A Worldly Look at Language Acquisition

Dan Isaac Slobin (Ed.)
The Crosslinguistic Study of Language
Acquisition, Vol. 1: The Data; Vol. 2:
Theoretical Issues
Hillsdale, NJ: Erlbaum, 1985.
1,332 pp. ISBN 0-89859-367-0 (set).
$125.00 (Vol. 1); $65.00 (Vol. 2);
$160.00 (set)

Review by
Kenji Hakuta

Dan Isaac Slobin, professor of psychology at the University of California, Berkeley, is author of Psycholinguistics (2nd ed.). *Slobin is recipient of the New York Academy of Sciences Award in the Behavioral Sciences.* ■ *Kenji Hakuta, professor of education and psychology at the University of California, Santa Cruz, is author of* Mirror of Language: The Debate on Bilingualism.

To appreciate the nature of this contribution by Dan Slobin, we need to step back at least 20 years into the history of child language research, into the heady days of the 1960s. These were the days when the empiricist account of language

acquisition and behavior had been dealt a lethal blow in the form of Chomsky's (1959) classic review of Skinner's (1957) *Verbal Behavior*. Most significantly for the new generation of developmental psycholinguists, a revolution—very much in the sense of Thomas Kuhn—had occurred in the field of linguistics, resulting in a parallel new agenda for the study of child language.

The aspect of the new linguistic agenda that most tantalized the developmental psycholinguist was the centrality of the effort to account for the linguistic intuitions of idealized speaker-hearers of the language. Of particular relevance was the demonstration that an analysis of surface properties of language could not lead to insights about the more abstract properties of grammar found in intuitions (e.g., the fact that ambiguous sentences such as *The students are revolting* are assignable to two distinct structural assignments). If linguists could not derive such deep insights from the analysis of surface configurations, neither could children. How, then, do children come to have such linguistic competence? The logical step proposed by Chomsky, and followed by many developmental psycholinguists, was that structural knowledge about language was innate.

Another important facet of the new linguistic agenda was its promise to lead to the discovery of language universals. One important set of universals, called "formal universals" by Chomsky, referred to properties of grammatical rules and constraints that could be found across all human languages. If one were to propose a candidate as to what might constitute innate structural knowledge about languages, the set of language universals would constitute a prime candidate.

In those heady days, child language data were being combed for evidence for the innateness of language. Errors observed in children's language for which no adult model existed were noted and hailed as evidence for systematic rule formation, and abstract knowledge was imputed to children as part of their universal linguistic (and biologically based) endowment.

During at least one celebration of the linguistic capacity of children in this era, Slobin indicated a direction for theoretical development that he has pursued ever since. In commenting about McNeill's bold assertions about the structural contents of the child's innate language endowment, Slobin wrote:

It seems to me that the child is born not with a set of linguistic categories but with some sort of process mechanism—a set of procedures and inference rules, if you will—that he uses to process linguistic data. These mechanisms are such that, applying them to the input data, the child ends up with something which is a member of the class of human languages. The linguistic universals, then, are the *result* of an innate cognitive competence rather than the content of such a competence. (Smith & Miller, 1966, pp. 87–88)

This interest in finding out the child's set of procedures and inference rules led to his paper, "Cognitive Prerequisites for the Development of Grammar," in which he argued that the appearance of a particular linguistic form could be seen as a function of (a) the cognitive complexity of the concept represented therein, and (b) the formal linguistic complexity of the particular structure. The pacesetter for language development, he claimed, would be cognitive development, and within those boundaries, the grammatical means of expression would be important. In making this claim, Slobin took advantage of crosslinguistic information. By assuming that children of different language backgrounds develop cognitively at a uniform rate, universals in the appearance of the linguistic expression of given concepts across different languages could be attributed to the primacy of cognitive development. But within the broad constraints set by cognitive development, variations in the relative ease or difficulty in the acquisition of forms expressing a given concept could be attributed to the means of formal expression. Slobin hypothesized that any given structure would be influenced by the extent to which the form itself was consistent with the perceptual and information-processing biases of children. He induced a set of "operating principles" (OPs) that the language learning child appeared to have at his or her disposal, such as: PAY ATTENTION TO THE ENDS OF WORDS and PAY ATTENTION TO THE ORDER OF WORDS AND MORPHEMES. These OPs, in turn, are the inductive mechanisms used by the child in constructing grammar.

Ever since the appearance of this seminal article in which the strategic advantages of crosslinguistic comparison was demonstrated, Slobin's name has been practically synonymous with the crosslinguistic perspective on language acquisition. Now, he has really cornered the market, for these volumes will be a standard reference for years to come. The handbook elevates Slobin's method of crosslinguistic correlation to a new dimension, by systematizing the points of comparison and constructing an extremely informative and readable reference manual.

The bulk of the two volumes are taken up by syntheses of the literature on the acquisition of different languages. Eleven different languages are reviewed: English (by de Villiers and de Villiers); German (by Mills); Hebrew (by Berman); Hungarian (by MacWhinney); Japanese (by Clancy); Kaluli (by Schieffelin); Polish (by Smoczynska); Romance—with special reference to French (by Clark); Samoan (by Ochs); Turkish (by Aksu-Koc and Slobin); and American Sign Language (by Newport and Meier). The individual contributions are of extremely high quality (those by Clancy and by Newport and Meier, in my opinion, are exceptional), and each one merits a review in its own right. Indeed, the chapters are also published individually as monographs. Over the next several years, an additional two to three volumes are planned covering other languages.

Slobin indicates in his introduction that each of the authors was asked to approach his or her task with a common framework. They were to describe the language and the nature of the studies. This was to be followed by a description of the language acquisition data for the language with respect to the typical errors reported, the acquisition of structures that are apparently acquired without error, and the information on the timing of acquisition. The contributors were then asked to describe the setting of language acquisition: the evidence on the issue of the cognitive pacesetting of language development, the linguistic pacesetting of cognitive development, the influence of the nature of adult–child interaction on linguistic development, and the individual differences. Finally, contributors were asked to address various issues of theoretical significance and to make suggestions for further study. This schema for an organizational framework seems to have worked for most of the chapters. It would have been ideal if all of the chapters had conformed strictly to the standard format, but anyone who has edited a volume with independent-minded academics will appreciate the difficulty of such an accomplishment.

The second part of the work consists of theoretical issues in language acquisition. The centerpiece of this section is Slobin's own contribution, in which he attempts to elaborate on the operating principles of his earlier work, incorporating the data from the new studies. Most readers familiar with the previous work will find no surprises, other than a far greater specificity of the operating prin-

ciples (41 in all) and a larger data base in support of his approach. As in his previous work, Slobin is rigorously inductive and eschews theorizing in proposing his "Language-Making Capacity" (LMC):

Rather than "pre-tune" LMC to a particular current theory of abstract syntax, I prefer to work backward from acquisition data to propose systems of knowledge and information processing that seem to be prerequisite for the sorts of data that we encounter crosslinguistically. (p. 1158)

Slobin's monumental effort at inducing grammar through his operating principles is not without problems, many of which are familiar to those acquainted with his earlier work.

Indeed, Bowerman, in the final chapter of the work, presents a brilliant and balanced critique of the operating principles approach, while at the same time showing great appreciation for the substantive contributions of Slobin's work. For example, she correctly points out that the principles are a smorgasbord of generalizations and that specifications of the relations between the OPs are needed before they can lay claim to theoretical status. This lack of specification makes the OP approach difficult, if not impossible, to disprove as a theory. Furthermore, Bowerman points out that OPs fail to account for the more abstract universal syntactic constraints that have been the heart of the problem identified by formal linguists. As she puts it,

Nativist theorists would certainly urge that what is missing from the OP approach is a theory of grammar: a conception of how surface variability is constrained by deeper syntactic principles, and an account of how children's obedience to these principles guides their construction of a grammar for a particular language. (p. 1281)

The last criticism is, of course, only a problem for those who subscribe to the belief that an explanation of abstract linguistic competence should be at the core of developmental psycholinguistic inquiry. There are other linguistic approaches with which Slobin's work shares more of an affinity, including functional linguists such as Kuno (1986) and linguists who search for distributional regularities across languages such as Greenberg (1978) and Hawkins (1983). It is evident from Slobin's earliest remarks in the 1960s that he belongs to this more eclectic linguistic persuasion.

It is impossible to give the full flavor of a 1,332-page handbook in a brief book review, but a few observations that struck

me while reading the volumes are in order in concluding this review: (a) Dan Slobin has a great love for human language in all of its incarnations, not just for linguistic theories; (b) the volume is meticulously edited—a random check on the accuracy of references showed no errors, and typos are few in number; (c) it is a gold mine of information, and even skimming through the pages is the cause of many worthwhile linguistic daydreams; and (d) the luxury of crosslinguistic comparisons made easy through a work such as this reveals how far we actually are from truly understanding the nature of the human language making capacity.

References
Chomsky, N. (1959). [Review of *Verbal behavior*]. *Language*, 35, 26–58.
Greenberg, J. H. (Ed.). (1978). *Universals of human language, Vol. 4: Syntax*. Stanford, CA: Stanford University Press.
Hawkins, J. A. (1983). *Word order universals*. New York: Academic Press.
Kuno, S. (1986). The Japanese language. In H. Stevenson, H. Azuma, & K. Hakuta (Eds.), *Child development and education in Japan* (pp. 93–119). San Francisco: Freeman.
Skinner, B. F. (1957). *Verbal behavior*. New York: Appleton-Century-Crofts.
Smith, F. & Miller, G. A. (Eds.). (1966). *The genesis of language: A psycholinguistic approach*. Cambridge, MA: M.I.T. Press.