How Metonymic Are Metaphors?

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Abstract

Metonymy and metaphor are assumed to form a continuum with fuzzy cases between these categories. The paper focuses on the intermediate notion of *metonymy-based metaphor*. Four sources which may give rise to metonymy-based metaphor are distinguished: (i) a common experiential basis of source and target domain, due to the relationships of correlation and complementarity, (ii) conversational implicature, illustrated in the areas of implicated result and causation, implicated possession, and implicated purpose and activity, (iii) the taxonomic structure of categories, (iv) cultural models, exemplified by way of our folk understanding of physical force, communication and language, and emotion and physiological reaction.

Key words: *metonymy-based metaphor, metonymic relationship, metonymy-metaphor continuum, category, partial metonymy, full metonymy, submetaphor, conflation, deconflation, primary scene, primary metaphor, implicature, cultural model*

1. Introduction[1]

The distinction between the notions of *metaphor* and *metonymy* is notoriously difficult. In cognitive linguistics, metaphor is usually defined as a mapping across two conceptual domains, while metonymy is defined as a mapping within a single conceptual domain (see e.g. Lakoff and Turner 1989: 103). The notion of *conceptual domain* is thus crucial to defining metaphor and metonymy as well as distinguishing one from the other. In Langacker's (1991: 547) definition, a conceptual domain is "[a]ny coherent area of conceptualisation relative to which semantic structures can be characterised (including any kind of experience, concept or knowledge system)." Conceptualisations as well as one's experiences, concepts and knowledge systems are necessarily subjective and may thus differ from person to person although there is, of course, a large amount of intersubjective agreement on our experiences. We need to be aware of the possibility, however, that people's characterisations of semantic structures including figurative language may be different. This of course also applies to characterisations of language by linguists.

For example, in pointing out the experiential basis of metaphor, Lakoff (1993: 240). discusses, amongst other metaphors, MORE IS UP and states that "the MORE IS UP metaphor is *grounded in experience—* in the common experiences of pouring more fluid into a container and seeing the level go up, or adding more things to a pile and seeing the pile get higher." Taylor (*XXX, 1995: 138) takes up this issue and argues that height is literally correlated with quantity and that this natural association between quantity and vertical extent is one of

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metonymy. It is only when more abstract instances of addition are involved that metaphor takes over as, for example, when one speaks of *high prices*. In our application of scholarly categories to natural language, we obviously face the same phenomenon of fuzzy boundaries that characterises natural categories. We will, therefore, look at literalness, metonymy and metaphor as being potentially located along a continuum. The implications of the "literalness-metonymy-metaphor continuum" will be discussed in the following section.

2. The literalness-metonymy-metaphor continuum

A metonymy-metaphor continuum, which also shades over to literal extensions, has already been suggested by Taylor (*XXX, 1995: 175). Table 1 illustrates different usages of the attributive adjective *high* and its gradual transition from literalness via different stages of metonymy to metaphor:

literal		metonymic		metaphoric
(a) *high tower*	(b) *high tide*	(c) *high temperature*	(d) *high prices*	(e) *high quality*

Table 1: Literalness-metonymy-metaphor continuum

High in (a) is used literally in referring to verticality only; in (b) *high* is "partially," or weakly, metonymic in that it refers to both vertical and horizontal extension, i.e. the metonymy involved is UP FOR UP AND MORE; *high* in (c), *high temperature*, is "fully" metonymic in that it substitutes an entity within the same conceptual domain: the scale of verticality stands for degrees of temperature, i.e. UP FOR MORE. People might also see this metonymic situation as one

of EFFECT FOR CAUSE: the warm temperature makes the thermometer rise. *High* in (d), *high prices*, vacillates between a metonymic and metaphorical interpretation. Some people may associate *high prices* or *rising prices* with a rising line in a graph as used in stock reports. The graphic representation of a price belongs to the same conceptual domain as the price itself but is a different facet of it. This metonymic understanding may be described as THING FOR ITS REPRESENTATION. Other people may associate a high price with the amount of money a sales item costs. In this case, they may see 'height' (of a price) and 'quantity' (of money) either as belonging to the same conceptual domain and understand *high prices* metonymically as UP FOR MORE, or they may see them as belonging to different domains and understand *high prices* metaphorically as MORE IS UP. *High* in (e), *high quality*, refers to a scale of evaluation, the upper end of which is 'good.' We cannot easily think of evaluation and verticality as belonging to the same conceptual domain; hence this situation is seen purely metaphorically as GOOD IS UP.

The notion of a continuum ranging from literalness via metonymy to metaphor ties in with the developmental model of primary scenes and primary metaphors and the notion of (*de*)*conflation* proposed by Grady (1997) and Grady & Johnson (*XXX). Figure 1 represents four stages on the literalness-metonymy-metaphor continuum and illustrates these by means of the concepts UP and MORE.

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      UP                  MORE          metaphor
                                        MORE IS UP

deconflation        ( UP | MORE )       full metonymy
                                        UP FOR MORE

conflation          ( UP + MORE )       partial metonymy
                                        UP FOR UP + MORE

                        UP              literalness
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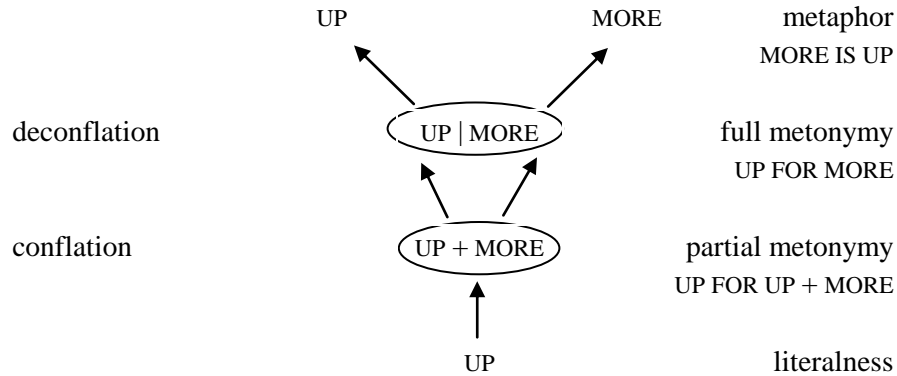
Figure 1: From literalness to metaphor: UP and MORE

The literal stage is represented by the experience of a single concept such as verticality. The stage of conflation, indicated here by UP + MORE, applies to a "primary scene" such as seeing the level of fluid in a container go up when more fluid is poured into it. Infants experience this highly frequent primary scene in the nurturing contexts. itself in two ways:. The two manifestations of the scene, rise of a level and increase of quantity, occur simultaneously and are so intimately correlated in our experience that even most adults are probably not aware of them. The conceptual conflation of UP and MORE is indicated in Figure 1 by the ellipsis uniting both manifestations under one concept. Grady (1997: 22) appropriately refers to such strong associations in our cognitive representation of the world as "conceptual binding."[2] If one of the manifestations is used to stand for the conflated concept as a whole as in *high tide*, we have partial metonymy.

The correlated manifestations of a single event may, however, also be seen as distinct concepts. Applied to children's cognitive

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[2] As is known from Piaget's experiments, children in the preoperational stage consistently judge the quantity of the fluid in a glass by the height of its level, ignoring other dimensions such as the glass's width. To them, quantity is literally height. Even adults may have preserved some of this preoperational thought.

development, Grady (1997: 23) refers to this developmental stage as "deconflation." This situation is indicated in Figure 1 by a vertical line separating the two concepts, which are, however, still united by the same domain. The metonymic relationship between UP and MORE, for example, may be exploited as in the following dialogue:

(1) Attendant: *How much gas do you want?*
     Driver: *Just fill her up.*

The customer answers a question about a quantity by metonymically naming a level of height. His response thus involves a "full" metonymy in the sense of substituting UP FOR MORE and might be interpreted as 'I want the quantity of gas that fits into the tank.' Unlike metaphorical relationships, metonymic relationships are in general reversible. The reversed metonymy MORE FOR UP is used by the customer in the same gas station situation:

(2) Attendant: *Shall I fill her up?*
     Driver: *Yes, put in as much as she can take.*

At a further stage of development the two manifestations of a single event may be seen as belonging to different conceptual domains. Provided that the two entities belong to the same general ontological category,[3] such relationships may be exploited metaphorically. Metaphors which arise from primary scenes and involve conflation and possibly deconflation are referred to by Grady (1997) as "primary metaphors." Since their immediate basis is metonymic, they will be referred to in this paper as "metonymy-based

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[3] More specifically, Grady (n.d.) notes the following constraints on the relationships underlying metaphors: they may not involve "separate entities (such as the famous ham sandwich and the restaurant customer), distinct temporal stages (cf. Action-for-Result, Result-for-Action), or distinct ontological categories (cf. Instrument for Action)."

metaphors." The metaphor MORE IS UP as in *high prices* and *rising prices* is thus seen as based on a metonymic relationship.

The grounding of metonymic concepts is, according to Lakoff & Johnson (1980: 39), "in general more obvious than is the case with metaphoric concepts." Hence, metaphors which are grounded in metonymy are more basic and natural than those which are not, or not only, have a metonymic basis. For example, the expressions *soaring prices*, *sky-rocketing prices* and *exploding prices* are felt to be more metaphorical than *high prices* and *rising prices*. The modifying expressions are more likely to evoke specific source-domain scenes of their own, combining verticality and rapid motion up to great heights. *Soaring* may evoke the image of a glider or bird flying high up in the air, *sky-rocketing* may make us see a scene of a rocket launched into the sky, and *exploding* may make us visualise an upward-bursting explosion. These expressions are understood metaphorically primarily due to our recognition of the specific conceptual domains they belong to. The metaphors involved might more specifically be described as PRICE FLUCTUATIONS ARE FLYING OBJECTS or PRICE CHANGES ARE EVENTS. At the same time, the metonymy-based metaphor MORE IS UP applies but only as a submetaphor within a metaphor. We might describe the complex metaphors involved in *soaring prices* as MORE OF A PRICE IS HIGHER IN A BIRD'S FLIGHT. Obviously, the metonymic basis of this metaphor is minimal.

The following discussion of metonymy-based metaphors will focus on the stages in the metonymy-metaphor continuum where metonymy shades over into metaphor. There appear to be four types of metonymic sources of metaphor. The development of the MORE IS UP metaphor illustrated a situation in which two conceptual domains derive from a metonymic relationship and ultimately from a common experiential basis (Section 3). A second metonymic source of metaphor relates to the pragmatics of a speech situation which gives rise to conversational implicature (Section 4). A third type of metonymy-based metaphor derives from the taxonomic structure of

categories (Section 5). A fourth area in which metonymy-based metaphor is found is that of cultural models (Section 6).

3. Common experiential basis

Any two entities, events or domains that are experienced together are conceptually contiguous and form a "metonymy-producing relationship" (Kövecses & Radden 1998, Radden & Kövecses 1999), or, for short, a metonymic relationship. Metonymic relationships may give rise to metonymy and possibly metaphor. Two types of metonymic relationships that are grounded in a common experiential basis and may lead to metaphor will be discussed here: (i) correlation and (ii) complementarity.

3.1. Correlation

The notion of *correlation* as used in the empirical sciences involves an interrelationship between two variables in which changes in one variable are accompanied by changes in the other variable. Statistically, the degree of a correlation is expressed as a coefficient based on scores along the scales of the two variables. Correlation coefficients allow the researcher to make predictions, but they do not imply a causal relationship between the two variables.

   Correlation is also a phenomenon that people observe in the world around them. Proverbs provide a wealth of such correlated observations. For examples, the proverbial expression *What's good for General Motors is good for America* illustrates a correlation in which two variables correlate positively along an evaluative scale: a change for the better for General Motors correlates with a change for the better for America. Positive correlations tend to evoke a causal interpretation: 'something is good for America *because* it is good for General Motors.*'* Negative correlations, by contrast, do not invite a causal interpretation: thus the proverb *The nearer the church, the*

farther from God is not understood in the sense of 'someone is farther from God *because* he is nearer to church,' nor does the proverb *Short visits make long friends* mean 'they are long friends *because* they pay short visits.' The default type of correlation in our experience of phenomena in the world is that of positive correlation; this is, in fact, the only type of correlation that pertains to metaphor.

In order to correlate two variables, they have to be conceptually contiguous. The correlation of quantity and verticality provides a perfect example of conceptual contiguity in that both variables originate from the same experiential basis. We also tend to interpret the positive correlation between UP and MORE in a causal sense, which strengthens the link of contiguity. In accordance with the reversibility principle of metonymic relationships, the flow of causation may be seen in either direction: 'something is more *because* its level is higher' or 'the level is higher *because* its quantity is more.'

Correlation underlies many metaphors as their metonymic basis. Apart from MORE IS UP / LESS IS DOWN, the following selection of conceptual metaphors correlates domains which can be traced back to a common experiential basis:

(3) a. HAPPY IS UP / SAD IS DOWN
   b. FUNCTIONAL IS UP / DYSFUNCTIONAL IS DOWN
   c. IMPORTANT IS BIG / UNIMPORTANT IS SMALL
   d. ACTIVE IS ALIVE / INACTIVE IS DEAD
   e. SIMILARITY IS CLOSENESS / DIFFERENCE IS DISTANCE

The metaphors HAPPY IS UP and SAD IS DOWN are visually reflected in people's facial expressions and drawings of such faces, in which their mouths and eyebrows are drawn up to express happiness and pulled down to convey sadness. We also witness the physical expression of HAPPY IS UP when a football player, after scoring a goal, throws up his arms and jumps for joy, and we may describe this reaction by metonymically referring to his emotional state of happiness.

Physical counterparts of FUNCTIONAL IS UP and UNIMPORTANT IS SMALL as in *The computer systems are down* may be seen in levers that are flipped up or down to start or stop an engine or turn a light on or off, an antenna that has to be put up to work or an umbrella that is put up to be used.

The metaphors IMPORTANT IS BIG as in *He is a big man* and UNIMPORTANT IS SMALL as in *The little guy always has to pay* are rooted in spatio-physical situations: IMPORTANT IS BIG applies to the spacious environment that important persons tend to reserve for themselves. For example, traditionally the most important person at the table has the biggest chair or the boss has the biggest office.

Also the metaphors ACTIVE IS ALIVE and INACTIVE IS DEAD as in *The party was dead* are inherently correlational: the more alive someone or something is, the more active he, she or it is. The common experiential basis of 'active' and 'alive' is also reflected in the present-day meaning of *lively* and in the polysemy of the Old English adjective *cwicu*, which is related to Latin *vivus* and Greek *bios* and meant both 'active' and 'lively' and, as a particular form of liveliness, developed the present-day sense of 'quick'.[4]

The common experiential basis of the metaphors SIMILARITY IS CLOSENESS (*This is close to the truth*) and DIFFERENCE IS DISTANCE (*This is far from the truth*) may be harder to detect. As argued in Radden and Matthis (2002), these metaphors are grounded in our folk understanding of similarity and difference: similar things are put together as reflected in the proverbial expression *Birds of a feather flock together*, whereas different things are put apart as expressed in *Oil and water don't mix*. Also sorting tasks in experimental psychology are based on the assumption that similar stimuli are sorted together while different ones are put apart. The relationship between spatial closeness/distance and similarity/dissimilarity leans, however, towards the metaphor pole of the metonymy-metaphor continuum. Thus, CLOSENESS may metonymically stand for

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[4] Cf. also the words *quicksilver* from *argentum vivum* 'living silver,' *quicksand* 'mobile sand' and the meaning of the German word *keck* 'lively, sprightly.'

SIMILARITY as in *Are they similar? – Yes, they come very close*, but its reversed metonymic use is not possible.

Correlations are also often involved in the metaphorical mappings between source and target domains. For example, the metaphor ACTION IS MOTION involves temporal mappings which are rendered as correlations such as SPEED OF ACTION IS SPEED OF MOTION as in *He flew through his work* and STARTING AN ACTION IS STARTING OUT ON A PATH as in *We have taken the first step*. The former correlation is measured by scales—the faster the action, the faster the motion, the latter correlation involves a once-only change. If the tenet is accepted that correlation is a fundamentally metonymic relationship, correlational mappings within a conceptual metaphor should also be seen as metonymic. These metonymic relationships within metaphor can, however, not be expressed as independent metonymies.

3.2. Complementarity

The relationship of complementarity is a special type of a part-part relationship in which the complementary, or opposing, parts are tightly linked to each other and establish a unity. Complementarity is a metonymy-producing relationship as has been shown by Voßhagen (1999), who adduced a wealth of examples where, especially in American slang, expressions are used to convey the opposite of what they normally mean. For example, *bad* may be used in the sense of 'good,' *insane* may mean 'positive, healthy state of mind' and a *big idea* is an 'unwelcome suggestion.' The latter example may be found in an ironic statement—in fact, irony may also be viewed as a type of opposition metonymy.[5] Apart from the special situational contexts of slang and irony, the general metonymic use of a complementary term

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[5] The metonymic substitution of a complementary term has even become lexicalised in the word *arrow*: *arrow* derives from Latin *arcus* 'arc, bow,' i.e. it originally referred to the bow, which, together with arrows, constitutes a complementary pair.

for the intended term is heavily constrained by the need of communicative clarity. Since both terms of a complementary pair have the same conceptual status, we cannot, as a rule, substitute one for the other. Thus, we do not substitute the complementary term 'husband' for 'wife' or 'teacher' for 'student.' When the complementary terms have different conceptual status, they may be used in a figurative sense. This applies, amongst others, to the complementary pairs form and meaning/concept (see 6.2.) and body and mind.

In the Western-Jewish tradition, body and mind, or body and soul, are seen as the two parts which constitute a human.[6] The close interdependence of body and mind is reflected in proverbial expressions such as *mens sana in corpore sano* or *keep body and soul together*. It is also reflected in the metaphor THE MIND IS A BODY, which enables us to understand the impalpable workings of the mind in terms of the palpable workings of one's body. Thus, we have metaphorical expressions such as *to have a strong will*, *to handle a situation*, *to turn one's back on an issue*, *to swallow an idea*, etc. Many of these metaphorical expressions are relatable to a common experiential basis: thus, we often use body language to illustrate or "underline" our thoughts. We might, for example, clench our fist in talking or thinking about a 'strong will,' literally use our hands in 'handling' a situation, turn our back when we don't want to get involved, etc. These are, of course, metonymic situations: clenching one's fist or turning away evokes a person's mental state, attitude or action that commonly goes with this particular bodily gesture. Specific elaborations of THE MIND IS THE BODY metaphor such as *to swallow an idea* are, of course, much harder to relate to a common experiential basis: what does *accepting an unpleasant idea*

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[6] The fact that the metaphysical issue of body and mind has been so vigorously debated by philosophers confirms the well-established complementary status of these notions. The particular stance taken by philosophers—dualism of body and mind or single unit—is irrelevant for the folk understanding of the pair BODY AND MIND or BODY AND SOUL.

metonymically share with *swallowing food*? This is, however, not the decisive point. The conceptual metaphor THE MIND IS THE BODY is claimed to be based on our common complementary experience of BODY and MIND. Specific linguistic realisations of the conceptual metaphor are, just like specific MORE IS UP metaphors discussed above, to be seen as instances of metonymy-based metaphors which are closer to the metaphor end of the metonymy-metaphor continuum. (Also see Dirven *XXX).

Complementary terms also closely linked to the whole they are parts of. This part-whole relationship is widely exploited in metonymies in which the upper end of a scale is used to stand for the whole scale (*How old are you?* 'what is your age?') and, conversely, the whole scale is used to stand for its upper end (*I am beginning to feel my age* 'I am beginning to feel that I am getting old'). The relationship between complementary terms and the unity they form is also exploited metaphorically: metaphors such as LOVE IS A UNITY and MARRIAGE IS A DURABLE BOND BETWEEN TWO PEOPLE and metaphorical expressions such as *to be cemented together*, *to be bound together*, *to be tied to each other*, etc.[7] reflect our firm belief in the inseparability of a complementary relationship, which, as argued, is essentially metonymic in nature.

4. Implicature

A second major metonymic source of metaphor is the process of conversational implicature. The area of grammaticalisation provides a good illustration of metaphor emerging from the pragmatics of a situation. Grammatical categories tend to develop gradually rather than abruptly. For example, the usage of *to go* as a future marker is likely to have evolved along a continuum of metonymically related

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[7] See Kövecses (1986 and other publications), Kövecses, Palmer and Dirven (this volume) and Quinn (1987) for metaphors of love and marriage.

senses as shown by Heine, Claudi & Hünnemeyer (1991: 70ff), whose examples are repeated here under (4):

(4) a.   Henry is going to town.
    b.   Are you going to the library?
    c.   No, I am going to eat.
    d.   I am going to do my very best to make you happy.
    e.   The rain is going to come.

The literal sense of 'spatial movement' as in (4a) may lead to the implicature of 'intention' as in (4b) and 'intention without spatial movement' as in (4c) and may, further on, invite the conversational implicature of 'prediction' as in (4d) and 'prediction without intention' as in (4e). These "context-induced reinterpretations" have become conventionalised by pragmatic strengthening.[8] In the case of the future sense of *be going to*, these processes resulted in a metaphor which might be described as THE FUTURE IS FORWARD MOTION. Heine, Claudi & Hünnemeyer (1991: 60ff) refer to this type of pragmatically motivated metaphors as emerging metaphors as opposed to "creative metaphors," which involve a "willful violation of conceptual/semantic rules."

   Other classic examples of grammaticalisation processes leading to metaphor are provided by the deontic and epistemic senses of modal verbs. While Sweetser (1990), amongst others, argued that the world of reasoning as expressed by epistemic modality is metaphorically understood in terms of the socio-cultural world as expressed by deontic modality. Other scholars account for the polysemy of modal verbs by tracing their evolution of senses back to context-induced implicatures.[9] For example, the deontic meaning of intention of *will*

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[8] Cf. also Nicolle's (1998) relevance theory perspective on the grammaticalisation of *be going to* and Langacker's (1991: 219-220) analysis of this process as subjectification.

[9] See Radden (1999) for a discussion of different explanations of the deontic/epistemic polysemy of modal verbs.

is assumed to invite the implicature that the future state is highly likely to occur, and hence leads to the epistemic meaning of prediction.

A given sense of an expression and its conversationally implicated sense are part of the same domain, i.e. they are conceptually contiguous and form a metonymic relationship. Metonymic relationships which are particularly prone to inviting conversational implicatures and may lead to emerging metaphor involve the following implicated elements: (i) implicated result and causation, (ii) implicated possession, and (iii) implicated purpose and activity.

4.1. Implicated result and causation

In illustrating the experiential basis of metaphor, Lakoff (1993: 240) provides as a further example the metaphor KNOWING IS SEEING: "The experiential basis in this case is the fact that most of what we know comes through vision, and in the overwhelming majority of cases, if we see something, then we know it is true." This is, however, not a description of a metaphorical situation, in which we understand one thing in terms of something else, but of a metonymic situation in which we infer an additional aspect of meaning by using conversational implicature. The standard test of conversational implicature, its canceling, may also be applied here. For example, I may see red spots but I know that this is an illusion, or I see a beautiful sunset but I know that this is not true because it is not the sun that moves but the earth. As observed by Lakoff, however, in the overwhelming majority of cases we take something we see to be true. This is reflected in the proverbial expression *seeing is believing* and the tautology in *I saw it with my own eyes* to indicate certainty (Sweetser 1990: 33). Visual information is assumed to be more reliable than information gained through other sources. This is nicely illustrated in the greater veracity we place on an eyewitness report than on one based on hearsay.

The metonymic relationship between seeing and knowing may give rise to the partial metonymy SEE FOR SEE AND KNOW and the full, substitutive metonymy SEE FOR KNOW. In the former case, a stimulus is processed both visually and mentally. It might apply to a situation in which two chess-players brood over a chess-problem and one of them finds the solution, visualizing the moves on the chessboard, and says, *I see the solution*. The latter case of metonymy only involves mental processing. It might apply to a situation in which a person answers the question *Do you know what I mean?* by saying, *Yes I see what you mean* or *I see your point*, where *see* is used metonymically as a substitute expression for *know*. The development of the Germanic preterit present verbs, whose preterit forms came to adopt present senses, probably proceeded through these two metonymic stages. First, the idea of 'I have seen' as in Latin *vidi* probably gave rise to the implicature 'I have seen and (therefore) know' and the metonymy SEE FOR SEE AND KNOW, and then the implicature became pragmatically strengthened to 'I know,' i.e. the metonymy SEE FOR KNOW.[10]

In the partial metonymy SEE FOR SEE AND KNOW, the event of seeing precedes that of the implicated state of knowing and is also seen as bringing it about. Thus, we may say *I saw it, therefore I know it* or *I know it because I saw it*, but we may not reverse this order and say *#I know it, therefore I saw it* or *#I saw it because I knew it*. The causal interpretation of purely temporally linked events is also a matter of implicature and is known by the principle *post hoc ergo propter hoc*. The relationships between precedence and causation on the one hand and subsequence and result on the other hand are also metonymic. Moreover, both metonymies may also be seen as partial, i.e. as PRECEDENCE FOR PRECEDENCE AND CAUSE and SUBSEQUENCE FOR SUBSEQUENCE AND RESULT, or as fully substitutive, i.e. as PRECEDENCE FOR CAUSE and SUBSEQUENCE FOR RESULT. These causal

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[10] The Old English verb *witan* 'know' derives from an Indo-European root *weid-* 'see.' It is still preserved in the English words *wise*, *witness*, *wit*, *wot*, *wis* arch. 'know,' all of which have completely superseded the old meaning of 'see.'

metonymies are superimposed on the SEE FOR KNOW metonymies. As in the representation of the relationships between UP and MORE in Figure 1, we may represent the continuum of the increasingly complex metonymic network underlying the metaphor KNOWING IS SEEING as illustrated in Figure 2.

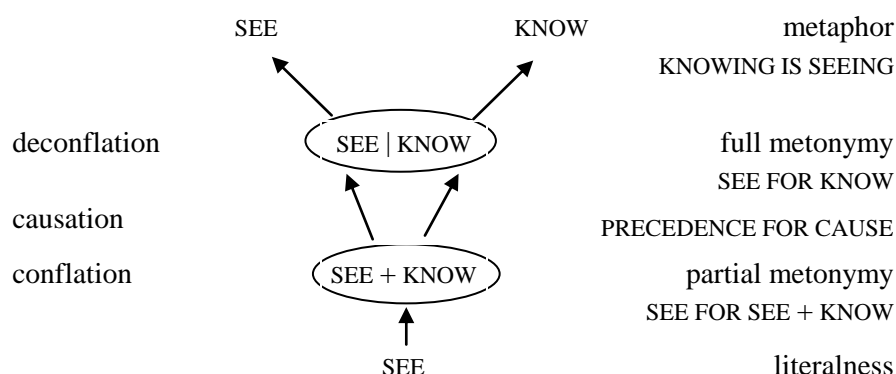|		
	SEE KNOW	metaphor
		KNOWING IS SEEING
deconflation	(SEE | KNOW)	full metonymy
		SEE FOR KNOW
causation		PRECEDENCE FOR CAUSE
conflation	(SEE + KNOW)	partial metonymy
		SEE FOR SEE + KNOW
	SEE	literalness

Figure 2: From literalness to metaphor: SEE and KNOW

A conflation of SEE and KNOW has been found in language acquisition studies, where children do not distinguish between seeing and knowing and express the complex notion as *see* (see Lakoff & Johnson 1999: 86 and Grady & Johnson *XXX). The intermediate metonymies of causation and result are not fully depicted in Figure 2 and only represented by PRECEDENCE FOR CAUSE.

Implicatures of causation are not restricted to sequential events but are also found in correlational relationships, which, by definition, do not involve causality. Thus, *First come, first serve* expresses a correlation between coming and being served but also invites a conditional or causal implicature: 'if you come first, you will be served first' or 'since you came first you will be served first.' Likewise, the correlative relationship expressed by *Once bitten, twice shy* gives rise to the causal implicature 'since I was bitten once, I am shy twice as much.' The metonymic relationship between

CORRELATION and CAUSATION fosters its metaphorical application as CAUSATION IS CORRELATION. Thus, causation is metaphorised as accompaniment, or more generally, correlation as in *An increase in pressure* accompanies *an increase in temperature* (Lakoff & Johnson 1999: 218).

This section shall be concluded by mentioning two more metaphors which may be accounted for by causal implicatures: WELL-BEING IS WEALTH as in *He has a rich life* and STATES ARE SHAPES as in *You are in good shape*. Most people will probably relate wealth to well-being on the assumption that a good fortune will guarantee a good life, and similarly most people will probably assume that a good physical shape is tantamount to good health.

4.2. Implicated possession

Expressions such as *to hold a driver´s license, to hold power, to hold a belief* and *stock holder* point to a conceptual metaphor POSSESSION IS HOLDING. The metaphor is, however, grounded in metonymy. Heine (1997: 83-108) found that languages make use of six main event schemas as templates for expressing predicative possession: the Action Schema, the Location Schema, the Companion Schema, the Goal Schema, the Genitive Schema and the Topic Schema. At least the first four event schemas can be analysed as situations from which a resulting state of possession may be implicated—the latter two schemas are also syntactically determined.

The Action Schema denotes possession by means of verbs meaning 'seize,' 'take,' 'get' and 'hold.' An utterance such as 'The man has taken the car' (from Nama, a Khoisan language; Heine 1997: 92) readily invites the implicature that the man now possesses the car. The Action Schema is the pattern commonly found in European languages: English *have* probably originates from the Indo-European root **kap-* 'seize' as in Latin *capere*, and Spanish *tener* goes back to Latin *tenere* 'hold.' These historical data suggest that

the metaphor POSSESSION IS HOLDING has emerged by implicature and pragmatic strengthening via the metonymy HOLDING FOR POSSESSION.

Also the event schemata of Location (*Y is located at X*), Companion (*X is with Y*) and Goal (*Y exists for/to X*) may readily implicate a resulting state of possession. Various languages have developed the sense of possession with these event schemata. Heine (1997: 95) notes one area where the Goal Schema is also found to express possession in English: the use of the Goal preposition *to* in the expression *secretary to the president.* This directional-possessive usage of *to* is, in fact, fairly widespread in English: *the preface to a book, the prelude to war* and possibly also *essential to life.* These expressions may be described as instances of a metaphor POSSESSION IS REACHING A GOAL, which undoubtedly has a metonymic basis.

4.3. Implicated purpose and activity

The metaphor PURPOSES ARE DESTINATIONS as in *We've reached an agreement* or *It took him hours to reach a state of perfect concentration* is, according to Lakoff (1993:240), grounded in our experience: "to achieve most of our everyday purposes, we [...] have to move to some destination." Since purposes belong to a different domain from destinations, this situation is metaphorical. However, the metaphor is based on two implicated metonymies: PLACE FOR (PLACE AND) ACTIVITY and DESTINATION FOR (DESTINATION AND) PURPOSE.

The PLACE FOR ACTIVITY metonymy applies to places that are associated with events which typically occur at these places. Many spatial areas are specifically designed to be used as the setting for certain kinds of activities: playgrounds are designed for children to play in, hospitals are for ill people to be medically treated in, beds are made for us to sleep in, etc. The association between such man-designed spaces and the activities typically performed there is so tight that the mention of the place suffices to invite the implicature of a special activity. We readily understand *The children are on the*

playground in the sense of 'the children are on the playground and playing there' and *The children are in bed* in the sense of 'the children are in bed and sleeping or getting ready to sleep.' The use of a *but*-sentence reveals our expectations about places and activities typically performed at the places: thus, a sentence such as *I am in my study but can't concentrate* is in conformity with our expectations about the use of a study, while [#]*I am in the bathroom but can't concentrate* does not conform to our expectations about bathrooms.

Places which are the destinations as goals of our motion of course invite the same implicatures: *The children are going to the playground* implicates that 'the children are going to play there' just like *The children are going to bed* implicates that 'the children are going to sleep.' Since destinations involve deliberation, mention of the destination of a motion also invites the implicature of the purpose, i.e. the metonymy DESTINATION FOR PURPOSES. The complex metonymic pattern establishing the meaning of sentence (5a) may therefore be represented as in (5b) and glossed as in (5c):

(5) a.   *We have reached the border.*
    b.   (We have reached) DESTINATION (= DESTINED PLACE FOR ACTIVITY) FOR PURPOSE (= REACH DESTINATION FOR ENSUING ACTIVITY)
    c.   (We have reached) the border (= the border for crossing the border) for the purpose (of reaching the border in order to cross the border)

A sentence with a metaphorical destination such as *We have reached an agreement* makes use of the same metonymic structure except for the destination, which does not refer to a place, but already specifies the ensuing state of being in agreement.

5. Category structure

A third type of metonymy-based metaphor relates to taxonomic hierarchies of categories. The relation between a category and members included in the category is widely exploited in metonymy: a category as a whole (genus) may stand for one of its members (species) and a member of a category (species) may stand for the category as a whole (genus). Thus, the category 'pill' may be used to stand for one of its salient members, 'birth control pill,' and, conversely, the salient subcategory 'aspirin' may stand for the category 'pain-relieving tablets' as a whole. Metonymic shifts within taxonomic hierarchies possibly account for the majority of semantic changes.

The metonymic, or synecdochic,[11] relationships between categories and salient members may also be exploited in metaphor. Thus, the category 'harm' applies, amongst others, to physical, mental or psychological damage. The metaphor HARM IS PHYSICAL INJURY as found in *Her death hurt him* or *My pride was wounded* is based on the relationship between the category 'psychic harm' and a salient member of this category, namely 'physical injury.' The metaphorical interpretation is possible because 'psychic harm' and 'physical injury' may be seen as belonging to two different domains, and, as is the case in many metaphors, the physical domain serves as a source domain for an abstract target domain. The metaphor is, however, based on a metonymic relationship between PHYSICAL INJURY and PSYCHIC HARM. Physical injury and psychic harm are also often experienced together, and physical injury often causes psychic harm; in addition to their categorial interrelatedness, physical injury and harm thus also have a common experiential basis. Also historical data support this analysis: an earlier sense of *harm* was 'injury,' and

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[11] Seto (1999) argues convincingly that relationships between entities in the world (called E-relations) need to be distinguished from those between conceptual categories (called C-relations). The former relationships are at the basis of metonymy, while the latter are at the basis of synecdoche. The issue is, however, of no relevance here.

mayhem underwent a sense development from 'bodily injury, mutilation' to 'confusion, fear.'

The distinction between the physical and abstract also accounts for the following metonymy-based metaphors: PROPERTIES ARE PHYSICAL PROPERTIES (*big discovery*), A PROBLEM IS A TANGLE (*a knotty problem*) and COMMUNICATION IS LINGUISTIC COMMUNICATION (*People should have a say on the treaty*). In each of these metaphors an abstract category is understood in terms of a concrete member.

Less obvious instances of metaphors based on category inclusion are ACTION IS MOTION (*What's your next move?*) and CHANGE IS MOTION (*She fell in love*). 'Motion' is a salient member of the categories of 'action' and 'change.' A great many actions involve motion. For example, when someone knocks at my door, I do not say *Open the door and come in!*, but *Come in!*, i.e. I use the partial metonymy MOTION FOR MOTION AND ACTION. Likewise, a move in a game of chess consists both of moving a piece and creating a new position; an infant's motion of a piece on the chessboard would not be a move. The aspect of motion may be minimal in the action *He made the first move to end the quarrel* and may be completely absent in *What's your next move?* 'what are you going to do next?' These usages are, therefore, much closer to the metaphorical end of the metonymy-metaphor continuum.

Also changes may involve motion and are often metonymically expressed in English by referring to the motional aspect, i.e. as MOTION FOR MOTION AND CHANGE: the vase which I accidentally drop 'goes' to pieces, the button of my coat 'comes' off, etc. As with actions, the motional aspect may be nearly or completely absent in a change as in *go bankrupt* or *come true* and thus give rise to metonymy-based metaphor.

The metaphor CAUSE IS FORCE as in *The study sparked a controversy*, lastly, may also be seen as based on category inclusion. Causes are most immediately experienced in the shape of physical forces and typically also involve the exertion of physical force. Physical force is needed to start up the engine of a car by either turning the ignition key or pushing the car. We also transfer this

experience onto abstract domains and speak of *being convinced by the force of his argument*. Since changes are understood as motion, caused changes are metaphorised as caused motion and, therefore, typically expressed by caused-motion verbs such as *send* and *leave* as in *The explosion sent me into a tailspin* and *The fire left 200 people homeless* (cf. also Lakoff & Johnson, 1999).

6. Cultural models

Cultural models may provide a fourth source of metonymy-based metaphors. Quinn & Holland (1987: 4) define cultural models as "presupposed, taken-for-granted models of the world that are widely shared [...] by the members of a society and that play an enormous role in their understanding of that world and their behavior in it." This definition shall also subsume folk models, i.e. naive, and usually mistaken, theories of the world. Cultural and folk models are important to our cognition because they interconnect distinct phenomena of the world in a coherent and explanatory way and thus open up new relationships, which may be exploited by metonymy and metaphor. We will look at three areas in which cultural or folk models account for metonymy-based metaphors: (i) physical forces, (ii) communication and language, and (iii) emotions and their physiological reactions. Folk models probably also underlie metaphors in the areas of perception, morality, and life, which, however, shall not be discussed here.

6.1. Physical forces

McCloskey (1983) has shown that people hold a naive theory of motion, which is known as *impetus theory*. According to this folk theory, objects are set in motion by imparting to them an internal force, or "impetus," which keeps the object in motion until it gradually dissipates. In this model, forces are contained in the

moving objects themselves and propel them into a certain direction. A person who lives by the impetus theory may understand expressions such as *His punches carry a lot of force* and *Put more force behind your punches* literally, metonymically or metaphorically. In the literal interpretation, force is directly quantifiable and ponderable, in the metonymic interpretation, force is related to a substance contained in, or put into, a container, i.e. SUBSTANCE FOR FORCE, and in the metaphorical interpretation, force is understood as a substance, i.e. FORCE IS A SUBSTANCE CONTAINED IN AFFECTING CAUSES and FORCE IS A SUBSTANCE DIRECTED AT AN AFFECTED PARTY (Lakoff *et al.* 1994).

6.2. Communication and language

According to Reddy (1979), seventy percent of the expressions used to describe communication in English are based on the CONDUIT metaphor. Reddy's main concern was the impact the metaphor has on our thinking, a view which takes the existence of the metaphor for granted and does not ask how it is motivated. The CONDUIT metaphor is so successful precisely because it reflects what most people take for reality. The conduit metaphor involves two aspects: that of the relationship between form and meaning and that of communication as transfer.

   According to the folk model of language, meanings reside in word forms and other linguistic "containers" as in *This chapter contains a lot of content*. Since 'form' and 'content' clearly belong to different domains, their relationship is metaphorical and has been described as THE CONTENT IS CONTAINED IN THE STIMULUS, where *stimulus* refers to the "linguistic or non-linguistic entity which is understood to have conventionalized meaning [...]" (Lakoff et al. 1994). The relationship between form and meaning or content is, however, also metonymic. Form and content are complementary notions which are assumed to be inseparable. They therefore allow us to use the form of a word to stand metonymically for the conceptual content it expresses. The very

nature of language is in fact based on the metonymy FORM FOR CONTENT/CONCEPT (cf. Lakoff & Turner 1989 and Radden & Kövecses 1999). The form of a word may even be affected by its conceptual content as shown by expressions such as *four-letter word*, *ugly word* or *bad language*, in which a word as a whole, i.e. including its form, is conceived of as negative.

Both the metaphorical view of language as a container filled with content and the metonymic view of language as form standing for content are fully entrenched in the folk model of language, but they are not contradictory. The metonymy FORM FOR CONTENT only needs to be combined with the ubiquitous metonymy CONTAINER FOR CONTENTS, giving rise the metonymy CONTAINER FOR CONTENT, i.e. the metonymic counterpart of the CONTENT IN CONTAINER metaphor.

Our strong belief in the inseparability of a word's form and content makes us also believe that speakers communicate their thoughts by sending content to the hearer. This second aspect of the CONDUIT metaphor is reflected in wordings such as *I didn't get my point across*. Lakoff et al (1994) describe the metaphor as COMMUNICATION IS TRANSFER or, more specifically, THE CONTENT TRAVELS ACROSS TO THE EXPERIENCER. People may literally believe in a kind of telepathic communication of content and only become aware of the fact that form might "travel" as well in situations or danger of misunderstanding, for example in saying *What I am saying is ...*, meaning 'what I mean is...' People also find their folk model of communication as transfer of content confirmed by the omnipresence of communication technology. The aspect of transfer of the CONDUIT metaphor appears to be experienced literally, rather than metaphorically or metonymically.

6.3. Emotions and their physiological reactions

Extensive research carried out especially by Kövecses has shown that emotions are largely understood metaphorically and that physiological reactions of emotion are metonymically related to these

emotions. The relationship between a given emotion and a particular physiological reaction is based on observation of one's own and other people's behavior and is taken to be causal: an emotion causes a physiological reaction. In our folk model of emotions, we may, therefore, conclude from a person's physiological reactions what emotional state he or she is in. For example, when we see a person becoming pale or shaking, we conclude that he or she is terrified.

At least some of the physiological reactions accompanying emotions also shape our metaphorical understanding of them, i.e. some metaphors of emotion appear to have a metonymic basis. For example, Lakoff (1987: 382) suggests in his case study of 'anger' that a folk theory of physiological effects forms the basis of the metaphor ANGER IS HEAT. Thus, one of the physiological effects of anger is increased body heat. This metonymic relationship is elaborated in the metaphors ANGER IS THE HEAT OF A FLUID IN A CONTAINER as in *You make my blood boil* and ANGER IS FIRE as in *He was breathing fire*. In a similar way, the metaphor ANGER IS INSANITY as in *You're driving me nuts* is grounded in the metonymy INSANE BEHAVIOR FOR ANGER as in *He is about to throw a tantrum.* The metonymic folk model of physiological effects probably also accounts for the emotion metaphors LUST IS HEAT, AFFECTION IS WARMTH, LOVE IS MADNESS and LOVE IS FIRE.

7. Conclusion

The paper started out from the assumption that literalness, metonymy and metaphor form a continuum. Metonymy and metaphor do not form clear-cut categories but, like natural categories, display degrees of membership and have fuzzy boundaries. The study focused on that section of the continuum where metonymy shades over into metaphor. It was assumed that, in this transitional area, metaphor may emerge from metonymy or is based on metonymy. Four metonymic sources of metonymy-based metaphors were distinguished: (i) the common experiential basis of two domains, (ii)

the operation of conversational implicature, (iii) the taxonomic structure of categories, and (iv) cultural models.

In view of these findings, the traditional distinction between metonymy and metaphor can no longer be upheld. The classical notions of metonymy and metaphor are to be seen as prototypical categories along a metonymy-metaphor continuum with a wide range of intermediate categories such as metonymy-based metaphor in between. This view also helps to explain the underlying conceptual motivation of many metaphors.

The discussion tried to be open to different possibilities of interpreting a given expression as metonymic or metaphoric. This approach recognises the fact that people may conceptualise things differently. It may also contribute to reconciling the conflicting views laymen and experts, i.e. cognitive linguists, have about metonymy and metaphor. Anybody who ever taught a course on metaphor, or talked to colleagues about metaphor, has in all likelihood come into a situation where their students, or colleagues, expressed strong disbelief at accepting something as an instance of metaphor, insisting that this is literal speech. Both are right in their way. To repeat an example used at the beginning: to the layman, *high* in *high prices* is literal or possibly metonymic since height and quantity are not seen as incompatible with prices but, on the contrary, are part of the same conceptual domain. To the cognitive linguist, *high* in *high prices* is metaphorical because of the systematicity and ubiquity of the MORE IS UP metaphor. The notion of the metonymy-based metaphor retains the linguistic notion of conceptual metaphor and at the same time relates it to the view of naive speakers of the language who were the ones who developed metaphors in the first place.

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