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# LEXICAL AND CONSTRUCTIONAL ORGANIZATION OF ARGUMENT STRUCTURE: A CONTRASTIVE ANALYSIS

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**Abstract.** In this chapter I outline some principles for a contrastive analysis of basic clausal expressions in English and Spanish. They are formulated within a general framework of Cognitive Linguistics. The proposed principles for cross-linguistic variation are a challenge to the principles of parametric variation in syntax as envisioned in Chomsky (1981) and defended by Snyder (2001). From a theory-internal point of view, they lead to a reinterpretation of Talmy's descriptive typology of *macro-events* (Talmy 1991, 2000). Particularly, they solve a serious flaw in Talmy's typology due to his exclusive focus on lexicalization patterns.

Contrastive analysis may provide insight into differing ways of organizing grammatical information. Construction grammar (CXG) suggests that clausal core information is organized by integrating at least two construction types: A) schematic constructions, B) lexical constructions (e.g. Croft 2001; Fillmore 1988; Goldberg 1995, 2006). In addition, clausal expressions are, according to some CXG-frameworks (e.g. Croft 2001), supposed to be built on language-specific construction types. I hypothesize that languages may differ according to the level of constructional specificity at which the core information is organized. English (and presumably other Germanic languages to some extent) tends to organize principal clausal information in schematic argument structure constructions, leaving secondary information for lexical (verbal) specification. Spanish (and presumably other Romance languages to some extent) seems to organize principal clausal information lexically in verbal argument structure constructions, leaving secondary information for schematically organized specification.

## Introduction

Snyder (2001) presents evidence that crosslinguistic variation in syntax is a domain in which general, explanatory principles are operative. He provides converging evidence from child language acquisition and comparative syntax for the existence of a syntactic compounding parameter in the classical sense of Chomsky (1981). This parameter determines the availability in some languages (e.g. Germanic languages) of a range of syntac-

tic complex-predicate constructions, e.g. verb-particle constructions, and unavailability in other languages (e.g. Romance languages). In this chapter, I will identify similar typological differences. But I will also show that there is in principle no reason why Snyder's findings should be taken as evidence for a generative, parametric understanding of crosslinguistic variation in syntax. I will demonstrate that a construction grammar based contrastive analysis of basic clausal expressions may reveal similarly differing ways of organizing grammatical information. Such a framework may provide the same kind of principles for crosslinguistic variation in syntax that have been put forward by Snyder, though with a different theoretical perspective. In addition, it may account for a restricted availability of complex event expressions in Spanish that has not been accounted for in Snyder's proposal. Within the general framework of cognitive linguistics, the theoretical implications lead to a reinterpretation of Talmy's descriptive typology of *macro-events* (Talmy 1991, 2000).

Construction grammar (CXG) suggests that the clausal information is organized in constructions at different levels of specificity (e.g. Croft 2001, Fillmore 1988, Goldberg 1995). There are, from this point of view, at least two basic devices for organizing the core information of the clause:

- A) Lexical constructions
- B) Schematic constructions

According to some CXG-frameworks (e.g. Croft 2001), clausal expressions are supposed to be built on language specific construction types. Hence, assuming that clausal information is organized in language-specific constructions, it is here hypothesized that languages may differ according to the level of constructional specificity in which the information is organized.

In typical usage it appears as if organizing principles are predictable from the properties of the clausal constituents. For instance, in (1) we cannot see whether the basic transfer meaning: 'X caused Y to receive Z' is organized exclusively in a lexical argument (valence) structure, centred in a trivalent verb with rich semantic content, or whether it is encoded holistically as a schematic pairing of form and meaning: [SUBJ, V, OBJ<sub>1</sub>, OBJ<sub>2</sub>] / 'X caused Y to receive Z', and specified lexically by the verb. The confusion that a prototypical ditransitive may cause is due to the verb being trivalent and the transfer-meaning of the clause being perfectly compatible with the basic meaning of the verb: 'to give (something to someone)'. It therefore seems as if a schematic level is not needed to express the transfer-meaning here since the verb appears to be the organizing

device. However, we still do not know whether there is a division of labour between a schematic form-meaning pairing, taking care of the basic transfer meaning, and a verbal form-meaning pairing that specifies the basic transfer meaning. It could be objected that if this were the case, the organization of grammar reflected in (1) would be characterized by informational overlap and redundancy. One could respond that even if redundancy may seem inappropriate, there is no reason to believe that simplicity or nonredundancy are psychologically valid characteristics of grammatical knowledge and representation (see e.g. Croft 2001; Goldberg 2006).

Atypical combinations of words and expressions provide knowledge about linguistic diversity and variation. It may, however, also serve as a valuable source of data for the linguist to understand how basic clausal information is organized in the grammar, since clausal organizing principles are not necessarily transparent in usage. Atypical usage may thus offer clues on grammatical organization, which are not directly assignable to the constituents. When the basic clausal meaning cannot be derived from the meaning of the verb, this may be an indication that this information is organized at another, more schematic level in grammar, independently from the encoding of the verb, as in (2) from Goldberg (1995).

- (1) Peter gave her a present.
- (2) Peter baked her a cake.

The chapter is structured as follows. Firstly, I will present a short introduction and discussion on the term *construction*, as it is used in the construction grammar framework, and its application in this chapter. Secondly, a tentative hypothesis for a typology of constructional specificity will be formulated for English and Spanish. Thereafter, I will analyze expressions in English and Spanish of *volitional transfer* (the ditransitive) and *caused motion*. Specifically, I will show that a contrastive perspective offers insight into principles for clausal organization, and important implications for previous typological research will be briefly outlined. Finally, conclusions will be drawn.

### **Constructions at different levels of specificity**

The term *construction* has always existed in the history of linguistics. However, prior to the formulation of the construction grammar framework, it was only loosely defined without significant theoretical interest. It was understood simply as a complex linguistic unit, often with reference to the clausal level of analysis. Indeed, it often retains this traditional

meaning. In construction grammar frameworks (e.g. Croft 2001; Fillmore 1988; Goldberg 1995, 2006; Langacker 1987/91) emphasis is specifically placed on the theoretical importance of the term *construction*.

In a synchronic perspective, constructions are non-derived pairings of form and meaning. Constructions exist in the grammar at different levels of specificity; see e.g. Goldberg (1995, 2006). Hence, a construction grammar emphasizes both abstract linguistic patterns and more substantial types and instances of usage. Constructions link formal properties (morphological, syntactic and phonological) to meaning (mostly semantic, but also discourse-functional and pragmatic) in a conventionalized relation.

Grammars consist of many different construction types. Some examples are provided in Figure 1.

Construction type	Form	Meaning
Spanish lexeme	[casa]	'house'
Spanish morpheme	[-s]	'plural'
Spanish <i>se</i>	[se-V-a-OBJ]	'impersonal meaning'
Spanish idiom	[más vale tarde que nunca]	'better late than never'
English ditransitive	[SUBJ-V-OBJ1-OBJ2]	'X causes Y to receive Z'
English rule	[SUBJ-VP-AND-Ø-VP]	'conjunction reduction'

**Figure 1.** Different construction types

It is important to recognize that most expressions referred to here as specific constructions, contain different construction types in their internal structure. This is, e.g., the case in (3).

- (3) ¿Qué le hizo Pedro a la hija de Fernando?  
 what DAT.3SG do.PST.3SG Pedro to the daughter of Fernando  
 'What did Peter do to Fernando's daughter?'

Expression (3) involves the integration of a number of different constructions:

- [Someone, do, to someone, what] – constructions
- [Interrogative] – construction
- [Double indirect object] – construction
- [VP] – construction
- [NP] – construction
- [Lexeme] – constructions
- [Inflection] – constructions (e.g. mode/aspect/tense)

From this perspective, grammar consists of many different types of constructions, integrated into clausal expressions. Should we then understand every single form-meaning pair in grammar as a construction? Are there elements of coded meaning in grammar that are not constructions? The answer is yes, though it is crucial to emphasize that the term *construction* is meant to be very general and comprehensive. How do we then identify constructions? Constructions are interrelated and have properties inherited from other constructions, while also retaining an autonomous status in the grammar as carriers of grammatical information. Constructions are thus defined synchronically as *non-derived* pairings of form and meaning. Consequently, a subject is a form-meaning pair in grammar, but it is not a construction given that the subject can be derived directly from argument structure constructions, e.g. the transitive or the ditransitive construction, in which the subject plays an integrated role. The subject does not have features that cannot be derived from the form-meaning pairings of the argument structure constructions. Users continually (re)analyze and (re)categorize linguistic input in different construction types. The identification of constructions is therefore basically an empirical matter of measuring user's categorization of linguistic input into different construction types (see e.g. Croft 2001; Tomasello 2000, 2003). Whether or not some element of form-meaning pairing is a construction, is a relevant empirical question, but it has limited theoretical interest. More interesting, from the point of view of construction grammar, are the following questions:

- What types of construction organize the clausal core information?
- How is the core information organized in different languages, and by means of which construction types?

As mentioned in the introduction, two kinds of construction at different levels of specificity seem to play a privileged role in clausal organization:

- 1) The lexical (verbal) constructions, in which the information is organized by the verb in a verbal argument structure construction.
- 2) Schematic argument structure constructions.

### **A tentative typology of constructional specificity**

One important insight provided by construction grammar is that English tends to organize the basic clausal information in schematic argument structure constructions, and that this information is specified in lexical constructions, particularly by the verb (Goldberg 1995). Below I provide

evidence that Spanish expressions are not organized in the same way. Tentatively, I formulate the following hypotheses:

- English tends to organize basic clausal information in non-derived schematic argument structure constructions. The basic clausal information is complemented and specified lexically, primarily by the verb.
- Spanish tends to organize basic clausal information lexically by means of a verbal argument (valence) structure construction. The basic clausal information may be complemented by a schematically organized, and non-verbally derived, constructional specification.

### **Contrasting English and Spanish constructions**

In the next subsections, the hypotheses outlined in the previous section will be verified and exemplified. We will examine some frequent expressions in English and Spanish from a contrastive point of view, with respect to the constructional specificity and strategy of clausal organization. I will discuss how two principal construction types seem to be used differently in English and Spanish as devices for organizing core information. In particular, it will be demonstrated that the analysis has important implications for previous typological research.

#### **The ditransitive construction**

The central sense of the ditransitive construction involves transfer between a volitional agent and a willing recipient (Goldberg 1995), as in (4). Spanish has parallel constructions, as in (5).

(4) She made Peter a cake.

(5) Le            hizo            una tarta a Pedro  
 DAT. 3SG    make.PST.3SG    a    cake for Pedro

In typical expressions of the ditransitive, as in (4) and (5), there are no indications that show whether the transfer-meaning is encoded in a lexical (verbal) construction on the basis of valence relations, or in a schematic argument structure construction, in which the formal pattern of SUBJ, V, OBJ<sub>1</sub>, OBJ<sub>2</sub> codes the transfer-meaning, or by means of both devices. Atypical examples, such as (6), indicate, however, that the transfer-

meaning is encoded in a ditransitive argument structure construction, and that the specification of the activity is encoded by the verb.

- (6) She baked Peter a cake. (Goldberg 1995)

**Schematic ditransitive construction:** [SUBJ,V,OBJ<sub>1</sub>,OBJ<sub>2</sub>] / ‘X causes Y to receive Z’

**Verbal construction:** [baked] / ‘specification of the verbal process’

The main reason is that the transfer-meaning cannot plausibly be part of the lexical meaning of *bake*. If the central information, the transfer-meaning, were organized by the verb, the lexical meaning of *bake* should include a special ditransitive variant, which is not plausible. The ditransitive argument structure is a frequent meaning pattern in Spanish, as exemplified in (5), though it does not in general combine with verbs that do not predict the characteristic transfer-meaning *per se* (Martínez Vázquez 2003), as in (6). Nevertheless, some examples like (8), in which the verb does not predict the ditransitive meaning, are perfectly acceptable in Spanish.

- (7) She cooked him a joint of meat.  
 (8) María le cocin-ó un asado.  
 María DAT.3SG cook-PST.3SG a joint of meat

However, the use of the dative in the Spanish version in (8) does not necessarily imply a volitional agent and a willing recipient, which is the central meaning of the ditransitive construction in English. Example (8) could be uttered in at least the following contexts:

- (8a) María le cocinó un asado *para dárselo*.  
 ‘María cooked him a joint of meat *with the intention of giving it to him.*’  
 (8b) María le cocinó un asado *antes de irse para que no tuviese que hacerlo él*.  
 ‘María cooked a joint of meat *before she left, so that he wouldn’t have to do it.*’  
 (8c) María le cocinó un asado *para demostrarle que sabía cocinar*.  
 ‘María cooked a joint of meat *to show him that she knew how to cook.*’

Therefore, Spanish expressions with a dative object in which the verb does not predict the ditransitive meaning, as exemplified in (8), do exist. But they are not evidence for the existence of non-derived schematic ditransitive constructions in Spanish that are comparable with the English ditransitive. They are rather evidence that Spanish expressions of ditransitive meaning, as in (5), are basically organized lexically by verbal constructions, and that the schematic ditransitive construction, characteristic in English, does not exist in Spanish as a non-derived element in the grammar. What (5) and (8) do suggest is that Spanish has a very commonly used non-derived dative-construction, which is not equivalent to the English ditransitive construction. I will tentatively hypothesize that it is a morphological construction with the abstract meaning of pointing out a beneficiary. The dative construction combines with a verbally based ditransitive argument structure as in (5), depending on a number of syntactic and pragmatic rules. In fact it combines with almost all types of argument structure, as the transitive structure in (8), or the intransitive structure in (9).

- (9)      ¿Cómo **le**            fue?  
           How    DAT.3SG    go.PST.3.SG  
           ‘How did it turn out for him?’
- (9’)     ¿Cómo fue?  
           ‘How did it turn out?’

The possibility of combining the dative construction with almost all kinds of argument structure indicates its non-derived status as a productive grammatical construction. In examples like (8) and (9), the dative construction may be left out without changing the basic meaning of the clause, as shown in (9’). This is an indication that the dative construction is not involved in the encoding of the central meaning of the clause. It rather provides supportive clausal information by pointing out, schematically, a beneficiary. Spanish versions of the ditransitive meaning thus seem to support the hypothesized characteristics of Spanish as opposed to English: The basic information in Spanish is verbally organized, and tends to be specified by abstract schematic constructions.

### The caused motion construction

The central meaning expressed in (10) is *caused motion*.

(10) He kicked the ball into the box.

This meaning appears to be provided by the verb since the semantic frame of *kick* implies ‘someone who kicks’, ‘something to kick at’ and ‘some-where to kick it’, which is the basic meaning of the clause. When the semantics of the verb does not imply a sense of *caused motion* that is similar to the basic meaning of the clause, the existence in the grammar of a non-derived schematic *caused motion* construction is indicated (Goldberg 1995).

(11) He sneezed the napkin off the table.

Core information: [SUBJ,V,OBJ, OBL] / ‘X caused Y to move Z’

Secondary information: [(SUBJ) V ] / ‘(A) sneezed’

We are now disposed also to analyze (10) as an expression of *caused motion* that combines a schematic *caused motion* construction with a verbally organized specification.

(10) He kicked the ball into the box.

Core information: [SUBJ,V,OBJ, OBL] / ‘X caused Y to move Z’

Secondary information: [(SUBJ)V(OBJ)(OBL)] / ‘(A) **kick** (B) (C)’

The encoding in (10) is redundant in the sense that the two sub-constructions (schematic + lexical construction) involve the same basic argument structure. But as already argued in the introduction, grammatical coding is very often redundant to some extent.

In Spanish, we may perfectly well express the same meaning of *caused motion*, see (12), though it seems to be impossible when the verb does not predict the *caused motion* pattern *per se*, as in (13).

(12) Met-ió la pelota en la caja de una patada.  
 place-PST.3SG the ball in the box with a kick  
 ‘He kicked the ball into the box.’

Core information: [(SUBJ)**metió** (OBJ)(OBL)] / ‘X caused Y to move Z’.

Secondary information: [ADV form] / ‘causal specification’.

- (13) \*Estornud-ó la servietta de la mesa.  
 sneeze-PST.3SG the napkin from the table  
 'He sneezed the napkin off the table.'

Example (12) may then be analyzed as an expression of *caused motion* whose principal clausal information is organized lexically by the verb. The causal specification may be organized by a non-derived schematic adverbial construction (*de una patada*). This analysis provides further arguments for the idea, already supported by the contrastive analysis of the ditransitive construction, that in Spanish the principal clausal information is organized lexically by the verb, as opposed to English, in which it is organized in more complex pairs of form and meaning (schematic constructions). The analysis has been carried out within the construction grammar framework, and has therefore important implications for how we should interpret Snyder's findings on cross-linguistic variation in syntax (Snyder 2001), as outlined in the introduction. His findings may not, as he claims, be due to the existence of a syntactic compounding parameter in the sense of Chomsky (1981). Snyder's data may rather reflect a cross-linguistic difference of constructional specificity in the sense of the analysis suggested in this chapter. In particular, the present analysis has demonstrated that expressions of complex events, comparable to English counterparts, such as the double object dative, are not excluded in Spanish. They have, though, to be licensed and organized by the verb. The partial availability of complex event expressions in Spanish cannot be accounted for by Snyder's global parametric variation.

### A construction-based typology of macro-events

A construction-based analysis of expressions of caused motion, cf. the previous section, has also interesting implications for Talmy's descriptive typology of *macro-events* (Talmy 1985, 1991, 2000), and for its theoretical status. Talmy found that in expressions of macro-events - the most important sub-domain is the motion event - some languages, e.g. Germanic languages, tend to lexicalize the main event in a satellite (so-called "satellite framing"), and the co-event by the verb. Other languages, e.g. Romance languages, tend to lexicalize the main event by the verb (so-called "verb framing"), and may express the co-event outside the verb, typically by adding an adverbial. Talmy's typology shows, very convincingly, the predominance in some languages, as opposed to other languages, of certain patterns of form-meaning mapping in expressions of

macro-events. In Pedersen (2009), however, I have argued that the typology suffers from being formulated exclusively in terms of lexicalization patterns. Its status as a universal typology requires a framework that goes beyond having the lexeme as the basic unit of the typology. It should include both the lexical level and more schematic constructional levels of analysis. It would thus profit, I argue, in terms of explanatory power and predictability, from being fitted into a construction grammar framework, in which constructions of different degree of specificity are the basic constituents. I argue that despite the considerable variation that can be observed, Germanic languages tend to map the main information of expressions of macro-events onto a complex schematic construction and the secondary information onto a lexical (verbal) construction. Romance languages tend to map the main information onto the verb, i.e. a lexical construction, while the secondary information may be mapped onto a schematic construction. These regularities represent a special case of the more general principles outlined in the present chapter, which is concerned with the organization of clausal information in general, not only with the construction of macro-events.

According to some linguists, one of the main shortcomings of Talmy's typology is that some languages do not seem to fit in his binary typology (e.g. Slobin and Hoiting 1994, Slobin 2004 and Zlatev and Yangklang 2004). In fact, from many studies, most of them concerned with the study of the motion event, a picture has begun to emerge of substantial deviations from the Talmian typology in almost all languages (e.g. Aske 1989; Berman and Slobin 1994; Gennari et al. 2002; Ibarretxe-Antuñano 2004a, 2004b; Pedersen 2009; Slobin and Hoiting 1994; Slobin 1996, 1997, 2000, 2004; Zlatev and Yangklang 2004). See also Talmy (2005), and Beavers *et al.* (2008) for overviews.

In Pedersen (2009), I suggest a specific strategy for research into macro-events. Research projects should develop a typology of constructions, not of languages. This is in line with a more general trend in typological research away from typologizing languages as a whole, to typologizing particular situation types expressed in a language (see e.g. Croft *et al.* 2008). This strategy has important implications for how we should interpret the data that do not fit the patterns suggested by Talmy. Pedersen (2009) provides the examples reproduced here as (14)-16), in which the macro-event is state change. The English and Danish versions may show the typical "Germanic" pattern, as demonstrated in (14), in which the main information (MI = state change), according to Talmy, is expressed by the satellite *out/ud*. However, a "Romance" type is available as well. In Danish, it is very common to construe the main information (the state change)



tions made by Talmy in a different theoretical perspective. Furthermore, it provides a concrete solution to a serious flaw in Talmy's typology. In (17) it is counterintuitive that the satellite lexeme (*out*), whose basic meaning is: 'leaving a container' (Rudzka-Ostyn 2003), should determine the main event ('X caused Y to move Z').

- (17) Peter *pushed* him **out** of the restaurant.  
 (18) Pedro lo **ech-ó** del restaurante  
 Pedro ACC.3SG.MASC throw-PST.3SG out from the restaurant  
 a *empujones*.  
 by pushing  
 'Peter pushed him out of the restaurant.'

In a construction-based framework, the characteristic feature of the English version in (17) is that the main clausal information is determined by a schematic *caused motion* construction: [SUBJ V OBJ OBL] / 'X caused Y to move Z'. This information is specified by a lexical construction (*pushed*). The Spanish version in (18), opposed to the English version, organizes the main clausal information in a lexical argument structure construction centred in the verb (*echó*), and specifies this information in a schematically organized adverbial construction. This analysis indicates that the cross-linguistic difference that may be observed in expressions of caused motion like example (17)-(18) should not be interpreted as differing lexical mappings of directed motion, as hitherto claimed, but rather as manifestations of differing constructional organization of clausal information in English and Spanish.

The existence of basic typological differences in expressions of macro-events, as the ones originally observed by Talmy, cannot be denied, no matter how they are described and understood. In the present chapter, I have discussed the possibility that such regularities and differences may reflect general typological principles that govern the organization of clausal information. The essence of the principles of parametric variation (Snyder 2001) is that some languages have a compounding parameter in the Chomskian sense, and other languages do not. The compounding parameter enables, for instance, English to organize expressions of complex events such as resultatives, or double object datives. It is a problematic implication of Snyder's proposal that languages like Spanish that lack the compounding parameter are supposed not to permit expressions of complex events that are comparable to the English counterparts. The present framework, however, accounts for the fact that very similar versions of, e.g., English resultatives, or double object datives, do exist in Spanish. We

have seen that the condition for Spanish, as opposed to the condition for English, is that the argument structure has to be lexically licensed, and organized, by the verb. We may, therefore, tentatively state that the present proposal represents a challenge to the parametric principles of cross-linguistic variation proposed by Snyder (2001).

## Conclusion and perspectives

Construction grammar frameworks suggest that two principal construction types determine how information is organized in simple clauses: Schematic constructions and Lexical constructions.

I have argued, on the basis of contrastive data, that English and Spanish, and presumably other West European languages, are different regarding how these organizing devices are used, and specifically at which level of constructional specificity the basic clausal information is organized.

It has been demonstrated that English tends to organize basic clausal information in schematic argument structure constructions, leaving secondary information for lexical (verbal) specification. Spanish seems to organize basic clausal information lexically in a verbal argument structure construction, leaving secondary information for schematically organized specification. This framework provides a reinterpretation of Talmy's descriptive typology of macro-events that solves a serious flaw in the typology due to its exclusive focus on lexicalization patterns.

Acquisition data indicate that Spanish learners find it particularly difficult to comprehend and acquire English expressions in which the basic schematic meaning cannot be derived directly from the lexical meaning (Martínez Vázquez 2003). It is therefore also likely that research into L2-acquisition of argument structure will turn out to be supportive for the hypothesis formulated in this chapter.

The hypothesis represents a challenge to the Chomskian claim (1981), defended by Snyder (2001), that the difference between English and Spanish is due to a parameter setting of cross-linguistic variation in syntax.

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