

JOACHIM GRZEGA

**SOME THOUGHTS ON A COGNITIVE ONOMASIOLOGICAL APPROACH TO WORD-FORMATION  
WITH SPECIAL REFERENCE TO ENGLISH<sup>1</sup>**

**Abstract**

Word-formation is seldom seen from a cognitive and onomasiological angle. Exceptions are the works by Pavol Štekauer and articles by Andreas Blank and Peter Koch. This paper evaluates these contributions and their most relevant points and suggests some further additions to the respective theories. As in Štekauer's theory, the approach presented here assumes that a speaker's mind passes five levels in the name-giving, or word-finding, process: (i) the conceptual level (analysis of the concept), (ii) the semantic level (structuring of the semantic markers), (iii) the onomasiological level ("naming in an abstract sense", i.e. selecting the iconyms), (iv) the onomatological level ("naming in a concrete sense", i.e. selecting the morphemes), (v) the morphonological level (concrete realization respecting a word's inherent morphonological rules). At the onomasiological and onomatological levels, speakers can select from 16 different word-formation types (Štekauer's 5 types have been supplemented here): conversion (syntactical recategorization), simplex composites (e.g. *lion-hearted*), complex composites (e.g. *truck driver*), mark-absence composites 1 (e.g. *driver*) and 2 (e.g. *hatter*), base-absence composites (e.g. *redskin*), copulative composites (e.g. *deaf-mute*), ellipsis, clipping, acronym, contamination (e.g. *brunch*), back-derivation, reduplication, morphological recategorization, word-formation in connection with borrowing (pseudo-loans like *telephone*, loan-translation like Fr. *gratte-ciel* from E. *skyscraper* or loan-renditions like G. *Wolkenkratzer*, literally "cloud-scraper", from E. *skyscraper*), clarifying (or post-classifying) composites (like *hound dog*), and folk-etymology. With some types formal-aesthetic aspects seem more relevant than salient conceptual aspects.

**1. Introduction**

At the beginning of each onomasiological approach is a concept that you want to name. You either (a) choose an already existing name for the concept or (b) you choose to create a new synonym or (c) it may also be that the concept is so new that it has not even been given a name yet. As to (a) and (b) two conversational principles that have been felt to be relevant for linguistic change have been playing an important role for a score of years now: the so-called efficiency principle and the so-called expressivity principle (cf., e.g., Geeraerts [1983] or the summarizing work by Blank [1997a]). At any rate, in cases (b) and (c) the speakers need find a suitable motivation, an iconym as Alinei (e.g. 1995, 1997) has called it, for the new coinage. This means that you have to analyze the concept (into salient aspects): you may see the elements it consists of (partiality), you may see what it looks like compared to other things (similarity), you may see what it does not look like compared to other things (contrast), you may see other concepts that the concept to be named is related with (contiguity) or you may see the relation to other words in the same conceptual field (taxonomic relations).<sup>2</sup> Koch (2001) further subdivides these principles into seven

<sup>1</sup> I wish to express my gratitude to Pavol Štekauer for commenting on an earlier draft of this paper. I would also like to thank my colleague Miller Jones for his linguistic and stylistic comments.

<sup>2</sup> Some of these principles remind us of the terms *synecdoche/pars pro toto*, *metaphor*, *contrast* and *metonymy*, which, however, have to be placed into the realm of semantic changes only. The associative principles of "similarity" and "contiguity" in connection with semantic shifts were first investigated by Roudet (1921), whose assumptions are the basis for Blank's (1997a) model, in which the principle of "contrast" has been added. In recent literature (cf. Blank 1997a), *synecdoche/pars pro toto* has no longer been separated from metonymy, since the delimitation seems fraught with extreme difficulties. Koch (1999b), e.g., sees both as relations within a frame (on frame theory cf. Fillmore 1975, 1985). However, in

cognitive-associative relations: contiguity (i.e. relations within a conceptual frame; he also calls these conceptual hierarchies *engnymies* in order to distinguish them from *taxonomies*), metaphorical similarity, taxonomic similarity, taxonomic superordination, cotaxonomic contrast, and conceptual contrast. When trying to find a name for a given concept the speaker not only has to select from cognitive possibilities, but s/he also has to select from formal possibilities to transfer these associations into actual sound: basically s/he may either (a) take an already existing word and give it a new meaning (i.e. semantic change), (b) borrow an already existing word with the same meaning from another dialect or language (loan-word), (c) coin an entirely new lexical item, or (d) form a new word from already existing material (word-formation); the speech community may also use a combination of these possibilities.<sup>3</sup> For illustration I will take Alinei's (1995, 1997) example of the terms for GLASSES in various languages and Dirven/Verspoor's<sup>4</sup> (1998: 54f.) example on the terms for the CELLULAR PHONE. FOR GLASSES we find the terms E. *glasses* (associative principle: partiality; formal type: semantic change), Fr. *lunettes* (literally "little moons"; similarity; word-formation), It. *occhiali* (literally "things belonging to the eyes"; contiguity; word-formation), G. *Brille* (from Fr. *briller* 'shine'; partiality; borrowing). FOR CELLULAR PHONE we find AmE *cellular (phone)* (partiality; word-formation); BrE *mobile phone* (partiality; word-formation) or *carphone* (contiguity; word-formation), Fr. *portable* (partiality; word-formation/semantic change?<sup>5</sup>), G. *Handy* (meaning "[portable in the] hand"; partiality; (pseudo-)loanword)<sup>6</sup>. While the topic of semantic change has been seeing a cognitive and onomasiological revival in recent years (cf. especially Blank 1997a), it is astonishing, though, that hardly any theoretical, general attempt has been made to view word-formation as a forming process, as an active process, in other words: as an onomasiologically and cognitively relevant phenomenon.<sup>7</sup>

Word-formation did not start to be considered a separate branch in English linguistics until the pace-setting work from the pen of Hans Marchand (1960, 2nd ed. 1969).<sup>8</sup> However, Marchand's book as well as other frequently cited basic works such as the ones by Lees (1960), Adams (1973), Halle (1973), Lieber (1981, 1992), Kastovsky (1982), Hansen et al. (1982), Bauer (1983) and Anderson (1992) share the feature of focussing primarily on the analysis aspect and neglect or exclude the synthesis aspect, i.e. the active process of forming proper. Exceptions are Jackendoff (1975) and Aronoff (1976). But in these (sometimes mathematics-laden) works from the realm of generative linguistics the extralinguistic concept is more or less ignored. All these theories and approaches<sup>9</sup> have in

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some cases two concepts within a frame are mingled and in some cases the "frame heading", as it were, and a concept within this frame are mingled. I will see the first as contiguity/metonymy and the second as partiality/synecdoche, which is similar to Bredin's (1984) nomenclature that synecdoches have to do with structural relations, while metonymy is based on extrinsic relations; but a more detailed discussion of this issue must be reserved for another occasion.

<sup>3</sup> For a more detailed survey on these various formal possibilities cf. Zgusta (1990). The variety of name-giving possibilities is already remarkably presented by Whitney (1867, Chapter 3, and 1875, Chapter 8).

<sup>4</sup> Dirven/Verspoor's book is a good introduction to linguistics from a cognitive and onomasiological viewpoint (cf. Grzega [forthcoming]).

<sup>5</sup> We will come back to this problem later.

<sup>6</sup> The comparison of such possibilities is not only relevant as to single new objects, but sometimes also as to the development of an entire lexicon, as can currently be demonstrated with the establishment of a standard variety for the five Dolomitic Ladin dialects in South Tyrol (cf., e.g., Grzega 2000b with a study of concrete problems).

<sup>7</sup> The onomasiological importance of word-formation within a specific word-field, namely trees and fruits, has been dealt with by Koch (1999a).

<sup>8</sup> despite the already very valuable early work by Koziol (1937)

<sup>9</sup> Except for Hansen et al. (1982) the theories of the authors mentioned are summarized and evaluated in the comprehensive survey by Štekauer (2000). A rich bibliography of works on English word-formation until 1972 is offered by Stein (1973).

common that diachronic facts, i.e. historical processes, are not taken into account where this seems valuable. The same defaults can be observed within other philologies. It was only in 1998 that Pavol Štekauer rang in the cognitive, “onomasiological turn” in word-formation,<sup>10</sup> even though Andreas Blank (1997b) had lectured on word-formation from an onomasiological viewpoint on the occasion of the International Congress of Linguists one year earlier—with particular focus on Romance examples. These two linguists as well as a few thoughts of Dirven/Verspoor (1998) and Koch’s (2001) three-dimensional grid for lexical diachrony shall be discussed in the following sections. Their ideas will be evaluated and, if need be, also be complemented in order to enable the integration of word-formation into a larger project of historical onomasiology that I am carrying out at present.

## 2. Approach by Pavol Štekauer

### 2.1. The Elements of Štekauer’s Theory

For Štekauer<sup>11</sup> word-formation is about “**productive, regular, and predictable** onomasiological and word-formation types producing **motivated** naming units in response to the **naming needs** of a speech-community, by making use of **word-formation bases of bilateral namings units and affixes** stored in the lexicon” (Štekauer 1998: 33, his emphasis; similarly stated already in 1996: 113). These naming units, according to Štekauer, have a purely lexical function; in contrast to the generative grammatical claim, there is no link between word-formation and syntax.<sup>12</sup>

According to Štekauer a word-forming, or word-finding, process consists of five levels: (1) the conceptual level, where the concept to be named is analyzed and conceptually categorized in the most general way (i.e. “SUBSTANCE, ACTION (with internal subdivision into ACTION PROPER, PROCESS, and STATE), QUALITY, and CONCOMITANT CIRCUMSTANCE (for example, that of Place, Time, Manner, etc.)” [Štekauer 2001: 11]), (2) the semantic level, where the semantic markers or semantic components are structured,<sup>13</sup> (3) the onomasiological level, where one of the semantic components is selected as the onomasiological basis (representing a class like agent, object, instrument etc.<sup>14</sup>) and another as the so-called onomasiological mark of this basis (the mark can further be divided into a determining constituent—sometimes distinguishing between a specifying and a specified element—and a determined constituent),<sup>15</sup> (4) the so-called

<sup>10</sup> Cf. also the preliminary works by Štekauer (1992, 1996). A concise illustration of his onomasiological theory is presented in Štekauer (2001) and Štekauer (2000: 1-28).

<sup>11</sup> I will mostly quote from Štekauer (2001), since this article as a publication in an internet journal can be accessed very easily. The passages cited can also be found —partly in the same wording—in other contributions by Štekauer (cf. bibliography).

<sup>12</sup> Problematic cases such as *sit-around-and-do-nothing-ish* or *leave-it-where-it-is-er* are solved as follows: “the Lexical Component cannot fulfil its typical function of feeding the required word-formation bases to the WF Component for the simple reason of not having them in stock. Therefore, the Lexical Component mediates the required material from Syntax” (e.g. Štekauer 2001: 26). For a counter-view cf. Hansen (2000: 173f.).

<sup>13</sup> The structuring of semantic markers from an onomasiological point of view is also in the center of a recent article by Horecky! (1999).

<sup>14</sup> Cf. also Beard’s (1995) assumption that there exists a series of universal supralinguistic cognitive categories (such as “Subjective/Agent”, “Objective”, “Instrumental”, “Locational”, “Diminution”, “Augmentation” etc.). These categories, as Štekauer (e.g. 2001: 3) rightly underlines, must not be mixed up with the distinction between nouns, verbs etc. The category “action”, for instance, can be expressed by nouns as well as verbs, the category “quality” by nouns, adjectives, or verbs, etc.

<sup>15</sup> Štekauer (e.g. 2001: 4) paraphrases this as “naming in a more abstract sense”.

onomatological level (with the Form-to-Meaning Assignment Principle [FMAP]), where the concrete morphemes are selected,<sup>16</sup> (5) the phonological level, where the forms are actually combined, respecting morphological and suprasegmental rules.

Štekauer distinguishes five types of word-formation processes: (a) the “Complete Complex Structure (CCS)”, which formally shows all three constituents—onomasiological base, determining constituent, determined constituent—, e.g. *[[truck] [drive]]-[-er]*; (b) the “Incomplete Complex Structure R (ICSR)” (with *R* standing for ‘right’), where the determining constituent is not represented in the form, e.g. *[lock] [pin], [drive]-[-er]*; (c) the “Incomplete Complex Structure L (ISCL)” (with *L* standing for ‘left’), where the determined (actional) constituent is not represented in the form, e.g. *[hat(t)][-er]*; (d) the “Simplex Structure (SS)”, where the onomasiological mark cannot be split into a determining and a determined part, e.g. *[lion-heart][ed]* (*lion* and *heart* are the specifying and the specified element of the onomasiological mark, but not the determining and the determined constituent; cf. Štekauer [1998: 89]); (e) the “Onomasiological Recategorization (OR)”, which is called *conversion* or *zero-derivation* in the traditional terminology.

Since the terms *ISCL[eft]* and *ICSR[ight]* are very Anglocentric (and probably Slavocentric), I suggest speaking of “ICS2” (“Incomplete Complex Structure 2”) and “ICS1” (“Incomplete Complex Structure 1”). It may be added that not even in English is the “determinant” always in first position as shown by the type *pickpocket* (which may be influenced by French, e.g. *coupe-gorge*; cf. Marchand 1969: 381) or by a form like *center of attraction* (vs., e.g., *detention center*) with a formative element of<sup>17</sup>.

## 2.2. “Conversion”/“Onomasiological Recategorization”

The last type that was mentioned here, “Onomasiological Recategorization”, is especially important to Štekauer; he even dedicated an entire book to it (Štekauer 1996). Štekauer (cf. especially 1996: 23-43) views the process traditionally called *conversion* as a pure restructuring on the conceptual level and pronounces himself clearly against the theory of a zero-suffix, a theory that is often found in traditional literature (cf., e.g., Marchand 1969 and Bauer 1983). Cases like *e-mail*→*to e-mail* can thus *not* be explained on the formal level. The theory of a zero-suffix only makes sense, according to Štekauer (1996: 29, 38), when there are “true” suffixes with the same function. Otherwise we would also have to postulate a zero-suffix as a singular morpheme, and cases like *sheep*<sub>pl.</sub> would have to be interpreted as cases with a double zero-suffix or as cases where a singular zero-suffix is replaced by a plural zero-suffix. However, only with a minority of so-called conversions do we find variation with “true” suffixes; a good example is *cheat* (sb.), where a formation *cheater* is also imaginable (cf. the pattern *write*→*writer*). Other examples are less supportive of the zero-suffix theory. Thus, Štekauer writes that when we compare *clean* - *clean* and *legal* - *legalize* that a form *\*cleanize* is impossible, because *-ize* can only be attached to Latinate elements. But then, one could also reply that *in-* never precedes stems of Germanic origin (*un-* can be attached to both inherited and borrowed word-stems). Nevertheless, his argument must not be ignored in general. Štekauer (1996: 40) still adds further arguments against the zero-suffix theory: “derivational morphemes can occur in

<sup>16</sup> Štekauer (e.g. 2001: 4) paraphrases this as “naming in a more concrete sense”. It means a selection from the possibilities of expressing, for example, “Agent”; in English this can be expressed by *man*, *-er*, *-ist*, *-ant* etc. This also means that synonymy, which can be explained through a diachronical approach, is also natural in word-formation.

<sup>17</sup> On this cf. also Section 6.1.

word-formation either as allomorphs (e.g. *-er*, *-or*, *-ar* for agent nouns), or as homonymous morphemes whose word-formation meaning differs (*-er*<sub>1</sub> meaning ‘Agent’, *-er*<sub>2</sub> meaning ‘Instrument’). But Štekauer (1996: 40) continues: “In the case of zero word-formation morpheme, the first, above mentioned, possibility must be rejected. A zero morpheme cannot be an allomorph of, e.g.[,] the suffix *-er* because it—if conceded—functions as a parallel meaningful unit to a number of other suffixes. Moreover, it lacks any formal relations to the would-be allomorphs”. To me, the similarity does not seem a pre-condition for allomorphic relationship (cf. *more* and *-er* as allomorphs of the comparative). As to the equivocal nature of a postulated zero-suffix one could object that there are simply several homonymous zero-suffixes. But Štekauer (1996: 40) writes:

“this yields scores of homonymous zero morphemes because one and the same zero cannot cover all, semantically very different functions, e.g. Agent (*cheat*<sub>N-V</sub>), Quality as a result of Action (*clean*<sub>A-V</sub>)[,] Time of Action (*time*<sub>N-V</sub>), Object of Action (*insert*<sub>V-N</sub>), Objectification of Action (*experiment*<sub>N-V</sub>), Directional nature of the Object of Action (*contour*<sub>N-V</sub>), Instrument of Action (*switch*<sub>N-V</sub>), and dozens of others.”

Here we could reply, though, that some of the functions could surely be subsumed in a more general way. Nevertheless, we must not underestimate the polysemy of some suffixes (including their metonymical and metaphorical functions)—cf., e.g., the very different functions of *-er* in *teacher*, *villager*, *drawer*, *toaster*, *best-seller*. However, Štekauer’s arguments cannot be totally invalidated and all include aspects that, in sum, do indeed support his objection against the zero-suffix theory to a certain degree.

To Štekauer, the process of conversion is the following. The first basic feature is the conceptual recategorization: “Thus, for example, *atabank* represents a SUBSTANCE. When, however, conceptually recategorized, it becomes an ACTION; *experiment* expresses a PROCESS—after recategorization it refers to an ACTION PROPER”. With *to dance* and *dancer* we could equally well speak of a recategorization (on the basis of the associative principle of contiguity) from ACTION to AGENT OF ACTION, of course in combination with a formal change. It seems as if Štekauer focusses too much on the word instead of the concept. Therefore, the basic feature of conceptual recategorization doesn’t suffice to characterize conversion. Štekauer’s second feature is the non-analyzable onomasiological level, which Štekauer (e.g. 2001: 17) explains as follows: “the onomasiological connective, as an expression of logical-semantic relations, does not relate the base and the mark; rather, it relates the motivating and the motivated conceptual categories” (similarly Štekauer 1996: 48). This is convincing and, once more, shows the similarity of this process with semantic changes, which also take place without formal changes. The third feature is the change of word-class, which, for Štekauer (e.g. 2001: 18) is a strong argument against the assumption of a zero-suffix: “While suffixation can be divided into class-changing and class-maintaining, all new coverted coinages—irrespective of considerable semantic differences—behave equally in this respect: all types of conversion are class-changing” (similarly Štekauer 1996: 47). Here, one could argue that the zero-suffix simply belongs to those suffixes that change the word-class (just like synonymous “true” suffixes). Plus, we may ask whether the problem of a change of the word-class is not only a problem of languages that have word-classes. And we may then ask whether “conversion” should be distinguished from semantic change at all<sup>18</sup>. If Hockett’s (1976: 23) observation is true that all languages have at least a “major form-class distinction reminiscent of ‘noun’ versus ‘verb’ [...], though not always at the same size-level”, then we may keep the distinction

<sup>18</sup> Tournier (1985: 48) also groups conversion and semantic change (which he calls “métasémie”) under the same category of “semantic neologisms”.

between “conversion” and semantic change. It is then the only criterion so far. Another important feature according to Štekauer is the phonological/orthographical identity between the original form and the converted form (which, again, yields no basis for differentiation between “conversion” and semantic change). Štekauer (e.g. 2001: 20) criticizes Marchand for his alleged natural definitions: “Marchand’s definitions of *whistle*-<sub>N</sub> ‘forcing the breath through the teeth or compressed lips’ vs. ‘instrument used for whistling’ do not appear to be more natural or obvious than the following pair: ‘to use a whistle’ vs. ‘an instrument operated by air expelled from lungs’.<sup>19</sup> Well, it seems logical, and therefore indeed natural, to suggest that ‘forcing the breath through the teeth or compressed lips’ must be the primary sense, whereas ‘wind instrument’ is secondary and ‘to use a whistle’ must be tertiary (no use of the instrument without the existence of the instrument). But I would argue that for an onomasiological approach diachronic facts must be regarded as decisive<sup>20</sup>. Štekauer’s (2001: 20) second point of criticism that “[c]ontrary to Marchand’s assumption (1955: 172) it is possible to ‘saw without a saw’ just as it is possible to *hammer* without a *hammer*” can be refuted by the help of prototype theory. Sawing and hammering without a saw and a hammer seem just peripheral, or metaphorical, members of the respective categories. After all, even Štekauer (e.g. 2001: 21) admits:

“in the vast majority of cases, this way of determining the ‘derivational’ relations resembles the ‘familiar’ chicken-or-egg problem [...]. Therefore, the only way out seems to consist in the complementary effect of a multiplicity of criteria, including the criterion of extralinguistic subsequence, diachronic data, formal criteria (like stress pattern), morphosyntactic effects [...], structural relations (combinability with affixes), etc.”

Nevertheless, diachrony is far too often neglected, and this seems to me the most vulnerable aspect in Štekauer’s theory. This is plainly visible in his own example of *milk*, the evolution of which he sees as *milk* ‘liquid substance given by a cow’ → *milk* ‘to obtain milk from a female mammal’. A look at the historical facts shows that we are not dealing with a case of conversion, but with one of derivation; from the noun *milc* (according to the OED recorded for the first time around 900) speakers derived a typical denominal weak verb of class 1, *milcian*, (according to the OED recorded for the first time around 1000). Besides, we may wonder whether today we would coin, for a still unnamed concept ‘to get milk out of a cow’s udder’, a form *to milk* or whether a new form *to milk* would not rather serve to denote ‘to give milk’, ‘to use milk’, or ‘to add milk’; many conversions—at least those between nouns and verbs—seem to express ‘making’, ‘using’, ‘providing’ or ‘directional/locational’ relations. Thus, we have “true” conversions of *milk* in *to milk the tea*, *to milk one’s lamb* [of a cow], and *to milk the bottles*.<sup>21</sup> There are even cases of re-conversions, e.g. *handbag* [object] → *to handbag* [action] → *handbag* [process].

In Štekauer’s theory a few cases are problematic, because they do not show total phonological identity, e.g. *abstract* (sb.) vs. *abstráct* (adj.). Tournier (1985: 174) speaks of “quasi-conversions” here. In these instances Štekauer (1996) takes historical facts into account and comes to the following result:

<sup>19</sup> Similar criticism was already raised in Štekauer (1996: 130).

<sup>20</sup> As a matter of fact, according to the OED, ‘instrument’ is already recorded for ca. 950, ‘breathing’ only for ‘1050’ (by accident?). The sense ‘using a whistle’ is not attested before 1530.

<sup>21</sup> It seems as if all of Štekauer’s (1996: 104ff.) examples can equally be subsumed under these few major relations. Štekauer himself, however, refrains from such a narrow limitation and says: “The number of possible meanings of new converted meaning units is limited by the number of actual meanings of a potentially polysemantic motivating naming unit, and the number of potential onomasiological connectives (logical and semantic relations) between the motivating and the motivated naming unit” (Štekauer 1996: 106).

“The employment of a diachronic method resulted in the division of examined material into two groups: genuine conversion pairs, on the one hand, and etymologically excluded pairs, on the other. [...] It is only the first of them which results from a word-formation process (conversion), while the identical orthography of the pairs of the latter group resulted from a historical convergence of two, originally independent, forms. [...] conclusion: there is basically no difference in the phonological behaviour, or properties, between the two groups in question. From this it follows that the phonological differences between the converting and the converted words of any conversion pair have not been predetermined by any specific word-formation (i.e. conversion-specific) rules. On the contrary, all these differences follow the general tendencies rooted in the word-class of the particular members of a conversion pair [...]: they are not meaning-constituting devices, but only devices that **may** function as meaning-distinctive ones” (Štekauer 1996: 93f.; his emphasis).<sup>22</sup>

This view, however, appears a little simplistic to me and seems to be thought of as an auxiliary contrivance to be able to defend the thesis of a hundred-percent regularity and predictability of word-formations. In general, I accept this thesis, but I don't consider Štekauer's wording very efficacious, since the consequence is that many word-formation processes are not viewed as such or are—as in this case—misinterpreted. I will delve into this problem in more detail below. First, a few more fundamental thoughts on conversion shall be added here. In an onomasiological approach, the starting-point should always be the concept to be named. The concept gets analyzed, and salient features and associations (similarity, contrast, contiguity, partiality, taxonomic relations) are activated in the mind. Then the speaker, or the speech community, selects from the repository of productive word-formation possibilities and discovers that, particularly with contigual associations, there is also the possibility of selecting, without any formal modification, a word that is used in a different syntactical position, but typically in a frequent paraphrase for the concept to be named. From the paraphrase *to write an e-mail* or *to use e-mail* the speaker “takes out” the rhematic, salient part and gets *to e-mail*. Out of the *instrument for whistling* the speaker makes a *whistle* and from *to use a whistle* s/he forms a new *to whistle*. The occasional shift in the stress pattern is explainable through the synchronically different model patterns (which, in return, are themselves explainable by a diachronic study, e.g. through the loss of inflectional suffixes with the borrowing of Gallicisms).

Besides, I do not want to ignore the fact that some words are certainly converted rather subconsciously, e.g. *fun*. The starting-point is the choice of saying *That's fun<sub>sb</sub>!* and *That's funny<sub>adj</sub>!* without a difference in meaning. The noun and the adjective take the same syntactical position here. Therefore it can happen that word-class boundaries are blurred and that in the formation of a comparative *fun* is treated like an adjective. At least in the US, *That's even funner!* or *That's a fun thing to do!* can be heard (at least in some regions), so that future lexicologists may add a new sub-entry *fun<sub>adj</sub>* to their dictionaries.

Štekauer (1996: 115ff.) also deals with the typically English feature of converting proper names. In Clark/Clark's (1979) standard sentence *My sister Houdini'd her way out of the locked closet*, for instance, the verb *to Houdini* has to be understood as ‘to escape by way of a trick’. A salient feature of the name-giving person serves to denote the same feature of other persons. In contrast to other denominal verbs, the hearer can only decode such sentences and forms when provided with the relevant encyclopaedic knowledge.

One particularity hasn't been mentioned so far. It may be that a word is obviously not fully converted, i.e. that it doesn't adopt all features of its new word-class, e.g. *the poor* (instead of *\*the poors*). Tournier (1985: 174) speaks of “partial conversion” here. I, on the contrary,

<sup>22</sup> Tournier (1985: 180), too, points out that there may be “pseudo-conversion” because of double borrowing.

would prefer to categorize these formations as ellipses (e.g. from *the poor* [*people*]).

In sum, we may still wonder whether semantic change and conversion should be kept apart. Cognitive-associative differences are absent, the formal differences are minimal and only become visible within the surroundings of a *text*. However, conversion allows stress shift, which semantic change does not (unless we newly define it that way). It is for these two differences that the distinction between conversion (or “syntactical recategorization”, as we may henceforth call it) and semantic change will be kept here.

### 2.3. “Exocentric Compounds,” “Back-Derivation,” and “Bracketing Paradoxes”

Štekauer also casts light on three other traditional “problems”, namely the problem of exocentric compounds (cf., e.g. Štekauer 1998: 147-154), that of back-derivation (cf., e.g. Štekauer 1998: 154-162) and the problem called “bracketing paradoxes” (cf., e.g., Štekauer 1998: 127-142).

As an example Štekauer mentions the form *unhappier*, which would have to be analyzed as [*un*]-[[*happy*][*er*]] from a morphological point of view, since the comparative suffix *-er* is only added to monosyllabic and some disyllabic words. However, from a semantic point of view, as Štekauer convincingly states, *unhappier* has to be interpreted as ‘more unhappy’ rather than ‘not happier’. Štekauer (e.g. 2001: 29) demonstrates how the problem can be solved with his approach:

“Since the onomasiological theory with its FMAP [i.e. Form-to-Meaning-Assignment Principle] does not rely on a binary word-formation structure, the problem of bracketing paradoxes is meaningless. Moreover, the proposed approach is based on the principle that the relations in question are not hierarchical. The members of the onomasiological structure (the base, the determining and determined constituents of the mark, and the specifying and specified elements of the determining constituent) function at the same level of description.”

Although the comparative form *unhappier* is actually a problem of morphology, not of word-formation, the Form-to-Meaning-Assignment Principle can nevertheless solve such problems due to the assumption that people simply select from the number of semantic markers given.

As regards the compounds that are traditionally called “exocentric”, “bahuvrihi” or simply “pseudo”-compounds Štekauer writes (e.g. 2001: 3; his emphasis):

“I propose to explain ‘exocentric compounds’ by a two-step process in which only the first has word-formation relevance. The first step consists in the formation of an **auxiliary, onomasiologically complete** (i.e. with both the base and the mark included), *naming unit*. The second step is based on mere **elliptical shortening**. [...]. Therefore, this type of naming units can be analysed on a par with the underlying ‘full’, auxiliary, version, although the latter has not come to be used (institutionalised).”

Štekauer substantiates his theory by claiming that the plural of *sabertooth* is not \**saberteeth*, but *sabertooshs*; therefore, we would have to depart from a shortened onomasiological base (e.g. *animal* or *tiger*). But the plurals of the plant-name *horsefoot* and of *tenderfoot* ‘newly arrived immigrant’ would have to be \**horsefoots* and \**tenderfoots* then, but this is not the case (in both instances we have *-feet*). Therefore, it seems more suitable to assume a combination of metonymy/pars pro toto and composition (or to say that not both elements of the contigual relation have to be expressed in a word-formation unit). Štekauer (2001: 32) says that his explanation “is more ‘natural’ in terms of word-



*formation* principles and corresponding to the psychological reality of coining new naming units,” which includes the theory of the traditional identification-specification scheme. To me, it appears equally natural to say that, at first, a specific salient feature of the concept to be named is selected and then formally realized by way of compounding. Štekauer could solve the problem with his own approach if he added a sixth word-formation structure, which could be termed “Incomplete Complex Structure B (ICSB)”, where *B* stands for *base* and where the base is not represented in the form.<sup>23</sup> Then the type *killjoy*, *wagtail*, *catchfly* would easily fit into this category, too, even though with a reverse determination structure. This structure seems especially popular when the possible base is semantically very vague and general, a *passepartout* word such as *man*, *thing*, or *animal*. As regards the cognitive process, though, *catchfly* and *redskin* do not quite fall together: in the first case the object *is* a catching thing, whereas in the second case the object *has* a skin.<sup>24</sup>

Finally, there is the problem of back-derivation, e.g. *stage-manager* → *to stage-manage*. Štekauer (e.g. 2001: 32) writes:

“The conceptual fallacy in traditional accounts of back-formation is that they explain the origin of a ‘shorter’ naming unit (e.g., *stage-manage*) without accounting for the way in which a ‘longer’ (*stage-manager*) naming unit came into existence. ‘Longer’ naming units must have been somehow coined, they could not merely have appeared ‘out of the blue’. Moreover, the suffixes included in ‘longer’ naming units have all the features of ‘normal’ suffixes. Therefore, I believe that both members of the ‘pairs’ related by the notion of ‘back-formation’ are generated separately.”

This, however, is not only against intuition, but also against the historical facts, which are, once again, excluded. Of course it is correct that the speaker first goes through the conceptual, the semantic and the onomasiological level. On the onomatological level, though, the “longer” form comes into play as a formal model and onomatological lure. It seems inept to assume totally separated formation filiations.

#### 2.4. Morphemes and Morphs

A few more thoughts shall be added to Štekauer’s approach. Štekauer writes (e.g. 2001: 2): “While Beard ‘evicted’ affixes from the ‘community’ of majors classes (N, V, A) by claiming that—like articles, adpositions, conjunctions, and some pronouns—they ‘bear no semantic content but reflect grammatical function [...]’ I find affixes to be on a par with lexemes (both are form-meaning units)”. Here it could be replied that there are simply two types of affixes: one with semantic function (e.g. ModE *un-*), the other with grammatical function (e.g. ModE *-ness*). It also seems not right to say “that no naming unit can be generated from units smaller than the morpheme, with the morpheme being defined traditionally as the minimum bilateral sign, having its own specific form and specific meaning”. Certain expressive or onomatopoetic words are surely based on morphs, not morphemes. A word like *clash*, for instance, is on the one hand formally based on words like *cl-ather*, *cl-ack*, *cl-ap* etc., on the other hand on words like *d-ash*, *l-ash*, *cr-ash* etc. (in *clash* *cl-* could be regarded as the determinant and *-ash* as the determinatum [cf. Hansen et al. 1982: 141ff.]).

#### 2.5. Blends and Acronyms

Since for Štekauer word-formation patterns are a hundred percent productive (and thus

<sup>23</sup> I think that this is more apt than postulating an intermediate type ICSR (cf. also, e.g., Štekauer 2001: 34).

<sup>24</sup> In Blank’s (1997b) approach these two types are separated, as will be illustrated below.

regular and predictive), he excludes blends and acronyms from word-formation.<sup>25</sup> My view is different. I see word-formations as neologisms out of material in one's own dialect/language. Thus, blending and acronyming, although not traditional and central word-formation processes, fall perfectly well into this category. In any case, I do not really understand Štekauer's view that acronyming cannot be seen as a word-formation process on the ground that acronyms have the same meaning as their long forms. At least, I cannot agree with this view—or at least not with the wording. When an American calls a black co-citizen not *Black* any longer, but *Afro-American* or *African American*, then a new meaning hasn't been created either; nevertheless everybody would regard the two new terms as a result of word-formation. However, I do agree with Štekauer when he states (personal communication) that the two latter examples represent the result of a fully new and independent word-formation process passing all word-formation levels, whereas acronyms are formed on a formal level only. Another aspect that is a little unfortunate in my view is that Štekauer pursues only Modern English situations. For him *Monday* and *cranberry* are uninteresting for word-formation, because *Mon-* and *cran-* are not morphemes, but rather similar to phonemes (since they don't **carry**, but only **distinguish** meaning). However, when these words were coined they were of course transparent compounds/syntagms; *Mōnan dæg* was absolutely transparent in Old English times. I would like to see the beginning of a word at the beginning of an onomasiological theory. On the other hand, the following allegations are fully convincing. Štekauer (2001: 8) answers to the “Chomskian claim that words which result from derivational processes often depart from their ‘expected’ meaning”—like *revolve* vs. [*French*] *revolution* or *construct* vs. [*genitive*] *construction*—that this is not part of a word-formation process, but takes place in the lexical component of the mind. We could also say that this is a case of semantic change, or even: collocational semantic change.

## 2.6. Analyzing a Few Problematic Word-Formations

At the end of the evaluation of Štekauer's approach I want to contemplate a few concrete problematic cases.

(1) Let us have a look at the word *butterfly*. According to Štekauer's model, we would have to view *fly* as the onomasiological base. The base is the element “denoting a class, gender, species, etc. to which the object belongs” (cf., e.g., Štekauer 2001: 11). In the first case we could at least speak of a metaphorical classification (with *butter* being the onomasiological mark), but in the second? It would in my opinion be wrong to put all such cases completely into the Lexical Component. I shall analyze *butterfly* as “mark + base” here.

(2) Let us now have a look at the term *brimstone butterfly*. Here we can't assume a typical three-fold distinction *brimstone-butter-fly*, with *brimstone* being the determining constituent and *butter* the determined constituent. It is rather the case that *brimstone* specifies *butterfly* as a whole. In this case, it only makes sense to assume that *butterfly* is the onomasiological base and *brimstone* the onomasiological mark. This already seems to be covered by Štekauer's model, but it seems important to me to show the difference between “bi-partite” compounds and “pluri-partite” compounds.

(3) We will now ask for the theoretical classification of *skyscraper*, which will also be analyzed in Blank's approach (cf. below). Štekauer (personal communication, 1998: 89s.)

<sup>25</sup> More bluntly, blending, to Štekauer, is a two-step process, the first step being identical with compounding, the second step (“shortening”) falling into the Lexical Component. (cf. also Štekauer 1997).

places it, like *sword-swallower*, under “Complete Complex Structure”: *sky-scrap(e)--er*<sup>26</sup>; however, the reader should be reminded of the aspect of similarity again (the building doesn’t “really” scrape) and that word-formations can show the cognitive-associative relations of similarity. Štekauer (personal communication) suggests that *scrape* is first semantically shifted in the Lexical Component and then combined with *sky* in the Word-Formation Component. I, however, prefer Koch’s (2001) view that word-formations can also be triggered off by any kind of cognitive-associative relation, including similarity.

(4) After checking Štekauer’s examples there seems to be a certain “fuzziness” in the classification as a “simplex structure” and “incomplete complex structure 2”. Thus, *honeybee* and *policeman* are put into the latter category (cf. Štekauer 1998: 10). The classification of *honeybee* can of course be justified on the fact that a *honey-(making) bee* or *honey-(producing) bee* is indeed conceivable. But what should the determined constituent of *policeman* look like? Therefore, I would categorize *policeman* as a “simplex structure” as well. By accident, *blackbird* has fallen into the group of “simplex structures”, but should appear under “Incomplete Complex Structure Left” (Štekauer, personal communication).

(5) The group of “complete complex structures” encompasses, according to Štekauer (1998: 95), words like *speedometer* and *seismometer*. But how is it possible to recognize a three-part structure here? The words consist of two parts: *speedo-meter* (or *speed-ometer*) and *seismo-meter* (or *seism-ometer*); consequently, they seem to belong to the “simplex structures”. In a personal letter, Štekauer holds the view that the onomasiological structure of *speedometer* is “meter measuring speed”. Therefore, it would probably be best to put them into the group of “Incomplete Complex Structures L” for the moment—a suggestion which I could also agree with.

(6) The terms *screwdriver*, *stone crusher*, *gear reducer*, *tape reader*, *rope-dancer* and *mine-worker* all have the same formal skeleton, and the first four terms also seem to go back to the same cognitive/semantic pattern. By accident, however, Štekauer (1998: 95) has put only the first two terms into the class of “complete complex structure”, whereas he (1998: 90) has listed the rest of them under “incomplete complex structure R [i.e. 1]”. Štekauer (personal communication) corrects that the latter should also be mentioned in the first group.

(7) Cases like *actor-manager* and *deaf-mute*, which are traditionally termed copulative compounds, don’t seem to be respected in Štekauer’s classification at all. They will have to be grouped as a separate entry.

(8) Štekauer doesn’t mention cases like *peacock*, *reindeer* or *hound dog*. These are remarkable, since the meaning of the second element is already included in the first, which becomes especially apparent in the compound *hound dog*. Gusmani (1973: 51f.), too, points out this tautology and suggests calling such formations “clarifying compounds” or “classifying compounds”. They more or less represent the opposite of shortening. The existence of the “shorter” word is prior to the existence of the compound. Here the five levels of the word-finding process were not passed in the normal way. At the beginning of the process is an unmotivated word: *pea*, *rein*, *hound*. If a speaker is familiar with the word he will then immediately go to the onomasiological level. If s/he’s not, s/he passes the conceptual and the semantic level first. On the onomasiological level, the speaker selects a

<sup>26</sup> It cannot belong to the complex structures, since there is no \**scrap(e)-er*. Cf. the descriptions in Štekauer (1998: 89ff.).

base, but not a mark, since the mark is represented by the unmotivated original word. Therefore, on the onomatological level, only the morpheme for the base need be selected. On the morphonological level, the original word is then morphologically treated like a mark. That is why it appears in first position in English, for example (*hound dog*, not *\*dog hound*). We may indeed call this group of lexemes *clarifying composites*, or, since the secondarily attached element tries to motivate and classify the word, *post-classifying composites*.

(9) The last type of word-formation I would like to mention are cases like *sparrow-grass* (from Lat. *asparagus*), *bridegroom* (from OE *brȳdguma* ‘literally: bride-man’), and *nick name* (from ME *eke name* ‘literally: additional name’). These cases are traditionally called *popular etymology* or *folk-etymology*. Definitions of *folk-etymology* may be broader or narrower, depending on the author(s). It seems largely accepted, though, that each folk-etymological change is triggered off by a similarity (possibly even a homonymy) of expressions<sup>27</sup>. There are folk-etymologies with conceptual/referential/denotational change, and folk-etymologies without conceptual/referential/denotational change. Only the latter are important for onomasiology. The speaker’s subconscious act—roughly spoken—is the morphological (partial) transparency of an opaque word<sup>28</sup>. S/he does not truly search for a name; therefore the levels of the word-finding process do not seem to be relevant. What the speaker does, is misinterpreting the original word-finding process. The speaker assumes a wrong selection on the onomatological and onomasiological level with the consequence that even the elements on the semantic level (connotation and some of the semantic markers) are newly ordered, or interpreted. Even though all this happens subconsciously, folk-etymology is nevertheless some type of word-formation, and unless we want to see the phenomenon of re-motivation as a separate word-coining process aside from “borrowing”, “semantic change” and “word-formation proper”, we should in fact include it here.

I would like to stress that the points of criticism brought into discussion are certainly not to ignore the value of Štekauer’s theory. In fact, my own synthesis will very much be founded on his OT theory. However, I wanted to show that elaboration and supplementation of this theory are needed.

### 3. Approach by Andreas Blank

The late Andreas Blank has gained recognition for his cognitive approach on semantic change, which he presented in his landmark habilitation dissertation (1997a).<sup>29</sup> But he also tried to apply his theoretical framework to the field of word-formation (Blank 1997b). In his approach, too, speakers first analyze a concept to be named into various elements, i.e. into salient sub-concepts. The most salient sub-concept that is already associated with a word will then serve as a semantic basis for word-formation. The semantic difference between the basic concept and the concept to be named will then be bridged by adding an affix or a second sub-concept (“co-basis”). Blank says that these relations between basis,

<sup>27</sup> For a different view cf. Blank (1993: 48). A more thorough discussion of the problem will follow at another occasion (but cf. already Grzegza 1998: 14f., 25ff.).

<sup>28</sup> Cf. Mayer (1962: 50), Bebermeyer (1974), and Olschansky (1996: 107). Olschansky’s work is the most comprehensive and currently most important study on folk-etymology and includes an exhaustive bibliography.

<sup>29</sup> Blank’s comprehensive work is reviewed in Grzegza (1999); his English examples are specifically discussed in Grzegza (2000a).

co-basis and the new concept are based on the associative principles of contiguity<sup>30</sup>, contrast, and similarity. As already said, I want to add a fourth principle to these three, namely the principle of partiality<sup>31</sup>.

In his article Blank covers compounds, affixations and conversions; acronyms, blends and clippings are neglected here as well. Suffixations, which, according to Blank, are based on similarity and contrast, are classified into four types: “In this case, speakers feel a noticeable contrast between the concept to be verbalized and the prototypical conception, by attaching it nevertheless to the prototype of the category it belongs to. Theoretically, four dimensions of deviation can be expressed: (a) SMALLER, (b) BIGGER, (c) WORSE and (d) BETTER/ENDEARING” (Blank 1997b). Blank mentions four examples from Italian: from *ragazzo* ‘boy’ we get (a) *ragazzino*, (b) *ragazzone*, (c) *ragazzaccio*, (d) *ragazzuccio*. Such word-formation programs practically do not exist for Middle English and Modern English and only to a limited extent for Old English.<sup>32</sup> Suffixation based on contiguity is easily conceivable and also present in English, e.g. ACTIVITY - PRODUCT: *write*→*writing*, ACTIVITY - PERSON: *write*→*writer*.

As to prefixation we find examples for all of Blank’s three associative principles also in English: (a) contiguity: *modern*→*post-modern* like Fr. *guerre* ‘war’→*après-guerre* ‘post-war period’, (b) similarity: *large*→*extralarge* like It. *vecchio* ‘old’→*stravecchio* ‘very old’, Sp. *falda* ‘skirt’→*minifalda* ‘mini-skirt’ or *carburant* ‘gasoline’→*supercarburant* ‘super gasoline’, (c) contrast: *happy*→*unhappy*. However, the view that the cases under (b) go back to a similarity between two concepts is slightly problematic. Not the prefix expresses the similarity, but the word-stem; the prefix rather is a marker for denoting that the concept is a peripheral member of a category. In other words, the prefix rather expresses **contrast** with regard to the prototype.

In Section 4 Blank (1997b) deals with what Štekauer calls “Onomasiological Recategorization”:

“An important motivation for WORD-FORMATION is the need to have a word in another word class. In this case, the concept remains the same and there is no conceptual association at all. The change is on the level of the lexical information. In order to change word class, speakers can use derivation or, as an isolating device, conversion (comprising so-called ‘back-formation’ and ‘zero-derivation’).”

Blank recognizes that the cognitive phenomenon of “onomasiological recategorization” not only applies to conversion. However, his examples are not always well chosen. Thus, we can neither speak of conversion nor derivation in the following examples: Fr. *père* ‘father’ vs. *paternel* ‘fatherly; paternal’ (Latinism), Sp. *atacar* ‘to attack’ vs. *ataque* ‘attack’ (Gallicism).

In Section 5 Blank focusses on composition, within which he distinguishes five different Romance types. The first and most typical one is based on “similarity/contrast within a category + conceptual contiguity”, which Blank (1997b) comments on as follows:

“Traditionally speaking, we could say that one part determines the other, but I will plead here for a

<sup>30</sup> Cf. also the contribution by Koch (1999b: 157ff.), in which he also describes the process of motion as a word-formation process relevant to Romance languages. For English as a genderless language this process is of course irrelevant.

<sup>31</sup> Blank (1997a) and others see partiality as a sub-phenomenon of contiguity; however, I want to see partiality as a separate principle.

<sup>32</sup> Concerning diminutives in English cf. the studies by Höge (1901) and Rotzoll (1909).

different interpretation: a double conceptual relation between the new concept expressed by the compound and the two concepts that form the compound. [...] this type of compounding is characterized by the similarity between a prototype and a peripheral member as well as by conceptual contiguity.”

However, from an onomasiological point of view the issue should be approached in a different way. On the one hand, the speaker classifies the concept to be named into a category, recognizing at the same time that the concept is not a central member of the category; on the other hand, a salient feature is extracted for the name-giving, or word-finding, process. In this instance I would prefer speaking of “contiguity/partiality”. Examples mentioned by Blank include: Fr. *wagon-lit* ‘sleeping car [literally: “bed-car”], It. *autostrada* ‘freeway’, Pg. *máquina de escrever* ‘type-writer’. The characteristic feature of the second type is a combination of “similarity/contrast within a category” plus “metaphorical similarity”, where the determinatum can be explained as in type 1, but the determinant goes back to metaphor, e.g. ModE *frogman*. Type 3, “double similarity/contrast (coordinated compounds)”, is explained as follows: “This type is characterized by the absence of determination. The concept to be expressed shows particular deviation from the prototype of two (or even more) categories, but doesn’t really fit into any of them” (Blank 1997b), e.g. ModE *deaf-mute*, Fr. *moissoneuse-batteuse-lieuse* ‘combine harvester’ or It. *portafinestra* ‘French window’. But why *deaf-mute* is said to fit neither into the category DEAF nor into the category MUTE is unclear to me. Besides, the expression “*particular deviation from the prototype*” seems exaggerated. Moreover, the first and second examples seem to be different from the third. In the former two we have an addition of concepts (contiguity of features). In the third example we are facing neither a typical door nor a typical window (contrast to the prototype of the category); here we are dealing with a conceptual blending as in *brunch*, with the difference that there is no formal blending. The fourth type consists in “integral metonymies and metaphors (called exocentric compounds)”. While Blank correctly says that none of the word-parts refers directly to the concept expressed nor a superordinate category, the statement that exocentric compounds show no determination is too superficial. There is at least determination of second degree: A salient feature of the concept is extracted and expressed by way of a determinative composite. Among Blank’s examples there is *skyscraper*, which in traditional works is not listed under exocentric compounds; in fact, a skyscraper really is an object that “scrapes” (even if only metaphorically). Thus, the term *exocentric compound* is not totally synonymous with Blank’s *integral metonymies/metaphors*. Integral metonymies are formalizations of a salient feature (partiality), integral metaphors are formalizations of a salient feature that is viewed in a metaphorical way. Blank’s last compound type, finally, is paraphrased as “double contiguity” and seems to apply predominantly to words consisting of a verbal element and a following noun like Fr. *chasse-neige* ‘snowplough’. Blank (1997b) writes: “Semantically these Word-formations rely on frame-relations: there is contiguity between the concept SNOWPLOUGH and the SNOW on one side, and between the ACTIVITY of a snow-plough and the concept TO CHASE on the other, showing a salient aspect of this activity”. But a snowplough’s activity and chasing seem to be based on similarity rather than on contiguity—a snowplough itself can’t “chase”. Another example listed is It. *cavatappi* ‘corkscrew (literally: “draw-corks”)’. Here too, the concept doesn’t “draw” by itself. Blank’s third example, Sp. *limpiabotas* ‘shoeshine boy (literally: “shine-shoes”)’, fits better, as would the classical English example of *pickpocket*. In sum, in Blank’s fifth type we can differentiate between at least two sub-types.

A general problem in Blank’s contribution seems to be the strict separation of affixation and composition—with the consequence that the underlying associations are described in a

different way. However, I agree with Štekauer that words like *worker* and *workman* have undergone the same cognitive process and that *-er* and *-man* represent synonymous morphemes. Or why should we interpret Sp. *lavandería* as “contiguity between wash-house and washing” (cf. Blank 1997b), but E. *wash-house* as “similarity/contrast within a category + conceptual contiguity”? With *lavandería* too the speaker surely not only sees the contiguity between wash-house and washing, but also the similarity with other concepts whose names bear the suffix *-dería*, viz. buildings (cf. Sp. *panadería* ‘bakery’). Štekauer’s theory is more comprehensive here: certain salient relations are focussed on and can be expressed by various linguistic means. The AGENT OF AN ACTION, for instance, can be expressed by the morphemes *man*, *-er*, *-ist*, *-ant* etc. in English. It may be mentioned that there may occur formal affinities with certain morphemes. Thus, *-ist* and *-ant* are only attached to Latin-Greek word-stems.

By and large, notwithstanding the points of criticism mentioned here, Blank has definitely provided us with a valuable basic model for word-formation in an onomasiological and cognitive view, showing that the same associative principles hold true for both semantic change and word-formation.

#### 4. Approach by René Dirven and Marjolijn Verspoor

Although Dirven and Verspoor’s work is only an introductory book, it offers a number of valuable aspects for word-formation. In the section on compounds, for example, Dirven/Verspoor (1998: 57)—following Bauer (1983: 188; cf. above)—remark that our interpretation of compounds has to do with our cultural knowledge. From an onomasiological viewpoint it can be added that due to this it is possible to express such prototypical relations between two sub-concepts or sub-aspects by simply combining two stems. Moreover, the following observation can be made: “In *tennis shoes* the purpose relation is clear. In *horse shoes* and *snow shoes* the purpose relation is self-imposing, too, but the notion of ‘shoes’ has now been extended to that of ‘a protecting or supporting structure for the feet’” (Dirven/Verspoor 1998: 58). Once again, it becomes obvious that several processes of onomasiological/lexical creation can be combined, in this instance metaphor and composition.<sup>33</sup>

Dirven/Verspoor (1998: 60) also illustrate how important compounds are in the development of taxonomies, because: “If we invented a new simple form for each conceptual subcategory, we would overburden our memory capacity and no longer have a clearly hierarchically structured lexicon”. The author’s examples are convincing: *motorway* as a subtype of *way*, *miniskirt* as a subtype of *skirt*, *sportscar* as a subtype of *car* and *electronic mail* as a subtype of *mail*. However, it can be asked why there is a compound *motorway* as a subtype of *way*, whereas other subtypes are the non-derived *avenue*, *alley*, and *street*. And why is there a compound *sportscar*, but also *van*, which is formally independent of *car*.

Their next section is dedicated to derivation. Dirven/Verspoor (1998: 64) rightly emphasize

<sup>33</sup> The variety of associations and relations that can be expressed by just putting two word(stem)s together was already demonstrated by Whitney (1875: 121); his general idea, though, resembles rather the theory of generative grammar, when he writes: “Such a word [i.e. a compound] is logically an abbreviated descriptive phrase, with the signs of relation, the ordinary inflections or connectives, omitted; the two main ideas are put side by side, and the mind left to infer their relation to one another from the known circumstances of the case”.

the fact that some types of suffixation are accompanied by metaphor and metonymy. An example: “The agentive meaning of *-er* can also be extended to non-human forces and we then have an instrumental meaning as in *an eraser, a sharpener, an opener* or [...] more metonymical or metaphorical extensions of *-er* as in a *best-seller* or an *eye-opener*.” Another interesting observation which is onomasiologically relevant is that “an affix will only be applied to a particular word form if its abstract, generalized sense is compatible with any of the senses of the word stem” (Dirven/Verspoor 1998: 63). The use of *-able* serves for illustration:

“Since most things do not have inherent properties that make it possible to *buy* or to *cut* or to *paint* them, their derived forms with *-able* are not likely to occur. But in combination with the generalizing prefix *un-*, this construal becomes much more possible e.g. *unbuyable paintings* or *uncuttable meat*. Here again we are dealing with time-stable, salient properties, since the permanent absence of a given property is denoted” (Dirven/Verspoor 1998: 63).”

That this is not quite so simple is proven by the existence of *purchasable*; moreover, the OED lists records, even if low in number, of the following words: *buyable* (3 times), *cuttable* (2 times), and *paintable* (4 times). The non-existence or low frequency of certain forms therefore requires other explanations.

Dirven/Verspoor also delve into the question of the origin of affixes. Many affixes can be traced back to a process that has become known as *grammaticalization*. This refers to the process in which an originally free morpheme adopts the function (and form) of an affix. The suffix *-ful*, for instance, as in *beautiful* or *wonderful*, goes back to the adjective *full*. This is not anything new (cf. Whitney 1875: 122f., Paul 1920: 347ff.), but only for a few years has this phenomenon been dealt with in a more detailed and systematic way, for instance in the works of Elizabeth Closs Traugott (e.g. Traugott/König 1991, Traugott [forthcoming]). But whereas Paul only mentions “grammaticalization” as the source of affixes, Dirven/Verspoor seem to depart from several sources, although they don’t mention any other. I would like to add two others: (1) the borrowing of affixes (e.g. *non-*, *-able*), (2) the (folk-etymological and consciously playful) separation of part of a word and its use as a new affix. A good example for this type is *-aholic*. Its occurrence in words such as *workaholic* and *sexaholic* cannot simply be explained as the result of a blending with *alcoholic* (as done by Dirven/Verspoor [1998: 68]); since *-aholic* is very productive, it is entirely justified to regard it as a full suffix. A similar example is *-burger* (originally only in *hamburger*, which in fact is a derivative of the city name); *-wise*, too, has meanwhile become a very productive suffix in English, while for many centuries it had been playing only a subordinate role.<sup>34</sup> Furthermore, English language history is characterized by a continuous extraction of “pseudo-suffixes” from Greek words to serve for new word-formations. Such word elements are on the threshold between lexical morphemes and derivational morphemes.

Dirven/Verspoor (1998: 65s.) also analyze formations like *speedometer* and *odometer* and regard this *-o-* as “infix-like element” (some also speak of “interfixes”). It seems a wise decision not to classify *-o-* as a true infix. The word *infix* reminds us too much of *affix*, i.e. morphemes, by definition units carrying meaning; this *-o-*, however does not have meaning. It is better to speak of a “formative element” here. But in the second group of

<sup>34</sup> Cf. the relevant passage in Marchand (1969: 358). Marchand also comments on the fact that several combinations with *wise* are regarded as compounds since the bases also occur as simplexes: “This is correct. But the combinations are never substantival compounds as their substantival basis would require; they are only used as subjuncts and adjuncts. Moreover, *wise* is being used less and less as an independent word and may, as a semi-suffix, one day come to reach the of F[rench] *-ment*”.



Dirven/Verspoor's examples—*fan-bloody-tastic*, *a-bloody-mazing*, *kanga-fucking-roo* etc.—the elements *-bloody-* and *-fucking-* can indeed be regarded as having meaning (although not a very clear one); at least they have an effect on the **connotation** of the concept named.

The process of conversion is explained by Dirven/Verspoor in the traditional way, i.e. as zero-derivation, but they add: “Conceptually, each conversion process implies a metonymical extension from one element in an event to the whole event: thus in *to bank* the place where the transaction takes place, i.e. the bank, comes to stand for the whole of the transaction” (Dirven/Verspoor 1998: 66f.). This is important for the expositions above. Similarly, the authors write that back-formation is often combined with a widening of meaning.

The next paragraph is dedicated to clippings: “Clippings are forms from which a part has been cut off. They are not always semantic innovations, but often purely formal phenomena” (Dirven/Verspoor 1998: 67). Here it can be argued that other word-formations are not combined with semantic innovations either. Compounds, derivations etc. can also be created as synonyms to already existing words (e.g. *African American* beside *Afro-American*). Finally, as regards blends, Dirven/Verspoor recognize that this process not only encompasses a formal, but also conceptual blending: *brunch* is a combination of *breakfast* and *lunch*.

## 5. Koch's Three-Dimensional Grid of Lexical Diachrony

Koch does not specifically deal with word-formation, but—as already indicated above—has established a valuable grid for systemizing word-finding processes, which looks as follows (cf. Koch 2001: 19):

	identity	contiguity	metaphorical similarity	taxonomic similarity	taxonomic superordin.	taxonomic subordin.	cotaxonomic contrast	conceptual contrast
'zero'	00	01	02	03	04	05	06	07
number change	10	11	12	13	14	15	16	17
:								
:								
gender change	20	21	22	23	24	25	26	27
diathetical change	30	31	32	33	34	35	36	37
conversion	40	41	42	43	44	45	46	47
mutation	50	51	52	53	54	55	56	57
suffixation	60	61	62	63	64	65	66	67
prefixation	70	71	72	73	74	75	76	77
composition	80	81	82	83	84	85	86	87
lexical syntagm	90	91	92	93	94	95	96	97
phraseo- logism	100	101	102	103	104	105	106	107
:								
:								

Although the role of the stratification axis seems to need some further discussion (which I will reserve for another occasion), one innovation is very convincing, namely that not only semantic shifts, but also all sorts of word-formations can be triggered off by any of the seven (or eight, if “identity” is included) cognitive-associative relations.

Of course, the grid seems rather centered on features of Indo-European, particularly Romance, languages. Thus, not every language has the number or gender distinction. The same holds true for diathetical change (active vs. passive). In a more general grid we could subsume these processes under the term “grammatical shift” in analogy to “semantic shift” or, maybe better, “morphological recategorization” as a counterpart of conversion as “syntactical recategorization”.

Likewise, the distinction between composition and lexical syntagm is unclear to me. Koch (2001: 21) gives E. *coffee break* as an example for the former and Fr. *vin rouge* ‘red wine, literally: “wine red”’ as an example for the latter. But apart from the sequences of determining and determined element, I don’t see any differences. The distinction therefore seems superfluous.

Mutation is defined as a change in the word-class by substitution of the word-class-specific bound morphemes (e.g. Fr. *manquer* ‘to lack’ → *(le) manque* ‘the lack’), while in conversions a change of the word-class-specific bound morphemes is absent (e.g. G. *essen* ‘eat’ → *(das) Essen* ‘food’) (cf. Koch 2001: 21). However, the case of Fr. *le manque* can easily be seen as an instance of back-derivation. The category of mutation, too, appears

superfluous.

An important completion of the list of word-formation patterns is the process of phraseologism, which has been excluded in the other systems mentioned.

## 6. Synthesis

In this final section, I will attempt to draw a synthesis of a cognitive-onomasiological approach toward word-formation. I will once again shed light on the most important aspects of the works cited and add a few more ideas.

### 6.1. Process and Processes Revisited

The onomasiological starting-point is a concept to be named. Unless you don't decide to borrow a foreign term, the following phases are gone through. The concept is first analyzed and categorized. Various (salient) aspects and associations (similarity, contrast, contiguity, partiality) are activated in the speaker's mind (in Štekauer's terminology determining and determined constituents). It must be underlined that this does not involve a hierarchy of elements, though. Then the speaker has to choose the means to denote the concept or the activated prototypical association. In Štekauer's terminology this means that here the potentially expressible base as well as the mark are selected. Different subgroups of the speech community may highlight different associations/aspects and use different ways of expression.<sup>35</sup> Among the ways of expression is the combination of already existing linguistic material, commonly called *word-formation*. The speaker patterns his/her expression on already existing prototypical models, i.e. s/he must first have analyzed other linguistic units to coin a new unit (on the onomasiological level). S/he looks for models expressing similar semantic relations/associations as the focussed semantic relations/associations in the concept to be named. Again, I would like to stress that only salient aspects/reasons/associations are brought into linguistic form, since only these are expected and will be understood by the normal hearer. At the end there is the concrete realization respecting phonological and morphological rules inherent in the formal type.

The combination of already existing linguistic material can be grouped into four formal types:

- (A) the combination of lexical/free morphemes
- (B) the combination of a lexical morpheme and an affix
- (C) morphological or syntactical recategorization of an existing form
- (D) the shortening of an existing form

Ad (A) and (B): Type (A) is traditionally referred to as composition. Compounds express a variety of relations. These relations, however, as already mentioned, will always be prototypical/salient relations, since otherwise the speaker would risk not being understood. Type (A) may include a formative element, which is often neglected because such elements are rare in English, in contrast to German or the Romance languages: compare, for instance, Fr. *machine à écrire* (not *de*), Sp. *máquina de escribir* (not *a*), and It. *macchina da scrivere* (not *di* or *a*) 'type-writer'. English examples with formative elements are the already mentioned *center of attraction*, then also *lord's prayer*, *commander-in-chief* or

<sup>35</sup> Pavol Štekauer (personal communication) informs me that he and Don Chapman are actually carrying out research on the hypothesis that the preference for various word-formation types is tied to the various sociolinguistic factors.

AmE *driver's license* vs. BrE *driving license*. In contrast to (A) the variety of possible interpretations is smaller with type (B). Affixes trigger off relatively fixed associations between the word-stem and the concept named.

Ad (C) and (D): (C) unites gender change, number change, diathetic change and conversion; (D) is a generic term for clipping, blending, acronyming and back-derivation. I will come to these processes later.

We have already seen that apart from this morphological classification it is also possible to renounce the distinction between affixes and free morphemes and ensue a cognitively more elementary classification<sup>36</sup>. This brings us back to Štekauer's model again, where he distinguishes five different word-formation processes, although we have favored a different interpretation for the process of conversion. Beside these five types, we had already added a sixth and a seventh type. Beyond that, there are seven other processes that have remained unmentioned so far, but have been supplemented here in a way that they can easily be integrated into Štekauer's approach. Since long-winded terms will have a hard time getting accepted by the public, I will offer alternative terms in parentheses.

- (1) the "syntactical recategorization" (conversion)
- (2) the "simplex structure" (simplex composites)
- (3) the "complete complex structure" (complex composites)
- (4) the "incomplete complex structure 1" (mark-absence composites 1)
- (5) the "incomplete complex structure 2" (mark-absence composites 2)
- (6) the "incomplete complex structure B" (base-absence composites)<sup>37</sup>
- (7) the "copulative structure" (copulatives, or determination-absence, composites)
- (8) "formal shortening" of morphemes (ellipsis)
- (9) "formal shortening" of morphs (clipping)
- (10) "formal shortening" to initials (acronym)
- (11) "formal blending" (blends, contaminations)
- (12) "back-derivation"
- (13) "reduplication"
- (14) "morphological recategorization" (gender, number or diathetic change etc.)
- (15) word-formation plus borrowing (pseudo-loans and calques)
- (16) phraseologism
- (17) "clarifying composites" / "post-classifying composites"
- (18) folk-etymology

Again, in order to arrive at these structures the speaker has to pass—at least as regards the first six structures—five mental levels unless s/he doesn't borrow the name from another language/dialect: (i) the conceptual level (analysis and categorization of the concept: substance, action, quality or concomitant circumstance), (ii) the semantic level (structuring of the semantic components/associations, which need not only be based on contiguity, taxonomic relations and partiality, but also on similarity and contrast!), (iii) the onomasiological level (selection of two or three semantic components for the name), (iv) the onomatological level (concrete selection of the structure), (v) the morphonological

<sup>36</sup> See also Tournier (1985: 48ff.), who distinguishes between "morphosemantic neologisms" (which include constructed lexical units, i.e. derivation and composition, as well as onomatopoeic formations), "semantic neologisms" (which include conversion and metasemy, i.e. semantic change), and "morphological neologisms" (which include apheresis, apocope and acronymy).

<sup>37</sup> We may also speak of "incomplete complex structure and metonymy" or "word-formation metonymy" or "metonymy composition".

level (concrete realization of the structure)<sup>38</sup>. The passing of these mental stages can occur in various degrees of consciousness.<sup>39</sup> In addition, with types (2) to (6), the speaker has to decide whether he wants to realize these structures by a combination of free morphemes (possibly with a formative element) or by a combination of a word-stem and an affix or an interplay of both types. Moreover, it seems that certain structures are favored with certain associations. In this respect, Štekauer (1998) offers a good survey; and Blank's (1997b) article should also be mentioned here again.

Types (7) to (16) are added to Štekauer's types. In traditional works, too, these processes live in the shadows. They have therefore been dwelled on in smaller works; in this respect, the names of John Algeo (1974, 1975, 1977) and Garland Cannon (1985, 1986, 1988, 1989) should be mentioned.<sup>40</sup> Štekauer did not include these because he didn't regard these processes as one-hundred percent productive, and thus regular and predictable. But this view is too "Anglocentric". If we have a look at German, which possesses many more formative elements than English, then the variation between *Adventkalender* and *Adventskalender* 'Advent calendar' illustrates that so-called determinative compounds are not one-hundred percent predictable either. Then it's easier to include blends, clippings and acronyms as well. In English, too, there are such elements or at least cases where we can surmise such elements. Thus we may ask whether the *-al* in *transformational grammar* can be considered a formative element, since a form *transformation grammar* is also possible. Likewise, it is not always predictable when a speaker will use *un-* and when *in-* (or one of its variants, i.e. *il-*, *ir-*, or *im-*) as a negation prefix (cf. the study by Baldi et al. [1985]). A general rule says that *un-* is connected with Germanic and foreign stems, *in-* only with Romance or Latinate stems. Therefore, there is the form *incredible* aside from an older *uncredible*. One solution to the problem may be that not every speaker will of course be able to determine the origin of a word-stem. The final level is the morphological realization; this includes changes like stress shift, vowel reduction etc." Unpredictable word-formations are thus only awkward from the point of view of generative grammar (cf. Bauer 1983: 232). Of course, nobody doubts that the degree of predictability is lower with shortenings and blends, but it was important here to revise the requirements of word-formation that Štekauer has formulated in his works; in a personal letter Štekauer has underlined, though, that word-formation is not always predictable on the onomatological level and that the final word-shape is a combination of phonological, morphological, semantic and lexical restrictions and the creative approach of the "coiner". By the way, there is even the phenomenon of recursive shortening (e.g. *OK* [ou'keɪ]—whatever the origin may be—can be shortened to *oke* [ouk]). Types (8) through (10) are not only separated from types (1) through (7) as regards their formation, but also as regards their motivation. Their coinage is not at the end of the five mental levels described above. Here a long form is in the foreground, which becomes shortened for economical or aesthetic reasons. Such shortenings are the more frequent, the longer the full form and the more

<sup>38</sup> Levels (iii) to (v) may be viewed differently when the speaker decides to choose an already existing word and give it a new meaning (semantic change).

<sup>39</sup> This was already acknowledged by Whitney (1867: 122): "processes of word-making, of name-giving, in all their variety, are not, in the fullest sense, consciously performed: that is to say, they are not, for the most part, premeditated and reflective. There may be found among them, indeed, every degree of reflection, sometimes rising even to full premeditation." Even if new objects have to be named for the first time, there is some degree of unconsciousness, according to Whitney (1867: 123): "namely, the manner in which their selection is guided and determined by the already subsisting usages and analogies of their speech, and by the limitations of their intelligence."

<sup>40</sup> Cf. also the works of Devereux (1984), Kelly (1998) and Davy (2000); a very early work on blends is the one by Pound (1914). The same neglect is also present in basic and introductory works on word-formation in other philologies.

salient the concept in the speaker's world (cf. Zipf's law [1935: 142ff.]).

Some word-formation processes shall be analyzed in a still more thorough way, since the need for discussion seems to be greatest for them.

### 6.2. "Conversion/Syntactical Recategorization"

We have decided to keep conversion and semantic change apart, despite their large intersection. Once more, the reader shall be reminded that this process consists of a combination of the following features: recategorization on the conceptual level + non-analyzable onomasiological level + word-class change + phonological/phonetic and orthographical identity or near-identity (as there is sometimes a stress shift with vowel reduction). The question of unidirectionality doesn't really suggest itself in an onomasiological approach, it can only be asked in an analytical, structuralistic view, which is not at issue here. Again, I would like to recall that a syntactical recategorization does not always keep all semantic components of the original word.

### 6.3. Base-Absence Composites

This process, which leads to what is traditionally called *exocentric compounds*, doesn't seem to be a pure word-formation process, but is combined with metonymy or synecdoche/pars pro toto. A certain salient feature of the concept to be named is highlighted and then put into a linguistic form by combining (free) word-stems. Nevertheless, Štekauer's model could be extended and we could say that the onomasiological base is missing here. There is no need to postulate an auxiliary construction. The base is simply not salient enough for the speaker to include it in the expression. It seems as if the "having" association is the most prominent association with base-absence composites.

### 6.4. Copulative Composites

By *copulative composites* I understand two hierarchically equal morphemes, i.e. the lack of a determination pattern. The term subsumes both so-called copulative compounds (e.g. *German-French [border]*) and so-called additive compounds (e.g. *deaf-mute*).

### 6.5. Ellipsis

Ellipsis was defined by Ullmann (1962: 222) as semantic change based on a contiguity of forms. Blank (1997a: 281) correctly says that if a syntactical phrase is reduced to a single word and the meaning is kept, this cannot be called semantic change, but only lexical change. Nevertheless, in what follows he describes the processes involved in an ellipsis in a way that he can also classify ellipsis as a type of semantic change. I will only briefly add a few comments on that.

Basically there seem to be two very distinct types of ellipsis. On one side there are ellipses where the determining part was deleted, on the other there are ellipses where the determined part was deleted. The first type is represented by cases like *daily paper* → *daily*, the second by cases like *newspaper* → *paper*. While the latter can indeed be seen as some sort of semantic change (*paper* adopts a new meaning), the former is a true type of word-formation or, rather, word-shortening, since the process truly results in a new word, viz. *daily*<sub>sb.</sub>. Ellipsis is sometimes called the historical equivalent of clipping (cf. Marchand

1969: 448). In fact, ellipsis seems to be rather rare in Present-Day English. There is not a single example of ellipsis in the latest lists of “Among the New Words” (Glowka et al. 2000, Glowka et al. 2001). Relatively recent instances are *canine tooth*→*canine* and *jumbo jet*→*jumbo* (which Bauer [1983: 233] lists under clipping, but he doesn’t even have a separate chapter for ellipses).

## 6.6. Clippings

In contrast to Blank, I think that clipping does not result from a contiguity of linguistic signs, but from a contiguity of parts of linguistic signs. The big difference between ellipsis and clipping is that the former requires a deletion of morphemes, the latter only a deletion of morphs. The oldest records of clippings in English language history are from the second half of the sixteenth century: *coz* for *cousin* 1559, *gent* for *gentleman* 1564, *mas* for *master* 1575, *chap* for *chapman* 1577 and *winkle* for *periwinkle* 1585 (cf. Marchand 1969: 448; cf. also Biese 1941). Wermser (1976) unfortunately did not include clippings (or blendings) in his diachronic study, so that this is still a research gap to be filled; but for more recent decades the studies of Cannon (1987) and Algeo (1980) show that clippings play a rather minor role—at least in written English. The lists of “Among the New Words” show the same results. For the years 2000 and 2001 the lists include only two examples, namely *endo* from *end-over* ‘bicycling accident in which the rider flies over the handbars (among mountain-bikers)’ (Glowka et al. 2000: 76) and—with a diminutive ending—*Milly* ‘dance promoted and commissioned by Chicago city officials for the new-millennium fatigue syndrome’ (Glowka et al. 2000: 331). Commonly known are the following examples: (*tele*) *phone*, *mike* (< *mikrophone*), *porn(ographical film)*, *op(tical) art*, (*py*)*jam(a)*. The etymons are no longer generally known for *movie* (< *moving picture*), *deli(catessen)* and *sitcom* (< *situation comedy*<sup>41</sup>).

## 6.7. Acronyms

As already mentioned in the discussion on Dirven/Verspoor, acronyms play a paramount role in a highly modern society. For precision, I would like to underline that only spoken initialisms should be called acronyms; in my view it is not helpful that Algeo (1978, 1980) also defined cases like *Dr.* as acronyms. *Ph.D.* [pi:ɛɪtʃ’di:], on the other hand, is a true acronym. Some acronyms are pronounced letter by letter, others as syllables—with possible differences in different varieties: some pronounce <VAT> as [væt], some as [ˌvi:ɛrˈti:].

Like clipping, acronymy is based on a contiguity of parts of a linguistic form, where only some sounds—or better: letters—are selected for the new coinage. It is a particularity of acronymy that the short form sometimes seems mentally prior to the long form or at least concurrent. Then it passes through the phases described by Štekauer. And also Bauer (1983: 237) observes:

“In some cases it seems that the name of a particular object is specially chosen to give a suitable acronym. This seems to be true of *BASIC* [Beginners’ All-purpose Symbolic Instruction Code] or, for example, the Federation of Inter-State Truckers, *FIST*. In other cases, the acronym spells something which seems to be appropriate in some metaphorical case, as for example with *WASP* [White Anglo-Saxon Protestant].”

## 6.8. Blending

<sup>41</sup> Some native speakers actually see a connection with *to sit* and *communication* here.

This process occurs especially when there is a mixture of two categories so that an unequivocal classification of the concept to be named seems impossible. Yet Adams (1973) has shown that blends can be categorized into several subtypes: “expandable blends” (e.g. *Chunnel*), “conjunctive blends” (e.g. *smog*), “non-expandable blends” (e.g. *rockoon* ‘balloon rocket’), “derivational blends” (e.g. *beatnik*), and even “neo-Latin blends” (e.g. *aquacade*). I do not want to adopt this subtypology, but Adams’ system shows at least that blendings can represent all structures of the composites, type (2) to (7). There seem to be two kinds of blends: first, the type which I illustrated by way of the example of *clash*, second, the type where there are really two complete words at the beginning, e.g. *breakfast-lunch*→*brunch*. Aside from the (postulated) contiguity of linguistic expressions there is also—and this is much more important—the contiguity of concepts, which I’ve already mentioned above. For the speaker it is either difficult to decide whether *brunch* is a kind of BREAKFAST or a kind of LUNCH or s/he sees that a brunch combines elements of both: there’s contiguity between BRUNCH and BREAKFAST as well as between BRUNCH and LUNCH. In my opinion, the second interpretation is more useful, since it also covers cases like *motel*. If no long form has existed before, Štekauer’s onomatological level becomes relevant. This time it seems justified to assume an auxiliary “simplex structure” which immediately gives way to a shortened form for economical reasons or for reasons of prestige and fashion. Blending is a productive and prominent word-formation process in Modern English (at least in American English), only to be excelled by compounding and derivation (cf. the lists of “Among the New Words”).

If a word is frequently used for blending, then the clipped part might gradually serve as a new (pseudo-)affix, especially when combined with morphemes, not only morphs. This seems to be the case with *[X]-gate* (from *Watergate*), which can be glossed as ‘scandal in connection with [X]’. The latest list of “Among the New Words” include the entries *Skategate* (referring to the attack on scater Nancy Kerrigan, instigated by Tonya Harding) (Glowka et al. 2000: 190), *Kneepadgate* ‘sex scandal around President Clinton and Monica Lewinsky’ (Glowka et al. 2001: 81), also known as *Sexgate* (Glowka et al. 2001: 194), *Monasterygate* ‘scandal involving fund-raising by Vice President Al Gore in a California Buddhist temple’ (Glowka et al. 2000: 438). Another good example is the phoneme [i:], which can be considered a (pseudo-)prefix; in Glowka et al. (2001: 86) we find the lemmas *e-bucks* ‘electronic money’, *e-celebrity* ‘famous person promoting an Internet company’ and *e-entrepreneur* ‘person starting an Internet company’; besides, *e-mail* and *e-commerce* are now well-established words not only in English.

## 6.9. Back-Derivation

Similar to blending, the process of back-derivation<sup>42</sup> combines both the usual cognitive process and the inclusion of an already existing word. As illustrated above, Štekauer regards cases like *to stage-manage* as merely alleged cases of back-derivation and holds the view that the “short” form (*stage-manage*) and the “long” form (*stage-manager*) have been generated separately. Again, I would like to stress that I don’t want to deny that the speaker passes through the conceptual, the semantic and the onomasiological levels. On the onomatological level, however, s/he now looks for linguistic models, not only for model structures, but for concrete model forms that are semantically important. It is interesting to see that the content of back-derivations is often narrower than that of the model form (cf. Dirven/Verspoor 1998: 67).

<sup>42</sup> For an analysis of English cases of back-formation cf. Cannon/Bailey (1986).



### 6.10. Reduplication

Reduplications like *wishy-washy* (ablaut reduplication) or *willy-nilly* (rhyming reduplication) could of course be classified as copulative structures. But here too, it can't be denied that formal reasons played a decisive role in the selection process on the onomasiological and onomatological levels. The current lists of "Among the New Words" have collected two examples: the drug *love dove* (Glowka et al. 2001: 180) and the compound *bite fight* referring to the boxing fight in which Mike Tyson bit off a part of Evander Holyfield's ear (Glowka et al. 2000: 431).

### 6.11. Lexical Pseudo-Loan and Calques

Last but not least, we should not ignore the mixed types of word-formation and borrowing. First of all, there are the so-called lexical pseudo-loans, i.e. words that look foreign, but never existed as such in the "giving language". Since in Modern English these formations concern predominantly pseudo-loans with Latin and Greek elements they are often called *neoclassical compounds* (cf., e.g. Bauer [1983: 313; 1998]; there is no separate section reserved to them in Marchand 1969). In turn, the prestige of English attracts many nations to form pseudo-Anglicisms.<sup>43</sup> It seems as if here the name-giving person arrives at the onomatological level and now resorts to some type of material from a foreign language, which then undergoes the usual integration changes on the morphological level.

As to neoclassical compounds, it must be mentioned that the classification of some of them<sup>44</sup> as compounds is problematic since the words don't consist of two free lexemes, e.g. *photograph*. Neither are they affixes, because then formations like *\*photoization* or *\*photoesque* would be possible (cf. also Bauer 1983: 213f.). So the term (*pseudo-*)*affix* already used above seems indeed well-chosen.

Second, there are words that have been termed loan-translations and loan-renderings (i.e. only part of the foreign expression is translated). Both are also called calques. A few examples will illustrate these types:

(a) loan-translations: OE *fore-setnys*→Lat. *prae-positio*, OE *ān-horn*→Lat. *unicorn*, OE *hǣl-end*→Lat. *salva-tor*, OE *gōd-spel*→Gk. εὖ-αγγέλλιον, ModE *superman*→G. *Über-mensch*; Fr. *gratte-ciel*→E. *sky-scrapers*;

(b) loan-rendering: G. *Wolken-kratzer*→E. *sky-scrapers*; OE. *dune-sfigan*→Lat. *descendere*; ModE *brother-hood*→Lat. *frater-nitas*; OE *leorning-cniht*→Lat. *discip-ulus*.<sup>45</sup>

Here, the name-giving person appears to arrive at the semantic level, looks at a foreign language on the way to the onomatological level, and comes back to the native language on the onomatological level. However, with calques we have the problem that we cannot always decide whether the coinage was really modelled on a foreign term or whether it represents an independent, albeit parallel construction.

### 6.12. Varia

<sup>43</sup> Cf. the study by Filipović (1985). For German, cf. especially Carstensen (1980, 1981) and Grzegala (2001). For French, cf. Cypionka (1994).

<sup>44</sup> This shows that the group of "neoclassical compounds" is not a consistent one. In order to respect this gradualness, Bauer (1998) suggests categorizing English compounds within a conceptual space defined by three dimensions: a simplex compound dimension, a native—foreign dimension and an abbreviated—nonabbreviated dimension.

<sup>45</sup> The terminology used here goes back to Duckworth (1977: 40), whose classification is based on Betz (1949, 1959).

Two other phenomena shall briefly be mentioned at the end of this paper. The first is called *opaque compounds*. A number of works have dealt with English opaque compounds (cf. Faiß 1978, Götz 1971 as well as Mayer 1962). Of course, they are important neither in a structuralistic-analytical approach nor in an onomasiological approach, since speakers don't coin opaque compounds (they become opaque by accident). However, they sometimes keep their spelling and can then motivate the formation of a new lexical type, e.g. [ˈfɔrhed] vs. [ˈfɑrɪd] 'forehead' or the remotivation of [ˈhʌzɪf] toward [ˈhauswaɪf] 'woman who manages the household', while 'sewing kit' is (archaically) still referred to with the first pronunciation.

The second phenomenon is folk-etymology, which is not a type of semantic change, although classified as such by many linguists (cf. Ullmann 1962 and the overview in Olschansky 1996); but it is exactly the change in form which is the most basic aspect of folk-etymology. In the realm of word-formation it should be noted that folk-etymology has often resulted in new compounds: e.g. *sparrow-grass* for *asparagus*, *nick-name* for ME *an eke name* 'an "also"-name', *bridegroom* for OE *brydguma* or *sandblind* for OE *\*samblind* 'halfblind'.

## 7. Conclusion

In this paper I have strived to cover a large number of questions involved in an onomasiological and cognitive approach toward word-formation. Many ideas are based on recent models of word-formation. I have tried to further develop and coordinate them. The nomenclature that has been contrived is to cover all cases of word-formation, both central and peripheral ones. The approach presented here is part of a larger project dealing with motives for and types of onomasiological change.<sup>46</sup> I am aware that a number of questions could only be touched on the surface, but I hope they will attract other linguists to join the discussion.

Joachim Grzega  
*Englische und Vergleichende Sprachwissenschaft*  
*Katholische Universität Eichstätt-Ingolstadt*  
 85071 Eichstätt  
 joachim.grzega@ku-eichstaett.de  
 www.grzega.de

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<sup>46</sup> Cf. also the preliminary study in Grzega (2002).

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