

ACTION MEETS WORD: HOW CHILDREN LEARN VERBS. Edited by Kathy Hirsh-Pasek and Roberta M. Golinkoff. Oxford University Press, Oxford, 2005. pp. 588. Price: \$75.00, £46.00. ISBN 0195170008.

As its title suggests, this is not a book aimed at the reader with a more general interest in child development, focussing as it does on a particular topic (verb-learning) in a particular subfield of language acquisition (word-learning). That said, the 21 chapters of this volume between them approach the topic of verb-learning from a sufficiently wide range of theoretical and methodological angles to ensure that most child language researchers will find at least something to interest them.

The three chapters that comprise the first section investigate the question of how learners extract verbs from the continuous speech stream and group them into a word class. A consensus emerges from these chapters that learners accomplish both parts of this task by integrating a wide range of phonological and prosodic cues such as stress pattern, duration, number of syllables, vowel quality, and statistical/distributional information. The field seems to have made real progress in addressing the question of how children group words into form-classes such as VERB and NOUN. Twenty years ago, the dominant view was probably that this was impossible without recourse to innate knowledge (such as the innate category of VERB linked to the semantic notion of ACTION, e.g. Pinker, 1984), with the possibility that the child might use distributional information rejected out of hand. In fact, the chapters by Mintz and by Christiansen and Chater demonstrate that distributional information alone can yield, in principle at least, reasonably accurate classifications of lexical items.

The second section is primarily concerned with research on the ability of pre-linguistic infants to categorize ac-

tion-events along dimensions that languages encode. Some categories (e.g. of similar events of *containment* or *path-of-motion*) appear to be formed cross-culturally and spontaneously, whilst others (*support* or *manner-of-motion*) are formed later, and may require specific linguistic input (see chapters by Casaola *et al.* and by Pulverman *et al.*). Other studies investigate children's understanding of adults' intentions (e-chapters by Poulin-Dubois & Forbes and by Behrend & Scofield), concluding that children below age two have difficulty in understanding others' intentions.

However, one problem with both strands of research is that investigators sometimes adopt a rather top-down, linguistic-centred approach: The researcher formulates a problem that, based on linguistic theorizing, appears to be central to verb-learning (e.g. that some languages conflate manner of motion into the verb, whilst others conflate path, or that some verbs denote events that are not perceptually available), and then asks how the child solves it. From the point of view of the child, whose linguistic goal is not to discover precise, comprehensive verb meanings but to manipulate adults' behaviour, these problems may well be peripheral, particularly to early verb-learning.

In fact, many verbs that, from a linguistic perspective, may seem especially difficult to acquire (e.g. manner of motion verbs such as *run*, and psychological verbs such as *like* and *see*) appear amongst children's earliest multiword utterances (Theakston, Lieven, Pine, & Rowland, 2001). Of course, the use of a verb does not imply mastery of the full range of its meanings, but one must be sure to apply this criterion equally stringently to verbs (and nouns) that are predicted to be early- and late-acquired under one's theory.

The third section (and some chapters in the final section) reports experimental studies in which children are taught novel verbs. This seems to be rather difficult to do. Childers and Tomasello

(Chapter 12) found that children aged 2;2 were unable to learn a novel verb in an experimental setting (showing much better performance for nouns). Maguire, Hirsh-Pasek, and Golinkoff (Chapter 14) and Imai *et al.* (Chapter 17) report that—in some conditions—even 5-year olds (English, Chinese, and Japanese) cannot extend an experimentally taught novel verb to a scene in which the action is performed with a different object. These findings are typically interpreted as showing that verb-learning is hard. They suggest to me, however, that these tasks (generally preferential-looking/pointing) may, in some cases, not reveal the true extent of children's verb-learning abilities: Taken to their logical conclusion such findings would suggest that 5-year olds are not aware that, for example, drawing with a new pen is still called *drawing* and that 2-year olds cannot yet learn some action verbs at all (or at least without a very large number of exposures).

In keeping with this theme, the consensus of the final section on cross-linguistic influences is that verbs are harder to learn than (concrete) nouns, with many authors citing checklist and naturalistic-data studies showing a noun-advantage even for languages that might be expected to be 'verb-friendly'. Whilst nobody would dispute that some nouns (particularly concrete nouns) are easier to acquire than some verbs (particularly those denoting complex activities), simply counting nouns and verbs in children's vocabularies does not convincingly demonstrate this. The ratio of nouns to verbs is similar in children's vocabularies (approximately 5:1; see Gentner, Chapter 21) and the adult lexicon (at least in the *Oxford English Dictionary*). This is not because adults find verbs difficult to learn, but simply because languages seem to 'need' more different nouns than verbs (Tardiff, Chapter 18). What is needed are studies comparing noun-to-verb ratios (tokens and types) in child and adult vocabu-

aries and spontaneous speech data to determine whether children produce a smaller proportion of verbs than one would expect, given the language that they hear.

So where to now for the field of word learning? A shortcoming of early word-learning research was its almost exclusive focus on nouns. Consequently, word-learning procedures were proposed that could in fact hinder the learning of other word types, verbs included (Tomasello, 2003). Hirsh-Pasek and Golinkoff's book goes a long way towards redressing the balance. However, whilst today's researchers have moved away from studying noun learning *qua* word learning, they must be careful to avoid studying action verb learning (sometimes solely motion verb learning) *qua* verb learning. Rather, future research should investigate how children learn words of *all* types (possibly by processes such as cross-situational distributional analysis). It is to be hoped that this book will stimulate such research.

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