Studies of Child Language Development

Edited by
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and Dan Isaac Slobin

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STUDIES OF CHILD LANGUAGE DEVELOPMENT

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To the memory of the children of our times
who have been prevented from learning to
speak by bombs, bullets, gas, and napalm.

PREFACE

Adults have been interested in how children learn to speak since ancient times. In fact, the first recorded psycholinguistic experiment is reported by Herodotus, and dates back to about 600 B.C. At that time, the Egyptian king Psammetichus attempted to solve the problem of innate factors in language acquisition by having two children raised in a speechless environment. According to Herodotus, the children's first word was *bekos*, the Phrygian word for 'bread,' and accordingly the Egyptians conceded to the Phrygians in antiquity of ancestry. Modern theorists, however, lacking such unequivocal evidence, keep the ancient debate alive. It has been our intention, in preparing this collection of readings, to provide the reader with a compendium of the sorts of empirical evidence available today on the child's acquisition of language. The readings have, accordingly, been selected on the basis of the data which they provide. We have explicitly avoided

papers which are primarily theoretical in content. The data available to us are suggestive—by no means as conclusive as the data of King Psammetichus. We hope that many readers will be stimulated by the reports of these findings to develop their own theoretical notions and to go on to enrich the data base for further theorizing.

The first serious investigators of child language were parents, listening to the miracle of language development in their own homes, and we present some of the classic accounts of those observant parents in this volume. Other investigators have developed controlled means of elicitation and observation, and some of their studies are also included here. A number of the studies appear here for the first time in English. An understanding of the universal and particular aspects of language acquisition requires comparative data from many languages. Investigators at Berkeley, Stanford, Harvard, and elsewhere have begun to apply modern techniques of study to children in a variety of cultures (see Slobin, 1967, and references in this volume). We are beginning to read dissertations on the acquisition of such disparate languages as Samoan (Kernan), Tzeltal (Stross), Japanese (Sanches), Arabic (Omar), Luo (Blount), Finnish (Bowerman, Argoff), Serbo-Croatian (Radulović), Hungarian (MacWhinney), German (Roeper), and, of course, English. Thus the narrow range of languages reflected in the studies printed here (12 languages from four major language families) is being considerably expanded. (Studies of the acquisition of 40 different native languages, belonging to 14 major language families, are listed on page 177; and studies of at least 13 additional languages are currently in progress.)

The reader who wishes to explore the theoretical issues underlying the study of child language is referred to a volume edited by Slobin, *The ontogenesis of grammar* (1971b). There he can find the range of heated debate on questions of nativism and empiricism in the child's development of language, in a symposium including Martin Braine, Susan Ervin-Tripp, David McNeill, David Palermo, I. M. Schlesinger, Dan I. Slobin, and Arthur Staats. Important theoretical issues are also raised in

papers published in two recent conference volumes, *Cognition and the development of language* (Hayes, 1970) and *Advances in psycholinguistics* (d'Arcais and Levelt, 1970). Recent reviews of the field also serve to guide the interested reader through the theoretical thickets (see Braine, 1971b; Ervin-Tripp, forthcoming; McNeill, 1970; Menyuk, 1971). Roger Brown's *A first language* (in press) explores the early stages of language development in depth. Slobin's *Psycholinguistics* (1971c) may help orient the beginning reader to the general context of theory and research in psycholinguistics.

A full bibliography of writing on child language, from the years 1250 to 1967, can be found in Slobin's revised and augmented edition of *Leopold's bibliography of child language* (1972). Continuing coverage of the field is now available in the quarterly *Language and Language Behavior Abstracts*. We have provided editorial comments at numerous places throughout the volume, and the bibliographical references to all of these comments are gathered together in a single bibliography at the end of the book.

In editing this volume we have not tried to be completely up-to-date in theory or comprehensive in bibliography. Nor have we limited ourselves to the reprinting of only careful studies with "clean data." Rather, we hope to have selected papers which present *provocative* data, even if scanty. We have been aided by many good colleagues and friends in our selection—among them, David McNeill, Susan Ervin-Tripp, Martin Braine, and numerous others. We owe special thanks to Carolyn Wardrip for bibliographic assistance, to Caroline Stoel and Elinor Yeates, who worked long and hard on the technical aspects of the volume, and to our translators. If this volume stimulates the reader to improve upon the understanding of child language development presented here, it will have served its purpose.

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University of California, Berkeley — D. I. S.
September 1972

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PHONOLOGY

In the course of acquiring full competence in his native language, the child must acquire a competence in its sound system: he must become able to hear and produce sounds in the way the fully competent users of the language hear and produce them. This phonological competence includes at least five different but interrelated matters.

1. Obviously the child must learn to use the distinctive sound differences of his language. The speaker of English, for example, is able to use the difference between *Tom* and *Tim*. If someone asks *Who's coming tonight?* and one of these names is the answer, he is able to hear in terms of the difference and make the correct identification even in the absence of any other contextual clue, and he is able to produce the difference so that other speakers can hear it correctly. The particular ranges of sound and the differences between them differ from language to language and must be acquired. Sound segments or "phonemes" like the /t/, /i/, and /m/ of *Tim* represent the opposing terms of the sound differences or "oppositions" used in a language: *Tom* ≠ *Tim* ≠ *Kim* ≠ *Kip*. Every language has its own system of phonemes and oppositions for the child to acquire (see Gleason, 1961, pp. 257–270).

2. Every phoneme may be viewed as a simultaneous bundle of phonetic characteristics, "distinctive features," and it is clear that the speaker of English is able in some sense to use these features directly as such in the language. For example, some sounds are unvoiced and others voiced, differing by the absence or presence of the feature of voicing; thus /s/ and /f/ are [−vce] and /z/ and /v/ are [+vce], and the speaker of English makes direct use of this in pronouncing *house*, the noun, with /s/ but *house*, the verb, with /z/, and similarly *grief*:

grieve and all the other instances where English makes a noun into a verb by adding the feature of voicing. Some distinctive features like the [±vce] of English occur in other languages in quite similar forms, and new attempts are being made to arrive at a universal framework of phonetic features (for example, see Chomsky and Halle, 1968, pp. 293–329), but every language has its own arrangements and its own uses of distinctive features for the child to acquire (see Jakobson and Halle, 1956, pp. 20–36).

3. Strings of phonemes are pronounced and heard in different patterns of prominence; that is, some sequences are louder than others or change in pitch or differ in other special ways, and the speaker of a language is able to use this "prosodic" or "accentual" machinery in the way his language requires. In English, syllables are pronounced with different degrees of stress, and this variation is important in the grammar of the language; thus the speaker of English in using words with the suffix *-tion* always produces and expects to hear the highest stress on the syllable immediately before the *-tion*, regardless of where the highest stress is on the simple word from which the suffixed one is derived (for example, prevént : prevéntion, demólish : demolítion, élevate: elevátion). Every language has its own prosodic system for the child to acquire. (See Kingdon, 1958, for English; Hockett, 1955, pp. 65–72, attempted a survey of the possibilities in general.)

4. Some strings of phonemes are more "pronounceable" than others in a language; that is, some combinations of sounds are more likely to occur in actual words in the language and are easier for the speakers to hear and reproduce in newly coined words or foreign words. In English, consonant combinations like /st/ or /pl/ are more pronounceable at the beginning of words than one like /ft/ or /ml/. There are many English words like *stack*, *stain*, *sty* or *plaque*, *plain*, *ply*, but only very rare or marginal words would begin with /ft/ or /ml/. The inventor of a name for a new product or a new technical concept might possibly invent a word like *stike* or *plang* but hardly *ftack* or *mlish*. Some preferences are widespread among languages, some even universal, but every language has its own patterns of restrictions on pronounceability which the child must acquire (see Scholes, 1966).

5. Sentences may be said with different intonations in such a way that they have different meaning even though all the words are the same, and every sentence actually spoken has some kind of contour of the fundamental pitch and related phenomena as part of its total auditory content. In English a sentence like *What does he want?* may be said with a number of different intonation contours, and an adult speaker can readily distinguish, for example, a contour which simply asks for the information from one which means *Did you ask "What does he want?"*, the latter having a characteristic high pitch and final rise. Some features of intonation, voice quality, and the like, may be universal, and others may be so different in function from the sentence itself as to constitute a more or less autonomous channel of communication. But every language has its own system of sentence contours which the child has to