Metonymical object changes: a corpus-oriented study on Dutch and German
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III. TYPES OF METONYMY UNRAVELLED

1. Reflections of metonymy and the direct object

In the previous chapter, I defined metonymy as a cognitive mechanism which highlights elements within a semantic-conceptual frame. In this way, metonymy has its reflections on language. Traditionally, the metonymical process of highlighting is analysed from a semasiological perspective, in that certain semantic traits of an expressed concept are made more important than they normally are. As I have argued, the semasiological effect mirrors an onomasiological highlighting, i.e. an intended interpretation is communicated by the expression of a related concept. Both simultaneously occurring effects can be illustrated by the example Goethe used for ‘works by Goethe’: Semasiologically, Goethe is interpreted as ‘Goethe’s oeuvre’ by semantically foregrounding the fact that authors write books, whereas onomasiologically the word Goethe is actually used because of an explicit focus on the author-element of the intended oeuvre-concept.

However, a full analysis of the metonymical mapping involved presupposes that one does not only know how the mapping takes place, but also which expressions or linguistic structures are actually affected by metonymy. To put it in more general terms, one must know which types of metonymical reflections on language actually exist. Although this may sound rather trivial, it turns out that there is no consensus on this topic in the literature. Scholars do not only disagree on which linguistic structures and phenomena should be accounted for by an underlying metonymical motivation, but they also have different analyses of which linguistic phrase is actually metonymical or where metonymy comes into play.

The goal of the present chapter is therefore to disentangle the different ways in which metonymy appears in language and to answer the question of how and on which linguistic levels the metonymical mechanism works. On this basis, it will become clear that metonymy does not only cause shifts in the interpretation of lexical items, but also plays a crucial role in determining predicative argument structures. The latter is especially important for the topic of this work. An analysis of how metonymy determines the direct object does not only have to discuss how the interpretation of the object can be influenced by metonymy, but primarily needs to take into account how metonymy determines the choice of a particular type of direct object.

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27 A shorter, modified version of this chapter was published as Sweep (2011) “Metonymical transfers: The complex relation of metonymy and grammar.” Linguistics in Amsterdam, 4.1, 1-36.
2. Lexical, semantic or pragmatic interpretational effects

2.1 Lexicalised metonymies and occasional referent-oriented ones

Early linguistic studies on metonymy either use examples from the rhetoric-literary tradition or focus primarily on the relation between metonymy and meaning change. As a result, two different types of metonymy have been analysed, which are not always explicitly distinguished from each other.

In the more classical sense of the rhetoric-literary tradition, metonymy is considered as an *ad hoc* way of naming things. Such metonymies are primarily used to refer to concrete objects. Sentences (1)-(3) illustrate this.

(1) You can find the *ulcer* in room 103.
(2) I saw the *plume* climbing up the tree.
(3) He drank a whole *bottle*!

In (1) the patient is indicated by his disease, in (2) a squirrel is referred to by the mention of its tail and in (3) a liquid has to be interpreted on the basis of its container which is conceptually present.

However, linguists recognised early on that metonymy does not only cause occasional shifts where one expression is used instead of another, as in (1)-(3), but that it may also induce shifts in the lexical meaning of an expression. Therefore, a second type of metonymy, which has been analysed from the early semantic studies onwards, is metonymy as a motivation or underlying principle for the meaning variation of a certain specific linguistic sign (cf. e.g. Ullmann 1967; Taylor 1989). Metonymy as an underlying semantic principle can operate synchronically, leading to related senses or polysemy, as well as diachronically, leading to semantic change (cf. Koch 2001; Koch 2004; or Hilpert 2006: 129). Metonymy-induced polysemy and semantic change occur on a lexical-semantic level and they can be labelled ‘lexicalised metonymies’.

This distinction between occasional and lexicalised metonymies is not always explicitly made (cf. however Koch 2004: 12; Koch 2001: 206-207). The reason probably is that the onomasiological level has not properly been taken into account (cf. chapter II, especially §4-5). If one analyses metonymy primarily from a semasiological perspective, metonymy merely leads to a shift in interpretation, as is the case in both types of metonymies. However, if it is in addition considered onomasiologically, it becomes clear that in occasional metonymies with a referential shift one word is used instead of another (two ways of referring to one entity), whereas in cases of metonymy as an underlying semantic principle, there is a meaning shift within one lexical expression (one word to refer to several meanings). Of course, lexicalised metonymies and occasional referential metonymies cannot
always be clearly distinguished from each other. Since both metonymy types interact, they instead form a continuum of cases (cf. also Barcelona 2005: 315).

Scholars disagree on which of the two types should be regarded as the most prototypical type of metonymy. Barcelona, for instance, states that the term metonymy is used for a variety of phenomena “including ‘classical’ or ‘prototypical’ examples of linguistic referential metonyms for individuals” (Barcelona 2005: 313). Linguists from a more lexical-semantic tradition, however, usually consider metonyms which affect the lexicon as the most traditional instances of metonymy (cf. the use of metonymy by historical-philologists, as discussed in Geeraerts 2010: 6, 25-27, 33, 92-93). Occasional metonyms used for naming objects or persons, exemplified in (1)-(3), are seen as “less central” (cf. Koch 2001: 209, 221).

Koch also makes a slightly different distinction: He divides metonyms into two categories: referent-oriented and concept-oriented (Koch 2001; Koch 2004). Referent-oriented metonyms are defined as “metonyms whose primary task is to create an expedient solution for reference assignment” (Koch 2004: 25). Sentences (1)-(3) illustrate such referent-oriented metonyms. Concept-oriented metonyms are used to express “a new conceptualization that could theoretically be integrated into the lexicon of a given language” (Koch 2004: 25). Lexicalised metonyms cannot be considered the same as concept-oriented metonyms, because concept-oriented metonyms “do not have to be habitualized” (Koch 2004: 28, emphasis in original) and “referent-oriented metonyms may undergo habitualization” as well (Koch 2004: 27).

The difference between referent-oriented metonyms and concept-oriented metonyms must therefore be gradual. First of all, all metonyms are by definition conceptual. In addition to this, it cannot be denied that a metonymical expression which is clearly used to refer to some entity in a contextually appropriate way can at the same time evoke a new conceptualisation, even if this is not its primary goal. Example (2) illustrates this very well. Similarly, the fact that concept-oriented metonyms may convey new conceptualisations does, as explicitly explained by Koch, not imply that concept-oriented metonyms never bring referential shifts into play (cf. Koch 2004: 25).

Koch therefore divides concept-oriented metonyms into referent-sensitive and non-referent-sensitive ones. Koch illustrates a “non-referent-sensitive concept-oriented metonymy” by means of the example child, which could denote a ‘young person’ and continguously a ‘descendent’. These two interpretations can coincide, meaning that the word can denote an overlapping class of referents (Koch 2001: 223; Koch 2004: 23-25). Concept-oriented metonyms are said to be referent-sensitive if they can be used to refer to two concepts which provide conceptual access to each other without denoting an overlapping set of referents (Koch 2004: 30). Referent-oriented metonyms, on the other hand, are said to be “always necessarily referent-sensitive” (Koch 2004: 29). Although this claim seems plausible at first sight, section 4 will show that it does in fact turn out to be problematic. The fact that metonymy is conceptual by nature obscures the distinction between referent-oriented and concept-oriented metonyms.
In the rest of this section, I will discuss different types of interpretational shifts that have to some extent been lexicalised. In section 2.2, I will discuss different types of metonymies, which are clearly of a lexical nature. These metonymies all underlie lexical shifts, synchronic as well as diachronic. In section 2.3 I will analyse how metonymy can be involved in concept-oriented metonymies that are based on the lexical content of a word but do not have a direct effect on the lexicon. In both sections the gradual nature of language in general and of metonymy in particular will be discussed. In the closing subsection 2.4, I will briefly discuss the role of metonymy in more or less standard interpretational shifts on a higher, pragmatic level of interpretation.

2.2 Metonymy: Semantic change, polysemy or other lexicalisations

Metonymy as a principle underlying semantic change can be illustrated by the meaning of the Dutch word *winkel*, which has changed its meaning from ‘corner’ to ‘store’ or ‘shop’, owing to the fact that most visible shops were located at street corners (cf. Geeraerts 1986: 42). The original meaning is only visible in Dutch expressions or word formations (such as *winkelhaak*, meaning ‘right-angled tear’ or ‘carpenter’s square’) and it is reflected in the German word *Winkel*, which only means ‘corner’ or ‘angle’.

Metonymy as a synchronic semantic principle may cause polysemy, i.e. lead to related senses belonging to the lexical content of a linguistic sign. This is in fact one of the first metonymical effects that linguists became interested in. As well as *metonymy-induced polysemy* or *metonymical polysemy* this type of polysemy is also called *logical*, *systematic*, or *regular polysemy* (cf. e.g. Apresjan 1992: 240ff; Brdar 2009: 260, 263; Geeraerts 2010: 148; Koch 1999: 140; Moerdijk 1993; Nunberg 1996; Peters 2003; Schifko 1979: 244).

The prototypical way of illustrating metonymical polysemy is by the word *school*, which can, depending on its context, have the meaning of an educational institution, a concrete building, the people involved, the time spent at school and so on (cf. Moerdijk 2003: 282, 284, 287). Sentences (4)-(7) illustrate each of these possible meanings.

(4) The *school* has run out of money [institution]
(5) They repainted the *school* [building]
(6) The whole *school* had a day off [people]
(7) I will meet you after *school* [time / classes]

It is often said that all these meanings belong to one general conceptual structure corresponding to the word *school* (cf. Moerdijk 1989). All meanings can be seen as belonging to one general frame or to one gestalt. As a consequence, the meaning of
the word does not really change by metonymy; rather a different part of the concept is activated or highlighted (cf. Moerdijk 1989).

Such multiple polysemy is not restricted to this specific word (cf. also Brdar 2007: 77). Words that are similar to school show partly overlapping metonymical patterns, cf. ‘The university / bank has run out of money’ or ‘They repainted the university / bank’. The fact that a similar metonymical polysemy-pattern occurs with different words clearly indicates that metonymy operates on a conceptual level and cannot be reduced to a purely lexical or semantic level (cf. Moerdijk 1990: 119-120). It also casts doubt on the assumption that semantics can be considered independently of conceptual knowledge.

In the above instances of metonymical polysemy, it remains unclear what the basic meaning of the word should be. The meanings are so closely related that they rather form a solid network or the general conceptual structure, i.e. a gestalt, which as such represents the meaning of the word. Nunberg calls such instances of polysemy “densely metonymous”, since “[i]ts various denotations are interdefined” (Nunberg 1996: 126). Nunberg himself illustrates dense metonymy with the example newspaper, denoting the concrete object that can be read, the type of publication, the company and so on. He claims that it is a “problem with truly dense metonymies […] that we may not be able to assign one or the other use a priori place in the lexicon” (Nunberg 1996: 126). This description also applies to the interdefined meanings of school.29

In other cases of metonymical polysemy the word in question clearly has a basic meaning. Some lexicalised meanings or senses have been metonymically inferred on the basis of this primary meaning. Consider, for instance, the dictionary description of the Dutch numeral tien (‘ten’), which includes the meaning of a playing card with the number ten (cf. WNT). This example shows that lexical shifts induced by metonymy are not limited to nouns (cf. also Koch 2001: 220; Koch 2004: 29-30). Metonymical polysemy can occur in all kinds of parts of speech, just as lexical change induced by metonymy can. Rather complex concepts, as denoted by numerals or verbs, can also be shifted metonymically. An illustrative example of a verb that exhibits metonymical polysemy is, for instance, the Dutch verb klateren.

28 Cf. below chapter IV (§1) for the same metonymical pattern with klooster (‘convent’) or abdij (‘abbey’). For other patterns of metonymy occurring within several nomina actionis cf. Moerdijk 1990, Hüning 1996 and for cross-linguistic differences and overlaps cf. Peters 2003.
29 Cf. also the discussion in Moerdijk 1989: 128ff, who suggests (after an analysis of school and related words such as museum and bank) that if there is a primary meaning, the ‘organisation/institution’-meaning could be basic within this network. This means that the basic part of the lexical network or the frame in which the metonymical highlighting effect occurs. Note that an onomasiological perspective is necessary for the insight that the metonymical shift or highlighting occurs within the frame ‘organisation/institution’, because this frame cannot be deduced solely on the basis of the word school. Instead the frame corresponds to the primary meaning (also evoking the metonymically related meanings) of school, therefore reasoning from meaning to form.
which literally means ‘to splash’ or ‘to make splashing sounds’ and therefore also has the metonymically related meaning of ‘to urinate’ (cf. Van Dale 14).

Another well-known example of a metonymical meaning extension on the basis of a primary meaning is the phenomenon “grinding”, i.e. making a mass noun out of a count noun (cf. e.g. Brdar 2007: 82-84; Brdar 2009: 263-268; Copestake & Briscoe 1996: 37ff; Ruiz de Mendoza & Pérez 2001: 336ff; Ziegeler 2007: 111). Grinding can be illustrated by the word *rabbit*. *Rabbit* basically denotes an animal, but by highlighting aspects within the *rabbit*-frame the word can be used for the meat (*we had rabbit for dinner*) or even its fur (*she is wearing rabbit*). Although these meanings are not basic meanings, they are also not occasional. This is supported by the fact that they are often incorporated in dictionaries. The Dutch dictionary *Woordenboek der Nederlandsche Taal* (WNT), for example, explicitly classifies the second meaning of *konijn* (*rabbit*) as metonymical. This metonymical meaning is split up, denoting the fur (meaning 2.a) or the meat (meaning 2.b).

It can be difficult to establish, however, to what extent a conventionalised meaning is actually part of the lexical content of a word. Consider, for instance, sentences (8) and (9).

(8) I am reading Goethe.
(9) Picasso is in the Louvre.

On the one hand, one may doubt whether the ‘work by’-interpretation is an actual part of the lexical content of the proper names *Goethe* or *Picasso*. On the other hand, examples (8) and (9) also clearly differ from examples (1)-(3). The tight connection between artists and their work causes a conventionally established metonymical interpretation of the proper name. This is definitely not the case in sentences (1)-(3). In these examples, no one would argue that one of the conventionalised interpretations of *ulcer* is ‘patient with ulcer’ or that ‘squirrel’ is one of the default interpretations of *plume*.

Examples (8) and (9) represent a conventionalised way of interpreting rather than a lexicalised meaning. Instead of a lexicalised meaning of the proper name, the ‘work by X’-interpretation is a general convention of use (cf. also Nunberg 1996: 118-119). This particular convention of use is connected to a lexicalised metonymical pattern (viz. MAKER FOR PRODUCT). Waltereit explains this as follows:

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Note that the connection between ‘making splashing sounds’ and ‘urinating’ cannot be fully accounted for by analysing the example as highlighting an element (the causal action) of the splashing-frame only. The connection is clearer within the urinating-frame, since urinating automatically leads to splashing sounds. This again shows the fruitfulness of the combination of a semasiological (from form to literal meaning) as well as an onomasiological (from intended meaning to form) analysis. Often a semasiological account is not sufficient, since one should also take into account the interpreted frame and analyse the different ways to communicate this, i.e. literally or by highlighting elements of it (cf. also footnote 61).
“Daß es problemlos möglich ist zu sagen George Sand est sur l’étagere de gauche, liegt nicht daran, daß für den Namen George Sand die Metonymie Autor-Werk usualisiert ist, sondern daran, daß eine allgemeine, von individuellen Lexikoneinträgen unabhängige referentielle Relation konventionalisiert ist.”

(‘The fact that it is unproblematic to say George Sand est sur l’étagere de gauche is not based on a habitualisation of the metonymy author-work for the name George Sand, it is rather based on a conventionalisation of a general, referential relation which is independent of individual lexical entries.’) (Waltereit 1998: 27, my translation)

I fully agree that the metonymical interpretation of proper names such as Shakespeare, Goethe or George Sand should not be regarded as a sense of these words, which belongs directly to the lexicon, but rather as a generalisation about the lexicon.31 In other words, one is not dealing with a lexicalised metonymical meaning but with a conventionalised use of a metonymical pattern. A similar claim could be maintained for metonymies based on the contiguity relation LOCATION-PEOPLE, as illustrated by, for example, Maastricht is proud of its dialect or London was in a state of uproar.

If the metonymical meaning has become part of the lexical content of the word, as in school, there are reasons to assume that the contiguity pattern is conventionalised as well. Moerdijk (1989) explains this very clearly. The fact that a similar kind of polysemy as with school occurs with all kinds of words that denote institutions (such as bank or museum) shows not only that the different meanings have become part of the lexical content of these words, but also that the metonymical pattern (from INSTITUTION to BUILDING or to PEOPLE, etc.) is conventionalised as such. The systematic metonymical shifts of words such as school, bank, museum, etc. can only be explained by recognising the contiguity pattern as a convention of use, given that the re-interpretation occurs independently of the individual words (Moerdijk 1989: 129ff).

The same point can be illustrated by means of “grinding”. Even though linguists and lexicographers regard ‘meat’ or ‘fur’ as conventionalised meanings of a word that denotes an animal, such as rabbit (cf. Brdar 2009: 263ff; WNT), grinding itself could be considered a kind of lexical rule (cf. Nunberg 1996: 119). The metonymical pattern turns out to be conventionalised independently of the individual words.32

31 The difference between generalisations in the lexicon and generalisations about the lexicon (which correspond to conventional meaning or conventional usage) originates from studies on speech acts and scalar implicatures (cf. Recanati 2003: 304; Russell 2006: 373; Searle 1975: 76). Interestingly, speech acts and (generalised) conversational implicatures have also been analysed as metonymical, cf. below.

32 The only difference between, for instance, MAKER FOR PRODUCT (and more specifically AUTHOR FOR WORK) and OBJECT FOR MATERIAL is that the latter is much more restricted.
2.3 Metonymy and the spectrum of lexical ambiguities

The problem of whether one is dealing with different meanings, senses or simply with vagueness, or in other words the question of whether one should split up and specify senses or group them under a more general description, is generally known and discussed by linguists and lexicographers (cf. e.g. Geeraerts 1993; Moerdijk 2003; Tuggy 1993). Lexical ambiguities do not necessarily lead to lexicalised senses, as already demonstrated by the examples discussed at the end of the previous section (examples (8) and (9)). In addition to this, semantic metonymical effects that do not directly affect the lexicon (in that they do not result in conventionalisations) do not have to refer to concrete objects. They can also be of a more abstract nature (cf. also Koch 2004: 28).

Koch provides two very clear examples of this. The first is an example taken from his family life. Koch and his wife used to reserve a day for family activities, such as short trips or sightseeing, which they called a *jour fixe*. His son, who as he got older found these days rather boring, reinterpreted the concept of a *jour fixe* as a ‘day with boring activities’ instead of a ‘day reserved (for family)’ (Koch 2001: 206). Another interesting example is the occasional transitive use in a German newspaper of the verb *verstummen* (literally: ‘to grow silent’) (cf. Koch 2001: 210; Koch 2004: 28).

It is only abstract, occasional shifts that can occur without being conventionalised: some non-occasional, referent-oriented words could also lead to an interpretational shift without a lexicalisation effect. Sometimes a certain aspect of the meaning of a lexical item is activated without a real change of the interpreted concept or referent (cf. Kleiber 1995: 123ff or Kleiber 2007: 180ff). This type of lexical ambiguity is illustrated in the following examples.

(10) a. The *dog* bit the *cat*. (Langacker 1993: 31)
   b. John petted the *dog*.

(11) a. Arthur washed and polished the *car*. (Cruse 1986: 58)
   b. I filled up the *car*. (Croft 1993: 351/Geeraerts 2010: 217)

In sentences (10)a and (10)b, the word *dog* gets slightly different interpretations, since in (10)a strictly speaking the dog’s teeth bit a part of the cat, whereas in (10)b John did certainly not pet its teeth. Similarly, in (11)a and (11)b different parts of the car are washed, polished or filled up. However, no one would claim that the a-sentences and b-sentences exploit different senses of the word *dog* or *car*. Within these sentences these words each have only one meaning. Each word refers to exactly the same referent, viz. ‘dog’ or ‘car’, even though different aspects of this referent are directly involved in the actions. All aspects are automatically available with the presence of the evoked referent, but, depending on the context, some of them, such as the teeth or the fur, the varnish or the tank, can be more important than others.
Such examples have therefore been dubbed “active zone phenomena” (Langacker 1993) or “contextual modulations” (Cruse 1986). Cruse describes this activation of different aspects of a concept as caused by “the relative highlighting or backgrounding of semantic traits” (Cruse 1986: 53). Fully in line with Cruse’s definition, such examples are often directly connected to metonymy (cf. Croft 1993: 350-351; Kleiber 1995 or Kleiber 2007; Langacker 1993: 31; Langacker 2009: 51, 52; cf. also Waltereit 1998: 31-33; Taylor 2000: 121). Kleiber calls these zone activations instances of métonymie intégrée, i.e. integrated metonymy.

In addition to metonymical polysemy and zone activation, one might distinguish a third way of selecting a different sense within a context. This type of lexical ambiguity is illustrated in (12) and (13).

(12) a. This book is heavy (Croft 1993: 349)
   b. This book is a history of Iraq (Croft 1993: 349)

(13) a. She put her head through the window. (Taylor 1989: 124)
   b. I painted the window (while she was standing in it) (cf. Taylor 1989: 124)
   c. I saw her through the window

In (12)a the word book is interpreted as a concrete object (the physical tome) and in (12)b as the content or the text. Similarly, in (13)a the window is interpreted as the opening, in (13)b as the frame of this opening and in (13)c as the sheet of glass. Cruse describes such lexical ambiguities as different semantic facets of the lexical content of a word (Cruse 2000: 115). Although facets can be interpreted separately (compare (12)a and (12)b), they can also often be present simultaneously, as in I gave him a book. They do not have to cause zeugmas (cf. also (13)b).34

These examples therefore behave differently as compared to cases of real polysemy, where the different senses are not evoked at the same time.35 Semantic facets also differ from active zone phenomena, because both facets do not have to be present simultaneously. The meaning of facet-words is a complex product of the related but different senses. For this reason, Pustejovský calls these examples “dotted objects” (Pustejovský 1995: 93, cf. also Cruse 2006: 52-53, 61).

Lexical generality because of zone activation (as in (10) and (11)), lexical ambiguity caused by different relevant facets (as in (12) and (13)), and metonymical polysemy have to be distinguished from each other, even though they have the character of a gliding scale.36 Taylor explains this spectrum of lexical ambiguities by

33 Thanks to Wim Honselaar for the example.
34 There are also referential metonymies following habitualised patterns (such as PLACE FOR GOVERNMENT) that allow such double interpretations, cf. Brdar 2007: 86.
35 Even for examples of dense metonymy, such as school, it is difficult to refer to several meanings within one sentence, cf. ?The school had a day off because it was on fire or ?They repainted the school that had run out of money.
36 However, not all types of lexical ambiguity are always distinguished in this way. There is a lot of terminological variation. Langacker uses the term zone activation for (10) as well as for
saying that examples of contextual modulation or zone activation are “the seeds of polysemy”, whereas different facets are already “beginning to acquire an independent status” (Taylor 1989: 124). Koch makes a similar claim (2001: 222) by noting that “differentiations in terms of facets are “deeper” than mere contextual variation [i.e. zone activation or contextual modulation], but “shallower” than real (metonymic) polysemy”.

Although lexical ambiguities caused by different relevant facets or zone activation are certainly not the most prototypical reflections of metonymy (cf. also Barcelona 2005: 314; Waltereit 1998: 33), both types are often directly connected to metonymy (cf. e.g. Langacker 1993: 31-33; Radden & Kövecses 1999: 31, 48; Ruiz de Mendoza & Pérez 2001: 235; Taylor 1989: 124). Some scholars, however, explicitly reject the idea that metonymy underlies all these lexical ambiguities.

Paradis, for instance, does not regard lexical ambiguities or polysemy as metonymical, since it does not involve a “process of concept-to-concept mapping, but one of conceptual highlighting within the envelope concept only” (Paradis 2004: 260). This is a fairly radical claim, since it breaks with the traditional analysis of metonymical polysemy as well as with recent ideas on this topic.

In his analysis of the phrase Time Magazine, Croft in contrast to Paradis argues that the polysemous meanings of this phrase are metonymical (1993: 348) and he describes example (11)b as “[a]nother example of metonymy” (1993: 350). However, he considers the facets illustrated in (12) and (13) to be different from prototypical instances of metonymy, because “the elements profiled in each domain are highly intrinsic” and “no reference is made to external entities” (1993: 349).

Geeraerts and Peirsman’s analysis is once again slightly different: They argue that the most prototypical instances of zone activations, as displayed in (10), should not be analysed as metonymical, whereas examples such as (11) and (12) do involve metonymy (2011: 91).

Koch’s analysis takes an intermediate position between Paradis’ and Croft’s or Geeraerts and Peirsman’s: Although Koch regards the polysemy of a word such as tongue as a prototypical case of metonymy (2001: 209), he denies that different facets of, for instance, book or active zone phenomena belong to the realm of metonymy. According to Koch these two types of lexical ambiguity do not involve a real shift in reference; neither is there a lexical problem as in most cases of metonymical polysemy. This means that these lexical ambiguities cannot shift the referent or the concept literally connected to the word. Therefore, these examples do not imply “different perspectives on the same cognitive ‘material’” (2004: 47) and
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According to Koch they do “not involve a real figure/ground effect” (2001: 222; cf. also Koch 1999: 150).

These latter quotations, however, contradict Koch’s own, very plausible analysis, since he does agree that these lexical ambiguities are contiguity-based, i.e. based on the relation between elements connected within a frame. The difference in interpretation of, for instance, a window as the opening or as the frame, therefore, is a prototypical figure/ground effect and an excellent example of different perspectives on the same cognitive material (cf. also Pustejovsky 1995: 31). Although there are obviously more and less prototypical examples of metonymy, no principled distinctions can be made within the continuum of lexical ambiguities. So even though it is felt that “one does not want to extend the term metonymy to the book and window examples” (Croft 1993: 350), one should in fact analyse all above examples as metonymical, only as more or less prototypical instances of the phenomenon. A similar conclusion is given by Langacker, who argues that all these lexical ambiguities are “metonymic or very much akin to metonymy” (Langacker 1993: 31). The differences between the different types of lexical ambiguities simply confirm that the category of metonymy is a continuum without clear-cut boundaries.

2.4 Metonymical re-interpretations on a pragmatic level

As discussed in the previous subsections, metonymically shifted interpretations do not have to affect truth conditions. The phenomenon of semantic facets and active zones or integrated metonymies illustrate this. In addition, there also appear to be pragmatically based interpretational shifts of larger phrases, which do not alter truth conditions. Examples (14) and (15) are said to illustrate how pragmatic meaning (i.e. implicatures) can be based on metonymical inferences.

(14) She was able to finish her dissertation. (Cf. Panther/Thornburg 1999: 334)
(15) General Motors had to stop the production. (Cf. Panther/Thornburg 2004: 103)

If it is said that someone was able to finish her dissertation, the natural inference will be that this person has finished it. Similarly, if a company had to stop the production, this implies pragmatically that the company has actually stopped it. Example (14) is explained as based on the POTENTIALITY FOR ACTUALITY contiguity and example (15) on the OBLIGATION TO ACT FOR ACTION pattern (Panther & Thornburg 1999: 335; Panther & Thornburg 2004: 103; Panther & Thornburg 2003a: 4ff; cf. also Stefanowitsch 2003: 114; Ziegeler 2003: 177). The metonymical patterns make clear how pragmatic meanings of sentences can be inferred. Panther and Thornburg call these types of metonymies predicational metonymies (based on Gibbs 1994, cf. e.g. Panther & Thornburg 2009: 22).

Example (15) not only contains a predicational metonymy, but also has a metonymical subject (following the COMPANY FOR EXECUTIVE OFFICERS pattern) (cf. Panther & Thornburg 2004: 103). The combination of a referential and a
predicational metonymy makes the whole proposition metonymical. According to Panther and Thornburg, this combination of metonyms, therefore, leads to a propositional metonymy (cf. 2003a: 5; 2004: 103; 2007: 246).

The term propositional metonymy has been introduced by Warren (Warren 1999; Warren 2002). She uses the term in a slightly broader sense, viz. for all cases in which there are “concomitance relations” not just between entities but between propositions (Warren 1999: 130). Example (16) illustrates such a propositional metonymy.

(16) *The shops are dark.* (Warren 1999: 130)

Sentence (16) can be used to state that the shops are closed, based on the metonymical inference (VISIBLE) EFFECT FOR CAUSE.37 Interestingly, the metonymical and the literal interpretation do not exclude each other in this example. In contrast to more classical examples of metonymy, the literal interpretation does not violate truth conditions (cf. Warren 2002: 115). Although in these cases something is added to the interpretation (to “the conceptual point of view”, Warren 1999: 122), the metonymical interpretation is, as opposed to other types of metonymy, compatible with the literal meaning. This makes such propositional metonymies special.38

Propositional metonymies, as illustrated above, are not the only metonymical interpretations beyond sentence level. The following sentences illustrate other examples with pragmatic contiguity-effects that also apply to the interpretation of the sentence as such.

(17) *I would like you to close the window*  (Panther/Thornburg 2004: 103)
(18) *Enjoy your summer vacation*  (Panther/Thornburg 2004: 101)

37 Warren herself speaks about an ANTECEDENT-CONSEQUENT relation (Warren 1999: 130), which could in my view be seen as a more general description of EFFECT FOR CAUSE (for a detailed account of other instances of EFFECT FOR CAUSE metonymies cf. Panther & Thornburg 2000).

38 It must be noted that metonymical interpretations should, as explained in chapter II (§3), be of an accidental or contingent nature (Panther & Thornburg 2007: 240-241). Some of Warren’s examples of propositional metonymies turn out to be just synonymous propositions, such as for instance *It won’t happen as long as I breathe* [i.e. live] (Warren 1999: 129). One may doubt whether this is still contingent, i.e. accidental. If not, it should be excluded from the realm of metonymy. Example (16) is clearly different in this respect: Even though a literal interpretation of this sentence does not directly violate truth conditions, the metonymical interpretation is a still cancellable or defeasible (cf. Panther & Thornburg 2003a: 8) and therefore contingent (cf. Panther & Thornburg 2007: 240).
In example (17) the wish expressed by the speaker “metonymically evokes the request to close the window”, since an “attribute of a speech act [i.e. of the speech act scenario, JS] can stand for the speech act itself” (Panther & Thornburg 2004: 103, 104). These pragmatic inferences via metonymical patterns are therefore called ‘speech act metonymies’ or ‘illocutionary metonymies’ (cf. Brdar-Szabó 2009; Koch 2001: 209; Panther & Thornburg 1997; Panther & Thornburg 1998; Panther & Thornburg 1999; Schiffrin 1979: 259-261; Thornburg & Panther 1997). Such examples also show “that propositional forms can be linked metonymically” (Panther & Thornburg 2004: 104).

Example (18) illustrates a comparable phenomenon. Although the sentence has the form of a command and can thus be understood as a directive speech act, it can in addition be interpreted as a wish by the speaker. If sentence (18) is uttered as a directive speech act, meaning “do something so that you enjoy your summer vacation”, a RESULT FOR ACTION metonymy is exploited. The interpretation of (18) as a wish can be inferred if enjoying something is considered to be an experiential state. In that case interpreting (18) as a directive speech act is impossible and therefore the interpretation is metonymically shifted to a wish (Panther & Thornburg 2004: 101; cf. also Ruiz de Mendoza & Pérez 2001: 328ff). 39

A difference between metonymies on the semantic level and these metonymical effects working on pragmatic interpretation is the degree of abstraction. These metonymies are therefore often called high-level metonymies (cf. e.g. Panther & Thornburg 2004; Panther & Thornburg 2007: 257; Ruiz de Mendoza 2007; Ruiz de Mendoza & Díez 2001/2003). Furthermore, the metonymies in these examples clearly interact with the syntactic structure and form. Example (18), in which the directive speech act goes hand in hand with the imperative form, illustrates this particularly well. Therefore, metonymy does not only cause interpretational shifts on the semantic and pragmatic levels, but may also have an effect on the level of grammar (cf. Brdar 2007: 66). I will discuss this in more detail in the next section.

3. The complex relation of metonymy and grammar

3.1 Grammatical effects or grammatical metonymies?

Having acquired the insight that metonymical re-interpretations can apply to large structures and even affect the pragmatic interpretations beyond sentence level, linguists have recently become more and more interested in the relation between metonymy and grammar (cf. e.g. Barcelona 2004; Brdar 2007; Panther et al. 2009; Radden & Dirven 2007; Ruiz de Mendoza & Pérez 2001). Since metonymy plays a fundamental role on all kinds of meaning levels, it has to affect grammar (i.e. syntax

39 Such an analysis in terms of metonymical inferences presupposes that the primary function of imperatives is marking commands. Wim Honselaar suggested that if one believes in a one-to-one correspondence between form and function this is not by definition the case (cf. also footnote 43).
and morphology); after all meaning and linguistic form are two sides of the same coin. High-level metonymies in particular are said to show that “linguistic form is sensitive to conceptual, i.e. metonymic, structure” (Panther & Thornburg 2000: 215).

However, one does not necessarily have to look at more abstract pragmatic metonymies to understand that metonymy has its repercussions on grammar: Grammatical effects can also occur on the basis of interpretational shifts of single expressions, or even of smaller linguistic elements. The latter can, for instance, be illustrated by the meaning of certain morphological elements, such as affixes. Since affixes themselves contain meaning, metonymical polysemy is not limited to words. There are several studies of metonymically motivated polysemy of morphological elements (cf. among others Hüning 1996; Palmer et al. 2009; Panther & Thornburg 2001; Panther & Thornburg 2002; Diez & Pérez 2004/2005). Although the metonymical meaning shift or polysemy of an affix occurs within a cluster of morphologically related words and is reflected on a grammatical level, polysemous morphemes are of course not fundamentally different from lexicalised metonymies on the level of single words. A nice example to illustrate this is the German suffix -erei (cf. Hüning 1996). This suffix, which is attached to verbs, can, for instance, denote the action, the result of the action, or the company that performs this action. The word Druckerei, for example, denotes ‘printing’, but also ‘printing office’ and ‘print’. Similarly Weberei denotes ‘weaving’, but also ‘weaving mill’ or ‘woven textile’. This type of metonymy may be visible within grammatical elements (such as morphemes), but still occurs on a semantic-lexical level (cf. also Moerdijk 1990 for a similar polysemy in simplicia). These examples demonstrate how difficult it is to detect whether metonymy can directly affect grammar or whether this is only a secondary effect of its conceptual shifts.

In order to give a balanced picture of the different grammatical and semantic influences of metonymy Koch distinguishes seven types of metonymy, depending on the linguistic level which is influenced by the metonymy (Koch 2001: 109-112). His first three types of metonymy parallel the classification I gave above to a large extent; Koch also distinguishes between “purely lexical metonymies” (i.e. metonymical polysemy and meaning change without direct grammatical implications), contextually dependent metonymies, such as ham sandwich (“metonymies at the level of discourse semantics”), and metonymies on a real pragmatic level of interpretation (“speech act metonymies”) (Koch 2001: 209).

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40 Grammar should thus be seen as involving all levels which systematically affect linguistic form and structure, such as morphology, syntax and syntactically induced effects (such as e.g. pronoun binding). Of course, it would be an illusion to think that there are clear-cut boundaries between form and meaning and therefore between syntax and lexicon (cf. also footnote 42).

41 Lexical metonymies in the sense of Koch are different from what I have called lexicalised metonymies, because they can also be of an ad hoc nature. I classify such occasional metonymies as contextual-semantic. My notion of lexicalised metonymies is thus slightly narrower as compared to Koch’s lexical metonymies and my notion of semantic-contextually dependent ones is somewhat broader as compared to Koch’s notion.
Different linguistic levels can also interact: A fourth type of metonymy intervenes between speech acts and the lexicon.

In addition to these four types, Koch distinguishes three different types of metonymies with impact on grammar. These are “lexical metonymies with grammatical implications”, “metonymies as transitions between lexicon and grammar” and so-called “metonymies within grammar” (Koch 2001: 209).

The lexical metonymies with grammatical implications will be discussed in detail below as predicative metonymies. Metonymies as transitions are involved in grammaticalisation processes (Koch 2001: 211; cf. also Detges & Waltereit 2002: 164ff). Most interesting in light of the present discussion is Koch’s last category, i.e. “metonymies within grammar”, also called “intragrammatical metonymy” (Koch 2001: 112). Koch illustrates this type with the example of the development of the use of grammatical tenses, such as the use of the past tense for counterfactuals (Koch 2001: 212; cf. also Radden & Kövecses 1999: 33). In contrast to grammaticalisations, no lexical import is involved in such grammatical changes. Tense systems are clear examples of elements representing meaning purely through grammar. Therefore, according to Koch, interpretational shifts within the use of a certain tense morpheme to a contiguously related interpretation occur on a purely grammatical level.

However, one could also argue that the latter metonymies instead belong to a pragmatic level of re-interpretation. The metonymical interpretation of a past tense as a counterfactual could occur by linking propositions to one another (cf. also Panther & Thornburg 2003b). This analysis is perhaps even more plausible, since for some examples the lexical meaning of the verb plays a crucial role in such metonymies (cf. Panther & Thornburg 2009). The claim that no lexical import is involved is therefore problematic.

This shows that the more one believes in the meaningfulness of grammar, the stronger the influence of metonymy must be. Langacker, whose model of Cognitive Grammar represents one of the most extreme positions on the meaningfulness of grammatical structures, therefore even speaks about “metonymic grammar” (Langacker 2009).

With Honselaar pointed out an additional problem: An analysis in terms of grammatical metonymy assumes that the counterfactual meaning of a past tense morpheme is secondary to the past tense meaning. If one believes, however, that the past tense meaning and the counterfactual meaning are both connected to the past tense morpheme and equally basic, the two meanings could be merely metonymically related while no metonymical inference from one to the other has taken place. This latter vision could be based on the idea of a one-to-one-correspondence of form and function (which make past tense and counterfactual interpretations belong to one general function of past tense morphemes). The same problem exists for the analysis of the imperative in example (18): The idea of the metonymical inference is only possible if one assumes that imperatives primarily mark commands (direct speech acts), but not if one believes that the function of the imperative-form directly includes all its possible uses (cf. footnote 39). The fact that the same problem exists for past tense morphemes and for imperative examples, such as (18), again indicates the close relation and the fuzzy boundary between phenomena tagged as grammatical metonymies or as pragmatic metonymies, which link (interdefined) propositions.
Thus, the distinction between grammatical and pragmatic metonymies is blurred for several reasons. However, this does not mean that pragmatic metonymies do not affect grammatical structures. Panther and Thornburg also underline the idea that figurative thought, such as metaphor and metonymy, “might influence grammar”, “have a potential influence on grammatical structure”, or that “grammatical patterns are motivated” by figurative thought (Panther & Thornburg 2009: 1, 4, 36, italics in the original). They write: “We view metonymy as a conceptual phenomenon, and ask ourselves how this phenomenon interacts with, or influences, grammatical structure.” (Panther & Thornburg 2009: 11, italics in the original). So-called ‘grammatical metonymies’ could only be seen as metonymical influences on linguistic form (syntax and morphology), as an effect of a conceptual-interpretational shift (cf. Panther & Thornburg 2009: 11). In other words, a semasiological effect of metonymy is paired with an onomasiological effect, which is visible within grammar.

According to Ruiz de Mendoza and Pérez, however, it is necessary to distinguish between “cases where metonymy simply motivates a grammatical construction thus determining the nature of its meaning effects” and what they call “genuine cases of grammatical metonymy” (Ruiz de Mendoza & Pérez 2001: 334, cf. also Koch 2001: 209, 211-212). This difference is a very complicated one, especially since metonymy is of conceptual nature, a point which is also emphasized by Panther and Thornburg. Because meaning and form are necessarily paired, it remains unclear how one should exactly determine whether a metonymical effect on a linguistic structure is just the result of an interpretational shift or whether the metonymy primarily affects grammar. Ruiz de Mendoza and Pérez ignore how complicated this difference is. Their distinction between grammatical side-effects and purely grammatical metonymies sharply contrast with the definition of grammatical metonymies given by Panther and Thornburg, who primarily analyse them as additional effects caused by a metonymical shift (cf. 2009: 11, 24).

The fact that meaning and linguistic structure are so closely intertwined makes it difficult to analyse the exact role of metonymy in grammar: Even if it is obviously the case that metonymy is reflected within linguistic structures, it is still debatable whether this is only a side-effect, co-occurring with a conceptual-interpretational shift, or whether metonymy also primarily causes grammatical effects. Because meaning and form are necessarily paired, it remains under Ruiz de Mendoza and Pérez’s account unclear how one should determine whether a metonymical effect on a linguistic structure is just the result of an interpretational shift or whether the metonymy primarily affects grammar.

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I will illustrate this difficulty in section 3.2, where I will give an example of a contiguity effect that causes metonymical polysemy in one language, while it induces morphological changes and word formation processes in others. This example leads to the question of whether metonymy can be the driving force behind morphological processes themselves, affecting meaning as a co-occurring effect only. I will, however, reject this idea by demonstrating that in some examples no metonymy is involved at all, whereas in other examples it is implausible to claim that metonymy affects grammar and therefore meaning rather than the other way around. It could merely be claimed that both effects occur simultaneously (cf. also Seto 1999: 118), since metonymy always induces a parallel semasiological and onomasiological effect (cf. chapter II or Sweep 2012). In addition to this, it will turn out that some additional effects on the linguistic structure (i.e. on grammar) can help us to gain more insight into the nature of the particular mapping. I will briefly touch upon this idea in section 3.3, by discussing the use of determiners in combination with proper nouns. These considerations will bring me to section 4, where a more detailed analysis of metonymical re-interpretations in general will be discussed.

3.2 Metonymy and morphological conversions

Cross-linguistic comparison shows that the same contiguity effect can lead to metonymical polysemy in one language but to a morphological change in another. I will illustrate such cross-linguistic differences by the contiguity pattern FRUIT FOR TREE. In Dutch, the word appel (‘apple’) or peer (‘pear’) cannot only be used to denote the fruit, but has the additional meaning of the fruit tree, i.e. ‘apple tree’ or ‘pear tree’ (cf. Van Dale 14). This meaning can be illustrated with a sentence, such as de appel staat in bloei (‘the apple is in bloom’). Similar metonymical polysemy patterns can be found in other languages. Italian lemon, for instance, can also be used for both the fruit and the tree (Koch 1999: 158). In English this type of polysemy does not exist: The tree is denoted by a compound: lemon tree, apple tree, etc. Spanish also displays a morphological effect: The masculine word for lemon, i.e. limón, undergoes suffixation with a change in gender to denote the tree by the neuter derivate limonero (Koch 1999: 158).

If metonymy underlies this semantic constellation in Dutch, the idea that metonymy also underlies the grammatical-morphological process in Spanish or even in English emerges. Koch writes about this: “[w]e have to conclude that frames and contiguities not only account for metonymic change and polysemy, but also for other lexical processes” (Koch 1999: 158). This correct observation does of course not imply that Koch believes that the Spanish conversion or the English word formation are metonymical. On the contrary: He explicitly states that frames and contiguity relations can help to explain such processes “beyond the realm of metonymy” (Koch 1999: 159; cf. also Koch 2001: 232).

Following Koch, there are clear reasons to reject the idea that related but morphologically different words is motivated by metonymy. Apart from the polysemous words for kinds of fruit and their corresponding trees Dutch, for
example, also has compounds to refer to the trees, such as limoenboom, appelboom, etc. The lexicalised metonymical meaning of appel denoting ‘apple tree’ and the compound appelboom can be explained on the basis of contiguity-relations and frames. However, although metonymical relations (i.e. contiguity relations) between the two words can clearly be recognised in both cases, no metonymical highlighting of any kind is involved in the compound example. Dutch limoenboom, English lemon tree or Spanish limonero explicitly express their referent in a fully transparent way (cf. also Koch 2001: 232 examples 44, 45, 46).

Similarly, Brdar analyses “specialized affixes, conversion, or compounding” as instances of “a metonymy avoidance strategy” (Brdar 2009: 271, cf. also the discussion and examples on p. 263-268). The reason to speak of metonymy in the case of the Dutch appel or Italian lemon denoting the tree is exactly the fact that the meaning difference is not associated with a formal difference although there is a semantic shift.

Some English morphological processes, however, do not directly lead to visible formal differences. Examples are the nouns cut or supply, derived from a verb with the same form, or verbs such as to author or to shampoo derived from similar looking nouns. These examples are better comparable to the Dutch appel-example than to the Spanish limonero-example, since there is a contiguity-shift without any visible marking. Such conversions or zero-derivations have therefore been analysed as involving metonymy (cf. e.g. Dirven 1999; Kövecses & Radden 1998: 55ff; Ruiz de Mendoza & Pérez 2001: 331ff; Seto 1999: 109). Although the discussion whether zero-derivations are metonymical is very complicated, there are at least two problems with this claim.

First of all, I doubt as to whether we are actually dealing with two interpretations of one invariant linguistic form. The same objection has been made by Koch (2001: 232). Although the verb and the noun in a/the cut and to cut or a/the author and to author do indeed look the same, in fact they are not. The interpretational shift is accompanied by a shift in word class. They therefore have distinct forms in concrete examples, such as two cuts or he authors / authored / is authoring. In contrast to the Dutch appel-example, it could be claimed that concrete examples such as he authored the book or the country needed more supplies it cannot be maintained that the semantic shift has taken place without any visible effect. Again the fact that the verb and noun stand in a metonymical or contiguity relation to each other does not necessarily mean that metonymy must be involved.

45 It does, however, remain vague whether Brdar considers the tree examples as an instance of metonymy avoidance or metonymy marking (2009: 261-268), since although specialised affixes and conversions are given as examples of avoidance strategies Brdar also states that “[m]etonymy marking and metonymy avoidance strategies may occasionally become almost indistinguishable, or work in tandem, e.g., when conversion is accompanied by formal markers” (2009: 271).

46 However, as we will see in the next section (footnote 51) and on the basis of dictionary material in the next chapter (the Dutch example aubergine), there are all kinds of in-between cases in which it is not fully clear whether we are dealing with different morphological forms or, for instance, only with different determiners.
However, even if one does insist on the lack of visible marking in the basic conversion process (i.e. in the shift of word class) in English, there is a more fundamental problem with the claim that metonymy primarily affects grammar. Ruiz de Mendoza and Pérez claim that the conversions discussed above are clear examples of grammatical metonymies (2001: 334), since the mapping is said to operate “at a non-lexical level placing constraints on certain grammatical operations” (Ruiz de Mendoza & Pérez 2001: 332). The idea is therefore that most metonymies have meaning effects which could influence their syntactic environment, whereas conversions show metonymy operating directly on the morphological system.

Although it is true that conversion is a component of grammar (morphology), it does have a semantic effect as well. If one makes a contrast, as Ruiz de Mendoza and Pérez do, between examples of purely grammatical metonymies and those where a grammatical structure is only determined by conceptual meaning, it is implied that in grammatical metonymies the effect on morphology or syntax (i.e. the onomasiological effect) is more fundamental than the mere conceptual shift (the semasiological effect). In other words, the causal relation between effects on meaning and form should be reversed as compared to metonymies where grammatical changes are only side-effects based on a semantic shift (cf. Ruiz de Mendoza & Pérez 2001: 334). But it remains unclear where this claim about the causality comes from or, in other words, how one knows whether we are actually dealing with a genuine case of grammatical metonymy or merely with grammatical side-effects.

It can even be questioned whether it makes sense to claim that shifts in meaning without formal marking are caused by a conceptual device that primarily affects the formal marking rather than the shifted interpretation. I would claim that an effect on form caused by a conceptual mechanism can by definition only be an effect co-occurring on the basis of the conceptual highlighting process. In other words, the effect on grammatical form necessarily reflects the conceptual nature of metonymy.

In the next section, I will provide a closer inspection of other additional grammatical effects.

3.3 Grammar reflecting meaning: Determiners with proper nouns

Classical examples of metonymy which affect the interpretation of a single word can also have grammatical effects. Sentence (20), in which a comparable metonymy is exploited as in (9) [repeated here as (19)], illustrates this.

(19) Picasso is in the Louvre
(20) In the Louvre hangs a Picasso

Normally, no indefinite articles are used with proper names, but since the meaning of Picasso is shifted from the individual to one of his works, the indefinite article is
unproblematic (cf. also Brdar 2007: 119, 98ff). The determiner only explicitly marks or indicates the metonymy (cf. Brdar 2009). In this example the syntactic construction with an indefinite article is therefore said to be motivated by the metonymical meaning effect and not an instance of metonymy directly affecting grammar (cf. Ruiz de Mendoza & Pérez 2001: 334).

It has, however, been suggested to me that a verb-noun shift, such as the shift of作者 as a noun to the verb to author, is not fundamentally different from the Picasso-person to Picasso-painting shift, since in the latter case the indefinite article is a grammatical marker of a metonymical kind of conversion, as is the verbal inflexion in the case of the to author-shift. The problem with this line of reasoning is, though, that the use of an indefinite article with a proper name in its literal sense is very unusual, but certainly not impossible. This is illustrated by examples (21) and (22) (taken from the BNC).

(21) when a John Piper and his wife Marjory were both charged with scolding.

(22) A Mary Malone who lived from 1663 to 1699 was the woman who became Dublin’s favourite daughter.

Such examples show that the use of articles is, in contrast to verbal inflexion, not grammatically but rather semantically constrained; The use of an indefinite article only makes sense if the referent is one of the persons with that particular name. The same goes for other determiners and pluralisation, as illustrated by the Dutch examples (23) and (24).

(23) Zo werkten de beide Jannen in dit familie bedrijf.
   so worked the both Jan-plur in this family company
   ‘Both Johns worked in this family company’

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47 These examples challenge the view that proper names do not have sense, i.e. refer to a concept, but only reference (as expressly argued by Kripke). The proper names with an indefinite article point toward the idea that the proper name could even refer to a set of referents, which therefore directly conflicts with Kripke’s idea of rigid designators. Furthermore, if metonymy applies to a proper name the possible referents and therefore its intension are shifted. There are thus two options: Either these examples do not make use of real proper names, but rather of a specific kind of descriptions (as in the way suggested in the work of Russell), or proper names do in fact have in Frege’s terms Sinn (i.e. an intension) and Bedeutung (i.e. an extension). Unfortunately, the issue is too complicated to fully discuss here in full detail, but research on proper names should definitely take into account the above examples.

48 Cross-linguistic differences (cf. also the footnote 51 below) could play a role in this. In contrast to Dutch and English, for instance, it is fairly normal in German to use definite articles in front of proper names.

(24) Jan H., overigens niet de Jan H. van de ijsfabriek van vroeger.\(^{50}\)
Jan H., though not the Jan H. from the ice-factory from before,
‘Jan H., though not the Jan H. from the icecream factory from the old days,’

In (23) the proper name can be pluralised, since there are two persons with the name Jan. Example (24) shows similar behaviour: The definite article can be used with the proper name, since there are more people with the same name and the definite article denotes that it is not the Jan H. of the icecream factory who is referred to.

So, if, on the basis of (21)-(24), one agrees that there is no fundamental, morphological difference between the word denoting a person or a piece of work by this person, the different grammatical behaviour must be of a semantic-pragmatic nature.\(^{51}\) As a consequence, such changes in the syntactic environment of a metonymical word can be used to analyse the exact nature of the semantic effect induced by the metonymy.

This has, in fact, been done. On the basis of the effect on the determiner in (20) it has, for instance, been claimed that the metonymical shift involved actually is derived in two steps: In addition to a mapping of the form ARTIST FOR WORK a mapping from the artist’s work in general to a specific work is made (cf. Ruiz de Mendoza and Pérez 2001: 338ff). Metonymies that seem to be the same at first sight in fact turn out to be slightly different. Consider (25) and (26).

(25) I love reading Goethe
(26) I am reading a Goethe

According to Ruiz de Mendoza and Pérez the difference between (20) and (26) “lies in the conceptual nature of the target domain of the second metonymy” (Ruiz de

\(^{50}\) Source: Meppeler Courant, 30-03-1994 (ANW-corpus).
\(^{51}\) For French, one could question whether it is tenable that no morphological conversion has taken place, since this metonymical shift is paired with a shift in gender; the metonymical expression has to have masculine gender, even if the author is female (cf. Kleiber 1995: 130; Kleiber 2007: 177). On the basis of this, it could be suggested that the proper name has undergone morphological conversion in a similar way as the author-to author-example. Even if this is so, the similarity between the French author-book shift and the English noun-verb shifts again show the problem of claiming that metonymy primarily affects grammar: One does certainly not want to argue that French ARTIST FOR WORK metonymies work “at a non-lexical level placing constraints on certain grammatical operations” (Ruiz de Mendoza & Pérez 2001: 332). Therefore, if the derivation of the author-verb from the author-noun is considered as an instance of metonymy, I would suggest, as discussed in the previous section, that the conceptual shift from a person to a contiguous activity must be primary (or at least simultaneous) to the grammatical conversion, since metonymy is before all else a conceptual mechanism. In the next chapter the same point will be illustrated by means of a different Dutch example that also involves metonymy paired with conversion (cf. chapter IV, §2.1).
Mendoza & Pérez 2001: 339). They therefore conclude about the PAINTER-PAINTING and the WRITER-TEXT mappings:

“While a picture is the direct outcome of the painter’s activity, a book is but a vehicle of expression for the author’s ideas and not the direct result of the writer’s activity. So, it is quite appropriate to use the article as a modifier of the source of the ‘Picasso’ metonymy, where the target is a unique item, but not so in the other case [i.e. AUTHOR FOR TEXT] where the target is specific but not typically unique.” (Ruiz de Mendoza & Pérez 2001: 339)

This idea should be tested against more data. In the case of composers and pieces of music it is also true that the target is “specific but not typically unique”. This could explain why we cannot use ??listen to *a Mozart. Following this line of reasoning, the relation between directors and movies should be different from composers and music or authors and books, since indefinite articles before names of film directors are quite possible, as illustrated in (27) and (28).

(27) I think it’s high time we watched a Hitchcock

(28) I also recently watched a Hitchcock for the first time

I do not, however, see a fundamental difference between books and movies and I doubt whether a movie is “a direct outcome” and “typically unique” in the same way as a painting is. Furthermore, some author-names can occur metonymically with an indefinite article. One does find, for instance, examples such as (29) or (30) on the internet.

(29) Having never read an Agatha Christie before, I wasn’t certain of what to expect

52 I would like to thank my colleagues of the ACLC (especially Bart de Boer) for discussing all kinds of possible metonymical uses of proper names with me during lunch and coming up with some of the examples discussed in this section.
53 Although Mario Brdar provided me with some examples with definite articles, such as “The Beethoven G major isn’t too difficult. Whilst the F# one isn’t too bad either, I always feel one runs the risk of the odd wrong note playing in such a key. The two Mozarts, particular the F Major K332 are a much easier option than both Beethovens.” (cf. (http://www.abrsm.org/forum/lofiversion/index.php/t18068.html) or “They performed two Haydins and two Mozarts. The Mozarts had the conductor playing piano as well” (http://www.anguswfinlay.com/AngusWFinlayOnline/My_Blog/Entries/2010/11/15_Symphonic_Sound.html).
This poses a serious problem for the theory above. There must be other reasons governing the use of indefinite articles. It could be the case that the connection between Goethe, and probably also Mozart, and their oeuvre is so strong that the metonymical use of their names simply does not allow indefinite articles, even if we are clearly reading one piece of Goethe’s work or listening to one particular piece of music by Mozart. Furthermore, Goethe’s work is highly diverse, consisting of novels, plays and poems. In the case of Agatha Christie, who is primarily known for writing a large number of mystery novels, this may be different. Her work is a homogeneous set of mystery novels and every part of it therefore refers to a single mystery novel.

This is an intuitive explanation rather than a precise analysis and the present section therefore merely touches upon some questions rather than answering them. The discussion presented in this section does, however, show that it is possible to gain some insight into differences between metonymical mappings on the basis of analysing their syntactic-grammatical environment. Even if the use of articles in front of proper names is only constrained semantically or pragmatically, these differences in the use of articles can be used to gather insight in the semantic-pragmatic effects of metonymy.

Proper names are not the only words that show effects on their syntactic environment. The process of “universal packaging”, which changes mass nouns into countable nouns, exhibits similar effects. Such MATERIAL FOR OBJECT contiguities have exhaustively been discussed by Brdar (Brdar 2007: 79-82; cf. also Ziegeler 2007: 101ff). The phrase three coffees please illustrates universal packaging and its grammatical consequence (cf. Jackendoff 1992: 26ff): The word coffee as a mass noun cannot be combined with determiners, such as articles or numerals, but if coffee is metonymically interpreted as an object a determiner or numeral is felicitous.

The opposite effect can be found in cases of “grinding” as discussed above (cf. also Brdar 2009: 263). In Russian, for example, grinding does not only change the use of articles, but it also has consequences for case marking. Case marking on the direct object in Russian is dependent on animacy: Animates direct objects appear in the accusative case, whereas inanimates direct objects are marked by the genitive form. As a consequence, direct objects denoting animals normally get accusative case but appear in the genitive case, when they are metonymically interpreted as food or material (Mell'čuk 1988: 381, 386).
Although such grammatical effects are side-effects of the shift in interpretation and not directly caused by metonymy, the next section will demonstrate that the semantics of surrounding words (such as articles and numerals) can provide information about the nature of metonymical re-interpretations.

4. Metonymical re-interpretations revised

4.1 Referent transfers or sense transfers?

Shifts in the use of surrounding words such as determiners can be taken into account to analyse in detail how metonymical mappings work. In this section, I will analyse step-by-step how noun phrases can be used metonymically. Let us therefore start with a non-metonymical example, such as (31).

(31) The ham sandwich tasted delicious.

We can understand the subject-NP of this sentence by understanding the concept corresponding to the compound ham sandwich and by knowing how the word the is used. Our knowledge of the concept ham sandwich (its intension) gives us the set of entities that the concept could possibly refer to (its extension) and the determiner of the NP leads us to the interpretation of one specific (contextually obvious) entity of this set.

There is no reason to assume that NPs which are used metonymically, as in (32), are interpreted in a fundamentally different way. If one analyses the ham sandwich in (31) as a specific entity of the classes of ham sandwiches, one should propose that in (32) the correct referent is interpreted in a similar way, i.e. by interpreting ham sandwich and picking out one specific referent that fits this concept (i.e. that belongs to the relevant set).

(32) The ham sandwich is sitting at table 9.

This, however, has crucial consequences for an analysis of the metonymy involved. The referent of the ham sandwich is apparently not directly shifted, but only via a conceptual shift of ham sandwich (cf. Sag 1981; Nunberg 1996). According to Nunberg, we are therefore not dealing with indirect reference or a ‘reference transfer’ in examples of metonymy but rather with a ‘sense transfer’ of ham sandwich. Examples (33)-(35) illustrate the same interpretational process.

(33) Five ham sandwiches are sitting at table 9. (cf. Sag 1981: 285)
(34) Every ham sandwich at that table is a woman. (cf. Sag 1981: 285)
Ham sandwiches generally prefer to sit by the window. (cf. Geurts 1998: 290)

Rather than assuming that the phrases five ham sandwiches or every ham sandwich as wholes shift their referents, it is the case that numerals and existential quantifiers have their normal semantic functions. Therefore, it must be concluded that only the meaning of ham sandwich is conceptually shifted within this specific context (Sag 1982: 285). This analysis also explains why we can use metonymically shifted expressions in a generalised way, as in (35). Rather than denoting concrete referents in examples like (35), all possible referents of the set are referred to.

The correctness of analysing referential shifts as caused by sense transfers is also illustrated by (36).

That (*Those) french fries is (*are) getting impatient (Nunberg 1996: 115)

Nunberg argues that we use the singular demonstrative and singular verb form because of the fact that first the meaning of french fries is transferred from the general class of ‘french fries’ to the class of ‘customers of french fries’ and next a specific, singular entity of that metonymically inferred class is picked out. The singular would be unexpected, if one argued that the full noun phrase directly denotes another referent.

The straightforward explanation of the semantics of surrounding words and of grammatical phenomena, such as agreement, intuitively makes the sense transfer account the most attractive option. However, the idea of sense transfer instead of referent transfer or, in other words, the idea that the property or concept expressed by the noun is shifted rather than the interpretation of the entire noun phrase is not generally accepted by linguists. Koch, for instance, writes:

“In the case of referent-orientation, it is the whole phrase, as a referring expression, that is metonymic and not the lexical entity that is part of the phrase. [...] it is not ham sandwich/sandwich au jambon as such that undergoes metonymy, but the whole referring phrase (including the determiner) whose reference shifts via a metonymic figure/ground effect DISH–CUSTOMER.” (Koch 2004: 25-26)

This view does, however, have two undesirable consequences. First of all, it is problematic given the data presented above. If the determinant and lexical phrase are shifted together, it should assumed that different shifts apply to (32), (33) and (34). This is not very plausible, especially not since the contiguity-type is exactly the same. In addition it is left unexplained how we interpret a shifted the, five or every in these examples and how we are able to understand generalised uses of metonymical expressions as in (35).
Secondly, the quotation above directly contradicts Koch’s very precise account of metonymical meaning in an earlier paper (Koch 2001). He analyses that three semiotic elements should be taken into account in order to understand metonymy precisely. These are the linguistic meaning (signifié), the more general concept connected to this (designatum) and the actual referent (Koch 2001: 218; cf. also Blank 1997: 101; Koch 2004: 20). In contrast with the above quotation, Koch claims in his 2001 paper that metonymical processes can indeed have consequences for the actual referent, but only via the concept connected to it:

“metonymy [...] is clearly based on contiguity relations between conceptual designata. The third entity [JS: besides signifié and designatum] involved in semiosis, the actual, individual referent, seems to be included in the metonymic processes only insofar as it is subsumed under a concept in whose contiguity and frame properties it participates.” (Koch 2001: 218).

I fully agree with Koch’s above description. I share the opinion that even referent-oriented metonymies have to be of “a conceptual nature” and could best be described as “a shift from one (class of) referent(s) to a totally distinct (class of) referent(s)” (Koch 2001: 218). In other words, metonymy induces a shift in the interpretation of the actual referent because of a figure/ground effect in the concept corresponding to this referent. The analysis in Koch’s 2001 quotation is a perfect description of Nunberg’s correct sense transfer account of the metonymical ham sandwich example: The concept corresponding to the noun rather than the direct referent has been shifted. In the next section I will discuss additional evidence for the sense transfer account of nominal metonymies.

4.2 Solving the puzzle of predicatively used metonymies

Most cognitive linguists agree that metonymies do not necessarily have to induce a referential shift. This is an important point of discussion though (cf. Sweep 2009b), since it has often been thought that referring is the fundamental function or even the only function of metonymy (cf. e.g. Lakoff & Johnson 1980: 36). Metonymical interpretations that do not lead to a new referent are, for instance, examples of zone activation or facet-senses (cf. Kleiber 1995: 122, 125; Kleiber 2007: 180-182, cf. also Koch 2001: 219). Metonymical noun phrases in predicative positions have also been used to add support to the claim that a metonymically shifted interpretation

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60 One can doubt whether signifié and designatum should be distinguished or even whether it is possible to distinguish them from each other, cf. also Koch 2004: 20.

61 This again shows the need of an onomasiological account: The figure/ground effect does not only occur in the literal meaning of the expressed concept (i.e. interpreting ham sandwich as the customer who ordered this), but the metonymical expression also causes a figure/ground effect in the intended concept (i.e. denoting the customer by highlighting his/her order), since this is the reason why the metonymical expression is used.
does not necessarily cause a shift from one referent to another (cf. e.g. Radden & Kövecses 1999; Ruiz de Mendoza 2000; Ruiz de Mendoza & Pérez 2001).

Such nominal metonyms used predicatively are illustrated in (37) and (38).

(37)  John is a real *brain*.

(38)  Jim is the fastest *gun*.

The metonyms in (37) and (38) are considered special, since *brain* or *gun* does not refer to the person as a whole (thereby shifting their referents), but instead say something about John’s or Jim’s characteristics (cf. Ruiz de Mendoza & Pérez 2001: 323). It is claimed (cf. e.g. Ruiz de Mendoza 2000) that each of the examples contains a metonymical noun phrase in predicative position signalling that the subject has an abstract property related to the noun phrase used, i.e. ‘being of the type of the contiguous referent’. These metonyms in predicative positions are therefore often described as non-referential uses of metonyms (cf. Ruiz de Mendoza 2000: 114).

Although these metonyms certainly do not directly shift their interpretation to some specific, concrete, contiguous referent, one can seriously question whether predicatively used metonyms are crucially different from normal referent-oriented metonyms. If (37), for instance, means that John is a smart person, then the phrase *real brain* has shifted its reference to ‘smart person’. Similarly, if (38) expresses that Jim is the fastest shooter, then *gun* has been shifted to ‘person with a gun’ (i.e. ‘shooter’). This is an important observation, because it shows that the semantics of the metonymical expression such as in, for example, *John is our real brain* entered the room.

The same point can be illustrated by sentence (39).

(39)  She is (just) a pretty *face*.

This example is taken from Lakoff & Johnson themselves (1980: 37), who regard the sentence as a normal, referential PART FOR WHOLE metonymy. Radden and Kövecses, however, argue that *face* cannot stand for the whole person, given that (39) does not mean ‘she is pretty all over’ (1999: 18-19). The reason for this is probably just that the metonymy involved does not follow the pattern PART FOR WHOLE but rather something like ATTRIBUTE/PART FOR PERSON WITH THIS

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62 I also raised this question in Sweep 2009b (p. 106), though without discussing this within the context of a sense transfer account.

63 In addition, this example is complicated because it is a little idiomatic: The use of the word *just* almost seems to be necessary and is almost always used in the example. This word furthermore implies something negative, i.e. that she is not very smart. Therefore, the sentence is a rather complex example of a predicatively used metonymy.
ATTRIBUTE/PART, meaning that the sentence should be interpreted as ‘she is (just) a person with a pretty face’. Because the metonymy is used in predicative position, no shift of a concrete referent has taken place. However, this example does once again illustrate that there is no fundamental difference with a referential use of the same metonymy, as in Our pretty face comes in.

On the basis of these observations it can be concluded that a predicatively used metonymy is nothing but a normal metonymy in predicative position. In consequence, it becomes obvious that all normal referent-oriented metonymies do not directly shift their referent, but instead shift their meaning, and thereby their referent. Metonymy always induces a sense transfer: Under the sense transfer account, the referential shift in Our real brain entered the room only occurs on the basis of a re-interpretation of the corresponding concept (real brain), which occurs in exactly the same way in the metonymy predicatively used in John is our real brain. In other words, the parallel between predicatively used metonymies and referential ones clearly pleads for a sense transfer account.

These metonymies show that the opting for a referent transfer or a sense transfer of nouns in fact depends on how one analyses NPs in general. It could claimed that NPs directly refer to concrete entities or that they pick out an entity of a denoted set of entities (that can be subsumed under some concept). The latter analysis turns out to be much more precise (cf. also Blank 1997 or Koch 2001) and is even necessary for explaining predicatively used phrases as well as referential ones. As a consequence, however, it remains untenable to assume that a conceptual mechanism such as metonymy directly applies to intended referents, skipping shifts at the level of concepts. The obvious similarities between metonymical nominal phrases and referential metonymies show that if the former demand a sense transfer account, the same must be true for the latter.

Additional support for a meaning or sense rather than a referent transfer is provided by the fact that it is not only occasional referent-oriented metonymies that can be used predicatively, as in examples (37) and (38), but also lexicalised ones. An example of this is: He is a fine bass. Although this example is analysed fully in line with the examples discussed above (cf. Ruiz de Mendoza 2000: 114), it is in fact slightly different, since one of the lexicalised metonymical meanings of bass is ‘a man with a very deep singing voice’ (cf. also Sweep 2009b: 112). The fact that there is no fundamental difference between referential metonymies and predicatively used ones can therefore also be illustrated with some lexicalised examples, such as bass. The word bass is metonymically interpreted in the same way in He is a fine bass and in Our finest bass is ill. Once again the need for a sense transfer emerges: In lexicalised metonymies (be it referentially or predicatively used) it is certain that a sense or meaning transfer has occurred, rather than a referent transfer. Lexicalised metonymies in various syntactic positions and the similarity between some occasional referential metonymies and predicatively used ones clearly plead for a sense transfer account.

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64 Thanks to Fons Moerdijk for the observation.
4.3 Double possible analyses and strange cross-linguistic differences

If one ignores the advantages discussed above, the sense transfer account and the referent transfer account thus far only differ methodologically. For standard referent-oriented metonymy of the *ham sandwich*-type both accounts assume, for example, that one ends up with a shifted referent (directly or via a shift in concepts) and both accounts will analyse the nominal phrase as metonymical (although with or without determiner or quantifier). However, in other cases the analysis of which phrase has undergone a metonymical shift will differ under the two accounts, since a sense transfer induced by metonymy predicts that all parts of speech, and not only noun phrases can undergo metonymical shifts.

Although this prediction is correct (remember the metonymical polysemy of the Dutch verb *klateren*) and is reflected in the literature more frequently (cf. Koch 2001: 220; Koch 2004: 29), it does also have an unpleasant consequence: It is claimed to double the possible analyses of some sentences with a metonymical re-interpretation (cf. Nunberg 1996: 123).65 Example (40) can be used to illustrate this.

(40) Billy’s shoes were neatly tied.  (cf. Nunberg 1996: 110)

Since it is only possible to tie shoe laces, some element in the sentence has to be re-interpreted. But how do we know which expression should be re-interpreted metonymically: The concept expressed by the subject or the concept expressed by the verb? If we assume that the senses of noun phrases as well as of predicates can be metonymically shifted, both analyses are possible. Nunberg therefore writes: “either *shoes* has a transferred reading where it refers to the shoe laces, or *tied* has a transferred reading, where it denotes the property that shoes acquire when their laces have been tied” (Nunberg 1996: 123).66 This problem was already discussed in Honselaar’s dissertation (Honselaar 1980: 64).

Two tests are supposed to make it possible to decide whether the noun or the predicate is metonymically shifted: Co-predication and anaphoric reference. The idea behind these tests is simple; they are both used to determine in which way the nominal phrase is actually interpreted. If the noun is interpreted metonymically, it should be possible to coordinate predicates that apply to the metonymical referent. It

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65 Kleiber argues that this is a clear disadvantage (“*Le prix qu’a payé*”) for Nunberg (Kleiber 1995: 119; cf. also Kleiber 2007: 177). It is, however, not fair to say that only Nunberg’s account has to pay this price: Every theory which correctly assumes that predicates can have metonymical meanings (cf. Koch 2001; Koch 2004) opens the possibility for the two analyses discussed in this section.

66 A similar problem applies to the so-called tough-construction, as in *The book is easy to read*. Such sentences are approached in two ways: Langacker (1995) claims that the predicative expression, such as *is easy*, is interpreted metonymically, while Brdar-Szabó and Brdar (2004) argue that it is the book that is metonymically interpreted. Recanati argues that both analyses are possible (Recanati 2004: 34).
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should also be possible to refer anaphorically to this new referent. If, on the other hand, the noun is interpreted literally, the antecedent of the anaphor should be the literal referent and it should be possible to add predicates that can be combined with the literal referent. In that case the metonymical re-interpretation is said to apply to a different phrase than the nominal one.

Examples (41)-(43) illustrate these tests (cf. Nunberg 1996: 123).

(41) Billy’s shoes were neatly tied. They were blue.
(42) */? Billy’s shoes were neatly tied but frayed.
(43) Billy’s shoes were neatly tied but dirty.

The only available reading for sentence (41) is that the shoes were blue. It is not possible to interpret ‘they’ as referring to the shoe laces. Sentences (42) and (43) show something similar: It is only possible to add a predicate that applies to the literally expressed subject (i.e. ‘the shoes’). Therefore Nunberg argues that it must be the predicate tied instead of Billy’s shoes that is metonymically transferred in example (40) (Nunberg 1996: 123). If the nominal phrase was interpreted metonymically, these tests would be expected to show the opposite outcome.67

This is exactly the outcome for an example such as (32) (repeated as (44)). Even though it is, in principle, also possible to analyse is sitting at as metonymically transferred, it is claimed that the two tests indicate that in this example the metonymy affects the noun phrase.

(44) The ham sandwich is sitting at table 9.
(45) The ham sandwich is waiting for his/*its check. He/*It is getting impatient.
(46) The ham sandwich is sitting at table 9 and is getting impatient.
(47) *The ham sandwich is sitting at table 9 and looks delicious.

Anaphors can only grammatically agree with the customer, as in (45), and it is impossible to add predicates that apply to the literal sandwich, as in (47).

According to Nunberg these tests demonstrate that it is sometimes even possible to have two analyses for one and the same sentence. Nunberg argues that an example such as (48) can be analysed as metonymically shifting the sense of the proper name but also of the predicate (Nunberg 1996: 124).

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67 A similar argumentation can be found in Stallard 1993, who speaks about predicative metonymy as opposed to referential metonymy. I will discuss his account in more detail below (cf. section 5.1).
Yeats is still widely read  (Nunberg 1996: 124)

This idea is supported by the fact that sentence (48) could, according to Nunberg, be followed by (49) as well as by (50) (but not by (51), cf. Nunberg 1996: 131).

(49) ..., although he has been dead for more than 50 years.
(50) ..., although most of it is out of print.
(51) …*, although most of him is out of print.

On the basis of this, Nunberg concludes that (48) “is in fact ambiguous”: If (48) is followed by (49), Yeats has to be interpreted literally and thus the predicate is metonymically interpreted, whereas if (48) is followed by (50) “yeats is a mass term referring to the poet’s work” (Nunberg 1996: 124).

There are a few problems with this reasoning. First of all, one can question whether it is plausible that the ambiguous reading of (48) only becomes visible when another sentence is added without any directly noticeable change in the reading of the sentence as such. Secondly, Nunberg’s intuition that the author of (48) could be anaphorically picked up is not shared by everyone or certainly differs across languages. Since I am not a native speaker of English, I am not able to judge Nunberg’s English examples. In Dutch, it seems to me only possible to use the masculine pronoun in both cases. Sentences (52)-(55), which are the Dutch translations directly corresponding to (48)-(51), illustrate this.

(52) Yeats wordt nog altijd veel gelezen
Yeats is still always a lot read

(53) …, alhoewel hij al meer dan 50 jaar dood is
…, although he already more than 50 year dead is

(54) …, alhoewel het meeste ervan niet meer gedrukt wordt
…, although the most there-of [= of it] not more printed is

(55) …, alhoewel het meeste van hem niet meer gedrukt wordt
…, although the most of him not more printed is

The phrase “But most of him is out of print” (referring to Daudet’s works) can be found on the internet as a quotation within an interview with an English translator, cf. http://www.randomhouse.ca/catalog/display.pperl?isbn=9780679312093&view=auqa [May 2010].

Note that in this case a similar thing as in (45) occurs, however with an opposite effect concerning animacy: In (45) an anaphor for animate beings (he) is used although the nominal phrase is literally inanimate, whereas in (50) an anaphor for inanimates is used, although the nominal phrase is literally animate.
Two conclusions are possible on the basis of these examples. Either sentences such as (48) and (52) display different kinds of metonymical mappings across languages, even though they have fully similar structures or it is only the rules for pronouns and anaphors which differ across languages.\textsuperscript{70}

If it could be demonstrated that it is just the use of anaphors which differs across languages, grammatical agreement of anaphors could not be used as a test to decide between nominal or verbal metonymy in all languages. In the next section, I will therefore analyse the behaviour of anaphor agreement in Dutch, English and German.

\textbf{4.4 Anaphor agreement in Dutch, English and German}

Before comparing the behaviour of anaphors in Dutch, German and English, it will be useful to discuss a totally different explanation of why anaphors behave the way they do in connection with metonymical expressions. Ruiz de Mendoza and his collaborators account for the use of anaphors on the basis of the difference between source-in-target and target-in-source metonymies (cf. above chapter II, §3). They claim that the only antecedents available in the discourse are the ones in the highest domain. This principle is called the Domain Availability Principle (cf. Ruiz de Mendoza & Pérez 2001: 351, Ruiz de Mendoza & Díez 2004: 500).

The Domain Availability Principle perfectly explains the difference between (45) and (41): In the \textit{ham sandwich}-example, we are dealing with a source-in-target metonymy (i.e. the target ‘customer’ includes the sub-domain ‘order’). Since the customer is the highest domain, he/she is available for anaphors and additional predicates. The \textit{tied shoes}-example (sentence (41)), on the other hand, is a target-in-source metonymy (the source ‘shoes’ include the ‘laces’). Therefore, they can only be interpreted as referring to the literally expressed shoes and no transfer of predicates needs to be assumed; the metonymy is nominal in both cases, but the only antecedents available for anaphors and new predicates simply come from the highest domain.

Even though this theory is intuitively plausible and makes good predictions for (41) and (45), it is not flawless. First of all, it is not always easy to decide objectively whether the target domain is included in the source or the other way around. To me it is, for example, not entirely clear why the author-domain would include the oeuvre-domain rather than the other way around. I would assume that the oeuvre-domain includes the author, since an oeuvre implies the existence of an author whereas authors do not have to have written work (yet). Ruiz de Mendoza and Pérez assume, however, that the work is included in the author domain “since an author’s work is a salient part of our knowledge about him” (Ruiz de Mendoza & Pérez 2001: 338). Without objective criteria to decide whether the metonymy is

\textsuperscript{70} It could be argued that in this sentence there is no metonymical expression at all, since the prepositions of the English phrases \textit{most of something} or \textit{most by someone} are both translated into Dutch with the preposition \textit{van}. The phrase \textit{het meeste van hem} could just be analysed as ‘most (works) by the author’.
source-in-target or target-in-source, the theory runs the risk of being circular (cf. also Sweep 2009b: 112-113).

In addition, the Domain Availability Principle does not always make correct predictions. For some specific English examples, the theory predicts the opposite of what is possible in the language (cf. Sweep 2010b, note 2; see also example (84) and footnote 84 below). For other examples it provides only half an explanation.

The AUTHOR FOR WORK metonymy can again be used to illustrate this. Since AUTHOR FOR WORK metonymies are said to be of the source-in-target type, it is predicted that it is only possible to use the pronoun *he*. Even though this may be true for Dutch (cf. examples (52)-(55)), Nunberg’s data contradict this idea for English (cf. examples (48)-(51)). Since all metonymies are either target-in-source or source-in-target, the Domain Availability Principle could by definition never explain why it is possible to use different types of anaphors, referring to the source or to the target, within one contiguity type. Nunberg’s data are not the only examples of this: Some German data will be discussed below that also support the idea that the use of both types of anaphors (i.e. source-corresponding and target-corresponding) is sometimes possible.

It has also been suggested that being animate is so essential that we automatically refer back to the human participant, independent of whether the source or the target is human (Stirling 1996: 84; cf. also Kövecses & Radden 1998: 64). However, this suggestion has the same problems: It cannot explain why different anaphoric agreements are sometimes possible, and it is incompatible with grammatical agreement in German data. German data thus turn out to be problematic for all accounts.

To demonstrate this, I will first compare the use of Dutch and English pronouns and anaphors. In contrast to the differences in the Yeats-examples discussed above, Dutch and English pronouns and anaphors behave similarly in sentences with metonymies of the *ham sandwich* type. Consider first the English example (56) (= (45)) and the Dutch equivalent (57).

(56) The *ham sandwich* is waiting for his/*its check. He/*It is getting impatient.

(57) *Het broodje beenham* wacht op zijn rekening. Hij/*Het is ongeduldig aan het raken.

As explained before, it is claimed that the nominal phrase is metonymical, because the pronouns refer back to the customer. This is visible in the syntax of English since the pronouns for animates (*his/he*) must be used. Dutch shows comparable behaviour. The phrase *broodje beenham* is grammatically neuter and literally denotes an inanimate object. The choice of *hij* (*he*) and the impossibility of using *het* (*it* [neuter, inanimate]) in the next sentence shows that it must be a shifted referent (i.e. the customer) that is picked up as the antecedent.

Just as for English and Dutch, it has been claimed that in German examples of the *ham sandwich*-type anaphors always have to refer to the customer and can never
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refer back to the concrete object that the customer has ordered (Egg 2004). The choice of pronoun, however, seems to be different in German as compared to Dutch or English. Consider example (58) (cf. Egg 2004: 47 sentence (11) and 51 sentence (19b)).

(58) Das Schnitzel wollte zahlen. Es war verärgert.
  the.ART N schnitzel wanted to pay. il.PRON N was irritated
  ‘The schnitzel wanted to pay. He was getting annoyed.’

Even though, in contrast to English, the anaphor grammatically agrees with the neutral gender of the expressed order (i.e. Schnitzel), Egg argues on a purely semantic basis that the pronoun can only refer back to the customer of the schnitzel.71

At first sight, this directly contradicts Nunberg’s idea that the choice of the pronoun, i.e. it / es versus he / er, indicates the actual referent of the nominal phrase (cf. also examples (48)-(51)). However, the use of English it and German es differ in general. German has three grammatical genders (neuter, feminine and masculine) and if an animate nominal phrase is grammatically neuter, it can be referred to by es (‘it’) and not necessarily by er (‘he’) or sie (‘she’). As Köpcke, Panther and Zubin put it: “in German grammatical gender agreement often competes with conceptual gender agreement” (Köpcke et al. 2010: 171). Grammatical gender can thus, at least in written German, be stronger than natural gender. Example (59) (from Grimm)72 and (60) about Dionysus (from the DWDS-corpus) illustrate this.73

71 If this analysis is on the right track, example (58) casts doubt on Panther and Thornburg’s idea that metonymies influence grammar by their targets, whereas metaphors affect grammar on the basis of their source meanings (cf. Panther & Thornburg 2009: 17, 24). If their idea is true at all, it could be nothing more than a tendency, since Egg’s examples show the opposite effect. Interestingly Köpcke, Panther and Zubin also explicitly claim that metonymic sources can indeed directly influence grammatical elements (Köpcke et al. 2010: 167).

72 Several variants of the text exist. This example is based on a version from 1812 (cf. http://de.wikisource.org/wiki/Sneewittchen_%28Schneewei%C3%9Fchen%29_%281812%29 ) and the same pronominal reference can be found in a version of 1837. Very interesting is a version in which the feminine pronoun sie (‘she’) and es (‘it’) are both used within the same sentence: “Schneewittchen aber wuchs heran und wurde immer schöner und als sie sieben Jahre alt war, war es so schön,…” (cf. e.g. Heidreich Peter (2000): Weg wird Weg im Gehen: Beiträge zur Spiritualität, Religion und Märchendeutung, LIT Verlag Berlin-Münster, p. 115 or the audio version of www.vorleser.net).

73 Cf. also the examples discussed by Köpcke et al. (2010: 171, 178).
(59) Schneewittchen aber wuchs heran,
'Snowwhite but grew up,'
und als es sieben Jahr alt war
and when it seven years old was
‘But Snowwhite was growing up and when she was seven years old...’

(60) aber Hermes rettete das Kind
‘but Hermes saved the child,’
indem er es in Zeus’ Schenkel inüehnte
in that he it in Zeus’ thigh in-sew
‘but Hermes saved the child, in that he sewed him (/it) into Zeus’ thigh’

Without discussing these grammatical differences with English, Egg gives two arguments why it must be the case that the pronoun refers to the customer in (58) (despite its literal grammatical agreement with the order).74 The first argument is the so-called ‘uniqueness presupposition’-test. He explains this as follows: One can only felicitously use a definite nominal phrase, if there is exactly one referent that fits this phrase. This requirement for definite phrases is called the “uniqueness presupposition” (“Einzigartigkeitspräsupposition”, Egg 2004: 46). If a nominal phrase is interpreted metonymically, the unique referent must have changed. The “uniqueness presupposition fulfilment” shows that exactly this has happened in the case of example (58): A waiter can even utter this sentence including the definite noun phrase, when he is standing next to a pan full of schnitzels. The uniqueness presupposition can only be fulfilled in the described situation if the referent of “Schnitzel” has been metonymically shifted (Egg 2004: 47). It must thus be the nominal phrase and not the verb that is metonymically shifted.

The contrast between the masculine pronoun in English and Dutch ((56) and (57)) and the neuter in German ((58) or (62)) therefore only demonstrates that the rules for anaphors are slightly different in the two languages, exactly as suggested above and as supported by the non-metonymical examples (59) and (60). The ‘uniqueness presupposition’-test shows us that the metonymy in each language actually applies to the same phrase.

74 It should be remarked that Egg himself does not explicitly discuss the fact that the pronoun in his German examples such as (58) grammatically agrees with the source and not with the target. In the discussion of other metonyms Egg claims, strangely enough, that the verb must be metonymical instead of the noun, given the observation that pronouns can only grammatically correspond with the nominal expression used and not with the alleged target (cf. Egg 2004: 51-52 sentence 20 versus sentence 19).
4.5 What does co-predication actually test?

In the previous section it has been made clear that even if anaphors behave differently in German as compared to English, the ‘uniqueness presupposition’-test can nevertheless reveal that the nominal phrase is metonymical (Egg 2004: 46ff). But the ‘uniqueness presupposition’-test cannot always be used.

First of all, in some examples it can be very difficult to come up with a scenario to test whether the uniqueness presupposition holds for the shifted concept. This is illustrated in (61), an example from the DWDS-corpus, in which the author (Kant) but also his oeuvre are by definition both unique.

(61) Sie sollten Kant lesen.
they should Kant read
‘They should read Kant.’

Secondly, the uniqueness presupposition does not have to be fulfilled at all in examples of metonymy with indefinite phrases, which makes it impossible to use this test. Consider for instance example (62).

a.N schnitzel wanted to pay. it PRON N was irritated
‘a schnitzel wanted to pay. He was getting annoyed.’ (cf. Egg 2004: 51)

According to Egg, the argument of co-predication can, however, also be used to explain why the pronoun Es has to apply to the customer. The second part of example (58) (repeated below as (63)) is clearly about the customer and not about the literal schnitzel. If it is argued, in line with Nunberg, that the neuter pronoun in fact indicates that the schnitzel is literally interpreted, then not only does the predicate wollte zahlen but also the next predicate war verärgert have to be metonymically transferred.

Although Egg does not explicitly discuss this line of reasoning, his paper indicates that he does not regard this as very plausible, since it is, he claims, impossible to use predicates that do not apply to the customer. This is illustrated by contrast between (63) (= (58)) on the one hand, and (64) and (65) on the other.

(63) Das Schnitzel wollte zahlen. Es war verärgert.
the.ART N schnitzel wanted to pay. it PRON N was irritated
‘The schnitzel wanted to pay. He was getting annoyed.’

(64) * Das Schnitzel wollte zahlen. Es sah sehr appetitlich aus.
the.ART N schnitzel wanted to pay. it PRON N saw very delicious out
‘A schnitzel wanted to pay. It was looking very delicious.’
(65) * Ein Schnitzel lag auf dem Teller. Es war verärgert

*A schnitzel was on the place. It was getting annoyed.* (cf. Egg 2004: 50)

One might question, whether it is correct to compare these predicates. There could be many other reasons for the impossibility of the second part of the examples (64) and (65). For (64) it is, for instance, fairly evident why the pronoun cannot be used to refer to the literal schnitzel: If customers want to pay, they have generally finished their dishes. It does not make much sense from a pragmatic point of view to refer to a property of the now invisible schnitzel.

Sentence (65) also crucially differs from (63). In (63) the relation CUSTOMER-ORDER has become relevant because of the paying-predicate. Furthermore, a relation between the wish to pay and the irritation seems to be implied. None of this is true in (65). Independently of the literal use in the first half of the example, it can seriously be questioned whether the metonymy ORDER-CUSTOMER is important enough to refer to an irritated customer. A reason for the infelicity of the sentence could be the general context. i.e. the fact that there is no relation between the two predicates.

Kleiber and Waltereit have offered similar arguments against the co-predication test in general (cf. Kleiber 1995: 127ff or Kleiber 2007: 183ff; Waltereit 1998: 57-58): Predication of a metonymical phrase is only possible if the metonymical connection is relevant in its specific context. Nunberg calls this relevance for using metonymical expressions ’noteworthiness’ (cf. Nunberg 1996: 114). The condition of noteworthiness casts doubt, however, on the usefulness of the co-predication test. The test may not offer any prove as to whether the nominal phrase is interpreted literally or metonymically but only shows whether the metonymical relation, such as the one between customers and orders, is of any relevance for the predicate used in its context.

Whereas Nunberg argues that *I am parked out back* must be an instance of predicate transfer, since *I am parked out back and I need an oil change* seems to be impossible, I agree with Waltereit and Kleiber that this example could be infelicitous for pragmatic reasons only (cf. especially Waltereit 1998: 57). The contiguity DRIVER-VEHICLE (or POSSESOR-POSSESSED, cf. Kövecses & Radden 1998: 64) is probably not relevant in the same way for the oil change as it is for the parking predicate. This can be supported by an example such as *(!)I am parked out back; you can find me in the last lane* (said to a car-park attendant) which seems to me much better (cf. also Waltereit’s example 1998: 57).

If this is correct, co-predication cannot be used to test whether the metonymical transfer applies to the nominal subject or to the verb phrase, since it only tests to what extent the contiguity relation is relevant in a certain context. This idea also suggests that examples such as (64) and (65) are in fact probably possible in an appropriate context. Suppose, for instance, that a waiter has to bring a customer of a ham sandwich his check, but he does not exactly know how much the ham sandwich costs nor does he know the exact table number. Probably a colleague could felicitously direct this utterance to him: *(!)The ham sandwich is sitting at table 9*
and it costs 4 euro (≈ 64). Nunberg would have to assume that the predicate is sitting at has to be metonymical in this example, whereas I would claim that there are pragmatic reasons to explain the use of the pronoun it.\textsuperscript{75}

If this is correct, co-predication cannot be used to test whether the metonymical transfer applies to the nominal subject or to the verb phrase, since it only tests to what extent the contiguity relation is relevant within a certain context. Not only invented examples used in specific made-up scenario’s illustrate this. Although it is not very easy to find real examples of this kind, some corpus examples do indicate that sentences similar to (65) are in fact perfectly possible (cf. examples (66)-(68) below). In order to account for such examples, I will propose another type of metonymy involved. As I will explain, the possibility of a sense transfer of the verb for the above examples as proposed by Nunberg is rendered even less plausible by this analysis.

\textbf{4.6 Metonymical transfers of anaphors}

In the previous sections I have showed that Nunberg’s distinction between verbal and nominal sense transfer is problematic. Although Nunberg himself warned that counter-intuitive metonymies occurred in some examples, or even that double analyses were possible, I have shown that Nunberg’s tests can hardly ever decide whether nominal or verbal phrases are metonymical. Co-predication cannot be used as a decisive test, since this possibly only tests the relevance of the contiguity relation. Grammatical agreement of anaphors also does not always reflect which phrase is metonymical: In Egg’s German examples the use of anaphors contradicts other tests, such as the uniqueness presupposition-test. Unfortunately, this test is not always available (cf. (61) and (62)).

However, there is one argument left which still pleads for the nominal metonymy in the case of the German ham sandwich-examples. If co-predication is determined by pragmatic factors, and even if pronoun agreement cannot be used in German, a predicate transfer analysis still has to assume a double metonymy for the above Schnitzel-examples: It could only be claimed that wollte zahlen is metonymically transferred and Schnitzel is interpreted literally, if the next predicate war verärgert also gets a metonymical interpretation. This predicate semantically applies to the customer and not to the order (cf. example (62)/(63), page 64).

However, closer inspection shows that Egg’s nominal metonymy account has to deal with a similar problem. Egg’s explicit claim that the word Es in examples (58) or (62) is co-referential with the customer (Egg 2004: 51) conflicts with the grammatical agreement of Es. If Schnitzel is metonymically understood and the predicate war verärgert is interpreted literally as applying to the customer, it must

\textsuperscript{75} Note the similarity with example (63).

\textsuperscript{76} Intuitions on this differ: I agree with Waltereit that the sentence ?I am parked out back and I need an oil change is really strange, whereas Wim Honselaar finds it acceptable. He finds my suggested example (?).The ham sandwich is sitting at table 9 and it costs 4 euro highly zeugmatic.
be concluded that the anaphor Es itself must be metonymically. The semantics of Es has to be metonymically shifted in the sense that the anaphor does not directly pick up the referent available in the text as its antecedent, but rather introduces a new referent (‘the customer’) by its relation with a related expressed one (‘the order’). Not only does predicate transfer have to account for two metonymies (i.e. wollte zahlen and war verärgert), but the noun transfer-account leads to double metonymical interpretations (of Schnitzel and of Es) in German as well.

I am not alone in being led to the conclusion that anaphors can be metonymical: Langacker also noticed that anaphors can refer to entities that are “accessible only via metonymy rather than being directly mentioned” (Langacker 2009: 66; cf. also Langacker 1996; Langacker 1999: 280-281). Examples taken from corpora and the internet do indeed illustrate the point that anaphors by themselves sometimes appear to be interpreted metonymically. Consider, for instance, the German example (66).

(66) Ich holte die klein-en Flaschen mit Gin, Rum und Scotch heraus [...] In jed-er Flasche war ein ander-er Teufel, und ich trank sie all-e – ein-e nach der ander-en.

‘I took the little bottles with Gin, Rum and Scotch out [...]. In every bottle was a different devil, and I drank them all – one after the other.’

The plural words sie alle (‘all of them’) must refer back to the one available plural in the text, i.e. die kleinen Flaschen. This idea is confirmed by the phrase eine nach der anderen, which has to refer back to a grammatically feminine antecedent. The only feminine antecedent available is Flasche. The words eine and der anderen cannot refer to the spirits (Gin, Rum, or Scotch) nor to the devil (Teufel), since these words are all masculine. However, the word Flasche and die kleinen Flaschen are interpreted literally. This makes two different analyses possible: In line with Nunberg it could assumed that the predicate trank (‘drank’) gets a metonymical interpretation since sie alle - eine nach der anderen refers to the bottles. However,
one could equally well claim that the anaphor sie alle - eine nach der anderen are metonymically interpreted.

Similar examples can also be found in English or Dutch. Sentence (67), from the British National Corpus, shows an example which is very similar to (66).

(67) Monty was supposed to be on the wagon and I certainly didn’t see him drinking, until I discovered that every time he passed the bar he’d pick up any bottle that was on the bar and drink it.

The word *it* seems to refer to the bottle, which is, however, the literal object that has been picked up. The semantics of *it* should therefore be analysed as metonymical: The anaphor does not pick up an antecedent directly available in the text; rather it introduces a new referent (‘an alcoholic drink’) on the basis of a conceptually related, available one (‘bottle’).

Similarly, example (68) of the ANW-corpus illustrates a Dutch metonymical pronoun connected to an AUTHOR-WORK contiguity.

(68) Tucholsky (1890-1935) was een van die schrijvers die hun naam vaak veranderen. 
except as Kurt Tucholsky wrote he also as Ignaz Wrobel

Theobald Tiger, Peter Panter en Kaspar Hauser. ( [...] )

Ik weet nog hoe ik *hem* voor het eerst las.

‘Tucholsky (1890-1935) was one of those authors who often change their names. Except as Kurt Tucholsky he also wrote as Ignaz Wrobel, Theobald Tiger, Peter Panter and Kaspar Hauser. ( [...] ) I still remember how I read *him* for the first time.’

The last phrase of example (68) *hoe ik hem voor het eerst las* (lit.: ‘how I him for the first read’) has to be interpreted as ‘how I read a book by Tucholsky for the first time’. In the first two sentences of example (68), however, the word Tucholsky has to be interpreted as the proper name of the author, since no re-interpretation is

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77 For a Japanese example see Langacker 2009: 67.
needed: It simply states about the author Tucholsky that he often changed his name and therefore wrote under different pseudonyms. We cannot plausibly assume any metonymy (either of the noun or of the predicate) here since all predicates fully apply to the literal author himself. The only re-interpretation necessary is in the last sentence in (68). One can preserve the intuition that las (‘read’) just refers to an activity involving books, if it is the anaphor that is metonymically interpreted, i.e. picking up an antecedent (‘book’) which is related to an available one (‘Tucholsky’) in the discourse. An anaphors with a metonymically transferred sense does not refer to a referent interpreted earlier, but instead it is applied to a new, contiguous referent on the basis of an available one that was interpreted earlier.

In addition to these examples, there is a second argument for the metonymy of Es in the Schnitzel-examples of (58) or (62): I seriously doubt whether grammatical agreement always has to occur in German. Suppose that examples (69) and (70) are used to refer to a male customer.78

(69) Die Bratwurst wollte zahlen. ?? Sie [male customer] war verärgert.
the.F sausage wanted to pay she [male customer] was irritated
‘The sausage wanted to pay. He was irritated’

(70) Die Bratwurst wollte zahlen. Er war verärgert.
the.F sausage wanted to pay he was irritated
‘The sausage wanted to pay. He was irritated’

Although the gender of Bratwurst is feminine, it would be very confusing to use the pronoun sie, which agrees grammatically with its antecedent Bratwurst, to refer to a male customer. I would suppose that, if these sentences are ever used, only (70) could be used felicitously in the situation described. Similar examples are provided by Köpcke et al. (2010: 177) on the basis of a MUSICIAN-INSTRUMENT contiguity. If these examples with a pronoun agreeing with the gender of the customer are possible as well, the logical conclusion is that the pronoun of (58) which refers to the order must have been interpreted metonymically. This view is supported by Egg’s uniqueness presupposition: Since it must be the nominal phrase that is metonymical, the same should be true for the anaphor.

Anaphors that are metonymically interpreted have intuitively explanatory power in an intuitive way (cf. examples (66)-(68)), but they undo the usefulness of both the anaphor and co-predication tests. How should we analyse, for instance, examples (41) (here repeated as (71)), if anaphors can also be metonymical?

(71) Billy’s shoes were neatly tied. They were blue.

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78 I have to thank Mara van Schaik-Radulescu for discussing the Schnitzel-examples with me, since I thought of this example on the basis of our discussion.
One does not have to assume, as Nunberg does, that the second sentence shows that the predicate of the first is metonymically transferred. One could also argue that Billy’s shoes and also They in (71) are metonymically used, thereby preserving the nominal transfer. Co-predication does not help, because the same alternative reasoning exists for sentence (42) as well as for (43) (here repeated as (72)-(73)).

(72) */? Billy’s shoes were neatly tied but frayed.  (Nunberg 1996: 123)
(73) Billy’s shoes were neatly tied but dirty.     (Nunberg 1996: 123)

The reason that co-predication in (72) is not possible could be the fact that the PART-WHOLE relation between shoes and their laces is not relevant enough for frayed laces, while it is relevant for tying and even for being dirty. Frayed laces do not cause the shoes to be frayed, whereas dirty shoes can easily imply dirty laces (cf. Kleiber 1995: 124 or Kleiber 2007: 180). In conclusion, we should say that in these cases tests such as anaphoric pick-up and co-predication cannot help to conclude whether the metonymy applies to the verb or to the nominal phrase.

For some examples it becomes even more difficult to decide where the metonymy comes into play. We could, for instance, assume that in (74) Kant and he are metonymical, but we could equally think that the two predicates are transferred (as would be done by Nunberg).

(74) Kant is still popular, although he is difficult to read.

Sentence (75) suggests that the nominal-metonymy analysis is correct, but the parallel with (76) on the other hand pleads for a transferred predicate.

(75) Kant is still popular, although some of it is out of print.
(76) Kant is still popular, although he died two centuries ago.

In examples like these predicate transfer is often rejected solely on the ground that it is not intuitively satisfying (cf. Panther & Radden 1999: 10). Although one can question whether “intuition is a sure guide” (Nunberg 1996: 123) for scientific analyses, the option that anaphors can be metonymical provides an equally explanatory analysis for the above examples (as for (74)) while better preserving intuitions. Of course, this does not mean that predicate transfer by metonymy is in principal impossible, but it simply shows that neither co-predication nor “divergent anaphora” (Kleiber 2007: 174) are reason enough to completely abandon the possibility that the noun is metonymical in some of the above examples.
4.7 Metonymical nouns, anaphors and real verbal sense transfers

In general, a sense transfer account is a better explanation for metonymically shifted interpretations. First of all, a sense transfer account in the sense of Nunberg is compatible with the stability of the semantics of surrounding words (such as the, five or every). Secondly, it explains the fact that referential metonymies do not crucially differ from predicatively used metonymies, even though the latter do not denote a shifted referent. This shows that even examples in which the metonymy is used for referential purposes need to be analysed as sense transfers, since referring to entities always takes place via corresponding concepts (cf. Koch 2001: 218).

In addition to these advantages, the sense transfer account provides a unified explanation for all kinds of metonymical shifts, independent of which part of speech is used metonymically. If metonymy could only be used for referential shifts, it remains unexplained how pragmatic metonymies could exist (cf. §4.2 above) or why abstract lexicalised metonymies, such as the metonymical meaning of the Dutch verb *klateren*, are possible.

A comparison of metonymically transferred verbs of the latter kind with Nunberg’s examples of predicate transfer shows an even more fundamental problem for Nunberg. As for all metonymical shifts, the correspondence between the basic and metonymical meaning of Nunberg’s transferred predicates should be noteworthy (cf. Nunberg 1996: 114). However, it remains vague what the meaning of the literal sense and the shifted sense of the predicate should be in Nunberg’s examples (cf. also Kleiber 1995: 120 or Kleiber 2007: 175). Nunberg only explicitly states that “the property denoted by the derived predicate has to correspond in a certain way to the property denoted by the original predicate” (Nunberg 1996: 112). Kleiber correctly criticizes the correspondence relation in Nunberg’s predicate transfers:

Elle [i.e. cette correspondance] n’existe pas non plus en dehors de relation qui unît les deux types de référents mis en avant par la thèse du changement de référent. (Kleiber 1995: 120)

≈

Nor does it [i.e. the correspondence] exist outside the relation which unites the two types of referent according to the thesis of referent change. (Kleiber 2007: 176)

The only relation that allows the predicates in Nunberg’s examples to correspond in a noteworthy way is the relation between the nominal phrase and a contiguous concept. The fact that the contiguity should somehow be located in the nominal phrase itself fundamentally weakens the idea of a metonymically transferred verb in a very fundamental way.

It is of course quite possible that the meaning of a verb is metonymically transferred. Nunberg’s instances of predicate transfer can be directly contrasted with verbal lexicalised metonymies. As discussed above, lexicalised metonymy or metonymy-induced polysemy is not limited to noun phrases (cf. also Nunberg 1996:
Verbs, for instance, could as well get contiguously related meanings, which directly correspond in a 'noteworthy way' with their basic meaning. I have illustrated this above by the Dutch verb *klateren* which literally means ‘to splash’ and on the basis of this also has the lexicalised, metonymically related meaning of ‘to urinate’. Although examples of verbs with a metonymical meaning do not seem to be very frequent (cf. however Stoeva-Holm 2010), the Dutch verb *klateren* is not the only example of a verb that has a metonymically transferred sense. Another Dutch example is *kuipen*, which denotes the old craft of making barrels (cf. WNT meaning 1). This verb is also used in the meaning putting herring in barrels by closing these by hand (cf. WNT meaning 2). Another example is the Dutch verb *tikken*. This could literally be translated as ‘tap’ or ‘touch’ and it has acquired the metonymical meaning of ‘tapping someone while playing touch’ (cf. WNT meaning 5). In all these examples the contiguously related meanings of the verb correspond with their basic meaning in a ‘noteworthy way’.

These metonymical predicate transfers crucially differ from the examples analysed by Nunberg as a sense transfer of the predicate. The problems discussed above for Nunberg’s examples of predicate transfers do not play a role for these polysemous verbs. Also, the correspondence relation between the transferred sense and the basic meaning clearly differs from Nunberg’s examples. In the case of *klateren*, *kuipen* and *tikken* the noteworthy condition is easily fulfilled, since the transferred activity implies the literal one.

In sum, although I have demonstrated on the basis of several arguments that a sense transfer account is necessary for nominal phrases, as well as for verbs and even for some pronouns, I have also shown that we do not have to assume transferred predicates for Nunberg’s examples. First of all, the predicate appears to be interpreted literally in these cases. Secondly, I have shown that Nunberg’s tests for distinguishing between predicate transfer and nominal transfer are misleading. In addition, I have explained that, although the relation between grammar and the conceptual metonymy-mechanism is very complex (cf. section 3), grammatical functional words, such as anaphoric pronouns, can also acquire shifted interpretations due to the same metonymical mechanism (cf. also Waltereit 2004). This shows that metonymy is able to affect the syntax-semantics interface.

In the next section I will take a closer look at other metonymical effects on grammar-semantics interface by looking at other examples that closely resemble Nunberg’s idea of a seemingly literal predicate with a metonymical shift.

### 5. Syntax-semantics interface: Predicative metonymy

#### 5.1 Metonymical transfers of predicates’ argument slots

Just before the publication of Nunberg’s paper (1996) on predicate transfers, Stallard made a comparable proposal: He contrasts “referential metonymies”, illustrated by the *ham sandwich*-example, with so-called “predicative metonymies” (Stallard
Since it is Stallard’s primary goal to automatically extract correct readings of metonymy, his arguments for the existence of predicative metonymies are fairly sketchy. He only gives three arguments for their existence, each illustrated by only one example. This also makes it difficult to analyse to what extent Stallard’s predicative metonymies differ from Nunberg’s predicate transfers. His explanation of predicative metonymies, however, is slightly different from Nunberg’s.

His first argument is also used by Nunberg, viz. the doubtful anaphoric pick-up and co-predication. According to Stallard, the fact that in some cases an anaphor or a predicate in a sentence following a sentence with a metonymical expression can only refer to the literal sense of the metonymical phrase in the first sentence, demonstrates that the nominal phrase cannot be metonymical. As demonstrated in detail above, this conclusion is not as straightforward as Stallard claims it to be.

His second argument for the existence of predicative metonymy is based on question-answer pairs. He explains that the answers to certain questions show that a seemingly referential metonymy cannot apply to the noun. This is illustrated by the question \textit{Which airlines fly from Boston to Denver?}. Since “only flights ‘fly’” (Stallard 1993: 88), a metonymical mapping between \textit{airlines} and ‘flights’ could be assumed. The word \textit{airlines} seems to be used literally however, since it would be absurd “to respond to this question with the sets of flights from Boston to Denver” (Stallard 1993: 88).

Predicative metonymies are thus similar to Nunberg’s transferred predicates, in the sense that, although the contiguity relation applies to the entities corresponding to the nouns, these nominal phrases appear to be interpreted literally. However, Stallard’s description of predicative metonymies is slightly different from Nunberg’s. Although Stallard claims that in the case of predicative metonymies it is “more accurate to say that the predicate is coerced” instead of the noun phrase (Stallard 1993: 89; cf. also Nunberg 1996: 115), he immediately adds that this claim is in fact “a simplification”. Predicative metonymies should be more precisely analysed “as a coercion of a predicate argument place, rather than of the argument NP itself” (Stallard 1993: 89). In other words, this type of metonymy occurs on the level of the VP, rather than changing the verb (V) or the direct object (NP) (cf. also Iwata 2005). The quotation from Stallard’s article is interesting, because it clarifies how it is possible that it is not the argument itself that is shifted, although the predicate also seems to preserve its literal meaning.

Figure 3 graphically illustrates the idea of a predicative metonymy.

\footnote{Within the context of metonymy, the word ‘place’ can easily be misunderstood as literally referring to a location. In the rest of this dissertation, I will therefore prefer the phrase “argument slot” instead of “argument place”.}
In this illustration words are represented as puzzle pieces that can be combined into phrases and sentences. Suppose the right-hand slot of the verb piece represents the direct object slot of the verb. Both participants ($x$ and $y$) fit this slot. None of the puzzle pieces need to be changed, i.e. they could all be interpreted literally. They only should be inserted correctly, which can be seen as that the perspective of the combination will be slightly different. The two different argument realisations represent different VPs with a single verb.

The idea that metonymy cannot only affect the interpretation directly but can also affect the type of argument of a predicate, as described by Stallard’s predicative metonymy, is also reflected elsewhere in the literature. It links up with the traditional question to what extent the syntactically realised arguments of a verb correspond with its arguments that are necessary from a semantic point of view (cf. e.g. Cappelle 2005: 291ff). Whatever one’s exact standpoint may be in this discussion, it cannot be denied that there must be some correspondence between semantic participants and syntactic arguments.

Traditionally this correspondence between syntax and semantics is directly reflected by the idea of semantic or thematic roles, also called case roles in older literature (cf. Fillmore 1986). A semantic role specifies the relation between a verb and each of its syntactic arguments (cf. Rappaport & Levin 1988: 9). One would expect that mechanisms working upon conceptual structures (therefore affecting semantics) would also be able to influence syntax, via the mediating level of semantic roles. A transfer of a semantic role automatically leads to a different syntactically realised argument.

Unfortunately, the apparatus of semantic roles is a fuzzy one. The clearest dichotomy in the relation of a syntactic argument and a verb is the difference between being subject and object. In simple active sentences the subject generally
corresponds with the do-er, the agent, and the direct object corresponds with an undergoer, the patient. But not all verbs are that simple. Some verbs do not express an action that can be carried out by some person. Although such verbs do have a syntactic subject, this cannot, due to the semantics of the verb, be an agent. Problems such as these have led to an expansion of labels for semantic roles (cf. Dowty 1991), making them difficult to specify and problematic to use.

It is not necessary, however, to use specific role labels in order to demonstrate that metonymy can influence a verb’s argument structure. In a recent series of papers, Mario Brdar and Rita Brdar-Szabó have demonstrated at length how metonymic processes can determine the argument structures of several predicates and adjectives (Brdar 2007; Brdar 2000; Brdar-Szabó 2009; Brdar-Szabó & Brdar 2004; cf. also Koch 2001: 210-211). The changes they describe are similar to Stallard’s predicative metonymy, in the sense that the metonymical influence affects the predicate’s argument slot only, since also according to Brdar and Brdar-Szabó these metonymical “relational-grammatical” transfers do not have “to correlate with lexical polysemy proper” (Brdar 2007: 183; Brdar-Szabó/Brdar 2004: 330).

In the present dissertation, I will discuss this type of metonymy, which operates on the syntax-semantics interface of verbs, in full detail. Although these phenomena are no prototypical instances of metonymy, I will demonstrate that they are clearly driven by contiguity and that they exist in a continuum with all kinds of metonymical shifts (cf. below chapter IV, §3.3; chapter V, §4.4). In chapter IV (§3) I will discuss how dictionaries describe the metonymy involved in these examples and chapter VIII will work out the concept of a predicative metonymy as a frame-internal highlighting effect. In the rest of this section (section 5), I will first consider existing literature on two types of possible predicative metonymies, i.e. so-called logical metonymy and contiguity shifts based on semantic roles (cf. Stallard 1993: 93).

5.2 Logical metonymy (LM)

A very interesting type of metonymy in English which directly affects syntactic structure is illustrated in (77) and (78).

(77) Mary began the book
(78) Mary finished the book

Strictly speaking, it is only possible to begin or finish activities. One cannot begin or finish an object as such. Therefore, an activity in which the book plays a crucial role has to be inferred. Sentences (77) and (78) are thus interpreted by default as meaning that Mary began or finished reading or writing the book.

Sentence (79) is said to work in a similar fashion. Because enjoying an object presupposes some time interval of exposure to the object or some experience with
the object, we understand that if John enjoyed a sandwich, he probably enjoyed eating it.

(79) John enjoyed the sandwich

The metonymical shift is said to be directly visible in the syntactic structure, in that the shift from a concrete object to an activity co-occurs with a shift between a nominal direct object (the sandwich) and a verb phrase (e.g. eating) in English (cf. Egg 2003: 163; Lapata & Lascarides 2003: 1; Verspoor 1997a: 166). The non-metonymical expressions corresponding to interpretations of (77)-(79) illustrate this. Consider (80)-(82).

(80) Mary began reading / to read (the book)

(81) Mary finished reading (the book)

(82) John enjoyed eating (the sandwich)

Logical metonymy is said to be different from other instances of metonymy. Pustejovsky describes the difference between metonymy proper and logical metonymy by stating that in the former “a subpart or a related part of an object stands for the object itself” (Pustejovsky 1991: 424), whereas in cases of logical metonymy “a logical argument of a semantic type (selected by a function) denotes the semantic type itself” (Pustejovsky 1991: 425, cf. also Pustejovsky 1989: xxii). Phrased differently, the quotation states that in cases of logical metonymy a specific part of the interpreted argument structure has been realised (viz. the argument of the activity demanded by the matrix verb) denoting the activity as such. Although the metonymy in examples (77)-(79) is occasionally referred to by the metonymical pattern on which it is based, i.e. OBJECT FOR ACTION IN WHICH THE OBJECT IS INVOLVED (cf. Ruiz de Mendoza & Pérez 2001), most studies use the term ‘logical metonymy’ (e.g. Godard & Jayez 1993; Pustejovsky 1991; Pustejovsky 1995; Verspoor 1997a; Verspoor 1997b).81

There are several given reasons why this type of metonymy is called logical. In line with Pustejovsky, some studies argue that this metonymy is logical, because apart from the metonymical shift, an additional shift in the interpretation takes place, viz. a shift from a concrete object to an additionally interpreted abstract event in

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80 Cf. also Sweep 2010a: 19-23 or chapter VIII, §4.3 below and Sweep 2011: 33.
81 I will only take into account examples of concrete direct objects combined with verbs that semantically require an event. However, the same type of semantic shift occurs in the combination of nouns with some prepositions and even with adjectives (cf. e.g. Godard & Jayez 1993: 170). In addition, it is sometimes said that a comparable metonymy arises in combining some verbs with specific subjects (Horacek 1996: 121, 125; Pustejovsky 1995: 53ff). I will not take such examples into account.
which the concrete object functions as an argument. This additional shift is formally a type shift, also called a logical shift (Verspoor 1997a: 166; cf. also Lapata & Lascarides 2003: 306).

Pustejovksy himself explicitly describes the above examples as logical because “there is an interesting systematicity” in these examples of metonymy (Pustejovsky 1995: 54; cf. also Horacek 1996: 120). He is probably referring to the fact that the metonymically interpreted activity is inferred on the basis of the direct object, but is also triggered by type requirements of the matrix verb (cf. also Verspoor 1997b). The problem is that most metonymies are structural in one way or another, and that very often the predicate plays a crucial role in interpreting a noun phrase as metonymical.\(^\text{82}\)

Logical metonymy is interesting because the activity has to be inferred on the basis of the expressed concrete object in combination with the matrix verb. The matrix verb requires an event, which is inferred on the basis of the concrete direct object. The question then emerges where exactly the metonymy should be located: In the verb or in the nominal phrase?

Although the matrix verb is of crucial importance for inferring the metonymical interpretation, the semantics of the NP-argument plays an even more crucial role. Although the matrix verb requires an event, it turns out to be extremely awkward to locate the metonymical interpretation, i.e. the specific event, fully in the semantics of the matrix verb. Apart from the fact that this is intuitively less plausible, the account of a metonymical predicate has clear theoretical drawbacks.\(^\text{83}\)

First of all, it will become impossible to make a list of all the different senses of \(\text{begin}\) (cf. also Jackendoff 1997: 60). In fact, it must be assumed that a verb such as \(\text{begin}\) can have an infinite number of senses, such as \(\text{begin reading, begin writing}\) (in combination with a book), \(\text{begin eating}\) (in combination with a sandwich), \(\text{begin smoking}\) (in combination with a cigarette), etc. The same will be true for all verbs that allow these constructions, such as \(\text{finish, enjoy}\), and others. This does not only make the lexicon very inefficient (cf. Verspoor 1997a: 168) or even close to infinite, but it also makes it impossible for crucial generalisations to be incorporated (cf. Pustejovsky 1995: 48). Such an approach can never account for the fact that \(\text{finish or enjoy}\) has the same set of meanings in combinations with the same set of direct objects.

\(^\text{82}\) Sometimes the term \textit{logical metonymy} has been used for examples of polysemy that are motivated by metonymy, as discussed in section 2.2 (cf. Brdar 2009: 263; Kleiber 2007: 169; Nunberg 1995: 116). Although there is an obvious relation between \textit{logical metonymy} and systematic meaning shifts that could be described as instances of regular polysemy (cf. Horacek 1996: 120-122), examples (77)-(79) do not, however, necessarily need to be analysed as instances of polysemy. Probably the term \textit{logical metonymy} has also been used for instances of polysemy by confusing the terms \textit{logical polysemy} and \textit{metonymical polysemy}. I will use \textit{logical metonymy} only in the way explained in this section, i.e. applying to examples similar to (77)-(79).

\(^\text{83}\) Most of these drawbacks are very clearly summarised in Verspoor’s dissertation (Verspoor 1997a: 167-169).
In addition, the idea that the verb is metonymical in the above examples also generates an endless number of interpretations for concrete sentences, of which many will even turn out to be impossible: If \textit{begin} has many metonymically transferred senses, the possible interpretations for a sentence such as (77) are also endless, since the verb could mean ‘begin reading’, ‘begin eating’, ‘begin smoking’, etc. It would thus dramatically increase the amount of work carried out by pragmatics (cf. Verspoor 1997a: 168-169), because one must choose the correct \textit{begin}-meaning out of all these options.

Furthermore, it remains unclear how ‘begin reading’ or ‘begin eating’ are metonymically related senses of \textit{begin} as such. What kind of highlighting processes could account for all these senses? It may be evident that the problems for the transferred predicates are very similar to the problems for Nunberg’s predicate transfers: The above problems all occur when the connection between the verb and the nominal complement has not been made. It can simply not be denied that the noun plays an essential role in causing the metonymical highlighting effect. Triggered by the semantics of the matrix verb (which asks for an event), it is the concrete direct object that leads to the intended, contiguously related event.

One may wonder, however, whether the direct object is interpreted metonymically or literally. Again, the problematic diagnostic tests that were discussed above have been used to support the view that the interpretation of the direct object can not be metonymically shifted (cf. Godard & Jayez 1993: 168). These tests, such as the use of anaphors and relative clauses and co-predication (coordination of predicates), are illustrated for the above logical metonymies in (83)-(87).

(83) John began his book at ten and put it away at eleven.

(84) *John began his book at ten and didn’t stop it till eleven.

(85) John began a book that was very thick.

(86) *John began a book that took two hours.

(87) He ate and enjoyed the salmon. (cf. Godard & Jayez 1993: 169)

The anaphor can only be used to refer to a concrete thing, not to an event associated with the object. This makes (83) possible, since it is the concrete book that is put away\textsuperscript{84} and it also rules out example (84) (cf. Godard and Jayez 1993: 169). Similarly, the use of a relative clause referring to a property of the concrete noun is clearly possible, as in example (85), while (86) with the relative clause referring to

\textsuperscript{84} Note that example (83) is in conflict with Ruiz de Mendoza’s Domain Availability Principle. Since the examples of \textit{OBJECT FOR ACTION IN WHICH THE OBJECT IS INVOLVED}-metonymies are of the type source-in-target (cf. Ruiz de Mendoza & Pérez 2001: 340), it should be possible to refer to the matrix domain ‘read’ instead of to the concrete book, whereas according to the above data it turns out to be the other way around.
the reading event is infelicitous. The fact that it is only possible to refer to a property of a concrete object, such as the thickness of the book, and not to a property of the interpreted event, such as duration, suggests that the noun book is interpreted literally, as a concrete thing. In the last test, the coordination test, one concrete noun is combined with two predicates, one that needs a concrete object and one that requires an eventive phrase as a direct object, as in (87). Since it is quite possible to combine the two predicates with only one NP, it is claimed that it is not very likely that the noun has fully changed its interpretation and type to an event-entity. Otherwise the examples would be zeugmatic.

According to Godard and Jayez these tests show that the coercion process is internal to the semantics of the matrix verb (cf. also Verspoor 1997a: 171). Although I have demonstrated above that the outcome of these tests are not fully decisive, they could be used to support the intuition that the noun acquires a literal interpretation. There may be some doubt as to whether the interpretation of the noun is really transferred; its literal interpretation appears to be more or less intact, since it is directly involved in the process that is started, finished or enjoyed. Rather than assuming a transfer of the predicate or of the noun, the metonymical interpretation only arises when predicate and direct object are combined (i.e. at VP-level). This would mean that we are only dealing with a metonymical shift of the type of argument, i.e. with the predicate’s argument slot (Stallard 1993: 89), rather than with the meaning of the verb or NP as such.

Summarising, it turns out to be most precise to assume that the contiguity effect of logical metonymy leads to a transfer of the argument slot of the verb (cf. Stallard 1993: 89). Logical metonymy should therefore be analysed as an instance of predicative metonymy: The argument slot of the verb is coerced, based on a contiguity relation between the two possible arguments, i.e. the activity and the object involved. In chapters VII and VIII, I will come back to this in more detail.

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85 As with all the anaphors discussed above, intuitions probably differ. I would like to thank an anonymous reviewer (cf. Sweep 2010a: 5 note 2) who has pointed out to me that he/she doubted whether referring to the event is actually impossible. As an illustration he/she gave the example (*At ten, John began his new book, which he did for two hours; at noon he had a light lunch, after which he prepared his courses for the next day. A reason for this difference could be the fact that in this example which instead of the pronoun it has been used. This is in line with ideas discussed in Köpcke et al. (2010). They analyse differences in grammatical versus conceptual agreement on the basis of Corbett’s Agreement Hierarchy and pragmatic functions corresponding with these elements (Köpcke et al. 2010: 179ff). Although they only discuss which gender must be used under the same interpreted antecedent, it is possible that these scales also interact with the possibility to refer to metonymical targets or sources. More research on this would be useful.

86 Within their formalism, Godard and Jayez therefore require different semantic representations for predicates such as begin, finish or enjoy depending on the type of complement (cf. Godard and Jayez 1993: 174). However, they do not conclude that it must be the verb as such that is metonymically re-interpreted: Although the predicate can have different types of arguments, it is still the noun that is continguously connected to the interpreted event.
5.3 Metonymy and semantic roles

Stallard suggests that, besides examples of logical metonymy, another type of predicate transfer or of transferred argument slots is probably reflected in the research by Fass, which analyses the relation between metonymy and semantic roles (cf. Stallard 1993: 93). The idea that a conceptual mechanism such as metonymy can affect semantic roles was in fact already touched upon by Schifko in 1979. Within his rather broad notion of metonymy, Schifko discusses metonymical relations between agents and actio, or between actio and affected or affected object (Schifko 1979: 246).\(^7\)

Fass has analysed the relationship between metonymy and semantic roles in a computational framework (cf. e.g. Fass 1991a; Fass 1991b).\(^8\) Fass suggests that “every metonymic concept appears to specify a relationship between two case roles” (Fass 1991b: 41), meaning that they work in tandem with contiguity relations. A PRODUCER FOR PRODUCT metonymy, for instance, relates an agent (the producer) with a patient (the product). Similarly, the metonymical association between a container and its content could be seen as an instrument-patient relationship (Fass 1991b: 43). In addition to arguing that contiguity relations or metonymical associations could be explained by semantic roles, i.e. “as case role substitutions”, Fass claims that “perhaps metonymy can be used to explain observations in the case grammar literature” (Fass 1991b: 44).

A detailed account of how this can be done can be found in Waltereit’s work (Waltereit 1998; Waltereit 1999). Waltereit contrasts classical-referential metonymies, which are often detected on the basis of violations of selection restrictions, from metonymy-based effects that do not lead to a shift in reference. Sentences (88)-(91) illustrate the difference (cf. Waltereit 1999: 234-235; Waltereit 1998: 55-56):

(88)  a. The customer (who ordered a ham sandwich) is waiting for his check
      b. The ham sandwich is waiting for his check

(89)  a. The patient (with the ulcer) is waiting for the doctor
      b. The ulcer is waiting for the doctor

(90)  a. The waiter finally served the customer (of the ham sandwich)
      b. The waiter finally served the ham sandwich (to the customer)

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\(^7\) Moerdijk also mentions the relation between contiguity relations and semantic roles (1990: 121).

\(^8\) Stallard himself refers to Fass 1991a, especially to his discussion on source and target substitutions (Fass 1991a: 62). The problem with this reference is firstly that this paper describes an algorithm (met*) for recognizing figurative from literal language, rather than exhaustively discussing metonymy and semantic roles. Secondly, Fass uses the terms source and target in this paper in a very different way than is usual nowadays in cognitive linguistic research on metonymy (cf. Fass 1991a: 60, 90). Fass knows these uses as well (cf. Fass 1991a: 52), which makes his discussion a little confusing.
(91) a. This type of antibiotics can cure the patient (with an/of ulcer)
b. This type of antibiotics can cure the ulcer (of the patient)

Sentences (88) and (90) are based on a CUSTOMER-ORDER contiguity and (89) and (91) both exploit a metonymy based on the PATIENT-DISEASE relationship. Despite this similarity in contiguity relations, the examples (88) and (89) on the one hand and (90) and (91) on the other differ crucially.

The metonymies in (88)b and (89)b are classical instances of metonymy. We understand that the subjects of the b-sentences must be humans on the basis of the context (in these examples the selection restrictions of is waiting). Therefore, we interpret ham sandwich as ‘the customer of the ham sandwich’ and ulcer as ‘the patient with an ulcer’ (as literally expressed in (88)a and (89)a). Examples (90) and (91) are different in this respect. Although the fact that a customer as well as a ham sandwich can be served and the fact that a patient as well as an ulcer can be cured are caused by the same contiguity-types as exploited in (88) and (89), the noun phrases of the latter examples are all interpreted literally.

According to Waltereit therefore, though the contiguity types in the two sets of examples are the same, they work on different levels. He argues that the metonymies ((88)b and (89)b) are said to be based on contiguity relations on an insertional level (“Besetzungsebene”), since a contiguous concept is inserted for the original and therefore reinterpreted. The shifts illustrated by (90) and (91), in contrast, are analysed to occur on the level of semantic roles (“Rollenebene”) (Waltereit 1998: 56; Waltereit 1999: 235).

Waltereit states that the semantic roles stand in a contiguous relation in examples such as (90) and (91), but he assumes that metonymy is involved from a diachronic point of view rather than from a synchronic one (Waltereit 1998: 56; cf. also 1999: 235; cf. also chapter VIII, §1). Waltereit considers the above shifts to be caused by a diachronic development based on classical metonymy. As he puts it: “The occasional metonymic use is likely to be fixed later as a new meaning of the verb, when a metonymic shift is no longer involved.” (1999: 235). Apart from the complicated question to what extent we are dealing with polysemous verbs (cf. also chapter IV, §4; Iwata 2005; Iwata 2008; Sweep 2010b), there are some other fundamental problems with this claim (cf. also Ch. VIII, §1).

First of all, the consequence of Waltereit’s analysis is that examples (90) and (91) must originate from an occasional use of ham sandwich in the meaning of ‘customer’ or ulcer referring to ‘patient’ (or the other way around?) (cf. Waltereit 1998: 56; 1999: 235). One might question whether this is really plausible.

Secondly, the contiguity relations between the two possible direct objects, such as a customer and an order or a patient and a disease, is no longer supposed to play a role. From a synchronic perspective, Waltereit only explicitly considers the two possible direct objects as standing in a metonymical relation on a semantic role level. He writes: “die beiden Rollen sind kontig zu einander” [‘both roles are contiguous to each other’] (Waltereit 1998: 56, cf. also 1999: 235). However, his actual analysis of specific instances of these alternations casts doubt upon this claim,
since he explains object changes with reference to relations such as CUSTOMER-ORDER (Waltereit 1999: 235) or, in so-called locative alternations (cf. examples (92)-(94) below), to CONTAINER-CONTENT (Waltereit 1998: 26).89

In line with this, one could suppose that even synchronically a metonymical transfer applies, since the contiguity associations are still evident. This would mean that the metonymy does not induce a transfer of the concept corresponding to the lexical noun phrase, but rather a transfer of the verbal argument, i.e. of the type of argument or argument slot. In line with this, there are a few other studies that also touch upon the idea that even from a synchronic point of view metonymy could play a crucial role in alternating syntactic realisations of semantic participants (cf. Dowty 2000: 126; Cappelle 2005: 339).

Waltereit’s idea that semantic roles are contiguous to each other is also problematic, since it is not exactly clear what these semantic roles are. This can best be illustrated by examples of so-called locative alternations, which are also discussed by Waltereit as a role level metonymy (Waltereit 1998: 66ff; Waltereit 1999: 239). They are exemplified in (92)-(94).

(92)  a. Mary spread butter (on the bread)
     b. Mary spread the bread (with butter)

(93)  a. John emptied the stuff (from the drawer)
     b. John emptied the drawer (of the stuff)

(94)  a. The waiter wiped the crumbs (off the counter)
     b. The waiter wiped the counter

Different semantic roles are suggested for examples such as (92)-(94). Some scholars speak about locatum and location or about theme and goal, but others consider all above direct objects as ‘themes’ (cf. the discussion in Rappaport & Levin 1988 or in Dewell 2004: 22ff) or as ‘patients’ (cf. Jackendoff 1990: 172; Jackendoff 2002: 181; Laffüit 1998: 129), irrespective of whether they refer to locations, things in a location, material or products. This causes a problem for the claim that the semantic roles are contiguous to each other, since it does not make sense to claim that a contiguity relation between ‘theme and theme’ or ‘patient and patient’ causes a shift in the type of direct object. This again shows that the contiguity applies to the concepts expressed by the direct objects. I will come back to this in chapter VIII.

Of course, Waltereit is right in stating that the metonymy involved in the above sentences must be of a specific kind, as has also been observed by lexicographers (cf. especially the next chapter). The direct object is not, as in classical metonymies, metonymically re-interpreted. Rather, the metonymy occurs on the level on which

89 In a similar way, Waltereit is not totally consistent in his idea of polysemy of the verb. I will discuss this in chapter IV, §4 and once again in chapter VII, §1.
verb and direct object are combined. I therefore follow Waltereit’s analysis that the shifts as illustrated in (90) and (91) show a metonymical figure/ground effect (a highlighting of elements) within the conceptual-semantic frame evoked by the verb (Waltereit 1998: 25-26, 56; Waltereit 1999: 238, cf. also Koch 2001).

In the context of the verb, both direct objects form one conceptual unity or gestalt. The gestalt character or contiguity relation between both possible direct objects plays an essential role in the process of combining verb and direct object. Hence, the interpretation of the direct object slot is metonymically changed, rather than the direct object as such. Based on contiguity relations between both possible direct objects, the argument slot can be occupied by the location or by what is in the location (i.e. locatum), by the customer or the order, or by the patient or the disease and so on. In other words, neither the meaning of the verb nor the noun that is expressed as the direct object is metonymically shifted, but only the combination of the two, i.e. the class (cf. Waltereit 1999: 235) or type of argument connected to the verb.

If metonymy could indeed be the underlying mechanism of argument slot transfers as in sentences (90)-(94), we are dealing with examples of predicative metonymies par excellence. I will examine this issue in detail in the following chapters.

6. An overview of different types of metonymical transfers

In this chapter I have discussed the different ways in which metonymy influences language and which linguistic levels are affected by metonymy. Table 1 gives an overview of all types of metonymical influences, arranged by the relevant interpretational level. It should be noted that this overview is by definition a simplification, since linguistic levels interact closely, making it very difficult to see where one level ends and another begins.
CHAPTER III

Table 1: Types of metonymical transfers

<table>
<thead>
<tr>
<th>Interpretational layer of transfer</th>
<th>Sub-type</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lexical</td>
<td>semantic change</td>
<td>Dutch: <em>winkel</em> (§2.2)</td>
</tr>
<tr>
<td></td>
<td>facet</td>
<td><em>book, window</em> (§2.3)</td>
</tr>
<tr>
<td>polysemy</td>
<td></td>
<td><em>school</em> (§2.2); <em>child</em> (cf. Koch 2001:223); <em>klateren</em> (§2.2 &amp; 4.7); <em>-erei</em> (§3.1)</td>
</tr>
<tr>
<td></td>
<td>rabbit</td>
<td><em>rabbit</em> (§2.2 &amp; §3.3); <em>coffee</em> (§3.3)</td>
</tr>
<tr>
<td></td>
<td>lexicalised convention of use</td>
<td><em>Picasso, Goethe, London</em> (§2.2)</td>
</tr>
<tr>
<td>Contextual-semantic (discourse)</td>
<td>referent-oriented</td>
<td><em>ham sandwich, ulcer, plume</em> (§2.1)</td>
</tr>
<tr>
<td></td>
<td>zone activation</td>
<td><em>wash the car</em> (§2.3); <em>the dog bit</em> (§2.3); <em>tying shoes</em> (cf. §4.3)</td>
</tr>
<tr>
<td></td>
<td>sense-oriented</td>
<td><em>jour fixe</em> (§2.3, Koch 2001: 206); <em>X verstummt Y</em> (§2.3, Koch 2001: 210)</td>
</tr>
<tr>
<td>Pragmatic-propositional</td>
<td>speech act</td>
<td><em>could you close the window</em> (§2.4)</td>
</tr>
<tr>
<td></td>
<td>propositional</td>
<td><em>the shops are dark</em> (§2.4)</td>
</tr>
<tr>
<td></td>
<td>predicational</td>
<td><em>being able to finish; had to stop</em> (§2.4)</td>
</tr>
<tr>
<td>Grammatical-semantic</td>
<td>metonymically used anaphors/pronouns</td>
<td><em>he’d pick up any bottle that was on the bar and drink it</em> (§4.6)</td>
</tr>
<tr>
<td></td>
<td>predicative m./argument slot</td>
<td><em>begin/enjoy a book</em> (§5.2)</td>
</tr>
<tr>
<td></td>
<td>LM</td>
<td><em>heal a patient/a disease; serve a person/an order</em> (§5.3)</td>
</tr>
</tbody>
</table>

Within the different layers of interpretation, I have disentangled several types of metonymical influences, ranging from highly prototypical to less prototypical metonymies. These different types of metonymy exist in a continuum, just as the interpretational layers do. The dotted lines are used to mark some of the fuzzy boundaries (cf. rabbit, Picasso, ham sandwich). These can be found between predicational or pragmatic metonymies and metonymies affecting grammar. Similarly, there are unclear boundaries between some occasional referent-oriented metonymies, certain conventionalised contiguity patterns and real polysemy.

On the lexical layer of interpretation all sub-types form a continuum. Polysemy, for instance, normally develops on the basis of semantic change (cf. Koch 2004: 17). From a diachronic perspective, there can be a period in time in which the difference between a semantic change and an established polysemy is unclear. But there are also overlaps within the synchronic lexical sub-types. It is, for instance, not always easy to draw the boundary line between facets of a word and polysemous meanings. The same fuzzy boundary exists between instances of polysemy and conventions of use. This can be illustrated by grinding: Sometimes grinding is regarded as a
polysemy pattern (as in this classification), while others see it as a mere convention of use leading to interpretational shifts in a context.

An example for standardised conventions of use in Table 1 is the metonymical use of names of artists and cities. Such metonymical interpretations do not directly belong to the lexical content of the proper name. Rather, they should be considered conventions of use stored on a lexical level. Since most conventions of use are habitualised referring patterns, it will not be at all surprising that they exist in a continuum with contextual-semantic metonymies, as is indicated by dotted lines in Table 1.

Contextual-semantic metonymies depend on the discourse or direct context. They can, for instance, be occasional, referent-oriented metonymies. Apart from a shift in reference, context can also focus upon a particular aspect of a referent (as in the case of zone activation) or even shift an abstract concept (the sense-oriented contextually shifted metonymies). Although context naturally also plays a crucial role in finding the right interpretation of lexicalised metonymies, the contextual-semantic metonymies only exist within context. This is caused by their ad hoc nature or by their lexical stability, as for zone activations.

The context and situation is also important for pragmatic metonymies. Pragmatic metonymies could affect the interpretation on speech act level or more generally lead to a re-interpretation of a proposition itself. Propositional metonymies can also occur on the basis of a re-interpretation of a predicition. This illustrates that these high-level metonymies interact with the grammatical level.

The grammatical level of interpretation concerns the linguistic structure of words and sentences. This is the most complicated level of metonymical conceptual shifts, because grammar (i.e. linguistic form) and semantics meet here. Effects on the syntax-semantics interface show by definition that linguistic levels interact with each other.

Examples of metonymy operating on the syntax-semantics interface are sentences in which grammatical elements such as pronouns or anaphors are used to refer to antecedents that can only be picked up in a discourse metonymically. In order to be able to do this, one has to have semantic-lexical as well as grammatical knowledge. Semantic and syntactic knowledge is also necessary for metonymical transfers which Stallard has labelled predicative metonymies (Stallard 1993). Predicative metonymies are metonymical transfers of a predicate’s argument slot. These metonymical shifts belong to a grammatical-semantic level, given that argument structure is in general somewhere in between syntax and the lexicon.

Nunberg describes a similar phenomenon as Stallard’s predicative metonymy. However, I have rejected the idea that his examples should be analysed in this way. In general, there are two problems with Nunberg’s analysis. First of all, the tests that he uses to detect this type of metonymy, such as anaphors and co-predication, are highly problematic. Nunberg’s argument based on these tests that the predicate rather than the nominal phrase is metonymical runs contrary to our intuitions in

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90 These are therefore also called generalisation about the lexicon instead of in the lexicon (cf. footnote 31).
some cases. I have shown that a predicate transfer is therefore not particularly plausible for these examples. The results of the tests are not only counter-intuitive, but different tests also turned out to contradict each other. Furthermore, Nunberg believes that there are even cases in which both analyses, i.e. sense transfer of verb or noun, are possible.

Although these claims have been correctly criticised (cf. Kleiber 1999; Kleiber 2007; Waltereit 1998), we must make sure we do not throw the baby out with the bathwater: For most examples, a sense transfer account reflects a much more precise semantic analysis (cf. also Blank 1997: 101; Koch 2001: 218; Koch 2004: 20) than the semantically implausible direct referent transfer. Because metonymy is a conceptual phenomenon, it can never lead to a direct referential shift but only to interpretational shifts, i.e. transfers in corresponding concepts. Apart from the fact that a sense transfer account gives a much better explanation for verbal inflection phenomena and the semantics of surrounding words with referential metonymies (cf. Sag 1981; Nunberg 1996), a sense transfer account of metonymy is needed in order to explain how different linguistic levels can be affected by metonymy. Metonymical transfers explain how interpretational shifts can not only occur on a semantic level (be it contextual or lexical) but also on a pragmatic level and even on the linguistic layer in which grammar and semantics meet. The general mechanism is the same in each case. But even within this plea for a sense transfer account, Nunberg’s examples of predicate transfers could simply be treated as nominal sense transfers (on a lexical or contextual level).

A second problem is that Nunberg’s description of predicate transfers differs slightly from Stallard’s predicative metonymies. Nunberg’s description applies to metonymically interpreted verbs. Verbs which have a metonymical interpretation could be metonymical polysemous ones or they could get a context-dependent reinterpretation, but both types are different from real predicative metonymies. Predicative metonymies should neither be described as transfers of the property expressed by the predicate nor as metonymical re-interpretations of a specific argument itself, but rather they should be considered metonymical transfers of the predicate’s argument slot, which is based on the contiguity relation between its possible fillers (i.e. its the possible direct objects). The predicate and the nominal phrase appear to be interpreted literally, but only the combination of the two could be called metonymical.

Basing myself on Stallard’s suggestions, I have discussed two specific instances of metonymies of this types, which really affect the predicate’s argument slot. These are instances of so-called logical metonymy (LM) and examples of metonymy affecting semantic roles. These two types of predicative metonymy both affect the qualitative type of an argument. Predicative metonymies could therefore also be characterized as metonymy-induced argument shifts of a qualitative nature (cf. Brdar-Szabol & Brdar 2004: 329, 332).

Interestingly, these types of argument slot transfers primarily occur in direct objects. Although Pustejovsky almost solely discusses LM in direct objects, he
indicates that comparable shifts occur in subjects (Pustejovsky 1995: 53ff). Other subject-examples similar to Pustejovsky’s direct object LM are discussed by Horacek (1996: 121, 125). Similarly, non-eventive contiguity shifts, i.e. metonyms affecting semantic roles, also occur in subjects, i.e. as non-eventive metonymical subject changes (cf. Carlberg 1948; Waltereit 1998: 70ff; Waltereit 1999: 240-241). However, the largest amount of work by far in the field of logical metonymy and semantic role metonymy discusses combinations of verbs and direct objects. I will label these two types of predicative metonymies, which are the main topic of this dissertation, “metonymical object changes” (MOCs). This term is based on tags used in Dutch and German dictionaries, which I will discuss in detail in the next chapter.

91 As indicated before (cf. footnote 81), sometimes nouns combined with certain prepositions or even adjectives have also been linked to logical metonymy (cf. e.g. Godard & Jayez 1993: 170; Horacek 1996: 122; Pustejovsky 1995: 127ff). I will not discuss such phenomena in this dissertation.