METONYMY IN, UNDER AND ABOVE THE LEXICON[1]

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The main goal of the article is to present a survey of recent research on the role of conceptual metonymy in grammar and discourse. A related goal is to argue that metonymy is more than just a lexical phenomenon. After defining conceptual metonymy from a cognitive-linguistic perspective, a detailed summary of recent research (including the author's own contributions) on the functioning of metonymy in conceptualization, phonology, grammar and discourse-pragmatic inferencing is offered. This survey provides evidence that metonymy is a conceptual mechanism (an inferential schema) operating under the lexicon (in phonological categorization and in the meaning and grammatical behavior of certain morphemes), in the lexicon, and above the lexicon (motivating other grammatical phenomena, especially grammatical recategorization, and partially guiding discourse-pragmatic inferencing, especially indirect speech acts and implicatures). This evidence, added to the fact that lexical metonymies are often at the same time grammatical and discourse metonymies, supports the by now commonplace claim in cognitive linguistics (in contrast to other approaches) that metonymy is a ubiquitous, multilevel phenomenon.

Keywords: metonymy, metaphor, cognitive linguistics, grammar, discourse

1. Goal of this article

The goal of this paper is to present a brief survey of recent research in cognitive linguistics (CL) on metonymy aimed at (a) providing illustrative examples of the role of metonymy in grammar and discourse, (b) emphasizing the usually overlooked fact that metonymy regularly operates *under* (phonology, morphemics), *in,* and *above* (phrases, clauses, sentences, utterances and discourse) the lexicon. The reason for its multi-level operation is that metonymy is a fundamentally cognitive phenomenon.

2. Notion of metonymy

The definition of metonymy assumed in this article is a consensus, uncontroversial CL definition that is based on Barcelona (2011a) where it is understood as an asymmetric mapping of a conceptual entity, the source, onto another conceptual entity, the target. Source and target are in the same frame and they are linked by a pragmatic function, so that the target is mentally activated.

"Frame" is a term preferable to the vague expression "domain", used by Lakoff and Turner (1989) or by Kövecses (1989). It is equivalent to Lakoff's Idealized Cognitive Model (ICM) and it designates an entrenched model of an area of experience (Fillmore 1985). A "pragmatic function" (Fauconnier 1997) is a privileged connection linking the roles of the frame and of one of its "conceptual entities"/ "subdomains", or the roles of two "conceptual entities"/ "subdomains" in the "frame". For example, in the general LITERARY PRODUCTION frame, PROUST AS AUTHOR has a privileged connection to HIS LITERATURE AS WORK (such as *Proust is tough to read*). In *Philips attended the*

meeting, the whole COMPANY frame is related by a pragmatic function to its REPRESENTATIVE. The notion of a source-target "privileged connection" is related to the view of metonymy as a shortcut (Alm-Arvius 2003) and of referential metonymy as a syntagmatic abbreviation (Warren 2002). One of the roles so connected (the source) causes the mental activation of the other (the target).

An important point is that, contrary to the traditional view, metonymy does not necessarily involve an act of reference (Barcelona 2005a). Take *She's just a pretty face* (FACE FOR PERSON), where the metonymic NP *pretty face* is not referential. Many of the metonymies involved in grammatical processes or in discourse pragmatics are not referential.

Mapping is equivalent to "conceptual projection". Another important point is that metonymic mappings are asymmetric, unlike metaphorical mappings, which symmetrically project the structure of the source onto that of the target.

There are several problems in CL affecting the precise definition of metonymy. They cannot be discussed here for lack of space (see Barcelona 2002a, 2003a; Benczes, Barcelona and Ruiz de Mendoza 2011 for further details). We only have space to mention some of them, like the issue of the exact distinction with metaphor. A recent proposal sees metonymy and metaphor as the two extremes of a multidimensional continuum (Barnden 2010).

Another problem is the status of certain WHOLE FOR PART metonymies, especially "active-zone" (AZ) metonymies (Langacker 2009). This issue is connected to the controversial distinction between metonymy and "facets" or "modulation" (Barcelona 2011a; Geeraerts & Peirsman, 2011; Paradis 2004). Only those AZ phenomena which are clearly metonymic will be considered (Barcelona 2011a; Geeraerts & Peirsman, 2011), that is, instances like *The Times criticized the minister* [where a mapping of COMPANY (NEWSPAPER) onto EMPLOYEE(S) (JOURNALIST(S))] occurs, but not unclear instances like *Your dog bit my cat*, where the conceptual shifts ANIMAL (DOG) to ANIMAL'S BODY PART (DOG'S SET OF TEETH) and ANIMAL (CAT) to UNSPECIFIED PART OF ANIMAL'S (i.e. CAT'S BODY) are not clearly metonymic (it is not clear whether there is a stable pragmatic function relating source and target in these shifts). In any case, the difference between AZ and metonymy is a *gradual* one (Barcelona 2011a).The characterization of metonymy presented is very broad, but only uncontroversial instances (called "typical" and "prototypical" metonymies by Barcelona 2011a) will be discussed.

3. Metonymy in conceptualization: Cognitive models, metaphor, blending

One of the main tenets in CL is that "invisible" conceptual operations and conceptual structures often underlie online linguistic structure at all levels of linguistic processing (Fauconnier 1999). The role of metonymy in them is evidence both of the conceptual nature of metonymy and of the fact that metonymy is not confined to lexical meaning.

3.1 Metonymy in cognitive models

Lakoff (1987: 77-90) claims that category models (i.e., ICMs and frames) are often organized around a metonymy-based prototype. These models are called metonymic models, which are innumerable and very frequent in cognition and language. In a metonymic model, the prototype is a sub-category acting as a metonymic "reference point" (Langacker 1993) for the whole category. The metonymies organizing these cognitive models are therefore normally "invisible", in the sense that they are not directly expressed through a given linguistic expression, because the models they create

govern certain aspects of our reasoning and our discourse understanding (especially in pragmatic inferencing) and certain aspects of grammatical structure.

Among the various types of metonymic models, Lakoff (Lakoff 1987: 77-90) cites what he calls "social stereotypes".

An example of the MOTHER stereotype is the "housewife-mother" who metonymically stands for the whole MOTHER category. See this instance of reasoning in terms of this stereotype (the concessive conjunction is quite revealing): *Jane is an excellent mother although she has a very demanding job outside her home.*

Another example is the BACHELOR stereotype, which presents bachelors as dating a lot, frequenting single bars, and being only interested in sexual conquest, stands for the whole BACHELOR category. It motivates such examples as *Mary's* husband *is a real bachelor*, which does not constitute a logical contradiction in the metonymic model. It would count as a contradiction in the "standard", "rigid" BACHELOR model, whose prototype is an *unmarried* male adult human who has reached marriageable age. There are many more examples of metonymic cognitive models in the literature (Feyaerts 1999). For psycholinguistic studies on the role of metonymy in cognitive models see Gibbs (1994, 1999, 2007).

3.2 Metonymy as a motivation for metaphor

On this issue see Barcelona (2000a) and Radden (2000). The metonymies motivating metaphors are also normally "invisible" in the sense that they are not directly expressed by means of a metaphorical linguistic expression, but they conceptually motivate the corresponding conceptual metaphor. I claim (Barcelona 2000a, 2011a) that there are two major types of metonymic motivation of metaphor:

The first motivation can be called *correlation-abstraction*. Both the metaphoric target and the metaphoric source are conceptualized metonymically from the same "subdomain", as in the conceptual metaphor DEVIANT COLORS ARE DEVIANT SOUNDS (manifested by such expressions as *That's a* loud *color*), which is made conceptually possible by the metonymic mapping of a salient EFFECT (a subdomain) of these sensory stimuli on perceivers, namely that of *FORCING THEMSELVES ON THEIR ATTENTION*, onto its CAUSE, such as DEVIANT COLORS and DEVIANT SOUNDS. In other words, in both cases an EFFECT stands for a CAUSE within the same frame (PERCEPTION). The metonymic highlighting of the same effect extracts the abstract similarity between deviant sounds and deviant colors which make it possible to metaphorically map the former onto the latter. In an expression like *acorn cup*, the metaphorical understanding of that part of acorns is possible thanks to the metonymic mapping of SHAPE onto both CUPS and ACORNS.

The second motivation can be referred to as *generalization or decontextualization* of a metonymy. A conceptual metaphor like MORE IS UP is based on the metonymic activation of QUANTITY (MORE) by HEIGHT (UP), due to their frequent experiential association in POURING or HEAPING frames / experiences / scenarios. The metonymy is directly expressed in the second utterance in this exchange: *'More coffee?' 'No thanks, my cup is still full'*. When HEIGHT is mapped onto QUANTITY in a context where HEIGHT is no longer really involved, the mapping is metaphorical, as in *the high cost of living / skyrocketing prices*.

3.3 Metonymy in blending

See Turner and Fauconnier (1995, 2000) and Fauconnier and Turner (2002). Turner and Fauconnier (2000) propose a series of "optimality principles on integration networks", which include their "metonymy projection constraint", which can be

summed up like this: "shorten in the blend the metonymic distance of elements in input spaces." An example is the symbol of death as the *Grim Reaper*. This symbol, they claim, arises from blending many "input spaces". In the blend, a shortened "long distance" metonymy connects death to the cowl worn by a friar assisting a dying person. In my view, metonymy is involved in the creation of their "generic" space, as this space is the result of a process similar to correlation-abstraction.

4. Metonymy under the lexicon: Phonology and morphology

Metonymy has traditionally been claimed to be a lexical phenomenon, i.e. as a rhetorical device give rise to special meanings of lexical items. But CL research has shown that it is also involved in sub-lexical structures and processes such as phonology and morphology.

4.1 Phonology: Motivation of the internal links in phonemic categories

According to Taylor (1995: 222-239), and Nathan (1986) who follow Jones's (1969) phonological theory, it is possible to describe a phoneme as a *category* consisting of a network of allophones organized around a prototypical allophone. As an example Taylor suggests that the link between the prototypical allophone of English /t/, namely the voiceless aspirated alveolar plosive, and the glottal stop (a possible allophone of /t/ in certain phonetic contexts), is the so-called glottalized *t*-allophone.

Barcelona (2002b) argues that if phonemes are conceptual categories, then they are subject to conceptual metonymy, which typically operates within categories (Lakoff 1987: 77-90). Barcelona (2002b) also argues that the glottal stop allophone (PART) can be argued to mentally activate the glottalized *t*-allophone (WHOLE). And the alveolar closure element (PART) in the glottalized can be argued to mentally activate the voiceless aspirated alveolar plosive *t* (WHOLE), which is the central allophone. Thus the various links in the chain mentally connecting these allophones would be metonymic so that metonymy would facilitate (together with co-textual factors) the recognition of a glottal stop sound as a peripheral member of /t/. As Nathan (1996) suggests, conceptual connections akin to metaphor and metonymy seem to play an important role in the structure of phonological categories. For further discussion of the role of metonymy in phonemic categories, see Radden (2005).

4.2 Morphology: Motivation of certain derivational morphemes

Some of the relevant research on morphology can be found in Barcelona (2005a, 2009a, in preparation), Radden (2005), and in Palmer et al (2009), the latter on the Tagalog prefix *ka-*. An example is the metonymic motivation of nominal morpheme {*ful*}, as in *armful* (Barcelona 2005a: 320-21). This morpheme occurs in this text in Eugene O'Neill's play *Long Day's Journey into Night*: TYRONE. *You're a fine armful now, Mary, with those twenty pounds you've gained*. This derivational morpheme derives nouns from nouns (*armful* from *arm*); other nouns with this morpheme are *bottleful, boxful, canful*, *worldful, churchful*. It historically originates in the adjective *full*. The meaning of the morpheme is "the quantity of X that fills or would fill Y" (adapted from the Webster's dictionary, 2nd edition, and the Oxford English Dictionary (OED), 2nd edition.. This sense of the morpheme seems to have been motivated in part by the metonymy DEGREE OF FILLING OF A CONTAINER FOR QUANTITY OF CONTENT FILLING IT, related to HEIGHT FOR QUANTITY (Barcelona 2000a). The domain of quantity is not directly activated by the subdomain of content within the FILLING ICM / frame, but by the subdomain of the degree to which the container has been filled by the content. In O'Neill's example, "the container" is a metaphorical one, namely Mary's arms.

The metonymy motivates other conventional linguistic expressions where the degree of filling of a container is a metonymic source for a certain quantity of content such as *give me half* a *glass of beer*. The container is specified in the derived noun by the lexical morpheme, {arm} in *armful* or {bottle} in *bottleful*, where it denotes a literal container. This morpheme is different from the one in such lexemes as *playful*, *joyful* which is an adjective-forming morpheme meaning "full of", "having," characterized by. It's meaning is motivated by metaphor.[2]

5. Metonymy in the lexicon

Lexical metonymies are extremely frequent although they seem to be less frequent than purely inferential discourse-level metonymies (Barcelona 2005a). Therefore, most of the examples of metonymy usually offered in rhetoric and semantics handbooks are lexical metonymies, many of them of the sort that motivates polysemy, such as those motivating the extended senses of *hand* as manual worker or sailor, *nose* as the sense of smell illustrated by *this dog has a good nose*, or *chicken* as in *chicken meat*. These metonymies are well-known in historical linguistics, rhetoric and lexical semantics, and they have been the object of detailed research in CL. Additional examples of lexical metonymies are discussed in sections six and seven on metonymy in grammar and discourse. We are mainly concerned here with the grammatical consequences of lexical metonymies (especially with regard to the morphosyntactic categorization of the respective lexemes) and with their discourse function (especially with regard to their role in reference-maintenance, discourse-pragmatic inferencing and, in general, in the creation of discourse coherence).

An important point that should be stressed is that lexical metonymies are not necessarily restricted to nouns. One example of this is *I am parked over there* (Radden and Kövecses 1999). The metonymy in this example affects the reference of pronoun *I*. Lexical metonymies are very often involved in reference. But referential metonymies are not exclusively lexical (nominal) phenomena, since they affect the referential value of a *phrase* (even though that value often crucially depends on the metonymically created sense of the phrase's lexical head), as in *the buses* (i.e., *the bus drivers*) *are on strike, an* example from Lakoff and Johnson (1980) and analyzed by Radden and Kövecses (1999) as an instance of CONTROLLED FOR CONTROLLER.

The success of referential metonymies in directing attention to the intended referent often requires a measure of inferencing, hence discourse-pragmatic inferencing is often involved (Warren 1999: 123). All of this means that it is typically not easy to neatly distinguish lexical metonymies from phrasal metonymies or from other grammatical metonymies (on the other hand, the dividing line between the lexicon and other grammatical units is often fuzzy), or even from discourse-level metonymies.

The main reason is that metonymy is above all a conceptual connecting device between elements in our experience (which are often, but not necessarily, coded lexically) and it is often not confined to one particular grammatical level or even to grammar. It is a natural inference schema (Panther and Thornburg 2003b).

6. Metonymy above the lexicon: Grammar

The importance of metonymy for research on grammar is clearly acknowledged in CL today. Langacker (1999: 67) says that though "usually regarded as a semantic phenomenon, metonymy turns out to be central and essential to grammar", and that grammar is "a rich source for the investigation of metonymy. At the same time, a recognition of its prevalence and centrality is critical not just for describing grammar

but also for a realistic assessment of its basic nature". Barcelona (2002b, 2005a and b, 2009a; in preparation) gives ample evidence of the fact that metonymy is a multi-level phenomenon, often simultaneously present at more than one analytical level in a given sentence, and that metonymies frequently chain to each other across several analytical levels. Some recommended general surveys of the role of metonymy in grammar are Brdar (2007b), Ruiz de Mendoza and Pérez Hernández (2001), Ruiz de Mendoza and Otal Campo (2002), Panther, Thornburg and Barcelona, eds. (2009), and within the latter volume, Langacker (2009).

6.1 Grammatical recategorization

Grammatical recategorization can be relatively transient or permanent. Both types are discussed. In some relatively transient grammatical recategorizations, as in the case of proper-common noun conversion the recategorization may become permanent.

Stative predicates are often transiently recategorized as dynamic predicates (Panther and Thornburg 2000, Ruiz de Mendoza and Pérez Hernández 2001, Ruiz de Mendoza and Otal 2002). Panther and Thornburg (2000) show that the metonymy EFFECT FOR CAUSE motivates this shift, as in *he asked her to be his wife* (paraphraseable as *he asked her to act in such a way so as to become his wife*). The predicate *be someone's wife* profiles a controllable (Ruiz de Mendoza and Pérez Hernández 2001), *resultant state* (Panther and Thornburg 2000), which constitutes a metonymic source for its implicit causal action (i.e. to act in such a way as to...). Compare these states with *non-controllable, non-resultant states*: **He asked her to be tall*.

The transient or permanent conversion of English proper names into common nouns is discussed in Barcelona 2003c, 2004; Brdar 2007a; Brdar 2007b; Soloshenko 2005. One of the many metonymy-motivated examples of this conversion discussed in the literature is *John has five authentic Picassos* (AUTHOR FOR WORK). Two special cases are paragons and partitive restrictive modification (both of them are more complex; only an oversimplified account is presented here). The use of names as *paragons* (Barcelona 2003c, 2003d, 2004; Brdar 2007a, 2007b; Pang 2006) is motivated, together with other factors, by the activation of a class of individuals by its most outstanding member, its ideal member (IDEAL MEMBER FOR CLASS). Some examples are:

> *That graduate student is an Aristotle*
> *There aren't any real Aristotles today*
> *A real Aristotle would be more systematic*

This metonymy is directly responsible for the transient grammatical re-categorization of this name as a common noun (it takes a number morpheme, and is preceded by determiners and restrictive modifiers). This recategorization may become permanent: *Caco* (mythological paragon of the class of thieves) became the Spanish common noun *caco* (colloquially 'thief'). Other Spanish examples are *galeno* ('physician'), from the famous physician *Galeno*. An English instance is *lolita* (after Nabokov's character), as in *My 13 year old daughter is starting to act like a lolita*.

Examples of partitive restrictive modification (Quirk and Greenbaum (1990: 88) are the young Joyce already showed signs of the genius that was to be fulfilled in Ulysses, and the older Joyce was wiser than the young Joyce. Its metonymic basis is discussed in Barcelona (2003c, 2003d, 2009b) and (Brdar 2007a, 2007b). This construction involves the conceptual partition of an individual into a fictitious class of individuals, but the corresponding noun phrase has only that individual as referent. The

metonymic basis is more controversial in this case, since the target is not wholly implicit. Barcelona (2009b) argues that the metonymy involved is ENTITY (JOYCE) FOR ACTIVE ZONE (JOYCE WHEN YOUNG).

Permanent grammatical recategorizations include most of the metonymy-motivated instances of conversion but also some instances of affixal derivation. Instances of metonymy-motivated conversion in the literature are discussed first below.

Mass-count noun conversions are analyzed by Brdar (2007b: 79); Ruiz de Mendoza and Pérez Hernández (2001); Ruiz de Mendoza and Otal (2002); and Kövecses and Radden (1998). Some examples of these: Count-mass conversion motivated by MATERIAL FOR OBJECT MADE OF THAT MATERIAL: *We did not always eat turkey for Christmas dinner* (Brdar 2007b). And mass-count conversion motivated by OBJECT FOR MATERIAL CONSTITUTING THE OBJECT: *To have won one gold medal and two silvers in those Games was historic* (Brdar 2007b).

Noun-verb conversion is dealt with by Dirven 1999; Ruiz de Mendoza and Pérez Hernández 2001; Ruiz de Mendoza and Otal 2002. The following examples were studied by Dirven (1999: 275-287), who identified three metonymies mainly involved in the process. One of them is INSTRUMENT FOR ACTION as in *He was angling* (from noun *angle* 'fishing rod'). The second metonymy is GOAL FOR MOTION, as in *the plane was forced to land in Cairo,* or as in the conversion of the noun *park* (designating a space set aside for leaving vehicles temporarily) into the verb *park* (designating the action of leaving a vehicle temporarily in a park, as in *I parked my car carefully*) (Barcelona 2009a; in preparation); many other denominal verbs such as *porch* (a newspaper)*, to short-list* (the candidates) are motivated by this metonymy (Kövecses & Radden 1998: 55, 60). The third metonymys is CLASS MEMBERSHIP FOR DESCRIPTION (according to Dirven) or AGENT FOR ACTION (according to Barcelona 2002a), as in *Mary* nursed *the sick soldiers.*

Adjective-noun conversion is not a very productive type of conversion. As Quirk et al (1985) state, it is usually due to ellipsis. In my view, this ellipsis is metonymy-motivated (Barcelona 2009a, in preparation). An example from my research is the adjective *interstate* (as in *interstate freeway*) converted into the noun *interstate* (as in *an/the interstate*). Further examples are *All interstates are necessary / The federal government is building an expensive new interstate / The interstate's length is 2000 miles / The new interstates increased the mobility of the American people*.

There is a double metonymic motivation for the ellipsis resulting in this conversion. One of them is the metonymy SALIENT PROPERTY OF A CATEGORY FOR THE CATEGORY, here manifested as SALIENT POLITICAL-GEOGRAPHICAL PROPERTY OF A TYPE OF HIGHWAY (LINKING TWO STATES) FOR THE TYPE OF HIGHWAY. This metonymy operates on the plane of conceptual content. The other metonymy (SALIENT PART OF FORM [MODIFIER] FOR WHOLE FORM [MODIFIER-HEAD CONSTRUCTION]) operates on the plane of constructional form (see section on grammatical formal metonymy below).

Other examples of adjective-noun conversion are the nouns *bitter* (from *bitter beer*), *daily* (from *daily newspaper*), *roast* (from *roast beef*).

The conversion of cardinal numeral determiners into cardinal numeral pronoun is discussed by Barcelona (2009a, in preparation). An example is the shift of *twenty* (determiner) to *twenty* (pronoun, meaning 'twenty years of age'). This conversion is not normally registered in standard descriptive grammars. A textual example from the play by O'Neill cited above: "TYRONE. *But thank God, I've kept my appetite and I've the digestion of a young man of* twenty, *if I am* sixty-five".[3] This conversion is also partially due to ellipsis motivated by SALIENT PART OF FORM FOR WHOLE FORM. The salient part

of the form of the age-measuring NP is the numeral. It is the first element in the NP and is also semantically more salient i.e. more informative (see 6.5. below).

There is also some recent CL research on the metonymic motivation of certain instances of *affixal derivation* (Panther & Thornburg 2002, on certain –*er* nouns; Szawerna 2005; Palmer et al 2009). An example (Panther & Thornburg 2002) is *cliffhanger* 'suspenseful event', which is motivated by the metonymy HUMAN PARTICIPANT (EXPERIENCER) FOR EVENT (in which the human participant is crucially involved); this metonymy motivates the shift from the agentive to the eventive sense of the {er} morpheme. The specific event is designated by the lexical base and is elaborated by CAUSE (the activity of cliffhanging) FOR EFFECT (suspense). One of the effects of cliffhanging is creating suspense.

Another example of metonymy-motivated affixal derivation is the noun-noun derivation by means of -*ful* as in *armful, bottleful*.

NPs are often re-categorized as names (Barcelona (2009a; in preparation): *The Continental Divide* as a conventional phrasal name for the Rocky Mountains is motivated by SALIENT PROPERTY OF AN ENTITY (FUNCTION AS CONTINENTAL BASIN DIVIDE) FOR THE ENTITY (THE ROCKIES).

6.2 Compounding

On this topic, see Radden (2005); Barcelona (2008; 2009a; in preparation); Benczes (2006); Kosecki (2005b). An example from this research is Barcelona (2008) on *bahuvrihi* compounds (a type of exocentric compounds), which are motivated by the overriding metonymy CHARACTERISTIC PROPERTY FOR CATEGORY (of people, plants, animals, objects): *highbrow* 'intellectual', *hardtop* (car type), *wetback, blockhead, featherweight, humpback*. The CHARACTERISTIC PROPERTY is in turn conceptualized literally, such as *humpback* (very few cases), metonymically, as *hardtop, wetback* (fairly common) or metaphtonymically, as in *highbrow, blockhead, featherweight, humpback* (most common).

6.3 Clausal grammar

On the superiority of a metonymic account over mere coercion analyses, see Ziegeler (2007). Two illustrative cases are: (a) The work on active zones (Langacker 1999, 2009; Brdar 2007b; Ruiz de Mendoza & Pérez Hernández 2001, in their section on metonymy in the predication; Ruiz de Mendoza & Otal 2002), as in the examples *George began the book* (BOOK FOR RELATION[4] [X READ / WRITE/ BIND / ILLUSTRATE BOOK]), A: *What could we buy for Mary's birthday?* A: *A book would be a good idea*, where *book* stand for "buying a book" (BOOK FOR RELATION [X BUY BOOK]). And (b) The work on valency extension/reduction and transitivity (Brdar 2007b; Ruiz de Mendoza & Pérez Hernández 2001, under metonymy in the predication; Ruiz de Mendoza & Otal 2002; Ruiz de Mendoza and Mairal 2007; Barcelona 2009a, in preparation). An example (Barcelona 2009a) is the historical polysemous extension of the verb *reduce* (this is at the same time an instance of subcategorial conversion). From the basic causative transitive sense (i) "to lessen in *any way*, as in size, weight, amount, value, price", its general intransitive sense (ii) "to diminish", is developed via ACTION [CAUSING X TO BECOME REDUCED IN GENERAL] FOR RESULT [X BECOMING REDUCED IN GENERAL]. And from this sense (ii) we get to the specific intransitive sense (iii) "lose weight, as in dieting", which is tantamount to "become reduced in weight", via (CATEGORY [BECOMING REDUCED IN GENERAL] FOR MEMBER [BECOMING REDUCED IN WEIGHT]).[5] Senses (i)-(iii) are thus motivated by a metonymic *chain* (Barcelona 2005a; Hilpert 2007). CL research on metonymy in clausal grammar also includes modality

(see, among others, Ruiz de Mendoza & Pérez Hernández 2001) and epistemic conditional constructions (Barcelona 2006, 2009a, in preparation.

6.4 Anaphora

For further information on anaphora see Langacker (1999; 2009); Ruiz de Mendoza & Pérez Hernández (2001); Ruiz de Mendoza & Otal (2002). According to Langacker (1999: 234-245, 261-296; 2009), the only real factors constraining anaphora are conceptual rather than syntactic. This explains in part why metonymy guides the resolution of what is known as indirect anaphora (Emmott 1997), that is, anaphors without a direct explicit, unambiguous antecedent. A type of indirect anaphora is so-called sloppy anaphor (which is, however, frequent and correct), where the real antecedent is a metonymic target in the dominion of a referent point currently active in discourse. For example, in *He speaks excellent French even though he's never lived there*, the antecedent of *there* is the metonymic target of *French* (France). The metonymy at work could be described as LOCATED (LANGUAGE) FOR (TYPICAL) LOCATION (COUNTRY).

Other types of indirect anaphora include bridging inferences (Clark 1977): *I saw a wonderful car in the street; the steering wheel was made of ivory*. The metonymy at work is PART [STEERING WHEEL] FOR WHOLE [CAR]. The NP *the steering wheel* is definite due to its metonymic connection to the referent already introduced by *a wonderful car*. Another instance of indirect anaphora is the role of metonymy in anaphora resolution with conjoined predicates as in *In Goldfinger Sean Connery* (= James Bond) *saves the world from a nuclear disaster, but he* (= James Bond) *had real trouble achieving it*. The metonymy is ACTOR FOR ROLE. According to the Domain Availability Principle (Ruiz de Mendoza 2000; Ruiz de Mendoza and Pérez Hernández 2001; Ruiz de Mendoza and Otal Campo 2002), only the matrix domain of a metonymic mapping is available for anaphoric reference. In this case, the ACTOR domain is the matrix because it includes the actor's ROLE. Thus *he* is directly anaphorical to the actor which (via metonymy) connects to his role.

6.5. Formal grammatical metonymy

A common tenet in CL is that both linguistic meaning and *form* are conceptual. There exists one canonical or prototypical basic form for a construction (such as the written form *gasoline* and its corresponding spoken form) and a number of non-canonical or non-prototypical basic forms (for example the clipped form *gas* of *gasoline*) of the construction.[6] The canonical and the non-canonical forms of the construction jointly constitute a small frame or category (a mental representation). If the set of the basic forms of a construction constitutes a conceptual frame or category, then it can be subjected to a conceptual operation like metonymy, which typically operates within frames and categories. The issue has been dealt with in great detail by Bierwiaczwonek (2005). See also Radden and Kövecses (1999), Kövecses and Radden (1998) and Barcelona (2005a, 2005b, 2009a, in preparation).

Among metonymy-motivated constructional forms we find certain types of lexical abbreviations (in writing and speech), certain weak forms, and certain types of ellipsis.

Two simple examples (Barcelona 2009a, in preparation) are presented to illustrate this point. The first one is the abbreviated form *gas* of the noun *gasoline*. This non-prototypical form is licensed by SALIENT PART OF FORM FOR WHOLE FORM. The salient part in this case is the segment *gas-* in the written mode and the corresponding segment in the spoken mode. Each of them is the most prominent segment of its

corresponding full form due to a number of salience factors (Barcelona, in preparation) which on the whole make it relatively more salient and effective as a metonymic source than other segments. In this case, the salience factors are initial position and, in the spoken canonical form, primary stress. Also, semantically, both segments are capable of evoking the basic meaning of the lexeme readily, unlike *–line* or its spoken counterpart. And they are shorter than *gaso-* and *–soline* and their spoken counterparts.

The second example is the non-prototypical form of a complex sentence /clause due to matrix (main) clause ellipsis. In section 6.1 we came across two instances of metonymy-motivated elliptical forms of a *phrasal* construction. Now, we discuss the partial metonymy-induced motivation and interpretation of an instance of *clausal* ellipsis. This is a well-known joke, attributed to W.C. Fields and cited by Attardo (1990) in his study on humor:

> Speaker A: *Do you believe in clubs for young men?*
> Speaker B: *Only when kindness fails.*

For a full analysis of this exchange, see Barcelona (2003b and in preparation). The schematic canonical form of this complex sentence/clause includes the matrix part of the main clause (the full main clause making up Speaker B's reply but without its subordinate clause) and its subordinate clause, that is the clause introduced by *only when*. The ellipsis is *formally* possible because a subordinate clause introduced by a subordinator (*only when)* can act as a metonymic source for the whole complex clause / sentence. The metonymy is once more SALIENT PART OF (CONSTRUCTIONAL) FORM FOR WHOLE (CONSTRUCTIONAL) FORM. It helps Speaker A recognize Speaker B's utterance as an elliptical form of the complex clause.

6.5 Other grammatical phenomena where metonymy is involved

The preceding survey was quite selective for lack of space. It did not include the role of metonymy in generic NPs (Radden 2005; 2009), in the tense-aspect-mood system of English verbs (Brdar 2007 b; Panther & Thornburg 1998, 1999; Radden and Kövecses 1999), grammaticalization (Barcelona 2009a, in preparation; Hilpert 2007; Heine, Claudi and Hünnemeyer 1991; Hopper and Traugott 1993; Traugott and Dasher 2002).

7. Metonymy above the lexicon: Discourse

The role of metonymy in pragmatic inferencing and in discourse is generally recognized in CL today. Lakoff's (1987: 78-79) remarks on the role metonymy in certain conversational conventions of Ojibwa and English initiated this research field, which has now extended to: (a) the metonymic motivation of the discourse-pragmatic implicatures motivating metaphorical lexical extension in the grammaticalization of *be going to* (Heine, Claudi and Hünnemeyer 1991; Hopper and Traugott 1993; Traugott and Dasher 2002; Traugott and Dasher 2002); (b) the metonymic motivation of indirect speech acts (Brdar-Szabó 2009; Panther and Thornburg 1998, 2003a; Pérez Hernández 2005; Thornburg and Panther 1997); (c) the metonymic basis of other types of pragmatic inferencing, including implicatures (Barcelona 2002b, 2003b, 2005a, 2005b, 2007, 2009a, in preparation; Panther and Thornburg 2003a); and (d) the role of metonymy in other areas of discourse understanding in several communicative modes (Gibbs 1994: 319-358) such as conceptual tautologies, mental reconstruction of texts, eponymous verb phrases, euphemisms, film, drama and art conventions and techniques, even literary styles.

The role of metonymy in literary discourse has received special attention by Kuzniak (2005), Dzeren-Glówacka (2005), and Pluciennik (2005), among others. And its role in images, iconic gestures and sign language discourse has been studied by Kwiatkowska (2005) and Wilcox, P.S. (2004), among others, and its role in aphasia has been investigated by Ciepiela (2005).

7.1 Two examples of the role of metonymy in discourse: Indirect speech acts and implicatures

Research on indirect speech acts by Thornburg and Panther (1997) argue convincingly that speakers operate on the basis of a set of idealized models for each type of speech act, which they call Speech Act Scenarios. These scenarios are derived from what they call the *action scenario*, which has these parts: The BEFORE (preconditions); the CORE (properties defining the action) and its RESULT (immediate outcome of a successful performance of the action); and the AFTER (intended or unintended consequences of the action which are not its immediate result).

An example of a speech act scenario is the Scenario for Directive Speech Acts (S= Speaker, H = Hearer, A = action requested), with the structure below:

    (i) the BEFORE: H can do A   S wants H to do A
    (ii) the CORE: S puts H under a (more or less strong) obligation to do A
    the RESULT: H is under an obligation to do A (H must / should do A)
    (iii) the AFTER: H will do A

Metonymy operates on the scenarios presented in the following examples to motivate indirect speech acts.

A BEFORE component for the whole scenario:
The metonymy SPEAKER'S WISH THAT HEARER PERFORM AN ACTION FOR THE WHOLE DIRECTIVE SPEECH ACT motivates an indirect request: *I need your help.* I would like you to *send a message to my mom telling her I'll be away for two weeks*.

An AFTER component for the whole scenario
The metonymy A FUTURE ACTION PERFORMED BY THE HEARER FOR THE WHOLE DIRECTIVE SPEECH ACT motivates an indirect request: *Oh, Rachel, don't you see, I can ask you to marry me now, he said huskily. You do care for me, dearest?* You will say yes*?*

The second example of metonymy in discourse is its guiding of implicatures. An example involving a parliamentary anecdote from the 1930's in Spain:

    - An opposition member of parliament (addressing the Prime Minister): *But what can we expect, after all, of a man who wears silk underpants?*
    - The prime Minister (rising calmly): *Oh, I would have never thought the Right's Honorable's wife could be so indiscreet!*

The analysis of the complex pattern of pragmatic inferences in this exchange was carried out in Barcelona (2003b). All of them were claimed to be motivated by metonymy. Only some of the implicatures intended by each interlocutor which were analyzed in that paper are listed below.

Implicatures that were meant and conveyed by the opposition member of Parliament.
1. The Prime Minister is homosexual.
2. The Prime Minister is unfit for office.

Implicatures that were meant and conveyed by the Prime Minister.
3. The member of parliaments's wife shares a secret with the Prime Minister.
4. She has told the member of parliament the secret.
5. She knows that the secret consists in the fact that the Prime Minister always wears silk underpants.
6. She has seen the Prime Minister undress.
7. *She has had a sexual affair with the Prime Minister, and is, thus, an adulteress* (main inference)

The comprehension of humorous discourse involves some type of quick "frame adjustment" (Attardo 1990). We find frame overlap and frame shift in this case. The UNDERWEAR frame overlaps with the HOMOSEXUALITY frame, which overlaps with the DISCRETION frame; the latter overlaps with, and finally shifts, to the HETEROSEXUALITY and ADULTERY frames. For sake of brevity, only the metonymic basis of inferences 3, 5, 6 and 7 is presented below: inference 3 is guided by RESULT (being discreet / indiscreet) FOR CONDITION (knowing a secret); inference 5 is guided by ENTITY (a propositional entity in this case: the fact that the Prime Minister supposedly uses silk underpants) FOR ONE OF ITS CONVENTIONAL PROPERTIES (being secret); inference 6 is guided by FACT (knowing the underwear used by someone) FOR ONE OF ITS SALIENT CONVENTIONAL EXPLANATIONS (having seeing that person undress); the first part of inference 7 is also guided by FACT (having seeing someone undress) FOR ONE OF ITS SALIENT CONVENTIONAL EXPLANATIONS (having had a sexual encounter with that person); the second part of inference 7 is guided by DEFINITION (a married woman having had a sexual encounter with a man not her husband) FOR DEFINED (adultery).

8. Conclusions

A rich amount of evidence and information has been provided to illustrate the role of metonymy in grammar and discourse and to emphasize the often overlooked fact that metonymy also regularly operates *under* (phonology, morphemics), *above* (phrases, clauses, sentences, utterance and discourse) the lexicon and *outside* oral language (such as sign languages, gestures, art), and that it is a primarily *conceptual mechanism*.

This conceptual nature explains why we regularly find the same general types of conceptual metonymies (EFFECT FOR CAUSE, PART FOR WHOLE, RESULT FOR CONDITION, ENTITY FOR SALIENT PROPERTY) operating at very different linguistic levels and in very different expressive and communicative modes.

Metonymies, on the other hand, chain to each other and to other conceptual factors such as metaphors and other types of contextual information to guide the processing of discourse (Barcelona 2005a, 2005b, 2007, 2009a, in preparation).

Notes

1. The research reported on in this paper has been funded in part by a grant awarded by the Spanish Ministry of Science and Innovation (FFI2008-04585).
2. An abstract notion, typically a process (i.e., PLAY, JOY) is understood as a physical "content", and a person, a behavior (i.e., playful hug) is understood as a metaphorical container.
3. Quirk et al. (1985: 394) categorizes five as in She was only five ['five years of age'] as a pronominal use of these numerals.
4. (or: PROPOSITION).

5. See the Webster's dictionary (2nd edition) on the description of these changes. Sense (i) is older than (ii) and (ii) than (iii), according to OED. Therefore, it makes sense to argue that (i) gave rise to (ii) and that (ii) gave rise to (iii).

6. By "basic form" I mean the uninflected full (i.e., non-abbreviated) form of lexemes and the full (i.e., non-elliptical or non-defective) form of syntactic constructions.

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