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## Words and Concepts in Time: towards Diachronic Cognitive Onomasiology

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*To Ekkehard König for his 60th birthday*

### 1. Introduction

Recent issues in diachronic lexical semantics have shed new light on an old-fashioned linguistic discipline, i.e. onomasiology.<sup>1</sup> This is less surprising when one is aware of the fact that, in their groundbreaking essay on metaphor, Lakoff and Johnson (1980) have rediscovered the existence of metaphorical schemas, the so-called "conceptual metaphors", such as LINGUISTIC CONCEPTS ARE CONTAINERS, ARGUMENT IS WAR etc., which assemble words and idioms having a common conceptual source and a common conceptual goal. As we will see below, this approach is already halfway towards cognitive onomasiology. Furthermore, cognitive linguistics is grounded on assumptions about language quite similar to those of onomasiology (see section 3). One of the aims of the present paper is to discuss the potential of modern onomasiology in light of cognitive linguistics. The second aim is to develop a framework of diachronic cognitive onomasiology. It will be shown that both, onomasiology and cognitive linguistics, reveal their full explanative power from a diachronic perspective.<sup>2</sup>

### 2. From semasiology to onomasiology

#### 2.1. The semasiological and the onomasiological approach to the lexicon

Onomasiological lexicology goes back to the early 20th century's *Wörter und Sachen*-movement in linguistics whose intention was to discover the different expressions existing in one or more language for a given concept and to explain their etymology and the motivations for their creation (cf. Blank, in press a; for a detailed bibliography cf. Quadri 1952). It served

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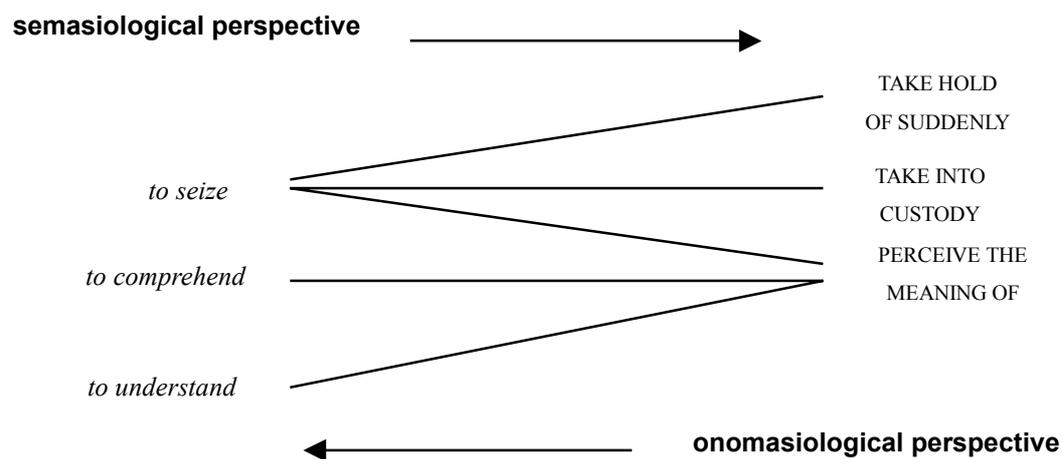
<sup>1</sup> Cf. Zgusta 1990; Geeraerts/Grondelaers/Bakema 1994; Geeraerts 1997; Blank 1998a, 1998b, 1998c; Koch 1997, 1999a, 1999b; the contributions to Blank/Koch 2001.

<sup>2</sup> Diachronic cognitive onomasiology has first been conceived together with Peter Koch and has been theoretically developed and practically applied to Romance languages with our co-workers in the Tübingen Decolar-Project (Paul Gévaudan, Barbara Ventarola, Antonia Neu). The aim of Decolar (*Dictionnaire étymologique et cognitif des langues romanes*) is a) to list the words for concepts designating body parts as well as human perception and qualities attributed to man in 14 Romance languages and idioms, and b) to describe as accurately as possible their diachronic genesis and to classify them according to the respective source concepts. In a parallel project "Lexikalischer Wandel – Polygenese – kognitive Konstanten" the same method is applied to a larger sample of languages of the world. For more details cf. ch. 3.2. and Koch 1999b; in press a; Blank 1998b; Blank/Koch, 1999b and 2000; Blank/Koch/Gévaudan 2000.

also as a methodological background to the great enterprises in linguistic dialectology during the 20th century. This extremely fruitful line of study lost its vitality under the influence of modern (structuralist) semantics whose view was decidedly semasiological.

The difference between the two approaches can be characterized by the following schema:

(1) Semasiology and onomasiology (cf. Quadri 1952, 168)



From a semasiological point of view (< Gr *séma* ‘sign’), we investigate the different *senses*, i.e. the polysemy of, e.g., E *to seize*, while onomasiology (< Gr *ónoma* ‘name’) asks for the *denominations* of, e.g., the concept UNDERSTAND.<sup>3</sup> In diachrony, two levels of abstraction should be discerned: *individual studies* of words or of concepts and more *theoretical approaches* to types of semasiological or onomasiological processes. Individual semasiological diachronic approaches describe the history of a particular word in time, e.g., how *to seize* has acquired the metonymic sense of ‘to take into custody’ and the metaphorical sense of ‘to understand’, but also its derivatives (*seizure* and *seizing*) and idioms (*to seize an opportunity*). On the level of theoretical lexicology, semasiology is the perspective behind typologies of the mechanisms of lexical innovation, such as metaphor, metonymy, types of word formation, idioms etc.<sup>4</sup> Onomasiological studies try to discover the different lexical “pathways” through which a particular concept has been designated by going back to the respective source concepts. They focus mainly on the continuous change in the way we express concepts and thus help to discover recurrent schemas of designating a concept or a

<sup>3</sup> Concepts can be linguistically realized by a paraphrase, as done here, or by a simple word. In the latter case, this word has a double function: it first denotes a mental idea (put into SMALL CAPS), but on the other hand, it is of course identical to an existing lexeme in a given language (put into *italics*), which indeed is one of the denominations of this concepts. The denominations of a concept are, in fact, more or less synonyms.

<sup>4</sup> Cf. section 4, and detailedly Blank 1997 for semantic change, Blank 1998d for word formation, Blank 1996 for idioms, and Blank 1999b and in press b for a comprehensive overview.

group of concepts as, e.g., the metaphorical expression of MENTAL PERCEPTION through words for PHYSICAL MANIPULATION (cf. Sweetser 1990: 28-44). The onomasiological perspective is also chosen for typologies of the motives of lexical change (cf. Zgusta 1990; Blank 1999a).

While from a semasiological point of view one can (and maybe should) decide whether he or she concentrates on cases of semantic change or on word formation, idioms or loanwords etc., onomasiological studies of particular concepts must always apply the whole scale of types of lexical change. Onomasiological change thus includes all types of lexical change (cf. Koch, in press a).

## **2.2. Universality or culture-specificity of concepts ?**

A fundamental problem onomasiology is concerned with is the fact that first of all we must define a conceptual system before starting an onomasiological analysis. Where do we get these concepts from? Are conceptual systems universal or language-specific? Are they binarily structured like the famous “arbor porphyriana” (cf. Raible 1997: 31s.) or must they admit other kinds of structuration? The first question leads straight to the more general question whether our language determines our concepts and our vision of the world or whether the world determines our language. I cannot discuss this fundamental and indeed more philosophical than linguistic issue here. It seems however clear that any kind of Platonian realism in linguistics is doomed to failure and that speech communities create their own conceptual systems, or in other words: a “world” of their own, which is then subsequently verbalized. This is to say that concepts are neither universal nor are they really language-specific: they rather are culture-specific and thus extralinguistic phenomena. In Upper Engadine Retho-Romance, e.g., we find the following words for SNOWING (cf. Liver 1989: 792; HWR: ss.vv.).

- (2a) *neiver* ‘to snow’
- (2b) *bischar* ‘to snow with small, icy flakes (esp. with strong cold)’
- (2c) *brisclar* ‘to snow softly’
- (2d) *cufnar* ‘to snow heavily with wind’
- (2e) *cuflegnar* ‘to snow softly with wind’

The fact that Engadine has at least five words where Standard English and Standard German have only one or two, obviously derives from the alpine climate which makes subtle linguistic differentiations necessary. We can have access to this “foreign world” by paraphrasing the concepts in question (as we did by defining the five words) and thus we are able to conceive the denoted fact, but, as the example shows, the existence of a simple lexeme or a lexicalized word-formation is a good evidence for the existence or the prominence of a concept in a given speech-community.

The example allows some conclusions regarding the methodology and the aims of

onomasiological research:

1. Literally every referent and every concept can be verbalized by any language. It is, however, more interesting to study which concepts are *usually* and *constantly* expressed in a given language (Heger 1964: 514). Only from this perspective can we get insight into the way a speech-community conceptualizes the world.

2. The conceptual system we choose for onomasiological studies should largely correspond to the semantic structure of the envisaged language (Heger 1964: 515). Thus, for analyzing Rheto-Romance we need a more subtle system of meteorological concepts than for analyzing English. Comparative onomasiological studies must define and rearrange the conceptual system according to the language-specific differentiations.

As a consequence, we should distinguish in semantics between an extralinguistic, although not universal conceptual system (what Humboldt has called the “Weltbild der Sprache”; cf. Hallig/Wartburg 1963: 52) and a language-specific semantic structure on the level of the signifieds. This distinction may seem to be too subtle and hypertrophic (cf. the critique in Taylor 1999: 23ss.), but reveals nevertheless necessary when one looks at the examples cited above: the opposition of *neiver*, *bischar*, *brisclar*, *cuflar*, *cuflernar* necessitates a set of intralinguistic semantic features in Rheto-Romance in order to distinguish the words semantically *on the level of the envisaged language*. These features remain purely extralinguistic for E *to snow*, where only one intralinguistic feature is needed to distinguish it semantically from *to rain* or *to sleet*. The concept to which *to snow* is linked nevertheless comprises all the information given with the five Rheto-Romance words, but this information remains irrelevant on the level of the English semantic system.<sup>5</sup>

### **2.3. The structure of conceptual systems**

Diachronic semasiology investigates the lexical and semantic development of words. Words have an internal structure, i.e. the synchronic relations between their senses, and a number of external structures, i.e. word class, derivational class and compounds, lexical solidarities etc. The simplest semasiological approach to words is the alphabetic order of a dictionary.

A major motivation for onomasiological approaches is the fact that alphabetic lists of words conceal the semantic and conceptual structures of languages (Hallig/Wartburg 1963: 53). As long as single concepts or a smaller group of concepts are investigated it suffices to make sure that the concepts have been well established in the sense of what has been said in section 2.2. Problems start when it comes to larger onomasiological studies, as they require a fully fledged conceptual system. It is obvious that simple binary taxonomies as the “arbor porphyriana” would not succeed to describe the complexity of the human vision of the world. As a consequence, the different conceptual systems that have been suggested (e.g. Buck 1949; Dornseiff 1954; Hallig/Wartburg 1963; Schröpfer 1976ss.; Vernay 1991ss.) combine mainly

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<sup>5</sup> For further discussion cf. Heger 1969; Raible 1983; Lüdi 1985; Koch 1996; Blank 1997: 89-102; Blank, in press c; Taylor 1999.

two types of relations:

a) *taxonomy*: a relation of concepts which are more or less similar while exhibiting a number of common features (e.g. TIGER, LION, LEOPARD, PUMA) and which can be subordinated to a more general concept which logically includes them (FELINE or CAT).

b) *engynomy* (cf. Koch, in press b): a relation of concepts which exhibit a subtype of contiguity, such as part/whole, cause/consequence, producer/product, activity/place etc. Engynomic structures determine mainly cognitive models of knowledge such as frames, scenes or scripts (cf. Koch 1999b; Blank, in press c).

Taxonomic and engynomic structures are synchronic counterparts to some of the ten associative relations that, in a semasiological perspective, are used to verbalize concepts (cf. section 4.1.).<sup>6</sup> Examples for how they combine in onomasiological structures can be drawn from any onomasiological dictionary. In ch. 2 (Mankind, sex, age, family relationship) of Bucks *Dictionary of selected synonyms in the principal Indo-European languages* we find a great number of taxonomic structures, such as MAN<sub>1</sub> (Human Being) – MAN<sub>2</sub> (vs. Woman) – WOMAN or PARENTS – FATHER – MOTHER, but also combinations with engynomic structures, such as HUSBAND – WIFE – MARRY – MARRIAGE or engynomic structures alone, such as ORPHAN – WIDOW. The more complex a conceptual structure is, the greater is the role of engynomic structures as, e.g., the frame “HEAD”, whose different subframes (FACE, ZONE OF THE EYE, ZONE OF THE NOSE, ZONE OF THE MOUTH) and their concepts (EYE, EYEBALL, IRIS, PUPIL, EYELID, EYELASH, EYEBROW) are completely related by contiguity.

### **3. Towards diachronic cognitive onomasiology**

Traditional onomasiology as well as the 19th century semasiological semantics have been strongly influenced by psychology and thus have more or less explicitly discussed a number of ideas that build now the fundament of modern cognitive semantics (cf. Geeraerts 1988). This new line of study has emphasized that human cognition works by several basic mental operations, such as the grouping of contiguous elements to domains, the association of similar and opposite elements, the analysis of complex scenarios into clear-cut smaller scenes, the forming of figur-ground schemas or the recognition of recurrent elements etc. As these primary mental operations can be considered as “human” in a biological sense, it appears most plausible that our languages reveal the traces of these principles in the way they verbalize concepts throughout their history.

Empirical studies done in cognitive linguistics give evidence for the universally fundamental character of the HUMAN BODY, of SPACE, of BASIC DIRECTIONAL and PERCEPTUAL CONCEPTS, such as UP/DOWN or LIGHT/DARK, and of some other basic concepts.<sup>7</sup> However, many of these

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<sup>6</sup> For the importance of these two relations cf. also the network-models of semantic knowledge from Collins/Loftus 1975 to Pustejovsky 1995.

<sup>7</sup> A rather eclectic choice of exemplary studies: Berlin/Kay 1969; Rosch 1973, 1975; Rosch et. al. 1976; Bierwisch/Lang 1987; Lakoff/Johnson 1980; Lakoff 1987; Johnson 1987; Langacker 1987/91; Dirven/Taylor 1988.

studies either do not make clear whether they take an onomasiological or a semasiological point of view or even both (such as the studies on the word *over* and on the concept ANGER in Lakoff 1987) or are based on a rather small language sample and sometimes just on English. While the first is a methodological imprecision that may obscure the results of the study, the latter risks to produce circular argumentation: basic cognitive concepts are postulated on the grounds of poor linguistic data and their cognitive relevance is then “proved” by finding them realized in the investigated language (Krefeld 1997: 5ss.): one cannot, e.g., postulate that body parts are basic cognitive concepts just because in English they serve as a source to so many metaphors (*arm of the law, head of the department, foot of the mountain, heart of the city*, etc.). Only, if these metaphors prove to be recurrent in a greater sample of related and non-related languages, one can hypothesize a common cognitive or anthropological grounding.

One way to avoid circularity thus consists in broadening the empirical basis, as has done Anna Wierzbicka in search of what she calls “semantic primitives”, i.e. concepts that are realized in every human language, such as, e.g., ME, YOU, SOMEONE, WANT, A KIND OF, etc. (cf. Wierzbicka 1994, 1996). From an anthropological perspective, Wierzbicka asks whether a concept is universally verbalized, but she does not ask *how, by what lexical means* this concept is verbalized. In the combination of onomasiology with the main focus of cognitive linguistics the latter question, however, reveals to be of central interest: if a given concept, e.g. the LEADER OF A GROUP, is expressed the same way in different languages, e.g. by the word for HEAD, or if it is expressed the same way in distant phases of the history of one language, then we are allowed to conclude that this way of expressing the concept represents a cognitively salient and privileged conceptualization. It is of crucial importance that there is evidence for *polygenetic processes* in order to exclude as much as possible adstrat influence or developments on an earlier stage of a common ancestor language.

Cognitive onomasiology, thus, requires both, an enlarged sample of languages in order to avoid circularity and a deepened insight in diachronic lexical processes in order to understand processes of conceptualization that, by time, have become opaque. Combining diachronic lexicology with onomasiology and applying it to more than only one or a few languages can enable us to show empirically which conceptualizations are proper to a single or very few speech communities and which can be found universally and thus may match with a biological predisposition of man in perceiving the world. Cognitive onomasiology then can procure us deeper insight into the way our mind works. It is important to say that “universally recurrent conceptualization” does not mean that it has to be found in every language of the world and even not in most of them: first, there are always some speech-communities that, for some reason or other, prefer a cognitively unprivileged way of conceptualizing a given concept, and second, several cognitively salient ways of conceptualization may parallelly exist and compete with each other.

The following section 4 gives a short overview of conceptualization principles and of some major lexical processes. Section 5 then exhibits three case studies which illustrate the range of

diachronic cognitive onomasiology.

#### 4. A comprehensive typology of lexical change

##### 4.1. Ten types of associative relations

Revisiting older (and more recent) onomasiological studies one is impressed by the mass of data and by the wide range of languages and dialects that has been investigated. Traditional onomasiological studies usually list metaphors and metonymies and distinguish between loanwords and semantic loans, but are less determined on other types of semantic change and usually are unaware of the semantic aspects of word formation and idioms. Yet, recent studies in lexicology have not only proved the existence of a broader range of types of semantic change, but have also emphasized the semantic aspect of word-formation, idioms and other types of lexical change.<sup>8</sup> From an onomasiological point of view, the common denominator of the major processes of lexical innovation is the fact that a speaker tries to verbalize a given concept by associating one or more other concepts that have already been verbalized in the speaker's language.

A good example to illustrate how one concept can be differently conceptualized is the case of the small piece of wood for lighting candles, cigarettes etc.: the usual word in English is *match*, a metaphor from *match* '(lamp) wick' (< OF *mesche*): the new object has been conceived *as* the functionally and formally similar object. In French we find *allumette*, which originally designated a splinter destined to transport fire. Formally, *allumette* is a suffixation of the verbal basis *allum-* 'to light', the suffix adds the sense of 'instrument for ...': the inherently associated concept, thus, is that of TO LIGHT. The semantic change from 'splinter' to 'match' is a case of semantic restriction or specialization, as a match is a kind of splinter. German *Streichholz* is formally a compound that combines two contiguity associations: *Holz* 'wood' refers to the material matches are typically made of and *streichen* 'to rub' refers to the movement one performs when lighting a match. Spanish has two words for MATCH: *fósforo* is a loan from Gr *phosphóros* 'firebringing' and thus characterizes metonymically the most salient aspect of the object; *cerilla*, literally "little piece of wax", refers to matches that are made of wax instead of wood: this is a diminutive suffixation.

The example shows that, if we want to fully understand the relation between the target concept (MATCH), the source concept (WICK, TO LIGHT, WOOD/TO RUB, FIREBRINGING, LITTLE PIECE OF WAX) and the words expressing the target concept (*match*, *allumette*, *Streichholz*, *fósforo*, *cerilla*), then we have to develop a semantic typology for all types of lexical innovation, such as semantic change, derivation, compounding, gender change, conversion, the different types of idioms, but also for word blending, agglutination, deglutination, onomatopoeia as well as loan words and their subsequent semantic changes. Recent studies (cf. footnote 8) have shown that, although these types of lexical innovation are formally

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<sup>8</sup> Cf. Koch 1999c; Gévaudan 1999; Blank 1996, 1997, 1998d (with recourse to Gauger 1971 for the semantic interpretation word-formation), 1999b.

completely different, they rely semantically on a small set of associative relations between source and target concepts. All associative relations can be reduced to the three Aristotelian principles of remembering, i.e. *similarity*, *contrast* and *contiguity*.

From these three principles, *similarity* shows by far the greatest diversity: The best known process based on similarity is that of metaphor which relates two concepts that exhibit a more or less peripheral perceptual or functional analogy or another common aspect, as e.g. E *foot* ‘terminal part of the leg, on which the body stands’ and ‘lowest part of a hill, ladder, etc.’. As the type of relation behind lexical metaphor can be found in word formation as in idioms, we call this associative relation *metaphorical similarity*.

There are cases of semantic change where conceptual similarity is higher, e.g., in Sp *tigre* ‘tiger’, which in Southern America means also ‘jaguar’, or E *hound* ‘dog trained to pursue game’, whose elder meaning is ‘dog in general’. In both cases, we can state similarity between the senses and the concepts behind them, and this similarity is fairly stronger as in the case of metaphor. Indeed, in addition to similarity, the concepts of DOG and DOG TRAINED TO PURSUE GAME as well as TIGER and JAGUAR show also a taxonomic relation, as defined in section 2.3. In the first case, the relation is hierarchical, DOG being the concept superordinated to DOG TRAINED TO PURSUE GAME. In the second case, the relation is non-hierarchical, TIGER and JAGUAR both being equally subordinated concepts to CAT or BEAST OF PREY. The similarity between both animals is obvious so that we may call the association between subordinated concepts on the same hierarchical level *co-taxonomic similarity* (cf. also Cruse 1986, 137).

In the case of E *hound*, the similarity remains more abstract, as, logically, DOG TRAINED TO PURSUE GAME is included in DOG. On the other hand, it is also obvious that the specialized sense is due to a kind of prototypical relation (cf. Blank 1997: 387), so that the similarity between the prototype (dogs for hunting) and other dogs is the associative basis of this change. The relation between prototypical members, non-prototypical members and the whole category is even more important in compounding (cf. Blank 1998d: 18-22). Synchronically, however, the hierarchical, taxonomic aspect is preponderant so that we can call the relation underlying the change of E *hound* ‘dog in general’ > ‘dog trained to pursue game’ *taxonomic subordination*. The opposite relation, where the process goes from the subordinated to the hierarchically higher concept, is called *taxonomic superordination*.

Similarity is a gradual phenomenon ranging from peripheral similarities to very strong conformity. The highest degree of similarity is *conceptual identity*, i.e. an association of the same concept or the highlighting of prototypical features of a concept, as observed in cases of tautology or in certain types of word formation (cf. Blank 1998d: 9 and 17s.).

Finally, similarity plays a role in an association which is not situated on the conceptual, or better: not only on the conceptual level, but works on the level of signifiers. This happens in cases of popular etymology, but also – voluntarily or involuntarily – in word blending, as in E *motor* + *hotel* → *motel* or in L *altus* + Germ *\*hauha-* → OF *haut* ‘high’. We call this relation *formal similarity*.

*Contrast* as an associative principle is by far less important than its counterpart *similarity*.<sup>9</sup> It figures in some cases of word formation and rarely in semantic change and idioms. As contrast of signifiers is the fundamental principle of every semiotic system, only conceptual contrast is relevant to lexicology and to cognitive onomasiology. Although lexical innovation by contrast occurs rarely, we can distinguish two subtypes: *co-taxonomic contrast* (or antonymic contrast), which designates an association of something directly opposed (as in E *bad* ‘not good’ > E (Slang) ‘excellent’), and *antiphrastic contrast* for cases of association of more indirectly opposed concepts (as in F *pensionnaire* ‘guest in a boarding house’ > F (Argot) ‘convict’).

Completely different from similarity and contrast are associations by *contiguity*, which is the principle behind the engynomic structures as defined in section 2.3. While contrast and similarity are relations that demand a certain reflection upon the concepts involved and are sometimes purely “academic”, as the two concepts have nothing to do with each other, contiguity relations result from reality insofar as we have learned that there is a spatial, temporal or logical connection between the concepts or that we can presuppose such a connection. We call this type of relation *conceptual contiguity*.

Again, as with similarity, there is a non-conceptual type of contiguity which is relevant for one type of semantic change (lexical absorption or ellipsis) and probably for word formation and idioms: this is due to the fact that simple words are combined to higher lexical units and that they may influence each other mutually. One example: automobiles were first called *motor cars* to distinguish them from other cars. With time however, motor cars became more common than other cars, so that *car* was used instead. Semantically, this is an absorption of the sense of *motor car* into the simple lexeme *car*, which formally is a part of the complex unit *motor car* (cf. for details Blank 1997: 288-292). The relation between the parts of complex lexical units is called *syntagmatic contiguity*.

#### **4.2. A cross-classification of processes and relations**

At first glance, the ten types of associative relations may appear rather abstract. And indeed, on the level of lexical description, they are surely more difficult to deal with than the terms metaphor or metonymy, which describe purely semantic processes as the words itself remain unaltered. The advantage of the ten relations reveals only when it comes to describe the different types of word formation and other types of lexical innovation, where a formal process (suffixation, compound, conversion or zero-derivation) and a semantic process coincide. Usually, these processes don’t have traditional names as is the case with the figures of speech. The distinction however is of absolute necessity for a cognitive onomasiology as described above – and, in a larger sense, for any work in synchronic and diachronic lexicology –, as it allows the clear determination of the *manner of verbalization* (compound, idiom, conversion, semantic change, etc.) and of the *type of relation* between

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<sup>9</sup> To the interdependence of contrast and similarity cf. Blank 1997: 142s.

source and target concepts (metaphoric similarity, conceptual contiguity, etc.). As a result, we obtain a cross-classification of the *manner of verbalization* and the *type of relation*. Some examples:

- (3) E *tea* ‘drink’ > ‘afternoon meal’  
*manner of verbalization*: semantic change  
*type of relation*: conceptual contiguity (= metonymy)
- (4a) It *ragazzo* ‘boy’ + *-ino* → *ragazzino* ‘little boy’  
suffixation / taxonomic subordination (= diminution)
- (4b) It *ragazzo* + *-one* → *ragazzone* ‘big boy’  
suffixation / taxonomic subordination (= augmentation)
- (5) F *bien* ‘well’ → (*le*) *bien* ‘the good’, ‘property’  
conversion / conceptual identity
- (6) G *Wüste* ‘desert’ + *Schiff* ‘ship’ → *Wüstenschiff* ‘camel’  
compounding / conceptual contiguity + metaphorical similarity
- (7) F *mener qn. en bateau* ‘to fool someone’  
syntactic idiom / metaphorical similarity
- (8) E *motor* + *hotel* → *motel*  
word blending / conceptual contiguity + taxonomic subordination + formal similarity

Semantic innovation, word formation, idioms, blends etc. are one way to cope with the necessity of verbalizing a concept. Another way is to borrow the word for the concept from a language that has already verbalized it. At all times and in most languages of the world borrowing has been a very common strategy: according to Walter/Walter (1991: 9ss.), ca. 8000 on the 60.000 words contained in the *Petit Larousse* have foreign origins – not included the borrowings from Classical and Medieval Latin. Loanwords often are submitted to further lexical change during or after the borrowing process (cf. Blank 1995: 46-53). A sort of attenuated form of borrowing is the so-called “loanshift” (Haugen 1950), a substitution of a foreign word or idiom by proper lexical material. In this case, indeed, all processes as described above, are possible, with the only difference, that the foreign language serves as a model that is more or less faithfully applied:

- (9) E *window* ‘rectangular field in a computer screen containing a specific application’  
⇒ G *Fenster*  
semantic change / metaphorical similarity (= semantic loan)
- (10) E *homepage* ‘first page of a website, often containing its directory’ ⇒ F *page d’accueil*  
lexicalized syntagm / metaphorical similarity + conceptual contiguity (= loan transfer)

At this point, we can return to the onomasiological perspective as we are now able to describe precisely the lexical pathways by which the words for MATCH in English, French, German and Spanish came to mean what they mean today. For this purpose, we use the following schema which goes from a given TARGET CONCEPT<sub>i</sub> to its SOURCE CONCEPT<sub>j</sub>. In

some cases, one likes to go beyond this source concept, which then is a TARGET CONCEPT<sub>i-1</sub> for a process that leads to another SOURCE CONCEPT<sub>i-1</sub>. In the center of each phase there is the case for the lexical process which links source and target form, and for the associative relation which links source and target concept:

(11) MATCH in English, French, German and Spanish

⊕ TARGET CONCEPT <sub>i</sub>	M A T C H ‘short, slender piece of wood or other material tipped with a chemical substance which produces fire when rubbed on a rough or chemically prepared surface’				
☞ TARGET FORM <sub>i</sub>	E <i>match</i>	F <i>allumette</i>	G <i>Streichholz</i>	Sp <i>fósforo</i>	Sp <i>cerilla</i>
⌘ PROCESS / RELATION <sub>i</sub>	semantic change / metaphorical similarity	semantic change / taxonomic subordination	compound conceptual contiguity + conceptual contiguity	loan conversion + conceptual contiguity	suffixation / taxonomic subordination
♪ SOURCE FORM <sub>i</sub>	E <i>match</i>	F <i>allumette</i>	G <i>streichen</i> + <i>Holz</i>	OGr <i>phosphóros</i>	Sp <i>cera</i> + <i>-illa</i>
📁 SOURCE CONCEPT <sub>i</sub> = ⊕ TARGET CONCEPT <sub>i-1</sub>	WICK	SPLINTER DESIGNATED TO TRANSPORT FIRE	TO RUB + WOOD	FIREBRINGING	WAX
☞ TARGET FORM <sub>i-1</sub>	ME <i>macche</i>	F <i>allumette</i>			
⌘ PROCESS / RELATION <sub>i-1</sub>	loan / conceptual identity	suffixation / conceptual contiguity			
♪ SOURCE FORM <sub>i-1</sub>	OF <i>mesche</i>	OF <i>allumer</i> + <i>-ette</i>			
📁 SOURCE CONCEPT <sub>i-1</sub>	WICK	TO LIGHT			

**5. Diachronic cognitive onomasiology: three case studies**

The following three case studies are intended to demonstrate our conception of diachronic cognitive onomasiology and especially the advances in the precision of lexical analysis. We will see how universally salient conceptualizations can be sorted out from a large corpus of languages, how different conceptualizations consequently lead to a completely different trend in verbalizing concepts from similar fields and, finally, how the conceptualization itself can vary in the history of one language.

**5.1. Universal conceptualizations: the PUPIL revisited**

In 1949, the Italian linguist Carlo Tagliavini published an article on “Some names for the PUPIL, an onomasiological study with special regard to the Camito-Semitic and the African

languages” [my translation]. Analyzing the names for this concept in far more than 100 languages and idioms, Tagliavini discovered nine main strategies of verbalizing the PUPIL, some of them comprising subgroups which contain variations of the main conceptualization. The major source concepts, according to Tagliavini, are BALL/EGG/APPLE, BLACK, CENTER, STAR/LIGHT, NUT/PIP/PEARL, MIRROR, SEE/LOOK, LITTLE MAN/GIRL/BOY/PUPPET and, more rarely, syllable reduplication as in baby talk (cf. Tagliavini 1949/82; for a short and slightly reorganized overview cf. Blank/Koch 1999b).

Tagliavini’s onomasiological study is ingenious and completely outstanding, as he clearly points out the major source concepts. We learn that there neither exists only one single way of conceptualizing the PUPIL nor is there an infinity of source concepts, but a strictly limited number of types. From the broad language sample we are allowed to conclude that these are universally recurrent strategies for naming the PUPIL, or, in other words, individual innovations that have been successful insofar as other speakers adopted them because they considered them to be convincing. Furthermore, a kind of empirical hierarchy can be stated: LITTLE MAN/GIRL/BOY/PUPPET is by far the most common strategy in Tagliavini’s corpus (44 idioms), followed by NUT/PIP/PEARL/LITTLE STONE (36), BLACK (24), BALL/EGG/APPLE (21), SEE (16), STAR/LIGHT (14), CENTER (7) and MIRROR (4).<sup>10</sup> At the end of his study, Tagliavini, states, referring to Bertoldi, that here “distant nations have occasionally met on the identical roads of human imagination” (Tagliavini 1949/82: 568 [my translation]).

From a cognitive point of view, one can predict that, if speakers adopt a new way of expressing the concept PUPIL, they will with high probability use one of the strategies discovered by Tagliavini. In this sense, his study is exemplary to any extent for diachronic cognitive onomasiology. Nevertheless, can we enhance the value of his study by classifying all lexical and semantic processes that have made a word that originally meant, e.g., ‘ball’ or ‘black’ to designate the PUPIL, in order to emphasize the lexical pathways speakers choose to express a concept as well as the intermediate stages. Applied to Tagliavini’s study this view will add, among others, the following precisions:

1. *Distinction between complex and simple denominations*: There is a difference between more and less explicit denominations as, e.g., Hung *szemfeketéje* ‘the black (part) of the eye’, Maori *karupango* ‘the eye-black’ vs. Coptic *kake* ‘the dark one’. Although the source concept remains the same, we have, on one side, semantically explicit compounds combining two conceptual contiguities (PUPIL – BLACK and PUPIL – EYE) and, on the other side, a conversion with conceptual contiguity where no explicit reference on the eye is found. The same holds true for Sard *candela di ogu* ‘candle of the eye’ and Engadine *stailina* ‘little star’: while the first case is a lexicalized syntagm that, semantically, combines metaphoric similarity with

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<sup>10</sup> Two restrictions must be made: 1. the hierarchy maybe is due to Tagliavini’s choice of languages which is not fully representative for the languages of the world; 2. the evidence for some of Tagliavini’s examples seems to rely on singular attestations in dictionaries and sometimes does not hold in light of modern lexicography as, e.g., Arab *hadaq* whose source concept rather is TO LOOK/GLANCE (cf. DMWA, s.v. ?adaqa) than SWELLING as postulated by Tagliavini.

conceptual contiguity, the second is a diminutive in metaphorical use.

2. *Distinction of different diachronic stages*: This problem is already overt in Engadine *stailina*: in a diachronic perspective, we must distinguish a) the forming of the diminutive *stailina* ‘little star’ (from *staila* + *-ina*, lexicalized with this sense, cf. DTL, s.v. “staila”), which is, semantically, a taxonomic subordination (a LITTLE STAR being a kind of STAR), from b) the semantic change from ‘little star’ to ‘pupil’. The correct source concept of PUPIL in Engadine thus is not STAR, but LITTLE STAR, which itself refers to STAR.

This distinction is of even higher importance in the following case: Tagliavini’s material shows clearly that, in most of the languages which use the BALL/EGG/APPLE-conceptualization, BALL, EGG or APPLE are not the source-concepts for PUPIL, but for EYEBALL, which, to any extent, is more convincing from a perceptive point of view (cf. F *prunelle* ‘little plum’ > ‘eyeball’). The correct source concept for PUPIL in these cases is EYEBALL. This is not just a matter of punctiliousness, but modifies our list of universal source concepts for PUPIL! Nevertheless we can state that Tagliavini found out, without being fully aware of it, that BALL/EGG/APPLE > EYEBALL > PUPIL constitutes a typical conceptual drift. I illustrate this drift with three examples taken from Tagliavini’s corpus:<sup>11</sup>

(12)

⊕ TARGET CONCEPT <sub>i</sub>	P U P I L ‘the opening in the iris of the eye’		
👁 TARGET WORD <sub>i</sub>	Ir <i>uball na suile</i>	Sirjenian <i>sin-kol’k</i>	Sard (Planargia) <i>láəəara</i>
⌚ PROCESS/RELATION <sub>i</sub>	semantic change / conceptual contiguity	semantic change / conceptual contiguity	semantic change / conceptual contiguity
🗨 SOURCE WORD <sub>i</sub>	Ir <i>uball na suile</i>	Sirjenian <i>sin-kol’k</i>	Sard <i>láəəara</i>
📁 CONCEPT-SOURCE <sub>i</sub> = ⊕ TARGET CONCEPT <sub>i-1</sub>	EYEBALL	EYEBALL	*EYEBALL
👁 TARGET WORD <sub>i-1</sub>	Ir <i>uball na suile</i>	Sirjenian <i>sin-kol’k</i>	Sard <i>láəəara</i>
⌚ PROCESS/RELATION <sub>i-1</sub>	syntagm / metaphoric similarity + conceptual contiguity	compound / conceptual contiguity + metaphoric similarity	semantic change / metaphoric similarity
🗨 SOURCE WORD <sub>i-1</sub>	Ir <i>uball + suile</i>	Sirjenian <i>sin + kol’k</i>	Sard <i>láəəara</i> , <i>gáəəara</i>
📁 SOURCE CONCEPT <sub>i-1</sub>	APPLE + EYE	EYE + EGG	GALLNUT

Let’s finally have a look at the major type for expressing PUPIL: at first glance, the source concept LITTLE MAN/GIRL/BOY/PUPPET seems somewhat strange, but is explained as the small reflection of oneself in the other’s eye. We have, thus, an inseparable combination of similarity (ONESELF – THE LITTLE PICTURE) and conceptual contiguity (THE LITTLE PICTURE –

<sup>11</sup> The intermediate sense ‘eyeball’ Sard *la??ara* is reconstructed by us, but is supported by the parallel Pt *bugalho* ‘gallnut’ > ‘eyeball’ (cf. DES, s.v. “gá??ara”).

THE ORGAN ITSELF). Here again, cases of word formation as, e.g., Iranian *mardom-e tsheschm* ‘little man of the eye’, Arab *sbi-ul ‘aiin* ‘little boy of the eye’, Kimbundu *camóna já méssu*, Sp *niña de ojo* ‘little girl of the eye’, have to be distinguished from semantic changes as, e.g., L *pupilla* ‘orphan, little girl’, Albanian *minzë* ‘girl’ or gr.*koj rh* ‘girl’.<sup>12</sup>

Concluding this paragraph we can state that a detailed diachronic lexicological analysis of the denominations found in a language sample not only focuses on the processes itself in order to give lexicologically satisfying results, but sharpens our view for intermediate concepts and thus furthers the exactitude of the postulated source concepts.

## 5.2. Cognitive saliency and diachronic drift: TREE and FRUIT

In section 5.1. we have seen that different strategies universally compete for the verbalization of a concept. Some strategies may however rank higher according to the number of languages in a corpus which use them. We can then say that in the group(s) of languages investigated a certain trend towards a certain number of strategies can be detected. In the case of PUPIL, however, we cannot really explain this trend, if not by saying that the little image of oneself in the other’s eye is more salient than other conceptualizations.

In the example we will discuss in this section, perceptive and conceptual saliency draws from a cultural background which serves as an explanation for the trend we observe. In his study on “tree and fruit” Koch (1999a) analyzes the denominations of PEAR and PEAR TREE as well as BEECH and BEECHNUT in 27 languages of the world. As a general tendency he finds out that, as in English, PEAR TREE is verbalized on the basis of PEAR (13) and BEECHNUT on the basis of BEECH (14):

(13a)Pt *pera* → *pereira* (suffixation / conceptual contiguity)

(13b) Turk *armut* → *armut anacı* (compound / taxonomic subordination + conceptual contiguity)

(13c) Pers *gol <abi* → *deraxt-e gol <abi* (lexicalized syntagm / conceptual contiguity + taxonomic subordination)

(14a) Sp *haya* → *hayuco* (suffixation / conceptual contiguity)

(14b) Jap *buna* → *bunanomi* (compound / taxonomic subordination + conceptual contiguity)

(14c) Arab *z <an* → *qamar azz <an* (lexicalized syntagm / conceptual contiguity + taxonomic subordination)

The reason for this converse situation is obvious: in the case of PEAR/PEAR TREE, the fruit is more important and therefore cognitively more salient, the tree serves as a background; in the case of BEECH/BEECHNUT the situation is inverted: the wood is the figure, the fruit is the ground. The conceptualization of trees and their fruits thus depends largely on our experience

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<sup>12</sup> The latter may of course be absorptions of former complex forms which are not documented.

and on their respective relevance to us. From this perspective, it is not surprising that in the majority of the languages analyzed by Koch the more salient concept is verbalized as a simple lexeme, while the less salient is verbalized as a complex lexeme on the basis of the simple one (19 in the case of BEECH/BEECHNUT, 20 in the case of PEAR/PEAR TREE). Koch states that “new designations of trees and fruits are not created in a totally arbitrary way” (1999a: 343).

Nevertheless, some exceptions of this general rule show that, once again, we have no cognitive “one way road”, but just a *typical drift of verbalization*. Lexical solutions which synchronically do not or not clearly mark this drift are gender change (15), metonymy (16) or morphologically independent lexemes (17). Especially intriguing is Polish (18) for PEAR/PEAR TREE with a development that even contradicts the general drift of verbalization:

(15a) L *pirus* ‘pear tree’ ≈ *pirum* ‘pear’

(15b) OGr ‘*ajpio*’ ‘pear tree’ ≈ *ajpion* ‘pear’

(16) Russ *grusza* ‘pear’ > ‘pear tree’ (semantic change / conceptual contiguity)<sup>13</sup>

(17) Danish *bøg(etræ)* ‘beech’ – *olden* ‘beechnut’

(18) Polish *grusza* ‘pear tree’ → *gruszka* ‘pear’ (suffixation / conceptual contiguity)<sup>14</sup>

The existence of examples that don’t fit into the general framework does not weaken the hypothesis of a cognitive grounding of the denominations for TREE and FRUIT, but emphasizes that, as a general rule, naming of concepts isn’t governed by strict constraints, but rather by a set of higher and lower probabilities from which we can “predict the range of [...] designational options” (Koch 1999a: 343s.). If a language exhibits one of the more untypical strategies, change – if it occurs – will rather go towards the more typical solution. Evidence for this historical dynamic in Koch’s sample is given by the greater number of Romance languages as well as by Modern Greek: they gave up the Latin and Old Greek gender alternation for PEAR/PEAR TREE (cf. 15) and adopted a more explicit marking of the relation which, of course, follows the typical drift of verbalization:

(19a) F *poire*, Sp, Pt, Cat *pera*, Engadine *paira* ‘pear’ → F *poirier*, Sp *peral*, Pt *pereira*, Cat *perer(a)*, Engadine *pairer* ‘pear tree’

(19b) NGr *apijdi* ‘pear’ → *apidiaj* ‘pear tree’

### 5.3. Change of conceptual boundaries: from less to more salient categorizations of the ARM

The development described in Romance underlines the existence of a typical cognitive constellation which favours a new conceptualization and verbalization of the PEAR TREE. The

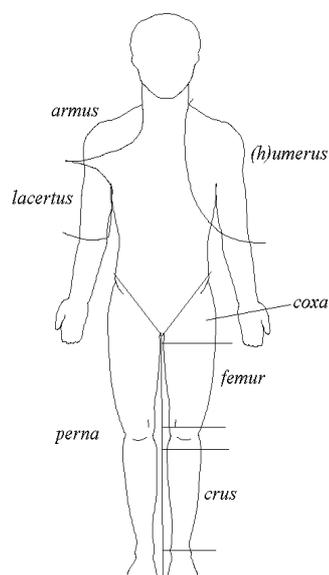
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<sup>13</sup> As this is, according to Koch (1999a), the diachronic direction of the process, Russian follows the general drift of verbalization for PEAR/PEAR TREE.

<sup>14</sup> Polish *gruszka* seems to be a case of diminution, but maybe the suffix can also have relational function as is the case with It *-ina* in *faggina* ‘beechnut’ (← *faggio*).

concepts PEAR TREE and PEAR themselves however remain unaltered. How a conceptual system itself changes under the influence of a cognitively more salient categorization of a conceptual frame is described by Krefeld (1999), once again with examples for change from Latin to Romance. Krefeld first states that there existed no original word in Latin to designate properly the concept ARM as we would conceive it. The three Latin words, *armus* ‘upper part of the upper arm and shoulder’, *(h)umerus* ‘upper arm and shoulder’ and *lacertus* ‘muscular upper arm’, indicate a categorization of the human body that overrides the distinction between the torso and the body extremities. The speakers of Latin thus conceptualized and verbalized the human body in a rather idiosyncratic manner as shows the following drawing:

(20) The conceptualization of the human body in Latin (cf. Krefeld 1999: 266)



Already during the classical period this kind of categorization, whose reasons are difficult to understand, was paralleled by a model that conceptualizes the ARM more as a whole and as an extremity ending with the shoulder joint and not comprising the shoulder itself. Probably right for this purpose, the Greek loanword *brachium* ‘forearm’ and ‘arm’ was introduced, while the meaning of *(h)umerus* was reduced to ‘shoulder’. The Romance languages abandoned completely the older Latin categorization and continued exclusively what Krefeld calls the “torso-extremity-model” (1999: 259s.). Thus, Romance makes a clear conceptual distinction between the ARM as an extremity (e.g. F *bras*, It *braccio*, Rum *bra $\approx$ t*, Engadine *bratsch*) and the SHOULDER as a part of the torso (e.g. F *épaule*, Sp *hombro*, Pt *ombro*, *espádua*, Sard *pála*, *κοθαυ*). From a cognitive point of view, this appears to be a more salient conceptual segmentation, as the perceptively clear shaped distinction between the torso and the extremities is respected. Again, we observe the adoption of a more typical strategy, but this time a change in the conceptual structure itself was involved.

## 6. Conclusion

Diachronic cognitive onomasiology investigates the main strategies that exist in a language

sample for conceptualizing and verbalizing a given concept and tries to explain them against a cognitive background in terms of salient perceptions, prominence, convincing similarities etc. It asks for the source concepts that seem to be universally recurrent, lays bare the associative relations between source and target concepts and describes the lexical processes used by the speakers. It thus requires a double framework of associative relations which virtually can combine with any process of lexical innovation.

This theoretical foundation also allows the description and explanation of changes towards a cognitively more prominent strategy and of reorganizations of conceptual structures. Furthermore can we, to a certain extent, predict which strategy will be the most probable to be taken by speakers when they produce lexical innovations. In this sense, a history of concepts that integrates semasiological change on the level of the individual designation contributes to a better understanding of how reality (or what man holds it to be) is perceived and interpreted and thus may serve as a modest contribution of linguistics to a better understanding of the human mind.

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