

WORD-FORMATION, METAPHOR AND METONYMY- PROCESSES, RESULTS AND THEIR DESCRIPTION*

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ABSTRACT

Metaphor and metonymy (M & M) are usually not included in the study of word-formation (WF). This paper, however, claims that—together with an analysis of WF and loans from other languages—an account of semantic transfer (ST) is required as part of a description of productive processes in the lexicon (dynamic lexicology). This claim is supported by a number of features which WF and M & M (or ST) have in common, such as productivity, varying degrees of acceptability and lexicalization. The principal difference is that WF produces new *lexemes*, while M & M yields *lexical units* (a distinction introduced by CRUSE 1986) as the result of processes of ST. The form of the linguistic sign remains the same. In addition to other levels of lexicological analysis, including semantic and pragmatic aspects, a cognitive level of description is needed to account for the fact that M & M are based on subjective, culture-specific perception and categorization rather than on objective similarity. Illustration is made with examples from English, German, French and Spanish.

INTRODUCTION

Metaphor and metonymy are usually not included in the study of word-formation. Of course it can be argued that these two types of semantic transfer do not produce new “words” but only additional meanings of existing words. However, a look at the relative frequency of neologisms based on metaphor and metonymy would seem to suggest that semantic transfer should be regarded as one of several productive processes in the lexicon, along with word-formation and loans from other lan-

guages. I shall argue that the description of all these processes belongs to what can be called *dynamic lexicology*. The processes may be combined and the results lexicalized and institutionalized. Following Cruse (1986) it is possible to distinguish between *lexemes*, as the products of word-formation processes on the one hand, and *lexical units*, as the results of semantic transfer on the other.

I shall first of all turn my attention to some fundamental issues concerning word-formation, its scope and its position within grammar. A six-level model for analysis is postulated. Subsequently, I shall discuss the issue of the relationship between word-formation, metaphor and metonymy in greater detail. Finally, the question is raised whether we need a *cognitive level* for the lexicon or not.

1. WORD-FORMATION AND GRAMMAR

1.1 In an essay from 1896 entitled “Ueber die Aufgaben der Wortbildungslehre” (“On the tasks of the study of word-formation”, reprinted in Lipka/Günther, eds. 1981: 17 ff.), Hermann Paul discusses the position of word-formation among the disciplines of grammar. He starts: “Die wissenschaftliche Wortbildungslehre ist wie die Lautlehre eine Schöpfung J. Grimms. Er hat ihr in seiner Deutschen Grammatik die Stellung zwischen Flexionslehre und Syntax angewiesen.” (“It was J. Grimm who first made word-formation an academic study, like phonology. In his *Deutsche Grammatik* he assigns to word-formation a position in between the levels of inflection and syntax.”) Paul opposes the view that word-formation and inflection are the same and emphasizes that meaning was neglected in the study of word-formation and that formal as well as content-related aspects have to be taken into account. In an analysis of German action nouns he draws attention to the fact that the genitive phrase in *die Befreiung des Vaterlandes* corresponds to the object of the verb *befreien*. In compounds such as *Gesetzgebung* and *Grundsteinlegung*, he states, the object is also represented. Paul (1981: 5) concludes that the study of word-formation also needs to take into account syntactic relationships.

1.2 In the classic school of American structuralism, which regards the morpheme as the smallest linguistic sign, morphology, as a superordinate discipline, is divided into inflection and word-formation. Word-formation, in turn, is subdivided into *derivation* (with prefixes and suffixes) and *compounding* or *composition*. The combination of grammatical or inflectional morphemes (or their variants, the allomorphs) with lexical morphemes yields new *word-forms*, not new words or lexemes. This model describes how grammatical morphemes function, e.g. in the formation of verb forms or the plural of nouns, but the meaning of lexical morphemes does not play any role in the analysis.

2. THEORY AND PRACTICE OF THE MARCHAND SCHOOL

2.1. The study of *word-formation* in the tradition of Hans Marchand unites European and American structuralism and is, in its classic version (Marchand, 1969),

strongly influenced by generative transformational grammar. In the first edition of his handbook on English word-formation (1960), Marchand gives a synchronic description of the system of English word-formation and of the diachronic development and productivity of word-formation types (mainly based on the *Oxford English Dictionary* = *OED*). The approach is analytic; the aim is to describe the morphological patterns of existing word-formations. Syntax and semantics are not taken into account. From the Geneva school Marchand adopts the concept of *syntagma* which denotes a combination of signs consisting of a *determinant* and a *determinatum* (*rain/bow*, *do/er*, *un/do*). The determinatum dominates grammatically (word class) and semantically and is sometimes symbolized by capitals (as in the examples below). Apart from such syntagmas, Marchand also distinguishes productive processes which do not combine full signs, such as *blending* (*motel*, *smog*), *clipping* (*lab*, *pub*, *plane*), *acronyming* (*radar*, *Nato*) and different types of *reduplication* (*boogie-woogie*, *chit-chat*). These patterns can be subsumed under the label of *non-syntagmatic* word-formation.

2.2 The process of *zero-derivation* (in which the derivational morpheme is symbolized by \emptyset) also results in syntagmas, according to Marchand, in which, however, the determinatum is not formally represented. To be precise, we could assume a type of morphological deep structure in such cases. The concept of zero-derivation (some prefer the term conversion) is justified by the parallel between this process and suffixations in which the suffix is formally represented, but also by additional syntactic and semantic information introduced by the suffix:

(1)	<i>legal</i> (adj.)	<i>legal/IZE</i> (vb.)	“make legal”
	<i>clean</i> (adj.)	<i>clean/∅</i> (vb.)	“make clean”

From a phonological point of view the base and the zero-derivation are identical; syntactically, however, their word classes differ, so there is no formal identity. Furthermore, the verb *clean/∅* contains the additional semantic element “make”, and the noun *cook/∅* the additional content “someone who”. Thus, as a result of zero-derivation there are two distinct *lexemes* which are homonyms, although they are formally and semantically very similar.

2.3 In the second edition of his handbook Marchand (1969) introduces underlying sentences and thus a syntactic *deep structure*. This concept of deep structure has two different origins. One is a book by Robert B. Lees (1960) in which nominalizations such as *the seller of the car* (as well as a large number of English nominal compounds) are derived from underlying kernel sentences such as “he sells the car” via transformations. The second is the work of Charles Bally, who as early as 1932 clearly recognizes and formulates the connection between the sentence as an explicit binary syntagma (*thème/propos*) and the reduced morphological syntagma (*déterminé/déterminant*). Both approaches give rise to Marchand’s assumption that *word-formation syntagmas* are based on sentences. He suggests so-called *types of reference* (1969: 31 ff.). The theory is based on the idea that one constituent of the underlying sentence (subject, object, predicate, predicative complement or adverbial complement) is presupposed as known. This constituent is picked out and topicalized and is made the determinatum of the reduced

word-formation syntagma, while remaining constituents may be transformed into the determinant. One sentence (*Someone eats some apple*) can thus result in different types of reference: a s(ubject)-type: *apple-eat/ER*, an o(bject)-type: *eating-APPLE*, and a pr(edicative)-type: *apple-eat/ING*. Marchand's types are based on purely syntactic criteria, as illustrated by the following list (supplemented by the ad(verbial complement)-type—the determinatum is again marked by capitals):

- (2) S-type: *apple-eat/ER, cry/BABY*
 O-type: *eating/APPLE, draw/BRIDGE*
 Pr-type: *apple-eat/ING, arriv/AL*
 Ad-type: *swimming/POOL, carving/KNIFE*

In Lipka (1976: 131 ff.) I modified Marchand's theory and suggested replacing the purely syntactic basis of analysis by Fillmore's semantic *deep cases*. With these a number of (partly homonymous) word-formation syntagmas can be distinguished and analysed more precisely. From a single underlying sentence (*Someone pays something to someone on some day*) we can now derive: Agent-type (*payER*), Goal-Benefactive-type (*payEE*), Object-type (*payMENT*, *payØ*), Time-type (*payDAY*), and—if the action is topicalized, which corresponds to Marchand's Pr-type—*payMENT*, *payING*. The following types are based on different underlying sentences: Instrument-type (*cookER, dishwashER*), Location-type (*swimming-POOL, bus-stopØ*), Experiencer-type (*mournER, sleepER*). These types make it possible to show fundamental differences between morphologically parallel words, such as *payER* (Agent), *cookER* (Instrument), *dinER* (Agent), *dinER* (Location), *mournER* (Experiencer), *containER* (Object), and also the deep-structural similarity between words that are morphologically quite different, such as *grave-diggER, cut-throatØ, car-THIEF* and *cookØ* (all Agent). The types thus contribute to a better description and analysis of the products or results of word-formation processes.

2.4 Marchand (1969: 54 ff.) postulates the following levels for the description of *word-formation syntagmas*:

- (3) a) *Morphologic shape*: On this level morphological elements and word classes are identified, disregarding function or meaning. E. g., *craft/s/man* is described as "noun + s + noun", *pott/er* as "noun + suffix", and *re/write* as "prefix + verb".
- b) *Morphologic structure*: After analysing the sequence of elements in a), the syntagma is now split up into its immediate constituents, and the functions of determinant and determinatum are assigned.
- c) *Grammatical deep structure*: On this level underlying sentences are postulated ("We dine in the room" for *dining room*, "(we) eat the apple" for *eating-apple*, "steam (operates) the boat" for *steamboat*, "the baby cries" for *crybaby*), and the constituents are assigned syntactic functions, i. e., Predicate-Adverbial Complement, Predicate-Object, Subject-Object, Subject-Predicate.
- d) *Type of reference*: This level was discussed in detail in 2.3.
- e) *Content at the morphological level*: On this level additional semantic elements are introduced, such as "purpose" in *drawbridge* and *writing table*, "characteristic properties", etc.

2.5 Kastovsky (1977) postulates that word-formation plays a key role among the different disciplines of linguistics. It can therefore be located “At the *crossroads* of morphology, syntax, semantics, and the lexicon” (as he puts it in the subtitle of his essay). In his analysis of word-formation patterns, Kastovsky uses, among other approaches, Marchand’s types of reference, but he also points out that the underlying representations of simple lexemes and word-formation syntagmas can be quite similar and may contain the same meaning elements (CAUSE, HAVE, DO, BECOME, NEG). The relationship between semantics and word-formation is again discussed in Kastovsky (1990).

In my article “A multi-level approach to word-formation” (Lipka 1983) I also pointed out the importance of *word semantics* for the description of complex lexemes and tried to improve Marchand’s five-level model summarized in (3). I distinguished the following levels:

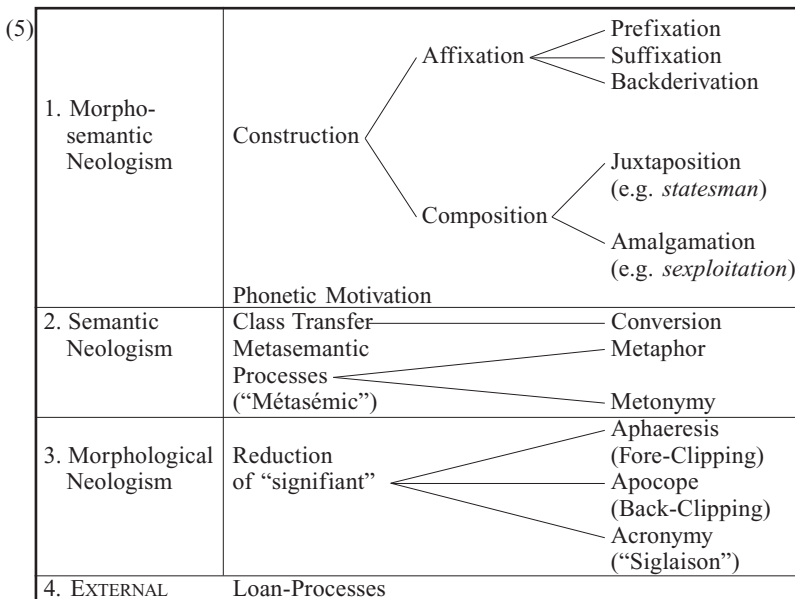
- (4) a) *Analytic vs. synthetic procedure*: complex lexemes such as *theatregoer* can be reduced, by paraphrasing, to an underlying sentence or syntactic group (analytic procedure). The synthetic approach, in reverse, reduces a sentence to a word-formation syntagma. This involves adding semantic features such as [+ HABITUAL] in *theatregoer* and [+ PURPOSE] in *writing-table*, *drawbridge*.
- b) *Synchrony vs. diachrony*: Synchronic analysis and diachronic development have to be separated. Lexicalization as well as some aspects of productivity can only be explained diachronically. The diachronic yield of certain patterns must not be confused with the present-day creativity of ad hoc- (or nonce-) formations.
- c) *Morphology and semantics*: Marchand’s levels (3a) and (3b) are not sufficient. They have to be supplemented by a morphological-semantic description. This holds for the different relationships between constituents e. g. in *crybaby*, *drawbridge* (both V + N), *steamboat*, *girlfriend* (N + N), the function of *-er* in *baker*, *plotter*, *sleeper* (Agent, Instrument, Place Adverbial) and the morphological shape of a category such as *nomina agentis* (from *gravedigger* at one end of the spectrum to *cook* at the other).
- d) *Syntax and semantics*: Apart from the transformational analysis of word-formation and its function of syntactic recategorization, particularly in nominalizations (*latecomer*, *the seller of the car*, *the liberation of Europe*), the combination of types of reference with semantic *deep cases* is helpful and rewarding.
- e) *Lexicalization and semantics*: This level deals with the basically diachronic process in which *complex lexemes*, particularly when they are used frequently, gradually lose their syntagmatic nature (*breakfast*, Spanish *desayuno*, French *petit déjeuner* —in the current meaning “lunch”, *déjeuner* is not motivated as “breaking fast”, derived from *jeûner* “fast”). Complex lexemes tend to become a single unit with specific content. The final results of this process may be completely idiomatized, unanalysable, demotivated lexemes, such as *lord*, *lady*. In addition to multiple formal changes, *demotivation* and *idiomatization*, which can mostly be characterized by a loss or addition of semantic features, play an important role here, as in *blackboard*, *holiday*, *watchmaker*, *highwayman*, *forehead*. Formal changes may include orthography, such as the loss of marks (e. g. the circumflex in *déjeuner*) or letters (*fo’c’sle* from *forecastle*), or capitalization in acronyms (*NATO*, *Nato*, *aids*, *laser*, *radar*). A formal fixation is made in French, which distinguishes between *défloraison* “the fall(ing) of blossoms” and *défloration* “deflowering”. Only at very first sight, the acronym, *EARL* meaning “*exploitation agricole à responsabilité limitée*” seems to be motivated.

f) *Pragmatics*: This level has to do with different aspects of the use of complex lexemes in context and in concrete situations. Extralinguistic knowledge plays an important role in the interpretation. E. g., a *pumpkin bus* may be a bus which looks like a pumpkin, or also a bus which changes into a pumpkin during the night (Downing 1977: 827 ff.). According to Zimmer, however, the complex lexeme denoted an excursion bus which stopped at a pumpkin field, so that the students could buy pumpkins before halloween (Lipka/Günther 1981: 243). The “deictic compound” *apple-juice seat* can be used to denote a particular chair in front of which there is a glass of apple-juice on the table (Downing 1977: 818). When protestors complain about having been *stoned and bottled by the spectators*, the innovative verb *bottle*, a “contextual” (Clark/Clark 1979: 785), obviously does not have its lexicalized meaning “fill in bottles”. Generally the *function* of complex lexemes in concrete texts is, on the level of *parole*, a matter of pragmatics, not only for nominalization. Further functions of word-formation syntagmas are the “naming function”, “classifying” (*wine glass, beer glass, etc.*) and “information condensation” function (as in *penfriend*).

Whether or not additional levels will be needed for an adequate description of productive processes in the lexicon is something which will have to be discussed.

3. DO METAPHOR AND METONYMY BELONG WITHIN THE SCOPE OF WORD-FORMATION?

3.1 In his comprehensive investigation of dynamic lexical processes in modern English—which result in neologisms and thus in an expansion of the lexicon—Tournier (1985: 51) distinguishes four categories. They are represented in modified form in the following schema reprinted here from Lipka (1992: 93):



The fourth *external* process, the adoption of loan words, is not of interest here, although it is highly important in the history of most languages. The other three macro-mechanisms of productive patterns obviously have to do with the aspect of Saussure's model of the linguistic sign affected in each particular case (in Tournier's terminology): 1. *signifiant* and *signifié* (morpho-semantic neologism), 2. *signifié* only (semantic neologism) and 3. *signifiant* only (morphological neologism, non-syntagmatic, reductive word-formation). In the second category the *signifiant* does not undergo any formal change in the cases of conversion, or zero-derivation, as well as of metaphor and metonymy.

In this model, the metasemantic processes ("métasémie") of *metaphor* and *metonymy* are obviously integrated among traditional word-formation processes. Tournier (1985: 21) criticizes Marchand and also Adams (1973) for not taking these, or loan processes, into account. He argues that a complete description of the *dynamic lexicon* should be dealing with "*La totalité des processus lexicogéniques de l'anglais*" (Tournier's emphasis).

3.2 Marchand (1969) and Adams (1973) indeed neglected these two processes of expansion of the lexicon. This can also be said about all traditional studies in word-formation since Paul (1896). In their *Englische Lexikologie* Hansen et al. (1985: 126) do mention that examples of zero-derivation can be interpreted as metaphors or metonymies. Thus, *hammer* in *he hammered the idea into our heads* has, as they point out, a transferred (metaphorical) meaning. In the chapter on lexical semantics (1985: 202 ff.), metaphor and metonymy —defined as *transfer* relationships— are then extensively discussed in connection with polysemy. Bauer (1983) deals exclusively with English word-formation, not the lexicon as a whole, and therefore, like Marchand and Adams, pays no attention at all to the metasemantic processes of *meaning transfer* (metaphor and metonymy) nor to loan processes. Following Lyons, (1977), he distinguishes (1983: 63) between predictable *productivity* and unpredictable *creativity*. This is why *headhunter*, in its literal meaning, is a matter of word-formation (productivity), whereas the "metaphorical extension ... 'one who recruits executives for a large corporation' " is not (creativity). The appendix of Quirk et al.'s (1985: 1517-1585) grammar gives an extensive overview of the most important word-formation patterns in English and distinguishes the four categories *Affixation*, *Conversion*, *Compounds* and *Miscellaneous modes*. Apart from that, here and in other chapters of the grammar, the distinction "metaphorical vs. literal" is used several times, whereas the concept of metonymy is only mentioned once.

3.3 In my *Outline of English Lexicology* Tournier's proposal is discussed in different contexts (1992: 92 ff., 120 ff., 186 —based on Lipka 1988, 1989 and 1990; but cf. now 1996): productivity in the lexicon, lexical rules, semantic processes and categorization. My considerations are based on the assumption that processes 1. and 3. in (5) —derivation (affixation), compounding and word-formation by reduction— as well as zero-derivation (conversion) result in new "*lexemes*". Metaphor and metonymy, however, are exclusively semantic processes by which the *signifiant* is not changed. This is why their results should not be called "lexemes", but "lexical units", a distinction introduced by Cruse (1986: 49, 76 f., 84) who defines "*lexical unit*" as "the union of a lexical form and a single sense" and "lexeme" as "a family of lexical units". Thus the lexemes *MAN* and *FOX* consist of the lexical units *man*₁ "human

being”, *man*₂ “adult male human being” and *fox*₁ “wild animal”, *fox*₂ “person as crafty as a fox”, *fox*₃ “fur of fox”. In *MAN*, the English lexeme translates into the two German lexemes *MANN* and *MENSCH*. *Fox*₂ and *fox*₃ are obviously cases of metaphor and metonymy (*pars pro toto*). The examples show that the processes of *semantic transfer* do not result in new lexemes. Metaphors create a second, dual (or multiple) *categorization* of reality; in metonymies one element (part, whole, container, content, etc.) stands for something else (whole, part, content, container, etc.). There are traditional classifications for both processes (cf. Lipka 1988: 360 ff., 1996).

3.4 In a very useful survey Schmid (1993: 46 f., 81 ff.) discusses different traditional and modern views on *metaphor* and *metonymy*. He points out that similarity and contiguity of the extralinguistic referents are often postulated as criteria for definition and that categorial extension and categorial chaining are involved in *semantic transfer*. Schmid introduces convincing arguments against similarity as the exclusive criterion for the definition of metaphor and emphasizes that metaphors are not based on a relationship of similarity but, in fact, create this relationship, i.e. “daß Metaphern nicht auf einer Ähnlichkeitsbeziehung *beruhen*, sondern daß sie eine Ähnlichkeitsbeziehung *schaffen*” (1993: 86, his emphasis). He therefore regards them as creative processes. There has been a controversial discussion in the relevant literature as to what extent metaphors depend on similarity (cf. *sausage dog* for “dachshund”). In his discussion of metonymy Schmid lists 17 typical relationships. He postulates (1993: 94) four characteristics of prototypical metonymies which refer to the situational and cultural context. The fourth characteristic is Lakoff’s stand-for relation between the two entities. Schmid also shows that there are cases of combined metaphor and metonymy. This possibility was already discussed in detail by Goossens (1990) in his article entitled “*Metaphonymy*”.

More recently, Dirven (1993) investigated the different mental strategies of *conceptualization* in metaphor and metonymy. He takes as his starting point Roman Jakobson’s (1956) criterion of paradigmatic and syntagmatic potential and mainly concentrates on metonymy, which he regards as a *cognitive process*. Three types are distinguished: Linear, conjunctive, and inclusive metonymy. The latter type (e. g. *head* for “intelligence”) always has a figurative interpretation, and there are degrees of figurativeness. For Dirven, contiguity in cases of metonymy is necessarily “conceptual contiguity”, whereas he claims that in metaphors a “principle of contrast” is involved. This view results in a continuum ranging from metonymy to metaphor along a scale of increasing *figurativeness* (1993: 15). At the one end, linear metonymy is characterized by conceptual closeness. In figurative metonymies the distance increases, and in the case of metaphor, at the other end of the continuum, there is often extreme “conceptual distance” between the “source domain” and the “target domain”. Metaphor can also be seen as “a bridge between domains” as in Lipka, 1996. Finally, Dirven discusses the functions of the two strategies: Metonymy is assigned a “potential of reference”, whereas metaphor can “express feelings, emotions, experiences in a more direct and tangible way” (1993: 24 f.). He relates these functions to two of Karl Bühler’s more general language functions, the referential and expressive functions (*Darstellung* and *Ausdruck*).

3.5 If there are degrees and the possibility of combining metaphor and metonymy, then the dichotomy between the two is obviously not as clear-cut as it often seems.

Even “figurative” and “metaphorical” are not always the same, as Dirven’s article shows. Different definitions by different authors are quite legitimate since we are dealing with so-called *notational terms* (cf. Lipka 1992: 5, 12, 16; 1998). Literature on metaphor shows that there is an abundance of concepts (cf. Dirven, 1993; Schmid, 1993). Of course one can also unite metaphor and metonymy in a superordinate category (*métasémie*, semantic transfer, see (5)). There are clearly features which the two phenomena have in common and which can be called *family resemblances*.

3.6 Now I would like to return to the question of whether the strict division between *word-formation* and *semantic transfer* is justified. There are a number of similarities and parallels between the two processes of expansion of the lexicon (cf. Lipka 1990, 1208; 1992: 120, 122 f.):

- (6) a) productivity
- b) degrees of acceptability
- c) the possibility of institutionalization and lexicalization and also
- d) the possibility of combining the two processes.

Let me comment on the four points in turn.

a) In many languages certain word-formation processes, such as compounding with two nouns (N + N), are basically unrestricted, as are certain rules for semantic transfer (e. g. place STANDS FOR people, as in *Washington, Rome, our street*, or *pars pro toto*, as in *bighead, loudmouth, redskin*). Such examples are interpreted as “contextuals” on the basis of Grice’s maxims and of world knowledge. Such *productivity* or *creativity* is unlimited.

b) Leech has pointed out that the acceptability of the following metaphors (7a) decreases in the same way as that of the corresponding suffixations in -y (7b):

- (7a) *Sam is an absolute pig (rat, mouse, hawk, skunk, tiger ... stegosaurus)*
- (7b) *piggy (ratty, mousy, hawky, skunky, tigery ... stegosaurusy)*

It is indeed not always easy to find a salient or obvious attribute for metaphor and metonymy or to establish a relationship between morphemes that makes sense. *Hawks* are more aggressive than *doves*, but what do we know about *gnus* or *stegosaurus* or *-sauri*. Tournier has shown that animal metaphors are extremely culture-specific.

c) The results of productive semantic as well as of word-formation processes can be *institutionalized* and *lexicalized* (cf. 3.7), i. e., they are adopted as part of the vocabulary of a language and can be subject to formal and/or semantic change. The reverse process is also possible, words can become obsolete and disappear from the lexicon. Metaphors are more or less alive and sometimes “dead”. *Bird* in English and *Käfer*, *Biene* in German, to refer to a young woman, are old-fashioned in both languages and represent different culture-specific *categorizations*. German *aalglatt* is institutionalized, but **eel-slippery* does not exist in English even though the attribute invoked is an undeniable property of the creature.

d) Beside the metaphor *shark* for a cheat and rapacious money-broker, there is also the metaphorical compound *loan-shark*. Here, as in many other cases, we find a *combination* of word-formation and semantic transfer. The following examples from three different languages illustrate the possibility of metonymical compounds in which there is a HAVE-relation which can be classified as *pars pro toto*:

(8a) *Bigmouth, bluestocking, leatherneck* (marine soldier), *paleface, red-breast, redcap* (military police in the UK, conductor in the USA), *redskin* (now taboo), *whitethroat; Blauhelm* (UN soldier), *Bleichgesicht, Rotschwänzchen, Weißdorn; blousons noirs, peau rouge, pied-noir* (seemingly from the boots of colonial soldiers). In Japan, Western foreigners used to be called *longnoses* (because of their salient (!) feature). In *egghead* metaphor is involved besides metonymy and compounding.

In other complex lexemes at least one constituent can be interpreted metaphorically:

(8b) *Bluebell*, Spanish *campanilla*, (from *campana* “bell”), *bluebottle* (a fly), *buttercup, roadhog, seahorse, herringbone, sunflower; Glockenblume, Glühbirne, Hirschkäfer, Kirchenschiff, Löwenzahn, Seerose, dent-de-lion*.

Some interesting Spanish examples may be introduced here, in which specific word-formation processes, metaphor and metonymy play a role. Acronyming as a strategy is involved in the name of the high speed train *AVE*, for “*alta velocidad española*”, like French *TGV* for “*train à grande vitesse*”. Besides the acronym, the Spanish railways also use the simplified drawing of a bird, called *ave* in Spanish, to symbolize the train. This is an instance of secondary remotivation of the acronym as a linguistic sign (cf. Ungerer, 1991). The novel complex lexeme *desayunador*, as a Place-type of reference (room for breakfast, *desayuno*) demonstrates suffixal productivity. Other derivatives, as in the case of *campanario* “belltower”, *campanero* “bellringer”, and *campanilla* “little bell” —all from *campana* “bell”— are lexicalized and institutionalized.

A combination of processes, with dominant metonymy, can be found in the name *Giralda* for the cathedral tower (*belltower* or *belfry*) in Seville. The turning figure on top, or part of it, is called *Giralda* (from *girar* “turn”). By simple or dual metonymy this is then extended to the whole tower. A similar development has occurred with the name *Bethlehem* and a metonymic shift to *Belén* in Spanish, meaning *crib* in BrE and *crèche* in AmE, for the model of a nativity scene. In BrE there is also the archaic *bedlam* “madhouse, lunatic asylum” from the name of the hospital of St Mary of *Bethlehem*, in London.

Basically, proper names are also simple and complex lexemes, like common nouns. There are transitions in both directions as in the case of *Hoover* (related to German *Huber*) and a *hoover*, but also, e.g. occupation nouns like *smith, turner, thatcher* becoming family names. Names may also serve as the basis for WF processes, such as zero-derivation, as in the case of *to Hoover*.

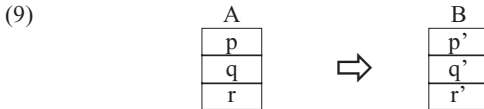
The term *el niño* (“the child”) has recently acquired world-wide ill renown. It was originally applied to a meteorological phenomenon by fishermen in South America, because it occurred around Christmas (*Navidad*), when “the boy-child Jesus” was born. Now, with the dramatic global changes of climate, the term *el niño*, originally

denoting any boy, has been metonymically shifted and lexicalized and institutionalized around the world.

For the *motorist* (institutionalized in BrE) travelling in Spain, the following lexicalized and institutionalized *complex lexemes* are particularly relevant: *aparcar* and *aparcamiento* “parking lot”, *autopista* and *autovia* (types of motorway), *gasoil* (diesel or derv), *gasolina* “petrol” and *gasolinera* “filling station”.

In the verb and zero-derived noun *rubberneck* (“curiously turn one’s head in order to see as much as possible”), which also functions as the basis of an explicit derivation *rubbernecker*, it is difficult to decide the extent to which word-formation, metonymy (*pars pro toto*, WITH a neck) and metaphor (LIKE rubber) play a role respectively. In English *unemployment statistics* can be *massaged*, while in German *Bilanzen* are *frisiert*. In each case they look nicer afterwards.

The problem of distinguishing between various semantic and word-formation processes does not arise if we assume a very general lexical rule as suggested by Leech (cf. Lipka 1990; 1992: 121):



The rule symbolizes that a lexical entry B with the morphological, syntactic and semantic specifications p' , q' , r' is derived from a lexical entry A with the specifications p , q , r . This generalization breaks up the dichotomy between morphology and syntax. It allows the language-user to derive nonce-formations in concrete texts and makes it possible to describe the practically unlimited productivity of many processes in the *parole*. At the same time, the rule needs to be complemented by the factors of *lexicalization* and *institutionalization* on the level of the “norm” of a language in Coseriu’s use of the term, cf. Coseriu (1961; 1967: 11-113).

3.7 I call the process of a new word being included into the lexicon of a language “institutionalization”. To be more precise, a word becomes part of the lexicon of a regional, social or other type of variety, such as British or American English, High German, Austrian or Swiss German or of a professional (e. g. nautical) slang (cf. Lipka 1992: 95 ff.; 1992). Institutionalized simple or complex lexemes are known to most speakers of this variety. If and when they are accepted and frequently used by the speech community they may undergo certain formal and semantic changes in the spoken and written medium. These changes can be subsumed under the cover term *lexicalization*. Thus the final vowel/diphthong in *postman* and *Sunday* is weakened. In *holiday* there is a combination of semantic and phonological changes including the demotivation of the constituents. A partial loss of motivation can be observed in *blackboard*, *cupboard*, *watchmaker* and *Handtuch* “towel” (no longer used for hands exclusively). In a number of agent nominalizations such as *crybaby*, *sleepwalker*, *rattlesnake*, there is an additional general feature [+HABITUAL], whereas others have acquired the feature [+PROFESSIONAL], e. g. *baker*, *gambler*, *writer*, *chimney sweep*.

Such binary features, as a simplified notation, suggest a clear-cut yes/no-distinction. However, as in so many areas of language fuzziness or fuzzy boundaries are a

more appropriate description of the state of affairs, as Labov in his discussion of container terms and Prototype Theory has demonstrated.

The fact that the zero-derivation *cook* exists alongside the instrument noun *cooker* can also be explained by lexicalization and institutionalization. *Streetwalker*, *callgirl*, *callboy*, *wheelchair* and *pushchair* have very specific unpredictable meanings. Due to changes in society, there are now such lexemes as *chairperson*, *policewoman*, *Kauffrau* “business woman” (from *Kaufmann*) and *Feuerwehrfrau* “female fire fighter”.

The metonymic lexeme *sundowner* consists of two lexical units, one in Australian (10a) and the other in British English (10b). In both lexical units, there is a temporal relationship between the determinatum *-er* and the rest (as in the original metonymic transfer of *el niño*):

- (10) *sundowner*
 (a) A tramp who arrives at a sheep station etc. in the evening for food and shelter
 (b) An alcoholic drink taken at sunset.

Now one could argue that (10a) and (10b) are not two lexical units of the same complex lexeme *sundowner*, because British and Australian English are two different language *systems*. I am, however, inclined to reject this hypothesis, and argue —with Eugenio Coseriu— that varieties of a language, such as English, German, French, or Spanish (in Europe and South America) basically have the same language *system*, but a different *norm* on all levels, from phonetics to textual aspects. If there are, however, morphological differences (albeit slight) with identical denotation, we have to recognize different lexemes. This holds for High German *Kasse*, “cash register”, *Sonnabend* “Saturday” and Austrian *Kassa*, *Samstag*, as well as for the different verbs *umziehen*, *übersiedeln*, *zügen* for “moving house” in High German, Austrian and Swiss German. Many more examples could be drawn from comparing North American English and South American Spanish with their European relatives.

The difference between (10a) and (10b) is certainly also a matter of social variation. According to the *OED*, (10b) is of colonial, especially South African, origin. The *OED* also gives examples (the most recent one from 1891!) of a third, obviously obsolete, lexical unit in American English: “one who practises as a doctor, etc., outside normal working hours” (cf. *moonlighting* and *moonshine* “illegally produced alcoholic drink”).

The following information from the *OED* shows that the metaphorical lexeme *skyscraper* had acquired different meanings at different periods —in nautical (1.) and in colloquial (2.) language (only the year of the attested use is quoted) before settling on today’s institutionalized lexical unit “a very tall modern building”.

- (11) *Sky-scraper*:
 1. *Naut.* A triangular sky-sail. 1794...
 2. *coll.* a. A high-standing horse. 1788...
 b. A very tall man. 1857...
 c. A rider on one of the high cycles formerly in use. 1892...
 d. A tall hat or bonnet. *Obs.* 1800...
 e. In Baseball, Cricket, etc. a ball propelled high into the air... 1866...

3. An exaggerated or "tall" story. *nonce-use*. 1841...
4. A high building of many storeys... 1883...

Only the last lexical unit 4. has been adopted as a loan translation in French (*gratte-ciel*), Spanish (*rascacielos*) and German (in a slightly modified and more explicit way, *Wolkenkratzer*).

4. A COGNITIVE LEVEL FOR THE LEXICON?

4.1 There is no doubt that the morphosemantic processes of word-formation and the semantic processes of metaphor and metonymy are not identical, even though they have a great deal in common and are often combined. The prototypical function of both categories is the productive expansion of the lexicon as symbolized by the rule in (9). This is why they are both part of *dynamic lexicology* but not of word-formation, except when they are combined with each other. Word-formation results in new lexemes, semantic transfer in new lexical units. In both cases, a description on the six levels presented in (4) is not sufficient. A further, *cognitive level* is required which makes particular allowance for a systematic integration of psychological aspects such as the perception and association of concepts as well as of holistic and culture-specific experiences.

Thus simple and dual categorization and the apprehension, recognition but also creation of a relationship of similarity between items from two *domains* (cf. Lipka 1996) are as important as the "stand-for-relationship" in metonymy based on contiguity (cf. 3.4.). While part-whole, container-content etc. have been recognized since antiquity, as ornamental stylistic figures, or tropes, the fundamental role of culture-specific cognition, the creative activity of the categorizing mind and the importance of prototypes have only been acknowledged recently (cf. Schmid, 1993 and Ungerer/Schmid, 1996).

4.2 In a comparative perspective, different languages have different ways of conceptualizing and metaphorically categorizing perceived similarities. A book which has *Eselsohren* ("donkey's ears") in German is *dog-eared* in English. The English verb *cherry-pick* "select the best" corresponds to the German collocation *sich die Rosinen herauspicken* ("pick out the raisins for oneself"). Someone who is easily frightened is categorized as a *chicken* in English (*Dont be such a chicken! chicken-hearted, chicken-livered, chicken out*) and as an *Angsthase* in German. The zero-derived lexeme *to mushroom/Ø* consists of three lexical units: 1. "pick mushrooms", 2. "acquire the shape of a mushroom", 3. "grow fast". The third meaning corresponds to that of the German expression *wie die Pilze aus dem Boden schießen* ("shoot from the ground like mushrooms", with *schießen* and *shoot* having become dead metaphors). Only in English will someone be said to *burn the candle at both ends* when they work too hard for too long. It is only the English language which has coined the metaphor *couch potato* to refer to a person who hardly moves, sits around and watches television most of the time. A recent analogical neologism is *mouse potato* for someone who uses the computer obsessively. Frequently the similarity is based on a whole situation or prototypical scene (cf. Lipka, 1988; 1989: 232 f.), as in French *vomitoire* (a wide exit in an amphitheatre)

and English *bombardier beetle* (cf. Lipka, 1992: 126). The German lexemes *Kran* and *Kranich* converge in English *crane* to denote both the bird and the machine. The metaphorical meaning is not only based on the bird's shape (slim neck, long beak and the joint linking them), but also on the typical movements of walking up and down and picking objects from the ground. This type of activity (and the figurative picking up) is probably the reason why the corresponding French metaphor of the word for the bird "crane", *grue*, denotes a prostitute (cf. German *Bordsteinschwalbe*). In many languages colloquial varieties and, even more so, slang are particularly productive areas in which metaphors are coined (cf. Warren, 1992).

4.3 The creation of similarity by subjective perception, categorization and conceptualization is generally more important in metaphors than objective similarity. Examples such as *schaumgekrönte Wellen* ("foam-crowned waves") and its French and English equivalents *moutons (blancs)* and *white horses* illustrate what Tournier (1988: 118) means when he speaks of "la perception d'une ressemblance". Metonymy, on the other hand, is based on "une association d'idées ... de nature variée" (Tournier, 1988: 124). This general relationship, which includes traditional concrete relationships within the referent (part-whole, container-content and vice versa, place-person, institution, etc.), is clearly psychological. Consequently, a cognitive level is necessary to explain and describe productive processes in the lexicon.

Notes

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