Constructions and generalizations

WILLIAM CROFT*

Abstract

Goldberg's Constructions at work makes an important contribution to the understanding of syntax by developing analyses for specific grammatical constructions from a usage-based constructional perspective and critically comparing generative analyses to them. It is argued here that some of the analyses that Goldberg offers may still be problematic (although they are superior to the generative alternatives), and in other cases, Goldberg can strengthen her defense of constructional analyses by offering a sharper critique of the generative alternatives.

Keywords: constructions; argument structure; island constraints; Subject-Auxiliary Inversion.

Constructions at work (*CW*) offers an alternative approach to grammar, one familiar to readers of this journal. Part I of *CW* (see §§1–3 of Goldberg's summary) provides a fine introduction to the constructional, usage-based approach to grammar, along with a critique of several generative analyses. Goldberg is doing important and valuable work in confronting analyses in the generative framework, in Part I and elsewhere in *CW*.

The central theme of *Constructions at work* (*CW*), as outlined in the introduction, is the phenomenon of linguistic generalizations. Generative grammar posits a Universal Grammar containing a set of general

grammatical properties that are hypothesized to be innate. In other words, the generalizations are already given. The fundamental problem with the UG approach to grammatical structures is that in fact grammatical generalizations are highly variable across languages (Croft 2001; see e.g., *CW*, 71, 193). If grammatical generalizations are not innate or even universal, then they must be learned.

Goldberg's proposed solution to the learning problem is found in Part II (see §§4–6 of her summary). Goldberg discusses learning argument structure, constraining generalizations (in general), and motivating the generalization over argument structure constructions. The chapter on constraining generalizations (Ch. 5; §5) surveys mechanisms for constraining generalization in the learning literature, including entrenchment, statistical pre-emption and type frequency. These concepts are (or should be) part of the arsenal of cognitive linguists defending a learning model for linguistic generalizations. More credit should be given to the work of Joan Bybee, however. Bybee's model of productivity include both type frequency and similarity of types (1995: 430), which Goldberg argues for. Also, Goldberg associates type frequency and openness of a schema (§5). In fact, Bybee (1995) argues that type frequency and openness of a schema are two different phenomena with distinct effects: type frequency motivates productivity but openness of a schema motivates a 'default' strategy, which is sometimes not the same as the most productive schema.

Chapter 6 (§6) is about comparing verbs and argument structure constructions as cues for sentence meaning, arguing that constructions are at least as good cues for sentence meaning as verbs. However, since 'sentence meaning' is taken to be something very close to construction meaning (transfer, caused motion), rather than the semantic domain of the verb, it is arguable that the observations are biased towards construction meaning.

Goldberg's more controversial proposals have to do with the learning of argument structure constructions (Ch. 4; §4 of her summary ends more cautiously). Goldberg observes that certain verbs occur much more frequently in particular argument structure constructions than other verbs. Goldberg reports an experiment in which it appears that skewed input speeds up the learning of a pattern. She also suggests that the meaning of the most frequent verb is highly general and essentially the same as the meaning of the construction as a whole (*CW*, 77–79; §4 compares the meanings of *put* and the caused-motion construction), and that the most frequent verb offers a way to learn the meaning of the relevant construction.

However, there are some problems with this hypothesis. First, there is evidence that forms with a high token frequency (such as 'give') do not

contribute to the productivity of a schema (Bybee 1985, 1995). Goldberg argues that the inconsistency is due to the fact that Bybee's morphological examples are completely substantive, whereas the syntactic constructions Goldberg investigates are schematic (*CW*, 90). But Bybee and Thompson (1997) show that frequency effects in syntax do reflect the autonomy of highly entrenched forms. For example, the high frequency English auxiliary verbs resisted the syntactic changes undergone by the other mostly lower frequency verbs and thus occur in idiosyncratic yet schematic syntactic constructions in Modern English. It has also been observed that crosslinguistically, 'give' is a syntactically idiosyncratic verb compared to other three-argument transfer verbs (Borg and Comrie 1985), probably due to its high token frequency.

Another question is whether the verb meaning of high-frequency verbs such as *put* are highly general. It is more accurate to say that the most frequent verbs are polysemous. Positing a highly general meaning for the verb implies a classical view of categorization, which Goldberg rejects (e.g., *CW*, 167). Thus it is not clear what meaning the construction should have, if that meaning is derived from a polysemous highly frequent verb. Even if the verb meaning is taken to be monosemous and highly general, the relationship between that meaning and the meaning of the construction is not entirely clear. If the meaning of the ditransitive construction were derived from the meaning of *give*, one would expect the ditransitive construction to include actual transfer as part of its meaning. Actual transfer is the central sense of the ditransitive, according to Goldberg (1995: 39). But as Goldberg herself notes, the ditransitive construction can be used for different modalities of transfer, including future transfer (*bequeath*), negation of transfer (*deny, refuse*), enablement of transfer (*permit*) and intended transfer (*bake, build*). But how would a child infer that in learning the range of the ditransitive construction, it is the modality (actual) that is dropped, but the transfer relation is preserved (see Croft 2003)? Goldberg concedes that the first verbs for the transitive construction are not canonical semantic transitives (*CW*, 79, citing Ninio 1999; see also Bowerman 1990). This poses the same problem in learning the range of the transitive construction.

Also, it is unclear what measure of frequency should be used. Goldberg notes that the high frequency of certain verbs in certain argument structure constructions is partly due to the fact that certain verbs are much more frequent overall (independent of which argument structure construction they occur in), and she suggests that relative frequency in the construction is the better measure. However, Goldberg's experiment tests only one novel construction, so only absolute frequency plays a role there. The question of whether absolute or relative frequency is the

significant factor in influencing the acquisition of argument structure constructions remains unanswered.

Finally, the basic fact about acquisition of syntax is that speakers/learners hear verbs (and other words) in constructions; they do not encounter either in isolation. Speakers must abstract both verb and construction from the complex whole they hear. It is possible that the acquisition of argument structure constructions is best explained in terms of the well-established factors of type frequency and similarity, and that high-frequency verbs do not play a major role in their acquisition (and in fact may have a different syntax).

Part III of *CW* (see §§7–9 in the summary) is about 'explaining' generalizations. Its primary aim is to show that semantic and discourse-functional properties of constructions provide a superior basis for generalizations about constructions than formal syntactic properties, using three case studies. These should be more easily learned, since they should be available in the social and physical context. I agree with Goldberg's conclusion, but not with the means by which she reaches this conclusion. The problem is that the grammatical generalizations are not easily reducible to semantic and discourse-functional properties in Goldberg's three case studies, and in fact not generally. This is my chief disagreement with Goldberg's approach.

In chapter 7 (§7), Goldberg challenges the syntactic analysis of so-called island constraints by proposing an alternative explanation in terms of discourse function or information structure. There is a vast literature on this problem, which I do not claim to master. One can certainly conclude from this literature that a purely syntactic account will not work: there are well-motivated positive exceptions (structures predicted to be ungrammatical by the syntactic account which are in fact grammatical). One can also more tentatively conclude that information structure, as in Erteschik-Shir's analysis that Goldberg endorses, plays a major role in explaining the patterns of (un)acceptability in this domain.

However, there are also positive exceptions to the information structure analysis, in particular in languages where the "extracted" elements remains in situ (*CW*, 152–155). Goldberg argues that extraction (and presumably, leaving a gap) increases processing load and combines with the pragmatic clash to lead to unacceptability (see also §7). But it is not clear to me why the pragmatic clash is allowed in the languages that allow it. Do these languages have the ability to express an information structure configuration that English (and similar languages) cannot? The whole area is extremely complex crosslinguistically: some languages allow violations of the Complex Noun Phrase Constraint (in some cases, only when a resumptive pronoun is used), while other languages are even more

restrictive than English, so that sentences that are not islands prohibit "extraction" (Hawkins 2004: 192–97 and references cited therein). It is clear that a categorical constraint, whether syntactic or pragmatic, will not account for the crosslinguistic facts. Instead, an explanation must be formulated in terms of gradient syntactic and/or pragmatic properties.

In chapter 8 (§8), Goldberg investigates the English Subject Auxiliary Inversion (SAI) construction. Both generative grammar and Fillmore and Kay's construction grammar argue that Subject Auxiliary Inversion has a wide range of functions that are so disparate that the only commonality is their formal structure, namely that the auxiliary verb precedes the subject, unlike the typical declarative construction. Goldberg argues that in fact the functions of the SAI construction form a radial category (*CW*, 170).

Unfortunately, SAI does not work quite like a radial category, as Goldberg herself notes: the prototype for the SAI functions doesn't exist (*CW*, 176). Instead, the functions of SAI seem to form a family-resemblance category: each shares some attributes with other members, but no member has all of the prototypical properties.

Hence the functions of the SAI construction are at best somewhat loosely related to each other. Does this mean that the only generalization linking together the SAI constructions is their form? In fact, Goldberg can strengthen her case by going on the offensive, questioning more strictly the alleged unity of form than she has done. Goldberg notes that in the wishes/curses function, the only auxiliary found is *may* (*CW*, 172). Also, in the conditional SAI, only certain auxiliaries occur:

(1)   Had she gone, they would be here by now.
(2)   Were she here, we could leave.
(3)   Should they come, we can ask them.
(4)   *May they come, we'll be able to leave.
(5)   *Have they eaten, then we'll serve dessert.

More importantly, SAI is only one structural property of otherwise diverse constructions. In some SAI constructions, the auxiliary is initial (polarity questions, conditionals, wishes/curses), while in others the auxiliary is preceded by another element (nonsubject information questions, initial negative adverbs, negative conjunct, positive rejoinder, exclamatives, standard of comparison). Goldberg observes that other restrictions are also found with particular SAI constructions: positive rejoinders and the standard of comparison SAI constructions cannot be followed by an overt verb phrase (*CW*, 176, 175), and wishes/curses do not allow

negative polarity items (*CW*, 173), and information questions require SAI only for nonsubject questions (*CW*, 171). These constraints do not follow from SAI per se, otherwise they would apply to all SAI constructions.

Hence one must posit constructions for each SAI function, each with its specific constellation of structural properties, one of which is SAI. One *could* then abstract a more schematic SAI construction from the collection of function-specific SAI constructions. But in a usage-based approach, why would a speaker do so? There is little functional unity to the different constructions that exhibit SAI. Moreover, what structural properties follow from SAI apart from SAI itself? Goldberg cites New-meyer (1998) as claiming that SAI occurs only in main clauses (*CW*, 168), but many have shown that it can occur in subordinate clauses under certain pragmatic conditions (*CW*, 180 and references cited there-in). The standard of comparison is also a subordinate clause and yet allows SAI.

Newmeyer (cited in *CW*, 178) argues that there is no motivation for SAI's structure. Goldberg replies that auxiliaries indicate polarity and that the noncanonical position of the auxiliary in SAI 'conveys that the polarity involved is not the canonical, positive polarity' (*CW*, 180). This argument can be strengthened by bringing together two typological obser-vations. First, when information focus is on the polarity (or more gener-ally, the mood) of the proposition (Dik 1997: 331), as it is in most of the English SAI constructions, it is crosslinguistically realized on either the verb or a separate finite element (Dahl 1979), including the English auxiliary (Bolinger 1990, Ch. 14). Second, in languages in which the canonical topic-comment information structure is SVO, VS order is fre-quently used for noncanonical information structures (Sasse 1987, 2006; Lambrecht 2000). Putting these two observations together, we can extend the VS order generalization to AuxS order for a noncanonical polarity focus information structure in an SVO language. This in turn may allow us to recast the SAI family as a genuine radial category centered around a polarity focus construction (perhaps the polarity question).

To me, this is the right way to counter analyses claiming the superiority of formal syntactic generalizations: first, show that they are not in fact very good generalizations, and second, show that there is functional mo-tivation for the structural patterns that do exist. This is the approach I take to grammatical relations in *Radical Construction Grammar* (Chs. 4 and 8). Rather than arguing for a functional generalization for subject and object, which is probably not tenable, I argue that the syntactic gen-eralizations are actually false, and the patterns that exist are motivated by the discourse functions of the relevant constructions.

In chapter 9, Goldberg offers pragmatic motivations for a number of proposed cross-linguistic generalizations on the realization of participants as syntactic arguments. Although I agree with the spirit of Goldberg's analysis, I found this chapter not very satisfying, partly because the cross-linguistic facts are more complex (for both argument realization and word order). A general functionally motivated solution to the problem must integrate both the construal of events as verbal expressions in argument structure constructions and the salience or topicality of referents (Croft 1991, 1994, 1998).

A minor issue is Goldberg's discussion of argument omission (*CW*, 195–97; §9). Goldberg compares the typologically widespread omission of recoverable arguments in languages like Russian and Japanese with the omission of arguments in the English 'deprofiled object construction' (*Tigers only kill at night*). However, the widespread omission of arguments is an example of what Fillmore (1986) calls definite null instantiation (DNI): a specific definite referent is recoverable in the context; whereas the English deprofiled argument construction is an instance of indefinite null instantiation (INI): an indefinite referent is recoverable in the context. It is clear that DNI referents are semantic arguments of the verb in the relevant argument structure construction, but it is not clear whether INI referents should be analyzed as arguments in the relevant argument structure construction (see Croft 2001: 276–80).

I certainly agree with Goldberg that the syntactic structures of constructions can be motivated by their function; my comments above are chiefly to suggest that a typological perspective makes it easier to identify the functional motivations (though it also reveals the facts to be more complex). I believe that it is reasonable to assume that functional motivation probably facilitates the learning of those constructions in language acquisition: it constrains the likely mappings of function onto form. However, I am not sure how much functional motivation offers a solution to the problem of constructing *generalizations* about constructions in a language. Most constructions have a range of functions that cannot be captured in a classical, necessary and sufficient conditions category. Hence speakers/learners must still figure out the range of functions of a construction based on the construction's form and functions that they have been exposed to. But a construction's formal syntactic properties are no more classically organized.

In conclusion, I wish to emphasize that I am in almost complete agreement with Goldberg's research program as presented in *CW*. There is much of value in the case studies in *CW* that I have not discussed; it is unfortunately in the nature of commentaries to pick on weak spots rather than rehearsing the strengths of a work. I believe that the direction of

research represented by *CW* is essential for genuine advances in our understanding of the nature of syntax.

Received 25 July 2007   *University of New Mexico*
Revision received 2 February 2008

References

Bolinger, Dwight
    1990   *Intonation and its Uses*. Stanford: Stanford University Press.
Borg, A. J. and Bernard Comrie
    1985   Object diffuseness in Maltese. In Plank, Frans (ed), *Objects*. New York: Academic Press, 109–126.
Bowerman, Melissa
    1990   Mapping thematic roles onto syntactic functions: are children helped by innate linking rules? *Linguistics* 28, 1253–1289.
Bybee, Joan L.
    1985   *Morphology: A Study into the Relation Between Meaning and Form*. Amsterdam: John Benjamins.
Bybee, Joan L.
    1995   Regular morphology and the lexicon. *Language and Cognitive Processes* 10, 425–455.
Bybee, Joan L. and Sandra A. Thompson
    1997   Three frequency effects in syntax. In Juge, Matthew L. and Jeri O. Moxley (eds), *Proceedings of the 23rd Annual Meeting of the Berkeley Linguistics Society*. Berkeley: Berkeley Linguistics Society, 378–388.
Croft, William
    1991   *Syntactic Categories and Grammatical Relations: The Cognitive Organization of Information*. Chicago: University of Chicago Press.
Croft, William
    1994   Voice: Beyond control and affectedness. In Hopper, Paul and Barbara Fox (eds), *Voice: Form and Function*. Amsterdam: John Benjamins, 89–117.
Croft, William
    1998   Event structure in argument linking. In Butt, Miriam and Wilhelm Geuder (eds), *The Projection of Arguments: Lexical and Compositional Factors*. Stanford: Center for the Study of Language and Information, 1–43.
Croft, William
    2001   *Radical Construction Grammar: Syntactic Theory in Typological Perspective*. Oxford: Oxford University Press.
Croft, William
    2003   Lexical rules vs. constructions: A false dichotomy. In Cuyckens, Hubert, Thomas Berg, René Dirven, and Klaus-Uwe Panther (eds), *Motivation in Language: Studies in Honour of Günter Radden*. Amsterdam: John Benjamins, 49–68.
Dahl, Östen
    1979   Typology of sentence negation. *Linguistics* 17, 79–106.
Dik, Simon C.
    1997   *The Theory of Functional Grammar, part 1: The Structure of the Clause*, 2nd rev. ed., ed. Kees Hengeveld. Berlin: Mouton de Gruyter.

Fillmore, Charles J.
   1986   Pragmatically-controlled zero anaphora. In Nikiforidou, Vassiliki et al. (eds), *Proceedings of the Twelfth Annual Meeting of the Berkeley Linguistics Society*. Berkeley: Berkeley Linguistics Society, 95–107.

Golberg, Adele E.
   1995   *Constructions: A onstruction Grammar Approach to Argument Structure.* Chicago: University of Chicago Press.

Hawkins, John A.
   2004   *Efficiency and Complexity in Grammars.* Oxford: Oxford University Press.

Lambrecht, Knud
   2000   When subjects behave like objects: an analysis of the merging of S and O in sentence-focus constructions across languages. *Studies in Language* 24, 611–682.

Newmeyer, Frederick J.
   1998   *Language Form and Language Function*. Cambridge, MA: MIT Press.

Ninio, Anat
   1999   Pathbreaking verbs in syntactic development and the question of prototypical transitivity. *Journal of Child Language* 26, 619–653.

Sasse, Hans-Jürgen
   1987   The thetic-categorical distinction revisited. *Linguistics* 25, 511–580.

Sasse, Hans-Jürgen
   2006   Theticity. In Bernini, Giuliano and Marcia L. Schwartz (eds), *Pragmatic Organization of Discourse in the Languages of Europe*. Berlin: Mouton de Gruyter, 255–308.