Levels of description and constraining factors in meaning construction: an introduction to the Lexical Constructional Model[1]

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This paper presents an outline of the LEXICAL CONSTRUCTIONAL MODEL, a meaning construction model that integrates insights from functional models of language (especially, Role and Reference Grammar) and Cognitive Linguistics (especially, Goldberg's Construction Grammar and Lakoff's Cognitive Semantics). The initial claim is that a theory of semantic interpretation should be constructed on the basis of two representational mechanisms, lexical and constructional templates, and two basic cognitive operations, subsumption and conceptual cueing, that specify in what ways meaning representations from different levels may interact. It is further shown that both lexical-constructional subsumption and purely constructional subsumption –at any stage of the meaning construction process– is regulated by an inventory of both internal and external constraints. Internal constraints involve the semantic units encoded in a lexical or a constructional template, while external constraints result from the possibility or impossibility of performing high-level

[1] Financial support for this research has been provided by the Spanish Ministry of Education and Science, grants HUM2004–05947–C02–01/FILO, HUM2005–02870/FILO, HUM2007–65755/FILO. Part of the research has been co-financed through FEDER funds. The present paper is an extensively revised and expanded version of preliminary work submitted in 2006 for a Fetschrift volume in honor of Professor Asunción Alba Pelayo (Mairal Usón & Ruiz de Mendoza forthcoming). We are thankful to Antonio Barcelona, Christopher S. Butler, Francisco Gonzálvez-García and Jan Nuyts for comments and advice on previous versions of this paper. For further information on the Lexical Constructional Model we refer the reader to the LEXICOM research webpage: <www.lexicom.es>.

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Folia Linguistica 42/2 (2008), 355–400.
ISSN 0165–4004, E-ISSN 1614–7308

metaphoric and/or metonymic operations on the items involved in the subsumption or cueing processes.

Keywords: lexical template, constructional template, subsumption, cueing, metaphor, metonymy

1. Introduction

The present paper develops some of the key assumptions of the LEXICAL CONSTRUCTIONAL MODEL (LCM) as preliminarily outlined in Ruiz de Mendoza & Mairal Usón (2007) and Mairal Usón & Ruiz de Mendoza (forthcoming). The LCM arises from the concern to account for the relationship between syntax and all facets of meaning construction, including traditional implicature, illocutionary meaning, and discourse coherence. The model makes use of some of the theoretical tools developed by Ruiz de Mendoza and his associates in the domain of Lakoff's (1987) Cognitive Semantics (e.g. Ruiz de Mendoza & Pérez Hernández 2001, Ruiz de Mendoza & Díez Velasco 2002, Ruiz de Mendoza 2007). It also draws insights from previous work on lexical decomposition by Faber & Mairal Usón (1999) and Mairal Usón & Faber (2002, 2005, 2007). At the heart of the LCM (see Figure 1) we find the notions of LEXICAL TEMPLATE (LT) and CONSTRUCTIONAL TEMPLATE (CT), which are the building blocks of the model. The principled interaction between lexical and constructional templates supplies the central or CORE meaning layer for other more PERIPHERAL operations –involving implicated meaning– to take place. Thus, fully worked-out representations at each level either cue for the activation of representations at the next higher level or are constructionally subsumed into them. Both conceptual cueing and (lexical-)constructional subsumption are cognitive processes and as such are constrained by a number of principles that determine their scope of application.

The rest of the paper is structured as follows: Section 2 gives an overview of the general architecture of the LCM; then we introduce the building blocks of the model, namely the notions of lexical template (Section 3) and constructional template (Section 4); we also discuss the role of the latter at its various levels of linguistic operation. This discussion is followed by an account of how the different descriptive levels of the model interact on the

basis of subsumption or cueing processes and of the kinds of constraints that regulate them (Section 5).

2. The general architecture of the model

As mentioned in the previous section, the LCM has a level 1 or core module consisting of elements of syntactically relevant semantic interpretation. Then, it has a pragmatic or level 2 module that accounts for low-level inferential aspects of linguistic communication. There is a level 3 module dealing with high-level inferences (i.e. illocutionary force). Finally, a level 4 module accounts for the discourse aspects of the LCM, especially cohesion and coherence phenomena. Each level is either subsumed into a higher-level constructional configuration or acts as a cue for the activation of a relevant conceptual structure that yields an implicit meaning derivation. Interpretive activity at all levels is regulated by a number of cognitive constraints. Figure 1 schematizes the general architecture of the model.

At level 1, lexical items are built into constructional representations, which have a more abstract nature. The semantic structure of lexical items is specified in terms of lexical templates, whose internal configuration is established on the basis of combinations of lexical functions and semantic primes, both of which have a number of variables (or predicate arguments) within their scope. These variables and their associated semantic structure fuse into constructional variables (or roles) and their associated structure thus giving rise to core grammar representations. The fusion process, which we call SUBSUMPTION, is regulated by a number of internal and external constraints, which take the form of various cognitive operations that will be addressed in Section 5. As will be seen, the two sets of constraints are licensing factors that filter out impossible combinations of lexical items with constructions.

The LCM also allows for a degree of inferential activity (i.e. conceptual cueing) at the level of core grammar. Thus, sometimes lexical-constructional subsumption may give rise to an underspecified representation at level 1, as in *She's ready* [for the party], *I will* [marry you], *The student was late* [for his Mathematics class]. In some pragmatics circles (notably Relevance Theory) it has been argued that examples like these require a straightforward form of inferential activity, called EXPLICATURE DERIVATION, which is different from IMPLICATURE DERIVATION (cf. Sperber & Wilson 1995). While implicatures

require reasoning based on a premise-conclusion pattern, where the premise is derived from the speaker's mental context or cognitive environment, explicatures result from assigning correct referents to pronominal forms, disambiguating meanings in context, and completing underspecified expressions like the above. In Relevance Theory explicature-derivation is seen as the context-guided inferential development of the blueprint provided by the linguistic expression. The LCM provides a slightly more refined view of this process. Thus, reference assignment occurs in connection with the fusion between predicate and constructional arguments at level 1, which makes this phenomenon independent of actual morphosyntactic realization. Disambiguation is carried out at any point of the semantic interpretation process, including the pragmatic, illocutionary and discourse levels (2, 3, and 4 respectively). For example, a 'Can You X' configuration can vary between a request or a question interpretation, an issue that will be determined at level 3.

Conceptual representations at level 2 either result from subsumption of fully worked-out level 1 representations into level 2 constructions or arise from the cued activation of low-level situational models (or scenarios). Or we can have both constructional subsumption and cueing at work thus yielding a rich array of meaning implications. Consider the case of the sentence *Who do you think you're talking to?* From the constructional point of view, we have a variant of the 'What's X doing Y' construction postulated by Kay & Fillmore (1999), which carries a heavily conventionalized implication that the addressee has acted in a way that upsets the speaker (e.g. *What's the child doing messing with my computer?*). The strength of the conventional implication depends to a large extent on the *do you think* element (cf. *Who are you talking to?*), which thus acquires a fairly stable status within the construction. But the meaning implications of this sentence can go beyond those obtained on the basis of the constructional mechanism. The 'Who Do You Think You're X?' configuration is typically associated with everyday situations where the speaker gets upset when the addressee has behaved in socially inappropriate ways that directly affect the speaker negatively. In this situation the speaker may feel that he has a right to challenge the addressee's behavior. The 'What's X doing Y' construction does not convey this special meaning implication directly, but the implication may be cued contextually (e.g. *What's that you're doing?* referring to a situation where it is clear that the addressee has treated the speaker wrongly) or it may even be obtained on the basis of level 1 resources

(e.g. by means of developing the explicit meaning of the message, as in *What are you doing talking to me like that?*).

Level 3 representations obey the same principles as their level 2 counterparts. The difference is just the kind of scenarios involved in the cueing process, which are not associated to low-level situations (like those found at level 2) but to more generic scenarios which specify higher level social conventions applicable to many different low level situations. Thus, *Who do you think you're talking to?* can be interpreted as a warning for the addressee to change his course of action. This speech act value derives from the social convention according to which we are expected, for whatever context, to act in socially acceptable ways, which, if not followed, can give those affected by our behavior the right to take measures. The same basic speech act value can be obtained constructionally through an explicit performative predicate (e.g. *I warn you that you are not addressing me appropriately*), although there are different usage implications: 'Who Do You Think You're X?' places greater focus on the misdeed than on the warning since the warning value is only implicit.

Finally level 4 representations, whether constructional or cued, make use of high-level non-situational frames establishing logical connections such as 'cause-effect' or 'evidence-conclusion', temporal relations such as 'precedence' or 'simultaneity', or conceptual relations such as 'similarity', 'contrast', 'conditioning', and 'concession', among others. Note that one single expression can be explained on the basis of the convergence of multiple discourse connections. For example, in *The bomb went off; three people died*, we have a precedence relationship from the point of view of temporal sequencing, but also a cause-effect connection between the bomb exploding and the people dying.

The final meaning representation can require further cueing operations that may still add further illocutionary values or other pragmatic (including added illocutionary meaning) or discourse values, such as irony, humor, and exaggeration, to name a few (cf. Barcelona 2005). For example, constructionally, *The bomb went off; three people died* can be regarded as an informative statement (level 3); then, after the precedence and cause-consequence connections have been worked out (level 4), we can give the whole sequence another illocutionary reading (e.g. a warning).

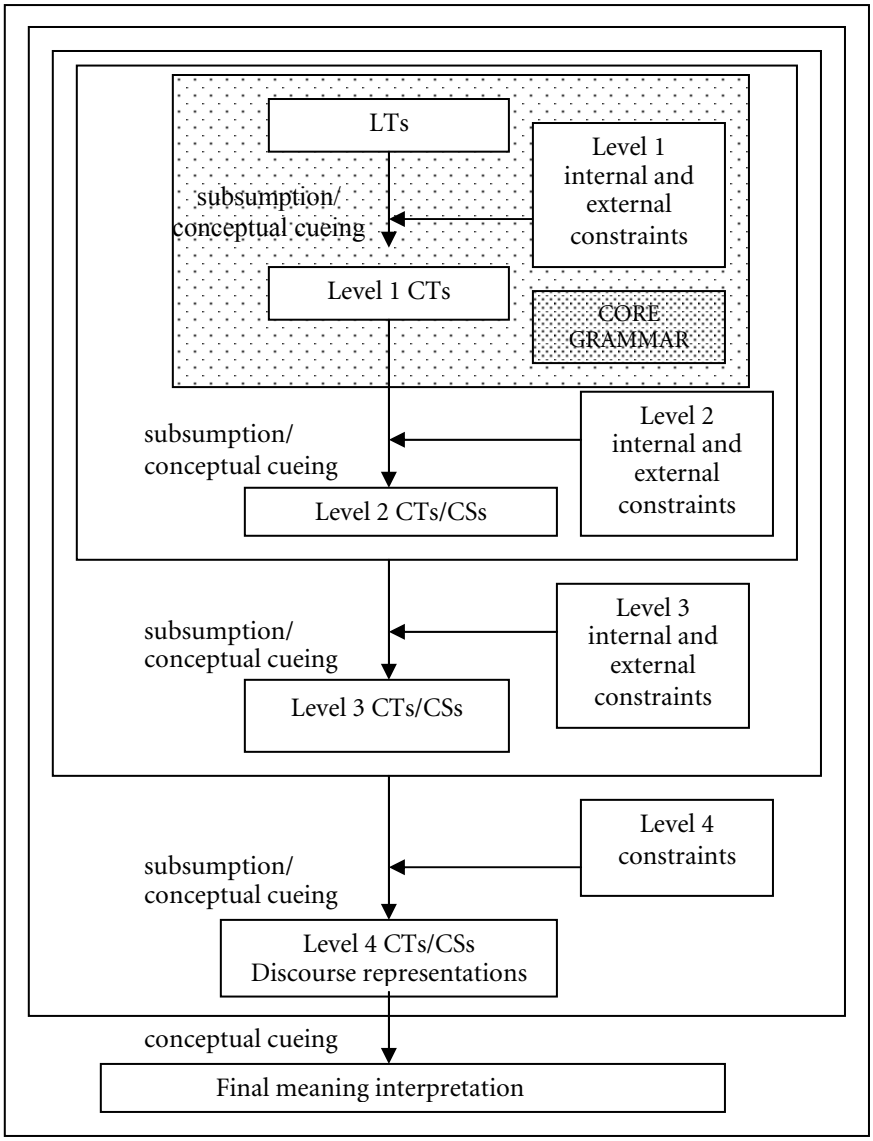


Figure 1. The overall architecture of the Lexical Constructional Model [LT = lexical template; CT = constructional template; CS = Conceptual Structure]

3. Lexical templates

The notion of lexical template is originally a development of the LOGICAL STRUCTURES (LS) postulated in Role and Reference Grammar (RRG) (cf. Van Valin & LaPolla 1997, Van Valin 2005), which uses a decompositional system to represent the semantic structure and argument structure of verbs and other predicates. Drawing on Vendler's (1967) well-known Aktionsart distinctions, RRG divides verb classes into states, activities, achievements, semelfactives, and accomplishments together with their corresponding causatives. States and activities are primitives, while accomplishments and achievements consist of either a state or activity plus a BECOME or an INGR operator. Finally, semelfactives encode punctual events, which do not result in a state. Table 1 gives a preliminary classification for illustrative purposes (cf. Van Valin 2005: 45).

Verb class	Logical structure	Example	Instantiation of LS
State	**predicate'** (x) or (x, y)	*see*	**see'** (x, y)
Activity	**do'** (x, [**predicate'** (x) or (x, y)]	*run*	**do'** (x, [**run**' (x)])
Achievement	INGR **predicate'** (x) or (x, y), *or* INGR **do'** (x, [**predicate'** (x) or (x, y)]	*pop* *burst into tears*	INGR **popped'** (x)
Semelfactive	SEML **predicate'** (x) or (x, y) SEML **do'** (x, [**predicate'** (x) or (x, y)]	*glimpse* *cough*	SEML **see'** (x, y)
Accomplishment	BECOME **predicate'** (x) or (x, y), *or* BECOME **do'** (x, [**predicate'** (x) or (x, y)]	*receive*	BECOME **have'** (x, y)
Active accomplishment	**do'** (x, [**predicate**$_1$**'** (x, (y))] & BECOME **predicate**$_2$**'** (z, x) or (y)	*drink*	**do'** (x, [**drink'** (x, y)]) & BECOME **consumed'** (y)
Causative accomplishment	α CAUSES ß, where α, ß are LS of any type	*kill*	[**do'** (x, ∅)] CAUSE [BECOME [**dead'** (y)]

Table 1. Inventory of RRG logical structures

The LS inventory is intended to capture only those aspects of the meaning of a word that are grammatically relevant. Since it bases its decompositional

system on Aktionsart distinctions, the inventory is capable of accounting for some important restrictions on constructional alternations. Compare:

(1) The boy broke the window with a bat.
(2) He ate his soup with a teaspoon.
(3) A bat broke the window.
(4) *A teaspoon ate his soup.

Example (3) is a case of the instrument subject construction, which is possible for 'break' verbs but impossible for 'consumption' verbs, as evidenced by (4). The reason for this oddity in the transitivity system whereby two seemingly parallel grammatical configurations have different grammatical properties is to be found in the different predicate-object relationships that characterize each verb class. 'Break' verbs denote causative accomplishments while 'consumption' verbs are active accomplishments. The instrument subject construction requires a causal element, which makes the construction sensitive only to the former predicate class. Let us now consider another causative accomplishment verb:

(5) The gunman killed the sheriff with a six-shooter.
(6) A six-shooter killed the sheriff.

As predicted by its LS configuration, *kill* can take part in the instrument subject construction. However, its grammatical behavior is not always comparable to that of 'break' verbs:

(7) The boy broke the window into a million pieces.
(8) *The gunman killed the sheriff into a dead body.
(9) Finally, Madison broke the window open and went in.
(10) *Finally, the gunman killed the sheriff dead.

As (8) and (10) reveal, the verb *kill* cannot be used in the caused-motion and resultative constructions. This is not the case for the verb *break*, as is clear from (7) and (9). This difference in grammatical behavior cannot be explained by simply looking into the LS of both verbs:

(11) **break:** [**do'** (x, ∅)] CAUSE [BECOME [**broken'** (y)]
(12) **kill:** [**do'** (x, ∅)] CAUSE [BECOME [**dead'** (y)]

It is necessary to achieve a greater degree of refinement in the semantic representation of the items belonging to the various verb classes. In the case under discussion, both *kill* and *break* have a resultative ingredient in their meaning composition (captured by the primitive concept BECOME in the LS representation). However, killing only admits one possible result, i.e. death, while breaking is compatible with a wider range of possibilities:

(13) a. Harry broke the glass into a thousand pieces.
b. Julie broke the vase into little fragments.
c. He broke the bottle into various segments, which wound around themselves, giving the observer the illusion of motion.
d. I broke the windowpane into four sections.
e. A picture fell from the wall, breaking the glass into thousands of sharp shards.
f. I broke the pillar into three parts and glued them to the base.
g. He broke the board into three nearly equal pieces when he tested for yellow belt in Taekwondo.

It is for this reason that *break*, unlike *kill*, makes use of the caused-motion construction in order to express the exact nature of the result. This difference between the two kinds of verb, which is grammatically relevant, is not captured by the standard LS formalisms of RRG. A way out of the problem consists in enriching semantic representations in such a way that it is possible to predict with greater accuracy when a given lexical item may or may not take part in a construction.[4] For this purpose the LCM makes use of the

[4] It is fair to note that Van Valin & Wilkins (1993), Van Valin & LaPolla (1997) and Van Valin (2005) all claim that primitive state and activity predicates (i.e. those indicated in boldface prime) need to be decomposed further. In this connection, RRG uses internal variables (marked with Greek letters) to encode those semantic parameters that express the semantic content of a verb, and external variables (marked with Roman characters) to express those arguments of the meaning of a verb that are grammatically relevant, as exemplified below for the verb *promise* (Van Valin & La Polla 1997: 551):

(i) [**do'** (x, [**express**(α).**to.**(β).**in.language.**(γ)' (x, y)])] CAUSE [BECOME **obligated'** (x,w)]

notion of lexical template, as developed by Mairal Usón & Faber (2002, 2005, 2007).

Lexical templates are constructed on the basis of a universal semantic metalanguage which includes an inventory of primes obtained by extensive factorization (i.e. the search for meaning regularities across predicates within a lexical domain)[5] of meaning definitions and a catalogue of operators, which express the way semantic primes combine to express the more specific hyponyms. The set of semantic primes that we have used coincide to a great extent with those used in Wierzbicka's Natural Semantic Metalanguage research program, which has been shown to be valid in almost over a hundred languages (cf. Wierzbicka 1996, 1999, Goddard & Wierzbicka 1994, 2002). The operators that express the conceptual syntax are based on the notion of LEXICAL FUNCTION as propounded in Mel'čuk's Explanatory and Combinatorial Lexicology. Lexical functions have also been shown to be typologically valid (cf. Mel'čuk 1989, Mel'čuk et al. 1995, Mel'čuk & Wanner 1996).[6] An important point which may not be overemphasized is the fact that we have adapted Mel'čuk's lexical functions –which were originally devised to apply to the combinatorial possibilities of a lexical unit– so that they can

Within this context, our lexical templates aim to provide a finer-grained semantic decomposition of primitive state and activity predicates by using a universal semantic metalanguage which consists of a number of primitives (or undefinable items) and a list of operators (or lexical functions) that account for the semantic and pragmatic parameters relevant to the meaning of a predicate.

[5] Faber & Mairal Usón (1999), drawing on the pioneering work of Martín Mingorance (1984, 1990, 1995), structure the English lexicon into a number of lexical domains: EXISTENCE (**be, happen**); CHANGE (**become**); POSSESSION (**have**); SPEECH (**say**); EMOTION (**feel**); ACTION (**do, make**); COGNITION (**know, think**); MOVEMENT (**go, move**); PHYSICAL PERCEPTION (**see, hear, taste, smell, touch**). Each lexical domain is identified by means of a prime (or undefinable item) in boldface. These primes can in fact be used for the formulation of the meaning of more specific lexical items, e.g. **feel** is used to define a number of hyponyms that belong to the lexical domain of EMOTIONS, such as *scare, terrorize, terrify, petrify*. Factorization allows us to identify a number of primes which mark where the semantic decompositional chain actually ends. A further step is to encode the differentiating properties between predicates belonging to the same lexical domain.

[6] It is impossible to do justice to the exact details of the formalism, so we refer the reader to Mairal Usón & Faber (2002, 2005, 2007) for a detailed account of the intricacies of the metalanguage.

account for lexical domain-specific relations, and allow the codification of those semantic parameters that are not visible to syntax, e.g. the manner, purpose, means, social status, speaker's attitude, the urgency of a request, among others (cf. Faber & Mairal Usón 1999, Mairal Usón & Faber 2007). It is also necessary to make it clear that there is a large degree of coincidence between the parameters obtained through systematic factorization and the list of collocational functions provided by Mel'čuk's model. Accordingly, we have used the inventory of lexical functions to formalize the set of semantic parameters that are relevant within a lexical hierarchy.

Lexical templates have the following format:

(14) **predicate**: [SEMANTIC MODULE<lexical functions>] [AKTIONSART MODULE<semantic primes>]

The semantic module, which expresses the semantic and pragmatic parameters that underlie predicate meaning, is expressed in terms of lexical functions. The Aktionsart module is based on RRG logical structures though the terms in boldface are not those used in RRG, but rather belong to an inventory of primes. Consider the following example from the domain of cognition and speech act verbs:

(15) **grasp**: [MAGNOBSTR & $\text{CULM}_{12[\text{ALL}]}$] **know'** (x, y)

The entry for *grasp* is a hyponym of *understand*, which focuses on the acquisition of knowledge, with *know* acting as the primitive that defines the whole verb hierarchy. The right hand side of the template contains the Aktionsart module, which is a representation of the logical structure as formulated in Van Valin (2005) (cf. Table 1 above). In the representation *grasp* designates a state predicate with two arguments (*x*, *y*) that are related to each other by a prime that is indicated in boldface, **know'**. The left hand side of the representation encodes the semantic properties that allow us to distinguish *grasp* from other predicates within the same hierarchy. In order to do so, we postulate two lexical functions, which capture the large degree of difficulty involved in carrying out the action (MAGNOBSTR) and the end-point of knowing something (which is understanding) (CULM_{ALL}).

Another example of lexical template taken from the lexical domain of cognition verbs is the predicate *consider*. This verb inherits the properties of

the state primitive *think* and specifies two semantic components which focalize the duration (CONT) and a present time location ($LOC_{in}^{TEMP\leftrightarrow}{}_{12}$).

(16) **consider:** [$LOC_{in}^{TEMP\leftrightarrow}{}_{12}$ CONT] **think'** (x, y)

If we move on to the domain of speech act verbs, a predicate like *command,* as a hyponym of *order*, inherits all its properties and adds its own specificity which lies in the political/military context:

(17) **command:** [$MAGN_{1[PERM]\,23,}$ $LOC^{soc\uparrow}{}_{(1)}$ (PLACE_TYPE: political/military)]
[**do'** (x, [**say'** (x, y)])] CAUSE [**do'** (y, z)]

The subscripts ($_{1,\ 2,\ 3}$) codify the speaker, auditory percept, and the addressee, respectively. MAGN specifies that the action is intensified to a very high degree, thus making it more forceful, and PERM, applied to the first argument, indicates that the speaker has power over the addressee and is licensed to ask him/her to do things. As for the Aktionsart module, this verb designates a causative accomplishment structure that is induced by an activity such that *x* says something to *y* and this causes *y* to do *z*.

In sum, lexical templates provide enhanced semantic representation and consequently allow us to account for those properties which go beyond those aspects of the meaning of a word that are grammatically relevant. As a result, we deal with very rich semantic representations along the lines of a robust and typologically valid formalism.[7]

4. Constructional templates

From our previous description, it is evident that lexical templates are but lower-level constructional characterizations. Because of their constructional nature, lexical templates share crucial features with higher-level representations, which we shall call CONSTRUCTIONAL TEMPLATES, with which they interact. Constructional templates are non-lexical representations with a

[7] This idea of formulating rich semantic representations is very much in consonance with the major tenets of Frame Semantics. For a comparison of lexical templates and frames, see Mairal Usón & Ruiz de Mendoza (2009).

grammatical impact.[8] They are not limited to the propositional level of description, i.e. the level where lexical structure (consisting of predicate-argument combinations) initially interacts with grammatical structure (involving tense, aspect, modality, and the arrangement of sentence constituents). Thus, we include among constructional templates configurations that would be regarded by other theorists as a matter of pragmatic implicature, illocutionary force or discourse structure. The LCM thus distinguishes the following constructional levels:

- level 1: constructions producing argument stucture characterizations;
- level 2: constructions accounting for heavily conventionalized situation-based low-level meaning implications;
- level 3: constructions that account for conventionalized illocutionary meaning (situation-based high-level implications);
- level 4: constructions based on very schematic discourse structures.

We explore each construction type in the next subsections.

4.1. Level 1 constructions

Argument structure characterizations have been the main object of investigation in constructional approaches to linguistic description (e.g. Goldberg 1995, 2006). Our level 1 construction templates are closely related to the account of construction types originally identified by Goldberg (1995: 3–4), as shown in Table 2.

[8] This proposal is much in line with Croft's (2003: 55ff.) distinction between VERB-SPECIFIC and VERB-CLASS SPECIFIC constructions, where the former account for the fact that there might be verbs within a lexical class that do not license a particular construction; for example, within verbs of permission *let* and *enable* cannot occur in the ditransitive construction. For Croft the existence of verb-specific constructions indicates that the dichotomy between lexical rules and abstract constructions is false.

Type of construction	Semantic representation
Ditransitive *Pat sent Hill a fax*	X CAUSES Y TO HAVE Z
Caused motion *Pat sneezed the napkin off the table*	X CAUSES Y TO MOVE TO Z
Resultative *She kissed him unconscious*	X CAUSES Y TO BECOME Z
Intransitive *The fly buzzed into the room*	X MOVES Y
Conative *Sam kicked at Bill*	X DIRECTS ACTION AT Y

Table 2. Construction types

The list is not intended to be exhaustive, but illustrates the high-level nature of the notion of construction at this explanatory level. Constructions thus consist of sets of arguments that relate among one another on the basis of abstract predicates such as CAUSE, BECOME, MOVE, and HAVE. In our own proposal, we retain this basic configuration but adapt it to the requirements of the universal semantic metalanguage that we use together with its associated Aktionsart characterizations. As a consequence, level 1 constructional templates make use of the same high-level representational mechanisms that characterize lexical templates, except for internal variable descriptions, since these are idiosyncratic to each verb and verb class. This feature of constructional templates is natural since level 1 constructions are built by abstracting away elements common to a number of lower-level predicate classes. We will now refer very briefly to the transitive and caused-motion constructions, which we will use later (Section 5.1) to account for some crucial lexical-constructional subsumption phenomena.

There are some verb classes that linguists have traditionally classified as transitive, where we typically have an actor and an object of the action. We regard transitivity in verbs as the potential of a verb (or a whole verb class) to participate in a higher-level configuration called the transitive construction, which has the following basic constructional template:

(18) [**do'** (x, y)]

In this template, we specify an action (**do'**), an actor (x) and an object of the action (y). The transitive configuration is the basic building block for other constructions, such as the ditransitive (which adds one more constructional

argument), the resultative (which adds a predicate expressing a resultant state of the object), and the caused-motion construction (which is in fact a case of resultative construction where the resultant state is a change of location). The caused-motion construction is illustrated in (19) and (20) below:

(19) They kicked me out of the casino.
(20) Then they pushed me into my cell and locked the door.

This construction conflates the roles of 'affected object' and 'actor' into one element of structure (the speaker in the examples above). It also conflates into one single predicate ('kick', 'push') two predicate values: causing motion and manner of causing motion. We propose the following constructional template for caused-motion, where the asterisk marks the optional status of an element:

(21) [**do'** (x, y)] CAUSE [BECOME *NOT LOC (y, z)]

It may be noted that the caused-motion construction is built on the basis of the basic transitive pattern [**do'** (x, y)]. This feature of the construction has consequences that will be addressed in Section 5.

4.2. Level 2 constructions

Level 2 meaning can be obtained on the basis of a combination of degrees of pragmatically guided and linguistically guided situation-based low-level inferencing. Traditionally, pragmatically guided inferencing has been termed IMPLICATURE, which is arguably obtained by the application of some pragmatic principle (like the maxims of the Cooperation Principle proposed by Grice 1975 or the Principle of Relevance put forward by Sperber & Wilson 1995). On the other hand, linguistically (i.e. lexically or constructionally) guided inferencing has been called PRESUPPOSITION (cf. Karttunen 1974). Thus, *She regretted getting a tattoo* presupposes that the protagonist got a tattoo. This is a background inference that derives from the semantic characterization of the verb *regret*, which suggests that the protagonist wishes that she had not performed the action (one cannot regret what one has not done). But the same sentence can have a number of different implicatures,

which will vary with the context (e.g. 'she won't get a new tattoo', 'she was scolded by her parents', 'she didn't know tattoos are permanent', etc.).

Our account differs from traditional accounts on presupposition and implicature in pragmatics and the philosophy of language in two ways. First, presupposition is not a pragmatic inference but a consequence of the lexical or constructional properties of semantic descriptions. Thus, factive predicates like 'regret', 'realize', and 'be proud that' have the property of introducing a thematic argument that is presented as true from the experiencer's perspective. This property is captured in their corresponding lexical templates by applying the relevant set of lexical functions and primitives to their second internal argument. Consider the lexical template for the verb *regret*:

(22) [SYMPT (sadness) $\text{INVOLV}_{1,2}$ (want) DEGRAD $(\text{do})_2$ $\text{LOC}_{\text{in}}^{\text{temp}\leftarrow}$/$(\text{become})_2$ $\text{LOC}_{\text{in}}^{\text{temp}\leftarrow}$ *because* $\text{PROP}_{1,2}(\text{true})_2$] **feel'** (x, y)

The template specifies that there is a sentient entity that experiences sadness because he/she believes that he/she had acted in the past in a certain harmful way and wishes he/she had not done so.

Second, our proposal admits that implicature can have a constructional motivation. A case in point is the well-known 'What's X Doing Y?' construction, studied by Kay & Fillmore (1999). Consider the following related examples:

(23) a. What's the child doing?
b. What's the child doing in the kitchen?
c. What's the child doing in the kitchen with the carving knife?

Since the 'What's X Doing Y?' construction is idiomatic, it is formally different from others, like the transitive, ditransitive, caused-motion, resultative, and benefactive constructions. In Kay & Fillmore's analysis, it consists of a combination of compulsory (*what's*, *doing*) and variable (X, Y) elements. However, we believe that making a distinction between idiomatic and non-idiomatic constructions does not do justice to their broad range of variation. There are degrees of idiomaticity. Thus, for the sake of coherence with other aspects of the LCM, where we see some elements realizing others in a multiple-level parametrization process, we shall refer to unmodifiable elements in a construction as NON-PARAMETRIZABLE, while other elements

will be recognized as being PARAMETRIZABLE to different extents. In our application of this distinction to Fillmore & Kay's treatment of 'What's X Doing Y?', *doing* would be distinguished as a non-parametrizable element, while the X and Y elements are highly parametrizable, since they admit a large amount of variability.

As Kay & Fillmore note (1999: 4), semantically, the 'What's X Doing Y?' construction seems to convey the idea that there is something wrong about the situation described (there is an "incongruity" component in it). In our view, this incongruous situation can be seen as a call for remedial action or even as a complaint from an illocutionary perspective. But what is really noteworthy about this construction is the importance of the Y element to guarantee this meaning value (cf. in this connection Ruiz de Mendoza & Otal Campo 2002: 156). Thus, while (23a) above is ambiguous between the questioning and the directive interpretations, this is clearly not the situation with (23b) and (23c), where the Y element has been realized linguistically. It is also possible to note that the greater the elaboration of the Y element, the clearer the directive or the complaint interpretations. This is so because the construction implies that the speaker, in being able to supply so much information about what is going on, already knows the answer to his own question. This implication is captured by the Y element. Since (23b) and (23c) make that element explicit, they qualify as instances of the level 2 'What's X doing Y?' construction. In contrast, the potential reading of (23a) as a directive act or a complaint can only be obtained by means of a pragmatic operation. That we are dealing with implicated meaning in the three examples is evidenced by the plausibility of the extensions in (24) below, all of which cancel out the meaning implication that something is going wrong. However, note that the greater the amount of information provided by the Y element, the more difficult it is to override the conventional implication, as in (24c):

(24) a. What's the child doing? Not that I'm worried. Just asking.
b. What's the child doing in the kitchen? Are you teaching him to carve the turkey? That's definitely a good idea.
c. Hey, what's the child doing in the kitchen with the carving knife? Did you then make up your mind to teach him how to carve a turkey? That's definitely a good idea.

Ruiz de Mendoza & Otal Campo (2002: 158) have argued that 'What's X doing Y?' is related to other constructions that also seem to convey the idea that something is wrong in the situation described. Consider:

(25) a. Who's been messing with my computer?
b. What's the neighbor been doing with my flowers?
c. Where's he been the last 50 years, golfing with Joe Kennedy Sr.?
d. Why's he been messing with my computer?
e. Where's he been all his life?

These sentences exemplify what we may call the 'Wh-'s been Y?' construction, which roughly conveys the same idea as 'What's X Doing Y?', namely that what is being described is wrong. The difference is that in 'Wh-'s been Y?' the description is provided by a constructional presupposition, while in 'What's X Doing Y?' the description is explicit. There are some important similarities, however. Thus, the Y element of 'Wh-'s been Y?' usually contains an *–ing* form, though there are exceptions like (25e), and the related 'What's X Doing Y?' construction also has an *–ing* form, *doing*, which in Kay & Fillmore's account is not subject to variation. But this part of Kay & Fillmore's analysis may not be accurate. Consider:

(26) a. What're they building?
b. What're they building in there?
c. What're they building in there at this time of the year?

Examples (26b) and (26c) can have meaning implications that are comparable to those in (23b) and (23c) above. They generally point to an incongruous state of affairs. Also this implication is stronger in (26c), where the Y element has been specified in greater detail, than in (26b), a situation which parallels the one described above for (23c) and (23b). So, what we really have is a 'Wh-interrogative' construction whose X and Y element can experience a greater degree of parametrization than the *wh*-component: 'What be-PRESENT X V-ing Y?'

Another example of level 2 configuration with elements that can be parametrized to varying degrees is provided by the so-called double *be* (or copula doubling) construction (e.g. *The thing is, is that he didn't tell the truth*). McConvell (1988), Tuggy (1996), and Massam (1999) have studied the details of this construction, which serves to call the hearer's attention to a given situation while asserting its truthfulness or relevance. It usually takes

the configuration 'X is, is Y', where X, which is marked by a high tone, is the topic and Y, which takes a low tone, is the focus. While Y is a relatively unconstrained element (it can be realized by any *that*-clause), there is a fairly limited range of options for X, normally *the thing*, *the problem*, *the question*, *what I mean*, and *what happens*.

In our view, the possibility of modifying some of the relatively fixed elements of the construction is evidence that constructions of this kind have been obtained through a process of what Langacker (1999: 105) has aptly called ENTRENCHMENT or inherent ease of activation, which is a function of type frequency.

4.3. Level 3 constructions

The idea that illocutionary force is coded in language systems either by lexical or grammatical means is not new. Searle (1969) postulated the existence of a number of ILLOCUTIONARY FORCE INDICATING DEVICES, such as word order, stress, intonation contour, punctuation, verb mood, and performative predicates. Some functional grammar accounts (e.g. Dik 1997a/b, Halliday & Matthiessen 2004) assume that illocutionary meaning is part of grammar and has to be incorporated in grammatical description only in so far as there are linguistic devices to express such meaning. Thus, Halliday & Matthiessen (2004: 108), in examining the clause as exchange, note that grammar has a mood system (declarative, interrogative, imperative) that realizes four basic speech functions (offers, commands, statements, and questions). Dik (1997b), in turn, uses typological criteria (Sadock & Zwicky 1985) to distinguish four basic illocutionary functions coded in most languages: statements, questions, commands, and exclamations. These basic illocutions correspond to three sentence types (declarative, interrogative, imperative) and to exclamative constructions. Dik (1997b) further argues that there are grammatical mechanisms that can be used to derive other illocutions from the basic ones. For example, declarative, imperative, and interrogative sentences can be converted into requests by adding *please* (e.g. *Please, I hate this music!*; *Give me the book, please*; *Can you swim, please?*), declaratives into questions by means of a tag (e.g. *She's a nice girl, isn't she?*), and imperatives into exclamations through suprasegmental features (e.g. *Look who's THERE!*), among other possibilities. Our own view is very close to Dik's proposal, but with the crucial difference that what Dik calls grammatical derivation is not really so, but a matter of

constructional conventionalization (Ruiz de Mendoza & Baicchi 2007). We thus believe that there are level 3 constructions that evince the same degrees of conventionalization that we find for level 2 constructions. Witness (27):

(27) a. Can you write Morse code?
b. Can you explain Einstein's theory of relativity?
c. #Can you write Morse code, please?
d. Can you explain Einstein's theory of relativity, please?
e. Can you hear the ocean?
f. #*Can you hear the ocean, please?
g. Can you listen to me?

'Can You Y?' sentences are a relatively conventional way of making requests. But the same construction can be used to ask questions. So, the interpretation of 'Can You Y?' is constructionally ambiguous. Grammatically, the 'Can You Y?' string is interrogative, so it could be argued, *à la* Dik, that the request interpretation is derived pragmatically, in contrast with example (27d), where we have grammatical derivation through the addition of *please*. But this is clearly not the case for two reasons. First, there are sentences like (27a) and (27e) that can hardly be converted into requests, not even through grammatical mechanisms, as evidenced by examples (27c) and (27f). Second, there are 'Can You Y?' sentences that have an extremely strong default interpretation as requests, as is the case with (27g). Evidently, the existence of default interpretations that are not predictable from grammatical form calls for a non-derivational account. Instead, we propose a constructional account of non-pragmatic illocutionary meaning, where illocutionary constructions may have compulsory (non-parametrizable) and variable (parametrizable) elements, as was the case with level 2 constructions. Parametrization is not an unrestricted process. Thus, the Y element in the 'Can You Y?' directive construction can only take verbal predicates belonging to certain lexical classes (state and non-active accomplishment predicates are excluded). Additionally, the Y element may optionally include *please* (*Can you listen to me, please?*) or beneficiary complements (*Can you sing for me?*) as ways of either reinforcing the directive character of the sentence or simply forcing the request interpretation.

Finally, note that the non-parametrizable part of the construction, just like in some level 2 constructions, admits some variation with slight changes in meaning that do not alter the overall illocutionary interpretation. That is,

"non-paramatrizable" does not mean absolutely invariable but rather realizable through a limited set of options. Thus, we can have sentences using *will you*, *would you* and *could you* forms for the 'Can You' part of the construction:

(27) h. Will/would you please answer all the questions in the questionnaire?
i. Can/could you please answer all the questions in the questionnaire?

The question may now arise as to the status of 'Can You Y?' strings that have a purely interrogative function. In the LCM such strings are considered parametrizations of the Aux-NP constituents of the polar interrogative construction. Obviously, 'Can You Y?' requests have been derived by conventionalizing one form of performing such parametrization and giving it a stable speech act value. Again, as with level 2 configurations, the stable association of a specific interpretation with the construction is a matter of degrees of entrenchment.

4.4. Level 4 constructions

There are constructions that capture conventional implications that go beyond the clause level. These are level 4 constructions. One well-known example is the 'Let Alone' construction (e.g. *Would anyone buy this garbage, let alone eat it?*; see Fillmore, Kay & O'Connor 1988), which can be symbolized as 'X Let Alone Y'. The construction, which has two highly variable constituents (X and Y) related by *let alone*, sets up an entailment relation between the two constituents that it relates. In this relation, the state of affairs depicted in Y is considered less likely to happen than the one in X. In turn, X either expresses or implicates a negative situation, i.e. one in which a state of affairs is portrayed as not being the case. The kind of discourse relationship described has the pragmatic consequence of placing emphasis (through an exaggerated contrast) on the Y element.

The 'X Let Alone Y' configuration has two highly variable elements (X is negative and Y provides a contrast on the bases of a scale) and one element with a low range of parametrization possibilities: the coordinating conjunction can sometimes be replaced by *never mind* (e.g. *A lot of poor*

parents barely have time to see their kids, never mind cook for them) and *much less* (e.g. *Few will ever see an Aston Martin up close, much less drive one*).

Another level 4 construction that admits a degree of variation in some of its compulsory elements is 'Just Because X Doesn't Mean Y' (e.g. *Just because we live in Berkeley doesn't mean we're left wing radicals*), which is used to indicate that the second constituent does not necessarily follow from the first (Holmes & Hudson 2000). Note that 'Just Because' is not easily modifiable without doing violence to the construction (**Because we live in Berkeley doesn't mean we're left wing radicals*), while 'Doesn't Mean' does admit some variation (*Just because we live in Berkeley is no reason to think we're left wing radicals*; cf. Bender & Kathol 2001, for similar considerations).

In our view, the 'Just Because X Doesn't Mean Y' construction is a highly conventionalized parametrization of a more generic evidence-conclusion/conclusion-evidence pattern generally expressed through discourse connectors such as *so* and *after all*. Consider the following re-phrasings of one of the examples above:

(28) a. They live in Berkeley. They must be left wing radicals.
b. They must be left wing radicals. They live in Berkeley.
(29) a. They live in Berkeley, so they must be left wing radicals.
b. They must be left wing radicals; after all, they live in Berkeley.

The discourse relationship between the two sentences in (28a) is one of evidence-conclusion and in (28b) of conclusion-evidence. Both in (28a) and (28b) the connections are implicit and need to be derived inferentially. This is not the case in (29a) and (29b), where they have been made explicit through discourse connectors, which thus acquire a clear constructional potential. We have two reverse constructions 'X So Y', and 'Y After All X', where X and Y can be either positive or negative statements, with various meaning effects:

(30) a. They don't live in Berkeley, so they can't be left wing radicals.
b. They can't be left wing radicals; after all, they don't live in Berkeley.
c. They live in Utah, so they can't be left wing radicals.
d. They can't be left wing radicals; after all, they live in Utah.
e. They don't live in Utah, so they could be left wing radicals.
f. They could be left wing radicals; after all, they don't live in Utah.

Relevance theorists (e.g. Blakemore 1987, 1988, 2002, Blakemore & Carston 1999, Wilson & Sperber 1993) have studied discourse connectors (among them *so* and *after all*) in quite some detail. Relevance Theory makes a distinction between CONCEPTUAL and PROCEDURAL ENCODING. The former deals with the creation of coherent schematizations of experience, while the latter deals with the creation of instructions or constraints on pragmatic processing. Discourse connectors are a case of procedural encoding since they tell us the kind of inferential process that the hearer is expected to follow. In the case of the sequence 'X So Y' the hearer is expected to think of X as the evidence for the conclusion in Y; this reasoning pattern is reversed in the interpretation of 'Y After All X'. This proposal has the advantage of recognizing the inferential dimension of discourse connectors. However, we do not think that they are procedural any more than other aspects of interpretation at other levels, including what we have called subsumption (see Section 5). What discourse connectors do is activate high-level cognitive models (or frames) like the EVIDENCE FRAME, which, elaborating on previous work by Ruiz de Mendoza (1999: 23), we can define as follows:

(31) A state of affairs X is evidence of the existence of another state of affairs Y if thinking of X as true involves thinking of Y as true as well.

So and *after all* exploit the Evidence Frame in converse ways by parametrizing differently the X and Y elements in it.

5. Subsumption processes

In the Lexical Constructional Model subsumption is a stepwise meaning production mechanism that consists in the principled incorporation of lower levels of semantic structure (captured in the form of lexical and constructional templates) into higher levels of syntactically-oriented structure (Ruiz de Mendoza & Mairal Usón 2007; Ruiz de Mendoza 2007). Subsumption is a constrained process that takes place at all levels of meaning derivation. At the level of core grammar, INTERNAL CONSTRAINTS specify the conditions under which a lexical template may modify its internal configuration. They take the form of licensing or blocking factors that depend on lexical class ascription, lexical-constructional compatibility, and either predicate or internal variable conditioning of external variables.

EXTERNAL CONSTRAINTS result from the possibility or impossibility of performing high-level metaphoric and metonymic operations on the lexical items involved in the subsumption process.

5.1. Lexical-constructional subsumption

Lexical and constructional templates interact in a constrained way. First, there is a general principle of conceptual interaction according to which higher-level conceptual patterns incorporate lower-level patterns. This principle was first identified by Ruiz de Mendoza (1997) and explored in detail on the basis of different kinds of cognitive model interaction by Ruiz de Mendoza & Díez Velasco (2002). In our view, a specific case of the principle is what Michaelis (2003) has termed the OVERRIDE PRINCIPLE in the context of constructional coercion.[9] This constructional principle states that the meaning of a lexical item conforms to the meaning of the structure in which it is embedded. A case in point is the transitivity feature of the caused-motion construction. Consider:

(32) The Washington press corps literally laughed him out of the room.

Example (32) differs from (19) and (20) in Section 4.1 in that 'laugh' has undergone subcategorial conversion from a verb with a prepositional complement (**laugh-at'** (x, y) 'laugh at someone') to a purely transitive verb (**laugh'** (x, y) 'laugh someone'). It may be observed that subcategorial conversion is a consequence of the Override Principle, which requires an adjustment of the meaning of 'laugh' to make it acquire attributes compatible with the caused-motion construction. But, in our view, the situation is slightly more complex. We may wonder why 'laugh' can participate –through coercion and subcategorial conversion– in the caused-motion construction, while this is not the case for other action predicates that are naturally transitive and do not need that kind of adjustment:

[9] Ziegeler (2007) has recently argued against the usefulness of the notion of coercion. She argues that apparent cases of coercion can be better explained on the basis of metonymy, diachronic development, and expansion of grammatical functions. In our own view, the notion is only useful if adequately constrained, as will be shown below.

(33) a. *They caught him out of the room.
b. *They killed him out of the room.
c. *They described him out of the room.
d. *They drank him out of the room.

We believe the answer lies in a correct understanding of the way internal and external constraints license lexical-constructional subsumption, i.e. the principle-regulated fusion of a lexical template into a higher-level constructional pattern. We shall address the two kinds of constraint in the next two sections.

5.1.1. External constraints on lexical-constructional subsumption

First, let us see why it is possible to convert 'laugh at' into 'laugh'. The constructional requirement is to find a causative accomplishment predicate that will initiate the causal chain that results in the object of the action moving from one location to another. Since 'laugh' is an activity predicate, without any causal and resultative component, the only way to make it part of the caused-motion construction is by reinterpreting the activity predicate as if it were a causative accomplishment predicate. This reinterpretation process is metaphorical and it crucially hinges upon the correlation between two kinds of actor and two kinds of object. In the case of causative accomplishments, the actor and object are what we may call an effector and an effectee, i.e. an actor whose action has a direct impact and subsequent effects on the object. In the case of activities, the actor is a mere "doer" of the action that is experienced by the object. This observation suggests an analysis of the subcategorial conversion process experienced by 'laugh' in terms of SOURCE and TARGET domain correspondences, of the kind proposed by Lakoff (1993) for conceptual metaphor within the context of Cognitive Linguistics.

In Cognitive Linguistics, a metaphor is defined as a conceptual mapping or a set of correspondences between two domains, one of which (called the source) allows us to reason about the other (called the target). Ruiz de Mendoza & Mairal Usón (2007), on the basis of previous work by Ruiz de Mendoza (2007), have identified a number of metaphors that have consequences in terms of grammatical arrangement. For cases like the use of 'laugh' in (32) they propose the metaphor EXPERIENTIAL ACTION IS EFFECTUAL ACTION:

(34)	SOURCE		TARGET
	Effector	←=→	actor [both are doers]
	Effectee	←=→	goal/experiencer [both are objects]
	Effecting	←=→	acting [both are kinds of doing]
	Instrument	←=→	ø
	Purpose	←=→	purpose

The high-level metaphor we have spelled out above imposes positive and negative constraints on lexical-constructional subsumption. On the positive side, the metaphor opens the door to a number of subcategorial conversions of predicates that can be classified as experiential actions. This is the case of the predicates 'listen', 'wink', and 'wave', among many others, all of which have experiential goals, which, in their default syntactic expression, are marked by a preposition ('listen to', 'wink at', 'wave at'):

(35) a. Finally, I felt like I was being listened into existence.
b. She winked her away through Picadilly.
c. She waved me into the kitchen.

But there are also negative constraints that filter out impossible expressions even if we are working with experiential actions. Consider (36):

(36) a. *They laughed him out of the room with big laughter (but cf. *with a hearty guffaw*, which specifies manner).
b. *John laughed him out of the room with his mouth and lips.

It is not possible to make use of the instrumental role in the metaphor since experiential actions, unlike effectual actions, do not have such an element. The instrumental role is discarded from the mapping by the application of the Extended Invariance Principle (EIP). The EIP was first proposed by Ruiz de Mendoza (1998) as a development of Lakoff's Invariance Principle, which was restricted to topological or image-schematic structure, to all kinds of generic-level structure. The EIP stipulates that the generic-level structure of the target domain of a metaphoric mapping has to be preserved in a way that is consistent with the corresponding structure of the source. This means that we cannot do violence to the 'experiential action' domain by forcing an instrumental role into it, as evidenced by the impossibility of sentences like (36a) and (36b). The metaphor also rules out expressions with activity

predicates that cannot take an object, as in (37), or those where the object is not an experiencer, as in (38):

(37) *Sharon shivered me into the room.
(38) *My mother dressed me into the room.

This metaphorical constraint happens by virtue of the activity of the Correlation Principle, first proposed by Ruiz de Mendoza & Santibáñez Sáenz (2003), which is active in the selection of the best possible source domain in terms of the implicational structure of the target. For example, in ARGUMENT IS WAR, an extremely intense debate between opposing political candidates may appropriately be described as an all-out war rather than just a skirmish. In the case of AN EXPERIENTIAL ACTION IS AN EFFECTUAL ACTION, both effectors and effectees are appropriate correlates for experiential actors and goals for two reasons: (i) the two pairs of roles stand in an actor-goal relationship; (ii) if we want to preserve the "coerced" meaning implications of the target domain when the lexical template is built into the caused-motion construction, effectors and effectees are the best possible source elements since the caused-motion construction requires literal force applied to an object. In the metaphor we understand the actor and goal of an experiential action as if they were the material doer and object of an effectual action (i.e. an action that has a direct physical effect on the object). A simplified representation of externally constrained lexical-constructional subsumption for *Peter laughed Mary out of the room* is found in Figure 2. For the sake of simplicity, we have made use of the lexically realized constant ***laugh at'*** (in boldfaced italics)[10] to stand for its corresponding lexical template.

[10] Since *laugh* is not a primitive, we use boldface and italics to mark the difference with real primitives, which, recall, are notated in boldface.

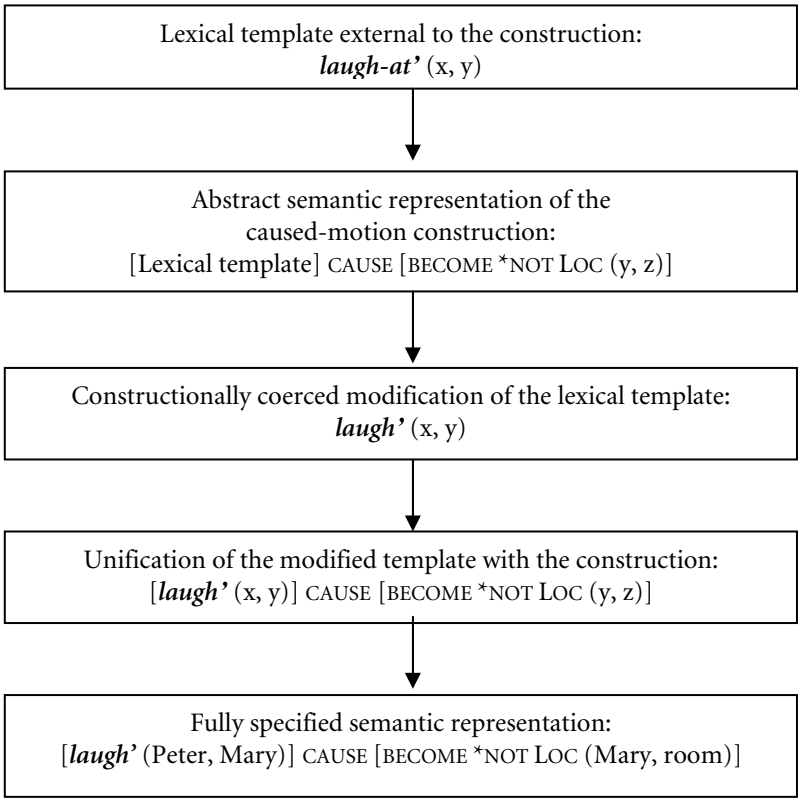


Figure 2. Simplified representation of a case of lexical-constructional subsumption

There are other high-level metaphors that constrain lexical-constructional subsumption. For example, as noted in Ruiz de Mendoza & Mairal Usón (2007), in *He talked me into it*, 'talk someone (into)' is based on the metaphor COMMUNICATIVE ACTION IS EFFECTUAL ACTION, which licenses a subcategorial conversion process whereby the receiver of the message is seen as if directly affected by the action of talking rather than as the goal of the message. In *He drank himself into a stupor*, the metaphor AN ACTIVITY IS AN (EFFECTUAL) ACCOMPLISHMENT allows us to interpret the originally intransitive predicate 'drink' in terms of a transitive structure of the actor-object kind (in the example, the object is reflexive). To give just one final example, among many possible others, of the constraining power of high-level metaphor, consider the following sentence:

(39) Peter loved Mary back into life.

This sentence is an instance of the metaphor AN EMOTIONAL STATE IS AN EFFECTUAL ACTION. The predicate 'love' is what Halliday & Matthiessen (2004) have called a mental process predicate, which, in their terminology, has two associated roles, a sensor and an object of sensing (i.e. a phenomenon). In (39) the sensor is treated as an effector and the phenomenon as an effectee. The mapping is licensed by the Correlation Principle to the extent that the object of sensing is a goal of the sensor's activity.

Metonymy can also act as an external constraint on lexical-constructional subsumption. Following the standard approach in Cognitive Linguistics, we define metonymy as a domain-internal conceptual mapping where one domain (the source) affords mental access to another domain (the target). In virtue of this operation, the source is taken to stand for the target. Thus, in the sentence *Tie your shoes*, 'shoes' is cued by the predicate 'tie' to give us immediate access to (and consequently stands for) 'shoelaces'. The constraining power of high-level metonymy on grammatical arrangement has been discussed in some detail in Ruiz de Mendoza & Pérez Hernández (2001) and Ruiz de Mendoza & Mairal Usón (2007).[11] Here we will just address a few relevant facts. Compare the following sentences:

(40) a. The door closed (easily).
b. The bread cut easily/well.
c. *The bread cut.
(41) a. This new machine sews nicely.
b. This soap powder washes whiter.

Example (40a) is a case of the inchoative construction, which, as is well known from the literature, alternates with the causative construction (cf. *Someone closed the door*). The inchoative construction is very similar to the middle construction, exemplified by (40b), with only one crucial distinguishing property: in the middle construction there is an evaluative element, which is obligatory, as is evidenced by the impossibility of (40c). In

[11] The constraining role of metonymy in constructional behavior has also been explored in quite some detail in Panther & Thornburg (1999a/b, 2000), Brdar-Szabó & Brdar (2002), and Brdar & Brdar-Szabó (2003), with examples from English, Hungarian, and Croatian.

the inchoative construction the evaluative element is optional. The sentences in (41), in turn, illustrate the characteristic-property-of-instrument construction (Levin 1993: 39–40), which we prefer to label, following Ruiz de Mendoza & Peña Cervel (2008), instrument-subject evaluative. Ruiz de Mendoza & Mairal Usón (2007) give a unified account of the semantic motivation for these three constructions on the basis of two related high-level metonymies: PROCESS FOR ACTION and PROCESS FOR ACTION FOR RESULT. The inchoative construction is grounded in the PROCESS FOR ACTION metonymy. The metonymy allows us to retrieve the implicit agent of the inchoative construction, a situation that is impossible in the case of non-inchoative processes:

(42) The sheriff died (of a heart attack).

In (42) the sheriff's dying does not stand for someone willfully causing his death. Note that in order to have this situation we need to make use of a metaphor, as in (43), where a natural process is seen as if it were caused by an intentional agent:

(43) A heart attack killed the sheriff.

Furthermore, for the high-level metonymy PROCESS FOR ACTION to be applicable to a verbal predicate, the predicate needs to fulfill a number of conditions: there must be implicit agentive, instrumental, purposive, and beneficiary roles that are retrievable only through the metonymic operation:

(44) a. *The door closed by John (cf. John closed the door).
b. *The door closed with his left hand (cf. John closed the door with his left hand).
c. *The door closed to start the experiment (cf. The experimenter closed the door to start the experiment).
d. *The door closed for me (cf. John closed the door for me).

The impossibility of these examples is to be found in the violation of the Extended Invariance Principle mentioned earlier, which in its application to metonymy preserves the high-level configuration of domain internal relationships. Evidently, the Extended Invariance Principle does not allow us to include in the source the roles mentioned above, which are specific to the target.

The middle and instrument-subject evaluative constructions add an evaluative ingredient that may affect either the process or the result components of the PROCESS FOR ACTION FOR RESULT metonymy. Thus, in *The bread cut easily* and *This new machine sews nicely*, it is the process that is assessed, as revealed by the paraphrases:

(45) a. It was easy to cut the bread.
b. It is nice to sew with this new machine.

By contrast, the paraphrases are not possible in the case of *The bread cut well* and *This soap powder washes whiter*, since in these examples it is not the process but the result that is assessed:

(46) a. *It was well to cut the bread.
b. *It is whiter to wash with this soap powder.

This observation suggests that we have two different exploitations of the same high-level metonymic chain. In one of them, special focus falls on the initial source domain (the process); in the other, it is the final target domain (the result) that is particularly highlighted. The difference in focus is to be added to the other factors mentioned above to account for the ability of the two related high-level metonymies to set external constraints on lexical-constructional subsumption and to account for the range of interpretative possibilities of each construction with its variants.

5.1.2. Internal constraints on lexical-constructional subsumption

Lexical-constructional subsumption is also regulated by other constraints that have the internal semantic make-up of the lexical and constructional templates within their scope. In what follows we include a sample of some of the most representative internal constraints (see Mairal Usón & Ruiz de Mendoza forthcoming for a more exhaustive description).

The simplest case is Full Matching, which stipulates that there must be full identification of variables, subevents, and operators between the lexical template and the constructional template. Thus, the predicate 'break' can take part in the effectual variety of the transitive construction because it shares with the construction the relevant elements of structure, i.e. an effectual action that causes a change of state. In Figure 3 the higher and lower

layers represent the lexical template and the constructional template respectively.

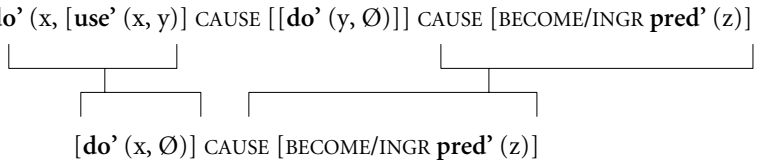


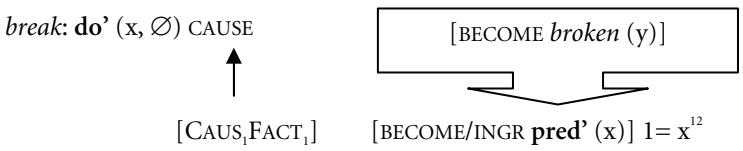
Figure 3. Full matching between a causative accomplishment predicate and the effectual variety of the transitive construction

A second constraint is concerned with the proper identification of events. According to the Event Identification Condition, the semantic configuration of the construction must be a proper subevent of the canonical lexical template. A case in point is that of the conative construction, which imposes the presence of either a motion or a contact subevent. Accordingly, contact-by-impact verbs such as *hit*, which are represented by the lexical template in (47), are compatible with a conative construction since a motion subevent is easily identified [**move.toward'** (x, y)].

(47) [INSTR$_1$, INVOLV$_{<Manner> \& <Purp>}$] [[**do'** (w, x)]] CAUSE [[**do'** (x, [**move.toward'** (x, y)]]

Continuing with the notion of events, Aktionsart representations can act as filters for certain cases of lexical-constructional subsumption. For example, following Cortés Rodríguez (2009), we note that the causative/inchoative alternation occurs with pure change of state predicates, which means that either a telic accomplishment or an achievement can be compatible with the semantics of the inchoative construction, while this is not the case with states, activities, their corresponding causatives, and active accomplishments:

(48) *break*: a causative accomplishment predicate



Thus, it is not surprising that we cannot subsume a state lexical template into an inchoative constructional template. If we compare the lexical and constructional representations in (49), we note that the implicit causative parameter together with the dynamic telic event structure do not have a corresponding analogue in the state lexical template for *see*; hence lexical-constructional subsumption is not feasible in this case:[13]

(49) The lexical template for *see*: *** *** **see'** (x, y)

The constructional template: [CAUS$_1$FACT$_1$] [BECOME/INGR **pred'** (x)] 1= x

If we now turn to causative states, we note that although the implicit causative parameter of the constructional template finds a corresponding analogue in the causative operator of the lexical template, the BECOME/INGR constructional operators, which signal the telic nature of the construction, are not compatible with anything in the lexical template since we are dealing with a state predicate, which is atelic and unbounded:

[12] Cortés Rodríguez (2009) posits this representation as one of the two possible constructional templates for the inchoative construction. Note that the format is the same that is used for lexical templates. On the right hand side, there are two lexical functions, CAUS1 and FACT1, which emphasize that the first argument can be understood as an in-built causer involved in the realization (FACT ' factum') of the change of state depicted. For an in-depth analysis of the causative/inchoative alternation and all the semantic and syntactic co-occurrence restrictions associated with it, we refer the reader to Cortés Rodríguez (2009).

[13] A similar argument can be used to explain the ungrammaticality of activity predicates within the causative/inchoative alternation (see Cortés Rodríguez 2009).

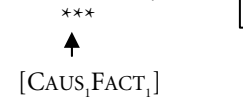
(50) **do'** (x, ∅) CAUSE [**feel'** (y, [**pred'**])]

A different case is that of active accomplishments as represented by the predicate *eat* below. Here we have two concatenated events, namely an activity which ends in a telic state:

(51) **do'** (x, [*eat* (x, y)]) & INGR **consumed'** (y)

If we try to subsume the lexical template for *eat* into the inchoative constructional template we note that the ingressive, telic event is identified while this is not the case with the implicit causative parameter, which explains why subsumption is not possible with this type of predicates:

(52) **do'** (x, [**pred'** (x, y)]) & [INGR **consumed'** (y)]



The lexical class of a predicate can also be very influential in determining lexical constructional subsumption. For example, we can ascertain why 'break' verbs can participate in the causative/inchoative alternation, while this is not the case with 'destroy' verbs. If we look at their lexical representations below, there is nothing that should prevent them from participating in this alternation, but this is not really the case with 'destroy' verbs.

(53) a. **do'** (x, 0) CAUSE [BECOME **broken** (y)]
b. **do'** (x, 0) CAUSE [BECOME **destroyed** (y)]

Then, why is it possible to generate the inchoative construction from (53a) and not from (53b)? The reason lies in the fact that the lexical template for 'destroy' verbs is further modified by the primitive BECOME NOT **exist'** and the lexical function REALLIQU$_{12}$ which expresses the idea that someone carries out an action such that an entity does not longer exist. This means that

'destroy' verbs are not verbs of change of state but verbs of existence and therefore are incompatible with the semantics imposed by the construction itself:

(54) [REALLIQU$_{12}$] **do'** (x, 0) CAUSE [BECOME NOT **exist'** (y)]

Lexical Blocking is in fact another constraint that operates within a lexical-constructional subsumption process. One of the components of the lexical template can block the unification with a certain construction given that this component is a suppletive form. An interesting case is *kill*: this verb does not take part in the causative/inchoative alternation since its inchoative form is suppletive, i.e. *die*, and blocks out a potential inchoative form of *kill*.

Finally, two further constraints are in order here: Predicate-Argument Conditioning and Internal Variable Conditioning. Both are operational on the basis of the semantic nature of one of the arguments in either the lexical or the constructional templates. By Predicate-Argument Conditioning we refer to cases in which the lexical template can place restrictions on the kind of instantiating element that we can have for a constructional argument. Thus, in the caused-motion construction we have a basic constructional structure of the 'X-predicate-Y-Z' type, where Y is an NP and Z is a PP. In principle, the constructional template can take any participant role to instantiate the Y element, which can be either human or non-human (e.g. *Jim pushed her into the room*; *Denise blew the dry leaf off the tree stump*). However, once the predicate and PP slots have been filled in, this choice constrains the kind of Y element that we can have. For example, in *She drove me into a depression*, the Y element has been realized by a human verb role; we cannot have a non-human element (cf. **She drove the gnat/the cobble-stone into a depression*).

Internal Variable Conditioning arises from the internal configuration of the lexical template instantiating the predicate slot of a constructional template. The internal predicate variables place constraints on the nature of both the predicate and constructional arguments. A clear example is supplied by the use of the verb 'drive' to instantiate the caused-motion construction. The lexical template of 'drive' contains an indication of loss of control for the object. Because of this, there is a tendency for the Z element to be axiologically negative and have frequent instantiations such as the following: *desperation*, *panic*, *madness*, *frenzy*, *depression*, *apathy*, *rage*, *terror*, etc. Realizations with words like *peace*, *bliss*, *delight*, and *happiness* may occur

only in contexts where lack of control is felt to be positive (e.g. *I hear music that drives me into melancholy/happiness*). The same principle, within the context of the subjective transitive construction (cf. Gonzálvez-García 2003, 2006, 2008), accounts for the nature of the depictive element in this construction, which is necessarily evaluative, as a by-product of a subjective evaluative judgment; the constraining activity of the principle of Internal Variable Conditioning is illustrated in the following pair of sentences drawn from Gonzálvez-García (2008):

(55) a. #I know you must think me the man who is standing over there.
b. I know you must think me awful. (BNC CDE 861)

In essence, this section has presented a sample of some of the most relevant internal constraints that influence lexical-constructional subsumption. The next section examines the way in which subsumption processes take place at the rest of the levels of description identified in our model.

5.2. Constructional subsumption and conceptual cueing

In the LCM, fully worked-out core-grammar representations (level 1) are the input for a pragmatic (level 2) module that accounts for low-level situational aspects of linguistic communication. A level 3 module deals with high-level situational models (illocutionary force). Finally, a level 4 module accounts for the discourse aspects of the LCM, especially cohesion and coherence phenomena. Each level is subsumed into higher levels of description as licensed by a number of cognitive constraints. Internal constraints at these levels are based on the ability of each lower-level configuration to parametrize its next higher-level construct. Thus, subsuming a level 1 structure of the kind 'the child is doing something in the kitchen' into the 'What's X doing Y?' construction is a straightforward task, since 'the child' and 'something in the kitchen' are feasible realizations of the X and Y elements respectively. However, in this example the output of level 2 subsumption may not be integrated into other higher-level constructions, even though it has a level 3 interpretation (e.g. a complaint). This interpretation is obtained through the metonymic activation of a high-level illocutionary model that Ruiz de Mendoza & Baicchi (2007) have called the COST-BENEFIT COGNITIVE MODEL. This model captures social conventions on

human interaction according to which people are expected to act in ways that are beneficial for other people. An utterance exploiting 'What's X doing Y?' acquires the default interpretation of a call for the addressee to do something about an incongruous situation on the basis of the activation of part of this model. The rationale for this sort of interpretation is that if the addressee had been aware that there is something wrong about the situation described, he should have already fixed it rather than let the speaker do it. So asking about the nature of the incongruous situation serves as a way of calling the addressee's attention to the problem so he can act. This is a case of CONCEPTUAL CUEING rather than constructional parametrization since the whole level 3 interpretive process works by making the level 2 output stand for the relevant part of the cost-benefit cognitive model, as outlined above. Conceptual cueing is a meaning derivation process whereby a meaning representation –of levels 1 to 3– acts as a prompt for the metonymic activation of a related conceptual structure that is either the final meaning representation of a linguistic expression or contains all the meaning ingredients to become the output for the next level of interpretation. The conceptual structure thus activated consists of one or more cognitive models either in isolation or in principled interaction. Consider one more example. Take the sentence *The child is in the kitchen again* in a context where it is evident that the child is up to something. The meaning implications of this sentence (i.e. the child is doing something wrong) are comparable to those of the 'What's X Doing Y' construction. However, they are not obtained by parametrization of a level 2 construction, but rather by conceptual cueing in the form of the metonymic activation of a low-level situational model (or scenario) where the child did something he was not supposed to do in the kitchen (presupposed information), was perhaps scolded (tentative implication), and has returned (explicit information) to repeat his incorrect behavior (non-tentative implication).

Let us now turn our attention back to example (28a), here repeated as (56) for convenience:

(56) They live in Berkeley. They must be left wing radicals.

We noted before that the coherence relationship between the two sentences in this example hinges upon a high-level propositional model that we called the Evidence Frame. This cognitive model specifies an evidence-conclusion relationship between two propositions such that if one is (thought to be) true

the other is (thought to be) true as well. As such, (56) parametrizes the two items in the evidence-conclusion relationship. The parametrization process here is constructional to the extent that there is an iconic arrangement of the two sentences (a form of supra-sentential constituent ordering) and a conventional use of *must* to introduce a conclusion. However, let us cast (56) into a conversational format:

(57) A: They are left wing radicals.
B: Small wonder. They live in Berkeley.

In (57) the Evidence Frame is exploited differently. Speaker B takes A's turn as a conclusion that follows from the evidence that the protagonists live in Berkeley. In fact, B acts on the basis of the assumption that A's remark can be taken as a conclusion that follows from some sort of evidence. B's response is only extra corroborative evidence that what A says is true. As such B's response is a conceptual cue that calls upon the whole Evidence Frame in a metonymic way (living in Berkeley stands for the high likelihood of being a left wing radical).

5.2.1. External and internal constraints on constructional subsumption

As explained in Section 5.1, constructional subsumption involving low-level or high-level situational models is a matter of parametrization, which is but the higher-level correlate of Full Matching in level 1 subsumption processes (cf. Section 5.1.2). Consider again the case of a request taking the form of 'Can You X, (Please)?':

(58) Can you do the laundry, please?

The expression *do the laundry* is idiomatic to some extent and makes use of a transitive pattern grounded in the high-level metonymy GENERIC FOR SPECIFIC whereby 'do' stands for 'wash' (cf. Ruiz de Mendoza & Pérez Hernández 2001 for similar examples). So the expression can be classified as an active accomplishment from an Aktionsart perspective. The 'Can You X?' directive construction is fully compatible with Aktionsart characterizations containing a **do'** primitive, such as activities and active accomplishments. This observation strongly suggests that subsumption at this level takes place in compliance with conceptual compatibility principles similar to Full

Matching, which are internal to the process. The rest of the internal constraints operating at level 1 do not have correlates at levels 2, 3, and 4, simply because of the different nature of constructions at these levels, which, as we have seen, make extensive use of idiomatic configurations.

There are also external principles at work. Thus, we observe that the 'Can You X?' directive construction is not possible with states, as evidenced by the examples in (59), and that it can only be operational in the case of (non-active) accomplishments through heavy constructional coercion, as seen from the oddity of the examples in (60):

(59) a. *Can you own a car, please?
b. *Can you be tall, please?
c. *Can you fall ill, please?
(60) a. #Can you learn mathematics, please?
b. #*Can you blush, please?
c. #*Can you die, please?

Example (60a) is less odd than (60b) and (60c) because it is more sensitive to constructional coercion: it is easier to think of a person actively doing something that will result in his learning mathematics, but it is not clear how we can construe blushing or dying as controllable in a comparable way. In any case, what a sentence like (60a) conveys is the idea that learning mathematics can be construed as the result of a controlled activity, which suggests a high-level metonymic operation: the result of an action (as captured by the Aktionsart specification BECOME **predicate'** for accomplishments) can stand for the action itself, thus yielding the metonymy RESULT FOR ACTION. In this analysis, the metonymy licenses the possibility of saying (60a), but precludes (60b) and (60c) from being possible in standard contexts. The metonymy RESULT FOR ACTION was first postulated by Panther & Thornburg (2000), who used it to account for the possibility of finding imperative constructions –which would normally require an action predicate– with stative predicates (e.g. *Stand behind the yellow line!*). Ruiz de Mendoza & Pérez Hernández (2001) have noted that the RESULT FOR ACTION metonymy does not apply to all cases of stative predicates expressing resultant states. Thus, it is possible to say *Be happy*, but #*Fall asleep* is certainly odd. However, their negative counterparts (*Don't be so happy*, *Don't fall asleep*) may be possible. The reason for these asymmetries lies in the degree of difficulty in activating RESULT FOR ACTION depending on the

degree of control that the participant has over the situation in question. Thus, *#Fall asleep* is a strange instruction because the expression denotes lack of control, which clashes with the nature of the metonymic target (actions are controlled states of affairs). On the other hand, it is possible to act in such a way that one will not fall asleep, which seems to be fully compatible with the expression *Don't fall asleep*. In our view, this account has at least two advantages. One is that it provides us with a plausible (high-level) metonymic constraint on coercion of non-actional predicates in constructions typically requiring an action predicate. The other advantage is that it spells out the full range of meaning implications derived through coercion at any level of description. Thus, we can paraphrase *Don't fall asleep* as 'act in such a way that as a result you will avoid falling asleep'. Similarly, *Can you learn mathematics, please?* would have a paraphrase specifying the resultative nature of learning: 'act in such a way that as a result you will learn mathematics'. What this account cannot do is give a principled explanation of why sometimes the RESULT FOR ACTION metonymy cannot license constructional coercion of non-actional predicates, as is the case of *#Fall asleep* and **Can you blush, please?* The solution to this problem comes from the hand of the Extended Invariance and Correlation Principles, which, as we saw in Section 5.1.1, place constraints on the activity of metaphor and metonymy. Thus, in application of the Extended Invariance Principle, for the RESULT FOR ACTION metonymy to take place, it is necessary to preserve the generic-structure (i.e. the high-level) configuration of the result-action relationship: there must be a dynamic state of affairs under the control of an agent, whose action leads to a resultant state. For example, the instruction *Be happy* makes sense since it is possible for a person to act in such a way that he will control the conditions that make him feel happy. In contrast, the control condition is hardly possible in the case of falling asleep. Additionally, in connection with the Correlation Principle, we may wonder if the predicate 'happy' can count as the best possible source for such a controlled action. This has to be assessed in terms of the implicational structure of the action in question, which, in our example, requires an agent performing a controlled action that will create conditions for happiness. Contrast this situation with *#*Be tired*, which is highly odd. We cannot think of an agent involved in creating conditions of 'tiredness'. This makes 'being tired' an extremely poor source domain for any potential action target.

6. Conclusions

This paper has presented an outline of some of the most relevant aspects of the Lexical Constructional Model. This framework, which offers an alternative for the understanding of the relationship between lexical and constructional meaning, draws insights from functional models of language (especially, RRG) and Cognitive Linguistics (especially, Construction Grammar and Cognitive Semantics). The initial claim is that a theory of semantic interpretation should be constructed on the basis of two representational mechanisms (lexical and constructional templates), two basic cognitive operations (cueing and subsumption), and a set of cognitive constraints. It is shown that lexical constructional subsumption at all levels of description is regulated by an inventory of both internal and external constraints. Internal constraints refer to the semantic units encoded in a lexical or constructional template, while external constraints invoke higher conceptual mechanisms such as high-level metaphor and metonymy.

References

Barcelona, Antonio. 2005. The multilevel operation of metonymy in grammar and discourse, with particular attention to metonymic chains. In Francisco J. Ruiz de Mendoza Ibáñez & M. Sandra Peña Cervel, eds. *Cognitive Linguistics. Internal dynamics and interdisciplinary interaction*. Berlin: Mouton de Gruyter, 313–352.

Bender, Emily M. & Andreas Kathol. 2001. Constructional effects of 'Just because ... doesn't mean ...'. In Charles Chang, Michael Houser, Yuni Kim, David Mortensen, Mischa Park-Doob & Maziar Toosarvandani, eds. *Proceedings of the 27th Annual Meeting of the Berkeley Linguistics Society: General Session and Parasession on Gesture and Language*. Berkeley, CA: University of California, Berkeley Linguistics Society, 13–25.

Blakemore, Diane. 1987. *Semantic constraints on relevance*. Oxford: Blackwell.

Blakemore, Diane. 1988. 'So' as a constraint on relevance. In Ruth M. Kempson, ed. *Mental representations: the interface between language and reality*. Cambridge: Cambridge University Press, 183–195.

Blakemore, Diane. 2002. *Relevance and linguistic meaning. The semantics and pragmatics of discourse markers*. Cambridge: Cambridge University Press.

Blakemore, Diane & Robyn Carston. 1999. The pragmatics of *and*-conjunctions: the non-narrative cases. *UCL Working Papers in Linguistics* 11: 1–20.

Brdar, Mario & Rita Brdar-Szabó. 2003. Metonymic coding of linguistic action in English, Croatian and Hungarian. In Klaus-Uwe Panther & Linda L. Thornburg, eds. *Metonymy and pragmatic inferencing*. Amsterdam: John Benjamins, 241–266.

Brdar-Szabó, Rita & Mario Brdar. 2002. Manner-for-activity metonymy in cross-linguistic perspective. In Barbara Lewandowska-Tomaszczyk & Kamila Turewicz, eds. *Cognitive Linguistics today*. Frankfurt am Main: Peter Lang, 235–257.

Butler, Christopher S. & Javier Martín Arista, eds. 2009. *Deconstructing constructions*. Amsterdam: John Benjamins.

Cortés Rodríguez, Francisco J. 2009. The inchoative construction: semantic representation and unification constraints. In Butler & Martín Arista, eds. 247–270.

Croft, William. 2003. Lexical rules vs. constructions: a false dichotomy. In Hubert Cuyckens, Thomas Berg, René Dirven & Klaus-Uwe Panther, eds. *Motivation in language. Studies in honour of Günter Radden*. Amsterdam: John Benjamins, 49–68.

Dik, Simon C. 1997a. *The Theory of Functional Grammar. Part 1: The structure of the clause*. 2nd ed. by Kees Hengeveld. Berlin: Mouton de Gruyter.

Dik, Simon C. 1997b. *The Theory of Functional Grammar. Part 2: Complex and derived constructions.* 2nd ed. by Kees Hengeveld. Berlin: Mouton de Gruyter.

Faber, Pamela & Ricardo Mairal Usón. 1999. *Constructing a lexicon of English verbs*. Berlin: Mouton de Gruyter.

Fillmore, Charles J., Paul Kay & Mary Catherine O'Connor. 1988. Regularity and idiomaticity in grammatical constructions: the case of *let alone*. *Language* 64: 501–538.

Goddard, Cliff & Anna Wierzbicka, eds. 1994. *Semantic and lexical universals. Theory and empirical findings*. Amsterdam: John Benjamins.

Goddard, Cliff & Anna Wierzbicka, eds. 2002. *Meaning and Universal Grammar*. Amsterdam: John Benjamins.

Goldberg, Adele E. 1995. *Contructions: a Construction Grammar approach to argument structure*. Chicago: University of Chicago Press.

Goldberg, Adele E. 2006. *Constructions at work: the nature of generalization in language*. Oxford: Oxford University Press.

González-García, Francisco. 2003. Reconstructing object complements in English and Spanish. In Montserrat Martínez Vázquez, ed. *Gramática de Construcciones: contrastes entre el inglés y el español*. Huelva: Universidad de Huelva, Grupo de Investigación en Gramática Contrastiva, 17–58.

González-García, Francisco. 2006. Passives without actives: evidence from verbless complement constructions in Spanish. *Constructions* SV1–5/2006.

González-García, Francisco. 2008. The family of object-related depictives in English and Spanish: towards a usage-based, constructionist analysis. *Language Sciences* <doi:10.1016/j.langsci.2008.01.003>.

Grice, H. Paul. 1975. Logic and conversation. In Peter Cole & Jerry L. Morgan, eds. *Syntax and semantics. Vol. 3: Speech acts*. New York: Academic Press, 41–58.

Halliday, Michael A. K. & Christian M. I. M. Matthiessen. 2004. *An introduction to Functional Grammar*. 3rd revised edition. London: Hodder Arnold.

Holmes, Jasper & Richard Hudson. 2000. Just because X doesn't mean Y. Paper delivered at the *Linguistics Association of Great Britain Spring Meeting*. University College London, 6–8 April.

Karttunen, Lauri. 1974. Presupposition and linguistic context. *Theoretical Linguistics* 1: 181–194.

Kay, Paul & Charles J. Fillmore. 1999. Grammatical constructions and linguistic generalizations: the 'What's X doing Y' construction. *Language* 75: 1–33.

Lakoff, George. 1987. *Women, fire and dangerous things: what categories reveal about the mind*. Chicago: University of Chicago Press.

Lakoff, George. 1993. The contemporary theory of metaphor. In Andrew Ortony, ed. *Metaphor and thought*. 2nd edition. Cambridge: Cambridge University Press, 202–251.

Langacker, Ronald W. 1999. *Grammar and conceptualization*. Berlin: Mouton de Gruyter.

Levin, Beth. 1993. *English verb classes and alternations. A preliminary investigation.* Chicago: University of Chicago Press.

Mairal Usón, Ricardo & Pamela Faber. 2002. Functional Grammar and lexical templates. In Ricardo Mairal Usón & María J. Pérez Quintero, eds. *New perspectives on argument structure in Functional Grammar*. Berlin: Mouton de Gruyter, 41–98.

Mairal Usón, Ricardo & Pamela Faber. 2005. Decomposing semantic decomposition: towards a semantic metalanguage in RRG. *Proceedings of the 2005 International Conference on Role and Reference Grammar.* Taipei, Taiwan: Academia Sinica, 279–308.

Mairal Usón, Ricardo & Pamela Faber. 2007. Lexical templates within a functional cognitive theory of meaning. *Annual Review of Cognitive Linguistics* 5: 137–172.

Mairal Usón, Ricardo & Francisco J. Ruiz de Mendoza Ibáñez. 2009. Levels of description and explanation in meaning construction. In Butler & Martín Arista, eds. 153–198.

Mairal Usón, Ricardo & Francisco J. Ruiz de Mendoza Ibáñez. Forthcoming. Internal and external constraints in meaning construction: the lexicon-grammar continuum. In Mª Teresa Gibert Maceda & Laura Alba Juez, eds. *Estudios de Filología Inglesa: homenaje a la Dra. Asunción Alba Pelayo*. Madrid: UNED.

Martín Mingorance, Leocadio. 1984. Lexical fields and stepwise lexical decomposition in a contrastive English-Spanish verb valency dictionary. In Reinhart Hartmann, ed. *LEX'eter '83 Proceedings. Papers from the International Conference on Lexicography at Exeter*. Tübingen: Max Niemeyer, 226–236.

Martín Mingorance, Leocadio. 1990. Functional Grammar and Lexematics. In Jerzy Tomaszczyk & Barbara Lewandowska-Tomaszczyk, eds. *Meaning and lexicography*. Amsterdam: John Benjamins, 227–253.

Martín Mingorance, Leocadio. 1995. Lexical logic and structural semantics: methodological underpinnings in the structuring of a lexical database for natural language processing. In Ulrich Hoinkes, ed. *Panorama der Lexikalischen Semantik*. Tübingen: Gunter Narr, 461–474.

Massam, Diane. 1999. *Thing is* constructions: the thing is, is what's the right analysis? *English Language and Linguistics* 3: 335–352.

McConvell, Patrick. 1988. To be or double be?: current changes in the English copula. *Australian Journal of Linguistics* 8: 287–305.

Mel'čuk, Igor. 1989. Semantic primitives from the viewpoint of the Meaning-Text linguistic theory. *Quaderni di Semantica* 10: 65–102.

Mel'čuk, Igor, André Clas & Alain Polguère. 1995. *Introduction à la lexicologie explicative et combinatoire*. Louvain-la-Neuve: Duculot.

Mel'čuk, Igor & Leo Wanner. 1996. Lexical functions and lexical inheritance for emotion lexemes in German. In Leo Wanner, ed. *Lexical functions in lexicography and natural language processing*. Amsterdam: John Benjamins, 209–277.

Michaelis, Laura. 2003. Word meaning, sentence meaning, and syntactic meaning. In Hubert Cuyckens, René Dirven & John R. Taylor, eds. *Cognitive approaches to lexical semantics*. Berlin: Mouton de Gruyter, 93–122.

Panther, Klaus-Uwe & Linda L. Thornburg. 1999a. Coercion and metonymy: the interaction of constructional and lexical meaning. In Barbara Lewandowska-Tomaszczyk, ed. *Cognitive perspectives on language*. Frankfurt am Main: Peter Lang, 37–51.

Panther, Klaus-Uwe & Linda L. Thornburg. 1999b. The POTENTIALITY FOR ACTUALITY metonymy in English and Hungarian. In Klaus-Uwe Panther & Günter Radden, eds. 1999. *Metonymy in language and thought*. Amsterdam: John Benjamins, 333–357.

Panther, Klaus-Uwe & Linda L. Thornburg. 2000. The EFFECT FOR CAUSE metonymy in English grammar. In Antonio Barcelona, ed. *Metaphor and metonymy at the crossroads. A cognitive perspective*. Berlin: Mouton de Gruyter, 215–231.

Radden, Günter, Klaus Michael Köpcke, Thomas Berg & Peter Siemund, eds. 2007. *Aspects of meaning construction*. Amsterdam: John Benjamins.

Ruiz de Mendoza Ibáñez, Francisco J. 1997. Metaphor, metonymy and conceptual interaction. *ATLANTIS. Revista de la Asociación Española de Estudios Anglonorteamericanos* 19: 281–295.

Ruiz de Mendoza Ibáñez, Francisco J. 1998. On the nature of blending as a cognitive phenomenon. *Journal of Pragmatics* 30: 259–274.

Ruiz de Mendoza Ibáñez, Francisco J. 1999. *Introducción a la teoría cognitiva de la metonimia*. Granada: Método Ediciones.

Ruiz de Mendoza Ibáñez, Francisco J. 2007. High level cognitive models: in search of a unified framework for inferential and grammatical behavior. In Krzysztof Kosecki, ed. *Perspectives on metonymy*. Frankfurt am Main: Peter Lang, 11–30.

Ruiz de Mendoza Ibáñez, Francisco J. & Annalisa Baicchi. 2007. Illocutionary constructions: cognitive motivation and linguistic realization. In Istvan Kecskes & Laurence Horn, eds. *Explorations in pragmatics: linguistic, cognitive, and intercultural aspects*. Berlin: Mouton de Gruyter, 95–128.

Ruiz de Mendoza Ibáñez, Francisco J. & Olga I. Díez Velasco. 2002. Patterns of conceptual interaction. In René Dirven & Ralph Pörings, eds. *Metaphor and metonymy in comparison and contrast*. Berlin: Mouton de Gruyter, 489–532.

Ruiz de Mendoza Ibáñez, Francisco J. & Ricardo Mairal Usón. 2007. High-level metaphor and metonymy in meaning construction. In Günter Radden, Klaus-Michael Köpcke, Thomas Berg & Peter Siemund, eds. 33–51.

Ruiz de Mendoza Ibáñez, Francisco J. & José L. Otal Campo. 2002. *Metonymy, grammar, and communication*. Granada: Comares.

Ruiz de Mendoza Ibáñez, Francisco J. & M. Sandra Peña Cervel. 2008. Gramatical metonymy within the 'action' frame in English and Spanish. In María de los Ángeles Gómez-González, Lachlan Mackenzie & Elsa González-Álvarez, eds. *Current trends in contrastive linguistics: functional and cognitive perspectives*. Amsterdam: John Benjamins.

Ruiz de Mendoza Ibáñez, Francisco J. & Lorena Pérez Hernández. 2001. Metonymy and the grammar: motivation, constraints, and interaction. *Language and Communication* 21: 321–357.

Ruiz de Mendoza Ibáñez, Francisco J. & Francisco Santibáñez Sáenz. 2003. Content and formal cognitive operations in construing meaning. *Italian Journal of Linguistics* 15: 293–320.

Sadock, Jerrold M. & Arnold M. Zwicky. 1985. Speech act distinctions in syntax. In Timothy Shopen, ed. *Language typology and syntactic description.* Vol. II: *Clause structure.* Cambridge: Cambridge University Press, 155–196.

Searle, John R. 1969. *Speech acts*. Cambridge: Cambridge University Press

Sperber, Dan & Deirdre Wilson. 1995. *Relevance. Communication and cognition*. 2nd ed. Malden, MA & Oxford: Blackwell.

Tuggy, David. 1996. The thing is is that people talk that way. The question is is why? In Eugene H. Casad, ed. *Cognitive Linguistics in the redwoods: the expansion of a new paradigm in linguistics*. Berlin: Mouton de Gruyter, 713–752.

Van Valin, Robert D. Jr. 2005. *The syntax-semantics-pragmatics interface: an introduction to Role and Reference Grammar*. Cambridge: Cambridge University Press.

Van Valin, Robert D. Jr. & Randy LaPolla. 1997. *Syntax: structure, meaning and function*. Cambridge: Cambridge University Press.

Van Valin, Robert D. Jr. & David P. Wilkins 1993. Predicting syntactic structure from semantic representations: *remember* in English and its equivalents in Mparntwe Arrernte. In Robert D. Van Valin Jr., ed. *Advances in Role and Reference Grammar*. Amsterdam: John Benjamins, 499–534.

Vendler, Zeno. 1967. *Linguistics in philosophy*. Ithaca, NY: Cornell University Press.

Wierzbicka, Anna. 1996. *Semantics: primes and universals.* Oxford: Oxford University Press.

Wierzbicka, Anna. 1999. *Emotions across languages and cultures. Diversity and universals.* Cambridge: Cambridge University Press.

Wilson, Deirdre & Dan Sperber. 1993. Linguistic form and relevance. *Lingua* 90: 1–25.

Ziegeler, Deborah. 2007. Arguing the case against coercion. In Günter Radden, Klaus-Michael Köpcke, Thomas Berg & Peter Siemund, eds. 99–123.

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received: 21 November 2007
accepted with revisions: 26 December 2007
revised version received: 23 June 2008