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Metonymy in Language and Thought

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Frame and Contiguity

On the Cognitive Bases of Metonymy and Certain Types of Word Formation

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1. Introduction¹

It goes without saying that in a rhetorical perspective metaphor and metonymy are usually considered to be close relatives of each other. And in fact, they often get confused, not only by students, but — as to the application of these two theoretical notions — even by scholars. In general, it is metonymies that are reduced to metaphors. All in all, metonymy appears to be a kind of *parente pauvre* of metaphor (cf. Bredin 1984: 45): metonymy seems less interesting, less abstract and is supposed to demand a relatively minor intellectual effort. Nevertheless, I am convinced that metonymy occurs much more frequently than metaphor and tells us a great deal about our cognitive equipment. So it is worthwhile studying its cognitive bases in some detail.

2. Ad hoc metonymy and metonymic polysemy

First of all, let me clarify a terminological problem that constantly arises in connection with metonymy. On the one hand, the term 'metonymy' denotes a rhetorical trope which is applied ad hoc to certain lexical material; compare for instance:

- (1) Lat. iam proximus ardet *Ucalegon*
 'nearby, [*the house of*] *Ucalegon* is already burning' [my translation] (Verg. Aen. 2, 311f, cit. Lausberg 1973: § 568, 1c; my italics)

On the other hand, the term 'metonymy' is used to denote a specific semantic relation between two senses of a given polysemous lexeme, as for instance:

- (2) Eng. *bar* <sense₁> '.....'
 <sense₂> '.....'

 <sense_i> 'counter'
 <sense_j> 'public house' (metonymic sense in relation to <sense_i>)

To keep things clear, it would be better to call cases like Eng. *bar* (with respect to its senses_{i,j}) 'metonymic polysemy.' Nevertheless, there is a close relationship between ad hoc metonymy as illustrated in (1) and metonymic polysemy as illustrated in (2): just as polysemy in general develops through 'lexicalization' of a semantic change ultimately triggered by a contextual and/or expressive ad hoc use of a word in discourse,² metonymic polysemy also develops through lexicalization out of ad hoc metonymic usage in discourse — or put the other way around, metonymy constitutes an ad hoc innovation that can potentially induce a 'metonymic change' in the meaning of the lexeme concerned, which thereby becomes (metonymically) polysemous. I will come back to this issue in Section 9.

3. Metonymy and contiguity

We have to look for the semantic basis of ad hoc metonymy in order to account for metonymic polysemy as well. Traditionally, metonymy (and especially ad hoc metonymy) belongs to the realm of rhetoric. To my knowledge, the earliest definition of metonymy (Lat. *denominatio*) as a rhetorical trope in its own right is to be found in the *Rhetorica ad Herennium*:

- (3) *Denominatio* est, quae ab *rebus propinquis et finitimis* trahit orationem, qua possit intellegi res, quae non suo vocabulo sit appellata.

'*Denominatio* [i.e., 'metonymy'] is a trope that takes its expression from *near and close things* and by which we can comprehend a thing that is not denominated by its proper word.' [my translation] (Her. IV: 32, 43 = Anonymous 1894: 337; my italics).

By *res propinquae et finitimae*, the author of the *Rhetorica ad Herennium* virtually introduces an associative or cognitive element into his definition, namely the relation of closeness that might remind us of the *σύγγυς*, constituting one of the three relations Aristotle sets up to account for the process of remembering:

- (4) διὸ καὶ τὸ ἐφεξῆς θηρεύομεν νοήσαντες ἀπὸ τοῦ νῦν ἢ ἄλλου τινός, καὶ ἀφ'ὁμοίου ἢ ἐναντίου ἢ τοῦ *σύγγυς*. διὰ τοῦτο γίγνεται ἡ ἀνάμνησις.
 'So we track down the sequence [of our ideas] by starting from the present moment or from something else and from something similar or opposite or *close* [to it]. That is the way remembering comes about.' [my translation] (Aristotle, *De memoria et reminiscencia*, 451b: 18–22 = Aristotle 1975: 300; my italics).

In view of the fact that the theory of rhetorical tropes and the theory of remembering are, *prima facie*, two very different fields of investigation, the author of the *Rhetorica ad Herennium* was probably not in any way influenced by Aristotle. And that is the way the story continued for a long time.

On the one hand, we have the classical rhetorical conception of metonymy, more or less clearly involving a relation of closeness (or merely a constant relation of some kind). In the form of the notion of *κατάχρησις*, the rhetorical theory offers a device for coping even with lexicalized metonymic (or synecdochical or metaphorical) change of meaning (cf. Lausberg 1973: §§562 and 577; for metaphorical *κατάχρησις* see also Koch 1994: 203f, 207). Not very surprisingly, several 19th century historical linguists (Reisig, Bréal, Paul, Darmesteter, Nyrop, etc.) took up the rhetorical basis for describing metonymic (as well as other types of) change of meaning (cf. Nerlich 1992; Blank 1997a: 10–18). On the other hand, we have the modern thread of English sensualist philosophy and associationist psychology (Hobbes, Locke, Hume, James and John St. Mill, Bain, etc.) relying heavily on the relation of 'contiguity' and, to a lesser degree, on that of 'similarity.' This tradition does not go directly back to Aristotle's views presented in (4) — despite partly analogous distinctions.³

A first resolute attempt to bridge the by now traditional associationist relations and the linguistic classification of semantic change (Wundt 1912: 459–627) unfortunately did not clearly outline just metonymy.⁴

Meanwhile, Kruszewski had applied the two associationist relations of similarity and contiguity directly to the functioning of linguistic entities and, thereby, prepared Saussure's (synchronic) two-axes theory, which opposed 'associative' relations (i.e., those formed by pure similarity, *in absentia*) and 'syntagmatic' relations (i.e., those formed by contiguity, *in praesentia*) between linguistic entities (cf. Kruszewski 1884–90; Saussure 1916: 170–180; Holenstein 1975: 143–145; Happ 1985: 37–52).

It was only Léonce Roudet (1921: 686–692), who, in a most straightforward account, took up associationist relations and Saussure's two axes and thereby established the systematics of semantic change as illustrated in Table 1.

Table 1. Systematics of semantic change (Léonce Roudet)

| | ideas | words |
|------------|--------------------|--|
| contiguity | change by metonymy | (syntagmatic) change by ellipsis |
| similarity | change by metaphor | (associative) change by analogical 'irradiation' |

To my knowledge, it is here for the first time that the cognitive component of metonymy is explicitly stated in terms of associationist psychology (and in accordance with the classical rhetorical tradition):

- (5) *Changements résultant d'une association par contiguïté entre les idées.* Tous les changements que l'on a appelés changements par connexité ou par métonymie (devenue inconsciente) appartiennent à cette catégorie. (Roudet 1921: 690)

Take our example (2). In a public house we normally find a counter across which liquor and food are served. Thus, there is a spatial contiguity between the ideas COUNTER and PUBLIC HOUSE. Their contiguity must have triggered the metonymic change of meaning (from 'counter' to 'public house') that underlies the metonymic polysemy of Eng. *bar* 'counter; public house.'

Now let us consider another example (cf. *DHLF*, s.v. *prison*).

- (6) OFr. *la prison* 'act of seizing,' hence: 'captivity,' hence: 'prison,' hence: (MFr.) 'penalty of imprisonment'

Between ACT OF SEIZING and CAPTIVITY there is a temporal and a causal contiguity; and between CAPTIVITY and PRISON there is a spatial contiguity, as there is also between PRISON and PENALTY OF IMPRISONMENT. These contiguity relations are the cognitive basis of the corresponding metonymic changes (and of the resulting synchronic metonymic polysemies we observe in OFr. *la prison* 'act of seizing; captivity; prison' and MFr. *la prison* 'prison; penalty of imprisonment').

Roudet's diachronic considerations were not paid much attention to in the discussions of the following decades, which concentrated on synchronic and theoretical issues. A far more influential statement, including thoughts on the functioning of metonymy in general (but not on metonymic change!), is due to Roman Jakobson (1956), who, inspired by Kruszewski and Saussure, put forward his two-axes theory with far-reaching overall correlations, paralleling *contiguity – syntagmatic axis – combination – Broca aphasia – metonymy* on the one hand, and *similarity – paradigmatic axis – selection – Wernicke aphasia – metaphor* on the other.⁵ The oversimplifications inherent in these correlations have been criticized on several grounds (cf. the criticism in Holenstein 1974; Happ 1985: 12–17, 61–93, 127–139; Blank, this volume). One point, however, has been differentiated in passing by Jakobson himself. When interpreting different reactions to the stimulus *hut* in a verbal association test, he considers neither 'contiguity' and 'syntagmatic relation' nor 'similarity' and 'paradigmatic relation' as coextensive, as shown in Table 2.⁶

Table 2. Association test: stimulus 'hut' (Roman Jakobson)

| | 'positional' similarity (PARADIGMATIC relation) | 'positional' contiguity (SYNTAGMATIC relation) |
|--|---|---|
| 'semantic' CONTIGUITY | metonymy (→ <i>thatch, litter, poverty</i>) | (→ ... <i>burnt out</i>) |
| 'semantic' SIMILARITY (CONTRAST) | tautology (→ <i>hut</i>) synonymy (→ <i>cabin, hovel</i>) antonymy (→ <i>palace</i>) metaphor (→ <i>den, burrow</i>) | (→ ... <i>is a poor little house</i>) |

In this way, Jakobson brings together the rhetorical-poetic notion of 'metonymy' and the semantic-associative relation of 'contiguity.'

From a psychological and anthropological perspective, contiguity (and similarity/contrast) seem to be absolutely fundamental associative relationships (cf. also Raible 1981). But there remain some problematic points, especially with respect to language. First, a 'semiotic' problem: if we apply contiguity to metonymy, that is, to word semantics, which semiotic level do we have to aim at? This problem will be dealt with in Section 4. Second, a 'psychological' problem: is contiguity a well-defined relationship and what is it like? This question will be taken up in Section 5.

4. Contiguity as a conceptual relation

Let us begin with the semiotic problem. As we have already seen (cf. quotation (5)), according to Roudet, metonymy is based on a contiguity between ideas, that is — in more up-to-date terms — 'conceptual' contiguity. In contrast to this, Table 2 reveals that Jakobson's authoritative two-axes theory does not deal with concepts, but with linguistic 'signs.' So in Jakobson's approach, metonymy seems to presuppose a (semantic) contiguity between linguistic signs. Similarly, in the period following, many scholars accounted for metonymy and metonymic change in terms of contiguity between the 'senses' of two 'words.'

Consider for instance Ullmann's systematics of the 'essence' of semantic change, which only superficially seems identical to Roudet's system (Table 1), by which it has indeed been inspired (cf. Ullmann 1962: 211–227; Blank 1997a: 19f, 35–38).

Table 3. 'Essence' of semantic change (Stephen Ullmann)

| | sense | name |
|------------|----------|-------------------|
| contiguity | metonymy | ellipsis |
| similarity | metaphor | popular etymology |

As 'sense' probably corresponds to the Saussurian *signifié*, we would have to explain metonymic change by contiguity between linguistic meanings, which is not easy to imagine *in abstracto*. On a more technical level, contiguity between 'sememes' of words has been described in terms of operations on sets of semantic features, when treating, for example, rhetorical metonymies or metonymic polysemy (cf. Dubois et al. 1970: 106ff; Martin 1992: 75–86).

According to this approach, in our polysemous example (2), we would have to posit a semantic feature [counter] as figuring in the set of features that form the sememe 'public house' of the word Eng. *bar*.

Things get even more complicated when we have to describe cases of metonymic change in which the original meaning has not survived — a situation that can occur, sooner or later, with any semantic change (cf. REW, s.v. *focus*):

- (7) CLat. *focus* 'fireplace' > VLat. *focus* 'fire' (cf. Fr. *feu*; It. *fuoco*; Sp. *fuego*, etc.)

Would we have to posit, in this case, a feature [fireplace] as still functioning in the sememic description of Fr. *feu*, etc.?

Obviously, this cannot be a realistic approach to metonymy. Following this line of inquiry, we would be compelled to integrate into our linguistic description of a given lexical item all the information necessary to explain whatever metonymy may occur in this lexical item in the course of — even future — language history. In most cases of metonymy, I think, this method would yield a far too powerful and at the same time an 'overbred' linguistic description.

Moreover, an intralinguistic solution for contiguity seems inappropriate from the outset. The metonymy Eng. *bar* 'counter; public house' is possible thanks to our knowledge of public houses and counters and not thanks to our knowledge of the word *bar*. Similarly, the metonymy Lat. *focus* 'fireplace; fire' was possible thanks to the Romans' knowledge of fireplaces and fire. It is not our knowledge of words (and their semantic features), but our knowledge of the world that determines contiguities. So metonymy is not a problem of linguistic structure, but a problem that concerns the relation between language and the extralinguistic world. Contiguity has to be considered as constituting a conceptual, extralinguistic and not an intralinguistic relationship (see Le Guern 1973: 14, 25; Bredin 1984: 52f; Happ 1985: 129; Koch 1991: 284, 1993: 281; Blank 1993: 37, and this volume; also the notion *cotopie sémiotique* developed by Bonhomme 1987: 46).

5. Contiguity and frames

I now come to the psychological problem involved in contiguity relationships. According to Umberto Eco (1984: 147), 'contiguity' is a wishy-washy notion:

"[...] la contiguità è concetto abbastanza sfumato [...]" (cf. also Weinrich 1987: 107). Bredin (1984: 47) calls it "a convenient but unrevealing metaphor." Originally, the term 'contiguity' (like Greek *σύνεγγυς* in quotation (4)) belongs to the conceptual domain of space. Applying it to other conceptual relations (like the temporal or causal one between ACT OF SEIZING and CAPTIVITY in (6)), seems to involve a metaphor on the metaconceptual level: by choosing exactly this term, we conceptualize, on the metaconceptual level, different types of conceptual contiguity in terms of spatial contiguity. But is this metaphor legitimate on psychological grounds? Or do we run the risk of unduly spatializing cognitive relations of any kind?⁷

In my opinion, we can retain the term 'contiguity' because it actually covers a coherent range of cognitive relations. But we are not bound to retain the underlying spatial metaphor. An alternative model accounting for contiguity as a unitary kind of relationship is the 'frame' model, elaborated in cognitive psychology and linguistics in the last two decades (cf., for example, Minsky 1975; Fillmore 1975, 1985; Tannen 1979; Barsalou 1992; Cordier 1993: 143–147; cf. also the notion 'schema' in Bartlett 1932: 197–214, 300–304, 311–314). By recurring to frames, we can easily understand metonymic phenomena because frames — and this is a point I would like to stress — are non-linguistic, conceptual wholes. When acknowledging the latter fact, we do not have to overproliferate linguistic-semantic descriptions only for the sake of metonymies.

Contiguity is the relation that exists between elements of a frame or between the frame as a whole and its elements. Thus, PUBLIC HOUSE constitutes a frame (Figure 1), one of whose elements is the COUNTER (cf. (2)).

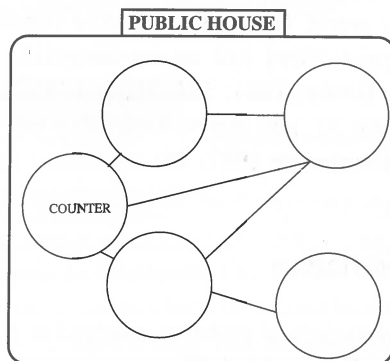


Figure 1. PUBLIC HOUSE frame

With regard to example (7), there is a FIREPLACE frame (Figure 2), one of whose elements is obviously FIRE.

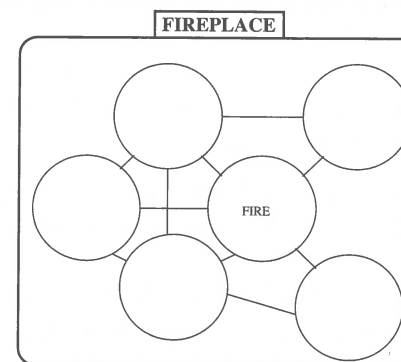


Figure 2. FIREPLACE frame

Similarly, there exists a frame, say, DEPRIVATION OF LIBERTY (Figure 3) comprising different elements such as ACT OF SEIZING, CAPTIVITY, PRISON, PRISONER, PENALTY OF IMPRISONMENT, and so on, that easily accounts for the metonymic changes of OFr. *prison* from 'act of seizing' to 'captivity' and thereafter to 'prison' (cf. (6)).

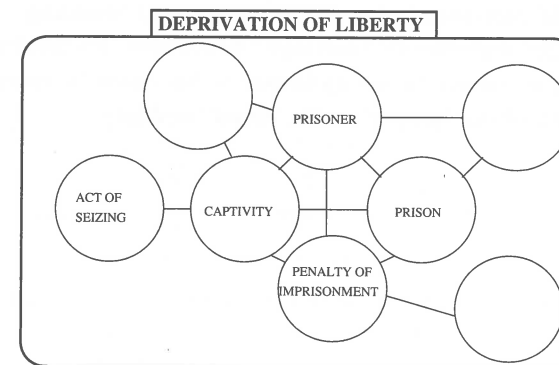


Figure 3. DEPRIVATION OF LIBERTY frame

Consider also the following, more complex example. In certain cultures at certain times, we find a MARRIAGE frame (Figure 4), comprising elements such as BETROTHAL, FIANCÉ(E), TRUST/ENGAGEMENT, SOMEONE who MARRIES₁ ('unites in matrimony') the BRIDE and the BRIDEGROOM, who MARRY₂ ('take each other as WIFE/HUSBAND'), MARRIAGE CONTRACT, VOW/OATH, WEDDING, PRAYER, UNION OF WIFE AND HUSBAND, SET UP HOUSE, MOTHERHOOD, and so on.

On the basis of this frame, we can unitarily explain a series of quite different metonymies in different languages:⁸

- (8) a. Lat. *sponsus*, -a 'fiancé(e),' hence: 'bride(groom)' > VLat. 'husband/wife' (cf. Sp. *espos*o, -a; Fr. *époux*, -se)
 b. Du. *trouwen* 'to entrust s.o. to s.o.,' hence 'to betroth,' hence 'to marry₁' (cf. MHG *trūwen*, NHG *trauen*)
 c. OE *weddian* 'to engage,' hence 'to marry₂'
 d. Lat. *vota* 'vows' > Sp. *boda(s)* 'wedding'
 Pol. *ślub* 'vow,' hence: 'marriage'
 Goth. *liuga* 'marriage' (cf. OIr. *lu(i)ge*, Cym. *llw*, Br. *lē* 'oath')
 e. (OHG *ēwa* 'law; contract' >) MHG *ē(we)* 'marriage contract,' hence: 'marriage' (cf. NHG *Ehe*)
 f. OFr. *marier* 'to marry₁' = Eng. *to marry* 'to unite in matrimony,' hence: 'to take s.o. as husband/wife'
 g. Fr. *mariage* 'marriage,' hence: 'union of wife and husband' and 'wedding'
 h. Lat. *matrimonium* (originally) 'motherhood,' hence: 'marriage' (i.e., 'union of wife and husband')
 > It. *matrimonio* 'marriage,' hence also 'wedding'
 > Sp. *matrimonio* 'marriage,' hence also 'husband and wife'
 i. VLat. *casare* 'to set up house' >? Sp. *casar* 'to marry₁'
 j. Lat. *oratio* 'prayer' → Br. *eured* 'wedding'

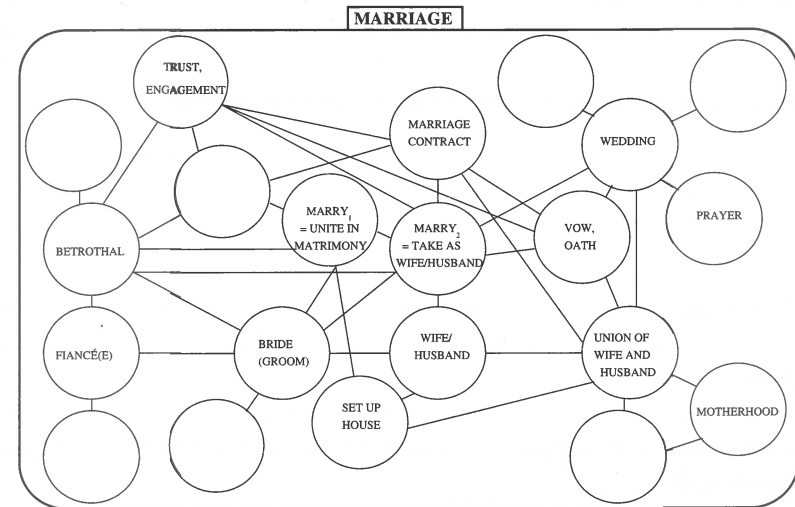


Figure 4. MARRIAGE frame

6. Frames and prototypes

But there still remain some problems with contiguity and even with frames. The original paradigm of associationist philosophy and psychology (see Section 3), which leans heavily on contiguity, takes a rather mechanistic approach.⁹ Whenever there is contiguity, there has to be an associative link. But is not everything contiguous to everything else? So why do we not associate everything with something or something with anything or everything? Frame models seem to be more subtle because they represent non-accidental networks of contiguities. But even a frame model conceived as categorical (something is or is not in a frame: this is inevitable, I think, in Artificial Intelligence) would not serve our purpose. Quite on the contrary:

- We have to acknowledge (see (2)) that there are perhaps public houses without a counter, which we would nevertheless call *bars*.
- We have to acknowledge (see (7)) that there are fireplaces without a (burning) fire and that fire is not confined to fireplaces; and, nevertheless, speakers of Vulgar Latin would have used the word *focus* to denote FIRE.

- We have to acknowledge (see (8)) that there are marriages without a wedding, husbands and wives that were never fiancé(e)s before, marriages without motherhood and vice versa, etc. Nevertheless, all the metonymic changes exemplified in (8) have taken place.

So then we have to admit that contiguity relations only hold for 'salient' members of the conceptual categories involved. Frames and the contiguity relations constituting them have 'prototypical' character:¹⁰

- A prototypical public house has a counter, and so we call it *bar*.
- Prototypically, a fireplace has a fire burning in it, and for Roman people, the prototypical fire may have been that of the fireplace; so they called it *focus*.
- A prototypical marriage begins with a wedding; in certain cultures at certain times, prototypical husbands/wives are engaged before they get married, etc.

It is on the basis of such prototypical frames and contiguities that metonymy works. This should not be misunderstood. Many prototype theorists speak of metonymic 'extension,' reducing metonymic change to a prototypical effect within one and the same category. I do not adhere to this kind of purely semasiologically based, 'extended' prototype notion (cf. Fillmore 1982: 32f; Jongen 1985: 126f; Lakoff 1987: 91-117, 416-461 and passim; Geeraerts 1988, 1997: 21f; Taylor 1989: 99-141; see the astute criticism of Kleiber 1990: 147-183; see also below, Section 7.1., and cf. Warren 1992: 123; Koch 1995: 37-40, 1996a: 129-131, 1996b: 231-234; Blank 1997a: 79-85, 1997b: 89-93). On the contrary, I would like to draw attention to the fact that, from an onomasiological point of view, PUBLIC HOUSE, for instance, although belonging to the same frame, is not a peripheral instance of the category COUNTER (nor vice versa).¹¹

So the two terms of a contiguity relation, for instance COUNTER and PUBLIC HOUSE, are two distinct conceptual categories, both prototypically structured in themselves (Figure 5). Strictly speaking, metonymic change involves prototypicality only inasmuch as the underlying contiguity relation would not hold but for the salient, prototypical members of one or both of the two categories concerned, and it is then generalized to these categories as wholes. Or, as Simon C. Dik (1977) puts it, these changes of meaning presuppose a sort of 'inductive generalization' (cf. also Geeraerts 1997: 68ff).

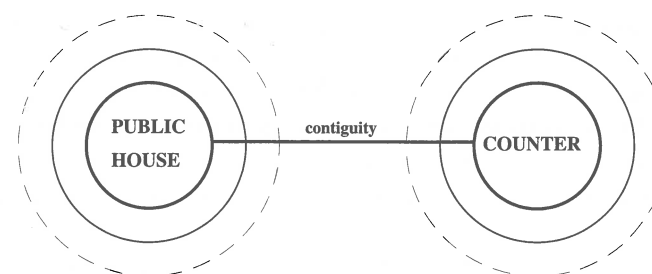


Figure 5. Contiguity relation between PUBLIC HOUSE and COUNTER

7. Frames and gestalts

When we introduce notions like 'prototype' and 'salience' into frame theory, we recognize the 'gestalt' character of frames and contiguities.¹² It is only by leaning on salience effects within frames that we can avoid the aporias of a mechanistic associationist approach or of categorical frame models.

More precisely, from a gestalt perspective, metonymy turns out to be a 'figure/ground' effect. Consider Figure 6 as a traditional example of a perceptual figure/ground constellation. In this figure, we can perceive a white cross on black ground, but alternatively, it seems to be a black cross on white ground (cf. Wittgenstein 1958: 207).

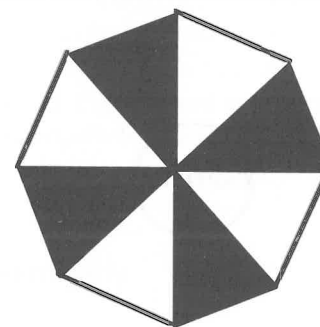


Figure 6. Figure/ground perception

Coming now to the conceptual level, we can claim that every concept designated by a given lexical item appears as a figure in relation to (at least) another contiguous concept that — for the time being — remains the ground within the same frame. But at some moment, while we are using the same lexical item, certain pragmatic, conceptual or emotional factors may highlight the ground concept so that figure and ground become inverted. That is what we call metonymy.

Thus, in one of the senses of OFr. *prison* ('captivity'; see above (6)), CAPTIVITY was the figure and PRISON one possible ground (Figure 7a). By highlighting PRISON into the figure and backgrounding CAPTIVITY, *prison* was acquiring the new metonymic sense 'prison' (Figure 7b).

According to Croft (1993: 348), we can interpret metonymy as a conceptual effect of domain highlighting within one domain matrix (opposing it to metaphor as a conceptual effect of domain mapping across different domain matrices).¹³ In the case of OFr. *prison* 'captivity; prison,' we shift, say, from the domain (HUMAN) CONDITION to the domain LOCATION within the domain matrix for *prison*. Note, however, two significant differences between the domain-matrix approach and the frame approach proposed above:

1. Frame-internal relations, in as far as they represent contiguity relations, exclude any similarity or taxonomic relations (relevant to metaphor and extension/restriction of meaning only). For domain (matrices) this is not so clear: the domain structure underlying the concept of the letter 'T,' for

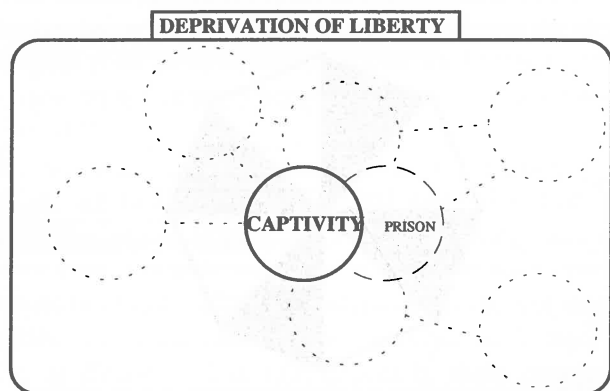


Figure 7a. Figure CAPTIVITY, ground PRISON

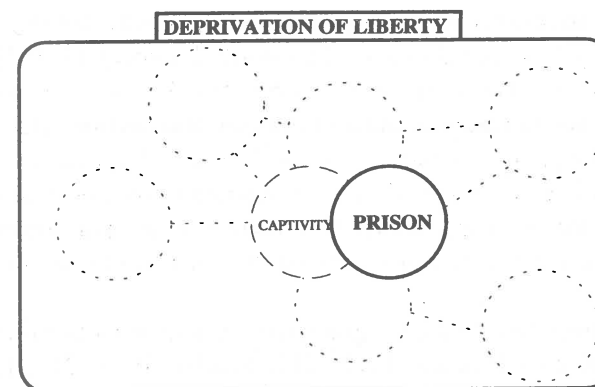


Figure 7b. Figure PRISON, ground CAPTIVITY

instance, contains relations like COMMUNICATION – HUMAN BEINGS, i.e., contiguity relations, but also LIVING THINGS – HUMAN BEINGS, i.e., taxonomic relations (cf. Croft 1993: 340–342). I think that the incorrect, but widespread term 'metonymic extension' (see Section 6) results just from an insufficient distinction between contiguity relations and taxonomic relations (including 'soft,' prototype-based relations). The same holds, by the way, for the confusion inherent in the traditional notion of 'synecdoche' (see Section 8).

2. In general, domain matrices are defined semasiologically in relation to an existing lexical item (cf. also Croft 1993: 338), whereas frames, which are relevant not only to metonymies but also to certain types of word formation, can — and in fact, should — be defined onomasiologically, so that even cross-over links within one and the same frame realized in different languages (cf. Figure 4 and examples (8)), concepts which have not yet been expressed, senses of a given word which do not yet exist, and new words which have not yet been formed can all be provided for.

8. The range of metonymy

A frame-based interpretation of contiguity helps us to determine the notion of 'metonymy,' whose range is not clear in all respects. According to rhetorical

tradition, we can distinguish metonymy from synecdoche, but the latter often appears to be only a special case of the former (Lausberg 1973: §§572–577; Bredin 1984: 45f). However, as Le Guern (1973: 36ff) has pointed out, synecdoche is not, in reality, a unitary trope (see also Section 7.1.): traditional synecdoche comprises (or rather: confuses) cases of taxonomic extension/generalization (e.g., *bread* ‘foodstuff’) or restriction/specification (e.g., *mortal* ‘man’) on the one hand, which have nothing to do with metonymy, and cases of *pars pro toto/totum pro parte* on the other hand (e.g., *roof* ‘house’; *America* ‘USA’).

In my opinion, we should integrate *pars pro toto* and *totum pro parte* into metonymy (cf. also Ullmann 1962: 212; Schifko 1979: 247; Lakoff and Johnson 1980: 36; Croft 1993: 350; Warren 1992: 64ff, 1995; Blank, this volume; Seto, this volume). Separating metonymy and *pars/totum* ‘synecdoche’ would be artificial because the difference between *pars/totum* relations and (other) contiguities is often not so easy to pin down. For instance, are the relations COUNTER – PUBLIC HOUSE OR FIRE – FIREPLACE to be considered *pars/totum* relations or relations of location?¹⁴ Behind these possible differences and uncertainties, we nevertheless perceive a fundamental constant: the *pars/totum* tropes, like any metonymic trope, involve a figure/ground effect: in *pars pro toto*, the *totum* — as a ground that becomes the figure — is a whole frame, and the *pars* — as a figure that becomes the ground — is one of the concepts of this frame (and vice versa for *totum pro parte*).

So we can retain our definition given in Section 5: contiguity is a salient relation that exists between the elements (or sub-frames) of a conceptual frame or between the frame as a whole and its elements. Consequently, metonymy implies a contiguity-based figure/ground effect between elements of a conceptual frame or between the frame as a whole and one of its elements (or vice versa).

A new differentiation between two contiguity-based changes of meaning has been suggested by Warren, who distinguishes ‘metonymy’ from ‘implication’ (cf. Warren 1992: 51–72, 101, 1995). Metonymy (in her narrow sense of the term) is a non-literal use of a word that causes an abrupt shift of meaning, restricted to a few, well-defined contiguity relations and — normally — to nouns. Implication, on the other hand, is the gradual development of novel, coexisting senses, based on if-then contiguities of any kind and occurring in adjectives, verbs, and nouns. I reject this differentiation on the following grounds.

First of all, it can easily be shown that metonymies (in this narrow sense) are possible even with verbs and adjectives:

- (9) Fr. *descendre* ‘to go down,’ hence: ‘to take down’ (with many parallels in other languages; cf. Koch 1991: 294; Haspelmath 1993: 92–94, 101, 104, 112–120; see also our example Eng. *marry* in (8f))
- (10) Eng. *sad* ‘distressed,’ hence: ‘distressing’ (with many parallels in other languages; cf. BDE, s.v. *sad*)

Secondly, we have to acknowledge that a frame-based figure/ground effect is present in ‘implications’ as well as in ‘metonymies’ (in the narrow sense). I would claim that the difference resides rather in the pragmatic, referential and expressive conditions in which these metonymies (in the broad sense) emerge in discourse, as we will see in the next section.

9. The origins of metonymy in discourse

In Section 2 I said that metonymic change of meaning is induced by ad hoc metonymies. The first step is always a figure/ground effect in discourse. We can imagine at least three possible types of ad hoc figure/ground effects for metonymy in discourse.

Consider, first of all, a putative reconstruction of the ad hoc figure/ground effect underlying (7) and illustrated in Table 4.

Table 4. Metonymic innovation through inference: FIRE

| HEARER: | Lat. “Incendamus focum!” | FIREPLACE | FIRE |
|---------------------------|---|-----------|----------|
| initial interpretation | (literally) ‘Let’s light the <i>fireplace</i> !’ | figure | ground |
| ‘inverted’ interpretation | ‘Let’s light the <i>fire</i> !’ | > ground | > figure |

This kind of frequently occurring figure/ground effect is due to a situational context in which both interpretations are pragmatically indifferent, which may in turn give rise to an almost surreptitious conceptual reinterpretation of the

lexical item. Traugott and König call this process 'pragmatic strengthening' or 'conventionalization of conversational implicatures/inferences.' In this case, it is the hearer (as a virtual speaker) who triggers the metonymic innovation which induces a metonymic change later on (cf. König and Traugott 1988; Traugott and König 1991: 193ff).

A similar analysis probably applies to one of the steps of semantic change in our example (6), which may be represented as in Table 5.

Table 5. Metonymic innovation through inference: PRISON

| HEARER: | OFr. "Il est en <i>prison</i> ." | CAPTIVITY | PRISON |
|---------------------------|----------------------------------|-----------|----------|
| initial interpretation | 'He is in <i>captivity</i> .' | figure | ground |
| 'inverted' interpretation | 'He is in <i>prison</i> .' | > ground | > figure |

I suppose that this type of figure/ground effect is the one Warren calls 'implication.'

A second type of ad hoc figure/ground effect is triggered by the speaker, as illustrated in Table 6. A Latin speaker wants to refer to the thigh of a person, but instead of using the 'exact' lexical item (Lat. *femur*), he imprecisely recurs to another item (*coxa*) which designates a contiguous concept, namely HIP (cf. Blank 1997a: 388f).

Table 6. Metonymic innovation through imprecision: THIGH

| SPEAKER: | | HIP | THIGH |
|--|------------------------|----------|----------|
| referential means | Lat. <i>coxa</i> 'hip' | figure | ground |
| thing meant | thigh x | > ground | > figure |
| → VLat. <i>coxa</i> 'thigh' (cf. Fr. <i>cuisse</i>) | | | |

The third type of ad hoc metonymy corresponds to metonymy as a rhetorical trope.¹⁵ A Latin speaker, in a very emotional setting, wants to refer to the head of a person he or she dislikes or is angry with. So the speaker does not use the neutral word *caput*, but he chooses a more expressive lexical means, the word *testa* 'skull.' It is the figure/ground effect between SKULL (as a salient part) and HEAD (as the whole) that produces expressiveness here (Table 7).

Table 7. Metonymic innovation through expressiveness: HEAD

| SPEAKER: | | SKULL | HEAD |
|--|----------------------------|----------|----------|
| expressive means | VLat. <i>testa</i> 'skull' | figure | ground |
| thing meant | head x | > ground | > figure |
| → VLat. <i>testa</i> 'head' (cf. Fr. <i>tête</i>) | | | |

Note the pragmatic differences between these three types of metonymic innovation (irrespective of the fundamental figure/ground constant). In the examples in Tables 4 and 5, it is the hearer (*qua* virtual speaker) who brings about the innovation, whereas in the examples in Table 6 and in Table 7 it is the speaker. In the cases described in Tables 4 and 5 and in Table 6, the 'oddness' of the innovation can be 'repaired' on the basis of Grice's (1975) conversational implicatures, whereas in the case described in Table 7 the metonymic trope is meant to be striking and not intended to be 'repaired.' Later on, by conventionalization through lexicalization, it loses its striking effect and, hence, its expressiveness.

10. Contiguity, gender change, and word formation

So far I have been looking at the role of contiguity in relation to metonymic change of meaning, which, by producing metonymic polysemy, constitutes an important contribution to lexical diversification. Now it is interesting to note that contiguities within frames also enable us to explain other types of lexical diversification.

Recall the frame DEPRIVATION OF LIBERTY (Figure 3) that comprised concepts such as ACT OF SEIZING, CAPTIVITY, PRISON, PRISONER, PENALTY OF IMPRISONMENT, etc. and allowed for an explanation of our example (6): as we have seen, several elements of this same frame were designated one after the other by the polysemous item Fr. *la prison* (with feminine gender). Now I would like to draw your attention to the item *li prisons* (with masculine gender), which in Old French enabled speakers to designate yet another concept, namely PRISONER:

(6') OFr. *la prison* 'captivity' → *li prisons* 'prisoner'

This new possibility of designation is based once again on a contiguity relation within the same frame. However, it is not simply a case of change of meaning, but the creation of a new lexical item identical with the original one (*la prison*), except for the gender. We have to conclude that frames and contiguities not only account for metonymic change and polysemy, but also for other lexical processes such as gender change.

In this area, besides gender change, which is of minor importance, we especially have to think of certain types of word formation. OFr. *li prisons* (6') has not survived in Modern French, but in competition with it, there existed the item *li prisoniers* 'prisoner,' which has survived in Modern French:

(6'') OFr. *la prison* 'captivity' → *li prisoniers* 'prisoner' > MFr. *le prisonnier*

Semantically, the item *prisonnier* belongs to a type of derivation called 'Ausgriff' by Gauger (1971: 66–74). In my analysis, this type of derivation is also founded upon contiguity within frames: a new concept is 'grasped' (and a new word is formed) by 'reaching out' from a contiguous concept designated by a word which already exists.¹⁶ This is a most important insight. Frames and contiguities represent a very fundamental cognitive principle underlying several lexical processes which considerably differ from each other. The processes are: metonymic change of meaning (without any morphological change), gender change, derivation of the 'Ausgriff' type, and, as we will see in a moment, even a certain type of composition.¹⁷

Let us consider, as a final example, the FRUIT-TREE frame (cf. Koch, in print). Based on the contiguity between FRUIT and TREE, in Italian, we find within this frame the following metonymic change of meaning and the resulting metonymic polysemy:

(11) a. It. *limone* 'lemon', hence: 'lemon tree'

In Spanish and English, on the other hand, we have word formations that are based on exactly the same contiguity between FRUIT and TREE:

(11) b. Sp. *limón* 'lemon' → *limonero* 'lemon tree' (derivation)

c. Eng. *lemon* → *lemon tree* (composition)

As (11c) shows, there exists in English a — by the way, very important — type of nominal composition $N_1 + N_2$, in which the concept designated by N_1

(LEMON FRUIT) and the concept designated by $N_1 + N_2$ (LEMON TREE) are contiguous (whereas the relation between the concept designated by N_2 (TREE) and the concept designated by $N_1 + N_2$ (LEMON TREE) is that of taxonomic subordination).

A purely semasiological approach (see Section 7.2.) may be able to reconstruct examples like (11a), but it would not account for the fundamental cognitive principle underlying examples (11a), as well as (11b) and (11c), whose essential conceptual homology can be elucidated only by an onomasiological frame approach.

11. Conclusion

In conclusion, when trying to grasp the mechanisms underlying metonymy, it may be useful to integrate four different traditional and non-traditional paradigms of 'cognitive' research: the associationist paradigm, gestalt theory, frame theory, and prototype theory. In certain cases (see Section 9), it is stimulating to take König and Traugott's (1988) pragmatic strengthening theory into account as well.

It is only the integration of these different approaches that enables us to appreciate the nature and the relatedness of frames and contiguities. The salient links between elements of a given frame — as constituting a prototypical conceptual gestalt — are what we call contiguity relations. Along these contiguities, people can produce the figure/ground effects underlying metonymies. But frames and contiguities extend considerably beyond the realm of metonymy: they also help us to understand certain types of gender change and word formation.

So, metonymy is a very important — though not the only — rhetorical and lexical device that gives us a clue to the fundamental role of frames and contiguities.

Notes

1. I express my gratitude to Mary Copple (Berlin) for the stylistic revision of this paper.
2. Concerning the intimate link between semantic change and polysemy, cf. Bréal (1921: 143ff, 284–287), Werth (1974: 377f), Koch (1991: 283), Blank (1993: 31), for me-

- tonymy, see especially Schifko (1979: 248–251). The lexicalization steps for metaphor are described in Koch (1994: 203–209); a general framework for lexicalization (and delexicalization) processes within semantic change has been established in Blank (1997a: 116–130). Note the important difference between ‘innovation’ and ‘change’ proposed by Coseriu (1958: 44–46).
3. Cf. Amin (1973: 19–81, especially 38). The first to explicitly take up Aristotle seems to be the Scotsman Thomas Brown, who occupies a somewhat particular position with respect to associationism (cf. *ibid.*: 72).
 4. Cf. the critical outlines of Wundt’s approach in Roudet (1921: 681–686); Nerlich (1992: 77–80); Blank (1997a: 18f).
 5. From Hjelmslev onwards, Saussure’s rather open concept of ‘associative’ relation is replaced by the technical, more specific concept of ‘paradigmatic’ relation (EITHER/OR-relation of substitution in a given syntagmatic environment); cf. Hjelmslev (1963: 33–40); Happ (1985: 52–59).
 6. Cf. Jakobson (1956: 90f); Holenstein (1974: 81–91); Happ (1985: 75–79, 130–139). According to Raible (1981), the distinction between semantic-(paradigmatic) contiguity (*hut – thatch*) and (semantic-)syntagmatic contiguity (*hut – burnt out*) is essential for preferences in human verbal associations.
 7. Rastier (1997: 140–145) underscores the undeniable tendency of cognitive linguistics to spatialize its objects of description.
 8. Cf. *BDE*, s.v. *marry*; *DCECH*, s.vv. *boda, casar, esposo*; *DE*, s.v. *Ehe*; *DELL*, s.v. *mater*; *DHLF*, s.vv. *époux, marier*; *DSSPIL*, s.vv. 2.33 *marry*, 2.34 *marriage*; *REW*, s.vv. *casa, sponsus, votum*.
 9. Cf. the critical observations in Amin (1973, especially 39–42, 111–115).
 10. For prototype theory, cf. Rosch (1973); Fillmore (1975); Taylor (1989); Kleiber (1990); Cordier (1993).
 11. See also Geeraerts (1997: 74f). Concerning the difference between salience effects within a frame and prototypicality effects within a category, cf. Cordier (1993: 122–124, 135–149).
 12. For gestalt theory in general, cf. for example Wertheimer (1922/23); Köhler (1947); Metzger (1986). Amin (1973: 97–155, 201f) stresses the holistic character of gestalt psychology as opposed to the mechanistic associationist approach, but he nevertheless does not definitively exclude a synthesis of association and ‘gestalt’ (cf. also Raible 1981: 5f).
 13. Cf. also Taylor (1989: 90). For the notions ‘domain’ and ‘domain matrix,’ cf. Langacker (1987: 147ff). — As to the totally different character of metaphor, cf., for instance, Bühler (1965: 342–350); Black (1954: 1977); Lakoff and Johnson (1980); Bredin (1984: 57); Liebert (1992: 28–82); Koch (1994: 209–214).
 14. Cf. also Cordier (1993: 123). Within the type of contiguity called ‘co-presence’ by Blank (this volume), there are several relations that can hardly be distinguished from *pars/totum*: TYPICAL ASPECT — ACTIVITY, TYPICAL ASPECT — FRAME, TYPICAL ASPECT — OBJECT, FUNCTION — OBJECT, OBJECT — PLACE. On the other hand, Blank’s distinction between

- ‘co-presence’ (including *pars/totum*) and ‘succession’ (excluding *pars/totum*) seems rather clear-cut.
15. We could speak here of ‘everyday rhetoric’ (*Alltagsrhetorik*) in Stempel’s sense (cf., for example, 1983); cf. also Koch and Oesterreicher (1996: 68–74, 79f); for the metonymy presented in Table 6 (and its many polygenetic parallels), cf. Koch (1997: 231f, 236).
 16. Different types of contiguity relations involved in certain Italian derivation processes have been described by Schwarze (1995) in terms of several conceptual models that are in part frame models (the ‘activity model,’ *ibid.*: 500–506; the ‘object constitution model,’ *ibid.*: 506–509, etc.).
 17. Cf. also Schifko 1979, 252–257 (unlike Schifko, I would not apply, however, the term ‘metonymy’ even to cases of derivation (‘Ausgriff’) and composition).

Abbreviations for languages

| | | | |
|-------|--------------------|-------|-----------------|
| Br. | Breton | MFr. | Modern French |
| CLat. | Classical Latin | NHG | New High German |
| Cym. | Cymric | OE | Old English |
| Du. | Dutch | OFR. | Old French |
| Eng. | English | OHG | Old High German |
| Fr. | French | OIr. | Old Irish |
| Goth. | Gothic | Pol. | Polish |
| It. | Italian | Sp. | Spanish |
| Lat. | Latin | VLat. | Vulgar Latin |
| MHG | Middle High German | | |

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