

# 2.3 Goldberg's Construction Grammar

*Kris Ramonda*

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## 1 Introduction

How is meaning transmitted through language? Perhaps the most salient marker of semantic information is the words themselves. However, the words alone do not account for the wide range of semantic meaning conveyed in a language. Syntactic organization can encode semantic information as well, in that the way in which words are arranged can impact the meaning of a phrase, independent of the individual words themselves. In fact, as a general principle, any change in syntactic form will entail, to a greater or lesser degree, a difference in meaning (Bolinger, 1968). This is Principle of No Synonymy of Grammatical Forms (Givón, 1985; Langacker, 1985), and it lies behind the development of Construction Grammar. Consider the following examples from Fillmore (1968: 49):

- (1) Bees are swarming in the garden.
- (2) The garden is swarming with bees.

Although very similar in meaning, (1) suggests that bees are limited to one area of the garden, while (2) gives the impression that the entire garden is full of bees. These differences derive from the fact that (2) is a statement about the garden (and, by implication, all of it), while (1) is about bees, and where they are located.

Let us now turn to a case in which the same verb occurs in a typical and an atypical usage (Goldberg, 1995: 29):

- (3) Sam sneezed.
- (4) Sam sneezed the napkin off the table.

In (3), the verb *sneeze* appears in its typical form as an intransitive verb, whereas in (4) we see a more marked, yet still plausible phrase in which *sneeze* takes a direct object in a caused motion construction. This less frequent use of the verb requires an 'imaginative interpretation' (Tomasello, 1998) in which the normally intransitive verb *sneeze* takes on a transitive quality. Although an atypical usage, it is not difficult to imagine a sneeze leading to the displacement of a napkin. The key point here is since the typical usage of the verb *sneeze* is as an intransitive verb, consideration of the verb alone could not predict its semantic value in the caused motion construction. It must therefore be assumed that the semantic notion of motion comes from the argument structure construction itself (Sub V Obj Obl). A defining feature of a construction, then, lies in the fact that the meanings associated with it cannot be fully derived from the meanings of its constituents, whether these be words, morphemes or phrases (Goldberg, 1995). It should be noted that constructions can present themselves in varying sizes and complexities, ranging from full sentence configurations (as in the above case of the caused motion construction), through phrases of various kinds, to patterns of word-formation. Thus, words can count as constructions, in case their meanings cannot be fully derived from their component morphemes. Even monomorphemic words can be regarded as constructions, since their meaning cannot be derived from their phonological makeup.

## 2 Goldberg and Construction Grammar

Although 'construction' as a pretheoretical notion has been long assumed, the theoretical underpinnings of Construction Grammar were developed and outlined in detail by Goldberg (1995). In this seminal work, she argued that sentence meaning was determined not only by the verb and its arguments, but also by the construction in which these occur. Below we illustrate the 'core' constructions studied by Goldberg, along with some of the constraints on their

use. We then discuss some of the differences between the constructionist and generative approaches and the basic tenets of Construction Grammar.

## 2.1 The English Ditransitive Construction

The English ditransitive construction has, at its core, the notion of the intended transfer of something to someone. Intention is one of the important semantic constraints, as is shown in the examples below (Goldberg, 1995: 143):

- (5) Joe painted Sally a picture.

In (5), Sally is the intended recipient of Joe's picture. He painted it with the intention of giving it to her.

- (6) \*Hal brought his mother a cake since he didn't eat it on the way home.

Example (6), however, sounds odd because presumably if Hal intended the cake for his mother, it would never have crossed his mind to eat it on the way home.

A second constraint requires that the recipient be an animate being, as shown in the following examples (Partee, 1965: 60)

- (7) I brought Pat a glass of water.  
(8) I brought a glass of water to Pat.  
(9) \*I brought the table a glass of water.  
(10) I brought a glass of water to the table.

Examples (7), (8) and (10) are all felicitous because in the ditransitive (7), the recipient, Pat, is animate, while in (8) and (10), paraphrases with *to* do not require the animacy of the destination. The ditransitive (9), on the other hand, sounds odd because a table is an inanimate object.

In addition to requiring animacy, the recipient must also be *willing*, which is why the second of the next two examples sounds rather strange (Goldberg, 1995: 146)

- (11) Bill told Mary a story.  
(12) \*Bill told Mary a story, but she wasn't listening.

While in (11) it is assumed that Mary is a willing participant to Bill's storytelling, (12) is odd and sounds contradictory. How could Bill have told Mary a story if she wasn't listening? The ditransitive implies a willing recipient and that is what is wrong with (12).

## 2.2 The English Caused Motion Construction

The English caused motion construction involves someone or something causing someone or something to move (either literally or metaphorically) to some place. Here are some examples from Goldberg (1995: 152):

- (13) Mary urged Bill into the house.
- (14) Sue let the water out of the bathtub.

The caused motion construction has a number of idiosyncratic exceptions that need to be accounted for. Goldberg has outlined two constraints, one being the causer argument constraint, the other being the direct causation constraint. The causer argument constraint stipulates that the cause must be either an agent or a natural force, but not an instrument. To illustrate this, consider the following (Goldberg, 1995: 165):

- (15) *Chris* pushed the piano up the stairs.
- (16) *The wind* blew the ship off course.
- (17) \**The hammer* broke the vase onto the floor.

The second constraint, direct causation, is tied to a much more nuanced set of principles. Only one of these will be mentioned here. This is that direct causation implies that the object has no opportunity to make a cognitive decision about the scenario. Goldberg (1995: 166) draws attention to this in the following examples:

- (18) Sam coaxed Bob into the room.
- (19) Sam frightened Bob out of the house.
- (20) \*Sam encouraged Bob into the room.

The verbs *coax* and *frighten* are acceptable precisely because the direct object, Bob, is directly under the influence of Sam's control. In other words, Bob's psychological state is such that he has not made any cognitive decision regarding the process of entering the room. In (20), on the other hand, it is clear that Bob, encouraged as he was, made the cognitive choice to enter the room. It is important to sound a note of caution here, however, as this account does not explain the existence of attested examples such as 'we must encourage children into libraries'. This suggests that Goldberg was perhaps relying too heavily on invented examples and that further corpus-based investigations of her theory would be useful.

### 2.3 The English Resultative Construction

The following are examples of the English resultative construction, which describe what someone or something caused someone or something to become (Goldberg, 1995: 192):

- (21) He ate himself sick.
- (22) She cried herself to sleep.

In both (21) and (22) we can observe that someone is causing someone to undergo change. Once again, we will examine two semantic constraints: one dealing with time and the other with adjectival gradability. The first constraint means that the result is inferred to have happened immediately, as can be seen in the next example (Goldberg, 1995: 195):

- (23) Chris shot Pat dead.

Goldberg explains that the death of Pat was an immediate result of Chris shooting her. If, for instance, Chris shot Pat, but she survived for a while, and later died in the emergency room, then the above phrase would be inappropriate.

Adjectival gradability is the crux of the second constraint which we will now observe. Words which are gradable and exist along a continuum of more or less, are disallowed in the resultative construction (Goldberg, 1995: 195):

- (24) \*He drank himself funny/happy.
- (25) \*The bear growled us afraid.
- (26) \*He shot her wounded.

Adjectives such as *funny*, *happy* and *afraid* are all gradable in that one can be very happy or just a little happy; something can be extremely funny, or somewhat funny and so on. Conversely, other adjectives clearly have a binary option of one or the other. For instance, one is either alive or dead, crazy or not crazy, which is why the following phrases are instances of the resultative construction (Goldberg, 1995: 195–6).

- (27) Chris shot Pat dead.
- (28) He drove her crazy.

Some further issues regarding resultatives are addressed in Goldberg and Jackendoff (2004, 2005).

## 2.4 The Way Construction

At its core, the *way* construction involves creation of and movement along a path, sometimes with difficulty, as in the following example (Goldberg, 1995: 199):

- (29) Frank dug his way out of the prison.

Here, Frank creates a path and moves along that path. The path itself, however, need not necessarily be concrete, as can be seen in the following (Goldberg, 1995: 205):

- (30) Joe bought his way into the exclusive country club.

Here, the path is abstract, meaning that Joe had to manoeuvre around social obstacles in a metaphorical sense. When the *way* construction involves the creation of a metaphorical path, it entails some sort of obstacle to surmount or difficulty to overcome. The two cases below illustrate this nuance of a metaphorical barrier (Goldberg, 1995: 204):

- (31) \*Sally drank her way through the glass of lemonade.  
(32) Sally drank her way through a case of vodka.

Unless Sally has an intolerant palate for soft drinks, (31) sounds more marked than (32) because the act of drinking lemonade usually doesn't require any special effort. A case of vodka, for obvious reasons, would entail much more effort on Sally's part.

In the above four argument structure constructions (ditransitive, caused motion, resultative and the *way* construction), we have seen examples of the core meanings of each and how semantics serves to constrain these constructions in a highly systematized manner. Later, we will find that those core senses of constructions are also related to and interact with peripheral senses which are less prototypical and more abstract. First, however, we will contrast Construction Grammar with other mainstream theories and discuss some of its basic tenets.

## 3 Theoretical Differences between the Constructionist and Generative Approaches

As a theoretical model, Construction Grammar diverges from a Chomskyan view of language in several important ways. The Chomskyan view maintains that language is an innate capacity and that people are hard-wired to acquire

language. This view of language is proposed in part because of the complexity of grammatical models assumed under Universal Grammar. This complexity renders it implausible that language could be acquired from input alone, but rather that language acquisition is guided by specific constraints and parameters. Construction Grammar, on the other hand, assumes a holistic cognitive approach to language learning involving simpler assumptions regarding syntax, which reduces complexity and thus allows for language to be learnable from input (Goldberg, 2006).

Constructionist and generative approaches differ in terms of their approach to 'peripheral' language. It is widely acknowledged that every language has idiosyncratic structures particular to that language. Given that these structures are not universal and therefore cannot be accounted for by an innate, hard-wired view of acquisition, the generative approach treats idiosyncratic structures as peripheral and they go largely unexamined. In contrast, the constructionist approach views these unusual patterns as being subject to the same learning mechanisms as more general patterns. If idiosyncratic patterns can be acquired through input only, then it is reasonable to assume that more frequent, universal patterns could also be learned in the same manner (Goldberg, 2006).

Another way in which the constructionist approach departs from the generative approach relates to the encoding of argument structure information. Under the generative approach, it is assumed that the verb determines the number of its arguments. Take, for instance, the verb *give*, which specifies three arguments (subject, direct object and indirect object), as in *John gave Jane a letter*. A constructionist approach would attribute argument structures not to the verb, but to syntactic constructions in which it occurs. Goldberg (1995: 11) points out that a major limitation of the verb centred approach is that a verb can often appear in a large number of distinct argument structure constructions, as with the case of *kick*:

1. Pat kicked the wall.
2. Pat kicked Bob black and blue.
3. Pat kicked the football into the stadium.
4. Pat kicked at the football.
5. Pat kicked his foot against the chair.
6. Pat kicked Bob the football.
7. The horse kicks.
8. Pat kicked his way out of the operating room.

Rather than maintain that the verb *kick* has eight different syntactic representations, the constructionist approach accounts for the different complement configurations in terms of the constructions in which the verb occurs. Table 2.3.1 illustrates some of these.

**Table 2.3.1** English argument structure constructions

1. Ditransitive	X causes Y to receive Z	Subj V Obj Obj2 Pat kicked Bob the football.
2. Caused motion	X causes Y to move Z	Sub V Obj Obl Pat kicked the football into the stadium.
3. Resultative	X causes Y to become Z	Subj V Obj Xcomp Pat kicked Bob black and blue.
4. The Way construction	X creates Y to move Z	Subj V Obj(way) Obl Pat kicked his way out of the operating room.
5. Conative	X directs action at Y	Subj V Obl(at) Pat kicked at the football.

#### 4 Key Tenets of Construction Grammar

In addition to establishing syntactical-semantic links, another cornerstone of Construction Grammar is the notion that basic human experiences correspond to central senses in construction argument structure. Goldberg defines this as the Scene Encoding Hypothesis and explains:

Languages are expected to draw on a finite set of possible event types, such as that of someone causing something, someone experiencing something, something moving, something being in a state, someone possessing something, something causing a change of state or location, something undergoing a change of state or location, and something having an effect on someone. (Goldberg, 1995: 39)

Constructions represent basic human experiences through structures which correspond to basic general events such as location, cause, transfer, result and so on, as in the above example (*John gave Jane a letter*) with the notion of transfer. The assumption is that the development and emergence of syntactic constructions in language evolved from a need to linguistically encode these event types (Behrend, 1998).

Another aspect of the constructionist framework is its interest in unusual, low-frequency constructions, for the light they might shed on the acquisition of more general patterns. As mentioned earlier, these idiosyncratic patterns are often disregarded in generative approaches because Universal Grammar cannot account for cross-linguistic anomalies. Indeed, one strength of the input-based, non-nativist view is that idiosyncratic constructions are expected cross-linguistically and support the notion that language can be learned without the need for innate hard-wiring. Goldberg (2003) cites the

covariational-conditional construction (The Xer the Yer; *The more you think about it, the less you understand*) as an example of an unusual, low frequency construction. The word *the* (which is etymologically distinct from the definite article) is not attached to a head noun and there is no conjunction combining the two phrases (which might indeed be verbless: *The more the merrier*). As such, the covariational-conditional is considered a unique construction due to the unpredictability of its form. Yet the construction is learnable, suggesting higher frequency, cross-linguistically attested constructions should be at least as easy, or even easier to learn on an input-based, non-nativist account (Goldberg, 2006).

## 5 Construction Grammar and Polysemy

Just as the lexicon encodes semantic information via form-meaning connections, so does the syntax, by linking distinct formal constructions with a meaning. In other words, there is no stark division between syntactic and lexical constructions, because they obey the same basic structural data arrangement (Goldberg, 1995: 7). It is therefore expected that there will be commonalities between syntactic and lexical constructions. One of these commonalities is the occurrence of polysemy. Polysemous words have more than one meaning. Essentially, a word has a core, prototypical meaning, which is the most frequent and oftentimes most concrete sense of the word. Surrounding this core meaning are other, less concrete, less frequent, and more peripheral senses of the word, organized in terms of a radial category (for further discussion, see Taylor, 2003). At the centre of a radial category lies the prototypical or central sense of the word. Just as individual words can have multiple senses and exist in radial categories, so too can syntactic constructions.

Goldberg (1995) illustrates how argument structure constructions, much like individual lexical items, can exhibit polysemy. Consider the use of the ditransitive, in which there is a transfer of a patient argument to a potential recipient (X causes Y to receive Z) (p. 34):

(33) John threw Jane the ball.

(34) Chris baked Jan a cake.

In (33), it is clear that Jane received the ball. However, in (34) all that is known with surety is that Chris baked a cake and that his intention was for Jan to receive that cake. It is unclear whether or not Jan received the cake. These multiple senses exemplify what Goldberg terms *constructional polysemy*, defined

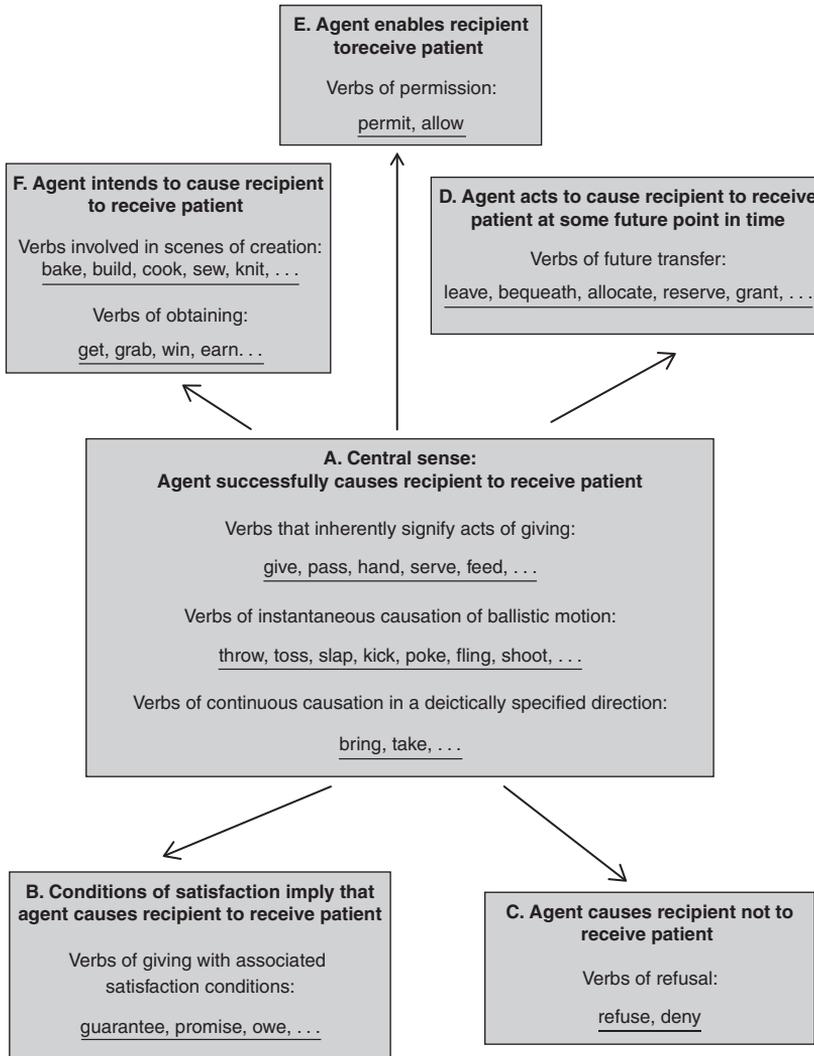


Figure 2.3.1 Constructional polysemy of the ditransitive argument structure construction (adapted from Goldberg, 1995: 38)

as when ‘the same form is paired with different but related senses’ (1995: 33). In spite of having multiple senses, the central sense defines the core meaning of the argument structure construction, as in the above case of the ditransitive with X causes Y to receive Z. Below are some further examples of slightly different senses of the ditransitive:

- (35) Bill promised his son a car.
- (36) Joe allowed Billy a piece of candy.
- (37) Joe refused Bob a raise in salary.

In (35) there is no indication that Bill has given his son a car. (36) implies that a piece of candy was not denied to Billy, but whether Billy acted on Joe's permission is not clear. Finally, (37) is a case in which transfer is denied. These examples deviate from the central sense of the ditransitive, which is to cause transfer, but retain the general sense of transfer (or lack thereof). The examples illustrate how argument structure constructions can behave in much the same way as individual lexical items in that both have core or central meanings, around which multiple other senses reside in radial categories. Figure 2.3.1 illustrates the polysemy of the ditransitive construction.

## 6 Conclusion

Although the pretheoretical notions of construction has been current for many years, Goldberg's landmark work (1995) and subsequent publications have laid out in a systematic manner a unifying theory of argument structure constructions. The theory also offers promising implications for pedagogical application (Holme, 2010; Littlemore, 2009). As mentioned, a major concern of the theory has been the study of 'peripheral', low-frequency, and 'marginal' constructions. However, precisely because they are low-frequency, there is often a lack of authentic data substantiating their use. For example, many of the oft-cited examples of constructions – such as the transitive use of *sneeze*, cited at the beginning of this chapter – yield few or no results in corpus searches. While this fact in itself does not impact on the validity of the theoretical approach, it does raise some questions for its pedagogical application. It is for this reason that Littlemore (2009) has suggested that future research should hone in on the most useful and frequent constructions which do appear in authentic texts and materials so that pedagogically informed research in Construction Grammar can be applied in language classrooms.

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