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The Foundations of Construction Grammar

1. Introduction:

Construction Grammar is one of the recent approaches to linguistic analysis, which has been advanced by Goldberg, Lakoff, Kay, and to some extent Sag. The theory hinges upon the notion that the analysis of a given language should be based on constructions rather than lexical items or phases. Constructions can comprise single words or complete sentences (e.g. idioms). Construction Grammar also focuses on differences across languages (especially Croft's Radical Construction Grammar), thus opposing the deep-rooted heritage of Chomskian universals.

The present paper shall attempt to explicate the new approach in two sections: section one will tackle the place of Construction Grammar and its motivations; section two will elaborate on its foundations.

2. Locating Construction Grammar:

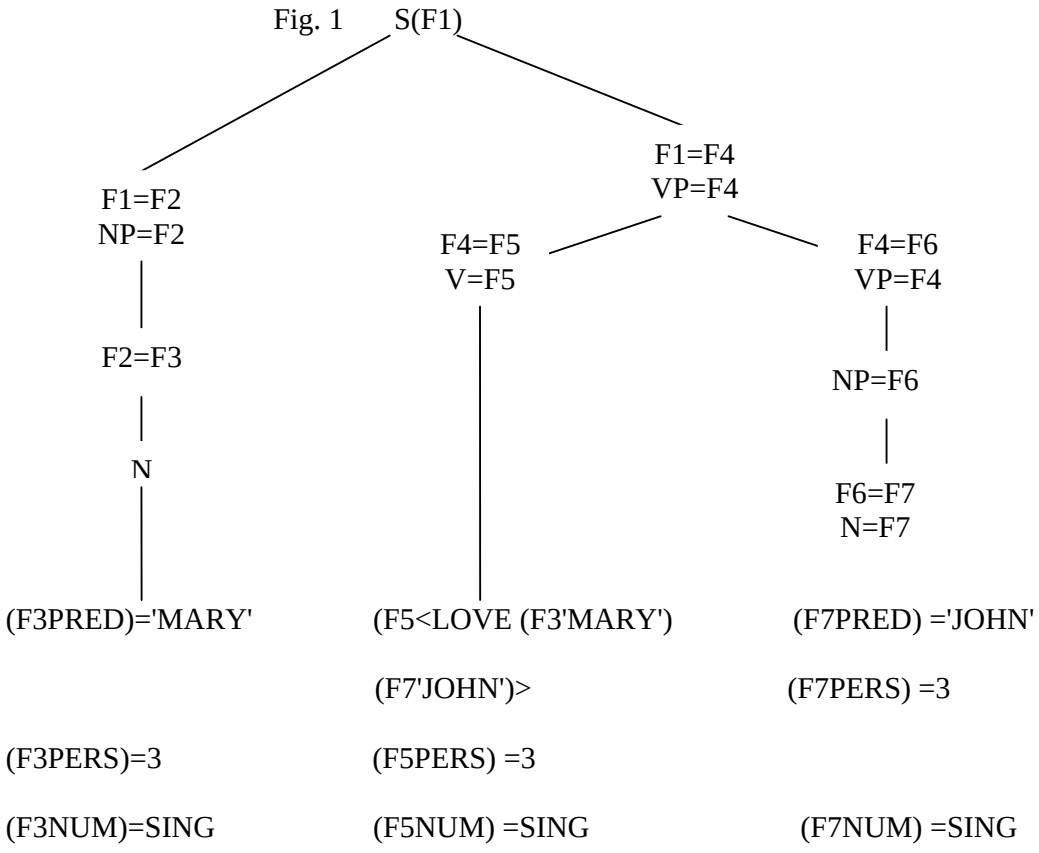
Theories of grammar are varied, and each stems from a number of tenets which guide the layers embedded in the analysis of language according to the models proposed. Each theory of grammar, therefore, attempts a new perspective of dealing with the several levels of linguistic analysis (i.e. phonology, morphology, syntax, semantics and, possibly, pragmatics), sometimes focusing on two or three, and other times ignoring one or two in order to accommodate its hypotheses. This has led to what can be called 'eclectic' theories of grammar that usually fall short of capturing all the levels mentioned above systematically.

Transformational Grammar (TG), for example, is one of the theories that long excluded semantics, later shadowing it in some kind of subcategorization frame. Phonology,

as a prime level in the hierarchy of linguistic levels, has also been ignored and, to crown it all, syntax was considered to be autonomous. Although TG enjoys a plausible degree of psychological reality as well as computational realizations, it remains lame in the area of morphology and pragmatics. Moreover, functional labels are excluded in the mundane tree-diagramming, that is, hierachicality is overrated at the cost of linearity. However, TG is still the springboard for many of the contemporary theories of grammar, especially Lexical Functional Grammar (LFG) and Valency Grammar (VG).

LFG depends for the most part on the tree-diagramming approach as a starting-point for linear analysis. Matrices that encompass functional labels such as 'subject' and 'predict' provide the basis for realizing the relationships among the basic components of a sentence. A simple sentence like 'Mary loves John' can be tree-diagrammed and coindexed and cast in a tree, as follows in Figure 1 (after Wescoat, 1989).

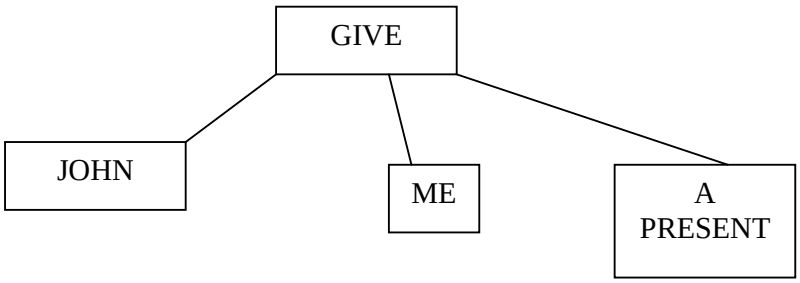
Fig. 1



LFG also refused the notion of 'empty category' proposed by TG as a solution to the problems encountered in such examples as *Seeing me surprised Mary*, where the verb *see* is attributed to an absent subject plus being a subject of a whole sentence at issue (cf. Kaplan,1994:11).

VG, like LFG, is another off-shoot of TG but in a new key. The locus here is the verb alone, which has the capacity to determine the other major components of the sentence. Although the theory is attractive enough, it is fundamentally based on the physics notion of valence, that is, the power of each verb in relation to other sentential components. Thus, the verb *give* in *John gave me a present* can be expressed in what is called a stemmata as follows:

Fig. 2



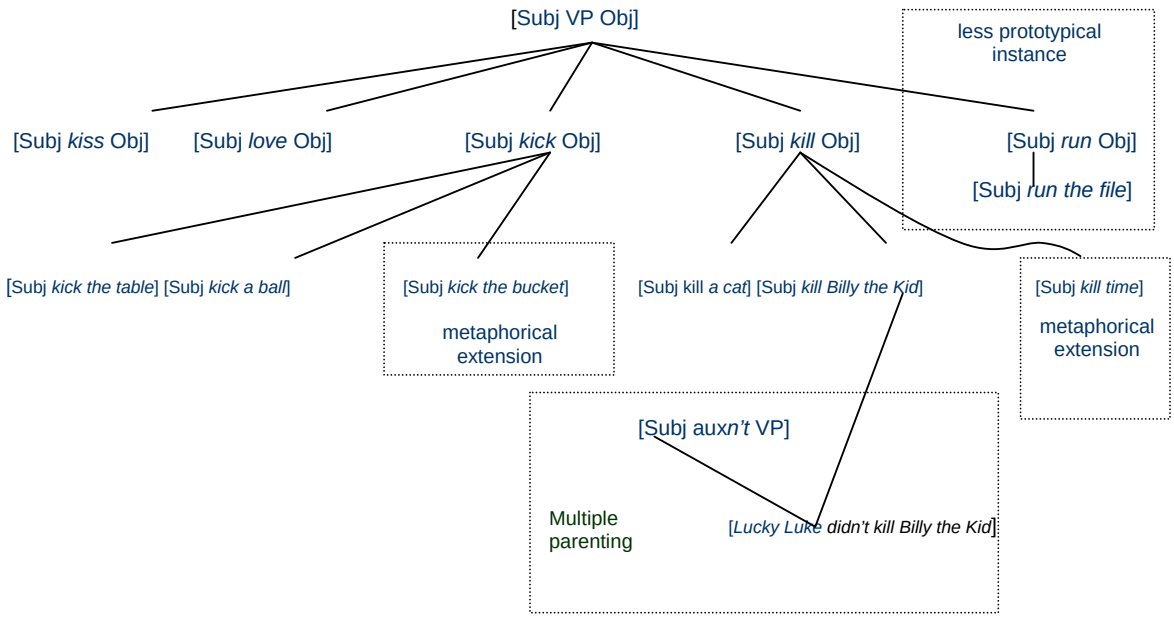
'Give' is capable of playing the role of centripetal force that attracts other syntactic labels, namely the three NPs in question. Yet VG is usually unable to account for peripheral elements in a sentence, such as adjuncts and prepositional phrases. It is also vulnerable to case-frames, especially in its treatment of components that the main verb can attract or forward.

This is just a brief survey of the previous theories of grammar, only the major ones, that dominated the scene for a number of years, Perhaps the most comprehensive of all is TG, but it is now outdated especially with regard to the notion of autonomy and the hazy views regarding pragmatics. Although the three theories enjoy a good degree of psychological feasibility and computational application, they may prove inadequate as fully fledged theories

of grammar. What is needed is a new approach that copes with the modern trends of psycholinguistics and computation (mental or computerized). This may materialize in Construction Grammar (commonly abbreviated CxG), the latest approach to grammar.

CxG is the result of the extensive research in the field of cognitive linguistics done by Lakoff, Kay, and Goldberg. It is primarily concerned with the fact that the whole is not a compositional function of the meanings of all its parts put together: constructions have meanings not necessarily derivable from its parts. Thus, form and content intertwine, and the semantic meaning of a grammatical construction is contingent upon conceptual structures such as schemas, conceptual metaphors, mental images, etc. In a sense, '[c]onstruction networks may be extremely huge, but may also have few members' (Jensen,2006:3). An example from Lakoff (1987) as quoted in (ibid) runs as follows:

Fig. 3



CxG is also concerned with what is called the 'syntax-lexicon continuum' which can be traditionally displayed as follows:

Syntax>subcategorization>frame>idiom>morphology>syntactic category>word>lexicon

3. The Foundations in Detail:

3.1.*Constructions, not single words*:

The most important aspect of CxG 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. Each word in this sentence is also considered a construction possessing pairings of form and meaning. 'John' has the formal attributes of being a phonological unit and so is 'Mary'. Both are likewise pragmatically referents to names in the physical world capable of analysis in terms of contextual factors. The verb 'marry' is a complex construction in itself: it is a phonological and semantic unit; and the inflexional morpheme in the end indicates its syntax. Moreover, the three components of the sentence explain the compositeness of a construction and the fact that the meaning of the construction is not equal to the amalgam of its components: it is bigger. Thus the phonological, syntactic, semantic, pragmatic, and morphological information embedded in this simple sentence do not surmount its functions in different contexts and the layers of each construction within.

3.2. *No genetic programming*:

A central contribution of CxG is that humans are not born with blueprints for language learning; humans learn language through constructions that are stored since infancy then modified. Goldberg (2003: 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, CxG 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 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?

3.3. *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]).

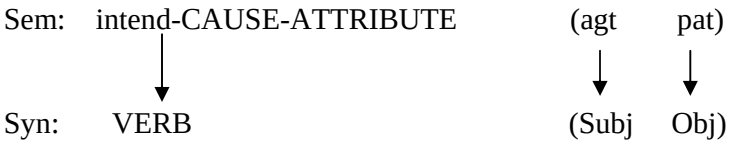
3.4 *Argument analysis*:

Goldberg (1995) provides such examples as *She sneezed the napkin off the table*. The unusual syntactic behaviour of *sneeze* is readily discovered through the prepositional phrase *off the table*: *sneeze* is treated as a transitive verb although basically it is not. According to the Goldbergian two-level analysis, the above sentence can be represented as below:

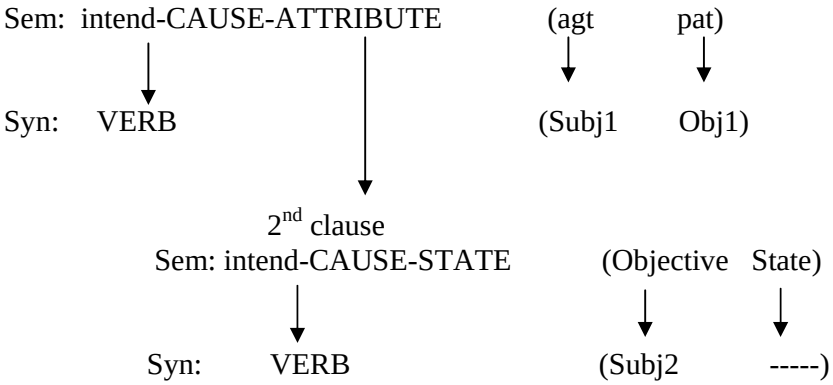
Now, take the following complex sentence:

He thought that John was skilful

A possible analysis may run as follows:



This analysis is clearly erroneous. It lacks the embedded sentence 'John was skilful'. An alternative analysis may be as follows:



The analysis above accords with two important intuitive facts:

1- The sentence at issue contains only one object.

2- The sentence at issue is complex.

3- Syntactic and semantic facts are by nature existent in every grammatical construction.

4. Conclusions:

It can be concluded that CxG is a novel approach to linguistic analysis. It provides new insights into the way lexical items and sentences can be processed by humans. It also eschews the deficiencies of other linguistic theories, especially TG by positing constructions as the smallest units of analysis. It is hoped that in the foreseeable future CxG extends to encompass phonology and pragmatics.

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