

MATCHING SYNTAX AND SEMANTICS IN ARGUMENT STRUCTURE: CONSTRUCTION GRAMMAR AND THE THEORY OF SYNTACTICO-SEMANTIC SENTENCE PATTERNS^o

Gonzálvez-García, Francisco

Universidad de Almería

Departamento de Filología Inglesa y Alemana

Facultad de Humanidades y Ciencias de la Educación

La Cañada de San Urbano, s/n, 04120, Almería (España)

Teléfono / Fax: (950)-015475, E-mail:

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Resumen

Este artículo tiene por objeto exponer las principales analogías y divergencias de corte tanto teórico como descriptivo en el análisis de la sintaxis y semántica de lo que tradicionalmente se ha denominado esquemas oracionales, tal y como éstos son objeto de estudio en dos modelos lingüísticos de orientación no transformacionalista: la Teoría de los Esquemas Sintáctico-Semánticos (Báez San José 1984, 1987, 1994, 1996) y la Gramática de Construcciones (Fillmore, Kay & O'Connor 1988[2003], Goldberg 1995, 1999, en prensa; Kay & Fillmore 1999, en prensa). Más concretamente, nuestra discusión se centrará en las siguientes cuestiones: (i) la definición y status teórico de sus respectivas unidades de descripción y/o explicación: el esquema sintáctico-semántico y la construcción; (ii) el objeto y desarrollo de sus investigaciones; (iii) la metodología de análisis, y, finalmente, (iv) sus implicaciones e implementaciones en los ámbitos de procesamiento de lenguas naturales o la adquisición y/o aprendizaje de lenguas.

Palabras Clave: *Sintaxis, semántica, esquema oracional, estructura argumental, Gramática de Construcciones, Teoría de los Esquemas Sintáctico-Semánticos.*

Abstract

This paper is basically concerned with offering a preliminary comparison, on both theoretical and descriptive grounds, of the analysis of the semantic and syntactic features of what has been traditionally referred to as sentence patterns, as these are tackled in two non-transformational models, namely, the Theory of Syntacticosemantic Sentence patterns (Báez San José 1975, 1984, 1994, 1996) and Construction Grammar (Fillmore, Kay & O'Connor 1988 [2003], Goldberg 1995, 1999, in press; Kay & Fillmore 1999, forthcoming). More specifically, the following aspects will be singled out for discussion: (i) the definition and theoretical status of the units of description and/or explanation concerned: the syntacticosemantic pattern and the construction, respectively, (ii) the focus and development of their research, (iii) the methodology of analysis, and (iv) the implications and putative implementations of their research findings in the domains of psycholinguistics or applied linguistics, such as natural language processing and language acquisition/learning.

Key words: Syntax, semantics, sentence pattern, argument structure, Construction Grammar, Theory of Syntacticosemantic Patterns

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Résumé

L'objectif fondamental de cet article consiste à exposer les principales analogies et divergences d' l'analyse des propriétés syntaxiques et sémantiques, d'un point de vue théorique et descriptif, de ce que l'on a nommé traditionnellement des schémas phrastiques selon l'objet d'étude des travaux de deux modèles linguistiques d'orientation non-transformationnelle: la Théorie des Schémas Syntactico-sémantiques (Báez San José 1984, 1987, 1994, 1996) et la Grammaire de la Construction (Fillmore, Kay & O'Connor 1988, Goldberg 1995, 1999, en presse; Kay & Fillmore 1999, en presse). Plus concrètement, notre discussion concernera les questions suivantes: (i) la définition et le statut théorique de leurs unités de description et/ou explication respectivement: le schéma syntactico-sémantique et la construction; (ii) l'objet et le développement de leurs recherches; (iii) la méthodologie d'analyse; (iv) leurs implications et possibles fonctionnements dans des domaines tels que le traitement automatique des langues naturelles ou l'acquisition et/ou apprentissage d'une langue.

Mots clés: Syntaxe, sémantique, schéma phrastique, structure argumentale, Grammaire de la Construction, Théorie des Schémas Syntactico-sémantiques.

Sumario

1. Introduction. 2. A glance at the definition(s) of construction. 3. What do constructional approaches have in common? 4. Contractions and syntactico-semantic patterns: Two sides of the same coin? 4.1 On the semantics of syntax. 4.2 Where do constructions/syntactico-semantic patterns come from? 4.3 The anatomy of a construction/syntactico-semantic pattern. 4.4 How are constructions/syntactico-semantic patterns related? 5. A quick look at the research focus of CG and the TSSP. 6. Some implications for language acquisition/processing. 7. Closing remarks.

1. Introduction

Ever since the publication of *Language* by Leonard Bloomfield in 1933 up to the present, *constructions* have remained a constant point of reference in the linguistic arena. It must, however, be emphasized that constructions have not always enjoyed an equally preeminent position in linguistic theory. Put simply, during this span of seventy years, their marginal status in the *Principle-and-Parameters* model (Chomsky 1986) as well as the *Minimalist Program* (Chomsky 1995)¹ has given way to an ever increasing centrality of this construct in current formal and functional models alike (Noonan 1999, Mairal Usón 2001, Jackendoff 2002). Specifically, a particularly invigorating rehabilitation of the construction has been effected ever since 1985, especially within the functional-cognitive paradigm in the United States, thus giving rise to the emergence of a family of constructivist approaches (commonly referred to as *Construction Grammar*, CG hereafter). About a decade before, around 1973, Valerio Báez San José introduces in Spain the linguistic ideas of F. Dane? (1964, 1966, 1968), and then goes on to develop his own theory out of this linguistic tradition (López García 1994: 12, Penadés Martínez 1998a: 463, 1999: 249), namely, the *Theory of Syntactico-semantic Sentence Patterns* (TSSP hereafter). In this paper, I simply wish to highlight, and to briefly explore, some of the major discoveries made in each model concerning the treatment of the syntax-semantics interface in general and argument structure in particular, with special focus on the most outstanding points of convergence and divergence within each model. The structure of this paper is as follows: First, I will examine the

¹ While it is true that constructions are treated as "pure taxonomic artifacts" and epiphenomena in the *Principle-and-Parameters* models (Chomsky 1995: 170), Newmeyer (1998) casts some doubt on whether this model does away with the notion of construction in actual practice. In his own words,

scope and definition(s) of constructions. Second, I will pinpoint a number of foundational assumptions common to construction-based approaches to grammar. Then, I will focus on how the following issues are handled within each model: (i) the semantic motivation of syntax, (ii) discovery procedures concerning constructions / syntactico-semantic sentence patterns, (iii) the anatomy of a construction / syntactico-semantic sentence pattern, and (iv) connection mechanisms for the constructs concerned. Next, I will take a quick look at the research focus of the two models. Finally, I will address the implications of both CG and the TSSP for language acquisition and/or language processing.

2. A glance at the definition(s) of construction

An attempt at furnishing a definition of construction is beset at first with the profuse use of the term mainly (though by no means exclusively) in a relatively wide spectrum of cognitive (usage-based) approaches to linguistic theory.² Following Thompson (2001), a five-fold distinction can be posited concerning both the definition and the specific theoretical affiliation of the constructional variant in question, as in (i)-(v) below:

- (i) The idea of construction advocated in traditional and pedagogical grammars as well as in the typological literature, understood as the syntagmatic result of the process of organization of a grammatical unit –a sentence, being ‘constructed’ out of a set of morphemes by the application of a set of rules (Crystal 1980 [1991]: 77).
- (ii) The construction invoked in the constructional variant of CG developed by Fillmore, Kay & O’Connor 1988[2003]), Kay & Fillmore (1999, forthcoming), and Kay (2002), which is “much like the nuclear family (mother plus daughter) subtrees admitted by phrase structure rules,” except that constructions (a) may span wider ranges of the sentential tree; (b) specify semantic and pragmatic information in addition to syntactic information, (c) may consist of single lexical items, and (d) may involve varying degrees of idiosyncrasy and feature a non-compositional meaning (Fillmore, Kay & O’Connor 1988 [2003: 243]). Nonetheless, this constructional variant departs from mainstream formalist models in invoking a monostratal account that countenances neither empty categories nor movement in addition to adopting a multiple constructional inheritance to capture syntactic and semantic generalizations (Kay 2002: 453).
- (iii) The view of constructions as an “assembly of symbolic structures” invoked in *Cognitive Grammar* (Langacker 2000: 13ff) and *Radical Construction Grammar* (Croft 2001: 4-8), linked by correspondences, one structure being foregrounded with respect to others (Langacker 2000: 16). Moreover, the basic grammatical constructs, including those pertaining to clause structure, have semantic characterizations based on construal and con-

² It should be noted that constructions are not by any means exclusive to the cognitive paradigm. In addition to the formal underpinnings of the constructionist variant developed in Kay & Fillmore (1999, forthcoming) and Kay (2002), it should be stressed that, as Noonan (1999: 29) conspicuously observes, “many aspects of the [constructional] model [...] are similar to proposals made recently by linguists working in the formalist tradition, in particular to proposals of adherents of L[exical] F[unctional] G[rammar], G[eneralized] P[hrase] S[tructure] G[rammar], and H[ead] D[riven] P[hrase] S[tructure] G[rammar], as well as to proposals made by Levin, Pinker, Jackendoff, and others.”

ceptual archetypes (Langacker 2000: 20). Another interesting point of convergence between these two models concerns avoiding a complex syntactic metalanguage and reliance on categorization to account for both meronymic (i.e., part-whole) relations of elements within constructions and the taxonomic relations among constructions (Croft 2001: 22-23).

(iv) A “realistic” approach to constructions, as advocated by Thompson (2002), which boils down to arguing that constructions are conventionalized recurring sequences of morphemes or words with open slots (i.e., some positions that allow choices among classes of items of varying size (Bybee, forthcoming)). On this view, it is argued that constructions cannot be determined nor properly understood irrespective of the temporal and social nature of spoken language. Thus, conversational data can be seen as leading to a workable and empirically grounded definition of a construction. More specifically, it is Thompson’s contention that the constructions for which there is best empirical evidence are not broad syntactic templates, but rather typically local, language-specific and lexically bound schemas as well as formulas showing routinization effects.⁴

(v) The Goldbergian definition of construction, as outlined in Goldberg (1998), which can be defined as follows:

C is a construction iff defn C is a form-function pair, such that some aspect of the form or some aspect of the function is not strictly predictable from C’s component parts (Goldberg (1998: 205), emphasis added to the original)⁵

Interestingly enough, this definition entails a significant broadening of the original formulation outlined in Goldberg (1995: 1) of a construction as a *form-meaning* correspondence.⁶ It must be noted that *meaning/function* is understood in a constructivist approach to encompass not only a number of aspects of lexical and grammatical meaning, but also other meaningful facets of information structure, such as focus or theme/rheme, or even discourse-based phenomena (Goldberg, to appear b).

³ However, Radical Construction Grammar places greater emphasis than Cognitive Grammar on building a theory of syntax from scratch (by deconstructing syntax as we know it) and is particularly concerned with a more exhaustive analysis of cross-linguistic patterns than has so far been done in Cognitive Grammar (Croft 2001: 6).

⁴ It should be emphasized that the above definitions of constructions should not be seen as mutually exclusive. In fact, Tomasello (2003: 10-11) contends that children initially operate with local, specific constructions, but later on create more general constructions, both types of constructions (local and abstract) being required in the language acquisition process.

⁵ According to this definition, constructions are “special” (i.e., irregular, non-predictable) correspondences. However, according to Langacker (2001), not all constructions meet the irregularity criterion in the same way. Thus, for instance, a distinction is to be made in instances of the caused-motion construction between (i) “John sneezed the foam off the cappuccino” (which involve a novel use of “sneeze”), and (ii) “John kicked the ball into the stands”, where the use of “kick” is fully entrenched and conventional.

⁶ In addition, this move can be said to be indicative of the strong affinity of CG with functional approaches to grammar. Affinity should not by any means be equated here with assimilation because, although authors like Tomasello (2003: 13) are happy to use the compounding “functional-cognitive” to refer to the model under examination here, some other authors would resist such a label. Thus, by way of illustration, Butler (2003) contends that Cognitive Grammar *à la* Langacker is sufficiently different from functional approaches so as to justify treating the two as separate, though clearly related.

3. What do constructional approaches have in common?

Regardless of the specific fingerprint stamped on constructions within each constructivist variant, it can be safely concluded that most Construction Grammarians substantially agree on the following issues:⁷

- (i) Constructions are the basic units of description and explanation, which can be said to exist independently of the lexical items (in particular of the matrix verbs) that instantiate them. However, in the production and interpretation of actual utterances, constructions are superimposed on each other. Thus, given a sentence like *The dog chased the cat*, it can be claimed, in accordance with the Goldbergian definition of construction reproduced above, that every word in the sentence concerned can be said to form a construction (i.e. the definite article construction, the NP construction, the VP construction, the direct object construction, the transitive construction, and so forth), thus revealing redundancy as an inherent feature of the semantic representation of constructions.⁸
- (ii) Grammar can be characterized as vast network of interrelated lexical and syntactic constructions of varying degrees of generality/specificity and syntactic complexity, generalizations across constructions being handled by means of inheritance relations (usually in the form of polysemy links).
- (iii) A non-modular view is invoked which posits a continuum (rather than a dissociation) between grammar and the lexicon, as borne out by evidence from language acquisition, aphasia, and language processing (Bates & Goodman 1997).
- (iv) The *Principle of No Synonymy of Grammatical Forms* (Bolinger 1968: 27), which stipulates that a difference in form spells out a difference in meaning and/or function, is invoked as a theoretically sound premise.
- (v) No division is assumed between “core” and “periphery”, all constructions thus being “equally” central to language study.
- (vi) No distinction is sanctioned in principle between a person’s knowledge of a language and other kinds of knowledge. As Goldberg (1995: 5) has put it, “knowledge of language is knowledge”.
- (vii) No transformations or derivations (by insertion or deletion rules) are required, this model thus being tied to a monostratal theory of syntax which posits only a single level of

⁷ For a more detailed discussion of the foundational assumptions of cognitive-functional approaches in general and CG in particular, the reader is referred to Goldberg (1996 a, b, to appear a), and Noonan (1999).

⁸ Supporting evidence for constructions as being superimposed stems from language acquisition facts. Thus, Tomasello (1998b) argues that children learn linguistic structures on at least two levels, *viz.* the sentence-level, and the word level, whether simple, as in the past tense (*jump-ed*), or morphologically-complex (*shoe-maker*). In much the same vein, Clark (1998: 472) contends that “the available evidence suggests that, from as young as 2.0; children could be viewed as working on constructions as within words as much as they do on constructions made up of words”, although this author nonetheless acknowledges that further cross-linguistic research is needed before this generalization can be further warranted.

representation corresponding roughly to what was traditionally called “surface structure” (Goldberg 2002).

(viii) From a methodological point of view, Construction Grammarians rely on corpus data in conjunction with linguist’s intuition, the latter proving essential to explicate acceptability differences.

4. **Constructions and syntactico-semantic patterns: Two sides of the same coin?**

For the TSSP developed by Valerio Báez San José and his followers, the key unit at both a theoretical and descriptive level, *viz.* the syntactico-semantic sentence pattern, is defined in the following terms:

The potential, abstract, complete sign, which exists independently of any situation and context, and is made up of at least a predicate, or a predicate and a number of intralinguistic variables connected with it (somebody, something, somehow, somewhere, sometime), the meaning of this sentence pattern being static and oppositional (Báez San José (1987: 76-77), quoted in Penadés Martínez (1990: 455); my translation).

However, in order to place the notion of syntactico-semantic pattern within a wider perspective, it must be noted that the TSSP posits, in consonance with Dane?’ theory (1964) (Báez San José 1994: 95), a three-fold distinction between: (i) *sentence* (a set of syntactico-semantic sentence patterns participating of at least a common predicative nucleus, while allowing for variations concerning the number and quality of the variables selected by the predicative nucleus concerned), (ii) *sentence pattern* (a potential predicative sign made up of a predicative nucleus and, possibly, of one or more intralinguistic variables) and (iii) *expression* (the textual and situational actualization of one of the so-called three ontological meanings (assertion, order and question) or any of the simple or complex variants of the meanings concerned, topicalization, as well as a number of context-(and situation-)sensitive variations.⁹

In the light of the ongoing discussion, a number of considerations must be made, as in 4.1-4.4 below:

4.1 On the semantics of syntax

Syntactico-semantic patterns are, in much the same vein as constructions, signs (form-meaning pairings/ correspondences).¹⁰ The conception of the syntactico-semantic pattern relies on the assumption that syntax is by and large inherently meaningful, a conception

⁹ See Penadés Martínez (1998) for a detailed account of the influence exerted by F. Dane? (1968) in the development of the TTSP and what still survives of his proposal in current formulations of the TSSP.

¹⁰ In the remainder of this paper, construction will be understood in a restrictive sense of sentence-level construction.

which also lies at the heart of Construction Grammar.¹¹ In fact, proponents of the TSSP are of the view that:

Syntax is not a mere combination of categories, but rather the form of a meaning of superior rank which cannot be readily identified with the combinatory of the partial meanings of the morphemes,[...] nor is it [syntax] a gnoseologic or logic structure [...] but rather an intralinguistic stratum which can [only] be defined within each particular language (Báez San José & Moreno Martínez (1974: 152), my translation).¹²

However, the two models differ in terms of the degree of abstraction and the semantic representation assigned to the syntactic part of the construction or the syntactico-semantic pattern. Thus, within the TSSP, the meaning of the syntactico-semantic pattern consists of a number of semantic marks, whereas for CG the meaning of a construction is articulated on a two-fold basis: a general abstract skeletal meaning for the construction as well as a number of argument roles (arguments associated with constructions). We shall have more to say about this issue in section 4.3 of this paper.

4.2 Where do constructions/syntactico-semantic patterns come from?

The discovery procedures concerning both constructions and syntactico-semantic patterns boil down to abstraction from large numbers of speech events. However, in the Goldbergian version of CG, constructions follow from the so-called *Scene Encoding Hypothesis*, which stipulates that constructions which correspond to basic sentence types encode as their central senses event types that are basic to human experiences (Goldberg, 1995: 39).¹³ Specifically, Goldberg further intimates that:

constructions involving basic argument structure are shown to be associated with dynamic scenes: experientially grounded gestalts, such as that of someone volitionally transferring something to someone else, someone causing to move or change state, someone experiencing something, something moving. It is proposed that the basic clause types of a language form an interrelated network, with semantic structures paired with particular forms in as general a way as possible (Goldberg 1995: 5, emphasis added to the original).

As far as the TSSP is concerned, a syntactico-semantic can be arrived at after a process of gradual abstraction from the *parole* to the *langue*. As Báez San José has put it,

¹¹ In this respect, the models under examination here depart from the grammatical semantics approach invoked in Wierzbicka (1988), who argues that the semantic motivation for syntax is exceptionless, as noted by Goldberg (1995: 223-224).

¹² In addition, it must be borne in mind that there is an even more general and fundamental aspect in which the TSSP can be said to be in consonance with functional approaches, namely, the centrality of language as a tool for communication. In the words of Báez San José (1994: 67): "Speaking is understood as communicating with someone intentionally."

¹³ In this respect, an important observation is in order. As Goldberg herself (1995: 43) points out, this should not be taken to mean that *all* clause-level constructions encode scenes basic to human experience. This claim does not necessarily hold for non-basic clause-level constructions such as cleft constructions, question constructions, and topicalization constructions (and possibly passives), which are motivated by thematic requirements.

A sentence-pattern is obtained, if starting from the speech act, the following steps are carried out: after omitting exclamations, and questions/requests as they are assertion/not assertion marked members, the following items are abstracted, too: (i) the performative string, (ii) the nominal syntagms, prepositions, adjectives and adverbs, or their prosyntagm variables, (iii) text-connecting signs, modal words, nuance, degree, quantification and negation particles, (iv) focalization phenomena, (v) the thematic-rhematic articulation is abstracted, and (v) the final performed event's predicative nucleus verbal tense is put into the present (Báez San José (1994: 70-71)).

A similar, though by no means identical, process of abstraction is carried out in actual practice in formalizing constructions. Consider the examples reproduced in (1)(a)-(c) below:

- (1) (a) Pat gave Chris a book
- (b) Pat *saw /*watched/ *helped Chris a book
- (c) They will overnight you that package as soon as it comes in (Goldberg (1998: 213))

To begin with, it must be emphasized that in CG the degree of abstraction is inextricably connected with the semantic compatibility of the lexical semantics of a given matrix predicate with the semantics of the construction. Thus, by way of illustration, the occurrence of a given matrix predicate in, say, the ditransitive construction (Goldberg 1995: 141-151) is subject to the requirement that the verb should convey some sort of giving and/or transfer or be construed as encoding such notion. Consequently, since the verb *see* (as much as the entire semantic class of perception verbs) or *help*, for instance, are not lexically compatible with the constructional meaning of the ditransitive frame, such matrix verbs are not felicitous in the frame concerned.

Moreover, an important additional advantage of CG is that, if the corresponding TTSP-based characterization *someone-gives-someone-something / pure, non-affected agent* <for *someone* variable>, *non-causative action* <for *gives*>, *affected* <for *someone* variable>, and *specification* <for *something* variable>] (or any other verb-centered account) were invoked for the English ditransitive construction, one would be at best hard-pressed to explain the novel occurrence of *overnight* as a predicate of transfer in (1c), without positing a "give" sense for this verb, thus leading to an excessive (and possibly counterintuitive) proliferation of senses in the lexical entries of matrix predicates. For Goldberg, this aspect of the meaning of *overnight* derives from the construction and need not be ascribed to the matrix verb in question.¹⁴ However, it must be highlighted that CG does not deny the importance of verb meaning to determine the meaning of an expression, but rather argues that constructions are

¹⁴ For some scholars, acknowledgment of this dynamic interaction between constructional meaning and verb meaning is paramount to a functional account of the language. In the words of Croft (1998: 91), "... this interplay between grammatical constructions and the words that speakers fit into them is the source of the richness and flexibility of language as a means of communicating experiences."

better predictors of the overall meaning of a specific utterance in a given discourse scenario.¹⁵

4.3 The anatomy of a construction/syntactico-semantic pattern

As far as the anatomy of the construction and the syntactico-semantic pattern is concerned, let us dwell on the formal representation assigned within each model for verbless complement clauses of the types exemplified in (2)(a)-(b) for English and Spanish, respectively:

(2) (a) Personally I consider it distasteful (BNC Corpus, AHG 852) (Example taken from González-García 2003: 18)

(b) No le considero capaz de eso (Example taken from Penadés Martínez 1998b: 148) ['I do not consider him capable of that'] (my translation)

Verbless complement clauses of the type exemplified in (2a) have been handled as instances of the *subjective-transitive* construction (González-García 2003), the macrostructure of which is reproduced in Fig. 1 below:

| Sem. | DIRECT, PERSONAL CATEGORICAL INVOLVEMENT | Conceptualizer Experiencer Instigator Perceptor Attribuant | Theme | Attribute |
|-------------|--|--|----------------------------|-----------|
| R: instance | PRED FIND/ ENCONTRAR SEE / VER WANT/ QUERER LIKE / GUSTAR CALL / LLAMAR | | | |
| Pragm. | | TOPIC | TOPIC | FOCUS |
| Syn. | V | SUBJECT | OBJ./ SUB. ₂ | XP CO |

Figure 1. The macrostructure of the English subjective-transitive construction

As can be observed, the macrostructure above is iconic to the centrality of semantics and pragmatics over syntax accepted by usage-based models in general and practitioners of CG in particular, with semantics at the top and syntax at the bottom. Moreover, three different levels of representation are recognized, *viz.* semantic, pragmatic, and syntactic (which are connected by means of arrows, in consonance with the non-modular view of the lan-

¹⁵ This generalization is empirically backed up by evidence from language acquisition/processing (see section 6 of this paper for further discussion of this issue).

guage invoked in this model).¹⁶ Specifically, the NP V NP XP configuration is assigned a general constructional meaning, which can be glossed as follows: X (NP₁) EXPRESSES A DIRECT, PERSONAL, CATEGORICAL INVOLVEMENT to Y [NP₂, XP]. This macrostructure also captures the fact that there is an integration of the general constructional meaning with the lexical meaning of the classes of matrices which further elaborate the general constructional meaning in both languages (i.e., verbs of cognition, physical perception, volition, liking, calling and official communication, and so forth), which is made possible by the semantic compatibility of the semantics of the verb and that of the construction. Finally, reference must be made to the notion of constructional profiling, which occurs when an argument role is linked to a direct grammatical relation (SUBJ, OBJ, or OBJ₂) (Goldberg 1995: 48ff), thus being indicated by **boldface**, as in Fig. 1 above.¹⁷

As for the TSSP, the corresponding syntactico-semantic pattern for (2b) above would be as follows:

alguien – núcleo predicativo – a alguien / algo – algo / de algún modo

[*someone – predicative nucleus – to someone / something – something – in a given way*]

afectado portador de una actitud no objeto de la actitud – proceso no agentivo no causado actitudinal – objeto de la actitud incluido / especificado / caracterizado – inclusión / especificación / característica

[*affected, bearer of an attitude, not identifiable with the object of the attitude – non-agentive, non-caused attitudinal process – characterized / included / specified object of the attitude – inclusion / specification / property*]

(Penadés Martínez 1998: 158, my translation in italics)

At first sight, it can be argued that TSSP proceeds in the reverse order as CG (thus going from syntax to semantics). In this respect, it should be noted that intralinguistic variables such as *alguien* (somebody), *algo* (something), *de algún modo* (in a given way) make up the *syntactic* marks of the pattern in the TSSP, while *afectado* (affected), *process* (process), *objeto de la actitud* (bearer of the attitude), and so forth, are the semantic marks and form the semantic configuration of the pattern. However, upon closer inspection of the definition of the syntactic marks understood by Bácz San José and his followers as maximal

¹⁶ Technically speaking, the arrows in the macrostructure above indicate that once the verb's participants fuse with the constructional roles, the semantic roles are mapped onto syntax. The fusion of constructional and verbal semantics proceeds in accordance with two general principles, namely, the Semantic Coherence Principle and the Correspondence Principle (Goldberg 1995: 50). See also footnote 18 for some further implications of the distinction between verb's participant roles and constructional roles.

¹⁷ In this respect, Langacker (2001) argues that Goldberg's use of the notion of profile to refer to core arguments in constructions has nothing to do with the standard use of this term in Cognitive Linguistics, and reveals but *ad hoc* stipulations behind the name of an accepted theoretical construct.

projections of the lexical contents of given languages in general and Spanish in particular (Penadés Martínez 1994b), an interesting point of convergence that emerges is that both models can be seen as prioritising in some way semantics over syntax.

CG, unlike the TSSP, articulates a clear demarcation between the general meaning of the construction as a whole and that of the argument roles of the construction.¹⁸ In addition, in concert with the encyclopaedic, frame-semantics model of semantic representation invoked (Fillmore 1977), CG explicitly allows for a non-trivial interaction between the general constructional meaning and the lexical meaning of the matrix verb. This formalization difference, far from being trivial, is crucial to explicating the nature of constructions as abstract entities which cannot be identified with the lexical items (in particular the matrix verbs) that fill them, at least without invoking *ad hoc* multiple verb senses (cf. the discussion entertained on example 1(c) above).

Moreover, no interaction is recognized in the TSSP between the matrix verb and the syntactico-semantic pattern. However, the most striking difference between either account is that the TSSP does not explicitly make recourse to syntactic primitives like SUBJ., OBJ., etc.,¹⁹ in the representation of the syntactico-semantic pattern, this being so because the syntagmatic relationships among the elements of a pattern are treated, especially from Báez San José (1995) onwards, as hierarchical semantic relations of determination.²⁰ Thus, although the verb is still considered the nucleus of the pattern, any additional complement, say, a direct object would be taken to be a 1-determiner of the relationship sanctioned between the subject, *viz.* a 0 determiner of the pattern, and the predicative nucleus, *viz.* the so-called 0 *determinando* of the sentence-pattern.²¹ However, it should be borne in mind that the centrality of the verb in the syntactico-semantic pattern is indeed favoured by the specific morphosyntactic properties of argument structure in Spanish. In the words of Báez San José:

It seems that the theory of syntactico-semantic sentence patterns is in principle theoretically designed for languages such as Spanish, which allow for subjectless impersonal sentences: “The *predicative nucleus* may itself constitute a sentence.”

¹⁸ At a higher level of delicacy, it must be noted that, within CG, a distinction is posited between the verb's participant roles and the construction's roles, with no systematic identity between both roles being assumed, among other things because constructions can provide additional roles, if required. This distinction between verb's participant roles and construction's roles does not find reflection in the TSSP, given that, unlike CG, Báez San José and his followers assume that the semantic and syntactic variables of the pattern are projected from the matrix verb.

¹⁹ In this respect, the TSSP takes a similar position to the one invoked in Radical Construction Grammar, which dispenses with atomic syntactic primitives (Croft 2001: 18).

²⁰ Interestingly, the TSSP ends up providing a semantic motivation for syntax, whereas the syntactic primitives invoked in CG are not ascribed any meaning, which Langacker (2001) interprets as presupposing the doctrine of autonomous syntax.

²¹ However, as Penadés Martínez (1998: 466) conspicuously observes, this proposal is not without problems, since talking of a 1 or 0 determiner implies bringing in an order of preference, which is not proper of the sentence as a (systematic) pattern but rather of the sentence as an expression.

ce pattern, *Ilueve* (“it rains”), or need a series of variables ...” (Báez San José (1994: 74))²²

Construction Grammarians, by contrast, aim at accounting for the full inventory of constructions in natural languages as a whole (Goldberg 1995, Kay & Fillmore 1999, Barlow 2000), without being in principle designed with any particular language in mind.

Finally, unlike CG, no pragmatic facet is posited at least at the level of the syntactico-semantic pattern in the TSSP, which can be explained in terms of the fact pragmatic, discourse and textual features belong to the *parole*, (or, alternatively, to the realms of the expression), and as such, are abstracted away from the sentence-pattern. Within CG, such abstraction is not desirable, on the grounds that no distinction is made *a priori* between knowledge of language and how this knowledge is put to use, among other things because pragmatic and discourse-based features are essential to unveiling the constraints on grammatical constructions (Goldberg 1995: 24, 1999).²³

4.4 How are constructions/syntactico-semantic patterns related?

As far as the overall architecture of the models is concerned, it is interesting to note that both CG and the TSSP accept that constructions (or, alternatively, the syntactico-semantic patterns) form an structured inventory, that is, a *system*.²⁴ In consonance with this view, very great emphasis is placed on accounting for how constructions/syntactico-semantic patterns are connected. Both models even acknowledge that there exist important regularities concerning syntactic expression and semantic interpretation, which can be accounted for via constructions or syntactico-semantic patterns. Suffice, by way of illustration, the following quote by Báez San José & Penadés Martínez (1990: 132):

[...] 1) lexico-predicative units can be semantically grouped in terms of the syntactic patterns in which they are inserted; 2) these syntactic patterns, taken as representative diathetical constructions with oppositional value, can be said to form coherent semantic classes; 3) in-between these classes of sentences embracing the majority of predicative nuclei within a given language, there can be said to exist a number of transitions [...], which will be referred to, in keeping with the postulates of the Prague School, as core and periphery of the units of language (F. Dane? (1966)(Báez San José & Penadés Martínez (1990: 132), my translation)).

So far the analogies. In concert with the cognitive underpinnings of the model, CG relies on the assumption that a given grammatical construction may involve a substantial

²² It is interesting to note, however, that the subject may also be left out in English subjectless tagged sentences like *Fooled us, didn't they?* (Kay 2002).

²³ Thompson (2002) takes this argument a bit further and goes on to claim that a realistic account of grammar can only be arrived at by taking interactional (i.e., conversational) data into account.

²⁴ In this respect, it must be borne in mind that the constructional variant articulated in Thompson (2002) is an outstanding exception insofar as, in keeping with the tenets of Emergent Grammar (Hopper & Thompson, in press), the conception of language and grammar as a system is abandoned. Rather, it is argued that grammar is about schematic fragments emerging from frequent recurrent individual words, phrases, sets of words which function as reusable turns and parts of turns in everyday interactions.

number of constructional variants which can be characterized at various levels of specificity and linked by categorizing relationships to form a network, often centered on a prototype (Lakoff 1987, Goldberg 1995, Taylor 1998, Langacker 1998). Moreover, given the recognition of the non-discrete character of categories, cases of constructional blending or merging are expected to occur (Taylor 1998, Barlow 2000). Thus, the Goldbergian version of CG would relate low-level configurations of the type illustrated in (3a-b) below to the subjective-transitive construction by means of inheritance polysemy links:²⁵

(3)(a) By the spring James found himself faced by a formidable coalition of enemies (BNC Corpus EFV 1569) (González-García 2001: 152) (self-descriptive subjective-transitive construction)

(b) Consider it done, sir (BNC Corpus, CKC 41) (González-García 2003: 44) (imperative-subjective-transitive construction) -

The dynamic nature of constructions dramatically contrasts with the stative character of syntactico-semantic patterns (Báez San José 1987: 77). In addition, prototypicality is openly discarded in the TSSP (Báez San José & Penadés Martínez 1990: 110), and the same applies to derivations from basic patterns. In view of this, the notion of diathesis gathers special importance in accounting for the connection between syntactico-semantic patterns. As Báez San José & Moreno Martínez have put it,

For both the speaker and the linguist, there can be said to exist sets of expressions of the type alguien/ algo – blanquea - algo (somebody/something whitens something), algo blanquea (something whitens), algo - es - blanco (something is white), algo-está-blanco (something is white), etc, and as such they must be connected, without having to postulate a derivation, as in classic generativism, generative semantics, case grammar, be it in synchronic-systematic terms, as the above-mentioned schools have done, or in genetic-diachronic terms. The reasons for not doing this are obvious for us: if we consider synchronic-systematically one of the variants to be the model from which the others are derived, we must then do away with the notion of opposition. If this notion is abandoned, we are definitely not talking about the system (Báez San José & Moreno Martínez (1985: 81), my translation, emphasis and English glosses added to the original)

Thus, CG can be said to aim at a balanced combination of the syntagmatic and paradigmatic levels of linguistic description (Goldberg 1995: 24), while the TSSP prioritises paradigmatic relatedness in the form of diathetically opposed paradigms of syntactico-semantic patterns.

5. A quick look at the research focus of CG and the TSSP

Regarding the research production of CG, it must be noted that the original impetus of this model arose out of the analysis of idiomatic configurations of the type analyzed in Fillmore, Kay & O'Connor (1998[2003]), exemplified in (4)(a)-(b) below:

²⁵ In addition, it is hypothesized that derivation of secondary constructions from primary ones may well serve as a window on to language acquisition, as outlined in section 6 of this paper.

(4) (a) I barely got up in time to eat lunch, let alone cook breakfast (Fillmore, Kay & O'Connor (1998[2003: 255])) (the let alone construction)

(b) The bigger they come, the heavier they fall (Fillmore, Kay & O'Connor (1988[2003]: 248)) (the X-er, the Y-er construction)

However, it must be highlighted that CG should not by any means be equated with a grammar of constructional idioms (Croft 2001: 17). In fact, the research carried out within this model over the last fifteen years in general, and Goldberg's monograph (1995) in particular, has proved beyond any doubt the success of CG in coming to grips with a number of fairly productive language phenomena, as the ones illustrated in (5)(a)-(f) below:

(5) (a) There are ten students absent in class today (There-constructions, Lakoff 1987: 462-465)

(b) Frank sneezed the tissue off the table (Caused-motion construction, Goldberg 1995: 152ff)

(c) Harry shot Sam dead (Resultative construction, Goldberg 1995: 180ff)

(d) It's amazing the people you see here (The extraposition construction, Michaelis & Lambrecht 1996)

While the focus of the research production has been mainly on lexically-based constructions, due attention has nonetheless been paid to pragmatic issues, ranging from scalar implicatures activated by items like *even* (Kay 1997) to the pragmatic obligatoriness of modifiers with *-ed* participles (e.g. # a built house :: a recently built house, Ackerman & Goldberg 1996: 18) or adjuncts in argument structure constructions (e.g. # They built a house :: They built a house in 1961) (Goldberg & Ackerman 2001)

As far as the TSSP is concerned, their research concerns have been geared towards syntactic and semantic issues, without taking pragmatic aspects of argument structure into account –at least at the level of the syntactico-semantic sentence pattern. In addition to the publication of a number of seminal papers laying the foundations of the model (Báez San 1975, 1987, 1994, 1996), significant applications of the model to specific argument structure types include: the analysis of attributive patterns (Penadés Martínez 1994a, 1998b), the extrapolation of the model to the domain of derived nominals ending in *-ción*, *-ón*, *-sión* and *-zón* (Díaz Hormigo 1998, 1999), the fine-grained characterization of the role of diathesis within the model carried out in Devís Márquez (1993), or the discussion of the related transitive and intransitive syntactico-semantic patterns in Spanish outlined in Espinosa (1997). In consonance with the lexicographic orientation of the model (Casas Gómez & Penadés Martínez 1998), particularly outstanding is the development of a corpus-based, computer-assisted dictionary of syntactico-semantic patterns in Spanish, as outlined in Báez San José & Penadés Martínez (1990), and the programmatic elaboration of contrastive or parallel dictionaries of syntactico-semantic patterns (Penadés Martínez 1999: 266), a task upon which Construction Grammarians have not embarked yet.

6. Some implications for language acquisition/processing

References to the above-specified domains are practically non-existent in the TSSP literature, with the exception of Penadés (1990: 266-267), where mention is made of the fact that Danes' theory (1964, 1966, 1968) is compatible with psycholinguistic research findings (L. R. Gleitman, H. Gleitman, B. Landau and E. Wanner (1992: 208-209)) pointing to the verb as the main element around which its arguments cluster to yield systematic arrangements or patterns. Indeed, this generalization is not incompatible with the position articulated by CG in general and the Goldbergian version of the model in particular insofar as Goldberg acknowledges that the matrix verb is a better predictor than other words of the meaning of an utterance. However, Goldberg departs from the TSSP in assuming that constructions are better predictors of overall meaning than the rich, though nevertheless flexible semantics of the verb, and that constructions have a real cognitive status for language users. Supporting evidence for this claim stems from language acquisition and language processing. With respect to the former, Goldberg, Casenhisser and Sethuraman (to appear) persuasively demonstrate that children begin to learn the associations between form and meaning on two-levels, namely, verb-centred categories and abstract argument structure constructions, in which the especially frequent verbs "general purpose verbs" (i.e., *go*, *put*, *make*, *do*, and *get*) are learned early and used most frequently (Goldberg 1995: 40ff), these general purpose verbs being in direct correspondence with the basic argument structure constructions, as shown in Table 1 below:

| <i>Verb</i> | <i>Constructional Meaning</i> | <i>Construction</i> |
|-------------|-------------------------------|---------------------|
| Put | X causes Y to move Z | Caused Motion |
| Make | X causes Y to become Z | Resultative |
| Go | X moves Y | Intransitive Motion |
| Do | X acts on Y | Transitive |
| Get | X acquires/possesses Y | Possessive |

Table 1. Light verbs and the constructional meanings they correspond to (Goldberg 1998: 207)

As for the latter, Bencini & Goldberg (2000) conclude, on the basis of a number of experiments, that individuals are likely to sort out sentences in terms of argument structure *constructions* rather than the lexical semantics of the matrix verb, thus empirically grounding the psychological or cognitive reality of constructions for language users.²⁶ An interesting conclusion ensuing from the above is that both constructional meaning and verb meaning are required in the production and interpretation of an utterance in a given discourse scenario. Thus, while constructions are taken to be better predictors of overall meaning, verb meaning is nevertheless central to determining any existing exceptions to constructional generalizations.

7. Closing remarks

In the final section of this paper, I would like to summarize the discussion entertained in the preceding pages by highlighting that both CG and the TSSP can be considered, in var-

ying degrees, exponents of what may be somewhat informally termed *structural-functional* approaches:

CG and the TSSP can be seen as functional approaches in two important respects: (i) both are centrally concerned with language as a means of communication, and (ii) both prioritise semantics over syntax, taking a moderate stand on the semantic motivation of the latter.

In addition, CG (with the exception of the variant articulated in Thompson (2002)) and the TSSP may well be regarded as *structural* insofar as it is assumed that constructions and syntactico-semantic patterns are potential, abstract, non-compositional meaning-form correspondences (or signs) which can be said to form a highly structured set of related items with oppositional value.²⁶

However, unlike the TSSP, CG is (i) strongly committed to typological adequacy and discourse analysis, (ii) does not posit a distinction between language knowledge and language use, (iii) capitalises on the cognitive dimension of language in general and the non-discreteness of linguistic categories in particular, (iv) is explicitly committed to generativity in distinguishing between well-formed and ill-formed/non-acceptable sentences, and (v) argues that constructions are dynamic constructs central to accounting for language acquisition/processing facts. In spite of these differences, there is no doubt whatsoever that both models contribute in their own specific (and equally promising) ways to a better understanding of the syntax and semantics of argument structure. And what is more, they do so without invoking time-honoured, though nevertheless *ad hoc*, transformations or rules.

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²⁶ Interestingly enough, Martínez Vázquez (in preparation) demonstrates that Spanish university students have difficulty grasping the general constructional meaning of resultative or caused-motion constructions in English (i.e., Pat gave/passed/sent John the football), even though they can cope with those very same constructional meanings in their mother language.

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