Constructions at work: The nature of generalization in language

By Adele E. Goldberg


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Adele Goldberg’s Constructions at work: The nature of generalization in language (Oxford University Press, 2006) is an important book, one that all linguists interested in grammar should read, especially those who do linguistic fieldwork. It is not a tutorial on Construction Grammar (CG). Fieldworkers should be particularly encouraged by it: now they can appreciate the gold dust that runs through their fingers, the fine-grained details that have been brushed off the scale by those who only value big generalizations. But big-generalization theorists should also take note because the enterprise of capturing generalizations by means of abstract forms and derivations is now hanging in the balance: “Minnie Minnie, tickle a parson.”

Goldberg brings together a great deal of research to consolidate “constructivist approaches” to grammar, ones founded on the proposition that “Speakers’ knowledge of language consists of systematic collections of form-function pairings that are learned on the basis of the language they hear around them” (p. 227) and motivated by the conviction that, since constructions (form-meaning pairings) can account for what some call “peripheral” aspects of language, they should also be able to account for the “core” (p. 230).

Goldberg's goal is “to investigate the nature of generalization in language,” that is, “how and why constructions can be learned and how cross-linguistic and language-internal generalizations can be accounted for” (p. 3). Two questions prevail: (1) How do learners acquire generalizations such that they can produce an open-ended number of novel utterances based on a finite amount of input? and (2) Why are languages the way they are? (p. 11). Throughout, the constructionist approach is argued to provide the most adequate answers, and it is into this warp that Goldberg weaves data-based arguments, with the thread of argument structure frequently surfacing, a thread that Goldberg has carefully spun in previous studies.

Goldberg gives an overview of the book at the outset of chapter 1 and a wonderful summary in the final chapter. The summary given below draws especially from the latter, often quoting it. (For the real thing, read the book!)

There are three main parts. The first part, chapters 1-3, is about constructions.
In Chapter 1, Goldberg gives an overview of constructionist approaches, ones for which the pairing of form and meaning or function (which everyone accepts for lexical items) is extended to all levels of grammar. Thus, expressions like “The more the merrier,” “The higher they climb, the harder they fall,” and so forth, are instances of a construction. It is formed by juxtaposing two NPs, each beginning with “the” and followed by a comparative phrase. This form is paired with a meaning, roughly as follows: each NP expresses a variable; the second varies according to the first. Note that this rich meaning (really amazing for such a simple form!) is not the result of the words in the phrases, but belongs to the construction itself.

In Chapter 2, Goldberg advances the claim that broader and more robust generalizations hold for surface forms than for any form from which the surface might be claimed to be syntactically or semantically derived. She argues this convincing in the domain argument structure, considering (among others) the Ditransitive construction (e.g., Mina bought Mel a book) and the Caused-Motion construction (e.g., Mina sent Mel a book).

In Chapter 3, Goldberg argues for usage-based models of grammar, one that includes both item-specific information and generalizations. This is required to account for speakers’ full knowledge of language, including both instances and generalizations over instances. It is supported by linguistic facts as well as by what is known about the nature of non-linguistic categories, which also involve knowledge of both instances and generalizations. A speaker’s knowledge of language, from the particular to the most general, forms an integrated and motivated network (often an inheritance hierarchy).

The second part, chapters 4-6, is about how constructions are learned.

In Chapter 4, Goldberg “reports experimental evidence that indicates that constructions can in fact be learned on the basis of the input, and further explores empirical evidence for parallels in the learning of non-linguistic categories” (p. 12). Studies show that children skillfully employ “a host of pragmatic and cognitive abilities,” including the ability “to make statistical generalizations” and to “use semantics and pragmatics to help guide interpretation and generalization” (p. 227). Further, “children are experts at observing statistical correlations and making predictions on the basis of them, and they are also experts at interpreting others’ intentions” (p. 227). It is argued that learners are guided toward generalizations by “skewed input,” that is, by one or a few instances of a construction that occur remarkably more frequently than others accounted for by the generalization. Such skewed input has been found to be common in the input children receive.

An example: A few years ago in east Africa I saw a bumper sticker “Grace happens” on a seminary professor’s door. I asked some African students what they thought it meant but none of their responses came close to how I understand it, based on a similar bumper sticker that I see now and then, one that Wikipedia characterizes as “a simple existential observation that life is full of imperfections.” It was my exposure to this bumper sticker that induced in me the constructional meaning that makes “Grace happens” a clever and profound statement.

In Chapter 5, Goldberg explores the question of how generalizations are constrained. We’ve all heard a language learner extend a generalization too far, like a child saying “goed” (generalizing
the -ed `past’) instead of “went.” Children do not receive much explicit feedback about their utterances, so how do they avoid or recover from overgeneralization? The answer is that children receive indirect negative evidence in the form of “statistical preemption,” that is, other things being equal, “more specific knowledge always pre-empts general knowledge” (p. 94). For example, if learners encounter “went” in contexts where they might be tempted to say “goed,” then “went” pre-empts “goed.” Statistical pre-emption isn’t the whole story, but it is a good part of it.

In Chapter 6, Goldberg provides motivation for why constructions are learned, exploring the advantage that constructions give language users. Answers are sought without reference to “universal grammar” and “innate syntactic knowledge.” Goldberg’s answer, argued from the domain of argument structure, is mostly based on “the fact that constructions are highly valuable both in predicting meaning, given the form, and in predicting form, given the message to be conveyed” (p. 228). Simply put, constructions are valued because they make it possible to understand and produce utterances, so those who aspire to communicate must learn them.

The third part, chapters 7-9, seeks explanations for generalizations.

Chapter 7: Beyond just enabling the encoding of meanings, languages afford constructions to structure (“package”) information for various purposes: to introduce and manage discourse participants, to profile importance or degree of commitment, to direct attention or meet attentional expectations, and so forth. Within the generative tradition, the structures of various types of information packaging have generally been treated as strictly structural phenomena without concern for the cognitive (“discourse”) status of the information; a case in point is long-distance dependencies. If it is permitted to “move” sentence parts that semantically relate to each other a long way from each other, as in “Who did Mary say the report was written by?” (cf. “Mary said the report was written by X”), how does one constrain the movement to disallow cases such as “*Who did she see the report that was about?” (cf. “She saw the report that was about X”)?

Goldberg argues that constraints on long-distance dependencies strongly correlate with the information-structure properties of the constructions involved. For example, “Background constructions are islands [to extraction—DJW]” (p. 135) is true because (1) Movement generally makes the moved item more discourse-prominent, and (2) “[It] is pragmatically anomalous to treat an element as at once backgrounded and discourse-prominent” (p. 135).

Goldberg’s basic claim is that, if we put aside two cases for which long distance dependencies are possible, namely parts that (1) are the primary topic or (2) are within the focus domain, then all the other parts are not eligible for long-distance dependencies. This, she claims, accounts for the facts at least as well as purely syntactic account.

By the way, in this chapter (and elsewhere) I occasionally found myself objecting to the grammaticality judgments Goldberg has assigned to sentences; for example, Goldberg marks “Who did John give the book?” (p. 142) as less than fully grammatical (“??”) but for me it is fine. Well, decades of argumentation based on native-speaker intuitions have taught us that such discrepancies are inevitable, so we must be willing to read on without throwing the baby out with the bath water.
Chapter 8: Many approaches to grammar focus on form. Constructionist approaches, on the other hand, emphasize the individual functions that constructions serve (as well as their forms). Goldberg demonstrates the importance of function with respect to subject- auxiliary inversion (SAI), as in “Where did he go?” (as opposed to the ill-formed “Where he did go?”). SAI has heretofore been regarded as a strictly syntactic phenomena, not tied to a particular function. Those who make no reference to functional motivation generally just stipulate the formal contexts where subject-verb inversion applies without providing an explanation for its distribution. The challenge, then, is to identify whether a single (or closely related) set of function(s) relate the various syntactic contexts where SAI applies, found in diverse contexts like these: (1) Did she go?; Where did she go? (2) Had she gone, they would be here by now. (3) Seldom had she gone there… (4) May a million fleas infest his armpits! (5) Boy did she go! (6) He was faster at it than was she. (7) Neither do they vote. (8) So does he.

Goldberg gives an account in terms of the particular functions of each of these (sub)structures. What they share is that they all contrast with so-called “prototypical” sentences, assuming that prototypical sentences have predicate focus and are positive, assertive, independent, and declarative. They share “departure from prototypical” but depart from it in functionally different ways. Some cases depart in the same way, forming sub-cases, and this is something that a good analysis should capture. Constructionist approaches capture them by means of inheritance hierarchies: “Broad generalizations are captured by constructions that are inherited by many other constructions; subregularities are captured by positing constructions that are at various midpoints of the hierarchical network” (p. 13).

In Chapter 9, Goldberg discusses how cross-linguistic generalizations can be explained, particularly with reference to argument linking. So why—across languages—are Agents generally favored to become subjects and Patients to become direct objects? Does this reflect (innate) “universal grammar” or does it reflect a learning process shaped by non-linguistic factors? Goldberg argues that they result from “general cognitive, pragmatic or processing attributes of human cognition” and that “generalizations about the linking between form and function provides no evidence for a genetically determined ‘universal grammar’ related to argument structure generalizations” (p. 184).

This chapter deals less directly with constructions than previous chapters, but conveys (rather subtly) that a constructionist approach to grammar is the framework most consistent with facts emerging from non-linguistic domains. And her discussion abounds with citations; indeed, this chapter could serve as a portal to various relevant subdomains with which many readers might not be familiar (readers like me!). Goldberg apologizes that “the discussion here also only scratches the surface” but it is certainly a good introduction.

Chapter 10 is an interesting comparison of theories. First Goldberg identifies three “mainstream generative grammar frameworks” that use the pairing of form and meaning beyond that of lexical items, due to (1) Hale and Keyser, (2) Borer, and (3) Maranz; see the book for references. She compares these with construction grammar (broadly defined by seven “basic tenets”). Each framework is found wanting. Goldberg concludes that “the problem” with them is that they “have effectively legislated the idiosyncratic out of existence” (p. 213).
Then Golberg considers “more closely constructionist approaches”: Unification Construction Grammar (Fillmore, Kay), Cognitive Grammar (Langacker), Radical Construction Grammar (Croft), and Cognitive Construction Grammar (Lakoff, Goldberg); again, see the book for references. Key differences include (1) whether aspects of the grammar are redundantly specified in various constructions, (2) whether the grammar is more generally usage-based or not, (3) whether motivation is sought for the relationship between form and function, and (4) whether or not unification is adopted as the formal means for representing constructions. Surprisingly, for each of these differences, Unification Construction Grammar, the progenitor of the other three, stands apart from the lot; this is summarized in Table 10.1 on page 215. The discussions of the various approaches are very interesting and inspiring, somewhat like restaurant menus that, with each dish offered, include an enticing description.

Goldberg has included a substantial bibliography. At the end of the first chapter she writes, “There is a growing body of work within the constructionist framework, broadly construed” (p. 17): followed by a list of citations. For the reader who wishes to sample these, the references are included at the end of this review (ordered by year of publication).

This is a remarkable book, one that I highly recommend. That said, I have a few quibbles.

When claims are bolstered with references to other sources, kind authors include page or section numbers in the citations, to help the reader find the pertinent section. In this book, virtually all the citations lack page numbers. (There are a few exception, e.g., “Gundel (1985:35)” on page 129.) This is but one of several symptoms of editorial haste and inattention.

This book begs for a list of abbreviations, including acronyms. On page 145 one reads “In accord with the BCI,…” So what does BCI mean? …the reader searches. In the index? No entry. Well, after scanning backwards, one finally finds it introduced on page 135, where “(BCI)” is tacked onto the end of the statement numbered (14). (Note, I haven’t found it used between its introduction on page 135 and its use on page 145. If it’s there, I didn’t see it.)

Oh, and a list of figures, too. When I read page 135 and encountered the reference to Figure 7.1, I had trouble finding it. When I read the previous page (134), I had missed this figure’s caption. It is printed with smaller-than-normal letters at the very bottom of the page.

And that brings me to another quibble: this book does not follow a consistent style. For example, in some places emphasis is indicated by italic type while in others by bold. Sometimes examples are indented, sometimes not. Well, this is not surprising since some chapters drew heavily on previous publications.

There are a few places where the text is difficult or misleading. For example, on page 8 the text says, “In Massai, an External Possessor (“possessor raising”) construction allows a second object of the verb to be interpreted as a possessor of the other object” (emphasis mine—DJW). When one looks at the Massai example, however, one finds that the first object corresponds to the possessor and the second object corresponds to the theme; the order is “woman” followed by “animal skin.” What the reader must understand is that “second” does not refer to order, but to
coming “after” the “prior” thematic object. (Ah, there’s a generative metaphor lurking behind this use of “second.”)

The following sentence, on page 140, struck me as awkward: “Only if there is lexical stress (contrastive focus) on the recipient argument can a given ditransitive recipient be construed to be part of the focus domain.” If I understand this correctly, the following would be better: “Only if there is lexical stress (contrastive focus) on a ditransitive recipient argument can it be construed to be part of the focus domain.”

This work has benefited from new technology; there’s even an index entry for the “Google Search Engine,” now increasingly used as to search the world’s largest and most amorphous corpus; see pages 137 and 174. But it has suffered from technology, too; errors like “move” instead of “more” (p. 192, footnote 6) and “Reenan” instead of “Keenan” (p. 244 in the entry for Gross) are probably due to faulty OCR followed by editorial inattention.

Then there are some simple errors: on page 29, in example (18)b. there should be “it” or “so” after “instead he did”. On page 64, in “Culicover’s proposal is essential a version” there should by “ly” after “essential.” On page 101, “more often that” should be “more often than.” On page 167, “necessary and sufficient definitions” should probably be “necessary and sufficient conditions.” There are a few more minor errors that a copy-editor should have caught.

These quibbles do not diminish the importance of this book, nor should they discourage anyone from reading it. It is too good to miss.

Goldberg’s growing-body-of-work list

— 1988 —


— 1992 —


— 1994 —


— 2003 —


— 2004 —


— 2005 —


— Soon to come —

Dominey, P. F. and Inui, T. (submitted) “Miniature language learning via mapping of grammatical structure to visual scene structure in English and Japanese” manuscript.

Notes

1 Readers unfamiliar with Construction Grammar could acquaint themselves with it at http://en.wikipedia.org/wiki/Construction_grammar but is written to be read even by those who know little or nothing about CG.

2 Daniel 6:25-28 “This is the writing that is inscribed: MENE MENE TEKEL UPHRSIN. And this is its meaning: MENE—God has numbered [the days of] your kingdom and brought it to an end; TEKEL—you have been weighed in the balance and found wanting; PERES—your kingdom has been divided and given to the Medes and Persians.”