have varying ways to account for children's early utterances, however. The work of the sixties, inspired by new grammatical theory (Chomsky, 1957, 1965), interpreted early word combinations as evidence that the child was learning syntax and developing a grammatical system. More recently, the child's intentions and attempts to attain certain pragmatic goals in the world have dominated the research. The learning of morphological systems, such as the plural or past tense (Berko, 1958), remains some of the strongest evidence we have that children are not simply learning bits and pieces of the adult linguistic system but are constructing productive and cohesive systems of their own. Early sentences and the acquisition of morphology are examined in chapter 5, "Putting Words Together."

The School Years

All of this takes place in a remarkably short time. By the time they get to kindergarten, children have amassed a vocabulary of perhaps 8,000 words and almost all of the basic grammatical forms of the language. They can handle questions, negative statements, dependent clauses, compound sentences, and a great variety of other constructions. They have also learned much more than vocabulary and grammar: they have learned to use language in many different social situations. They can, for instance, talk baby talk to babies, tell jokes and riddles, be rude to their friends and somewhat polite to their parents.

During the school years children are faced with the major task of learning another linguistic system—the written language. This would be almost impossible if they did not already possess spoken language. Learning to read at a high level poses a particular problem for deaf children: imagine trying to learn to read Hungarian without having any idea of what it sounded like. Study of the cognitive processes involved in reading and the development of adequate models that represent the acquisition of this skill are two topics that actively involve researchers in developmental psycholinguistics.

School and, in particular, the demands of literacy, remove a child's language from the here-and-now and emphasize those characteristics of displacement that many researchers consider the hallmark of uniquely human language. Literacy requires decontextualized language use: "An example of decontextualized language in the purely oral mode is giving metalinguistic judgments; for example, judging sentences as grammatical or ungrammatical, identifying ambiguity, and giving definitions" (Snow, 1983, p. 183). Language development during the school years is discussed in chapter 7, "From Oral to Written Language." This chapter includes as well a discussion of children's growing ability to use language to convey information to others, to regulate their social relationships, and to create jokes, riddles, and poems.

Later Development

Language development, like human development in its other manifestations, continues beyond the point where the individual has assumed the outward appearance of an adult. The teen years may mark a crucial developmental watershed in the individual's ability to learn a first language. While studies of language development in young children have emphasized the ease and rapidity with which it occurs, a quite contrary situation prevails if for some reason language has not been heard or learned during those early years. Evidence obtained from the study of both feral and neglected children

suggests that there may be a sensitive age for first language acquisition (Lane, 1979; Curtiss, 1977).

Assuming they have language, teenagers add their own special style, and part of being a successful teenager lies in knowing how to talk like one. Language is also involved in psychological development: the psychiatrist Erik Erikson (1959) has pointed out that one of the major life tasks facing young people is the formation of an identity, a sense of who they are. A distinct personal linguistic style is part of one's special identity. Further psychological goals of early adulthood that call for expanded linguistic skills include beginning an occupation and establishing intimate relations with others.

Language development during the adult years varies greatly among individuals, depending on such things as their level of education and their social and occupational roles. Actors, for instance, must learn not only to be heard by large audiences, but to speak the words of others using varying voices and regional dialects. Working people learn the special tones of voice and terminology associated with their own *occupational register* or *code*. The register used by drill sergeants in the army, for instance, contrasts sharply with the occupational register of ballet masters, even though both include many directions for what to do with one's body.

With advancing age numerous linguistic changes take place: some diminution of word finding ability is inevitable. The inability to produce a name that is "on the tip of the tongue" is a phenomenon that becomes increasingly familiar as one approaches retirement age, for instance. But not all changes are for the worse: vocabulary increases, as does narrative skill—in preliterate societies, for instance, storytellers are typically older members of the community. Although most individuals remain linguistically vigorous in their later years, language deterioration becomes severe for some, and they may lose both comprehension and voluntary speech. The last words available for them may be as limited as those of young children. Language development in adulthood and old age is described in chapter 8, "Language Through the Life-Span."

Even though this brief overview has emphasized the regularities and continuities that have been observed in the development of language, it is important to know that individual differences have been found in almost every aspect. In this book individual differences are the topic of a separate chapter. A discussion and an evaluation of the theories that have been put forth to explain language development are also included in a separate chapter. Finally, it must be noted that language development does not take place solely in the service of individual cognition: language serves social functions, and individuals learn important variations in language that serve to mark their sex, regional origin, social class, and occupation. Other necessary variations are associated with such things as the social setting, the topic of discourse, and characteristics of the person being addressed. "Language in Society" is the title of our last chapter.