

Metonymical transfers: The complex relation of metonymy and grammar.¹

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Abstract

It has been known for a long time that metonymy is not just a figure of speech, but rather a cognitive process which affects linguistic expressions and their interpretations. Because meaning and form are two sides of the same coin, metonymical effects are also visible within grammar. Linguists have therefore started to make use of the notion 'grammatical metonymy'. It is not always clear, however, what exactly is intended by this notion.

In this paper I will clarify the relation between metonymy and grammar. I will show that grammar can be used to provide insights into the exact nature of metonymy. Based on several grammatical observations and linguistic tests, I will analyse metonymies as causing linguistic transfers and I will provide a classification of different types of such metonymical transfers.

1 Metonymy, linguistics and grammar

From the ancient Greeks onwards metonymy has been viewed as one of the principal figures of speech (cf. Arata 2005). However, most examples of metonymy are not typical for literary or rhetorical language use. Consider in this respect sentences (1)-(3).

- (1) The power of the *crown* was weakened
- (2) I am reading *Goethe*.
- (3) *The ham sandwich* is waiting for his check.

From a linguistic point of view, therefore, metonymy should not be seen as a figure of speech, but rather as a cognitive mechanism underlying normal language use (cf. Kövecses & Radden 1998).

Metonymy is based on contiguity, that is conceptual closeness in reality. In line with this, linguists have analysed metonymy as a kind of 'gestalt switch' (cf. Koch 1999: 151; Koch 2001: 203; Warren 1999: 127) or more precisely as a

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figure/ground effect within a frame (Koch 2001; Waltereit 1998; Waltereit 1999). The frame (or domain, ICM, etc.) is a semantic-conceptual structure, of which, in case of metonymy, certain parts are given more importance than is usual. Consequently, metonymy has been defined as a domain-internal conceptual mapping (cf. Barcelona 2005: 314; Ruiz de Mendoza 2000: 130) or as a highlighting effect within a conceptual structure (Croft 1993; Croft 2006; cf. also Sweep 2010: 11-12).

One of the first recognised influences of metonymy upon language is so-called metonymical polysemy, i.e. contiguously related meanings of a word (cf. e.g. Moerdijk 1989; Moerdijk 1990). Research on metonymy and grammar is rather new (cf. e.g. Barcelona 2004; Brdar 2007; Koch 2004; Langacker 2009; Panther *et al* 2009; Radden & Dirven 2007; Ruiz de Mendoza & Pérez 2001; Waltereit 1998), even though the notion *grammatical metonymy* (Panther & Thornburg 2009: 13, 22ff; Ruiz de Mendoza & Pérez 2001: 333; Waltereit 1998: 47; Warren 1999: 121) has been inspired by Halliday's term *grammatical metaphor* (cf. Halliday 1985: 320-321).²

Many studies on grammatical metonymies analyse the motivating role of metonymy on grammar. Panther and Thornburg, for instance, stress 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 then only be seen as metonymical influences on linguistic form (syntax and morphology), i.e. as a result of a conceptual-interpretational shift (cf. Panther & Thornburg 2009: 11).

Not everyone shares this vision. According to Ruiz de Mendoza and Pérez 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). This distinction between grammatical side-effects and pure grammatical metonymies sharply contrasts with the definition of grammatical metonymies given by Panther and Thornburg, who primarily analyse them as side-effects caused by the metonymical shift (cf. 2009: 11, 24).

This paper will therefore analyse if and how metonymy can affect grammar. The paper is structured as follows: In section 2, the complex relation between metonymy and grammar will be clarified. Section 3 will show how grammatical effects can be used to gather insight into the general nature of

² Actually, Halliday was not the first who used this term: Oksaar, who writes about metonymy-related phenomena, was already using the German term *grammatische Metapher* in 1969 (cf. Oksaar 1972: 153).

metonymy. Section 4 will return to the question of whether metonymy can affect grammar. In section 5, I will summarise the discussed insights into the exact nature of metonymy and recapitulate the different types of metonymy found.

2 Metonymy and morphology

Given that metonymy is, as correctly emphasized by Panther and Thornburg, of a conceptual nature, the supposed distinction between real grammatical metonymies and grammatical influences by metonymy as a side-effect of the conceptual shift (Ruiz de Mendoza & Pérez 2001: 334) is complicated. This difficulty can be nicely illustrated by cross-linguistic examples of a contiguity effect that causes metonymical polysemy in one language, but morphological changes and word formation processes in others.

An example of this is based on the contiguity pattern FRUIT FOR TREE. In Dutch, the word *appel* ('apple') or *peer* ('pear') cannot only be used to denote the fruit, but the words have the additional meaning of the fruit tree, i.e. 'apple tree' or 'pear tree' (cf. Van Dale 2005). 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 displays a comparable morphological effect: The masculine Spanish 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 is the principle underlying this semantic constellation in Dutch, the idea emerges that metonymy also underlies the grammatical-morphological process in Spanish or even in English. Koch writes about this: "[w]e have to conclude that frames and contiguities not only account for metonymical change and polysemy, but also for other lexical processes" (Koch 1999: 158). Note that this correct observation does not imply that Koch believes that the Spanish conversion or English word formation are metonymical. On the contrary: He explicitly states that frames and contiguity relations can help to explain these other lexical processes even "beyond the realm of metonymy" (Koch 1999: 159; cf. also Koch 2001: 232).

In line with Koch, there are clear reasons to reject that such related but morphologically different words are motivated by metonymy. In addition to the polysemous words for kinds of fruit Dutch, for example, has compounds to refer to the corresponding trees, such as *limoenboom*, *appelboom*, etc. The lexicalised metonymical meaning of *appel* denoting 'apple tree' and the word formation *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).

Under the same line of reasoning 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).³ The reason to speak of metonymy in the case of the Dutch *appel* or Italian *lemon* denoting the tree is exactly the fact that there is no formal difference although there is a semantic shift.

Some English morphological processes, however, also do not directly display visible formal differences. An illustration are the nouns *cut* or *supply* derived from verbs 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 metonymy is involved in zero-derivations is very complicated, there are at least two problems with this claim.

First of all, one can doubt 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 as such in *a/the cut* and *to cut* or *a/the author* and *to author* do indeed look similar, in fact they are not. Sometimes they even have distinct forms in concrete examples, such as *two cuts* or *he authors / authored / is authoring*. Contrary to the Dutch *appel*-example, one could claim that in 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 contiguity relation does not necessarily mean that metonymy as such must be involved.

However, even if one does insist on the lack of visible marking in the basic conversion process in English, there is a more fundamental problem with the claim that metonymy primarily affects grammar. According to Ruiz de Mendoza and Pérez the conversions discussed above are clear examples of grammatical metonymies (Ruiz de Mendoza & Pérez 2001: 334), since the mapping is said to operate “at a non-lexical level placing constraints on certain

³ To a certain extent, Brdar has left open the question of whether the tree examples are 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).

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 the process of conversion is a component of grammar (viz. of 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 is more fundamental than the mere conceptual shift. 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 unspecified 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.

One can even question 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 instead of the shifted interpretation. This can be very aptly illustrated with an example tagged as metonymical in Dutch dictionaries, viz. *aubergine* (‘aubergine / egg plant’). Van Dale 2005 states that this word metonymically denotes the colour ‘aubergine purple’ (meaning II.1). The vegetable is grammatically feminine (*de aubergine*), but since colour names (i.e. nouns derived from adjectives) always have neuter gender in Dutch the colour should be referred to as *het aubergine*. The word could of course also be used as an adjective. This example clearly shows that the conceptual shift is followed by a grammatical one instead of the other way around.

Effects on grammatical form where metonymy is involved necessarily reflect the conceptual nature of metonymy. In the next section, I will demonstrate that it is therefore possible to gather insight into differences of metonymical mappings on the basis of analysing their syntactic-grammatical environment.

3 Metonymical re-interpretations examined

3.1 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 metonymy in general operates. In this section, I will analyse step-by-step how noun phrases can be used metonymically. It is good to start therefore with a non-metonymical example, such as (4).

(4) The ham sandwich tasted delicious.

We can understand the subject-NP of this sentence by understanding the concept corresponding to the words *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 metonymically used NPs, as in (5), are interpreted in a fundamentally different way. If one analyses *the ham sandwich* in (4) as a specific entity of the classes of ham sandwiches, one should propose that in (5) 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).

(5) 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 (6)-(8) illustrate the same interpretational process.

(6) Five *ham sandwiches* are sitting at table 9.
(cf. Sag 1981: 285)

(7) Every *ham sandwich* at that table is a woman.
(cf. Sag 1981: 285)

(8) *Ham sandwiches* generally prefer to sit by the window
(cf. Geurts 1998: 290)

Rather than assuming that the expressions *five ham sandwiches* or *every ham sandwich* as wholes shift their referents, it is the case that the numeral and existential quantifier have their normal semantic function. Therefore, it must be concluded that only the meaning of *ham sandwich* is conceptually shifted within this specific context (Sag 1981: 285). This analysis also explains why we can use metonymically shifted expressions in a generalised way, as in (8). Rather than denoting concrete referents with such examples, one instead refers to all possible referents of a certain shifted set.

The correctness of analysing referential shifts as caused by sense transfers is also reflected in (9) (cf. Nunberg 1996: 115).

(9) That (*Those) *french fries* is (*are) getting impatient

Nunberg argues that we apply 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 then a specific, singular entity of that metonymically inferred class has been picked out. The singular would be unexpected, if one would argue that the full nominal phrase as such 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 instead of the whole phrase as such 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 metonymical 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 metonymical figure/ground effect DISH–CUSTOMER.” (Koch 2004: 25-26)

This view does, however, have two unpleasant consequences. First of all, it is problematic given the data presented above. If the determiner and lexical phrase are shifted together, one should assume that different shifts apply to (5), (6) and (7). This is not very plausible, especially not since the contiguity-type seems to be 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 (8).

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*)⁴ and the actual referent (Koch 2001: 218; cf. also Blank 1997: 101; Koch 2004: 20). Contrary to 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:

⁴ Some scholars doubt whether *signifié* and *designatum* should be distinguished or even whether it is possible to distinguish them from each other, cf. Koch 2001: 233 note 2 or Koch 2004: 20 note 20.

“metonymy can [...] not be accounted for in terms of relations between *signifiés* [...], it is clearly based on contiguity relations between conceptual *designata*. The third entity involved in semiosis, the actual, individual referent, seems to be included in the metonymical 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 also share the opinion that 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 actual referent because of a figure/ground effect in the concept corresponding to this referent.⁵ The analysis in the quotation above is a perfect description of Nunberg’s correct sense transfer account of the above *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.

3.2 *Solving the puzzle of predicatively used metonymies*

Most cognitive linguists agree on the fact that metonymies do not necessarily have to induce a referential shift. This is an important point of debate though (cf. Sweep 2009), 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 noun phrases in predicative positions have been used to support the claim that a metonymically shifted interpretation 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 predicatively used nominal metonymies are illustrated in (10)-(11).

(10) John is a real *brain*.

(11) Jim is the fastest *gun*.

⁵ This points towards another interesting issue: 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). The latter perspective of analysis could be seen as onomasiological (from meaning to form; cf. also Sweep 2010: 12). This perspective must be taken into account (cf. also note 20 below), for instance because it elucidates the reason why the metonymical expression is used.

The metonymies in (10) and (11) are considered special, since it is said that *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 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'. Such metonymies in predicative positions are therefore often described as non-referential uses of metonymies (cf. Ruiz de Mendoza 2000: 114).

Although these metonymies certainly do not directly shift their interpretation to some specific, concrete, contiguous referent, one can seriously question whether predicatively used metonymies are crucially different from other nominal metonymies.⁶ If (10), for instance, means that John is a smart person, then the phrase *real brain* has shifted its reference to 'smart person'. Similarly, if (11) 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* or in *Our real brain entered the room* does not crucially differ.

The same issue can be illustrated by sentence (12).

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

Sentence (12) is taken from Lakoff & Johnson (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 (12) does not mean 'she is pretty all over' (1999: 18-19).⁷ 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 ATTRIBUTE/PART: The sentence should be interpreted as 'she is (just) a person with a pretty face' (Moerdijk p.c.). Because the metonymy is used in predicative position, no shift of a concrete referent has taken place. 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 we could conclude that a predicatively used metonymy is nothing but a normal metonymy in predicative position. In consequence, it becomes obvious that nominal metonymies do not directly shift

⁶ This question has also been raised in Sweep 2009 (p. 106), though without discussing this within the context of a sense transfer account.

⁷ This example is also 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, however, implies something negative, i.e. that she is not very smart. Therefore, the sentence is a rather complex example of a predicatively used metonymy.

their referent, but instead shift their meaning and thereby their referent. Referential shifts as in *Our real brain entered the room* only occur on the basis of a re-interpretation of the corresponding concept (*real brain*), which applies in exactly the same way in the predicatively used metonymy in *John is our real brain*. The parallel between predicatively used metonymies and referential ones clearly pleads for a sense transfer account.

3.3 *Double possible analyses and strange cross-linguistic differences*

If one neglects the advantages discussed above, the sense transfer and the referent transfer accounts thus far only differ methodologically. For metonymies used to refer to concrete entities (such as in the *ham sandwich*-examples) both accounts assume that one ends up with a shifted referent (directly or via a shift in concepts). Both accounts also analyse the nominal phrase (with or without the determiner) as metonymical in *the ham sandwich is waiting for his check*. However, in other examples the analysis of which phrase has undergone a metonymical shift will differ under the two accounts. A sense transfer induced by metonymy predicts that all parts of speech and not only noun phrases can undergo metonymical shifts.

Although this prediction appears to be correct and is reflected in the literature more frequently (cf. Koch 2001: 220; Koch 2004: 29), it does also have an unpleasant consequence: It doubles the possible analyses of some sentences with a metonymical re-interpretation (cf. Nunberg 1996: 123).⁸ Example (13) (cf. Nunberg 1996: 110) can be used to illustrate this.

(13) Billy's shoes were neatly tied.

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).⁹

⁸ Kleiber argues that this is a clear disadvantage ("Le prix qu'a payé") for Nunberg's theory of sense transfers (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.

⁹ 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

According to Nunberg, 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 said 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 should also be possible to refer back with anaphora to this new referent. If, on the other hand, the noun is interpreted literally, the antecedent of the anaphora 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 (14) and (15) illustrate these tests (cf. Nunberg 1996: 123).

(14) Billy's shoes were neatly tied. They were blue.

- (15) a. Billy's shoes were neatly tied but dirty.
b. */? Billy's shoes were neatly tied but frayed.

The only available reading for sentence (14) is that the shoes were blue. It is not possible to interpret *they* as referring back to the shoe laces. The sentences under (15) 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 (13) (Nunberg 1996: 123). If the nominal phrase was interpreted metonymically, one would expect these test to show the opposite outcome.

Exactly this outcome, for instance, is the case for example (5) (repeated as (16)). Even though it is, in principle, also possible to analyse *is sitting at* as metonymically transferred, the two tests indicate that in this example the metonymy affects the noun phrase.

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

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

(18) The ham sandwich is sitting at table 9 and is getting impatient.

(19) *The ham sandwich is sitting at table 9 and looks delicious.

Anaphora can only grammatically agree with the customer, as in (17), and it is impossible to add predicates that apply to the literal sandwich, as in (19).

expression, such as *is easy*, is interpreted metonymically, while Brdar-Szabó and Brdar (2004) argue that it is the book that is metonymically interpreted.

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 (20) can be analysed as metonymically shifting the sense of the proper name but also of the predicate (Nunberg 1996: 124).

(20) Yeats is still widely read (Nunberg 1996: 124)

This idea is supported by the fact that sentence (20) could, according to Nunberg, be followed by (21) or by (22) but not by (23).

(21) ..., although he has been dead for more than 50 years.
(Nunberg 1996: 124)

(22) ..., although most of it is out of print.
(Nunberg 1996: 124)

(23) ...*, although most of him is out of print.
(cf. Nunberg 1996: 131)¹⁰

On the basis of this, Nunberg concludes that (20) “is in fact ambiguous”: If (20) is followed by (21), *Yeats* has to be interpreted literally and thus the predicate is metonymically interpreted, whereas if (20) is followed by (22) “[Y]eats is a mass term referring to the poet’s work” (Nunberg 1996: 124).

There are a few problems with this argumentation. First of all, one can question whether it is plausible that the ambiguous reading of (20) only becomes visible if 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 (20) could be anaphorically picked up by *it* is not shared by everyone or at least differs across languages.¹¹ Since I am not a native speaker of English, I am not able to judge Nunberg’s English examples. However, in Dutch it seems to me only possible to use the masculine pronoun in both cases. Sentences (24)-(27), which are the Dutch translations directly corresponding to (20)-(23), illustrate this.

¹⁰ The phrase “But most of him is out of print” (referring to Daudet’s works) can, for what it is worth, 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].

¹¹ Kleiber denies that the possibilities given by Nunberg exist in French (Kleiber 1995: 130; Kleiber 2007: 161, 177).

- (24) Yeats wordt nog altijd veel gelezen
 Yeats is still always a lot read
- (25) ..., alhoewel hij al meer dan 50 jaar dood is
 ..., although he already more than 50 years dead is
- (26) ??..., alhoewel het meeste ervan niet meergedrukt wordt
 ??..., although the most there/it-of not more printed is
- (27) ..., alhoewel het meeste van hem niet meergedrukt wordt
 ..., although the most of him not more printed is

This has the consequence that, under Nunberg's line of reasoning, sentences such as (20) and (24) display different kinds of metonymical mappings across languages, even though they have fully similar structures. However, an alternative, more intuitive conclusion would be that it is only the rules for pronouns and anaphors which simply differ across languages.¹²

In the next subsections, both tests will therefore critically be analysed. Section 3.4 discusses first of all the use of anaphora in Dutch, English and German. Following on this, section 3.5 examines the co-predications test and some alternative explanation for the use of anaphora and metonymical expressions is given in section 3.6.

3.4 Anaphora agreement in Dutch, English and German

Anaphors are used differently across languages. In order to demonstrate this, I will first compare the use of Dutch and English pronouns and anaphora. In contrast with the difference with 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 in (28) (= (17)) and the Dutch equivalent in (29).

- (28) The ham sandwich is waiting for his/*its check.
He/*It is getting impatient.
- (29) Het broodje beenham wacht op zijn rekening.
Hij/*Het is ongeduldig aan het raken.

As explained before, it is said that the nominal phrase is metonymical, because the pronouns refer back to the customer. This is directly visible within the syntax of English since the pronouns for animates (*his/he*) must be used. Dutch

¹² It could be argued that in this sentence there is no metonymical expression at all, since the prepositions of the English phrases *most of something* or *most by someone* are both translated into Dutch with the preposition *van*. The phrase *het meeste van hem* could just be analysed as 'most (works) by the author'.

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 an antecedent.

Just as for English and Dutch, it has been claimed that in German examples of the *ham sandwich*-type anaphors also always have to pick up the customer and can never 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 (30) (cf. Egg 2004: 47 sentence (11) and 51 sentence (19b)).¹³

- (30) 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.'

Even though, contrary 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.¹⁴

At first sight, this directly contradicts Nunberg's idea that the choice for the pronoun, i.e. *it* / *es* versus *he* / *er*, indicates the actual referent of the nominal phrase (cf. also examples (20)-(23)). 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 has grammatical neuter gender, it can also be picked up by *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 (31) about Dionysus (from the DWDS-corpus) and (32) (from Grimm)¹⁵ illustrate this.¹⁶

¹³ The following abbreviations are used in the glosses: ACC = accusative; ART = article; DAT = dative; DIM = diminutive; F = feminine; M = masculine; N = neuter; NOM = nominative; PL = plural; PRON = pronoun; SG = singular.

¹⁴ If this analysis is on the right track, example (30) casts doubt on Panther and Thornburg's idea that metonymies influence grammar by their targets (i.e. interpreted concepts), whereas metaphors affect grammar on the basis of their sources (i.e. words used) (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. Köpcke, Panther and Zubin also explicitly claim that metonymical words can indeed directly influence grammatical elements (Köpcke *et al* 2010: 167).

¹⁵ Several variants of the text exist. This example is based on original versions from the 19th century (cf. <http://de.wikisource.org/wiki/Sneewittchen>). Very interesting is a version in

- (31) aber Hermes rettete das Kind
 but Hermes.M saved the.ART N child.N

 indem er es in Zeus' Schenkel einnähte
 in that he.PRON M it.PRON N in Zeus' thigh in-sew
 'but Hermes saved the child, in that he sewed him (/it) into Zeus'
 thigh'
- (32) Schneewitt-chen aber wuchs heran,
 Snowwhite-DIM.N but grew up,

 und als es sieben Jahr alt war,
 and when it.PRON N seven years old was
 'But Snowwhite was growing up and when she was seven years
 old...'

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 (30), despite its literal grammatical agreement with the order.¹⁷ The first argument is the so-called 'uniqueness presupposition'-test. This is explained 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 (30): A waiter can even utter this sentence with 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.

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).

¹⁶ Cf. also the examples discussed by Köpcke *et al* (2010: 171, 178).

¹⁷ It should be remarked that Egg himself does not explicitly discuss the fact that the pronoun in his German examples such as (30) grammatically agrees with the order and not with the customer. In the discussion of other metonymies 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 interpreted concept (cf. Egg 2004: 51-52 sentence 20 versus sentence 19).

The contrast between the masculine pronoun in English and Dutch (example (28) and (29)) and the neuter in German (sentence (30)) thus 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 (31) and (32). The ‘uniqueness presupposition’-test shows us that the metonymy in each language actually applies to the same phrase.

3.5 *What does co-predication actually test?*

In the previous section it has been made clear that even if anaphora grammatically correspond to the metonymically used word, the ‘uniqueness presupposition’-test can nevertheless reveal that the nominal phrase is metonymical (Egg 2004: 46ff). But unfortunately, 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 (33), an example from the DWDS-corpus, in which the author (*Kant*) but also his oeuvre are by definition both unique.

- (33) 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 (34) (= Egg 2004: 51 sentence (19b)).

- (34) Ein Schnitzel wollte zahlen. Es war verärgert.
 a.ART N schnitzel.N wanted to pay it.PRON N was irritated
 ‘A schnitzel wanted to pay. He was getting annoyed.’

At first sight, 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 (30) (repeated below as (35)) is clearly about the customer and not about the literal schnitzel. If one argues, in line with Nunberg, that the neuter pronoun in fact indicates that the schnitzel is literally interpreted, then not only the predicate *wollte zahlen* but also the next predicate *war verärgert* has to be metonymically transferred.

Although Egg does not explicitly discuss this line of reasoning, his paper indicates that this is not very plausible, since it is, he claims, impossible to use predicates that do not apply to the customer. This is illustrated by contrast

between (35) (= (30)) on the one hand, and (36) and (37) on the other (Egg 2004: 50-51).

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

(36) *Das Schnitzel wollte zahlen. Es sah appetitlich aus.
 the.ART N schnitzel.N wanted to pay it.PRON N saw delicious out
 ‘A schnitzel wanted to pay. It was looking very delicious.’

(37) *Ein Schnitzel lag auf dem Teller. Es war verärgert.
 a.ART N schnitzel.N lay on the plate. it.PRON N was irritated
 ‘A schnitzel was on the place. It was getting annoyed.’

One might question, however, whether it is correct to compare these predicates in this way. There could be many other reasons why the second part of the examples (36) and (37) is impossible. For (36) 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 (37) also crucially differs from (35). In (35) 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 (37). Independently of the literal use in the first part of the sentence, one can seriously question whether the metonymy ORDER-CUSTOMER as such 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 expression is generally 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 on the usefulness of the co-predication test. Maybe the test does not prove 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 within its context.

Nunberg argues, for instance 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* (cf. Waltereit 1998: 57) seems to be impossible. I agree with Waltereit and Kleiber that this example could be infelicitous because of pragmatic reasons

only: The contiguity DRIVER-VEHICLE 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.

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 which extent the contiguity relation is relevant within a certain context. This idea also suggests that examples such as (36) and (37) 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 it costs nor does he know the exact table number. Probably a colleague could felicitously direct the utterance: (??)*The ham sandwich is sitting at table 9 and it costs 4 euro* ($\approx$ (36)). 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*.

A problem is that such examples are all very artificial and furthermore intuitions on them differ. It is very difficult to find real language examples. However, some corpus examples do indicate that sentences such as (37) are in fact perfectly possible. This will be illustrated and explained in full detail in the next section. In addition, another analysis for the metonymy involved will be proposed. As I will explain, this analysis makes the possibility of a sense transfer of the verb for the above examples as proposed by Nunberg even less plausible.

3.6 Metonymical transfers on anaphors

In the previous sections I showed that Nunberg's classification of certain examples as predicate transfers instead of nominal metonymies is problematic. Although Nunberg himself already claimed that counter-intuitive metonymies occurred for some examples, and even that double analyses were possible, I showed that the tests that were used can only support, but not decide, whether nouns or verbs are interpreted literally or not. Co-predication cannot be used as a decisive test, since this possibility also reflects the relevance of the contiguity relation. Grammatical agreement of anaphora also does not always reflect which phrase is metonymical: In Egg's German examples the use of anaphora contradicts other tests, such the uniqueness presupposition-test. However, the latter test is not always available (cf. (33) and (34)).

One might consider, however, that there is one argument left which still pleads for the nominal metonymy in the case of the German *ham sandwich*-examples. Even if co-predication is determined by pragmatic factors, and even if pronoun agreement cannot be used as a decisive test in German, a predicate transfer analysis still has to assume a double metonymy for the above *Schnitzel*-examples: One could only claim that *wollte zahlen* is metonymically transferred

and *Schnitzel* is interpreted literally, if the next predicate *war verärgert* also gets a metonymical interpretation. This predicate has to apply semantically to the customer and not to the order (cf. example (34)/ (35), page 16).

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 (30) or (34) is co-referential with the customer (Egg 2004: 51) is in conflict with the grammatical agreement of *Es*. If *Schnitzel* is metonymically understood and the predicate *war verärgert* is literally interpreted (applying to the customer), one should conclude that the anaphora *Es* itself must be metonymical. 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 (i.e. 'the schnitzel'), but rather introduces a contiguously related new referent ('the customer of this schnitzel'). Not only does predicate transfer thus 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 idea that anaphora can be metonymical by specific language examples: Langacker also noticed that anaphora 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 that anaphors by themselves are sometimes interpreted metonymically. Consider, for instance, the German example (38).¹⁸

¹⁸ Source http://www.bilandia.de/multimedia/randomhouse/randomhouse_dirie_nomadentochter_leseprobe.pdf, [February 2010].

(38) Ich holte die klein-en Flaschen mit
 I took the.ART ACC PL little-ACC PL bottles.F PL with

Gin, Rum und Scotch heraus [...].
 Gin.M, Rum.M and Scotch.M there-out

In jed-er Flasche war
 In every.ART-DAT F bottle.F SG was

ein ander-er Teufel,
 an.ART NOM M other-NOM M devil.M.SG,

und ich trank sie all-e
 and I drank them.PRON NOM PL all-NOM PL

– ein-e nach der ander-en.
 – one.ART-ACC F after the.ART DAT F other-DAT F

‘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* (‘them all’) 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* that 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 words *in jeder Flasche* and *die kleinen Flaschen* are interpreted literally. This makes two different analyses possible: In line with Nunberg one could assume that the predicate *trank* (‘drank’) gets a metonymical interpretation since *sie alle* - *eine nach der anderen* refers to the bottles. However, one could claim as a more intuitive alternative that the anaphora in *sie alle* - *eine nach der anderen* are metonymically interpreted.

Similar examples can also be found in English or Dutch.¹⁹ Sentence (39) of the British National Corpus shows an example which is very similar to (38).

(39) 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.

¹⁹ For a Japanese example see Langacker 2009: 67.

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, but rather introduce a new referent ('an alcoholic drink') on the basis of a conceptually related, available one ('bottle').

Similarly, example (40) of the ANW-corpus illustrates a Dutch metonymical pronoun connected to an AUTHOR-WORK contiguity.

- (40) Tucholsky (1890-1935) was een van die schrijvers die hun
Tucholsky (1890-1935) was one of those authors that their

naam vaak veranderen. Behalve als Kurt Tucholsky schreef
name often change Except as Kurt Tucholsky wrote

hij ook als Ignaz Wrobel, Theobald Tiger, Peter Panter en
he also as Ignaz Wrobel, Theobald Tiger, Peter Panter and

Kaspar Hauser. ([...]) Ik weet nog hoe ik hem voor het eerst las.
Kaspar Hauser I know still how I him for the first read
'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 (40) *hoe ik hem voor het eerst las* has to be interpreted as 'how I read a book by Tucholsky for the first time'. In the first two sentences of example (40), however, the word Tucholsky has to be interpreted as the proper name of the author, since no semantic reinterpretation of any kind is needed: It is simply said about the author Tucholsky that he often changed his name and therefore wrote under different pseudonyms. It is implausible to assume any metonymy (of the noun or predicate) in these first two sentences of (40) since all predicates fully apply to the literal author himself. The only re-interpretation necessary is in the last sentence in (40). One can preserve the intuition that *las* ('read') just refers to an activity with books, if it is the anaphora itself that is metonymically interpreted. A metonymical interpretation of the pronoun means that it is picking up a antecedent ('book') which is related to an available one ('Tucholsky') in the discourse. Anaphors with a metonymically transferred sense do not refer to a referent interpreted earlier, but are instead applied to a new, contiguous referent on the basis of an available one that was interpreted earlier.

Although metonymically interpreted anaphors have explanatory power in an intuitive way (cf. examples (38)-(40)), they undo the decisiveness of both the

anaphora and co-predication tests. How should we analyse, for instance, examples (14) (here repeated as (41)), if anaphora can also be metonymical?

(41) Billy's shoes were neatly tied. They were blue.

One does not have to assume, as Nunberg does, that the second sentence shows that the predicate is metonymically transferred. One could also argue that *Billy's shoes* and also *They* in (41) are metonymically used, thereby preserving the nominal transfer. Co-predication does not help, because a similar alternative reasoning exists for (42)-(43), which is a repetition of the sentences under (15) (cf. Nunberg 1996: 123).

(42) */? Billy's shoes were neatly tied but frayed.

(43) Billy's shoes were neatly tied but dirty.

The reason that co-predication in (42) is not possible could be the fact that the PART-WHOLE relation between shoes and the laces is not relevant enough for frayed laces, whereas 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 verb or 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 (44) *Kant* and *he* are metonymical, but we could equally think that the two predicates are transferred (as would be done by Nunberg).

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

Sentence (45) suggests that the nominal-metonymy analysis is correct, but the parallel with (46) on the other hand pleads for a transferred predicate.

(45) Kant is still popular, although some of it is out of print.

(46) Kant is still popular, although he has died two centuries ago.

In such examples, predicate transfer is often rejected solely on the basis 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 (such as for (44)) while better

preserving intuitions. Of course, this does not mean that predicate transfer by metonymy is principally impossible, it simply shows that co-predication nor “divergent anaphora” (Kleiber 2007: 174) are reason enough to fully abandon the possibility that the noun is metonymical in some of the above examples.

3.7 *Metonymical nouns, anaphora and real verbal sense transfers*

In general, a sense transfer account is a better explanation for metonymically interpretational shifts. 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 concrete, shifted referent. The obvious similarity between referential and predicatively used metonymical nouns shows that examples in which the metonymy is used for referential purposes also need to be analysed as a sense transfer. This makes sense, 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. I will explain this in the present section.

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 rather 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 unit les deux types de référents mis en avant par la thèse du changement de 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 casts doubt on the idea of a metonymically transferred verb in Nunberg’s examples.

It is, however, quite possible that the meaning of a verb is metonymically transferred. Metonymy-induced polysemy is not limited to noun phrases (cf. Koch 2001: 220; Koch 2004: 29-30; Nunberg 1996: 116-119). Complex concepts, as denoted by verbs, can also be shifted in a metonymical way. This is sometimes even coded in dictionaries. An illustrative example of a verb that exhibits metonymical polysemy is, for instance, the Dutch verb *klateren* that literally denotes ‘to splash’ or ‘to make splashing sounds’ and therefore also has the metonymically related meaning ‘to urinate’ (cf. Van Dale 2005).²⁰ Another Dutch example is the transitive verb *kuipen*, which denotes the old craft of making barrels (cf. WNT *kuipen* (I), meaning 1) and is also used for putting things, such as for instance herrings, in barrels by closing these by the same manual work (cf. WNT *kuipen* (I), meaning 2). Or compare the Dutch verb *tikken* that could literally be translated as tap or touch and therefore can acquire 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’.

Such metonymical predicate transfers differ on certain crucial points 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. Furthermore, the correspondence relation between the transferred sense and the basic meaning clearly differs in such cases from Nunberg’s examples. In case of *klateren*, *kuipen* or *tikken* the noteworthy condition is easily fulfilled, since the transferred activity implies the literal one.

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

In the next section I will take a closer look at other metonymical effects on the crossing point of grammar and semantics by taking into account other

²⁰ This example indicates the necessity for a semasiological (from form to literal meaning) as well as an onomasiological (from intended meaning to form) analysis of metonymy (cf. also footnote 5): The connection between the the concepts of ‘splashing’ and ‘urinating’ becomes clear within the intended urinating-frame, because urinating leads to splashing sounds and not the other way around.

examples that closely resemble Nunberg's idea of a seemingly literal predicate with a metonymical shift.

4 Metonymy and the grammar-semantics interface

4.1 Metonymical transfers working upon predicates' argument slots

Just before the publication of Nunberg's paper on predicate transfers (which originates from 1995), Stallard made a comparable proposal: He contrasts "referential metonymies", illustrated by the *ham sandwich*-example, with so called "predicative metonymies" (Stallard 1993). Since it is Stallard's primary goal to automatically extract correct readings of metonymies, his argumentation for the existence of so-called predicative metonymies is rather poor. First of all, he argues for the existence of predicative metonymies in the same way as Nunberg, viz. based on the doubtful anaphoric pick-up and co-predication.

In addition to this, he argues the existence of predicative metonymy is based on question-answer pairs. He explains that the answer to certain questions shows that a seemingly referential metonymy cannot in fact apply to the noun. This is illustrated by the question *Which airlines fly from Boston to Denver?*. Since only flights (or even airplanes) fly, one could on the one hand assume a metonymical mapping between *airlines* and 'flights'. The word *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).

Stallard illustrates these arguments by only three example. This makes it difficult to analyse to which extent predicative metonymies differ from Nunberg's predicate transfers. Stallard's predicative metonymies are 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 seem to be interpreted literally.

His explicit explanation of predicative metonymies, however, is slightly different as compared to Nunberg's. Although Stallard also 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).²¹ This is an interesting quotation, because it clarifies how it is possible that it is not the argument as such but rather the predicate is shifted, even though the predicate seems to preserve its literal meaning. In other words, this type of metonymy occurs on VP level, rather than changing the verb (V) or the direct object (NP) as such (cf. also Iwata 2005).

²¹ In the rest of this paper, I will prefer the term 'argument slot' instead of 'argument place'.

The idea that metonymy cannot only affect the interpretation directly but also the type of argument of a predicate is also reflected elsewhere in the literature. It links up to the traditional question to which extent the syntactically realised arguments of a verb correspond with the participants that are necessary from a semantic point of view. Whatever ones exact standpoint may be in this discussion, it cannot be denied that there must be some correspondence (or linking rules) 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 in this way, via the mediating level of semantic roles.

However, the apparatus of semantic roles is rather fuzzy. 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 corresponds with the do-er, i.e. the agent, and the direct object corresponds with an undergoer, i.e. the patient. But not all verbs are that simple. Some verbs, for instance, do not express an action that can be done by someone. Even if such verbs do have a syntactic subject, this cannot, due to the semantics of the verb, be an agent. Such problems 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. Rather recently, Brdar and Brdar-Szabó have demonstrated at length how metonymical processes can determine the argument structures of several predicates and adjectives (Brdar 2000; Brdar 2007; Brdar 2009; Brdar & Brdar-Szabó 2009; Brdar-Szabó 2009; Brdar-Szabó & Brdar 2004; cf. also Koch 2001: 210-211). Such valency changes are rather similar to Stallard's predicative metonymy, in the sense that the metonymical influence affects the predicate's argument structure as such. Brdar and Brdar-Szabó explicitly state that such metonymical "relational-grammatical" transfers do not have "to correlate with lexical polysemy proper" (Brdar 2007: 183; Brdar-Szabó & Brdar 2004: 330).

In the rest of this section, I will discuss such metonymies operating on the syntax-semantics interface of verbs in full detail. Based on Stallard's suggestions in the last section of his paper (cf. Stallard 1993: 93), I will take into account two types of possible predicative metonymies, i.e. so-called logical metonymy and metonymy on semantic roles.

4.2 Logical metonymy

A very interesting type of metonymy in English which directly affects the syntactic structure is illustrated in (47) and (48).

- (47) Mary began the book
- (48) Mary finished the book
- (49) John enjoyed the sandwich

Strictly speaking, it is only possible to begin or finish activities. Therefore, an activity in which the book plays a crucial role has to be inferred for sentences (47) and (48), i.e. reading or writing the book. Sentence (49) is said to work similarly. Because enjoying an object presupposes some time interval of exposure to the object or some experience with the object (cf. Sweep 2010: 10, 19), John probably enjoyed a sandwich.

Although the metonymy in examples (47)-(49) has also been named after 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).²²

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 asks for some 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, it turns out to be extremely awkward to locate the metonymical interpretation (i.e. the specific inferred event) fully in the semantics of this verb. Apart from the fact that this is intuitively less plausible, the account of a metonymical predicate has clear theoretical drawbacks.²³

First of all, it will become impossible to make a list for all the different senses of *begin* (cf. also Jackendoff 1997: 60). One should assume that a verb such as *begin* can have an infinite number of senses, such as *begin reading*,

²² Sometimes the term *logical metonymy* has been used for examples of polysemy that are motivated by metonymy (cf. Brdar 2009: 263; Kleiber 2007: 169; Nunberg 1996: 116). Although there is an obvious relation between *logical metonymy* and systematic meaning shifts that could be described as instances of regular polysemy (cf. Horacek 1996: 120-122), examples (47)-(49) do not, however, necessarily need to be analysed as instances of polysemy. Probably the term *logical metonymy* has also been used for regular polysemy by confusing the terms *logical polysemy* and *metonymical polysemy*. I will use *logical metonymy* only in the way explained in this section, i.e. applying to examples similar to (47)-(49).

²³ Most of these drawbacks are very clearly summarised in Verspoor’s dissertation (Verspoor 1997a: 167-169).

begin writing (in combination with a book), *begin eating* (in combination with a sandwich), *begin smoking* (in combination with a cigarette), etc. The same will be true for all verbs that allow such constructions, such as *finish*, *enjoy*, etc. This does not only make the lexicon very inefficient (cf. Verspoor 1997a: 168) or even close to infinite, but it also makes the incorporation of crucial generalisations impossible (cf. Pustejovsky 1995: 48): Such an approach can never account for the fact that *finish* or *enjoy* has the same set of meanings in combination with the same set of direct objects.

In addition, the idea that the verb is metonymical in the above examples also generates an infinite number of interpretations for concrete sentences of which several will even turn out to be impossible. If, for instance, *begin* has many metonymically transferred senses, the possible interpretations for a sentence such as (47) are also endless, since the verb could mean ‘begin reading’, ‘begin eating’, ‘begin smoking’, etc. It would thus increase the pragmatic work dramatically (cf. Verspoor 1997a: 168-169), because one must choose the correct *begin*-meaning out of all these options.

Furthermore, it remains unclear how ‘begin reading’ or ‘begin eating’ are metonymically related senses of *begin* as such. Which kind of contiguity relations or 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 if the connection between the verb and the nominal complement has not been made. One can simply not deny that the noun plays an essential role in the causation of the metonymical highlighting effect. Triggered by the semantics of the matrix verb (which ask for an event), it is the concrete direct object that leads to the intended, contiguously related event.

One may question, however, whether the direct object is interpreted metonymically or literally. Again, the same problematic diagnostic tests have been used to support the idea that the interpretation of the direct object cannot be metonymically shifted (cf. Godard & Jayez 1993: 168). These tests, such as the use of anaphora and relative clauses and co-predication (coordination of predicates), are illustrated for the above logical metonymies in (50)-(54).

- (50) John began his book at ten and put it away at eleven.
- (51) *John began his book at ten and didn’t stop it till eleven.
- (52) John began a book that was very thick.
- (53) *John began a book that took two hours.
- (54) 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 the associated event. This makes (50) possible, since it is the concrete book that is put away and it also rules out example (51) (cf. Godard and Jayez 1993: 169).

Similarly, the use of a relative clause referring to a property of the concrete noun is perfect, as in example (52), while (53) with the relative clause referring to 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 illustrated by (54). Since it is no problem to combine the two predicates with only one NP, it is said that it is not very likely that the noun has fully changed its interpretation and type to an event-entity. Otherwise the examples should be zeugmatic.

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. One can indeed question whether the interpretation of the noun is really transferred; its literal interpretation appears to be more or less intact, since it is as such directly involved in the process started, finished or enjoyed. Rather than assuming a transfer of the predicate or of the noun, the metonymical interpretation only arises in the combination of the predicate and direct object.

In conclusion, it turns out to be most precise to assume that the contiguity effect of logical metonymy leads to a transfer of the argument place or slot of the verb (cf. Stallard 1993: 89). Logical metonymy should thus 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 involved object.

4.3 *Metonymy and semantic roles*

Stallard suggests that, besides logical metonymy-examples, another type of predicate transfer or transferred argument slots is probably reflected in the work of Fass, who analyses the relation between metonymy and semantic roles (cf. Stallard 1993: 93).²⁴

Fass has analysed the relation between metonymy and semantic roles within a computational framework (cf. e.g. Fass 1991a; Fass 1991b). He

²⁴ However, the idea that a conceptual mechanism such as metonymy can affect semantic roles was already touched upon by Schiffko in 1979. Within his rather broad notion of metonymy, Schiffko discusses metonymical relations between agents and actio, or between actio and affected or effected object (Schiffko 1979: 246). Moerdijk also mentions the relation between contiguity relations and semantic roles (1990: 121).

suggests that “every metonymical 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 the idea that contiguity relations or metonymical associations could be explained by semantic roles, i.e. “as case role substitutions”, Fass even claims that “perhaps metonymy can be used to explain observations in the case grammar literature” (Fass 1991b: 44).

Such an explanation is given in detail in the work of Waltereit (Waltereit 1998; Waltereit 1999). He contrasts ‘classical-referential’ metonymies which are often detected on the basis of violated selection restrictions from metonymy-based effects that do not lead to a shift in reference. Sentences (55)-(58) illustrate the difference (cf. Waltereit 1999: 234-235; Waltereit 1998: 55-56):

- (55) a) The customer (of the ham sandwich) is waiting for his check
 b) The *ham sandwich* is waiting for his check
- (56) a) The patient (with the ulcer) is waiting for the doctor
 b) The *ulcer* is waiting for the doctor
- (57) a) The waiter finally served *the customer* (of the ham sandwich)
 b) The waiter finally served *the ham sandwich* (to the customer)
- (58) 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 (55) and (57) are based on a CUSTOMER-ORDER contiguity and (56) and (58) both exploit a metonymy based on the PATIENT-DISEASE relationship. Despite this similarity in contiguity-relations, the examples (55) and (56) on the one hand and (57) and (58) on the other are of two crucially different natures.

In (55) and (56), we understand that the subjects of the b-sentences must be humans on the basis of the context (such as in these examples the selection restrictions of *is waiting*). Therefore, we interpret *ham sandwich* as the customer of this sandwich and *ulcer* as the patient with an ulcer (as literally expressed in the a)-sentences of (55) and (56)). The examples under (57) and (58) are different in this respect. Although the facts that one can serve a customer but also a ham sandwich or cure a patient as well as an ulcer are caused by the same contiguity-types as exploited in (55) and (56), the noun phrases of these examples are all interpreted literally.

According to Waltereit the similar contiguity types of the above examples thus work on different levels. The former metonymies (i.e. the b)-sentences of (55) and (56)) are said to be based on contiguity relations on an insertional level

(“Besetzungsebene”), since a contiguous concept is inserted for the original one on a lexical level. The latter types of shifts, as illustrated by (57) and (58), are said to occur on semantic role level (“Rollenebene”) (Waltereit 1998: 56; Waltereit 1999: 235). Waltereit assumes that metonymy is involved from a diachronic point of view rather than from a synchronic one (Waltereit 1998: 56). From a synchronic perspective, Waltereit only explicitly considers the two possible direct objects standing in a metonymical relation on a semantic role level (Waltereit 1998: 56, cf. also 1999: 235).

This claim is problematic, however. First of all, the consequence of Waltereit’s analysis is that also examples (57) and (58) must be born out of an occasional use of *ham sandwich* in the meaning of ‘customer’ or *ulcer* referring to ‘patient’ (or the other way around?) (cf. Waltereit 1999: 56). One might question whether this is really plausible.

Secondly, the contiguous associations between the two concepts (and not just between the semantic roles) are still evident from a synchronic point of view. 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: 26; Cappelle 2005: 339). Interestingly, Waltereit’s actual analysis of examples such as (57) and (58) also takes normal contiguity relations such as CONTAINER-CONTENT (Waltereit 1998: 26) or CUSTOMER-ORDER (Waltereit 1999: 235) into account.

Of course, Waltereit is right in that the metonymy involved in (57) and (58) is of a specific kind. The direct object does not, as in classical metonymies, seem to be metonymically re-interpreted. Rather, the metonymy occurs on the level on which verb and direct object are combined. Within 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 combining process of verb and direct object.

Hence the interpretation of the direct object slot (i.e. the argument place) is metonymically changed, rather than the direct object as such. Neither the verb’s meaning nor the expressed 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. In other words, we are dealing with examples of predicative metonymies par excellence in examples (57) and (58).

5 Conclusions: Metonymical transfers and grammar

Since metonymy is a conceptual mechanism all its effects must be of a conceptual nature. Although this seems trivial, it has far-reaching consequences.

First of all, it means that metonymical effects within grammar can only co-occur with an effect on a conceptual level. The fact that metonymy always operates on a conceptual level has the additional consequence that metonymy can never induce a referential shift as such, but only by means of transfers in the

concepts (or frames) corresponding to these referents. In other words, metonymy never leads to referent transfers but only to interpretational transfers, i.e. transfers in a corresponding concept or in a combination of concepts.

This insight has already been obtained by Sag 1981 and was worked out by Nunberg 1996, but is still an important point of debate because of Nunberg's radical, counter-intuitive elaboration upon the idea of sense transfers. Based on co-predication and anaphora tests, Nunberg argues of some examples (contrary to our intuitions) that the predicate rather than the nominal phrase is metonymical. Additionally, he believes that there are even cases in which both analyses, i.e. sense transfer of verb or noun, are possible.

Although this claim has been correctly criticised (cf. Kleiber 1995; Kleiber 2007; Waltereit 1998) we must make sure we do not throw the baby out with the bathwater: In general, a sense transfer account reflects a much more precise semantic analysis (cf. also Blank 1997: 101; Koch 2001: 218; Koch 2004: 20) than a semantically implausible direct referent transfer.

I have shown that an account of metonymy in terms of interpretational transfers is necessary for several reasons. Apart from the fact that it gives a much better explanation for verbal inflection phenomena and the semantics of surrounding words (cf. Nunberg 1996), a sense transfer account of metonymy is needed in order to explain the different linguistic levels affected by metonymy. An example of such an affected level is grammar. The grammatical level of interpretation concerns the linguistic structure of words and sentences. The most complicated level of conceptual, metonymical shifts is therefore the interpretational layer in which grammar and semantics meet each other.

A clear example of metonymy operating on the syntactic-semantics interface are sentences in which grammatical elements such as pronouns or anaphors are used to refer to antecedents that can only be metonymically picked up in a discourse. In order to be able to do this, one has to have semantic-lexical and grammatical knowledge. Another example are those instances labelled by Stallard as predicative metonymies (Stallard 1993). In line with Stallard, I have explained predicative metonymies as metonymical transfers of a predicate's argument slot. Since the status of argument structure is generally somewhere between syntax and the lexicon, predicative metonymies occur on the syntax-semantics interface. In order to understand predicative metonymies, one also uses semantic-lexical and grammatical knowledge.

Although it seems at first sight that Nunberg's predicate transfer describes a similar phenomenon as Stallard's predicative metonymy, I have rejected the idea that Nunberg's examples must be analysed in such a way. In general, there are two problems with his analysis. Firstly, I have demonstrated that the tests which can be used to detect this type of metonymy are highly problematic. The results of these tests for Nunberg's examples are not only very counter-intuitive, but different tests also turn out to contradict each other. Secondly, his description of predicate transfers only applies to metonymically interpreted

verbs, i.e. contextually reinterpreted verbs or metonymically polysemous ones. Thus, even within my plea for a sense transfer account (cf. sections 3.1, 3.2 and 3.6) and for the existence of predicative metonymies (cf. section 4), I have argued that Nunberg's examples of predicate transfers could simply be treated as nominal sense transfers (on a lexical or contextual level).

Real predicative metonymies (as opposed to metonymically polysemous verbs or Nunberg's examples containing nominal metonymies) could be defined as instances of metonymy where the predicate as well as the nominal phrase are interpreted literally where the action expressed by the predicate as well as the nominal phrase are interpreted literally, but the combination of the predicate and argument is metonymical (i.e. the VP). Predicative metonymies could therefore also be characterized as metonymy-induced argument shifts of a qualitative nature (cf. Brdar-Szabó & Brdar 2004: 329, 332).

Based on Stallard's suggestions, I have discussed two specific instances of metonymies that appear to be of such a specific nature. These are instances of so-called logical metonymy and examples of metonymy affecting the expression of a verb's participants. Both are primarily found in direct object position and both affect the qualitative type of the direct object. These metonymies should therefore not be described as meaning transfers of the property expressed by the predicate nor as a metonymical re-interpretation of a specific argument as such, but rather as a predicative metonymy par excellence: A metonymical transfer of the predicate's argument slot.

6 References

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