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LEXICAL STRUCTURE, LEXICAL CONCEPTS AND METAPHORICAL CONCEPTS: THE CASE OF "CHANGE" VERBS IN ENGLISH*

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ABSTRACT. *The aim of this paper is twofold: (i) To examine some of the notions current in the FLM (L. M. Mingorance´s Functional Lexematic Model of semantic description) concerning lexical structure and knowledge, in the light of the cognitive paradigm; and (ii) to analyse some of the connections that can be established between the English lexico-conceptual domain of CHANGE verbs and other domains via the definitional structure of such lexical concepts as those of change verbs –as structured by the FLM–, in order to identify the underlying metaphorical concepts and processes involved.*

1. THEORETICAL BACKGROUND

1.1. *Typology of Cognitive Predicate Schemata in the FLM*

In the past decade Prof. Leocadio Martín Mingorance created an influential model of lexicological description which he called Functional-Lexematic drawing on Coseriu´s

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Lexematics and S.C. Dik´s Functional Grammar (see, eg. Martín Mingorance 1990; Felices 1991; Cortés 1994; Faber & Mairal 1994, 1997a, 1997b, fc.; Mairal 1997).

In the FLM the lexicon is viewed as a dynamic, textually-oriented repository of information about words and the contexts in which they appear that is available for both speaker and hearer in an act of communication. The lexicon actually manifests itself partly as the mental lexicon of speakers.[1] Thus, the meaning of lexical units is regarded by the FLM as the intersection of their paradigmatic and their syntagmatic axes, ie. of their sense and the set of collocationally restricted, syntactico-semantic combinations they may establish. Such an intersection is now conceived as having a conceptual schematic purport. This is no surprise, since lexical meaning is generally thought of within the model as lying at the interface of the linguistic *and the extralinguistic* worlds and as a meeting point for multidisciplinary study which (1) at system level expresses a comparatively stable potential awaiting textual actualisation and which (2) is moulded by, and inherits its value from, previous discoursal conceptualisations (hence the relevance of cognitive-textual analysis to symbolic-lexical definitions)[2]. Therefore, lexical meaning in the FLM should perhaps be seen, to my mind, as an internal knowledge representation, ie. part of a cognitive model, which, in the present case, might be called a change-relevant cognitive model.

Definitions, expressed by means of natural language components, are intended to reconcile a maximum degree of information with maximum economy. Yet, if we do not wish to take such a minimalist view, and as I have also tried to show elsewhere (Sánchez García 1998), the lexical entries proposed have a lexico-conceptual nature and thus must of necessity encapsulate a discourse and tropological (imaginative, metaphorical) structure, rather than including conceptual invariants; that is, they have cognitive-semiotic, ultimately cultural-symbolic, purport. Over the past few years, the FLM has in fact been moving towards addressing some of the implications of the cognitive approach to linguistic meaning as a whole and hence of the lexico-conceptual interface in particular. For example, Langacker's (1987) notion of schema has also been incorporated (Faber & Mairal 1997b), by which is meant an underlying organizational pattern of cognitive perception that encodes both mental and physical experience, which otherwise take the form of scripts or scenarios. A schema therefore reflects our interpretation of perceptual data, stereotyped situations and generalized (conceptualised) events. Its abstract characterization is compatible with all members of the category it defines. This notion has given rise to a recent development in the

1. Also as a component of language model (such as Dik´s FG), a module of systems for the processing of natural languages, and a dictionary.

2. From this characterization it should be clear that the notion of linguistic competence presupposed by the FLM is a dynamic one.

FLM, namely the proposal for each cognitive domain[3] of a field predicate schema: a *modular, dynamic* characterization that subsumes *linguistic* units obtained in a bottom-to-top fashion through the activation of lower-level schemata. A remarkable feature of these schemata, and one which is worth remembering for the purposes of this article, is their dynamic nature: these cognitive schemata are not frozen structures but establish internal connections with other schemata, a process which is the basis of metaphor (see below).

Schemata in the FLM are of three basic differentiated kinds: lexeme, dimension and field schemata. (i) Lexeme schemata encapsulate syntactic, semantic and pragmatic knowledge about the lexical item, including the configuration of definitional component parameters interpreted as present in a lexical entry. A lexeme schema specifies the extent to which it is a prototypical instantiation of the category which the dimension schema defines. This information affects the ordering of all the lexemes belonging to the dimension. (ii) Dimension schemata are made up of those prototypical syntactic, semantic and pragmatic units obtained from the lexeme schemata. They are held to be dynamic patterns that establish links with other domains, thus serving as the paths along which domain-schemata establish their connections. Their basic function is then that of encoding metaphorical processes that involve mapping a conceptual/semantic value from a source domain to a target domain. In view of such projections, a lexico-conceptual route principle (Faber & Mairal 1995) is said to obtain which regulates field-schemata connections and marks their path throughout the lexicon. (iii) Finally field schemata are obtained from dimension schemata. This is the general representation:

FIELD SCHEMA

Dimension schema-1	**Dimension schema-2**
Lexeme Schema	Lexeme Schema
Lexeme Schema	Lexeme Schema
Lexeme Schema	Lexeme Schema
Dimension schema-3	**Dimension schema-N**
Lexeme Schema	Lexeme Schema
Lexeme Schema	Lexeme Schema
Lexeme Schema	Lexeme Schema

3. Domains are domains of experience but they should also be taken to have a lexico-conceptual nature, ie. to be both manifest in and evoked by lexical forms on the symbolic level, especially if they are felt to include idioms (see below).

On this view, change verbs could be seen as a multidimensional set which inferentially coheres by virtue of the connectivity that characterizes every dimension level as indicated by the metaphorical mappings underlying the definitional structure[4] of lexemes at the level of lexeme schemata. The aim of this article is (i) to look at lexical structure as presented by the FLM by taking a more experiential, lexico-conceptual view (one that acknowledges the experience-based, cognitively motivated character of linguistic meaning), according to which such a lexical structure signifies a correlated kind of coherent experience; and (ii) particularly to make explicit in some samples of the Change verbal domain such a metaphorical structure of FLM definitions, which are then taken to have a lexico-conceptual character and thus symbolically to represent a constructed prototypical frame.[5] Connections –among domains, dimensions and groups– in the FLM are then to be understood as established via the metaphorical correspondences underlying definitions, which are constructed as part of complex underlying schemata that lay the foundations for knowledge representation in terms of a construed relational macronet; for, indeed, we are all "active experiencers and interpreters" of the world and use "creative *linguistic* and *conceptual* systems" (Faber & Mairal 1997b: 12; [their emphasis]).

2. Change Verbs and Metaphorical Concepts

2.1. *Change Verbs*

The overall structure of the domain of change verbs (the CHANGE domain) is as follows (Sánchez García 1998):

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4. definitional structure *qua* definitional statement in a given (metaphorical) understanding of it (cf. Lakoff & Johnson 1980: 165) that is generalised from discourse (ie. a hypothetical user of English is thought of), since "because we can conceptualize situations in metaphorical terms, it is possible for sentences containing metaphors to be taken as fitting the situations as we conceptualize them" (Lakoff & Johnson 1980: 172) (and recall that definitions have a cognitive-textual structure, ie. have a frame-like sentence or utterance ring to them).

5. This character would then be responsible for inserting them (given the ease of processing/activation of the relevant items) into the relevant cognitive and cultural models underlying terms. Such models -in the form of schematically simplified worlds- are activated by lexical items if need arises, otherwise remain by default latent or presupposed by lexical knowledge (see Martín Morillas 1997: 54, 55, 60; Sánchez 1998: 115; Martín Morillas & Sánchez 1998).

SUPER-DIMENSIONS	GENERAL		QUANTITATIVE				QUALITATIVE				REGULA-TIVE	
ORIENTATIONAL/ SCALAR DIMENSIONS	0		⇑		⇓		⇑		⇓		⇓ ⇑	
CAUSATIVE SUBDIMENSIONS	–	+	–	+	–	+	–	+	–	+	–	+

And next is a partial sample of the lexical structure interpreted for the "affect" group in the qualitative negative causative subdimension. The indentations graphically show the semantic hierarchy established by employing S. Dik´s (1978) stepwise lexical decomposition, a pivotal method in the FLM:

To worsen condition or appearance [+caus.]

1. affect to worsen the condition or appearance of sb/sth.
- **1.1. injure** to affect sb/sth (esp. a body tissue or sb. in a group) deliberately by doing an injustice or something bad to their appearance, health, or success, so that they become less sound, effective, successful or useful.
  - **1.1.1. harm** to injure sb/sth by inflicting pain suffering or loss.
  - **1.1.2. disable** to injure sb physically/mentally, making it impossible for them to live normally.
    - **1.1.2.1. maim** to disable sb badly, making part of their body permanently useless, through violence.
      - **1.1.2.1.1. cripple** to maim sb by injuring or causing the loss of their leg or arm. way.
      - **1.1.2.1.2. mutilate1** to maim sb severely, usu. by having part of their body violently removed.
  - **1.1.3. sprain** to injure an ankle/wrist/knee, etc. accidentally by a sudden, violent twisting motion.
  - **1.1.4. strain** to injure sth (esp. a muscle), by making it work too hard.
  - **1.1.5. hurt** to injure (a body, feelings) esp. (as if) by inflicting a not very serious wound.
    - **1.1.5.1 bruise** to hurt part of the body without breaking the skin, usu. producing a mark on it.

1.1.6. wound to injure sb's body by using some kind of weapon or instrument.
1.1.6.1. bite to wound sb with your teeth.
1.1.6.2. cut to wound sb making an opening in their body with a knife/sharp object.
1.1.6.2.1. nick to cut slightly.
1.1.6.2.2. scratch to cut sb with your nails or sth (esp. part of body) slightly with sth sharp or rough.
1.1.6.2.3. stab to cut sb by pushing a knife into their body.
1.1.6.2.3. gash to cut inflicting a large deep wound.
1.1.6.2.4. slash to cut in a violent way.
1.1.6.2.5. lacerate to cut badly and deeply.
1.1.7. prejudice to injure sb's chances of succeeding in sth.

From a cognitive perspective, the above lexical items are in fact cognitively salient conceptual nodes in a large relational network elaborating –by way of an incomplete, not necessarily discrete representation– the main prototypical concept "change".[6] Therefore, the hierarchy to which the links among lexical items give rise represent a major part of our change-relevant conceptual knowledge. In this context, then, several focal areas of conceptual space emerge as prototypically codified by the functional parameters which are present in the definitions of CHANGE verbs supplied by the FLM structuring (Sánchez García 1998), but which, rather than being inherent, ultimately account for the interactional properties (Lakoff & Johnson 1980: 120) of categories in the general change frame (cf. Fillmore & Atkins 1992), ie. of the related concepts in the corresponding propositional ICM (Idealised Cognitive Model) for change that is available for the speech community. Each focal area is then parametrized so as to perspectivize in a special way (that which coincides with symbolic structure) our categorization of the general implicit State of Affairs (an event).

The most central (cf. Ruiz de Mendoza 1997a: 402) of the focal areas/parameters for change are: attribute (ie. type of change effected or characteristic in which change is said to be effected, eg. *expand*), manner (in which the change takes place, eg. *expand*), means/instrument (used for a given change, eg. *prolong*), result (of change, eg. *congeal*); but there are also more peripheral parameters or frame elements: place (*soil*), cause (*blister*), extent (*swell*), quantity (*protract*), degree (*develop*), inception (*germinate*).

2.2. *Metaphorical Mappings in a Domain: Change*

In Lakoff & Johnson´s work a great emphasis is laid on the dynamic, ie. experiential aspects of categorization as well as on metaphorical processes. In order to be consistent

6. Such an extension has been shown (Sánchez García 1998) to involve the following orientational or spatialization metaphors relating to quantity (MORE IS UP, LESS IS DOWN), quality (GOOD IS UP, BAD IS DOWN) and control (POWER/STATUS IS UP, LACK OF POWER/STATUS IS DOWN).

with the outlook of the FLM, however, one feels tempted to contemplate the following work hypothesis: evidence of mappings from a source domain to a target domain can be obtained from the lexico-semantic structure of the domain analysed itself. This would entail of course envisaging the lexicon as the locus for knowledge representation, and would be based on the fact that a lexical entry for a lexeme contains components of the lexico-conceptual route in the form of clues to possible cognitive operations to which the lexeme is sensitive, such as metaphorical processes that we need in order to make sense of the world around us *both* prior to *and* as a result of our verbal interactions (M. Morillas & Sánchez García 1998). In other words (from a more cognitive, less functional/lexicographical standpoint), each lexeme is not disembodied, rather, given its psychological nature as a particularly organised aspect of cognitive processing and conceptualising ability, it contributes a partial, particular mental image to the understanding of the prototype category and thus presupposes in its constructed typical frame the above-mentioned metaphorical concepts as part of their overall imagery. That is, stimulation of its lexical entry elicits such associated metaphorical concepts in the activation of the overall indefinite image-like configuration of our knowledge of change.

As a consequence of this approach, we would say that the potential connections holding among domains through the agency of dimension schemas form a veritable semantic macronet. The macronet for change verbs would then be specified by pointing up the lexico-conceptual mappings operational from the various relevant source domains (even source dimensions and source groups) onto the target domain CHANGE. Some examples of CHANGE verbs codifying these metaphorical connections (ie. showing the dovetailing of domains –the mapping of domains into other domains– within the experiential gestalt "change") in the five main orientational dimensions are the following (several among them also actually showing double field –or group–[7] membership, in functional-lexematic terms, as fits their borderline status)[8]:

1. become to transform into the stated kind of entity / state / feeling. [SOURCE DOM.: EXISTENCE]

2. accumulate to increase gradually in number or amount until there is a large quantity in one place. [SOURCE DOM. EXISTENCE/ POSSESSION]

spread to extend over an area, usu. by stretching to the limit or affecting more and more people. [SOURCE GROUP: "worsen condition/appearance": *double group membership*].

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7. In actual fact, further levels were identified in the structure of the CHANGE domain, so that the series domain-superdimension-dimension-subdimension-group-subgroup should be borne in mind.

8. The examples are taken from both the [-caus.] and the [+caus.] subdimension, that is, the relevant connections make for the relational potential of the experiential gestalts of non-causative and causative change as they are available for the English language user.

heighten to intensify sth (as if) by lifting it above the ordinary [SOURCE DOM. ACTION & MOVEMENT]
enhance to heighten sth making it more attractive/desirable [SOURCE DOM. FEELING]
speed (up) to increase the speed, rate of movement or progress, or action of sth/sb. [SOURCE DOM. MOVEMENT]: *double field membership*.
hasten to speed the outcome of sth., making it take place sooner. [SOURCE DOM. EXISTENCE]: *double field membership*.
invigorate to strengthen (living things) making them more vigorous or effective. [SOURCE GROUP: "improve condition"]: *double group membership*.
lighten to increase the light of sth. [SOURCE DOM. LIGHT]: *double field membership*

3. **fall2** to decrease in price, amount, level, etc. (sth giving an effect of going down due to lack of support) [SOURCE DOM. MOVEMENT]
wither to decrease in degree of development (as if) by losing vital moisture, ultimately leading to death. [SOURCE DOM. EXISTENCE]
droop to weaken in energy through exhaustion, discouragement or lack of nourishment. [SOURCE DOM. FEELING]
slow (up/down) to decrease in speed. [SOURCE DOM. MOVEMENT]
loosen2 to decrease in firmness by becoming less fixed in place. [SOURCE DOM. POSITION]
discolour to decrease in colour, esp. looking unattractive. [SOURCE DOM. LIGHT, FEELING]

4. **recover** to improve in health by going back to a normal state. [SOURCE DOM. MOVEMENT]
freshen (up) to improve in physical condition or appearance (sb / sth), feeling cool, clean or comfortable. [SOURCE DOM. FEELING]
age2 to improve with the passage of time, developing in quality and taste (esp. of wine/cheese). [SOURCE DIMENSION: "To increase in degree of development"]
perfect to improve sth, with a view to acquiring evermore desirable qualities. [SOURCE DOM. POSSESSION]
correct to improve sth esp. by removing its faults. [SOURCE DOM. EXISTENCE]

5. **infect1** to worsen the physical or psychological health of sb/sth by giving them a disease or harmful bacteria. [SOURCE DOM. POSSESSION]

injure to affect sb/sth (esp. a body tissue or sb. in a group) deliberately by doing an injustice or something bad to their appearance, health, or success, so that they become less sound, effective, successful or useful. [SOURCE DOM. ACTION]
dirty to affect the appearance of sth by leaving marks on it. [SOURCE DOM. EXISTENCE]
swoon to faint and fall down (old-fashioned). [SOURCE DOM. MOVEMENT].

As can be seen, the above definitions provide specifications or modifications of more general definiens. In such modulations of the nucli of definitions one is able to identify the trace of at least one other change-relevant domain, dimension or group. This can be seen in the parameters or part thereof underlined. Underlying each of them is an independently and more directly understood source domain for a conceptual metaphor (a conventional metaphor as part of our conceptual system). That is, the definitional frame of change verbs –our conceptualization of changes– is systematically correlated with defining lexical concepts (eg. "go") of other lexico-conceptual domains, the lexical concepts being in turn instances of concepts directly emergent in our experience of reality such as "manipulation", "movement", "objects", "substances" and like natural kinds of experience (Lakoff & Johnson 1980: 69, 73, 118)[9]. These definitions are then to be seen as metaphorical definitions of the various change lexical concepts.

Thus in the above examples mappings from the domains of EXISTENCE, POSSESSION, ACTION, MOVEMENT, LIGHT, FEELING and POSITION can be interpreted as automatically (ie. unconsciously) activated when the change-relevant lexical entries are accessed for production or retrieved from memory, ie. when we are (re)classifying (aspects of) our experience of change in English. Thus a number of (ontological) metaphorical concepts could be construed, such as (only three are given for dimensions containing more than one item): TO BECOME IS TO EXIST (IN A DIFFERENT WAY); TO ACCUMULATE IS TO HAVE, TO SPREAD IS TO AFFECT (MORE) PEOPLE, TO HEIGHTEN STH IS TO LIFT IT; TO FALL (eg. IN PRICE) IS TO GO DOWN, TO WITHER IS (A FORM OF) DYING; TO DROOP IS TO FEEL LESS (ENERGY, COURAGEMENT); TO RECOVER IS TO GO BACK (TO NORMALITY), TO FRESHEN (UP) IS TO FEEL (COOL, etc.), TO AGE IS TO INCREASE IN DEVELOPMENT (a metonymic mapping); TO INFECT IS TO GIVE (DISEASE), TO INJURE IS TO DO STH. BAD, TO DIRTY STH. IS FOR MARKS TO EXIST ON IT. Naturally, the associated conceptual entailments could also be given in order to flesh out the used part of each metaphor and make it fit in more detail to the

9. In this sense, a mark (see the definition of *dirty* above) is also one such type of naturally-occurring experience, an ostensible inscription existing as a result of the change event denoted by the verbal predicate.

conceptual areas focalised as part of (ie. as a partial representation of) the definitional frame for a given lexical concept. But the phenomenon is clear enough: metaphor is conventionalised within the English change domain, since it is part and parcel of change definitional frames, whose range of applicability is in turn exposed in any literal discourse interpretation of such relevant linguistic expressions as "The water turned into ice", "She is slowly changing into a beautiful woman" or "Mammals developed out of reptiles" (Lakoff & Johnson 1980: 74). This means that a fundamental concept like "change" –profiled as being shot through with it, ie. organized in terms of it– surfaces as a varied and complex cognition, a complex conceptual experience or gestalt that is not only multidimensionally structured but also systematically organised into a metaphorically defined domain and understood thanks to the directly meaningful concepts that form the sources for the metaphors. This could not be otherwise, since

> linguistic expressions get their meanings (...) having the elements of the ICM´s either be directly understood in terms of *preconceptual structures in experience*, or indirectly understood in terms of directly understood concepts plus structural relations. (Lakoff 1987: 291) [our emphasis]

2.3. *Lexically composite expressions*

In a truly lexico-conceptual approach, lexically composite expressions (idioms and the like) should be included in domains (Sánchez García, fc.). Otherwise we would be thinking about a lexical semantic investigation only "in terms of the study of part of the lexicon as such", rather than "as a reflection of underlying conceptualizations" (Verschueren 1981: 318) also, and we would still be dealing with *lexical fields* rather than richer *word fields*, to use Lipka´s (1990) terminology.

In the CHANGE domain such expressions have been shown (Sánchez García 1998) often to bridge intra-dimensional or intra-domain gaps (those occurring between a causative and a non-causative subdimension, and between a positive and a negative dimension, respectively). Thus a case could be made to include **jump out of the frying pan into the fire** [to worsen (as if) by going from a bad situation to a less desired one] in the relevant negative subdimension. The source domain of the mapping is Movement ("going"), although complex additional mappings –and therefore domains– are also at work here concerning problems and fire (see Sánchez García fc. for details).

3. Conclusion

The point is not only that a case can reasonably be made in favour of including such composite expressions in lexico-conceptual domains, or that they help throw into relief

the ultimately metaphorical nature of the conceptualisation of such domains even perhaps more convincingly than simple lexical items can (given the clearly cultural-cognitive instantiation they represent, Gibbs 1994), but that metaphorical processes (mappings), as I hope to have shown, seem to be involved in any *definition*, description or paraphrase, of the symbolic counterparts of domain nodes, irrespective of whether they are simple or composite. Mappings are indeed subcategorized in definitional frames within conceptual domains, not only *appended to them* to construct ICM´s (Lakoff, in Ruiz de Mendoza 1997b: 48).

Given the pervasiveness of metaphor in our mental experience, these metaphorical conceptual processes are also part of the codification of lexical knowledge in that they, too, structure lexico-conceptual domains. Thus they make it plausible to make the FLM compatible with schema theory and the cognitive paradigm.[10] Such metaphorical processes are instrumental in understanding what complex conceptual networks are available in a given language and for a given linguistic community and clearly reflect the interpretive, ie. cognitive-discoursal nature of definitions in the FLM lexical structurings (Sánchez García 1998), especially those of the abstract lexicon, that is, they reflect not only their functional-oppositive or anatomical-ecological nature, but also their phenomenological one (Langacker 1991: 513). One may, from a cognitive perspective, take FLM structurings and definitions as special cases involving symbolic counterparts of Fillmore´s frames, ie. as important taxonomic and symbolic ICM´s imposed by the analyst (Lakoff & Johnson 1987: 287, 289), having a propositional purport,[11] and therefore qualifying as the propositional part of the ICM (Lakoff & Johnson 1987: 68).

We have seen that other parts of the ICM –such as the metaphorical mappings– are embedded in the propositional part. This seems to point to the unrecognized lexico-conceptual character of the avowedly spatial (Lakoff & Johnson 1987:283) standard (structural-functional) approach to the categorization of semantic *phenomena*: an approach for which word meaning amounts to an expression of conditions on the world and which does not recognize that each lexeme is a conceptual category which forms part of a cognitive model and of the whole cognitive system including other non-linguistic categories.

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10. After all, "multiple descriptions of the same phenomenon can be accepted as equally valid and revelatory, each contributing in its way to the overall scientific enterprise" (Langacker 1991: 510; also cf. Martín Morillas & Pérez Rull, fc.) and "no characterization ever achieves such fine-grained comprehensiveness that it cannot in principle be surpassed by another of even greater scope and resolution" (Langacker 1991: 512), for example those of the cognitive-cultural (Martín Morillas 1997: 60) or of the experiential view of meaning, which do not intend to discount but rather subsume the classical view (Ungerer & Schmid 1996).

11. Each element in its ontology -ie. each lexical meaning- containing some default propositional information about a state of affairs such as the change event by means of a part-whole schema and modification devices typical of propositions.

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