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Clarifying Some Issues in Construction Grammar Studies

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Lu Jianming, and Wu Haibo*

Peking University, Shandong Agricultural University

Abstract: "Form-meaning pair" is not a distinctive feature of constructions, but a universal feature of all things. A construction must be a structure. Morphemes are the smallest sound-meaning assemblies, but they only represent a symbolic relationship which has no internal structure; thus, they are not constructions. In addition, if morphemes are also treated as constructions, there is a problem of "heterogeneity" in understanding the "form" of constructions. As to the rising "constructionist" and the traditional "atomist" dichotomy, we feel the "constructionist" approach complies better with the actual linguistic life. Construction Grammar leads people to pay close attention to the integrity of constructions and the cognitive mechanisms behind linguistic facts. Therefore, it is of great value both theoretically and practically. However, since Construction Grammar has not yet displayed a distinct value in terms of methodology, we must be careful not to overrate it or overestimate it.

Keywords: construction, Construction Grammar theories, constructionist

Construction Grammar was founded between the 1980s and 1990s. Based on previous grammatical studies, it is a newly developed grammatical theory which draws on the Gestalt Theory of Cognitive Psychology. Construction Grammar integrates form, meaning and usage in order to provide a complete grammatical explanation for language. It originated with C. Fillmore and G. Lakoff, and was fully developed by A. Goldberg, and has grown into different schools. At least up to now, linguistic circles both in China and abroad have basically held a positive view towards this grammatical theory. The majority of linguists believe that Construction Grammar is useful to deepen linguistic studies, in particular to offer explanations for various grammatical phenomena, although this theory still has imperfections which need to be refined.

Nevertheless, we feel it is necessary to clarify some issues in Construction Grammar studies.

Constructions Are Not Just "Form-meaning pairs/pairings"

Goldberg (1995) gave a relatively comprehensive definition of constructions:

C is a CONSTRUCTION iff$_{def}$ C is a form−meaning pair <F_i, S_i> such that some aspect of F_i or some aspect of S_i is not strictly predictable from C's component parts or from other previously established constructions.

This quotation can be interpreted as expressing three levels of meaning: First, constructions are form-meaning pairs/pairings; second, constructions express distinct grammatical meanings; third, the form or meaning of constructions are not strictly predictable from their component parts or from other previously established constructions. The first is a necessary condition, but the distinctive features of constructions are actually reflected by the second and the third. However, the regretful fact is that many linguists, even including A. Goldberg herself, often interpret constructions simply as "form-meaning pairs/pairings." For example, at the beginning of the *Overview* part of her 2006 monograph *Constructions at Work: The Nature of Generalization in Language* (Goldberg, 2006, p. 1), wrote:

Constructions—form and meaning pairings—have been the basis of major advances in the study of grammar since the days of ancient Stoics.

Lakoff (1987) also defined construction as "a form-meaning pair (F, M)."

Apparently, there is nothing wrong with the idea "constructions are form-meaning pairs/pairings." However, this idea is likely to result in "contrarian understanding," that is, as long as a linguistic element is a "form-meaning pair/pairing," it is a construction. It is exactly this "contrarian understanding" that led Goldberg (2003, 2006) to include morphemes as instances of constructions. It is common knowledge that morphemes are the smallest sound-meaning assemblies in language (i.e. morphemes cannot be broken up into smaller sound-meaning assemblies), so the form of morphemes can only be "phonetic forms." However, the form of constructions at the syntactic level cannot be their phonetic form. It should be (or might be) the syntactic constructions' word class sequence or their semantic alignment pattern. Therefore, if morphemes are also treated as instances of constructions, there is a problem of "heterogeneity" in understanding the "form" of constructions. In addition, including morphemes as instances of

constructions might result in another problem, that is, language is simply a checklist which is made up of constructions of various length and complexity. However, this view of language is at odds with "the principle of maximized economy" proposed by Goldberg in discussing "relevant psychological principles of language organization" (Goldberg, 1995, pp. 67-68). According to this principle, which is based on John Haiman (1985), the number of constructions is minimized as much as possible, but if each morpheme, word, idiom and phrase structure is an instance of constructions, how can the number of constructions be minimized? It could be innumerable.

As a matter of fact, everything in the world is a "form-meaning pair/pairing." "Form-meaning pair/ pairing" is a universal feature of all things, not a particular feature of constructions. Therefore, we cannot understand constructions simply as "form-meaning pairs/pairings."

How Big Should the Scope of Construction Grammar Studies Be?

The term *construction* has several different meanings in linguistics. Ferdinand de Saussure used it to refer to "the cementing together of elements in contact in a syntagma." American descriptive linguists use it to refer to a syntactic pattern, such as SVO Construction, Passive Construction, Positive Construction, Negative Construction, Coordination Construction, and Cleft Construction. In Chomsky's Transformational Generative Grammar, *construction* refers to a describable structure generated by primitive units, which is predictable from words and relevant grammatical rules and is thus just an epiphenomenon. The classical definition of *construction* in Construction Grammar is given above in Goldberg (1995). In an academic discipline, it is not uncommon to use the same term to refer to different concepts. Take a familiar term *case* as an example. In traditional linguistics, it refers to morphological cases such as nominative, accusative and possessive, while in Fillmore's Case Grammar (Fillmore, 1968), it refers to semantic cases related to verbs such as agentive, objective, dative and instrumental. Finally, in Chomsky's Transformational Generative Grammar, it refers to the "case positions" that noun phrases must get before entering a sentence. In order to distinguish it from previous uses, Chomsky stated that it must be written with a capital C, namely Case.

How big should the scope of Construction Grammar studies be? Goldberg (2003, 2006) included various linguistic elements which are form-meaning pairs/pairings, such as morphemes, words, compound words, idioms, phrases and sentences. We have pointed out in section one that morphemes should not be treated as constructions. In addition to the reasons given above, there is another reason, namely a construction must be a structure. On this point, we agree with Ronald W. Langacker (1987):

> Grammar involves the syntagmatic combination of morphemes and larger expressions to form progressively more elaborate symbolic structures. These structures are called grammatical constructions. Constructions are therefore symbolically complex, in the sense of containing two or more symbolic structures as components.

While a morpheme is the smallest sound-meaning assembly, it is not a structure. This point is also related to the issue of "form and meaning pairings." As a matter of fact, "form and meaning pairings"

refer to two different situations or have two different meanings. The first is a symbolic relationship which has no internal structure, for example, the form-meaning pairings presented by traffic rules such as "Green light, go" while "red light, stop." The second is a symbolic relationship which has an internal structure, for example, the form-meaning pairings presented by objects such as bicycles and cars.

In terms of the form-meaning relationship, morphemes represent only a symbolic relationship which has no internal structure, that is, morphemes are not structures, and therefore, they cannot be constructions or included in Construction Grammar studies. In addition, based on Haiman (1985), Goldberg (1995) proposed The Principle of Maximized Economy, namely the number of distinct constructions is minimized as much as possible and the inclusion of morphemes as constructions clearly violates this principle.

What about linguistic elements which are both an internal structure and symbolic? Do we need to include all of them as objects of Construction Grammar studies? The answer is no. In traditional grammatical theories, grammar is divided into two branches of morphology and syntax, and we think this division still makes sense. Construction Grammar theories are ideally suited to the study of structures at the syntactic level. There are surely structures at the morphological level, e.g. compound words. The meanings of most compound words are not predictable from their component parts. However, it is unnecessary to include compound words as objects of Construction Grammar studies. This is not to say that we cannot use Construction Grammar theories to study compound words, but is to say that current analytical tools which are used to study compound words are already sufficient for dealing with the present research topics concerning the study of compound words, thus it is not necessary to study them by means of Construction Grammar theories. This is a bit similar to what happens in physics. For example, Einstein's Theory of Relativity can of course be used to explain mechanical phenomena in low velocity motion in the macro world, but the fact is that it is simpler and more convenient to use Newtonian Mechanics Theory to explain these phenomena.

It is generally accepted that structures at the syntactic level consist of "core" and "peripheral" syntactic elements. The meanings of the former are predictable while those of the latter are unpredictable. Chomsky focuses only on the study of "core" syntactic structures and his Transformational Generative Grammar does not deal with grammatical phenomena related to the "peripheral." Goldberg (1995) was mainly concerned with the study of "peripheral" syntactic structures whose meanings are not predictable and thus referred to as "constructions." In response to the criticisms from the linguistic circle, Goldberg (2006) revised her view of construction:

> 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. In addition, patterns are stored as constructions even if they are fully predictable as long as they occur with sufficient frequency. (Goldberg, 2006, p. 5)

> Unpredictability is not a necessary condition for positing a stored construction. There is evidence from psycholinguistic processing that patterns are also stored if they are sufficiently frequent, even when they are fully regular instances of other constructions and thus predictable

(Goldberg, 2006, p. 64).

The revised view in Goldberg (2006) is in conformity with the view emphasized by Croft W. A. (2001), i.e. constructions are the basic, primitive units of syntactic representation. There is no doubt that Construction Grammar theories not only can be used to study unpredictable peripheral syntactic structures but can be used to study predictable core syntactic structures as well. Nevertheless, we feel it is still unnecessary to include the latter as objects of Construction Grammar studies. The reason is that current grammatical theories are sufficient to deal with core syntactic structures and have already yielded rich results.

In fact, unpredictable peripheral syntactic structures consist of two types: One is of bound nature, and the other is of free nature. For example:

(1) hao shi hao, jiushi tai gui le.

good, be good, just too expensive particle

"It's good, but just too expensive."

(2) chang shi chang le, dan mei chang−chu weidao lai

taste be taste ASP, but not taste−particle flavor particle

"I've tasted it, but haven't tasted the flavor of it."

"hao shi hao" in (1) and "chang shi chang le" in (2) are instances of a fixed pattern "VP be VP (le)" expressing concession which cannot stand alone as a sentence. Therefore, "VP be VP (le)" cannot be studied alone as a construction. In other words, we should not treat "VP be VP (le) (hao shi hao/ chang shi chang le) as an independent construction and include it as an object of Construction Grammar studies. What we should do is take the whole "VP be VP (le), jiushi/ke/danshi VP" (hao shi hao, jiushi tai gui le/chang shi chang le, dan mei changchu weidao lai) as a construction and thus an object of Construction Grammar studies. The construction "VP be VP (le), jiushi/ke/danshi VP" is an instance of free peripheral syntactic structures. Fillmore, Kay & O'Connor (1988) ("Regularity and idiomaticity in grammatical constructions: the case of *let alone*") is viewed in the linguistic circle as a cornerstone which symbolizes the birth of Construction Grammar. In fact, what they studied in this paper is not the "let alone" construction, but the "P let alone Q" construction. This is because the grammatical meaning of the conjunction *let alone* cannot be expressed without the strong proposition P in front of and the weak proposition Q behind *let alone*. It is the semantic scale resulting from "P…Q" that brings out the grammatical meaning "not to mention, much less" of *let alone* conspicuously.

Östman & Fried (2005) held the view that one of the inadequacies of Construction Grammar studies is that they are restricted to morphological and syntactic levels due to the influence of traditional grammatical thoughts. Therefore, they proposed that constructional studies should be extended to the discourse level and put forward the concept of "discourse construction." In China, Yuan (2011, 2012a, 2012b, 2013) introduced and elaborated the theoretical views of Östman's discourse construction. Meanwhile, he formulated and expounded the theoretical framework of Discourse Construction Grammar (DCD) in these papers. Hu (2012, 2013) mainly discussed discourse construction coercion and stressed that "it is essential to study discourse construction coercion." However, we feel that the reasons for

including discourse as an object of Construction Grammar studies are not yet sufficient, and that currently there are hardly any benefits gained from applying Construction Grammar to the study of discourse.

Some sentences involve metaphor and metonymy, for example:

(3) na lao−jiahuo zhen shi−ge lao−huli.

　　that old−chap really be−classifier old−fox

　　"That old chap is such an old fox."

(4) ni zhidao yanjing qu na le?

　　you know glasses go where particle

　　"Do you know where (the man who wears) the glasses went?"

Although the meanings of (3) and (4) cannot be inferred literally, it is not necessary to study them by means of Construction Grammar, because the metaphor and metonymy theories of cognitive linguistics can be used to deal with these sentences.

There are two points that need to be understood. One is that in scientific studies, the birth of a new theory implies the development and promotion of a discipline, but the relationship between the new theory and the old ones is not simple substitution, but rather mutually complementary under most circumstances. The other is that no theory can take everything into its hands. If a researcher views his/her theory as a panacea which can deal with everything, then his/her work might be denigrated as a result.

How to Treat the "Constructionist" and the "Atomist" Dichotomy?

There is no doubt that Construction Grammar represents a brand-new grammatical view. The traditional grammatical view holds that morphemes combine to form words, words combine to form phrases, and phrases combine to form clauses and sentences. It is based on the study of the internal regularity of word and sentence formation, the generalization over different grammatical categories, and the explanation of grammatical and semantic relations between syntactic elements. It is generally called "the atomist" approach in the linguistic circle. On the other hand, Construction Grammar theories hold that language, at least the syntactic level, is actually made up of constructions. They emphasize the integrity of constructions which results from the intimate combination of syntax, semantics and usage. This view is expressed by the following four renowned Construction Grammarians:

Kay & Fillmore (1999): To adopt a constructional approach is to undertake a commitment in principle to account for the entirety of each language.

Croft (2001): Constructions, not categories and relations, are the basic, primitive units of syntactic representation.

Goldberg (2003): The totality of our knowledge of language is captured by a network of constructions: a "construct−i−con."

Goldberg (2006): *Constructions at Work: The Nature of Generalization in Language* (the title of the book)

Therefore, Construction Grammar theories are generally called the "constructionist" approach in the

linguistic circle. This approach gives more prominence to the top-down analysis. Its objective is not to determine the various grammatical categories and the combinatorial rules through which small sound-meaning assemblies combine to form large sound-meaning assemblies, but to make clear the holistic nature of constructions resulting from the intimate interaction of syntax, semantics and usage. Croft (2001) resolutely advocated the abolition of syntactic categories and syntactic relations, proposing that "the only syntactic structure in constructions is the part/whole relation between the construction and its elements."

How should we treat the rising "constructionist" and the traditional "atomist" dichotomy? We feel the relationship between them is not absolute opposition. As a matter of fact, the two approaches are concerned both with the whole structure and with the elements that make up the structure. Their difference is that of which one is given priority in grammatical studies. The "constructionist" approach holds that priority should be given to the whole structure, while the "atomist" approach holds that priority should be given to the elements. Comparatively speaking, the "constructionist" approach seems to comply better with the actual social life, especially the linguistic life. This is based on the following two grounds.

Ground one: Studies from language acquisition (including both child language acquisition and second language acquisition) tell us that when people learn a language, they do not first learn morphemes one by one, then words one by one, after that combinatorial rules one by one, and finally they use the combinatorial rules to combine the learned morphemes and words to form various utterances. The fact is rather that they learn constructions one by one, and then decompose the learned constructions into words and morphemes depending on actual needs. Take the "*ba*" construction in Mandarin Chinese as an example. For both native children and foreign language learners, they learn the construction "X *ba* Y V *le*" as a whole. A second example comes from Bencini & Goldberg (2000) and Dong & Liang (2004). These two studies focused on a sentence sorting task. The stimuli they used were sixteen sentences created by crossing four verbs (*throw, get, slice, take*) with four different constructions (Transitive, Ditransitive, Caused Motion, Resultative), as in Table 1 (from Goldberg, 2006, p. 114):

Table 1: Stimuli for Sorting Experiment

1a. Pat threw the hammer.	(VO) Transitive
b. Chris threw Linda the pencil.	(VOO) Ditransitive
c. Pat threw the key onto the roof.	(VOL) Caused Motion
d. Lyn threw the box apart.	(VOR) Resultative
2a. Michelle got the book.	(VO) Transitive
b. Beth got Liz an invitation.	(VOO) Ditransitive
c. Laura got the ball into the net.	(VOL) Caused Motion
d. Dana got the mattress inflated.	(VOR) Resultative
3a. Barbara sliced the bread.	(VO) Transitive
b. Jennifer sliced Terry an apple.	(VOO) Ditransitive
c. Meg sliced the ham onto the plate.	(VOL) Caused Motion
d. Nancy sliced the tire open.	(VOR) Resultative

4a. Audrey took the watch.	(VO) Transitive
b. Paula took Sue a message.	(VOO) Ditransitive
c. Kim took the rose into the house.	(VOL) Caused Motion
d. Rachel took the wall down.	(VOR) Resultative

The subjects in Bencini and Goldberg (2000) were native speakers, and in Dong and Liang (2004) were Chinese learners of English of varying proficiencies. They were asked to sort these sixteen sentences, provided in random order, into four piles based on "overall sentence meaning." Both of these studies showed that subjects tended to sort sentences by constructions instead of verbs. In addition, Dong and Liang (2004) found that their subjects produced more construction-based sorts as their English improved. According to these two studies, the linguistic category of construction is psychologically real in sentence processing. In other words, constructions do exist in linguistic psychology.

Ground two: In real life, when people buy everyday objects such as a table (or a chair, a bed, a bike, a car, etc.), they buy it as a whole rather than buying the legs, crosspieces, table top, etc., and then put these pieces together to make a table.

However, this does not mean leaving compositionality out of consideration. A table is a structure which is composed of various parts such as legs, crosspieces, tabletop, etc. We know that a structure must have three properties: integrity, severability, and internal regularity (He, 1988). This means that a structure must be a united whole, and this united whole is composed of certain parts, and these parts are governed by a set of rules so that they combine tier upon tier to form various relationships. Therefore, "integrity," "constituents," and "relationships (or rules)" are the three key factors of a structure, while "constituents" and "relationships" are the two pillars of the whole structure.

Construction Grammar theories lead people to pay close attention to the integrity of constructions, and this surely makes positive contributions to linguistic studies. A construction integrates features of form, meaning and usage, and this requires us to observe, analyze, and study syntactic structures from multi perspectives, at multi levels, and in multi ways. However, at least up to now, Construction Grammar theories lay too much emphasis on "integrity" and belittle or even ignore the compositionality of sentences, and this makes researchers feel that these theories are still lacking in the value of methodology. Shi (2013) held that "the methodology of Construction Grammar has not been clearly and systematically elaborated," and Chen (2016) even frankly pointed out that "Construction Grammar has not yet shown its distinct value of methodology." We feel that this is because at present Goldberg and other Construction Grammarians mainly concentrate their efforts on demonstrating that in language "it's constructions all the way down" by means of various experiments. Through case studies of ditransitive construction, caused motion construction, resultative construction, middle construction, way construction, etc., Construction Grammarians aim to reveal the nature of generalizations in language (including both language-internal and cross-linguistic generalizations), to explore how learners acquire these generalizations, and to analyze the argument structure of constructions. There is no doubt that these studies are important and desirable.

Nevertheless, they fail to study and explain how to make a from-large-to-small analysis of the internal structure of constructions. This makes researchers feel that from a linguistic point of view, Construction Grammar varies significantly from previous grammatical theories, but from a methodological point of view, it has not yet displayed its distinct value.

Of course, we should not be overcritical of a newly emerging grammatical theory, but neither should we overrate it. Many scholars, both in China and abroad, have elaborated the theoretical value of Construction Grammar theories, and they are of the view that Construction Grammar represents a new grammatical theory founded on the basis of the Gestalt Theory of cognitive psychology, Embodied Philosophy and Cognitive Linguistics. Researchers informed by this theory are more concerned with the cognitive mechanisms behind linguistic facts. Therefore, it is of great value both theoretically and practically. However, we have also seen that both in China and abroad there are some scholars who have overrated the theoretical value of Construction Grammar. The following quotation from Lakoff (1987, p. 467) is representative of scholars abroad:

> Theories of grammar without grammatical constructions simply do not account for anything approaching the full range of grammatical facts of any language.

And the following quotations from Wang (2011, 2013) are representative of scholars in China:

> Construction Grammar "almost covers every aspect of traditional grammar and has raised the explanatory power" (Wang, 2011, p. 38).

> "Construction Grammar is far superior to all of the previous linguistic theories" (Wang, 2013).

We feel these comments seem to have gone a bit too far. Construction Grammar is both useful and theoretically valuable, but the overestimation of its theoretical value will hinder it from progressing. As to the issue of how to improve its value of methodology, this is one which needs us to explore further in order to refine it in the future.

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