

# ***Wh-* interrogative inferential constructions in the Lexical-Constructional Model<sup>1</sup>**

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**ABSTRACT.** The Lexical Constructional Model (LCM; Ruiz de Mendoza and Mairal 2007, 2008, 2011; Mairal and Ruiz de Mendoza 2008a, 2008b; Ruiz de Mendoza 2008) is a comprehensive model of language that accounts for meaning construction at all levels of grammatical description. In the LCM constructions are distributed among four levels of representation that interact in principled ways: argument structure (level 1), implicature (level 2), illocution (level 3) and discourse (level 4). The aim of this paper is to provide a full characterization of the English *Wh*-interrogative family of inferential constructions, understood as a web of interrelated form-function pairings (González-García 2011), within the framework of the LCM. We shall examine the morphosyntactic, semantico-conceptual and pragmatic properties of three inferential (i.e. level-two) constructions: the ‘what’s X doing Y?’ construction, the ‘*wh*- do you think you BE-present V-ing?’ construction and the ‘who do you think you are?’ construction.

*Keywords:* inferential constructions, the Lexical-Constructional Model, implicature, situational Idealized Cognitive Model, metonymy.

## **1. INTRODUCTION**

Before going into the specifics of the English *Wh*-interrogative family of inferential constructions, let us briefly dwell in the issue of pragmatic meaning. Over the last few years there has been a growth of interest in the pragmatic aspect of language. It is widely

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acknowledged that there is a huge gap between what the speaker says and what he means. This distinction between the meaning of a sentence and the message actually conveyed by the utterance has led to vast research in the field of pragmatics. One of the central issues of pragmatic theories is to explain how the addressee works out the intended meaning. Most attention has focused on the principles applied by language users to make sense of utterances, whether socially-regulated conventions or cognitive principles. Gricean and Neo-Gricean accounts have postulated a set of maxims underlying the efficient and effective use of language. While Grice (1975, 1981) formulated a co-operative principle and its attendant maxims of conversation (Quality, Quantity, Relation and Manner), subsequent developments in the domain of pragmatics have advocated a reductionist approach. Thus, Horn (1984, 1989, 2004) posits the R[elation]-principle ('Don't say too much') and the Q[quantity]-principle ('Say enough'). Levinson (1983, 2000) proposes three principles – the Q[uality]-principle, the I[nformativeness]-principle (equivalent to Horn's R-principle) and the M[anner]-principle, each of which has two sides: a speaker's maxim, which specifies what the principle enjoins the speaker to say, and a recipient's corollary, which dictates what it allows the addressee to infer. Leech (1983: 83) postulates a Principle of Politeness, i.e. "an abstract quality residing in individual expressions, without regard for the context that governs their use." Relevance theory (Sperber and Wilson 1995) is even more reductive, since it offers a single cognitive Principle of Relevance. The idea is that communicative acts guarantee the optimal relevance of the utterance produced. Relevant utterances are those that strike the right balance between sufficient contextual implications on the one hand, and minimal processing effort, on the other<sup>2</sup>. Relevance is therefore a matter of unconscious inferencing.

The issue of pragmatic and discourse meaning has been addressed in functional<sup>3</sup> and cognitive approaches. Dik's Functional Grammar (1997) conceives the pragmatic component as the general framework encompassing both the syntactic and the semantic component. In line with this, he posits an illocutionary layer, distinguishes four pragmatic functions (i.e. Theme, Tail, Topic and Focus)<sup>4</sup> and discusses focus constructions (cleft sentences and pseudo-cleft sentences) whose function is to bring a syntactic element into prominence. Nonetheless, the pragmatic dimension of meaning is not dealt with in a systematic way. In much the same vein, cognitive models like Langacker's (2001) claim to adopt a usage-based approach in which a word's sense is a function of pragmatic meaning. Yet they actually embrace an abstract notion of language whereby the lexicon and the grammar consist of

<sup>2</sup> To be optimally relevant, speakers must make sure that their addressee can derive some contextual implication(s) from the information they conveyed. Such implications are inferred based on the speaker's explicit message and contextual assumptions the addressee brings to bear. At the same time, speakers must convey the intended contextual implication(s) in such a way that is least demanding in terms of processing.

<sup>3</sup> For a detailed description of functional and cognitive theories, see González-García and Butler (2006).

<sup>4</sup> The pragmatic functions are assigned to the constituents of the predication after the assignment of the semantic and syntactic functions.

assemblies of symbolic structures (i.e. constructions) derived from actual language use by processes of abstraction and schematisation. Meaning is identified with conceptualization, and discourse factors are not considered.

Constructional views in the cognitive linguistics paradigm (e.g. Lakoff 1987; Langacker 1987, 1991; Goldberg 1995, 1998, 2006; Croft 2001; Michaelis 2003) have emphasized the fact that language is a structural inventory of constructions. Constructions can be defined as follows (Goldberg 2006: 5):

Any linguistic pattern is recognized as a construction as long as some aspect of its form or function is not strictly predictable from its component parts or from other constructions. In addition, patterns are stored as constructions even if they are fully predictable as long as they occur with sufficient frequency.

Although constructions are operational at all levels of grammatical analysis, Construction Grammar approaches have focused on argument structure constructions, which provide the basic means of clausal expression in a language. In contrast with Construction Grammar approaches, the Lexical Constructional Model (hereafter LCM; Ruiz de Mendoza and Mairal 2007; 2008, 2011; Mairal and Ruiz de Mendoza 2008a, 2008b; Ruiz de Mendoza 2008; *cf.* Butler 2009 for a critical assessment) is a comprehensive model of language that accounts for meaning construction at the levels of argument structure (level 1), implicature (level 2), illocution (level 3) and discourse (level 4). This model fully integrates pragmatic and discourse meaning in grammatical description. As Ruiz de Mendoza and Mairal (2008: 370) point out, a challenging assumption of the LCM, which differentiates it from traditional pragmatic theories, is that implicature (i.e. pragmatic inferencing) may have a constructional motivation<sup>5</sup>. As it will be shown below, our study backs this assumption.

The focus of the present contribution is on the investigation of the English family of Wh-interrogative constructions postulated by Ruiz de Mendoza and Ota (2002: 158). Specifically, we will concentrate on three inferential constructions: the ‘what’s X doing Y?’ construction, the ‘wh- do you think you BE-present V-ing?’ construction and the ‘who do you think you are?’ construction. With the general sketch of the constructionist approach and the LCM framework in mind, this paper sets out to provide a detailed description and analysis of these constructions in structural, semantic and pragmatic terms.

The structure of the paper is as follows. The first section provides an overview of the Lexical Constructional Model. This is followed by a general characterization of this constructional family. In the third section we take up the discussion of the structural, semantic-conceptual and pragmatic features of three subconstructions within this family. The last section presents some concluding remarks.

<sup>5</sup> In the Gricean scheme conversational implicature is created by exploiting or ‘flouting’ (i.e. breaching) the maxims.

## 2. THE LEXICAL-CONSTRUCTIONAL MODEL

The Lexical Constructional Model is a meaning construction model elaborated in the research group Lexicom ([www.lexicom.es](http://www.lexicom.es)). As mentioned in Ruiz de Mendoza and Mairal (2008: 355), the LCM approach is based on functional models of language (especially Role and Reference Grammar) and cognitive linguistics (particularly Goldberg's Construction Grammar and Lakoff's Cognitive Semantics). As stated above, the model provides a thorough semantic description inasmuch as it accounts for all those aspects involved in meaning construction, including traditional implicature, illocutionary force and discourse coherence.

The LCM posits the following modules of semantic description (Ruiz de Mendoza and Mairal 2008; Mairal and Perrián 2010):

- (i) The level 1 or argumental module is concerned with the semantic representation of predicates in terms of lexical templates.
- (ii) The implicational or level 2 layer deals with low-level inferences.
- (iii) The level 3 or illocutionary module accounts for illocutionary value.
- (iv) The level 4 or discourse layer addresses discourse aspects, especially cohesion and coherence phenomena.

These four layers are interrelated by two cognitive processes: subsumption and cueing. This means that each level is either subsumed into a higher level module or acts as a cue for the activation of relevant conceptual structures that yields an implicit meaning derivation.

The basic organization of the LCM is given in figure 1.

The focus of this paper will be on level-2 (or inferential) constructions. Inferential constructions have attracted little attention. To the best of our knowledge, there have not been any unified accounts of this kind of constructions, with the exception of the LCM. In the LCM level-2 syntactic representations are seen as ways of restructuring level-1 information with a view to showing how the speaker interacts with it. The LCM identifies three basic types of *implicational* constructions: a) presuppositional constructions (e.g. the 'what's X doing' construction); b) non-presuppositional constructions (e.g. the 'wh-has been V-ing construction'), and c) focus constructions like *it was Sam who offered me the ring* and *what Mary told you isn't true*<sup>6</sup>.

<sup>6</sup> The presuppositional/non-presuppositional distinction points to the different pragmatic procedure through which the interpretation of the construction is achieved, whether explicature (presuppositional) or implicature (non-presuppositional). In an earlier paper (1992), Ruiz de Mendoza and Otal call the constructions *illocutionary-oriented presupposition* constructions, inasmuch as they encode a certain illocutionary interpretation, although the pragmatic specifications are present in the form of presupposition in the semantic make up of the linguistic expressions; the term 'presupposition' refers to the basic presupposition about the actuality of the situation described.

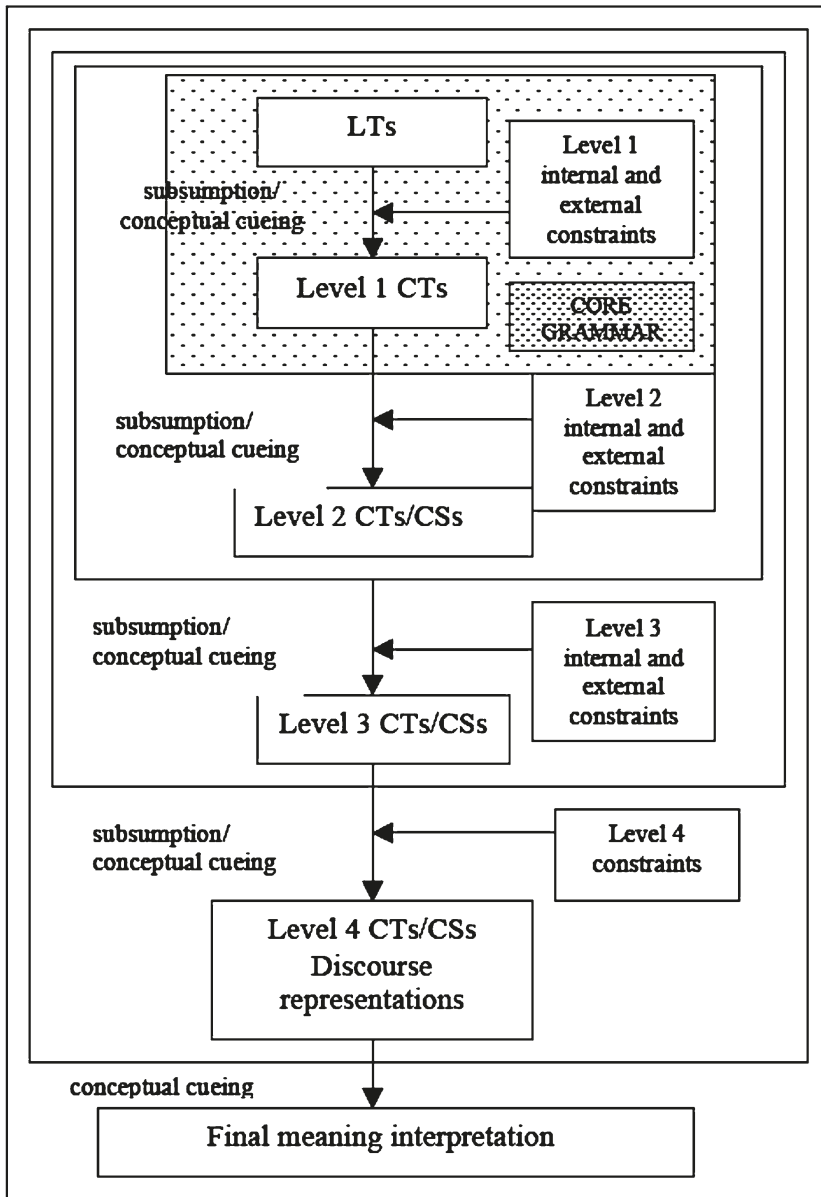


Figure 1. The overall architecture of the Lexical Constructional Model  
 LT = lexical template; CT = constructional template; CS = conceptual structure

Some scholars have investigated specific constructions like the ‘it is that-clause’ construction (Knoops 2007) and the double *be* or copula doubling (Ruiz de Mendoza and Otal 2002).

In the present article we concentrate on instances of interrogative clauses of the type exemplified in (1):

- (1a) What are you doing scaring me?<sup>7</sup>
- (1b) Where do you think you are going? You are not leaving this house.
- (1c) Who do you think you are?

We contend that combinations like those in (1) can be considered constructions in their own right on the grounds of structural, semantic and pragmatic properties. Our goal is to explore these properties in full detail. Crucially, within the constructional account invoked in this paper, these constructions are regarded as subconstructions subsumed within the English family of *Wh*-interrogative constructions.

### 3. THE ENGLISH *WH*-INTERROGATIVE FAMILY OF CONSTRUCTIONS

We are in complete agreement with Ruiz de Mendoza and Otal (2002: 158) about the existence of the English *Wh*-interrogative constructions, and we further claim that these lower-level syntactic configurations form part of a family of constructions. The notion of ‘family of constructions’ has been proposed by González-García (2006, 2008a, 2008b, 2009a, 2009b, 2011) and is to be understood as a web of interrelated form-function pairings. To substantiate our contention, we will analyse the formal, semantic and pragmatic commonalities of three subconstructions within the family: the ‘what’s X doing Y?’ construction, the ‘wh- do you think you BE-present V-ing?’ construction and the ‘who do you think you are?’ construction.

The properties of these constructions can be summarized as follows:

a) In structural terms, the ‘what’s X doing Y?’ construction and the ‘wh- do you think you BE-present V-ing?’ construction are partially-filled syntactic configurations containing an *-ing* form and the Y constituent is parametrizable (i.e. modifiable) to different extents (Ruiz de Mendoza and Mairal 2008: 371). In contrast, the ‘who do you think you are?’ construction is fixed.

b) In semantic-conceptual terms, the three constructions are based on a situational low-level ICM, which in turn is grounded in the metonymy ACTION FOR (ASSESSED) RESULT. The ‘who do you think you are?’ construction is based on a double metonymy AGENT FOR ACTION FOR (ASSESSED) RESULT. This high-level metonymic mapping

<sup>7</sup> The source used for data selection is the Corpus of Contemporary American English (COCA).

plays a role in fleshing out constructional meaning<sup>8</sup>. In that respect, the metonymy works as a form of conceptually-motivated enrichment for propositional development (*cf.* Ruiz de Mendoza 1999).

In the three constructions the action described is taken for granted. This presupposition constitutes the BEFORE component of the situational ICM. Further, the constructions carry the implicature – derivable from the presupposition – that there is something wrong about the situation described by the proposition.

c) In pragmatic terms, the constructions have a clearly identifiable illocutionary value of complaint. Thus, they convey a complaint made by the speaker to or about the addressee in relation to the state of affairs depicted in the sentence. This (default) interpretation can be connected with the morphosyntactic constraints exhibited by the constructions (see section 4.1.). The meaning effect is obtained via two pragmatic mechanisms: presupposition and conventional implicature. First, the propositional structure of the sentences presupposes the actuality of the action described. Then the constructions conjure up a situation in which the speaker is troubled by the state of affairs described in the proposition.

An important point that needs to be made clear is that the meaning of the three constructions is obtained on the basis of a combination of pragmatically guided (i.e. implicature) and constructionally guided situational-based low-level inferencing. This ties in nicely with the LCM tenet about level-2 meaning (Ruiz de Mendoza and Mairal 2008: 369)<sup>9</sup>.

#### 4. ANALYSIS OF THREE CONSTRUCTIONS WITHIN THE ENGLISH WH- INTERROGATIVE FAMILY OF CONSTRUCTIONS

As earlier mentioned, the morphosyntactic, semantic and pragmatic features common to the constructions under scrutiny here lead us to posit a family of constructions. On the other hand, their peculiarities suggest that this family allows for a variety of lower-level subconstructions. This section is concerned with the peculiarities of form and meaning displayed by the ‘what’s X doing Y?’ construction, the ‘wh- do you think you BE-present V-ing?’ construction and the ‘who do you think you are?’ construction.

<sup>8</sup> The role of conceptual structure in understanding pragmatic and discourse phenomena has been discussed in the cognitive linguistics literature (*cf.* Ruiz de Mendoza and Otal 1992; Otal 2000). Otal (2000: 325) highlights the role of the ‘plan and goals schema’ and the generic metaphoric and metonymic mappings GENERIC IS SPECIFIC and PART OF AN EVENT FOR WHOLE EVENT. Panther (2005: 353) and Ruiz de Mendoza and Mairal (2007: 33) postulate that high-level metaphor and metonymy regulate much of our inferential activity. Ruiz de Mendoza and Pérez (2001) discuss the operation of metonymy in the triggering of explicatures, and Barcelona (2003, 2005, 2007) looks at the role of conceptual metonymy in the derivation of text-level implicatures. As Otal (2000: 332) points up, “high-level conceptualisations may lie at the basis of pragmatic implications.”

<sup>9</sup> In the LCM the process of inferencing is referred to as *cued inferencing* or *cueing*.

#### 4.1. Structural properties

The ‘what’s X doing Y?’ construction, the ‘who do you think you BE-present V-ing?’ construction and the ‘who do you think you are?’ construction can be provisionally characterized as involving a *Wh*- interrogative pronoun.

The ‘what’s X doing Y’ construction is discussed by Kay and Fillmore (1999) within the framework of a generative formal theory that assigns a prominent role to grammatical constructions. These authors propose an independent construction (the *WXOY* construction) seen as an idiomatic abstract phrase that licenses sentences of the type in (2):

- (2a) What are you doing making fun of this guy?
- (2b) What is he doing in the middle of the day wandering the neighborhood?
- (2c) What are they doing in there for so long?

The existence of this construction is grounded on two facts (Kay and Fillmore 1999: 4):  
 a) the specific semantic interpretation associated by convention with only these sentences;  
 b) the morphosyntactic constraints regulating the sentences.

The ‘what’s X doing Y’ construction exhibits the following formal peculiarities:

1. The subject role must be filled with a human agent representing the addressee or a third entity involved in the state of affairs described in the utterance. Thus, it must be a second person or third person subject.

2. It contains the verb *do* in the present participial form.

3. As we can observe in (3), the Y constituent make take a disparate range of morphosyntactic realizations: a present participle (3a), a prepositional phrase (3b), or an adjective (3c):

- (3a) What are they doing laughing? And they shouldn’t be in the pubs.  
What is she doing bringing a little 2-year-old girl into a tattoo shop?
- (3b) What are you doing with my dress?  
What are you doing in my house?
- (3c) What are they doing dressed like that in the woods escaping from wolves?

It must be emphasized that the Y constituent displays a high degree of obligatoriness to the extent that its absence may make for the interpretation of the sentence as a request for information (e.g. *What’s Jim doing?*).

There are no constraints upon the verb-type that may be inserted in the Y slot. It may be a dynamic or a state verb. Consider (4) by way of illustration:

- (4a) What are you doing calling me now? (dynamic verb)
- (4b) What is he doing sending you down? (dynamic)
- (4c) What is he doing sitting alone? (state verb)



Second, the prepositional phrase realizing the Y constituent can be introduced by several prepositions (*with, without, in, etc.*), as shown in (5):

- (5a) What is she doing up a tree?
- (5b) What is she doing with her hand on my father's shoulder?
- (5c) What is he doing without a coat? It's freezing.

4. Negation of the Y constituent is possible:

- (6) What are you doing not sleeping?

5. The X and Y elements are referential, while *what, be* and *doing* are devoid of reference.

Three important restrictions characterize the 'what's X doing Y' construction:

1. The construction is only compatible with *do*. Thus, sentences in (7) are invariably ungrammatical:

- (7a) \*What are you carrying out with my laptop?
- (7b) \*What is your sister performing in an evening dress?

2. The interrogative pronoun functioning as the direct object does not admit *else*:

- (8) \*What else are you doing bringing a boy into the house?

3. The construction does not allow *do* to be negated:

- (9a) \*What aren't you doing barefoot in the garden?
- (9b) \*What isn't she doing with a knife in her hand?

A representative listing of the subconstruction 'wh- do you think you BE-present V-ing' is provided in (10):

- (10a) What do you think you are doing? Are you sure you are making the right decision?
- (10b) Where do you think you are going? Don't you know it's dark outside?
- (10c) Who do you think you are talking to?

A number of considerations suggest themselves in the light of the examples in (10):

(i) In formal terms, the construction is a compound interrogative clause consisting of two clauses.

(ii) The matrix verb *think* appears in the present simple form with the second person singular pronoun *you* functioning as the subject. We must observe that *think* is the only verb

eligible for occurrence in this construction. Thus, all other cognition verbs are systematically barred in the matrix verb-slot, as illustrated in (11):

- (11a) Where do you believe you are going?  
 (11b) What do you reckon you are doing?

(iii) The embedded clause contains two obligatory constituents: (1) a *wh*-word and (2) the pronoun *you* in the main clause filling the subject slot. The range of *wh*-words is restricted: *who*, *what*, *where*. Other pronouns are impossible: \**When do you think you are leaving?* \**Why do you think you are?* \**Whose car do you think you are driving?*

Two restrictions are imposed on the verb in the embedded clause, a semantic restriction and a morphological restriction. First, the verb has to occur in the present continuous form. Second, the construction appears only to be felicitous with the verbs *talk*, *do* and *go*.

As we can observe in (12), in the constructions introduced by *where* and *what* there is an optional Y element, which make take various morphosyntactic realizations:

- (12a) Where do you think you are going with that cigarette?  
 (12b) Where do you think you are going at this hour?  
 (12c) Just what do you think you are doing with my husband?

A few instances of the construction ‘who do you think you are?’ are provided in (13):

- (13a) Who do you think you are? I do not pay you -- and I pay you well -- to lecture me or to override my decisions”.  
 (13b) Who do you think you are? You act like you’re somebody special.  
 (13c) You’ve got some nerve. Standing me up. Nobody does that to me. Who do you think you are? A big shot?  
 (13d) Who do you think you are? How dare you wake us up?

The inferential meaning of the construction is strengthened through the addition of the phrase *the hell*, as illustrated in (14):

- (14) Who the hell do you think you are?

## 4.2. Semantico-conceptual properties

The ‘what’s X doing Y?’ construction, the ‘wh- do you think you BE-present V-ing?’ construction and the ‘who do you think you are?’ construction share a number of inherent semantico-conceptual properties. The ‘what’s X doing Y?’ construction and the ‘wh- do you think you BE-present V-ing?’ are semantically motivated by the situational high-level (generic) metonymy ACTION FOR (ASSESSED) RESULT<sup>10</sup>, whereas the ‘who do you

<sup>10</sup> This is in line with the LCM’s assumption that constructions are constrained by external (i.e. semantic) and external (i.e. cognitive) factors. This postulate is one of the major novelties of the LCM as compared with other cognitive/functional frameworks.

think you are?’ construction relies on the double metonymy AGENT FOR ACTION FOR (ASSESSED) RESULT. The metonymy ACTION FOR (ASSESSED) RESULT profiles the potential negative consequences of an action (Ruiz de Mendoza and Otal 2002). The metonymy is situational in that the profiling of the result of the action is not grounded on linguistic structure, but rather in our common knowledge that actions have results (Ruiz de Mendoza and Otal 2002: 187).

The metonymy operates on a low-level situational ICM (Idealized Cognitive Model)<sup>11</sup> and derives the pragmatic implicature of the constructions<sup>12</sup>. The notion of situational model has been put forward by Pérez and Ruiz de Mendoza (2002: 264) and include Leech’s (1983) pragmatic scales of cost-benefit, optionality and power, and Levinson’s (2000) politeness principle as parameters. The cost-benefit parameter assesses the cost and/or benefit that the action involves for the speaker and/or the addressee. The politeness parameter is an assessment of the degree of politeness conveyed by the utterance. Finally, the power parameter indicates the power relationship that needs to hold between the speakers in order to perform a speech act.

In much the same vein, we contend that the complaint interpretation of the constructions under scrutiny is obtained via a low-level situational model similar to the high-level situational ICM proposed by Ruiz de Mendoza and Pérez (2001) for directive speech acts. We formulate a proposal for a low-level situational ICM for each construction which in our view captures better the semantics of the configurations. This model is grounded on two cognitive mechanisms: the high-level metonymy ACTION FOR (ASSESSED) RESULT, which yields the complaint implicature, and the high-level metaphor SPEECH ARE EVENTS, which accounts for the three central components of the situational ICM (the BEFORE, the CORE and the AFTER).

Situational ICM of the ‘what’s X doing Y?’ construction

Action frame

THE BEFORE: Someone is doing something that the speaker doesn’t like.

Cost-Benefit: The action represents a cost to S<sup>13</sup>.

Politeness: S tries to maintain H’s face<sup>14</sup>.

THE CORE: S questions this action.

A is aware of the situation.

<sup>11</sup> Lakoff (1987) argued that knowledge is organized in the form of Idealized Cognitive Models (ICMs), which are types of conceptual structure: propositional, metaphoric, metonymic and image-schema. Propositional ICMs are conceptual descriptions in terms of argument-predicate relationships. The action frame is a propositional ICM.

<sup>12</sup> The view of implicature as the result of metonymic activity on low-level situational models is expounded in Ruiz de Mendoza and Mairal (2007).

<sup>13</sup> The following abbreviations are used: S (speaker), H (hearer) and A (addressee).

<sup>14</sup> In Brown and Levinson’s (1987) model, *face* means the public self-image of a person. Politeness in an interaction is the means employed to show awareness of another person’s face and avoid face-threatening acts.

Situational ICM of the ‘wh- do you think you BE-present V-ing?’ construction

Action frame

THE BEFORE: A behaves in a socially inappropriate way.

S doesn’t like this behaviour.

Cost-Benefit: The action represents a cost to S

Politeness: S threatens H’s face.

Power: S feels more powerful than A.

THE CORE: S challenges H’s action.

Situational ICM of the ‘who do you think you are?’ construction

Action frame

THE BEFORE: Someone has done something that S doesn’t like.

Cost-Benefit: The action represents a cost to S

Politeness: S threatens H’s face.

Power: S feels more powerful than A.

THE CORE: S questions the action.

A is aware of the situation.

The low-level situational ICMs of the three constructions consists of an action ICM and the pragmatic parameters of cost-benefit and politeness. This action frame takes the form of a generic scenario which can be partially described as follows (Ruiz de Mendoza 1999; Ruiz de Mendoza and Otal 2002): (a) actions are controlled attempts to modify a state of affairs, (b) actions have results which can be harmful for the participants, and (c) whenever the results of an action are not beneficial for one or more participants, other participants should do their best to change this situation. The presupposition that the action is in progress or has been carried out provides the BEFORE component of the situational ICM.

In the three constructions the action represents a cost to the speaker. Further, a politeness component is activated. In the ‘what’s X doing Y’ the speaker performs a face-saving act oriented to the addressee’s negative face by showing deference. In contrast, in the ‘wh- do you think you BE-present V-ing?’ construction and the ‘who do you think you are?’ construction, the speaker’s power status comes across as a component of both constructions. The speaker feels more powerful than the addressee and, as a result, challenges his behavior, thus performing a save-threatening act.

With respect to the directive meaning of the ‘what’s X doing Y?’ construction, Ruiz de Mendoza and Otal (2002: 189) argue that it is motivated by a second metonymic mapping, where the complaint becomes the BEFORE component of the request scenario and metonymically stands for the whole of it. The situational ICM for the ‘what’s X doing Y?’ construction with a directive interpretation could be formulated as follows:

Situational ICM of the ‘what’s X doing Y?’ construction (illocutionary value of request for action)

Action frame

THE BEFORE: S complains about a participant’s behaviour.

A is aware of the situation.

Cost-Benefit: The action represents a cost to S.

Politeness: S tries to maintain H’s face.

THE CORE: S asks H to do something about it.

This conceptual account of the inferential constructions leads the path to considering constructions not as mere form-meaning pairings but as sets of conceptual parameters subject to instantiation through explicit or implicit information strategies which in turn require the use of certain lexico-grammatical elements (Ruiz de Mendoza 2001: 8).

### 4.3. The pragmatic component

In Kay and Fillmore’s view, the ‘what’s X doing Y?’ construction generates an incongruity judgment – conventionally arising from the morphosyntax of the configuration – attributed by a judge (not necessarily the speaker) to the state of affairs described in the proposition. Such judgment often yields the implicature<sup>15</sup> that the speaker disapproves that state of affairs. Thus, the interpretation of a sentence built on the pattern ‘what’s X doing Y?’ as a complaint is triggered by an incongruity element. In other words, the idea conveyed by the construction that something is wrong about the situation would give rise to the complaint reading.

Ruiz de Mendoza and Mairal (2008) make two relevant claims about this implicature: (a) the implicature is yielded by a social interaction principle whereby nobody is supposed to perform certain actions without permission; (b) the construction does not yield the complaint implicature directly. Rather, the implicature is derivable from the low-level situational ICM described in the previous section.

The other constructions have a similar illocutionary value of complaint, which is encoded in the *do you think* element.

The ‘what’s X doing Y?’ construction and the ‘wh- do you think you BE-present V-ing?’ construction imply that the speaker, in being able to provide information about what is going on, already knows the answer to his own question. Thus, the addition of Y elements operates a meaning change from a request sense to a complaint meaning. As Ruiz de Mendoza and Mairal (2008: 37) remark, “the higher the degree of complexity, the stronger the conventional implicature”.

<sup>15</sup> The implicature/explicature dichotomy was introduced by Sperber and Wilson (1995). The explicature is the intended assumption explicitly conveyed by the utterance, while implicatures develop the full proposition conveyed by the utterance. In other words, explicature refers to explicitly communicated pragmatic meaning, while implicature refers to implicitly communicated pragmatic meaning.

It must be noted that the metonymy ACTION FOR (ASSESSED) RESULT plays a role in deriving the complaint implicature.

More importantly, in the three constructions the implicature has become strongly conventionalized, in such a way that it is grammatically entrenched<sup>16</sup>, thus becoming an explicature. In other words, the illocutionary value of these configurations has a constructional motivation<sup>17</sup>. This fact highlights the central role of syntax in the overall interpretation of a sentence.

The ‘what’s X doing Y construction?’ has a default interpretation as a request for action. As a consequence, we may find contexts where the sentences exploiting this construction are either pure complaints or calls for action.

## 5. CONCLUSION

In the present paper we have argued the case for inferential (level-two) constructions through the detailed examination of three subconstructions falling into the family of the English *Wh*-interrogative constructions: the ‘what’s X doing Y?’ construction, the ‘wh-do you think you BE-present V-ing?’ construction and the ‘who do you think you are?’ construction. We have captured their morpho-syntactic and semantic idiosyncracies and commonalities, and the interpretive effects associated with them. On the morphosyntactic plane, the subconstructions take the form of *Wh*-interrogative sentences. In a semantic view, the constructions are grounded on the situational high-level metonymy ACTION FOR (ASSESSED) RESULT. The grammatical structure of the sentences instantiating the constructions is readily associated with an illocutionary value of complaint driven by a situational low-level ICM grounded in the situational high-level metonymy. In the case of the ‘what’s X doing Y?’ construction, there is an associated meaning of call for remedial action.

We hope to have provided empirical evidence of two basic assumptions: 1) the presence of constructions at other levels of grammatical descriptions, not only of argument constructions; 2) the pivotal role of cognitive operations (i.e. high-level metaphor) and syntax in meaning construction.

The analysis of a family of inferential constructions has shown that semantic and pragmatic meaning is produced through a constructional mechanism in a way that it can be said to be linguistically encoded. This fact gives proof of the intricate interaction of grammar, semantics and pragmatics.

<sup>16</sup> In Langacker’s (1999: 105) terms, entrenchment is a function of the frequency of association between a meaning element and any given structural configuration.

<sup>17</sup> The correlation between a construction and some interpretation has been pointed up by some pragmatics scholars. Ariel (2008), for example, provides examples of a grammatically motivated use of language, i.e. cases when the interpretation is encoded in grammar rather than inferred. She draws an interesting distinction between codes and inferences. A linguistic phenomenon is governed by a code if the form-function correlation involves is conventional rather than derived by an inference. Levinson (1983: 165ff.) mentions a few constructions with implicatural constraints, e.g. non-restrictive relatives and indirect speech acts.

The scope of this paper being limited, we suggest two issues for further research: (i) the counterparts of the English *wh-* interrogative constructions in other languages; (ii) other families of inferential constructions.

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