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REVIEWS

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Melissa Bowerman & Stephen Levinson (eds.), *Language acquisition and conceptual development*. Cambridge: Cambridge University Press, 2001. Pp. ix, 602. Hb. $100.00, pb. $35.00.

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This volume, dedicated to Martin Braine, is the outcome of a conference held at the Max Plank Institute in Nijmegen in 1995. The first of four parts covers gen-eral theoretical issues; part 2 focuses specifically on word learning, particularly nouns; in part 3, entities, individuation and quantification are examined; and in part 4, relational concepts in form-function mapping, with a focus on the influ-ence of language-specific properties. Two main issues link the nineteen chapters: whether concepts are language-independent or constructed through language, and the role of experience in conceptual development. As emphasized by the editors in the introduction, past attempts to relate cognitive and linguistic devel-opment have not been too successful, possibly because of the focus on language structure within theoretical linguistics. Recent research on the domain-specific cognitive abilities of infants and on semantic and cross-linguistic aspects of lan-guage acquisition have provided new insights, and thus it is timely to reexamine the links.

There are three excellent chapters in part 1, "Foundation issues": one by Jonas Langer on cognition and linguistic ontology, one by Alison Gopnik on Whorfian influence, and one by Elizabeth Spelke and Sanna Tsivkin on conceptual change in the domains of space and number. The issues they discuss are complex, and I have not attempted to give an overview here.

Three authors take up issues relating to the constraints approach to word learn-ing. There are different opinions about whether children are guided in the acqui-sition of new words by innate principles or by learned biases. A main part of Linda Smith's chapter in part 2 is an insightful review of research on the "shape bias." Research findings reveal that children attend to shape in naming tasks by 24 months of age, but this attention develops, becoming more specific to specific contexts (p. 111). Smith, who follows a biological perspective, views specializa-tion as emerging from general processes. While domain-specific knowledge is first the product of development, it can shape later development.

Michael Tomasello also argues against innate principles; he assumes that chil-dren learn words in the same way as they learn other cultural skills. Readers

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CEIL LUCAS, ROBERT BAYLEY, & CLAYTON VALLI, in collaboration with Mary Rose, Alyssa Wulf, Paul Dudis, Susan Schatz, & Laura Sanheim, *Sociolinguistic variation in American Sign Language*. Washington, DC: Gallaudet University Press, 2001. Pp. xvii, 237, appendices, index. Hb $55.00.

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Sociolinguistic variation in American Sign Language is the successful result of applying sociolinguistic theory and methodology originally developed for spoken languages to American Sign Language (ASL). The product of several years of study conducted by a team of researchers, this book is more than just an exercise; both expected and unexpected findings are presented, thereby confirming and advancing the sociolinguistics of signed languages in particular and of language in general. Lucas and Valli bring to this work extensive experience with sign language linguistics; they are joined by Bayley, who is known for his work on Tejano English and Spanish variation among immigrants of Mexican descent. The statistical findings provide the necessary bridge between context and environment, on the one hand, and internal constraints, on the other, to explain the range of variation represented at phonological, syntactic, and lexical levels in ASL. Explicitly building on Weinrich, Labov & Herzog's notion of ORDERLY HETEROGENEITY (14, 193–94; cf. Weinrich, Labov & Herzog 1968), the book

provides useful examples and analysis for sign language linguists, and it would do well as a source for graduate and advanced undergraduate courses where materials beyond a primer of sociolinguistics are needed. For those more established in the field, the authors respectfully (and graciously) challenge several frequently cited findings concerning variation in ASL, such as Woodward & DeSantis' (1977) claims about negative incorporation and Liddell & Johnson's (1989) explanations for phonological variation in forms of the sign DEAF. They also demonstrate the usefulness of Liddell & Johnson's (1984, 1989) autosegmental movement-hold model for analyzing distinctive features of sign languages, especially when this is combined with statistical tools such as VARBRUL. Through such analysis, internal variation at phonological and grammatical levels is identified, and the influence of external constraints such as region, age, ethnicity, and gender are also revealed.

The first three chapters set up the context and purpose of the research, beginning with a useful and straightforward chapter on sociolinguistic theory, its history in the studies of sign languages, and how such studies relate to those conducted on spoken languages. The second chapter presents the issues and approaches involved in collecting and analyzing an ASL corpus, though it serves well as a model for spoken language corpora, too. The discussion in this chapter of the variable rule analysis software VARBRUL (Pintzuk 1988; Rand & Sankoff 1990) and other statistical tools for analyzing sociolinguistic variation is helpful, particularly for those coming to sociolinguistics whose backgrounds have focused on qualitative descriptions and who might need to have issues of quantitative methodologies involving multiple contextual influences made more explicit. The third chapter presents a brief sociohistorical account of education and pedagogical philosophies involving sign language in the United States, including changing policies at residential schools for deaf students, and the training and subsequent placement of teachers and students in these schools.

The study draws from five sites throughout the United States, picked as regional representatives. Subjects vary in age, though all were exposed to sign language at early ages (prior to 5 or 6 years old) to control for any effects of late or second language acquisition. All are considered to have native or native-like fluency. Ethnicity was restricted to Caucasian and African American because of practical limitations, although many other ethnicities are obviously represented in Deaf communities. Socioeconomic status and gender were also tracked, especially because these have been seen to be traits associated with sociolinguistic theories of language change. One variable particular to ASL signers is the history of pedagogical policy with regard to the use and status of sign languages in deaf education. The 20th century saw significant swings in the acceptance and use of sign language and oralist (speech) methodologies.

The three phonological variables studied include signs produced with the "1" handshape, the order and location of elements of the sign DEAF, and the locations of a class of signs that share common features (KNOW being a typical

example). The analysis reveals classic linguistic constraints on these variables (grammatical categories, phonological environments), and it shows that many of the manifestations of these constraints are explained in part through reference to sociohistorical factors of Deaf history and the social organization of Deaf communities. The authors suggest that the distribution of variations, when accounting for age, grammatical functions, social class, and ethnicity, indicates evidence of change in progress. Surprisingly, though, grammatical function plays a stronger role than anticipated, and the authors propose that this may be a direct reflection of the modality difference of signed languages (see chap. 6).

Of course, one of the trickiest aspects of linguistic analysis is the highly situated nature of discourse. The strength of the analysis done by these authors is that they weigh multiple factors to discern their relative influences on linguistic variation, and they produce quantitative findings that verify and challenge current explanations of patterns, some of which are based on qualitative studies. Yet even as they did so, these researchers encountered the perpetual problem that not all factors, whether internal or external (i.e., sociocultural), can be accounted for simultaneously, even where they are identified. Furthermore, they raise the epistemological problem that, when one is collecting a linguistic corpus and coding for various factors, the categories and terms used in coding (or even collecting) need to be already recognized in order to be explored. Thus, studies such as this one highlight the continuing need for a range of complementary approaches, including those that are psycholinguistic and anthropological, experimental and ethnographic. For example, the importance of the unique history of Deaf communities and the role of policy regarding the legitimacy of sign language hints at other issues that might be found only through more extended, naturalistic, inductive studies. Such studies would identify additional kinds of factors accommodated to through the ordered heterogeneity of language – factors that can then be tested quantitatively by projects such as that conducted by the authors of this volume.

It has been a pleasure to review a book so clear in purpose and successful in execution. This book demonstrates the advantages of carefully planned collaborative teamwork, drawing upon a vast range of expertise and experience, all the while modeling explicit methodology and theory for sociolinguistic analysis and exploration. The writing remains direct and accessible throughout, with technical terms and concepts supported by useful references, often summarized in ways that are helpful when introducing (or reintroducing) topics to readers not fully familiar with them. It suggests interesting avenues for future research. For these reasons, I strongly recommend this book for graduate and upper-division courses in sociolinguistic variation, especially courses in which the study of sign languages is included. I also recommend it to anyone interested in sociolinguistic variation, or the interplay between linguistic theory and pedagogy.

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THOMAS, ERIK R., *An acoustic analysis of vowel variation in New World English.* (Publication of the American Dialect Society 85.) Durham, NC: Duke University Press, 2001. Pp. ix, 230. Hb.

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Since the pioneering work of Labov, Yaeger & Steiner 1972, research in phono-logical variation has steadily grown more reliant on acoustic data – that is, on data resulting from instrumental measurements rather than from the auditory judg-ments of the researchers. This book from Erik Thomas demonstrates the fruitful-ness (as well as some of the limitations) of this research trend.

The book opens with an introduction to the acoustic study of dialect variation. Thomas provides a very helpful and comprehensive review of previous socio-acoustic research on American English. This section highlights one of the great strengths of the book: its extensive bibliography, which references several un-published dissertations and conference papers. Thomas offers some background on the nature of acoustic data, though the emphasis is clearly on instructing read-ers in how to read his vowel formant plots. The discussion assumes that readers understand something of the physics on which acoustic measurements are based (e.g., what a formant is). Chap. 1 concludes with an account of the methods used for measuring the data. Here Thomas provides a detailed description of his pro-cedures – something that is unfortunately often missing from work by other re-searchers in this area.

Chap. 2 sets about the ambitious task of describing the variants of all stressed vowels in "New World English," a term which is meant to cover North America