Published 2007 in *Handbook of Cognitive Linguistics* (Chapter 10) edited by Dirk Geeraerts and Hubert Cuyckens. Oxford: Oxford University Press, pp. 236–263.

CHAPTER 10

METONYMY

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1. Introduction

Metonymy is a cognitive phenomenon—not just a figure of speech—whose role in the organization of meaning (semantics), utterance production and interpretation (pragmatics), and even grammatical structure is considerable. The same metonymic principles that relate different senses of a word serve to create and retrieve novel meanings in actual language use. The ubiquity of metonymy can be interpreted as an indication that there is a continuum between linguistic meaning and communicative use rather than a strict division of labor between two autonomous components, semantics and pragmatics. Furthermore, the interpretation of grammatical structure (construction meaning) seems to be sensitive to metonymic principles. Finally, metonymic processes play a crucial role in semantic change and in grammaticalization.

The chapter is organized as follows: After a brief—and necessarily nonexhaustive—summary of the rhetorical tradition in section 2, various cognitive linguistic approaches to metonymy are discussed in section 3. A working definition of metonymy is developed in section 4, which is applied in the subsequent sections. Section 5 reports some work that demonstrates the interaction of metonymy with metaphor and the experiential grounding of metonymy. Section 6 is concerned with the role of metonymy in referential, predicational, propositional, and illocutionary acts. Section 7 considers metonymy in relation to pragmatic inferencing, i.e., implicature and explicature, and discusses some of its discourse-pragmatic functions. In section 8, the interaction of metonymy with grammatical structure is explored. Section 9 reports on work that compares the exploitation of

metonymies cross-linguistically. Section 10 describes the role of metonymy in diachronic change, in particular, semantic change and grammaticalization. Section 11 briefly considers the role of metonymy in language production, comprehension, and acquisition. Section 12 concludes the chapter with a discussion of unresolved problems, an analysis of the taxonomic structure of one high-level metonymy, and suggestions for future research.

2. The Rhetorical Tradition

Metonymy (Greek *μετονυμία*, Latin *denominatio*) is one of the major figures of speech recognized in classical rhetoric. One of the earliest definitions of metonymy is attributed to the treatise *Rhetorica ad Herennium* (see Koch 1999: 140). The anonymous author characterizes metonymy as "a trope that takes its expression from near and close things ['ab rebus propinquis et finitimis'] by which we can comprehend a word that is not denominated by its proper word" (translation by Koch 1999: 141). This ancient characterization already points to the notions of *contiguity* and *association* that have ever since been criterial in distinguishing metonymy from metaphor.

There is a rich tradition of research on metonymy in the historical-philological tradition of linguistics. As pointed out by Geeraerts (1988), the psychological orientation of much of nineteenth-century philology, e.g., the works of Michel Bréal and Hermann Paul, is theoretically very close to present-day Cognitive Semantics. Furthermore, the study of etymology almost inevitably leads to an interest in the general principles of semantic change including the role of metonymy (and metaphor) in the development of new meanings.

The concept of metonymy has remained remarkably constant since antiquity: a typical twentieth-century definition of metonymy that is not essentially different from the one given by the author of *Rhetorica ad Herennium* is found in Geeraerts (1994: 2477): "[Metonymy is] a semantic link between two senses of a lexical item that is based on a relationship of contiguity between the referents of the expression in each of those senses."

Traditionally, then, metonymy has been regarded as a *stand for* relation in which the name of one thing (henceforth, the *source* or *vehicle*) is used to refer to another thing (henceforth, the *target*) with which it is associated or to which it is contiguous. This view can be called the *substitution theory* of metonymy. A corollary of the substitution theory is that the source and the target are, at some level of analysis, considered to be equivalent ways of picking out the same referent. For example, in the sentence *Buckingham Palace issued a statement this morning*, the place name *Buckingham Palace* (source) may be said to stand for the British queen or one of her spokespersons (target). Under this view, the source expression

indirectly achieves the same referential purpose as the more direct referring expression *the Queen*. The substitution theory is, however, too simplistic in at least two respects. First, it typically focuses only on cases of *referential* metonymy, neglecting evidence that metonymy is also found on the predicational and illocutionary levels (see section 6). Second, as Radden and Kövecses (1999: 18) point out, metonymy involves more than just an operation of substitution. For example, in *She is just a pretty face*, the noun phrase *a pretty face* is not used referentially but predicatively; as well, it is not just a substitute expression for *a pretty person* but also highlights the prettiness of the person's face, from which the prettiness of the person can be inferred. Thus, the above sentence expresses more content than 'She is just a pretty person'.

The attempt to develop a sufficiently narrow definition of metonymy leads to the question of how it is to be delimited from other figures of speech and thought. The two tropes in relation to which metonymy is normally seen are metaphor and synecdoche. In traditional rhetoric, synecdoche is regarded as "quite distinct from metonymy" (Bredin 1984: 46). More recently, however, see, e.g., Jakobson (1971), synecdoche has come to be considered a subtype of metonymy. Jakobson's by now famous distinction between metaphor and metonymy links the former to paradigmatic selection in terms of similarity and contrast and the latter to the syntagmatic combination of semantically contiguous elements. A rather idiosyncratic theory has been put forward by the *Groupe de Liège* or *Groupe* μ (Dubois et al. 1970), where synecdoche is considered as the fundamental trope with both metaphor and metonymy as derivative categories (Schofer and Rice 1977; Bredin 1984: 45).

3. Metonymy in Cognitive Linguistics

In Cognitive Linguistics, metonymy and synecdoche are often believed to instantiate the same conceptual phenomenon (Lakoff 1987).[1] Lakoff and Johnson (1980) see metonymy (including synecdoche) as a predominantly referential shift phenomenon within one cognitive domain—much in line with the traditional conception of metonymy (see section 2 above). In contrast, they regard metaphor as a mapping from one conceptual domain onto another distinct conceptual domain, where the structure of the target is isomorphic to that of the source (Invariance Hypothesis).

Most contemporary accounts in Cognitive Linguistics have built on Lakoff and Johnson's (1980) original distinction between metaphor as a cross-domain mapping and of metonymy as a mapping within one cognitive domain. One influential attempt to elaborate Lakoff and Johnson's characterization is Croft's (1993: 348) proposal that metaphor is "a mapping between two domains that are not part of the

same matrix," whereas metonymy is a mapping within one "domain matrix." The notion of domain matrix goes back to Langacker's (1987) insight that the meaning of an expression can often only be determined against the background of a set of overlapping domains that jointly serve as a base against which the meaning of an expression is profiled. Croft (1993: 348) defines metonymy as a process of *domain highlighting* "since the metonymy makes primary a domain that is secondary in the literal meaning." Thus, in the utterance *The Times hasn't arrived yet*, the noun phrase *The Times* metonymically highlights a subdomain of the semantic frame it evokes—e.g., a journalist writing for the newspaper—which is usually only secondary. This case is contrasted with the interpretation of the definite description *this book* in *This book is heavy*, where both subdomains of book as a physical object and as a bearer of content are argued to be of equal importance and therefore nonmetonymic.

Ruiz de Mendoza (2000) proposes that metonymic mappings, which are usually considered to be whole–part, part–whole, or part–part mappings, can be reduced to two kinds: either the source of the metonymic operation is in the target ('source-in-target' metonymy) or the target is in the source ('target-in-source' metonymy). For example, for *The ham sandwich is waiting for his check*, Ruiz de Mendoza argues (2000: 114–115) that the contiguity link between HAM SANDWICH and RESTAURANT CUSTOMER is not a part–part relation in the domain RESTAURANT but rather a source-in-target metonymy where THE HAM SANDWICH is conceptualized as being within the target domain THE CUSTOMER. As an example of target-in-source metonymy, Ruiz de Mendoza (2000: 127) cites I *broke the window*, which in most situations conveys that it is not the window as a whole but typically only the windowpane that was broken.

Various scholars have claimed that metonymy is as pervasive a phenomenon in language and thought as metaphor. Lakoff (1987) stresses the cognitive importance of metonymic models alongside propositional, image-schematic, and metaphorical cognitive models (called 'Idealized Cognitive Models' (ICMs)), and in recent volumes, e.g., Panther and Radden (1999a), Barcelona (2000a), Dirven and Pörings (2002), it has been argued that the conceptual and linguistic significance of metonymy is comparable to that of metaphor. Furthermore, some scholars (e.g., Barcelona 2000b; Radden 2000; Ruiz de Mendoza 2000) have claimed that the borderline between metaphor and metonymy is blurred. Nevertheless, there are clear and agreed-upon cases of metonymy (and metaphor) and it is on these prototypical cases that the present chapter focuses.

A widely accepted definition of metonymy inspired by Langacker (1993) is the one proposed by Radden and Kövecses (1999: 21): "Metonymy is a cognitive process in which one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target, within the same cognitive model." The notion of cognitive model is taken in its broadest sense, encompassing three "ontological realms" (Radden and Kövecses 1999: 23): concepts, forms (especially linguistic), and things and events in the "real world." Over these realms, five potential metonymic relations are defined: (i) the sign relation between form and concept (e.g., the relation between the form *house* and the concept HOUSE); (ii) three "referential" relations (Form–Thing/Event, Concept–Thing/Event,

and the relation between Concept–Form and Thing/Event) (e.g., the relation between the form *house* or the concept HOUSE and the actual referent, i.e., a concrete house or the set of houses), and (iii) the relation between one sign (Concept–Form) and another sign (Concept–Form), which they call 'concept metonymy' (e.g., BUS–*bus* standing for BUS DRIVER–*bus driver*). To these types, the authors add other relations such as the substitution of one form for another (e.g., euphemisms like *shoot* for *shit*, or *gosh* for *God*). In what follows, the focus will be on type (iii) of Radden and Kövecses's typology ('concept metonymies'), i.e., those cases that most cognitive linguists would recognize as genuine instances of metonymy.

4. Metonymy as a Contingent and Defeasible Relation

A common denominator of the work reported on in section 3 is that metonymy is a cognitive process that operates within *one* cognitive domain or domain matrix and links a given *source content* to a less accessible *target content*. What constitutes *one* domain has to date not been satisfactorily elucidated in the literature and certainly remains a topic for further research (see section 12). An interesting proposition has been put forth by Barcelona (2003: 231), who proposes that speakers rely on *conscious* folk models of what constitutes a single domain versus two separate domains for the purposes of metonymy and metaphor, respectively. In this perspective, the decision of what constitutes a single domain cannot be made a priori on logico-semantic grounds alone but has to be based on empirical research on how speakers and, more generally, speech communities conceptually structure their universe.

The source content and the target content of a metonymy are linked by *conceptual contiguity* (see Dirven 1993). Metonymies that satisfy this criterion are henceforth called *conceptual metonymies*. 'Content' should be understood in its broadest sense, including lexical concepts (words) but also thoughts (propositional contents). When the source content is expressed by a linguistic sign (a lexeme or a syntagmatic combination of lexemes), one can speak of a *linguistic metonymy.* The focus of this chapter is on linguistic metonymies.

The characterization of metonymy as a contiguity relation or as a process whereby a source concept provides mental access to a target concept is perhaps too general. In an attempt to constrain the scope of metonymy, Panther and Thornburg (2002, 2003b) propose that the relation between the metonymic source and the metonymic target should be regarded as *contingent*; in other words, under this view, metonymic links do not exist by conceptual necessity. This assumption entails that a metonymic relation is, in principle at least, *defeasible* or *cancelable*. For example, in a hospital context where one nurse says to another, *The*

ulcer in room 506 needs a special diet, the link between *the ulcer in room 506* and *the patient with an ulcer in room 506* is a contingent link; it is not conceptually necessary that the ulcer belongs to the patient in room 506. The standard examples of metonymy such as RESULT FOR ACTION, PROCUCER FOR PRODUCT, PART FOR WHOLE, or CAUSE FOR EFFECT all appear to fall under the generalization that the relation between source and target is based on contingent conceptual contiguity.

From the assumption that metonymy is based on conceptual contiguity, it follows that the sign relation between form and meaning cannot be considered metonymic since this relation is usually arbitrary. However, Lakoff and Turner (1989: 108) and Radden and Kövecses (1999: 24) take the view that words/forms metonymically stand for the concepts they express.

The contingency criterion also implies that the notion of mental *access* from a source to a target concept has to be constrained. For example, in the sentence *The loss of her diamond ring chagrined Mary* the subject noun phrase provides mental access to the concept NONPOSSESSION; this concept, however, follows by necessity from the concept LOSS. Given the contingency criterion, the link between LOSS and NON-POSSESSION does not qualify as a metonymic connection; the converse relation may, however, be used for metonymic purposes since it is contingent: *Oh, I don't have my wallet* may metonymically stand for *Oh, I lost my wallet*, but the latter is not entailed by the former.

Another demarcation problem is how meaning *specialization* and *generalization* relate to metonymy. In the philological-historic tradition (see, e.g., Paul 1975: 81–82, 97–98) and in modern semantics, specialization—called 'autohyponymy' by Cruse (2000: 110–111)—and generalization —'autosuperordination' in Cruse's (2000: 111) terminology—are usually regarded as distinct from metonymy. It should be noted, however, that some cognitive linguists, such as Radden and Kövecses (1999: 34), consider specialization (e.g., *the pill* for 'birth-control pill') and generalization (e.g. *aspirin* for 'any pain-relieving tablet') as genuine instances of metonymy. Lakoff (1987) postulates a metonymic relation between the concept MOTHER and the more specialized concept HOUSEWIFE MOTHER (see section 7.1).[2] In view of the constraint on metonymy proposed above, it is problematic to regard generalization as a metonymic process since *aspirin* is a hyponym of *pain-relieving tablet* and therefore *x is aspirin* entails *x is a pain-relieving tablet* (at least under one interpretation of *aspirin*). Specialization does however not immediately qualify as nonmetonymic since a superordinate concept does not semantically imply any of its hyponyms: e.g., *x is a flower* does not entail *x is a rose*; that is, the relation between hyperonym and hyponym is contingent.

The contingency criterion is obviously not a sufficient criterion for distinguishing metonymy from metaphor and from pragmatic relations such as implicature (see section 7.1), because the latter two also involve contingent, i.e., in principle defeasible, relations between source and target and *implicans* and *implicatum*, respectively. However, it is a *necessary* criterion because it sets metonymy apart from relations that are based on conceptual necessity such as hyponymy (on the concept level) and entailment (on the propositional level).

From a semiotic perspective, metonymy is related to *indexicality*. If, for example, Mary has rented a parking space and finds out that her parking space has been taken by another car, she might become red in the face. An outside observer might interpret this as an index (more specifically, a symptom) that Mary is angry. The same observer might also verbalize his thinking by saying *Mary is red in the face*, thereby metonymically evoking the target content 'Mary is angry.' This metonymic reading is induced by the BODILY REACTION FOR EMOTION metonymy, which is a special case of the more general EFFECT FOR CAUSE metonymy (see section 12.2).

A further important property of a prototypical metonymy is that it *highlights* or *foregrounds* its target content and, accordingly, backgrounds its source content. For example, in the already given utterance *The ulcer in room 506 needs a special diet*, the patient suffering from an ulcer is highlighted, i.e., forms the topic of the utterance and can be subsequently referred to by the pronouns *she* or *he* (see section 7.4). By this criterion, in the utterance *Mary built a new garage last year*, the subject *Mary* is not a good example of a metonymy even if the usual inference is that she did not build the garage herself but had the work done by some workmen she hired. Intuitively, the utterance is about Mary, i.e., *Mary* is foregrounded, and not her workmen. This analysis is corroborated by the fact that *[...] and this year she* (= Mary) *went on a long vacation* is a completely natural continuation of first utterance (see Panther and Thornburg 2003b), whereas *[...] and then they* (= the workmen) *did some work on the house* sounds somewhat disruptive.

The accessibility of the target from the source appears to correlate with the *strength of the metonymic link* between source and target. In turn, the strength of the metonymic link seems, at least partially, to depend on what one may call the *conceptual distance* between source and target and the *salience* of the source (Panther and Thornburg 1998). For example, the compound *redhead* seems a priori more likely to designate a person than the term *toenail* for the simple reason that the former is more salient and conceptually closer (in a meronymic organization of body parts) to the concept PERSON than the latter.

Summarizing the above remarks, an adequate definition of conceptual metonymy should contain at least the following components:

a. Conceptual metonymy is a cognitive process where a source content provides access to a target content within one cognitive domain.
b. The relation between source content and target content is contingent (conceptually non-necessary), i.e., in principle defeasible.
c. The target content is foregrounded, and the source content is backgrounded .
d. The strength of metonymic link between source and target content may vary depending, among other things, on the conceptual distance between source and target and the salience of the metonymic source.

5. Metonymy and Metaphor

5.1 The Interaction of Metonymy and Metaphor

Like metaphor, metonymy is a means by which concepts with relatively little content may be conceptually elaborated and enriched, as amply demonstrated by, e.g., Kövecses (1995), Lakoff (1987), and Niemeier (2000) on emotion concepts such as LOVE or ANGER, and by Feyaerts (1999, 2000) on STUPIDITY in colloquial German. An important result of this research is that, for many concepts, metonymy and metaphor interact in complex ways. For example, Lakoff (1987: 382), who heavily relies on work by Kövecses (1986), postulates metonymies such as BODY HEAT FOR ANGER and INTERNAL PRESSURE FOR ANGER that motivate utterances like *Don't get hot under the collar* and *When I found out, I almost burst a blood vessel*, respectively. These expressions exemplify the more general metonymy SYMPTOM FOR CAUSE, which itself is a subcase of the high-level metonymy EFFECT FOR CAUSE (see section 12.2). Lakoff (1987: 383) argues that the folk theory of physiological effects (especially HEAT) forms the basis for the general metaphor ANGER IS HEAT, which in combination with the metaphor THE BODY IS A CONTAINER FOR THE EMOTIONS gives rise to expressions such as *I had reached the boiling point* and *Simmer down!*

Goossens (1990, 2002) has coined the term *metaphtonymy* to cover the interplay between metonymy and metaphor. He discusses four types of such interaction: metaphor from metonymy, metonymy within metaphor, demetonymization within a metaphor, and metaphor within metonymy. As example of the first category, Goossens (1990: 328, 2002: 356) cites *"Oh dear," she giggled, "I'd quite forgotten"*, where *giggled* stands for 'say something lightheartedly while giggling'. Goossens argues that this metonymic reading is the basis for a metaphorical interpretation involving a mapping from a nonlinguistic domain into the domain of linguistic action.

Goossens's influential work has inspired a rich body of research on the interaction of metonymy and metaphor. Ruiz de Mendoza and his collaborators have investigated various figurative expressions that typically involve the metonymic elaboration of the source and/or the target domains of metaphorical mappings. For example, Ruiz de Mendoza and Díez Velasco (2002: 526–527) analyze the idiomatic expression *Don't bite the hand that feeds you* as involving a source domain that contains the concepts ANIMAL, BITE, and HAND (that feeds you), the last metonymically evoking the agentive concept of a person that feeds you, i.e., FEEDER. This metonymically elaborated source domain is then metaphorically mapped onto the target domain with the figurative meaning 'Don't turn against a person that supports you', with straightforward metaphorical mappings from ANIMAL to PERSON, BITE to TURN AGAINST, HAND (that feeds you) via FEEDER to SUPPORTER.

In a similar vein, Geeraerts (2002) analyzes various types of metaphorical and metonymic interaction. His 'prismatic model' enables him to distinguish between the paradigmatic and the syntagmatic dimensions in the interpretation of figurative and idiomatic expressions. On the syntagmatic axis, the (compositional) relation between the meanings of constituent parts and what they contribute to the meaning of the whole expression is defined—both on the literal and on the figurative levels. On the paradigmatic axis, the relation between literal and figuratively derived meaning is described. These relations can be more or less transparent: Geeraerts refers to (the degree of) transparency on the paradigmatic level as 'motivation', and to (the degree of) transparency on the syntagmatic level as 'isomorphism'. For example, the exocentric Dutch compound *schapenkop* 'dumb person' (literally 'sheep's head'; cf. German *Schafskopf*) is both highly *motivated* (on the paradigmatic level) and *isomorphic* (on the syntagmatic level). Paradigmatically, the overall meaning of *schapenkop* comes about through a metaphorical mapping from '(stupid-looking) sheep's head' to '(stupid-looking) human head' followed by a PART FOR WHOLE metonymy that induces the reading 'stupid person' (Geeraerts 2002: 456). Syntagmatically, there is a modifier-head relation on both the literal and figurative levels of interpretations.

Panther and Thornburg (2002: 289) demonstrate the interplay of metaphor and metonymy in numerous *-er* nominals. For example, the meaning of *hoofer* is motivated through a metaphor (that itself contains a number of metonymic elaborations) from 'hoof' to '(human) foot'—with the latter metonymically evoking the activity of 'dancing.' This target sense combines with the agent meaning of *-er* to yield the specialized meaning 'professional (vaudeville/chorus) dancer'.

The research of the authors cited above suggests that metaphorical and metonymic mappings are, to a certain extent, intrinsically ordered to achieve an intended interpretation. However, as Geeraerts (2002: 460) points out with the example of the Dutch compound *badmuts* 'bald person' (literally 'swimming cap'), the relative ordering of metaphorical and metonymic operations need not always be fixed to arrive at an identical interpretation. Either the reading 'swimming cap' is metonymically elaborated into 'person with a swimming cap', which itself is metaphorically mapped onto the interpretation 'bald person', i.e., 'a person that looks as if he was wearing a swimming cap'; or there is first a metaphorical interpretation of 'swimming cap' as 'bald head', which, in turn, metonymically maps onto 'bald person.'

5.2 The Experiential Grounding of Metonymy and Metaphor

In addition to the interaction of metonymy and metaphor, some thought has been given to the question of the experiential grounding of metonymy and metaphor. Lakoff and Johnson (1980) attribute an experiential basis to many metaphors; Grady (1997), Lakoff and Johnson (1999), and Grady and Johnson (2002) claim

that humans from very early on form experiential correlations, which they call 'primary metaphors'. As instances of such basic metaphors AFFECTION IS WARMTH, DIFFICULTIES ARE BURDENS, and KNOWING IS SEEING, among others, have been proposed. A feeling of warmth is often concomitant with an affectionate embrace, lifting a burden correlates with a feeling of discomfort, and a fundamental source of information (acquisition of knowledge) is visual perception. The above authors see primary metaphors as the atomic building blocks of more complex metaphors. Other authors (e.g., Barcelona 2000b, Radden 2000, 2002) claim that such experiential correlations are metonymic.

For example, Radden (2002) argues that the experiential correspondences between UP and DOWN and HAPPY and SAD, respectively, are metonymic rather than metaphorical. The controversy between the 'metaphorists' and the 'metonymists' is not purely terminological but empirical in nature. The outcome of this discussion hinges, among other things, on an empirically validated answer to the further question of what the *semiotic* status of such experiential correlations is. If it turns out that, for instance, warmth is interpreted as an indexical *sign* for affection, then it makes sense to regard the experiential correlation between warmth and affection as metonymic rather than metaphorical.

Riemer (2002) argues that many expressions that look metaphorical, because their respective source domains and target domains are clearly separate, originate as metonymies. For example, the idiom *beat one's breast* 'make a noisy open show of sorrow that may be partly pretence', which Goossens (2002: 362) analyzes as a metaphtonymy (i.e., metaphor from metonymy), is better regarded as a metonymy whose source names a social practice that no longer exists. Riemer (2002: 395–397) calls such 'truncated' metonymies *post-metonymies*.

The problem of whether metonymic or metaphorical processes lead to changes in meaning is especially acute in diachronic semantics. A case in point is the origin of the systematic polysemy of modal auxiliaries in present-day English and other languages. Sweetser (1991: 49–51) argues that the 'root' (deontic) sense and the epistemic sense of modals are linked through a metaphorical mapping from the sociophysical domain into the domain of knowledge and reasoning. Thus, the epistemic *must* in *You must have been home last night* 'The available (direct) evidence compels me to the conclusion that you were home last night' is regarded as a metaphorical extension of the deontic *must* as in *You must come home by ten* 'The direct force (of Mom's authority) compels you to come home by ten' (Sweetser 1991: 61). Yet Goossens (1999, 2000) provides historical evidence for a contextually driven step-by-step dissociation of epistemic meanings from deontic meanings, which would rather point to a metonymic relation between the deontic and epistemic senses of modals.[3]

6. Metonymy and Speech Act Functions

In section 2, it was proposed that metonymy is not merely a referential phenomenon but serves other pragmatic purposes as well. In analogy to the three pragmatic functions that are familiar from speech act theory (see Searle 1969), one may classify metonymies into the following types: (i) referential metonymies, (ii) predicational metonymies, and (iii) illocutionary metonymies. These pragmatic types, which can occur in combination, are illustrated in the following sections (see Thornburg and Panther 1997; Panther and Thornburg 1998; and Brdar and Brdar-Szabó 2003, 2004).

6.1 Referential Metonymy

As discussed in sections 2 and 3 above, traditionally metonymy has been regarded as a means of indirect reference. Well known examples are referential noun phrases such as *the subway* in *The subway is on strike* referring to the subway personnel or *The saxophone isn't performing tonight* with *the saxophone* referring to the saxophone player.

6.2 Predicational Metonymy

Predicational metonymy is exemplified by utterances such as *The saxophone player had to leave early*, which, in many contexts, metonymically induces the interpretation 'The saxophone player left early'. In this case, a past obligation to leave early, predicated of the referring expression *the saxophone player*, is interpreted as an actually occurring past action predicated of the saxophone player. This case instantiates a large class of phenomena that involve a high-level metonymy where a potential event stands for an actual event.

6.3 Propositional Metonymy

When a referential metonymy is combined with a predicational metonymy, the result can be called a propositional metonymy. An example is *The saxophone had to leave early*, whose target meaning 'The saxophone player left early' comes about through the metonymies MUSICAL INSTRUMENT FOR MUSICIAN (referential) and OBLIGATORY ACTION FOR ACTUAL ACTION (predicational).

6.4 Illocutionary metonymy

Gibbs (1994, 1999), Thornburg and Panther (1997), Panther and Thornburg (1998), and Pérez Hernández and Ruiz de Mendoza (2002) argue that illocutionary acts, especially indirect illocutionary acts (see Searle 1975), can be analyzed in terms of conceptual frames, scenes, idealized cognitive models, scenarios, and the like. A component of a speech act scenario that is sufficiently 'central' can metonymically evoke other components of the scenario and thereby the scenario as a whole. The basic idea is that an attribute of a speech act can stand for the speech act itself, in the same way that an attribute of a person can stand for the person. Thus a metonymic analysis of an indirect request such as *Can you lend me your sweater?* links a BEFORE component of the request scenario, i.e., the hearer's ability to perform the requested action, to the CORE of the speech act, i.e., the attempt to impose a more or less strong obligation on the hearer.

Gibbs (1994: 354–357) provides experimental evidence that conventional indirect requests such as *Can/will you lend me your sweater?* or *Would you mind lending me your sweater?* are not just random substitute forms for the direct request *Lend me your sweater*. The source expression (and consequently, the source content) is not arbitrarily chosen but its selection is motivated by the speaker's intention to address potential 'obstacles' to the satisfaction of the request (see section 11). Gibbs's work shows that the meaning of the source expression is relevant to the interpretation process as a whole, thus providing strong evidence against the view that a source expression merely stands for a target.

6.5 Cross-Functional Metonymies

Conceptual metonymies often cut across the pragmatic types discussed in sections 6.1–6.4. A given conceptual metonymy may function referentially, predicationally, and illocutionarily. For example, a referential use of the metonymy ABILITY FOR ACTUALITY is illustrated in ***Her ability to convince the board of trustees*** *impressed everyone*, but the same metonymy may also be operative on the predicational level as in *She was* ***able to convince the board of trustees***. In both cases, there is a metonymically induced target meaning that the act of convincing the board of trustees *actually* occurred. A version of the above metonymy also exists on the illocutionary level. For example, in uttering ***I can assure*** *you that your application will be taken into consideration*, in most contexts the speaker *actually* does assure the addressee of the content of the complement clause despite the use of the modal hedge *can*.

7. Metonymy, Pragmatic Inferencing, and Discourse Functions

7.1 Metonymy and Implicature

The property of defeasibility likens metonymy as a cognitive process to pragmatic inferencing, in particular, conversational implicature in Gricean and Neo-Gricean pragmatics (Grice 1975, Levinson 2000, and Panther and Thornburg 2003a). Metonymic links can be used for *reasoning* or *inferencing* purposes.[4] Like implicatures, metonymies can become completely *conventionalized*, i.e., end up as senses in a polysemous word. Metonymy therefore cuts across the traditional semantics-pragmatics distinction. A metonymy may, on the one hand, statically relate different senses of a word, but it may also be productively used in actual communication situations to produce novel meanings. For example, *potbelly* has two entrenched lexical meanings 'large round stomach' and 'person with large round stomach', which are related by the metonymy SALIENT BODY PART FOR PERSON; this same metonymy can also be used productively to yield pragmatically derived meanings as, for instance, *balloonnose*, *fatface*, *skinnylegs*, etc. The productive use that speakers make of this metonymy can be considered evidence that it is not a 'dead' metonymy but a cognitively real process.[5]

Given that metonymic reasoning is pervasive in language use, some authors have argued that the concept of metonymy should be integrated into a general theory of pragmatic reasoning. Ruwet (1975) even claims that 'real' metonymy is a rare phenomenon and many cases of 'metonymy' (or 'synecdoche', which he treats alike in this respect) are probabilistic inferences drawn on the basis of world knowledge. According to Ruwet (1975: 375), in an utterance like *Voilà une voile à l'horizon* 'There's a sail on the horizon', the speaker means quite literally what is said, namely, that there is a *sail* on the horizon. The 'metonymic' or 'synecdochic' interpretation that there is a *boat* or *ship* on the horizon is a plausible though defeasible pragmatic inference. Ruwet's conclusion that the notion of metonymy is of limited theoretical interest is, however, not warranted since a theory of pragmatic inferencing must surely establish the kinds of *inference schemas* that participants use in actual communication to arrive at utterance meanings and these inference schemas are, to a considerable extent, based on metonymic contiguities.

There are some interesting parallels between what Lakoff (1987) calls 'metonymic models', and what Levinson (2000: 37)) refers to as the *I*-Heuristic (where *I* stands for 'Informativeness') in his theory of generalized conversational implicature. Lakoff points out that, e.g., the concept MOTHER metonymically evokes the subconcept HOUSEWIFE MOTHER. Levinson (2000: 37) argues that lexical items routinely implicate stereotypical pragmatic default readings: "What is

expressed simply is stereotypically exemplified." Levinson relates this heuristic to Grice's (1975) second Maxim of Quantity 'Do not make your contribution more informative than is required'. For example, a defeasible I-Implicature of *secretary* is the attribute 'female'. Defeasibility also holds for the metonymically evoked stereotypical meanings discussed by Lakoff (1987: 77–84). Although the concept HOUSEWIFE MOTHER is almost automatically activated when the word *mother* is used in linguistic communication, the metonymic link between the two concepts can be explicitly canceled without contradiction: *She is a mother of two daughters but she is not a housewife* is semantically well formed. A meaning that, in cognitive linguistic terms, is stereotypically evoked via metonymy (see Radden and Kövecses 1999: 27) or, in Neo-Gricean parlance, via a generalized conversational implicature, is generally not expressed through a separate lexical item; e.g., there are no simple lexemes for the concepts HOUSEWIFE MOTHER or FEMALE SECRETARY.

Metonymic links can be regarded as natural inference schemas available to the participants in a communication situation (see Thornburg and Panther 1997; Panther and Thornburg 1998, 2003a). Conversational implicatures, according to Grice, must be capable of being 'worked out'. As natural inference schemas, metonymies easily meet this requirement.

7.2 Metonymy and Explicature

Relevance theorists have generally been very critical of cognitive linguistic approaches to metonymy (and metaphor). Papafragou (1996) and Song (1997), following Ruwet (1975) in this respect, argue that metonymy, and other figures of speech, can be subsumed under general principles of pragmatic inferencing (in their framework, deductive inferences) and that there is no need to postulate the existence of a separate domain of metonymic reasoning. Papafragou (1996: 181) criticizes the cognitive 'associationist' approach to metonymy as suffering "from serious drawbacks on both descriptive and explanatory levels" because this approach supposedly cannot handle creative ad hoc uses of 'metonymy'. However, as with conceptual metaphor (see Lakoff and Johnson 1999), there might be less creativity in metonymic language use than Papafragou and Song assume. There is at least some initial plausibility that interactants resort to a relatively restricted set of metonymic inference schemas that are exploited again and again (see, e.g., Norrick's 1981 typology of metonymies). Papafragou does not grant any special status to metonymic elaborations but regards them as *explicatures* whose purpose is to allow the reconstruction of the explicit content of an utterance. From a cognitive linguistic perspective, Ruiz de Mendoza and Pérez Hernández (2003), while insisting on the cognitive reality of conceptual metonymy, agree with the view that metonymic elaborations of the sense of an utterance serve to identify its *explicit* content.

7.3 Some Discourse-Pragmatic Functions of Metonymy

So far, little attention has been paid to the pragmatic function of metonymic shifts. Why would speakers use metonymies at all when they could just as well employ nonmetonymic means of referring, predicating, and performing illocutionary acts? For the use of indirect speech acts, sociopragmatic reasons, such as politeness, have been adduced (e.g., Brown and Levinson 1987). In general, a careful analysis of naturally occurring discourse data suggests that metonymic source and metonymic target are not pragmatically equivalent in all respects, nor are metonymies with the same target but different sources mere stylistic variants of each other (see section 6.4).

Papafragou (1996) sees two communicative reasons for using metonymies: (i) The extra processing effort caused by a metonymy is set off by a gain in contextual effects (additional implicatures); (ii) the processing effort may be smaller than that for a literal expression of the metonymic sense. The latter case (ii) occurs quite frequently in the setting of routinized communicative interaction, e.g., at work: in a restaurant where the waitresses do not know the names of customers, it is common to refer to individuals or groups as *table five,* etc. In the given context, this is the most economical way to refer to otherwise unknown individuals. As an example of contextual gains consider the sentence *Now it* ***can*** *happen* uttered by Richard Williams, father of the tennis-playing sisters Venus and Serena Williams when they reached the final of the U.S. Open tennis tournament in 2001. Why would the speaker choose the modal *can* in a situation where he *knows* that his daughters *will be* the finalists in the tennis tournament? The reason may be that the source concept (POTENTIALITY) has—in the given situation—more contextual effects than the target concept (FUTURE ACTUALITY). The greater cognitive effort resulting from the metonymic coding of the utterance is largely compensated by the richness of conceptual information that it evokes. The potentiality modal *can* and the time adverbial *now* convey pragmatic implications of 'obstacles' that have been 'removed' by strenuous efforts; such connotations are not conveyed by the predictive modal *will*.

In a similar vein, Song (1997: 101) shows that metonymies with the same target but different source domains yield different contextual effects and can therefore not be regarded as discourse-pragmatically equivalent. For example, in Japanese the two utterances *konogoro kuruma-ni notte-inai* 'I have not ridden wheels recently' and *konogoro handoru-wo nigitte-inai* 'I have not held a steering wheel recently' conventionally stand for 'I have not driven a car recently'. According to Song (1997: 102), "the hold-a-steering-wheel metonymy highlights the controlling aspect while the ride-on-wheels metonymy highlights mobility." The two metonymies are thus appropriate in different contexts.

7.4 Metonymy and Coreference

A particularly intriguing property of metonymy is its interaction with anaphoric coreference in discourse (see Nunberg 1978, 1995; Fauconnier 1985; Kleiber 1995; Stirling 1996). A plausible hypothesis is that an anaphoric pronoun should be coreferential with the metonymically targeted referent of a noun phrase, rather than with the source referent. This hypothesis is confirmed by sentences like (i) ***The harpsichord*** *is on maternity leave;* ***she/*it*** *will be back next year*, where the MUSICAL INSTRUMENT FOR MUSICIAN metonymy leads to the interpretation of the subject noun phrase as 'the musician playing the harpsichord'. The anaphoric pronoun is coreferential with this targeted referent. However, in sentence (ii) ***Laura*** *is sun-burned;* ***she*** *probably took a vacation in Greece/**it* (*=her skin*) *needs dermatological treatment* where usually *Laura* is regarded as a WHOLE FOR PART metonymy for 'Laura's skin,' it is puzzling that the antecedent for the anaphoric pronoun must be the source—hence the selection of *she* instead of *it*. To account for the difference between sentences like (i) and (ii), Nunberg (1995) proposes that in (ii) there is no referential shift of the subject noun phrase *Laura* but rather a *predicate transfer*, i.e., a property that is usually attributed to skin is transferred to persons. Thus the obligatory occurrence of the anaphoric pronoun *she* (vs. **it*) is accounted for.

Nunberg's (1995) explanation has been criticized by various linguists (e.g., Kleiber 1995; Panther and Radden 1999b) on the grounds of its counterintuitive assumption that a sentence like *Linda is parked on the lower deck* involves no reference shift. Ruiz de Mendoza and Pérez Hernández (2001: 351) and Ruiz de Mendoza and Díez Velasco (2004) have suggested a *domain availability principle* that requires the anaphoric pronoun to be coreferential with the matrix domain—be it the source or the target of the metonymic operation. In sentence (i), a source-in-target metonymy is operative, i.e., the target domain is the matrix domain ('the harpsichord player'), which selects the anaphoric pronoun. In contrast, in sentence (ii) the metonymic target ('Laura's skin') is part of the source domain ('Laura') (target-in-source metonymy), which thus constitutes the matrix domain that is the antecedent of the anaphoric pronoun *she*. The theory of Ruiz de Mendoza and his co-authors has the advantage of accounting for the difference between sentences (i) and (ii) without abandoning the intuitively plausible assumption that both cases involve metonymic shifts of reference of the subject noun phrase.

8. Metonymy and Grammar

Conceptual metonymy, especially predicational metonymy (see section 6.2), interacts with grammatical structure. In what follows, some instances where grammatical constructions are sensitive to metonymically induced interpretations are presented.

In Cognitive Linguistics, it is generally assumed that grammatical constructions are carriers of meaning independent of the lexical items they contain (Goldberg 1995; Croft 2001). The lexical items used in a construction, especially the meanings of the verb and its argument structure, have to be fitted into the construction frame, but there are cases where a conflict between constructional meaning and lexical meaning arises. Two interpretive strategies emerge in such cases: either the utterance is rejected as uninterpretable (semantically anomalous) or the semantic and/or syntactic conflict is resolved by a meaning *shift* (Talmy 2000: 324–329) or *coercion* (Pustejovsky 1991). In general, the construction imposes its meaning on the verb meaning. For example, according to Goldberg (1995: 38), the ditransitive construction in English exemplified in *Mary gave Bill the ball* has the central sense 'Agent successfully causes recipient to receive patient'. Given this construction meaning, the transitive verb *kick* 'hit with the foot' in *Mary kicked Bill the ball* is in syntactic and semantic conflict with the syntax and the meaning of the ditransitive construction. The resolution of this conflict consists in a semantic shift: the basically transitive verb *kick* is construed ditransitively and coerced into the interpretation 'cause to receive *by means of* hitting with the foot'. This meaning shift is possible because there is an independently motivated conceptual metonymy MEANS OF ACTION FOR ACTION that makes the intended interpretation available to the hearer even if her or she has never before encountered the use of *kick* in the ditransitive construction.

In a similar vein, Panther and Thornburg (2000) consider *stative* predicates in 'action' constructions, e.g., imperatives or certain infinitival complement clauses. They show that, despite the semantic conflict between stativity and action, such sentences are possible if the state expressed by the predicate can be interpreted as the *result* of an action (see Figure 10.1). In such cases, the imperative construction forces an action interpretation on the stative predicate. Thus, the slogan of the American news network CNN *Be the first to know* is acceptable because the verb phrase *be NP* is interpretable as the effect of an intentional act of the hearer ('Do something [namely, watch CNN] so that, as a result, you are the first to know'). The conceptual shift at work here is based on the RESULT FOR ACTION metonymy. In contrast, the imperative *Be tall!* is pragmatically odd: an action interpretation induced by the RESULT FOR ACTION metonymy is hardly conceivable because 'tallness' is not seen as the outcome of an intentional act.

Ruiz de Mendoza and Pérez Hernández (2001: 340), following Pustejovsky (1991, 1993) in this respect, suggest a metonymic interpretation for complement noun phrases as in *John enjoyed the beer,* which has the default reading 'John enjoyed drinking the beer', but may, in varying contexts, also mean something like 'John enjoyed bottling the beer', 'John enjoyed pouring the beer', etc. The common denominator of all these readings is that the object denoted by the noun phrase (a salient participant) is involved in some event, which itself has to be metonymically inferred. Possibly, however, as Copestake and Briscoe (1995: 32) argue, the above sentence might be an example of sense modulation (constructional polysemy) that involves "an appropriate aspect of the meaning, rather than a change

in the meaning of the NP itself." In other words, the variety of possible contextual meanings of *the beer* could be due to vagueness, rather than to metonymic shifts that would result in clear-cut polysemy.

Langacker (2000: 200, 329–332) argues that a metonymy such as (SALIENT) PARTICIPANT FOR EVENT IN WHICH PARTICIPANT IS INVOLVED is also found in 'raising' constructions like *Don is likely to leave*. Strictly speaking, likelihood cannot be predicated of the individual Don, but only of the activity the individual is involved in, which in Langacker's terminology constitutes the 'active zone' of the nominal referent *Don* in the above utterance.[6] Brdar and Brdar-Szabó (2004) show that the use of the (SALIENT) PARTICIPANT FOR EVENT IN WHICH PARTICIPANT IS INVOLVED metonymy is fairly restricted in languages like German, Croatian, and Hungarian that do not allow 'raising' as freely as in English. Compare, e.g., *Don is sure to come* with German **Don ist sicher zu kommen.*

Metonymic coercion also seems to play a role in the interpretation of other nonfinite clauses, which, in Generative Grammar, involve the problem of 'control' (see Panther 2001). For example, in *Paula asked John to leave*, the usual (unmarked) interpretation is that John, the referent of the main clause object, is supposed to leave—i.e., the object of the main clause 'controls' the reference of the understood subject in the infinitive clause; whereas in *Johnny asked the teacher to go to the bathroom*, the referent of the main clause subject is most likely coreferential with the understood subject of the nonfinite clause, i.e., Johnny will go to the bathroom. The latter interpretation may be explained on the basis of a metonymic elaboration where the propositional form expressed by the verb phrase in the infinitive clause ('going to the bathroom') is interpreted as 'being allowed to go to the bathroom'. The infinitive highlights the intended pragmatic effect of such an act of permission, which itself is not expressed in the sentence but is easily accessed metonymically in the given context. In other words, the interpretation of this sentence heavily relies on a subtype of the RESULT FOR ACTION metonymy, namely, PRAGMATIC EFFECT OF SPEECH ACT FOR SPEECH ACT.

A clear case of an impact of metonymy on grammatical structure is provided by the use of names (paragons) as common nouns that denote a whole class of individuals (see Barcelona 2004). In *A real Shakespeare would never use those trite images*, the selection of the indefinite article in the subject noun phrase is clearly motivated by a metonymic shift from an individual (Shakespeare) to a whole class of individuals that have essentially the same relevant properties. The target concept determines the grammatical behavior, e.g., the target property of countability determines the possibility of using *Shakespeare* with an indefinite article or even pluralizing it (e.g., *the Shakespeares of the twentieth century*).

As a last example, consider Nikiforidou's (1999: 143) work on nominalizations. Nikiforidou shows that there is a cross-lexemic regularity concerning the interpretation of nominalizations in English. For example, the nominalized form *performance* in its basic sense profiles an action (*The performance lasted for two hours*),

but it may also highlight certain subdomains of the profile such as MANNER (*The performance was impressive*) or PRODUCT (*The performance is available on CD*). As Nikiforidou points out, the latter two interpretations can be regarded as active zone phenomena in the sense of Langacker (see above).

9. Metonymies across Languages

So far, relatively little work has been done on how metonymies are exploited across languages. Some of the questions that await solutions are: Are there conceptual metonymies that have the status of universals? Can languages be typologically classified according to the metonymies they do or do not exploit? How do these typologies compare with the more traditional morphosyntactic typologies? In what follows, some studies that have begun to explore these issues are presented.

Brdar and Brdar-Szabó (2003) show that the MANNER FOR (LINGUISTIC) ACTION metonymy is much more systematically exploited in English than in Croatian and Hungarian, where usually the linguistic action has to be coded explicitly in the verb. Thus, English allows a sentence such as *I must be open with her* where only the manner in which the speech act is performed is indicated, leaving it up to the hearer to metonymically infer the linguistic action itself. In contrast, in Hungarian the same content is rendered as ***Nyíltan** kell vele **beszélnem*** 'I must *speak openly* with her'; a literal translation of the English sentence **Nyíltnak kell vele lennem* is unacceptable in Hungarian.

Panther and Thornburg (1999) have conducted a comparative study of English and Hungarian in which they demonstrate that the POTENTIALITY FOR ACTUALITY metonymy is exploited more extensively in English than in Hungarian; in the domain of perception, the metonymy is systematically exploited in English but blocked in Hungarian. Thus English *Can you see him?* for 'Do you see him?' contrasts with Hungarian *Látod?* 'Do you see him?'. In another comparative study, based on parallel text corpora, Panther and Thornburg (2003c) show that English makes a more extended use than French of two related metonymic principles: THE ONSET FOR THE WHOLE EVENT metonymy and THE INCIPIENT PHASE FOR THE WHOLE EVENT metonymy, where 'onset' refers to the starting point and 'incipient phase' to the initial time span of an event. An example of the contrasting use of the latter metonymy is seen in a sentence from André Gide's novel *L'immoraliste* and its English translation: *Puis il **plut*** (coding of the whole event) vs. *Then it **began to rain*** (coding of the incipient phase metonymically evoking the whole event).

10. Metonymy and Language Change

10.1 Metonymy and Semantic Change

The significance of metonymic processes in the change of meaning of lexical items has been long noted by historical linguists and amply demonstrated since the nineteenth century (see references in Ullmann 1962). More recently, Koch (1999) has shown how meaning changes can be accounted for by relating components in a conceptual frame. For example, there is a quite systematic cross-linguistically observable metonymic shift within the MARRIAGE frame from, for instance, getting engaged or setting up house to marriage. Examples (from Koch 1999: 148) include: Latin *sponsus*, *-a* 'fiancé(e), hence: bride(groom)' > Popular Latin 'husband/wife' as in Spanish *esposo*, *-a*, French *époux*, *-se*; Latin *vota* 'vows' > Spanish *boda(s)* 'wedding'; Old English *weddian* 'to engage' > Modern English *wed* 'marry'; Polish *ślub* 'vow', hence: 'marriage.' Such examples provide support for the view that metonymies are intra-domain mappings.

10.2 Metonymy and Grammaticalization

It has been argued by various authors (e.g. Heine, Claudi, and Hünnemeyer 1991; Traugott and König 1991; and Hopper and Traugott 1993) that metonymy plays a crucial role in grammaticalization processes. According to Hopper and Traugott (1993: 80–86), metonymy is instrumental in the development of grammatical meanings from lexical meanings. For example, the historical change of *be going to* into a future marker, which in colloquial English is often contracted to *be gonna*, is based on a conceptual contiguity between the concept PURPOSE and the notion of FUTURE. A sentence such as *I am going to visit my sister* with the reading 'I am going for the purpose of visiting my sister' conversationally implicates 'I will visit my sister'. As Hopper and Traugott (1993: 82) point out, this implicature is defeasible, but still the conceptual link between PURPOSE and FUTURE is so strong that the implicature has become conventionalized in the case of *be going to* / *be gonna*.

As a further example of metonymically induced grammaticalization, one may cite the development of an abstract causal meaning out of a more concrete temporal meaning, as in the causal use of the conjunctions *since* < Old English *siððan* 'from the time that'. The metonymic motivation of this shift is that events that are temporally contiguous or overlapping are often seen as causally related. The cognitive reality of the underlying metonymy TEMPORAL CONTIGUITY FOR CAUSAL LINK becomes manifest in such utterances as *I couldn't work when the television was on* that convey the implicature 'I couldn't work *because* the television was on' (see Traugott and König 1991: 197).

11. Metonymy in Language Production, Comprehension, and Acquisition

That metonymic processes play an important part in utterance interpretation is amply demonstrated in Gibbs (1994, 1999). As pointed out in section 6.4, the interpretation of indirect speech acts can be accounted for on the basis of metonymic principles. Gibbs (1994: 345–351, 1999: 73) adduces experimental evidence that people interpret colloquial tautologies (e.g., *Boys will be boys*) on the basis of shared metonymic models (stereotypes). Especially, tautologies containing human nouns are more easily interpretable than *tautologies* with concrete nouns (*Telephones are telephones*) because stereotypes about humans are conceptually richer and more entrenched than stereotypes about things.

To date, hardly any work has been done on how children produce and understand metonymies, with the notable exception of Nerlich, Clarke, and Todd (1999: 368). The phenomena that they call 'synecdochical' or 'metonymical' overextensions such as *Papa* for 'father, grandfather, mother' (recorded at age: 1;0) or *choo-choo* for 'train' (age: 1;7) are perhaps best not regarded as genuine examples of synecdoche and metonymy, respectively, because it is not clear that the child in question really exploits a contiguity link between two concepts. At a later age (from about 5 years), however, the data of Nerlich, Clarke, and Todd show a remarkable increase of what they call 'creative metonymical shrinking', i.e., cognitive shortcuts to express novel ideas as in *I really like being a sandwich*, pronounced by a five-year-old child with the intended meaning 'I like being part of the children who, instead of having school dinner, are allowed to bring their own lunch box with sandwiches'.

12. Areas of Future Research

12.1 Constraints on Metonymy

Little systematic research has been done on what kind of conceptual, pragmatic, and grammatical constraints limit the linguistic exploitation of metonymy. Are there potential conceptual links that are never exploited or unlikely to be exploited by language users? One constraint on the exploitability may be the conceptual distance between source and target content: the more conceptually distant the source from the target, the less likely a metonymic operation will come about (see section 4 for discussion and examples). Alternatively, one might surmise that

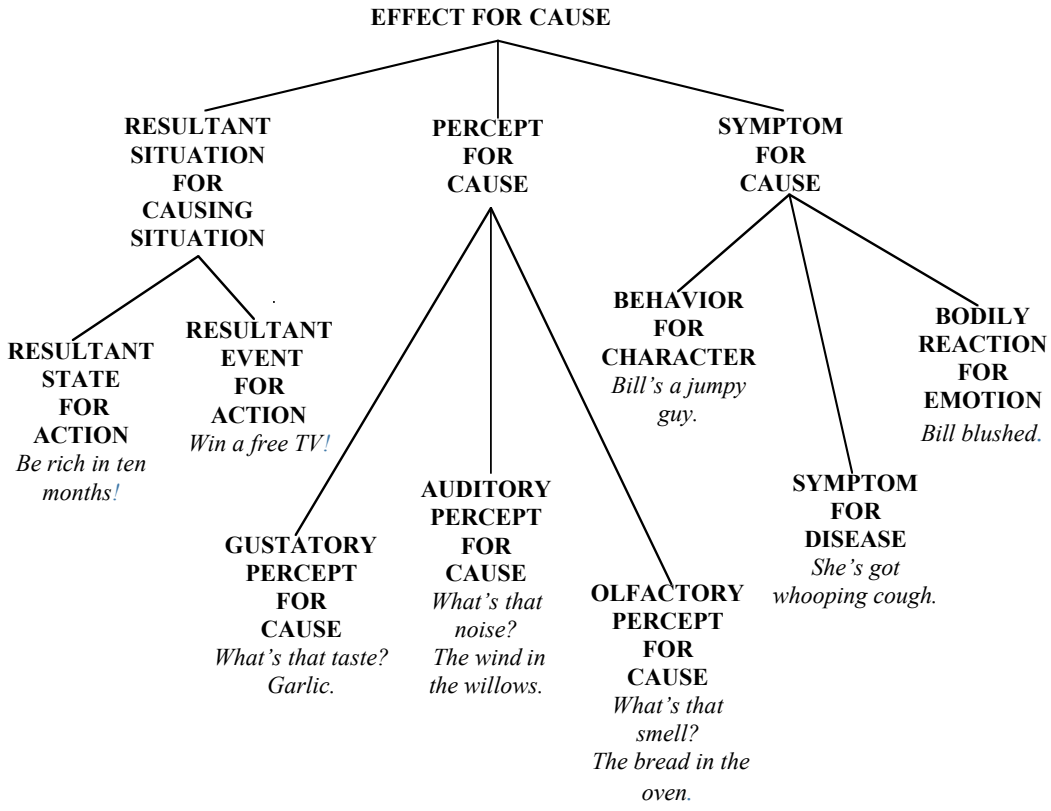

Figure 10.1. A tentative taxonomy of the metonymy EFFECT FOR CAUSE

properties of metonymic targets that are felt to be intrinsic or essential are likely to be exploited more systematically than properties than are seen as accidental.

Often the use of metonymies is restricted in more idiosyncratic ways. For example, *We need some young brains on our faculty* is completely natural, but *A young brain entered the library looking for Grimm's Dictionary* seems less felicitous. Some metonymic uses are highly formulaic such as *a sail* (for 'boat') *on the horizon*, but a nonformulaic usage such as *All the sails sank in the storm* is odd.

12.2 Metonymic Systems

Lakoff and Johnson (1980, 1999) and others have shown that metaphors are organized in rich conceptual systems. Metaphorical systems are presumably based on a relatively small number of basic (primary) metaphors (Grady 1997). For metonymy, various lists of high-level metonymies have been proposed in the twentieth century (e.g., Ullmann 1957; Norrick 1981; Radden and Kövecses 1999; see Nerlich, Clarke, and Todd 1999 for a brief discussion) but these hardly qualify as articulated taxonomies or classifications in the strict sense.

An exhaustive classification of metonymies remains a project for the future but it is plausible to assume that metonymies are, at least, hierarchically structured from fairly abstract 'high-level' metonymies to more and more specific subtypes.

This can be demonstrated for the fairly pervasive high-level metonymy EFFECT FOR CAUSE, which exhibits at least a three-layered taxonomic structure (see Figure 10.1).

The most specific instances of the metonymy are situated in the third level of Figure 10.1. There is a relation of hyponymy from bottom to top, with the more specific metonymies semantically implying the more generic ones. In what follows, some of the illustrative examples are briefly commented upon. The first two sentences on the far left of Figure 10.1 exemplify the RESULTANT SITUATION FOR CAUSING SITUATION metonymy; e.g., *Be rich in ten months!* is an exhortation to act in such a way (ACTION) in order to be rich (RESULT). Note that the imperative construction *coerces* a metonymic action interpretation of *be rich* in this case (see section 8). Another pervasive metonymic principle is illustrated by the PERCEPT FOR CAUSE metonymy: the question *What's that* ***noise*** is about the *cause* of the noise and the subsequent noun phrase identifies the source of the noise, i.e., the CAUSE, here a natural force. Related to this metonymy is the metonymy that connects a SYMPTOM to its CAUSE, where the cause ranges from diseases and emotions to more permanent character traits. When a person blushes, this is routinely interpreted as indicating some emotional state (such as shame, embarrassment). Bodily symptoms play an important role in identifying diseases; it is therefore not surprising that many ailments such as *whooping cough* are conventionally named by their symptoms. Finally, character traits are also quite naturally metonymically inferred from overt behavior. Thus *jumpy* is nowadays conventionally used to convey the meaning 'nervous' and even seems to have acquired the status of a post-metonymy in the sense of Riemer (2002) (see section 5.2).

In conclusion, metonymy is an extraordinarily rich source for the construction of new meanings whose impact on language use and conceptual structure and whose interaction with grammatical form is comparable to that of metaphor. Among the desiderata for future research the following are especially significant: (i) to establish criteria that permit distinguishing between metonymic intra-domain mappings and metaphorical inter-domain mappings; (ii) to remove, or at least, reduce, some of the terminological heterogeneity in the naming of metonymies; (iii) to search for high-level metonymies from which the rich array of lower-level metonymies can be derived; (iv) to do more comparative work on the exploitation of specific high-level metonymies across languages; (v) to explore the role metonymy plays in the acquisition of the lexicon; (vi) to carry out experimental work testing the cognitive reality of metonymic processes in language production and comprehension.

Notes

1. An exception is Seto (1999), who argues that taxonomic relations (hyponymy and hyperonymy) cannot constitute the basis for metonymic mappings. In this respect, Seto's approach appears to be in accord with *Rhetorica ad Herennium*, where synecdoche is restricted to MEMBER–SET or SUBSET–SET relations (see Burkhardt 1996: 177–178). According

to Seto, synecdoche is based on hyponymically organized conceptual relations whereas metonymy is grounded in spatiotemporal 'real-world' contiguities and, by extension, contiguity relations among abstract concepts. Thus, cases such as *ticket* for 'traffic ticket' (HYPERONYM FOR HYPONYM) or *(daily) bread* with the target meaning 'food' (HYPONYM FOR HYPERONYM) do not qualify as metonymies in Seto's (1999: 114) sense, but are regarded as instances of synecdoche. Seto's terminology is, however, somewhat at odds with the normal understanding of the terms 'synecdoche' as a part–whole and whole–part and 'metonymy' as contiguity relation like cause–effect, producer–product, essential property–thing, etc.

2. Dirk Geeraerts (p.c.) argues against this view as being based on the metalinguistic (metaphorical) conceptualization of concepts as sets.

3. It should be noted that Goossens himself is reluctant to call these meaning shifts metonymic.

4. In argumentation theory (see Feyaerts 1999: 318, who cites van Eemeren, Grootendorst, and Snoeck-Henkemans 1996 in this regard), the ubiquity of reasoning by association or by contiguity relations such as 'cause' and 'effect' or 'a person X' and 'X's actions' is well known.

5. An analogous argument is developed in Lakoff and Johnson (1999: 66–67) with regard to 'dead' metaphors.

6. The difference between *John enjoyed the beer* and *Don is likely to leave* is, however, that in the former case the metonymic target, e.g., John's enjoying the *drinking* of the beer, is not at all coded in the sentence, whereas in the latter case the target, i.e., *Don's leaving*, can be directly read off the sentence itself.

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