Amr M. El Zawawy
Alexandria University, Egypt

Rethinking Construction Grammar: Contributions and outstanding questions

Abstract: Construction Grammar has hitherto received thorough scholarly attention around the world. It provides plausible accounts for the peculiarity of the idiomatic structures. Its central contribution is that humans are not born with blueprints for language learning: humans do learn language through constructions that are stored since infancy then modified. It also emphasizes linguistic diversity as a stepping stone for comparative and contrastive analyses. However, some questions are posed in the course of the present study that require refutations. The nature of constructions is still not clear-cut, and argument structures emphasize relevance and pragmatic analysis at the expense of co-text, and the Maximized Motivation Principle is in need of reconsideration in the light of language typology.

1. Introduction:

Construction Grammar has recently stood out as a theory of language that foregrounds cognition as opposed to the traditional, entrenched concepts of Transformational Grammar. The new theory is no longer in its bud, and has received thorough scholarly attention around the world. Several off-shoot studies that focus on language acquisition (Construction Grammar for Kids) and semiotics (e.g. Sign-Based Construction Grammar) have been also made. A major contribution of Construction Grammar is its emphasis on the form-meaning pairings and the refutation of the implausibility of the hard-wired language ability. It has likewise distinguished between usage-based analysis (e.g. Goldberg's approach), where pragmatics is brought to the fore, and radicalism (Croft's approach) as an exclusively formal architecture for the new model. Construction Grammar is now considered a seminal avenue

for research in the data-driven description of language and language acquisition (cf. Ohori, 2002).

Despite its merits, Construction Grammar has left some questions unexplored. The present study is an attempt to determine the contributions of Construction Grammar in some detail and, at the same time, raise these questions and explore them in order to gain useful insights into the theory and await refutations from scholars in the field.

2. Contributions:

2.1. Constructions, the basic units of analysis:

The most important aspect of Construction Grammar is the fact that constructions are considered the starting point for linguistic analysis on all levels. The previous approaches to sentences as made up of lexical items or phrases are replaced by the notion of 'constructions', which inherently resembles a 'gestalt' of some sort. A simple sentence like 'John married Mary' is thought of by Construction Grammarians as a construction, with the verb 'marry' playing a pivotal role (cf. El Zawawy, 2009). Each word in this sentence is also considered a construction possessing pairings of form and meaning. This approach also accounts for the peculiarity of the idiomatic structures that require *whether it* and existential *there*.

2.2. Language acquisition:

A central contribution of Construction Grammar is that humans are not born with blueprints for language learning: humans do learn language through constructions that are stored since infancy then modified. Goldberg (2005: passim) proves that universalist approaches to language learning encounter many exceptions that endanger their integrity; what is at work is not universals per se but constructions that are language-specific.

In fact, Construction Grammar provides a solid ground for going beyond TG's genetic programming. The well-known experiment of getting children to provide plurals for nonsense words and further failing to discover anomalies or linguistic irregularities of the type of *write:*

wrote: written is no more than getting the wrong end of the stick: children do add *–s* a as a marker of plurality but only after generalizing that *wug*, for instance, is a lexical construction capable of being analyzed into *wug* + zero or (–s). Or they generalize that *write* is a lexical construction that belongs to the general abstract term VERB, which permits the addition of (–ed). When recognizing that *write* is a strong verb, children do modify the construction *write* by entering its variations *wrote* and *written*, respectively, as other sub-constructions, different in phonology, morphology and syntax, and, of course, semantics. Where, then, is genetic programming? Tomassello (nd: 11) also provides the following criticisms of Transformational Grammar:

> This approach creates two major problems. The first is how any given child, learning any given language, can link the abstract categories of the innate universal grammar to the particulars of the particular language she is learning (the linking problem). The second is how to account for changes in children's language over time, given that the innate universal grammar itself does not change across development (the continuity problem).

2.3. Radicalism:

Croft's Radical Construction Grammar is a step towards reopening vistas for contrastive analysis. Instead of the hackneyed approaches to similarities and differences across languages that may be typologically incompatible, RCG is concerned with language-specific phenomena. Croft (2005) argues that universalist phenomena of movements of relative clauses and passivization are by no means universal: some sentences contain verbs that cannot be turned into active (e.g. He was hit by a car) and relative clauses cannot sometimes be moved (e.g. A man who I had met came in [after Croft, ibid]). In this sense, diversity is emphasized. Moreover, RCG explains linguistic universals through assuming a universal conceptual space. He defines that space as follows:

> Conceptual spacerepresents a universal structure of conceptual knowledge for communication in human beings. (Croft 2001: 105)

In this respect, the RCG approach accounts for the cognitive plausibility of grammar through cross-linguistic patterns of grammatical structure, which are motivated by meaning, which in turn emerges from conceptual structure.

3. Outstanding Questions

3.1. What are constructions, once more?

Although this question might be balked at by many constructionists, there is still haziness about the notion 'constructions', especially the status of pure idioms, tense and Croft's atomic units.

Goldberg (2003:219) provides the following definition:

> Any linguistic pattern is recognized as a construction as long as some aspect of its form or function is not strictly predictable from its component parts or from other constructions recognized to exist.

Clear as it stands, the definition raises the question of whether or not pure idioms are considered constructions. Typically, pure idioms cannot be interpreted on the basis of their constituent words (cf. Palmer, 1996; Lyons, 1996). Thus, they can be intuitively included in constructions *par excellence*. Yet Goldberg and Casenhiser (2007:2) maintains:

> Nonetheless, the majority of linguists are willing to apply the term 'construction' to certain grammatical patterns that have unusual quirks in either their formal properties or their semantic interpretation (or both) that make them ill suited for universal status. That is, these cases do not follow completely from any general principles and so their patterns can not be predicted; they must be learned piecemeal. Notice, however, that it is not the case that these are simple idioms to be learned as individual chunks. They are in fact phrasal *patterns* with identifiable and definable rules (original emphasis).

The point made by Goldberg and Casenhiser above pertains to the term 'pattern' and the rules that patterns follow. But do pure idioms have no rules? Yes and no. Pure idioms have characteristics which are tantamount to rules, such as nonanalysability, compositeness, opacity, etc. They might also exhibit some rigid rules (though not all of these rules are strictly observed by native speakers), like strict word-order and weird concord (e.g. *It's dog eat dog*;

Still waters run deep), among others. Goldberg and Casenhiser (ibid), moreover, take a rather intermediate position by stating that:

> The majority of constructionists argue that not only are phrasal grammatical patterns constructions, but grammatical patterns that combine two or more morphemes lexically are also constructions. Still other theorists emphasize the parallels between morphemes, words, idioms and larger phrasal patterns by apply the term "construction" to any conventional pairing of form and function, including *individual* morphemes and root words along with idioms, partially lexically filled and fully general linguistic patterns (original emphasis).

Their examples include 'jog someone's memory' as an idiom (partially filled), which can be discovered from one of its components (see Cruse, 1986:35-37 for further discussion).Although they do not provide arguments for or against the inclusion of pure, fossilized idioms in 'constructions', the implication is that they are so. However, the clash stems from stating that 'patterns' are not chunks to be learned or simple idioms, but rather phrasal ones with specific rules. Kay and Fillmore (1999) discuss the example *what's* X *doing* Y (as in *What am I doing reading this paper*?). The example is obviously partially idiomatic, and is a good choice to fit the purposes of their discussion. Like all constructions, they eschew the intractable one like 'A new broom sweeps clean' or 'to have a chip on one's shoulder'. Evans and Green (2006:667ff) have noticed the problem and played it safe by positing that Goldberg's Construction Grammar is a special model:

> [I]t is important to point out that her definition of a construction differs somewhat from the definition assumed by Langacker in his theory of Cognitive Grammar… It also follows from Goldberg's definition of a construction that a complex word, phrase or sentence (which are all constructions in Langacker's theory), will only count as a construction in Goldberg's model if some aspect of its form or meaning cannot be predicted from its subparts.

In fact, Evans and Green's classification is plausible enough: it eschews impracticality by considering Goldberg's model as primarily usage-based as opposed to Croft's Radical Construction Grammar. Croft (2001: 362-363) provides a taxonomy of constructions, at the bottom of which are lexical items. An example of pure idioms is given, namely 'pull one's

leg'; thus, it can be safely said that, in Radical Construction Grammar, idioms, whether pure or not, are constructions.

However, Croft, in the taxonomy just explored, considers independent words atomic: grammatical categories have no independent status, and are defined in relation to constructions within which they occur. Croft's model, as regards this aspect in particular, suffers a serious deficiency. While it allows a wide range of lexical items and phrases to be considered constructions, independent words are not the sole atomic units of language. A large number of words are capable of being further analyzed into nuclear units called phonoaethemes. Bender (nb:10-11) provides a useful inventory of phonoaesthetic combinations. They can be considered constructions smaller than Croft's 'lexical items':

FORMS	EXAMPLES	SEMANTICS
-ag	lag, flag (v.), sag, bag, drag	`droopy' and `flabby'
-amble	amble, ramble, scramble, shamble	`locomotion'
-ash	gnash, crash, trash, smash, bash, dash	`breaking' or `fragments'
-ee	shivaree, jamboree, jubilee, spree, hoopee, whee, free, yippee, glee	`absence of restraint' carefree abandon'
-eazy	sleazy, greasy, queasy	`the sleaze factor'
-ician	logician, beautician, mortician, magician, syntactician, dietician	`practicioner'
-icious	delicious, luscious, scrumptious, nutritious, voluptuous, licentious	`sensual indulgence, `appealing to the senses'
-ump	hump, rump, bump, crump, lump, stump	`heavy masses'
-ush	lush, slush, gush, flush	`moist' and `oozy'
-utter	mutter, stutter, sputter, splutter	`utter'
-urry	scurry, worry, flurry, blurry, hurry	`haste' and `confusion'
ob-	objectionable, obnoxious, obtrusive, obstreperous, obstinate	`objectionable'

cr-	crawl, cringe, creep, crumple	`bent'
fl-	flitter, flow, flicker, flurry	`phenomena of movement'
gl-	glitter, glow, glare, gleam	`visual phenomena'
sl-	slip, slide, sled, slime, sledge, sleigh, sluice	`horizontal movement', `lack of traction'
sw-	swoop, swell, swish, swoon, swagger	`flourish', `sweep'
tor-	torture, torment, tortuous	`pain'
tur-	turbulent, turment, turmoil	`violence'
tw-	twist, twirl, tweak, twine, twinge	`twisting motion'
vi-	vituperative, vitriolic, vindictive, vicious	`intense ill-temper'

Table 1: At tabulation of Bender's phonothemes.

Thus, Croft's taxonomy should have a lower level under 'atomic and specific'.

The idea of searching for 'nuclear' units entails the problem of grammatical categories—which is as yet unsolved. Croft (ibid) considers grammatical categories as word class membership and functional roles. As such, he ignores tense as an inherent marker of time not only in sentences but even in independent words. The argument is that: if Croft assumes radicalism in his model, and Goldberg defines hers as usage-based, then both should not agree on omitting tense as a plausible construction. Croft disregards tense, since it cannot stand alone. Moreover, Goldberg (2003:221) furnishes the following analysis of an example sentence that is broken down into constructions as follows:

a) [What did Liza buy the child?]

(b) 1. Liza, buy, the, child, what, did constructions (i.e. words)
2. Ditransitive construction
3. Question construction
4. Subject–Auxiliary inversion construction
5. VP construction
6. NP construction

Her analysis obviously omits tense as a construction, although it is made up of pairings of form and meaning.

3.2. Argument structure: is it really newfangled?

A major feature of usage-based Construction Grammar is its emphasis on argument structure. Goldberg (2005) elegantly argues against the Argument Realization Principle (ARP). The Principle states that 'there must be one argument XP in the syntax to identify each subevent structure template (Goldberg, 2005:2). Her arguments rest upon the communicative necessities of situations, where arguments are not always expressed. Her alternative is a return to argument structure and the exploration of what she calls 'participant roles'. She (ibid:6) defines participant roles as 'roles associated with a sense of a verb'. She also adds the notion of 'profiling'. It means that certain functional roles (particularly, subject and direct object) are given a high profile or discourse prominence, while other roles are 'deprofiled'. To bring argument roles into the scene is to capture generalizations about verbs' functional roles. Her argument roles are thus associated with argument structure constructions, e.g. agent, theme, path, etc.

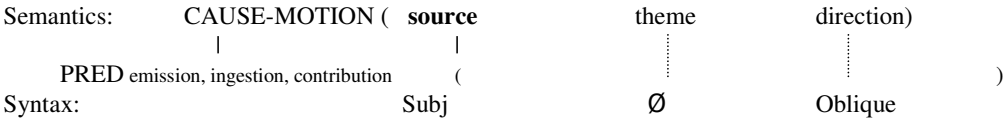
In fact, the new term 'argument role' is no more than an extension of the traditional thematic roles. Moreover, her 'principle of omission under low discourse prominence' is a version of the Relevance Theory. Consider her explanation of the term 'topic' in the same principle:

> [A]topical argument is an argument that is both given or recoverable, and about which the proposition is relevant. It follows from this definition that topicality should be recognized as a matter of degree: a proposition can be relevant to an argument to more or less extent. As a very weak necessary condition on topicality, we can use the criterion of anaphoricity. Arguments that are at all topical should be available for subsequent anaphoric reference, since they are by definition elements that are relevant to the discourse (ibid;10; original emphasis).

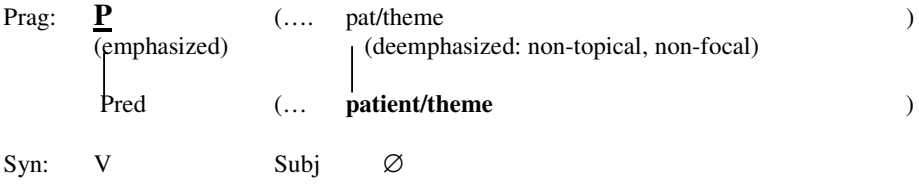
Argument structure is thus reconsidered in the light of argument roles, which are dependent on discourse functions. Omission or addition is governed by relevance, so what is new about the core of Goldberg's argument analysis?

3.3. Is context only pragmatic?

Related to argument structure and argument roles is the notion of context. Goldberg's model provides ample evidence for the usefulness of argument roles and its principles at the pragmatic, syntactic and semantic levels. Since Construction Grammar is monostratal, each level is represented below or after the other in the form of strata. An example from Goldberg (2005) illustrates the point. Consider the following analysis of the construction 'X contributes Y (to Z)' (ibid:9):



Deprofiling is also illustrated by including the pragmatic level of analysis:



The confusion arises when instances like 'Last summer, he died' or the variant 'He died last summer'. It is well-documented that adjuncts not related to verbs have ∅ theta roles. Therefore, they do not participate in the argument structure, and hence are disregarded in argument roles. This implies that they are left out in the monostratal analysis of the constructionist architecture and deemed marginal. It follows that the pragmatic context is the only level that is given due emphasis, and other marginal constructions are considered unimportant. The reason for ignoring such constructions is the overemphasis placed on the pragmatic context while overlooking potential constructions in adjacent co-texts1. This conclusion tips the scales in favor of Transformational Grammar, where in the traditional

[1] For a full discussion of the differences between context and co-text, see H. Widdowson (1973) *An Applied Linguistic Approach to Discourse Analysis*. Edinburgh: University of Edinburgh.

tree-diagramming, adjuncts not related to the verb are either instantiated as adverbial phrases or are moved to the normal positions of adverbial phrases.

3.4. Maximized motivation: is it a principle or just a generalization?

Goldberg also explains the relationships holding among constructions as a next step to argument analysis. In this respect, she (in Evans and Green, 2006:680-684) ventures to discuss the principle which regulates these relationships. The 'Principle of Maximized Motivation' runs as follows:

> The Principle of Maximized Motivation: If construction A is related to construction B syntactically, then the system of construction A is motivated to the degree that it is related to construction B semantically . . . Such motivation is maximized.

The problem here lies in the word 'maximized'. It is not always true that constructions of the same grammatical properties will to some degree share semantic properties. The four types of inheritance links (Goldberg, 1995:72) contain at least four exception examples of out of 19 well-formed ones given by Evans and Green (2006:680-684). That is, the principle is only valid to 78.95 % of the sentences. The following is a list of the number of ill-formed constructions in each link based on Evans and Green's examples:

- Polysemy links: 0/6
- Subpart links: 0/2
- Instance links: 1/4
- Metaphorical extensions: 3/7

The problem is aggravated with languages that abound in instance links, like Arabic. A glance at a common verb like 'daraba' (i.e. 'to hit') is quite astonishing: only three or four usages are not instance links[2]. It might be said that there should be a hierarchy for each family of languages, at least, in order to uphold the claim that the 'Principle of Maximized Motivation' is a principle, not just a generalization[3].

[2] In Lisan Al Arab alone, as a major Arabic dictionary, there are around 25 instance links for the verb 'daraba' (i.e. 'to hit').

[3] Matthews (2007:319) defines a principle as 'hypothetically valid for all languages, as opposed to a rule which is formulated for a particular language'.

Yet it must be acknowledged that the Principle is considered a major contribution to language theory, although it bears close affinity to Langacker's 'entrenchment'.

4. Conclusions:

The above discussions attest to the depth of Construction Grammar as a viable theory of language that encompasses several aspects already considered marginal for the generativists. However, it is not expressly designed to theorize linguistic marginalia. Rather, it attempts an integration with other contemporary theories of language. The contributions outlined and the questions posed are clear signs of the fitness for purpose the theory purports to achieve: the underscored cognitive dimensions, which used to be either overemphasized or relegated to a secondary status in other theories, pave the way for examining the recesses of the human brain with all its hidden mysteries. Furthermore, assuming that language is learned since infancy avoids many of the implausibilities hypothesized by Transformational Grammar and are left hitherto not cogently accounted for. It is therefore fair to conclude that Construction Grammar is a theory that fits the complexity of modern linguistic approaches. The queries deployed in the present paper are just a stepping stone for more other arguments that refute or prove their validity.

References

- Bender, Byron (nd) 'Morphological Paradoxes'. Available online: http://www2.hawaii.edu/~bender.

- Croft, William (2001) Radical Construction Grammar: Syntactic Theory in Typological Perspective. Oxford: Oxford University Press.

- Croft, William (2003) 'A Radical Construction Grammar Analysis of Noun Phrase Structure'. Available online: http://www.unm.edu/~wcroft/Papers/HDLS7-06M.pdf.

- Cruse, D.A. (1986) *Lexical Semantics*. Cambridge: CUP.

- El Zawawy, Amr (2009). 'The Foundations of Construction Grammar'. California Linguistic Notes, vol1, XXXIV. Available online: http://hss.fullerton.edu/linguistics/CLN/W09PDF/Zawawy-CG2.pdf.

- Evans, V. and Green, M. (2006) *Cognitive Linguistics*. UK: Edinburgh University.

- Goldberg, Adele and Casenhiser, Devin (2007). 'English Constructions', in Aarts, Bas and McMahon, April (eds.) *The Blackwell Handbook of English Linguistics*. London. Available online: http://www.princeton.edu/~adele/English%20Constructions.rtf.

- Goldberg, Adele (2003). 'Constructions: a new theoretical approach to language'. *TRENDS in Cognitive Sciences*. Vol. 7, 5.

- Goldberg, Adele (2005). 'Constructions, Lexical Semantics and the Correspondence Principle: Accounting for Generalizations and Subregularities in the Realization of Arguments. *The Syntax of Aspect*, Nomi Erteschik-Shir and Tova Rapoport (eds.). Oxford University Press.

- Lyons, John (1996). *Linguistic Semantics*. Cambridge: CUP.

- Mandhur, Ibn. *Lisan al-Arab [Arab Tongue].*10 vols .Amir Ahmad Haider & abdulMunim Ibrahim (eds). Lebanon: Dar al-Kutub al-Ilmiyah.

- Matthews, Peter (2007). *Oxford Concise Dictionary of Linguistics*. Oxford: OUP.

- Ohori, Toshio (2002) 'Construction Grammar-Its Background and Perspective'. *Keio Construction Grammar Workshop.* Mar. 18. Available online: http://gamp.c.u-tokyo.ac.jp/~tohori/CxGintro.pdf.

- Palmer, Frank (1996). *Semantics*. Cambridge: CUP.

- Paul, Kay and Fillmore, Charles (1999). 'Grammatical Constructions Linguistic Generalizations: The What's X doing Y? Construction'. Language, 75.

- Tomasello, Michael. (nd) 'Construction Grammar For Kids'. Available online: http://www.constructions-online.de/

- Widdowson, H. (1973). *An Applied Linguistic Approach to Discourse Analysis*. Edinburgh: University of Edinburgh.