
Weaving an Introduction

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Infants and young children naturally and spontaneously acquire the lexicon of their native language. This accomplishment is a topic of central interest in the cognitive sciences, because it raises core questions in psychology, linguistics, philosophy, computer science, and related fields. The past several years have witnessed an impressive accumulation of new knowledge about the learning of words. Recent discoveries in developmental psychology have been especially noteworthy, because they have helped to illuminate a process that is inherently multidimensional and dynamic.

In this edited volume, we invoke the metaphor of weaving to consider the acquisition of a lexicon. It has become clear that, to succeed in this task, learners weave together many different threads of knowledge and skill. These strands include perceptual (visual and auditory) sensitivities, general associative-learning mechanisms, conceptual and semantic constraints, an appreciation of lexical form class, and a rich understanding of communicative intent. It has also become evident that children do not intertwine these strands in a uniform fashion over the course of infancy and childhood, resulting in a flat weave. On the contrary, the evidence reveals much more texture to the fabric of word learning, with children recruiting some abilities and understandings more heavily at some developmental points than at others.

Like infants and toddlers acquiring their native lexicon, developmental psychologists seeking to understand word learning must also become adept at weaving. For the field to progress, researchers must

move beyond cataloging the isolated strands of knowledge or skill that learners use in any given act of word learning. In particular, it has become important that we abandon “either-or” approaches, in which a single thread is held to explain word learning from infancy throughout childhood. At the same time, we must progress beyond “all-inclusive” approaches, in which multiple strands are invoked in ways that fail to generate falsifiable hypotheses about lexical development. We believe that breakthroughs in theories of word learning await the discovery of precisely *which* threads of ability or understanding make *which* contributions to acquisition at *which* points during infancy and childhood.

This volume brings together chapters written by leading scholars in the field of lexical acquisition. Each contribution focuses directly on one or more of the various strands of knowledge or skill that underpin lexical development in infancy and childhood (e.g., perceptual abilities, lexical form class sensitivities, social-pragmatic understanding). Although the authors have centered their chapters primarily on the results of their own research programs, they have also considered explicitly how their work fits into the emerging picture of lexical acquisition as a multidimensional, dynamic task. As a result, the volume contains many chapters that explore the interactions among multiple threads of skill or knowledge at a specific point in development, and/or the unfolding of children’s reliance on a particular thread over the course of development.

Chapter Outline

The chapters in this volume resist being divided according to simple themes. This is a testament to the authors’ success in moving beyond static, one-dimensional positions. Yet the very richness of the authors’ arguments presented us with an organizational dilemma. In response, we have divided the chapters into two primary sections that mirror, however imperfectly, research in the field of word learning. The breakdown reflects a rough distinction between chapters that focus on issues surrounding *initial acquisitions* (often containing research with infant participants) and those that emphasize topics surrounding *later acquisitions* (often containing research with toddler and preschooler participants). This partitioning reflects more than

just subject populations. It also reflects a range of theoretical commitments within the field. Some scholars devote their primary attention to characterizing the initial state of the learner, whereas others dwell more substantively on the description and explanation of subsequent development. However, there is no doubt that the two sections contain many crosscutting themes.

Part I: Initial Acquisitions

The ten chapters in this section focus primarily on issues that arise during the earliest period of word learning.

1. How do learners represent the sound patterns of words? Fisher, Church, and Chambers defend the argument that these representations contain very fine phonetic information, contrary to traditional “abstractionist” views of lexical representation.

2. How do infants solve the fundamental problems of identifying words and their meanings? Echols and Marti point out important commonalities between children’s solutions to the two problems: in both cases, children use general cues and subsequently identify and rely on language-specific cues.

3. Why is it hard for infants to use language-specific phonetic detail to map sounds to meanings? Werker and Fennell develop the argument that this difficulty reflects resource limitations, and they raise the suggestion that there is continuity between prelexical categories and the representations available for use in word learning.

4. What role does perceptual information play in grounding representations of early word meanings? Landau argues that there is a complex mapping between perception and naming in the case of both objects and object parts. She explores the implications of this proposal for the linkages between nonlinguistic and linguistic representations.

5. How is an understanding of human intentions brought to bear in early word learning? Woodward proposes that words are not merely disembodied associates for young infants. Rather, she defends the view that from the outset, infants use their developing understanding of intentional action to interpret words.

6. What underlies changes to the character of word learning during the first two years? Hirsh-Pasek, Golinkoff, Hennon, and Maguire discuss the emergentist coalition model, arguing that word learners recruit different sources of knowledge (constraints, social-pragmatic understanding, and associative abilities) as the task of acquiring a lexicon unfolds during this period of development.

7. How do young children's general cognitive abilities work together to foster word learning? Bloom presents a theory that stresses the importance of several capacities—conceptual abilities, theory of mind, and grammatical form class sensitivity—in early word learning.

8. What can the study of learners who lack a conventional model for language tell us about the nature of the early lexicon? Goldin-Meadow presents evidence that the gesture systems of these learners contain categories that function like nouns, verbs, and adjectives. The results suggest that these categories are foundational in natural languages.

9. What underlies widely observed changes in children's lexicons during the first years of life? Snedeker and Gleitman propose that these changes stem from children's growing command of the semantically relevant syntax of their language. They use their proposal to account not only for the noun dominance in early vocabularies, but also for the concreteness of children's early verbs.

10. What is the origin and evolution of the links between words and meanings? Waxman demonstrates that infants begin the task of word learning equipped with a broad expectation linking novel words to a wide range of commonalities among named objects, and that this serves as the foundation for the more finely tuned expectations linking particular types of words (e.g., nouns, adjectives) with particular types of meaning (e.g., object categories, object properties).

Part II: Later Acquisitions

The nine chapters in this section deal with questions that surface as children begin to master mappings between words from particular lexical categories and their meanings.

11. How does preschoolers' knowledge of part-of-speech to meaning mappings interact with their word-learning assumptions to promote word learning? Hall and Lavin develop the argument that these assumptions play a fundamental role in helping children acquire sensitivity to how part-of-speech categories are expressed in their language.

12. How do children recruit word-learning constraints, semantic information, and syntactic information in lexical development? Markman and Jaswal address this question by examining the learning of the distinction between proper names and count nouns. In their chapter, they focus on how lexical form class to meaning distinctions are first learned and subsequently put to use to foster lexical acquisition, and on how the ostensive learning of words compares to the indirect or inferential learning of words.

13. How can the crosslinguistic study of the acquisition of nominals (proper names and common nouns) shed light on the mechanisms that underlie word learning? Imai and Haryu review their research on word learning in Japanese-speaking preschoolers. They argue that this work helps to clarify not only the nature of proposed word-learning biases, but also the universality and flexibility of word-learning processes.

14. What types of knowledge do children recruit in the task of learning generic noun phrases (words that designate object kinds)? Gelman proposes that children draw on multiple sources of knowledge (syntactic, pragmatic, and general world knowledge) to acquire generic language, and that generic language itself supports children's acquisition of generic knowledge.

15. Why are young children so successful at acquiring words (nouns, verbs, adjectives) in a wide variety of learning contexts? Akhtar argues that young children succeed so well because they are attuned to a number of pragmatic cues to intended meaning.

16. How do word-learning constraints and pragmatic knowledge interact in lexical development? Saylor, Baldwin, and Sabbagh address this question by focusing on the relation between children's word-learning skills (their ability to acquire nouns for object parts) and the input they receive (whole- versus part-label juxtaposition).

17. What is the role of general learning mechanisms in lexical development? Gentner and Namy argue that these mechanisms play a significant role in the task of acquiring a lexicon. In particular, they focus on comparison processing—more specifically, structural alignment and mapping—in the acquisition of words.

18. What does the crosslinguistic study of the acquisition of verbs reveal about the mechanisms that underlie word learning? Hohenstein, Naigles, and Eisenberg focus on differences between English and Spanish speakers in the development of talk about motion events. Their results support the argument that, in this development, syntactic knowledge is more fundamental than knowledge of language-specific lexicalization patterns.

19. Why are verbs selective about the environments in which they appear, but at the same time understandable by children in brand-new structures? Lidz, Gleitman, and Gleitman address this apparent paradox. They argue that the choosiness of verbs reflects the fact that they project their semantics onto clause structure in fixed ways, and that the innovations stem from a certain latitude in the system, allowing verbs to be understood in new environments, as long as they are in the “neighborhood.”

It is our hope that the nineteen contributions to this volume will lead to (at least) two positive outcomes for the field of lexical acquisition. First, because the chapters make significant contact with each other, we anticipate that readers will be able to discern points of convergence and divergence and thereby gain insight into the current state of theorizing in the discipline. Second, because the contributors have taken care to situate their work within the broader context (e.g., to understand the interactions among multiple types of skill and knowledge over the course of acquisition), we anticipate the emergence of new research agendas, guided by fresh theory-driven insights that will set the stage for the next generation of research in the field.

Acknowledgments

Geoffrey Hall would like to acknowledge funding from an operating grant from the Natural Sciences and Engineering Research Council

(NSERC) of Canada and from a Killam Faculty Leave Fellowship from the University of British Columbia. He thanks the University of British Columbia for ongoing support. He is indebted to Yale University (especially Paul Bloom) and New York University (especially Gary Marcus) for providing a stimulating work environment during his sabbatical. Sandra Waxman acknowledges funding from a National Institutes of Health grant (HD 28730). She is indebted to Northwestern University for ongoing support and to the Institute of Cognitive Science (Lyon, France) for providing an intellectual home during her sabbatical.

We dedicate this volume to the wonderful Roger Brown. He is responsible for interweaving the paths of the two editors, and his pioneering work in developmental psycholinguistics continues to inspire us both.