Wer fremde Sprachen nicht kennt, 
weiß nichts von seiner eigenen. 
[Those who don’t know foreign languages 
know nothing of their own.] 
-Johann Wolfgang von Goethe (1827)

Any child language researcher who studies this important book will come away convinced of the wisdom of Goethe’s dictum—and not just with regard to one’s own language, but also one’s own ideas about language acquisition. Fifteen authors examine thirteen languages, from nine different language families, carefully probing for reliable crosslinguistic generalizations about argument structure. In the process, some widely held theories and presuppositions prove to be shaky. Two dominant acquisition strategies—Gleitman’s syntactic bootstrapping and Pinker’s semantic bootstrapping—are put under the microscope. It turns out that each of them, though flawed, could be of some use to the child learner, but not in themselves. The child sometimes needs both strategies—but the task can’t be successfully carried out without attention to a range of other sorts of data, including the statistics and pragmatics of language use. Appeals are made to construction grammars and various usage-based approaches. The elephant in the room is linguistic diversity. There are simply too many apparent language-specific idiosyncrasies for the current formulas to work across languages, and linguistics has not reached a level of theoretical generalization that could systematically account for the many different patterns. The book is thus a healthy antidote to “either-or” ways of thinking that are so popular in our field (and, alas, in American politics and foreign policy as well). Instead, there are eloquent pleas for “both-and” approaches—and these pleas are firmly grounded in careful reasoning based on linguistic and child language data.

Argument structure is prime territory for exploring relations between syntax and semantics. As the editors say at the outset (p. 1):

“Verbs are the glue that hold clauses together. As elements that encode events, verbs are associated with a core set of semantic participants that take part in the event. Some of the verb’s semantic participants, although not necessarily all, are mapped to roles that are syntactically relevant in the clause, such as subject or direct object: these are the arguments of the verb.”

For developmentalists, the key issues are the origins of both the semantics of participant roles and the morphosyntax of their expression, and, critically, the “linking” or “alignment” between the two. At one end of the theoretical debate are proposals that the child begins with semantic and syntactic categories, as well as the mapping between them. At the other end are proposals—not formally or precisely stated—that the child can make use of a variety of skills, strategies, and information sources to work it all out without a prespecified starting point. So we are on the terrain of the ancient and classical debates between nativism and empiricism.
What everyone agrees on, however, is that the child must learn a given language—in this case, the specific lexical items, their meanings, and their realization in linguistic constructions. The two bootstrapping approaches share a pair of assumptions: (1) The links between lexical meanings and syntactic form classes are the same for all languages, and (2) the child is born knowing these links. In Gleitman’s terms (1990: 35):

“The first proviso to the semantic usefulness of syntactic analysis for learning purposes is that the semantic/syntactic relations have to be materially the same across languages. Otherwise, depending on the exposure language, different children would have to perform completely different syntactic analyses to derive aspects of the meaning.”

If this proviso is true, the child can use either syntax or semantics to figure out the other. Gleitman opts for “syntactic bootstrapping”: Given (2), the child can go from syntax to meaning. For example, hearing a verb with three participant roles—SUBJECT, DIRECT OBJECT, INDIRECT OBJECT—the child can make a reasonable guess at the meaning of give. Pinker (1989) opts for “semantic bootstrapping”: Given (2), the child can go from meaning to syntax. Hearing give in context, along with its three associated nouns or pronouns, the child can make a reasonable guess at the syntax of the verb. (Both approaches also assume that the child can extract the linguistically relevant concepts from innate capacities and observation of the situations accompanying speech, but this is not a topic of the current volume.)

What if proviso (1) is false? Both bootstrapping proposals become bootless. And issues of nativism lose their centrality. What remains is the challenge that existed before the long bootstrapping detour—namely, how, then, do children figure it all out. The contribution of the volume under review is to decisively refute the proviso of universalism. It would be too much to expect an adequate new acquisition theory to emerge, but many intriguing proposals are offered, including some “in tandem” applications of both syntactic and semantic bootstrapping.

The book may be difficult for readers unaccustomed to imagining how unfamiliar languages work. But the editors, and each of the authors, provide many clear expositions, with ample examples equipped with morpheme-by-morpheme glosses and translations. The reader will be repaid by flashes of insights into other mental worlds. The volume is, indeed, a journey of discovery, led by skilled guides. The itinerary includes three Germanic languages, three Mayan languages, two Australian languages, Japanese, and one each of Eskimo-Aleut and Dravidian. This sample presents enough diversity to challenge prevailing assumptions, which turn out often to have been based on uncritical use of English as a universal template. In my opinion, journeys such as this one should be an obligatory rite de passage for all child language researchers and theorists.

We owe a debt of gratitude to the Max Planck Society for their creation and continued funding of the great and unique watering-hole that is the Institute for Psycholinguistics in Nijmegen, in the eastern Netherlands. (And my disclaimer: I have been closely involved with that Institute since its founding in 1977 and have personal and professional ties with all of the authors.) The two editors, Melissa Bowerman and Penelope Brown, are senior researchers at the Institute, where they are part of an everyday intellectual world that includes field linguists, child language researchers, and experimental psycholinguists. The fruits of their interaction are evident in all of the chapters, which are written by present or past Nijmegen research associates. Over the course of several years, Bowerman and Brown headed a regular research project on argument structure, culminating in a 1998 workshop which is the basis for the current volume. But this is not a set of disconnected workshop papers. The ground had been well developed for focused discussion of particular issues before the workshop. Detailed commentary was provided.
by five discussants at the workshop, representing leading positions with regard to the topic: Eve Clark, Cynthia Fisher, Adele Goldberg, Ken Hale, and Beth Levin. And the editors have taken their job very seriously. Each of the chapters is a pleasure to read; all of them raise the central questions of the argument structure project; and these questions and the range of data are skillfully summarized and interpreted in the editors’ excellent 26-page Introduction. Examination of the three indexes shows the breadth and focus of the discussions across chapters. The most heavily cited names are, of course, Lila Gleitman and Steven Pinker, followed by the most relevant lexical semanticists: Beth Levin, Malka Rappaport Hovav, and Leonard Talmy. Strongly represented are advocates of construction grammar, especially Adele Goldberg and Michael Tomasello. References to all seven of these names are scattered throughout the entire volume. The second index is a language index, listing some 57 languages. The third index, the subject index, is a treasure of linguistic terms and theories, with well-considered headings, subheadings, and cross-references.

The Introduction is followed by 14 chapters, presented under three headings. The first five chapters deal with “Verb Meaning and Verb Syntax: Crosslinguistic Puzzles for Language Learners.” These chapters are based on adult language data, pinpointing potential acquisition problems as formulated by current theories. A few brief highlights will make it clear that the reader will be hard-pressed to leave the book without readjusting major preconceptions about the nature of mappings between meaning and form. Neither syntactic nor semantic bootstrapping can cope with the sorts of examples revealed here.

Eve Danziger presents Mopan Mayan data that cast doubt on the very nature of nouns and verbs, because basic activities such as ‘run’, ‘jump’, ‘yell’, and ‘laugh’ are realized only as nouns—e.g., ‘my running is continuous’ means ‘I’m running’. Jürgen Bohnemeyer follows with Yukatek Mayan, challenging the basic definition of motion events. There is no linguistic reflection of motion as a Figure moving along a Path, because each verb can take only one argument. Thus one cannot ‘go from A to B’, but rather ‘leave A arrive at B’. Consequently, changes of location like ‘enter house’ and changes of state like ‘die in house’ are not marked differently. Eva Schultze-Berndt describes an Australian language, Jaminjung, with a small closed class of some 35 verbs that can only be understood in complex verb constructions consisting of a verb plus one or more ‘coverbs’, and it is the coverbs that express all of the relevant specific event information. Sotaro Kita raises issues of verbs with underspecified linking of semantic arguments to grammatical roles in Japanese, as well as in Tzeltal Maya and Lipke (Kwa, West Africa), but differing in the nature of the underspecification. This chapter seems less relevant to the overall theoretical issue, since it presents a deviant subclass of verbs with regard to expected linking patterns, rather than the far-reaching problems posed by the other chapters in this section. Still, it shows that more than the two bootstrapping strategies will be needed.

Anna Margetts puzzles about the Western Oceanic language Saliba, with verbs for ‘give’ that do not align as expected. The two basic verbs have different argument structures: one of them, used only for first- and second-person recipients, does not mark the recipient as an argument, but as a directional goal; the other, used for third-person recipients, does mark the recipient as an argument. As Margetts concludes (p. 132): “These findings raise questions about the crosslinguistic universality of the alignment between event types and syntactic structures—in particular, between transfer events and clauses with three syntactic arguments.” In one way or another, all of the authors in the volume repeat Margetts’s challenge: “Both [bootstrapping] proposals assume a crosslinguistically universal mapping between syntax and semantics.” But even this small sample of diverse languages proves that expectation to be untenable.

The following three chapters fall into the second section, “Participants Present and Absent: Argument Ellipsis and Verb Learning.” A serious problem for syntactic bootstrapping proposals are utterances in which all of a verb’s arguments are not produced. For various structural and
pragmatic reasons, some languages make heavy use of ellipsis. The chapters in this section present both linguistic analyses and child language data on languages that will be unfamiliar to most readers. David Wilkins, working with speakers of Arrente, an Australian language, examines verbs for ‘put’ and ‘look’. These are parade examples for Gleitman: ‘put’ clearly has three arguments whereas ‘look’ has two. Because the third argument of ‘put’ is a location, Gleitman (1990: 30) proposes that “the component ‘transfer’ is inserted into the verb’s semantic entry.” She asserts (1990: 30): “This is just the kind of transparent syntax/semantics relation that every known language seems to embody.” In Arrente, however, both verbs take three arguments, and with the same case array: **ERGATIVE, ACCUSATIVE, DATIVE**. The **DATIVE** argument provides the location, thus obscuring the difference between the transfer meaning of ‘put’ and the ‘endpoint of the path of looking’ of ‘see’. Child language data, however, give some support to Gleitman’s and Pinker’s proposals that children are equipped to detect the relevant participant roles in ongoing events. Arrente children have no trouble marking the locative argument of ‘put’ with the **DATIVE**, but are not sure how to treat the goal of looking. Wilkins concludes (p. 160): “This suggests—that just as Gleitman and Pinker assume—certain argument-structure alignments between semantics and syntax may indeed be more ‘natural’ for learners than others.”

Penelope Brown reports her own detailed longitudinal work on the acquisition of Tzeltal Mayan, where verbs are often highly specific in their meanings and nouns are infrequently used. For example, because there is a large set of verbs of eating, in a particular situation it will be clear that ‘eat.soft.things’ refers to a banana, which therefore need not be mentioned. In addition, in Tzeltal, as in hundreds of head-marking languages around the world, cross-referencing on verbs indicates the number and roles of arguments. Clearly, a different sort of acquisition strategy is called for. Brown proposes (p. 184):

“In Tzeltal, an appropriate strategy is this: pay attention to the lexical semantics of verbs, as that will tell you what the arguments are. Hence, Tzeltal children launch early into verb learning. In English, however, the strategy is (arguably) this: pay attention to the argument structure, as that will tell you what the verbs mean. Hence syntactic bootstrapping is a plausible starting point.”

Brown concludes (p. 183) with another kind of bootstrapping, “typological bootstrapping,” proposed by Slobin (2001). With increasing experience in solving problems posed by the input language, the child becomes tuned to the typological properties of that language.

Section two concludes with the Eskimo language Inuktitut, presented by Shanley Allen. This is another head-marking language with a high rate of ellipsis. Allen notes that arguments are omitted only when the identity of the referent can be retrieved from situational or linguistic context. Reviewing child language data from Inuktitut and two other “frequent-ellipsis languages,” Korean and Italian, Allen finds that children are sensitive to relevant discourse pragmatic factors that predict the informativeness of arguments. Pragmatic information can thus guide the child to identify the missing arguments. Perhaps “pragmatic bootstrapping” should be added to the child’s toolkit.

Section three delves into a central issue of argument structure: “Transitivity, Intransitivity, and Their Associated Meanings: A Complex Work-Space for Learnability.” Two chapters deal with the West African language Ewe and the Unaccusativity Hypothesis, drawing implications for acquisition on the basis of linguistic analysis. James Essegbey shows that all intransitive verbs in Ewe fall into a single class, rather than the expected two classes of “unaccusatives” and “unergatives.” Felix Ameka gives a close analysis of the verb ‘die’ in Ewe, showing that its various senses do not line up with the number of arguments. The Ewe details go
beyond the scope of this brief overview, but the conclusion, again, is that we cannot accept proviso (1).

Angeliek van Hout follows with a detailed and insightful discussion of telicity, supported by child language experiments comparing two languages in which telicity is indicated by the verb (Russian, Polish) with three languages in which information about the direct object is critical in determining telicity (English, Dutch, Finnish). She finds that it is easier for children to master telicity when it is marked on the verb, and offers a range of potential explanations based on cognition and processing.

The last three chapters deal with causative verbs of transfer. Just as previous chapters tested explicit predictions of syntactic bootstrapping, Bowerman and Croft confront Pinker’s semantic bootstrapping predictions with child language data of spontaneous causative errors such as he disappeared the green one. They provide a lucid explanation of Pinker’s “broad-range rules” and “narrow-range rules,” and contrast his approach with usage-based mechanisms for grammar induction. They find that none of the predictions made by either model can be clearly supported by the data: Children didn’t follow Pinker’s rules; their innovations persisted over long time spans and seemed not to be influenced by “preemption” (the availability of conventional lexical items with the same meanings as the child’s innovations); and there was no firm evidence for children’s sensitivity to semantic subclasses of verbs. The authors are left with a weak appeal to “entrenchment,” which is a restatement of traditional dicta of associationism, now presented as a “usage-based model.”

The final two chapters are concerned with “weak endstate” interpretations of transitive verbs expressing state changes. Whereas a verb like ‘break’ entails an endstate (*He broke the plate but it didn’t break), verbs like ‘wash’ only have a pragmatically favored endstate (He washed the shirt but it’s still dirty). Experiments show that German children are not clear about this distinction and they can be helped by the simple provision of an adverb—‘again’. Children were taught nonsense verbs in two types of constructions, e.g., ‘Peter moffeled the basket’ and ‘Peter moffeled the basket again’. The adverb guides the child in interpreting the verb as a state change. As Wittek explains, the adverb provides “restitutive meaning,” which is not possible if an endstate is only pragmatically favored. She expands the bootstrapping program by adding another kind of bootstrap—attention to adverbs that accompany verbs. Finally, Pederson uses a version of Wittek’s experiment in Tamil, a language which (like Mandarin and Japanese), regularly expresses “less than full entailment of realization.” A cause-change-state verb like ‘kill’ actually means something like ‘engage in behavior that is cause-state-like’ (p. 343). Pederson suggests that children can learn appropriate verb uses by attending to constructions—in this case the verb complex. In Tamil, when a result is affirmed it is indicated by a converb, e.g., ‘kill leave’ is the equivalent of I killed him dead (‘I killed him and left’). With this broader understanding of the range of construction types in the language, the child can infer that if a change-state verb is used without an associated converb, it might not entail realization of the state. Again, these two chapters point toward the need to attend to construction grammar in formulating a theory of language acquisition.

This fine volume is deserving of careful reading. Although it cannot offer a convincing substitute model to the two bootstrapping proposals, it clearly reveals where they are lacking, and it points to a collection of factors that the child must be equipped to attend to, including relations between utterance and situation, and the interrelations between verbs, nominals, casemarking, tense-aspect marking, person, and more. The hope is that a plausible acquisition model can emerge once we know much more about the range of possible languages and the sorts of solutions
attempted by child learners. That distant goal can only be approached by more work such as the contributions of these 15 researchers.

The book is cleanly presented by Taylor & Francis, who have taken over the eminent line of Lawrence Erlbaum Associates. Headings are well-conceived and clearly indicated. The wealth of linguistic examples consistently follow the admirable format of a line of original text, separated by hyphens when necessary, with a following line in which glosses and grammatical symbols are strictly lined up under the corresponding elements above, followed by a translation in single quotes. Each chapter is followed by ample references, and, as indicated, there are three detailed indexes. The reader will be grateful for the editors’ painstaking efforts.

My only quibble is with Taylor & Francis, who have put all of the footnotes in the form of endnotes following each chapter. Erlbaum used footnotes, as does this journal, along with books and journals published by all of the leading publishers. I have a strong aversion to the use of endnotes instead of footnotes, and I’m sure I am not the only reader who finds it a nuisance to read a chapter with endnotes, because you have to keep a marker at the endnote location and keep switching back and forth between the page you're reading and the endnote, finding your way back into the interrupted text. As a consequence, one is sometimes driven to skip the endnotes to avoid the nuisance. This, of course, cancels out the author's intent in providing subsidiary information that is intended to be read at the point that it is encountered in the text. As a concluding aside, I would urge all of you who write and publish to insist on footnotes—for the sake of your own written intentions and the sake of your readers.

References

