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Word-Formation

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90. Types of foreign word-formation

Abstract

This article aims to investigate linguistic reflexes of non-nativeness in word-formations. It will be argued that foreign word-formation subsumes processes that vary considerably in how much they differ from indigenous types of word-formation. Divergences between indigenous and foreign derivations and indigenous and foreign compounds may turn out to be marginal; yet there are non-native combinations that deviate significantly. As the term foreign word-formation subsumes both word-formation and borrowing, this article starts out by trying to disentangle how these processes are intertwined. It ends with some remarks on how specific donor languages predetermine secondary usage.

1. Constituting new sources of lexical innovation

Lexical enrichment of languages follows a wide variety of patterns. Coining novel words by simply inventing new lexical labels (*jeep*, etc.) is one of these but not a prominent one. Most new lexical items are products of word-formation. New words are generated by recombining existing elements of a language; elements that carry lexical meanings or morphological functions: a machine that computes is a computer.

Another large chunk of new lexemes is borrowed. Computers are as well-established around the world as its lexical label is; an English product of word-formation has turned into a borrowed lexical item in other languages. Borrowing as well as word-formation extends the repertoire of words; nevertheless, the usage of non-native words and structures is subject to controversial discussions in many language communities (cf. article 92 on foreign word-formation, language planning and purism).

It seems easy to distinguish between these two sources of lexical innovation. With regard to *computer* there is little doubt that English word-formation simply preceded the

use of its product elsewhere. German *Computer*, for instance, retains linguistic features of English such as the word-initial <c> or the phoneme cluster /pju/. Still, the clear-cut distinction doesn't hold if Latin constituents like the verbal stem of Latin *computare* are used in English word-formations. In English, this is a combination of both word-formation and borrowing; foreign word-formation is the third major source of lexical enrichment of European languages (cf. article 93 on foreign word-formation in German, article 94 on foreign word-formation in English, article 95 on foreign word-formation in Italian and article 96 on foreign word-formation in Polish).

Foreign word-formation eventually sets in as soon as there is enough information available to decode the morphological structure of a foreign word. As far as a form like *computer* is concerned, there is nothing peculiar about a construction that refers to some sort of appliance carrying out whatever action is specified by the verbal stem. In more remote cases, it might be necessary to derive meanings or functions of non-native constituents by analysis of equally structured lexical items; we do not borrow morphemes, as Paul (1995 [1880]: 399) noted, we borrow words and begin to use their constituents as soon as we have figured out how they work and what they mean. Assuming that we are capable of decoding the concepts behind non-native elements by analogy despite scepticism here among cognitive linguists (e.g., St. Clair 2002: 17), foreign word-formation is more than the borrowing of non-native means to create new words. It requires a fair amount of linguistic analysis on the speaker's part to assign a secondary function to morphemes as well as to the constructions they form.

In some cases we fail, at least if usage standards of the donor language are what speakers of the recipient language are aiming for. Formations like German *Prinzessin* were obviously not analysed correctly if a feminine personal marker *-in* is added, not to French *prince*, but to a derived form that already includes that marker (*princesse*). The Italian pseudo-loanword *footing* 'jogging' is by no means ill-formed but nevertheless odd because none of the numerous meanings of this word in English even comes close to the way it is used in Italian, and Japanese *arubaito* is not German *Arbeit* but restricted to a very specific type of *Arbeit* that speakers of German also refer to by using a loanword: *Job*. It is a difficult task to integrate foreign words into a target language and just as intricate to master all aspects of foreign word-formation. That might be one reason why foreign word-formation trails borrowing at times by 100 to 150 years (Munske 1988: 63) or more.

Nevertheless, foreign word-formation gets easier with every new element added. The estimated 10,000 Greek and Latin loanwords in English adopted during the Renaissance (Baugh and Cable 1993: 227) established a stock of non-native words that was solid enough to render substantial foreign word-formation possible. Since the majority of loanwords in English appeared around 1800, thus, long after borrowing from classical Greek or Latin reached its peak (Scheler 1977: 48–52), it seems likely that foreign word-formation replaced borrowing as the dominant source of new words around that point of time – even though Neo-Latin as a potential source for borrowing may be underestimated (Rainer 2009: 47–50). According to the *Deutsches Fremdwörterbuch*, most foreign words in German are also word-formations rather than borrowed lexical items (Kirkness 1988: 234), and Schmitt (1996: 128) states that foreign word-formation in French not only outnumbers borrowings but also word-formation with genuine elements of French. Still, it is hard to tell in many cases whether words are borrowed or not. Even dictionaries might sometimes be misled by their specific perspective on foreign words

(Barz 2008: 40–41), and the shift from borrowing to foreign word-formation might not apply to elements from all sources to the same extent (Kirkness 2001: 106–117). It is the means that vary, but the tendency of broadening the non-native part of lexica remains the same. Some European languages use foreign types of word-formation widely while others compensate for their hesitant use of those processes by borrowing to a greater degree.

It has been argued that German, as compared to English or French, has lexical deficits in either case because of its tradition of purism (e.g., Kirkness 1996: 13; see also article 97 on word-formation and purism in German), but the latter languages have also had their period of profound aversion to foreign influence. There was strong opposition to *inkhorn terms* in English as well as to non-native ways of producing them (e.g., Adams 1987: 129; Baugh and Cable 1993: 212–219), and even in French foreign elements have not remained undisputed (cf. article 98 on word-formation and purism in French). The Latin terminology of jurisprudence, for example, was by law replaced by indigenous French terms as early as 1539 (Settekorn 1988: 38–40). Nevertheless, the number of Latin lexical items in French is vast; there were no major typological gaps to be bridged. It is not surprising that Germanic languages predominantly accessed the Latin lexical reservoir through French until English became the primary source of these elements for the other modern European languages (Kirkness 1996: 12) which, again, makes sense because more than half of all English words are of Latin or Greek origin (Scheler 1977: 52). Obviously, there is nothing unusual about constituents crossing language borders numerous times.

The odds are that many such elements alter features on their way: German *Diathek*, for instance, refers to a ‘slide collection’, whereas the similar compound in classical Greek means ‘testament’ (Holzberg 1996: 1–2), and even elements without lexical meaning (affixes) may simply change their functions: English *-ic* as well as its German or French equivalents (*-ik*/*-ique*) forms nouns while its Greek predecessor *-ikós* derived nouns into adjectives (*aisthētikós* ‘perceivable’). Secondary usage is not a matter of heritage alone; borrowed elements are used in the way they are needed, not necessarily in the way they were used in the donor language.

The stems involved here may be called “affixes” because they are bound (e.g., Schmitt 1996: 119–132). Since there is more to these elements than affix-like morphological behaviour, more specific ways to address them describe their features: Grossmann and Rainer (2004: 70–95), for instance, refer to “elementi formativi neoclassici” in Italian. Yet there are numerous terminological suggestions for these neoclassical elements of word-formation. “Confixe” is one of them, a French term for bound roots used by Martinet (1979: 20) and Kocourek (1982: 108) which was introduced as “Konfix” to German linguistics by Schmidt (1987b: 50). Italian “confisso” is not very frequent, perhaps because “confix” has also been used to refer to elements of word-formation that are not stems (Mel’čuk 1982: 80–84). Other terms such as “quasi-morphème” (Tournier 1985: 87–88), “Intermorphem” (Volmert 1996: 227–230) or “Ponem” (also Schmidt 1987b: 49) essentially refer to the same type of constituent, just as “affixoid” does – if we disregard that affixoids are not associated with non-nativeness. Despite the criticism the concept faces (e.g., Fleischer and Barz 1995: 27–28), “affixoid” is used in Germanic linguistics (e.g., ten Hacken 2000: 353) and is also one of the more frequent ways to address these elements in Slavic literature on morphology (Scheller-Boltz 2010: 49–69). However, none of the ways of referring to these stems is as well-established as the

English term "combining form", introduced by the *Oxford English Dictionary* (OED) in 1884 (Kirkness 2005: 451). Today this term is used in practically all works on word-formation published in English (e.g., Adams 1987: 128–138; Bauer 1998: 403–422; Lehrer 1998: 3–28; Warren 1990: 111–132 on English word-formation or Fradin 1999: 11–55; Szymanek 1998: 467 on Romance and Slavic languages).

However these elements are referred to, there does not seem to be a consensus as to what criteria the morphological classification of these stems should be based upon. Not even non-nativeness is a criterion all linguists agree on (e.g., Fleischer and Barz 1995: 122), and recourse to elements solely from classical languages as suggested by earlier approaches (Martinet 1970: 134–135; Marchand 1969: 5–6) has given way to broader categories not defined by the classical descent of its members (e.g., Schmidt 1987a: 27–35; Eisenberg 2006: 244–246). There seems to be a need for an additional morphological category; one question is where to draw the line between its members and other word-formation elements if combining forms share features with affixes (i.e. both are bound) and lexemes (i.e. both carry lexical information). The other one is how to define them if we take into account that the morphological features of these elements vary considerably. Some modify bases like affixes do, others function as bases for derivations, while the members of a third subset of these constituents are restricted to forming compounds. Either heterogeneous classifications or categories without distinctive features seem inevitable.

There are prototypical elements that meet all demands stated above (e.g., the constituents of *morphology*). Many others do not, such as those elements frequently used in international medical terminologies (*hyper-*, *-itis*, etc.). It is the fuzzy edges that are hardest to describe within this foreign subset of word-formation elements. Basically, the same counts for the processes of word-formation involved here.

2. Constituting new processes of word-formation

Linguists have been struggling to describe how Greek or Latin elements behave within modern languages. Obviously, foreign word-formation processes using Greek or Latin elements may lead to the same constructions in most European languages; it is a difficult task to label foreign word-formations by origin. Speakers of German do not necessarily know that *Musik* was formed in Latin, *Keramik* in French and *Pneumatik* in English (Munske 1988: 65), they don't have to because it does not really matter which language contributed a word to this international stock of words. Terms like "euromorphology" (Schmitt 1996: 119–146) or "learned word-formation" (Fradin 1999: 22–27) reflect this state of affairs; Bergmann (2000: 109) even refers to polygenesis here – to foreign word-formation that is European rather than word-formation specific to any one language. The common ground among these formations is their science-specific, rather than language-specific purpose and the recourse to a classical prototype constructed by the reanalysis of classical model-words that modern European languages share.

However, even if there is some process productive in all modern European languages, the first impulse should, of course, be to describe its products within the linguistic systems of any of these languages. Sections 3 through 6 will discuss how foreign the processes leading to foreign word-formations really are. If there is no systematically signifi-

cant deviation from compounding or derivation with indigenous constituents, it makes sense to describe non-native word-formations within native models (e.g., Eisenberg 2006: 242–246). But on the other hand, word-formation subsequent to the borrowing of words not only facilitated the use of non-native morphemes in derivations and compounds; it also introduced linguistic structures unknown to modern European languages up to that point of time. Patterns such as those generally referred to as "neoclassical compounds" as in *morphology* differ considerably from the way regular compounds of these languages are formed. It is tempting to refer to different sets of processes in recipient languages – native ones (see sections 3 and 4) that allow foreign constituents and foreign ones (sections 5 and 6) that require them.

Within the neoclassical subset there is heterogeneous morphological behaviour. The "medical" elements *-itis* or *hyper-* mentioned previously may form compound-like words despite being affix-like in that they are bound, but compared to the elements of which *morphology* is composed, there are additional restrictions. *Morpho-* as well as *-logy* can be used as either initial or as final constituent of neoclassical compounds, and they form bases for derivations ([[*morph*]eme]/[[*log*]ic]) as well as neoclassical compounds. *Hyper-* and *-itis* do not; they require stems as co-constituents, and they are restricted in their use as either initial or final constituents in European foreign word-formations. Obviously, some foreign stems resemble affixes more than others. Given that we cannot even pinpoint word-formations with elements of this kind as being either cases of compounding or derivation, it is tempting to avoid this distinction altogether and subsume all these combinational patterns under one common label. Martinet's (1970: 134–135) and – more recently – Schmidt's (1987a: 28–33) approaches may be described in this way. In their models (*recomposition* and *recombination*), the origin of the constituents in the former and their non-nativeness in the latter case seem to be more significant than similarities between foreign and native compounds or foreign and native derivations.

Marchand (1969: 5–6), on the other hand, distinguishes between native and non-native processes that do not necessarily correlate with the origin of the constituents involved here. *Word-formation on a native* [English] *basis of coining* combines words (as compounds do) or words and non-words (found in derivations). Foreign formations, on the other hand, are combinations of non-words; thus, the only criterion for nativeness, as far as types of word-formation are concerned, is the presence of a word. English *hypersensitive* (containing a non-word and a word) as well as its equivalent in other European languages is a native word-formation within his framework despite its non-native constituents, whereas *hypertrophy* (consisting of two non-words) is not.

Other models expand native concepts somewhat in order to describe non-native combinations of non-words. Müller (2005a: 208), for instance, refers to *affix-combination* if bound elements lack the ability to function as both initial and final constituents, whether they are stems or not. These stems resemble native affixes in this sense, no matter how much lexical content may be assigned to them. Even most productive and semantically transparent stems turn into affixes because topological properties suggest such a classification (e.g., German *Biblio-*$_{[\text{Aff}]}$*-thek*$_{[\text{Aff}]}$ 'library').

In sum, there seems to be a tendency to infer hyperonymic models that include modern and neoclassical combinations (Schmidt, Eisenberg) or derivation- and compound-like processes (Martinet), and a tendency to define foreign processes of word-formation by exclusion. Whatever is not possible within indigenous models of word-formation is foreign (Marchand, Müller) – combining affixes, for instance.

There have been many more attempts to disentangle foreign word-formation processes as well as criteria its constituents can be defined by − some of these reflections lead to contradictory results: Bauer (1993: 214−215), for instance, uses potential participation in neoclassical compounding to define combining forms, whereas Donalies (2000: 154−157) takes derivability as the sole criterion for such a classification. The one thing all theorists agree on is that some distinct subtype of word-formation exists that is foreign. Since all of these approaches − with, perhaps, the exception of Müller's affix-combination − require the presence of foreign stems, the differences do not seem to be all that significant. The foreign process of word-formation might be termed "recombination", "recomposition" or simply "word-formation on a non-native basis of coining". But even if there is some foreign model of word-formation, we still do not know how to capture the behaviour of non-native constituents in native-like constructions. The following sections aim to investigate how foreign the different types of word-formation are.

3. Foreign derivation

There is nothing foreign about affixing some sort of functional marker to a stem. Many of these markers gradually emerge within a language as lexemes become opaque and eventually grammaticalize. German *-heit* or *-schaft* (Fleischer and Barz 1995: 158−163, 168−170), for instance, used to be stems but turned into bound morphemes with morphological functions rather than lexical meanings; they became affixes just like the predecessors of their English counterparts *-dom* or *-hood* did (Marchand 1969: 262, 293). In all Romance languages, *-ment*(*e*) is such a result of grammaticalization (see article 106 on the Romance adverbs in *-mente*: a case study in grammaticalization), and even foreign words may share that destiny: the English suffix *-ify* derives from Latin *facere* 'to make' (Hall 2000: 537). Given that grammatical units do not tend to change their features easily (compare inflectional markers), it is worth noting that the inventory of word-formation morphemes is not as closed a system as other modules of grammar seem to be. Still, grammaticalization is a minor source for secondary affixes, and so is coining in the sense of simply inventing new affixes: Fradin briefly discusses elements that came along with attempts to establish an appropriate nomenclature for chemistry in 18th century French − very few of them (*-ate* 'chlorate'/*-on* 'xénon') being "pure creations" (Fradin 1999: 25).

The overwhelming majority of secondary affixes result from the analysis of complex loanwords. As far as Romance languages are concerned, the model derivations were obviously Latin (Rainer 2004: 1705−1708); English drew on the same source to make up for its native affixes that were lost after the Norman Conquest (Baugh and Cable 1993: 177−179). Within the German inventory of prefixes, non-native elements also constitute the most productive and the largest class (Polenz 1994: 88); for a language widely relying on compounding to extend its native lexicon, this does not come as a surprise. Within verbal word-formation, some languages compensate for morphemic deficits by "prefixing" words as bound elements to a certain extent (cf. article 23 on particle-verb formation). Verbal particles, derived from prepositions or adverbs, have relational meanings, and denominal particles have lexical meanings rather than the synsemantic functions associated with prefixes. Within the non-verbal domain of word-forma-

tion, not even particles take over functions the limited number of indigenous prefixes do not cover. As far as the semantic function of, e.g., German nominal prefixes is concerned, it is basically restricted to negation, augmentation, and diminution (Fleischer and Barz 1995: 320–346), but there are plenty of borrowed elements available that either fit into one of these categories (see Klosa 1996: 373–395 and Ruf 1996: 335–344 on foreign means of negation and augmentation) or constitute new ones. A series of studies – *Studien zur deutschen Sprache* – conducted and published by the *Institut für Deutsche Sprache* (IDS) reveal contemporary and past usage of elements like *inter-*, *trans-* or *ex-* in German. Articles on other morphemes have been published in these volumes that have shaped discussions on foreign word-formation in German linguistics in recent years (Hoppe et al. 1987; Munske and Kirkness 1996; Stickel 2001; Müller 2005b and 2009), and there is Eisenberg's book on foreign words, which discusses foreign elements in German most comprehensively (Eisenberg 2011).

The inventory of indigenous suffixes is much more elaborate in all languages described here; nevertheless, the foreign subset of suffixes is large and extremely productive. The suffix in *computer* (from Latin *-arius*), for instance, is one of the most frequent nominal markers; all Germanic languages have it (Bloomfield 1933: 455). Impressive productivity also counts for German *-ieren*; given that German lacks the verbal alternatives English has (regul-*ate*/class-*ify*/random-*ize*), the high frequency of *-ieren* and its variants does not come unexpectedly (Eisenberg 2011: 259–261). Yet suffixes differ from one another in their degree of integration. Intonation patterns in German show that there are (older) Latin elements almost indistinguishable from indigenous morphemes and also (younger) constituents that retain non-native linguistic features: derivations with *-er* are native-like in that they are stem-stressed, whereas formations with *-ieren* are not. Not even elements of the same origin necessarily behave in the same manner.

The stems in foreign derivations are bound just as Latin or Greek roots are. There is no word *comput-* in English or in the languages that adopted the concept and the lexemes associated with it – only a bound root ([[*comput*]er]/ing]/able]/…). Native roots, on the other hand, are generally free. They do not need a word-formation element to become a free form; not even verbal stems do since they may require only an inflectional marker to form words (e.g., Dutch [[*reken*]en$_{\text{INFL}}$] 'to compute'). Even the bases of parasynthetic derivations that might be described as bound bases as a result of prefixation (e.g., French *enrichir* 'to enrich'; Rainer 2004: 1706) need only inflection and not word-formation ([*en*[*rich*]]ir$_{\text{INFL}}$]). Verbal stems and parasynthetic bases are word-like in this sense; the non-native bound roots are not. Stems like *comput-* fill lexical gaps without being lexemes themselves.

On the other hand, bound segments may be obsolete linguistic constructs altogether because the notion of forming new words from scratch by first analyzing and then recombining bound roots with derivational elements seems a little far-fetched. We might simply adapt borrowed words to our own purposes by substituting constituents of one word with elements taken from others ([[comput]*er*]/*ing*]/*able*]/…). It might be a specific type of word-formation process rather than a specific type of constituent which frequently occurs in foreign word-formations. Munske (1988: 64–65) terms this specific type of foreign derivation *affix-substitution* in opposition to *addition* – which is what we find in indigenous derivation.

Still, secondary verbs like English *sculpt* remind us that analysis actually happens; Beard (1998: 56) refers to backformation here, as the borrowed word *sculptor* lost its

derivational suffix, leaving a base that could easily be integrated as a secondary verb of English. Backformation is not limited to foreign derivation (English *sightseeing* → *sightsee* / German *Staubsauger* 'vacuum cleaner' → *staubsaugen* 'to vacuum'), but it is a convenient way to form secondary word-formation paradigms based on complex loanwords.

4. Foreign compounding

Joining words to form another word is, of course, not limited by origin. As long as the constituents themselves are integrated into the language in that they carry all relevant grammatical and lexical information, there is no reason to look for another subset. Not even hybrid compounds appear to be restricted in any way; only the tendency that non-native elements are preferably used in a non-head position has been observed for German and English (Mackensen 1972: 98; Adams 1987: 129). The degree of morphological integration of loanwords in Germanic languages is remarkable in both hybrid and foreign compounds; non-native non-heads select native linking elements as the examples taken from Kürschner (2010: 847) indicate:

Danish	*station-s-hal*	*universitet-s-teater*
Dutch	*station-s-hal*	*universiteit-s-theater*
German	*Station-s-halle*	*Universität-s-theater*
Swedish	*station-s-hall*	*universitet-s-teater*

Nonetheless, there are differences in how compounds are formed. In Romance languages synthetic (verbal) compounds as in Italian *battimani* clap-hands 'applause' (Catalani 2004: 38–41) or Spanish *sacacorchos* pull-corks 'corkscrew' (Olsen 2000: 912) are quite frequent (see also Booij 2000: 858–859), whereas the corresponding exocentric model is rather insignificant in Germanic languages, though all of them seem to have isolated formations of that kind; Don (1998: 379), for instance, names Dutch *stampvoet* 'stamp foot'. It has been argued that these formations are lexicalized phrases (e.g., Rainer 2004: 1705), thus, products of syntax rather than word-formations, which eventually leads to the conclusion that Romance languages do not use compounding as much as Germanic languages do (cf. Olsen 2000: 911–913). Still, all European languages have compounds although there may be differences in how they are realized: German *Haustür* has its equivalent in English *front door*; German tends to form units on the morphological level, whereas English preferably makes use of word clusters, of *semi words* as Wurzel (2000: 39–41) termed units somewhere in between words and phrases. French, on the other hand, generally composes lexical items in opposite order of constituents (*porte de la maison*) just as Spanish (*puerta de la casa*) and Italian (*porta di casa*) do – even though there is more to compounding in French, Spanish and Italian, of course (e.g., Benveniste 1974: 171–176; Kornfeld 1998: 436–452; Grossmann and Rainer 2004: 31–69). In any case, the concept of joining words to form another one allows for very different realizations (overview on subtypes of compounds in Dressler 2006: 23–44).

Still, none of the languages described here seems to retain foreign characteristics if foreign constituents are used. According to Cypionka (1994: 224), the sequence of con-

stituents in hybrid formations in French corresponds to the French default in most cases (*scooter des neiges* 'snow scooter'; *prix standard* 'standard price'), and even the few German loan-compounds in contemporary English occasionally take on morphosyntactic shapes we would not expect: any google search suggests that English *kindergarten*/*kindergarden* has its "phrasal" variant in *kinder garden*. Needless to say, German forms compounds even if the model-word itself might best be described as one of Wurzel's semi words referred to above (English *top manager* > German *Topmanager*), and foreign compounding with French, Spanish or Italian constituents does not trigger inversion.

In compounds, foreignness is limited to the origin of its constituents. Still, there is one explicitly foreign type of compounding with rather limited disposition to interact with native modules of word-formation: neoclassical compounding.

5. Neoclassical compounding

From a lexical point of view, the type of word-formation discussed here is as foreign as it gets. It is not only that the constituents are non-native (*morphology*, etc.). The results of this type of word-formation do not seem to fit into the core lexicon of modern languages either. They are "éléments savants" (Martinet 1970: 134) − lexical units predominantly used in international scientific discourse. Even more recent works on foreign word-formation seem to imply that word-formation in general and combinations of this kind should be kept separate: Scholz (2002: 69), for instance, refers to "terminological combination" in Spanish, and the English term for the constituents of these complex units avoids the expression usually used to refer to constituents of word-formations: it is "combining form" and not "morpheme".

A closer look at the structure of these foreign word-formations reveals that there are morphological reasons for keeping them out of the core system. These combinations seem to violate the rules of word grammar. Compounds as well as derivations have heads. The major difference is that heads in compounds are not just heads in a morphological sense; they are "lexical heads" as well, while suffixes are not because this role is reserved for autosemantic morphemes − i.e. for stems. The final constituents of neoclassical compounds are stems in both senses but they are not words, which is disturbing in a way. If *morphology*, for instance, were a compound, the syntactic category should be determined by upward perlocation (Booij 2000: 860); *morphology* would not be a word because *-logy* is not. Yet we know that any such formation is not only a word, but in fact a noun with a word-final lexical head: the right-hand constituents of neoclassical compounds resemble heads of both compounds and derivations.

According to Selkirk (1982: 16, 119−124), this neoclassical type constitutes some discrete system of compounding. It may be a system in which we need to accept abnormal phenomena such as "bound words" (e.g., Fabb 1998: 69) or elements of word-formation that are underspecified in terms of categorical affiliation (Eisenberg 2011: 251−256, 283). But perhaps it is closer to the truth if we take into consideration that neoclassical formations like *morphology* might not be compounds at all. They could be regular derivations of multisegmental bases much like those described in section 3.

The notion of morphologically complex bases leaves us with non-words as lexical heads (*morpholog-*), which is not exceptional: non-native stems usually are non-words

([[*morph*]eme]). Still, compounding is involved here, because stems are joined together to form new lexical entities with new compositional meanings assigned to them. Selkirk (1982: 99) refers to "compound roots", whereas Donalies (2000: 155) argues that these complex units are simply combining forms themselves. If this is compounding, it is compounding that does not form words. Ten Hacken (2000: 354) suggests that bound compounds ([[*morpho*][*logo*]]) are derived to form words like *morphology* by some kind of suffix-substitution, the same process we have seen in foreign derivation (see section 3). But since the final vowels in these constituents (*morpho-*, *logo-*) do not seem to be anything but linking vowels, it might be easier to consider neoclassical compounding derivation of bound compounds containing minimal forms only ([[[*morph*]o[*log*]$_{(COMP)}$]*y*$_{(DER)}$]).

At first sight, the neoclassical linking vowels − in most cases Greek-based *-o-*, rarely Latin-based *-i-* (Höfler 1972: 125−136) − behave much like native linking elements do. They developed from inflectional markers into word-formation elements (Bauer 1998: 406), signalling compounding rather than some concept associated with the inflection marker that was reanalysed (for a discussion on linking elements in Swedish, German, Dutch and Danish see Kürschner 2010: 827−862). Dutch *boek-handel* 'bookshop', for example, is no less plural-marked than *boek-en-kast* 'bookcase' is (as far as the number of books referred to is concerned); *-en* does not imply "plurality" (Don 1998: 380−381). Still, it is not quite clear whether these elements are attached to the stems on their left (like inflection markers are) or simply inserted in between stems. As far as native linking elements are concerned, the preceding stem determines which one is used if there is a choice: Dutch *boek-en-kast* is grammatical but **boek-s-kast* is not. The linking elements in compounds with neoclassical stems, however, differ from those in regular compounds in this respect; formations like English *weatherology* show that it is not necessarily the compound-initial stem that determines the nature of the linking element. Neoclassical linking vowels do not seem to be linked to a stem (as suggested by ten Hacken's bound compound *morphologo*); they may only indicate neoclassical compounding. This specific type of foreign word-formation would provide a way of combining stems by insertion of a neoclassical segment, which does not mean that these formations are words. Neoclassical compounding is as foreign as it gets.

No matter how we try to capture the nature of these neoclassical combinations, there are good reasons for associating this type of foreign word-formation with some European prototype rather than with language-specific morphological systems. The prototype itself is stable, allowing only marginal adaptations to language-specific rules. The adaptations do not persist once the formations turn into internationalisms. German remodels the compounds originating in French or English according to the German realization of this prototype; it does not integrate English or French neoclassical compounds in an orthographically and phonologically unchanged form as it integrates other borrowed items from these languages − *Computer*, for instance. French neoclassical compounding shows how present this prototype still is as it disregards the morpho-topological default of French altogether once neoclassical stems are involved. There is no *gare d'aéro*, but there is an *aérogare* 'airport'.

6. Hybrid formation

Combinations such as French *aérogare* are both hybrid and compound, but they still differ from the hybrid compounds mentioned in section 4. They follow a neoclassical

model due to the origin of one of its constituents; they form neoclassical compounds, not compounds. Nevertheless, there are formations in which it seems hard to draw the line: compounds with non-words in non-head position, for instance.

Bound elements as non-heads do not conflict with the morphological systems of modern European languages since prefixes do not behave differently. Still, there is no prefixation involved in cases like Italian *ecodisastro* (Grossmann and Rainer 2004: 73), Spanish *ecosistema* (Scholz 2002: 105), German *Ökofreak* (Donalies 2000: 149) or Polish *ekobomba* (Scheller-Boltz 2010: 68) since the initial elements in these hybrids carry lexical meanings − which rules out prefixation −, but moreover they seem to mean something other than what we would expect. According to Reis (1983: 117), the initial elements in these formations generally refer to the concepts conveyed by neoclassical model-compounds; a German *Ökofreak* is some kind of 'ecological freak', Spanish *ecosistema* refers to an 'ecological system' and Italian *ecodisastro* or Polish *ekobomba* to a 'disaster' or a 'bomb' with regard to 'ecology'. Donalies (2000: 148−150) objects to this analysis. Nonetheless, any dictionary that indexes formations of this kind reveals countless constituents that seem to imply more than they overtly express, but only in rare cases is more than linguistic intuition available to show that some kind of neoclassical clipping is involved: Weinrich (2003: 930) has observed that these constructions neither denote a concept associated with *eco-* nor with the neoclassical compound *economy*. Obviously, German *öko-* as well as its cognates in other languages signals the presence of the neoclassical compound *ecology* which rules out the usage of *eco-* in other contexts: Italian *ecodisastro*, for instance, can not refer to an economic disaster.

Again we witness compounds with very unique features, and once again foreign word-formation might entail a combination of processes rather than a single compositional step merging a stem and a word. There is evidence that neoclassical compounds might be clipped to form constituents (e.g., Italian *ecologia* > *eco-*); constituents that are used in regular compounds (e.g., Italian *ecodisastro*). Given that neoclassical compounds themselves may be more complex than they seem (section 5), hybrid compounding may not be adequately described by the notion of minimal bound forms being attached to words.

The other hybrid pattern involving neoclassical constituents − non-words in head position − is somewhat awkward. It seems to belong to the domain of ad-hoc formations because they are easy to decode but apparently not useful enough to make it into the lexicon on a larger scale. Nevertheless, this process has existed for quite some time now; according to the *Oxford English Dictionary*, *weatherology*, for instance, can be traced back to the year 1823. Since we fail to identify some kind of model compound in *-ology*, etc., there is no use in assuming some kind of clipping either. The final constituents could be savant suffixes indicating a scientific approach to the entity specified by the element to which it is attached. If this is the case, there are multisegmental elements within the inventory of affixes (-[*o*[*logy*]]), elements with lexical meaning despite being affixes. With regard to French *-omanie*, Höfler (1972: 114−124) refers to a transition from (Neo-Latin) compounding to (French) derivation with these elements. But maybe these secondary suffixes are linguistic constructs given that morphemes share one common feature in any synchronic approach: morphemes are defined by their capacity to form regular words. Non-native stems as heads of hybrid word-formations are only capable of producing ad-hoc formations as it seems.

On the other hand, reanalysis of foreign stems as affixes is likely to happen because the transfer from one language into another one is often accompanied by the loss of lexical or morphological information as we have seen in the first section of this article. In fact, reanalysis of foreign elements unveils morphological characteristics that seem to be associated with foreign elements of word-formation only. Rainer (2004: 1705) points out that there are Latin prefixes that turned into synsemantic words of French (Latin *trans-* > French *très*), and occasionally affixes even develop into words with lexical meaning: *ex*, *macro*, even *isms* and many more are, in addition to their affixal use, secondary lexemes by now − in English as well as in other European languages. There are explanations for this behaviour, of course, ranging from clipping of model-words to usage-borne considerations. If elements are associated with more lexical content than plain affixes are, why shouldn't we use them accordingly? Hybridization is only one step on the way − an early one, according to Hoppe's (1999: 57) chronological register of *ex*-formations in German (*Exfrau* 'ex-wife' [1792]). But however these forms have evolved, it is a remarkable change in terms of categorical affiliation whenever bound forms turn into free ones.

The elements that remain plain affixes do not tend to leave the exogenic context they stem from; they derive predominantly non-native stems. Conflicting stress assignment rules might be a reason here. German words, for instance, are stem-stressed by default; thus, conflicts are inevitable whenever stem-shifting affixes are used. It makes sense to avoid conflicting rules within a linguistic system, and one way to do that is to refrain from hybridization. Formations like German *hausieren* 'soliciting' (lit. [['house']-ie-ren$_{(V)}$]) − not being stem-stressed − are rare. Nevertheless, most affixes are no longer restricted as to what kind of stem they can be attached to. The English suffix *-ness*, for instance, takes non-native stems (*nativeness*) and non-native *-able* forms hybrid words like *drinkable* (Bloomfield 1933: 454−455). Indigenous prefixes like *un-* can be attached to non-native words (1.a.) even though non-native words allow non-native prefixation, of course (1.b.). The only remaining genetic restrictions seem to affect the co-occurrence of non-native bound roots and native prefixes (2.a.) as well as non-native prefixation of native words (3.b.):

	English		German	
1.	a. *un-typical*	b. *a-typical*	a. *un-typisch*	b. *a-typisch*
2.	a. **un-morph*	b. *a-morph(ous)*	a. **un-morph*	b. *a-morph*
3.	a. *un-pleasant*	b. **a-pleasant*	a. *un-schön*	b. **a-schön*

We might expect hybrid derivation to be blocked by synonymous elements in the target languages (**apleasant*), but we have seen alternative ways of expressing the same thing (*atypical − untypical*). Redundancy is also not an issue here because alternate forms tend to develop specific qualities attributed to them. English *hypersensitive*, for instance, is as augmentative as English *supersensitive* is, but only *hypersensitive* carries an additional negative connotation. Conflicts in stress assignment cannot be responsible either because German *unschön* violates the (stem-stressed) default of German just as **aschön* would. In fact, there does not seem to be a systematic reason to avoid hybridization here; the tendency to stick to one language remains intact nonetheless. If this is the case, then the morphological behaviour is specific to the languages from which the borrowed elements of word-formation stem, at least to a certain extent. We will see that hybridization, even within the non-native subset, explains heterogeneous behaviour in some cases.

7. Language-specific reflexes in foreign word-formation

Given that integration into another linguistic system leads to all kinds of functional changes, we should not expect much of an impact from the languages in which borrowed elements originate; the term "neoclassical" reflects this underspecification as far as etymology is concerned. The generalization implied here is due to the path that lies behind the foreign elements but is also synchronically appropriate because of the similar functions both Latin and Greek elements have as tools for scientific discourse. On the other hand, younger anglicisms have similar (scientific) functions (Busse 2001: 143); not all of them are of Latin or Greek descent. Thus, the correlation between specific domains and specific languages does not seem to be a firm one, and it seems to be changing: Burmassova found that the figures for German anglicisms in contributions on science and technology in DIE WELT have declined in recent years; they have increased, however, in other sections of that journal (Burmassova 2010: 220–227). Time will tell whether the capacity to integrate anglicisms is about to be exhausted in some domains. In either case, if anglicisms develop one way or another within a specific domain, there is not a single foreign subset within the lexicon but a subset subdivided into groups defined by their origin.

There are additional domains with preferences of this kind. When it comes to food, languages like Italian come into play, despite the minor role it plays as a donor language these days (Schmöe 1998: 239–266). It is interesting that connotations seem to translate into word-formation elements in cases like *Mildessa* (Wegener 2010: 99), a German brand name for *sauerkraut* that gets an Italian touch by adding *-essa* to the adjective *mild*. It is even more interesting that Italian segments tend to be reinterpreted to a much greater extent than anglicisms are. According to Harnisch (2010: 113), the suffix in Italian loanwords like *Bambini* 'children' ceased to plural-mark their bases when used in German. Forms like *Bambinis* (pl.) or *Paparazzis* (pl.) indicate that the inflected Italian forms are mistaken for *i*-derivations denoting a person (compare German *Studi* 'student'). If, on the other hand, even bizarre elements of English like *-gate* or *-oholic* are used in much the same way in donor and recipient languages like German (Barz 2008: 52), French (Fradin 1999: 35–47) or Italian (Grossmann and Rainer 2004: 76), there is little doubt that the source makes a difference here. Still, the most significant language-specific reflex seems to be the sheer amount of anglicisms compared to the limited number of elements from other modern languages.

A frequency effect of a different kind affects processes rather than words. The increasing productivity of patterns that are marginal in most languages has traditionally been ascribed to English influence; it still is (Burmassova 2010: 46–47). According to Carstensen (1965: 45–62), English clippings (e.g., *ad* 'advertisement') and blends (*smog* 'smoke and fog') in particular may have facilitated the use of these models elsewhere; Fradin (1999: 27–35) discusses both blends (e.g., *optimistique* 'optimistic and mystical') and amputated forms in French (e.g., *bibliothèque* → *bibli* 'library'); Barz (2008: 52–55) adds German backformation (e.g., verbal *nordicwalken* based on *Nordicwalking*$_{(N)}$) to the list of processes that might be more frequent due to the productivity of corresponding English models of word-formation. Even the suffix that this article started out with (*-er* in German *Computer*) has acquired an additional function in analogy to its use elsewhere: Eisenberg (2011: 264) points out that this suffix is not restricted anymore to

exclusively derive verbal stems (compare German *Dampfer* 'steamer' having a noun as base).

One tentative conclusion would therefore be that English supplies terminology and alters patterns or frequency, whereas structures from other modern languages tend to be reanalyzed − they take on functions they did not originally have if they are adopted at all. We will see that there are language-specific aspects even within the one subset that has been described as a distinct and homogeneous morphological system so far − neoclassical formations.

Recalling what has been said about the Latinization of European derivation, it is tempting to associate neoclassical compounding with Greek; all constituents of neoclassical compounds mentioned here are of Greek origin. Perhaps this is more than coincidence. If we compare Greek- and Latin-based equivalents in today's terminologies, there is reason to correlate the origin and linguistic behaviour in foreign word-formation: *Microscope* is Greek, whereas *minimal* is Latin; *micro-* is initial element in neoclassical compounds only, while its Latin synonym is a base for derivations. Countless word-pairs show the same alternation in terms of how the elements are being used. The initial elements in *homo-geneous* − *simil-ar* or *hetero-genic* − *vari-ant* refer to the same concepts (*homós* − *similis* 'alike'/*héteros* − *varius* 'different'), but they are used in a way that is apparently specific to the language of origin. Modern European languages owe a great deal of their affixes and bases for derivation to Latin, and at the same time, the inventory of constituents of neoclassical compounds seems to be based almost exclusively on Greek stems. Keeping this language-specific distribution in mind, there is a reason for stems to be restricted to either neoclassical compounding or derivation after all.

As far as analogous elements that behave much like affixes are concerned (e.g., [*super*[sensitive]] − [*hyper*[sensitive]]; Bauer 1993: 215), origin also makes a difference. There are no doublets like *hypertrophy* − **supertrophy* either in English or in other European languages, because the initial element in *hypertrophy* is Greek and therefore appropriate for neoclassical compounding, whereas *super-* is Latin and, thus, predestined to be a secondary affix. Since bound stems are not prefixed (see section 6), **supertrophy* does not work.

There are more conclusions to draw from the observation that the label "neoclassical" itself does not refer to one homogeneous class of word-formation elements and processes (Eins 2008: 248−260). The most important aspect remains that there are reflexes of origin still visible in terms of how elements are used − within the neoclassical context, but also outside of it. In modern foreign word-formation, it is complicated to pinpoint how foreign complex words exactly are because their constituents blend in, rather than initiate systematic changes. Nevertheless, this subset is not homogeneous, as some elements are more likely to be reanalyzed rather than used as suggested by the language of origin. Typological distance might be one factor, but extralinguistic reasons are probably more crucial here. In related languages, systematic deviation might be marginal but still be significant in terms of how many linguistic units are affected.

8. Concluding remarks

Foreign word-formation subsumes a rather heterogeneous group of processes, some being more deviant than others, depending on the language-specific point of view. Never-

theless, there seems to be only one type of foreign word-formation that deviates from indigenous patterns more than it resembles them. In modern European languages, neoclassical compounding constitutes its own, its European type of foreign word-formation. Perhaps additional functions of neoclassical constituents in hybrid formations such as lexeme-like usages of affixes or affix-like usages of stems simply show that reanalysis is an attempt to adjust foreign formations to indigenous patterns. Nevertheless, the neoclassical type of foreign word-formation remains intact.

9. References

Adams, Valerie
1987 *An Introduction to Modern English Word-Formation*. London: Longman.

Barz, Irmhild
2008 Englisches in der deutschen Wortbildung. In: Ludwig M. Eichinger, Meike Meliss and María J. Domínguez Vázquez (eds.), *Wortbildung heute. Tendenzen und Kontraste in der deutschen Gegenwartssprache*, 39–60. Tübingen: Narr.

Bauer, Laurie
1993 *English Word-Formation*. Cambridge: Cambridge University Press.

Bauer, Laurie
1998 Is there a class of neoclassical compounds, and if so is it productive? *Linguistics* 36(3): 403–422.

Baugh, Albert C. and Thomas Cable
1993 *A History of the English Language.* 4th ed. London/New York: Routledge.

Beard, Robert
1998 Derivation. In: Arnold M. Zwicky and Andrew Spencer (eds.), *The Handbook of Morphology*, 44–65. Oxford: Blackwell.

Benveniste, Émile
1974 *Problèmes de linguistique générale*. Vol. 2. Paris: Gallimard.

Bergmann, Rolf
2000 Zum Problem der Produktivität europäischer Wortbildung im Deutschen. In: Mechthild Habermann, Peter O. Müller and Bernd Naumann (eds.), *Wortschatz und Orthographie in Geschichte und Gegenwart. Festschrift für Horst Haider Munske zum 65. Geburtstag*, 103–114. Tübingen: Niemeyer.

Bloomfield, Leonard
1933 *Language*. New York: Holt, Rinehart and Winston.

Booij, Geert
2000 Inheritance. In: Geert Booij, Christian Lehmann and Joachim Mugdan (eds.), *Morphology. An International Handbook on Inflection and Word-Formation*. Vol. 1, 857–865. Berlin/New York: de Gruyter.

Burmassova, Svetlana
2010 *Empirische Untersuchung der Anglizismen im Deutschen. Am Material der Zeitung* Die Welt *(Jahrgänge 1994 und 2004)*. Bamberg: University of Bamberg Press.

Busse, Ulrich
2001 Typen von Anglizismen: Von *der heiligo geist* bis *Extremsparing* – aufgezeigt anhand ausgewählter lexikographischer Kategorisierungen. In: Gerhard Stickel (ed.), *Neues und Fremdes im deutschen Wortschatz. Aktueller lexikalischer Wandel*, 131–155. Berlin/New York: de Gruyter.

Carstensen, Broder
1965 *Englische Einflüsse auf die deutsche Sprache nach 1945*. Heidelberg: Winter.

Catalani, Luigi
2004 *Deutsch, Französisch und Spanisch im Kontrast mit dem Italienischen. Vier Beiträge zum Sprachvergleich.* Frankfurt/M.: Lang.
Cypionka, Marion
1994 *Französische "Pseudoanglizismen". Lehnformationen zwischen Entlehnung, Wortbildung, Form- und Bedeutungswandel*. Tübingen: Narr.
Don, Jan
1998 IE, Germanic: Dutch. In: Rochelle Lieber and Pavol Štekauer (eds.), *The Oxford Handbook of Compounding*, 370–385. Oxford: Oxford University Press.
Donalies, Elke
2000 Das Konfix. Zur Definition einer zentralen Einheit der deutschen Wortbildung. *Deutsche Sprache* 28: 144–159.
Dressler, Wolfgang Ulrich
2006 Compound types. In: Garry Libben and Gonia Jarema (eds.), *The Representation and Processing of Compound Words*, 23–44. Oxford: Oxford University Press.
Eins, Wieland
2008 *Muster und Konstituenten der Lehnwortbildung. Das Konfix-Konzept und seine Grenzen*. Hildesheim: Olms.
Eisenberg, Peter
2006 *Grundriss der deutschen Grammatik. Das Wort*. 3rd ed. Stuttgart: Metzler.
Eisenberg, Peter
2011 *Das Fremdwort im Deutschen*. Berlin/New York: de Gruyter.
Fabb, Nigel
1998 Compounding. In: Arnold M. Zwicky and Andrew Spencer (eds.), *The Handbook of Morphology*, 66–83. Oxford: Blackwell.
Fleischer, Wolfgang and Irmhild Barz
1995 *Wortbildung der deutschen Gegenwartssprache*. 2nd ed. Tübingen: Niemeyer.
Fradin, Bernard
1999 Combining forms, blends and related phenomena. In: Ursula Doleschal and Anna M. Thornton (eds.), *Extragrammatical and Marginal Morphology*, 11–55. München: LINCOM Europa.
Grossmann, Maria and Franz Rainer
2004 *La formazione delle parole in italiano*. Tübingen: Niemeyer.
Hall, Christopher J.
2000 Prefixation, suffixation and circumfixation. In: Geert Booij, Christian Lehmann and Joachim Mugdan (eds.), *Morphology. An International Handbook on Inflection and Word-Formation*. Vol. 1, 535–545. Berlin/New York: de Gruyter.
Harnisch, Rüdiger
2010 Integration und Isolation von suffixverdächtigen Fremdwörtern – das Deutsche in typologischer Perspektive. In: Carmen Scherer and Anke Holler (eds.), *Strategien der Integration und Isolation nicht-nativer Einheiten und Strukturen*, 105–122. Berlin/New York: de Gruyter.
Höfler, Manfred
1972 *Zur Integration der neulateinischen Kompositionsweise im Französischen dargestellt an den Bildungen auf* -(o)manie, -(o)mane. Tübingen: Niemeyer.
Holzberg, Niklas
1996 Neugriechisch und Eurolatein. In: Horst Haider Munske and Alan Kirkness (eds.), *Eurolatein. Das griechische und lateinische Erbe in den europäischen Sprachen*, 1–11. Tübingen: Niemeyer.
Hoppe, Gabriele
1999 *Das Präfix* ex-. *Beiträge zur Lehnwortbildung*. Tübingen: Narr.

Hoppe, Gabriele, Alan Kirkness, Elisabeth Link, Isolde Nortmeyer, Wolfgang Rettig and Günter Dietrich Schmidt (eds.)
1987 *Deutsche Lehnwortbildung. Beiträge zur Erforschung der Wortbildung mit entlehnten WB-Einheiten im Deutschen*. Tübingen: Narr.
Kirkness, Alan
1988 Einleitung. In: *Deutsches Fremdwörterbuch.* Begonnen von Hans Schulz, fortgeführt von Otto Basler, weitergeführt im Institut für Deutsche Sprache. Vol. 7, 227–235. Berlin/New York: de Gruyter.
Kirkness, Alan
1996 Eurolatein. Überlegungen zu einem lexikalischen Phänomen und dessen Erforschung aus der Sicht eines Sprachgermanisten. *Sprachreport* 1(96): 11–14.
Kirkness, Alan
2001 Europäismen/Internationalismen im heutigen deutschen Wortschatz: Eine lexikographische Pilotstudie. In: Gerhard Stickel (ed.), *Neues und Fremdes im deutschen Wortschatz. Aktueller lexikalischer Wandel*, 106–130. Berlin/New York: de Gruyter.
Kirkness, Alan
2005 Zur lexikographischen Dokumentation eurolateinischer Wortbildungseinheiten: Vergleichende Beobachtungen am Beispiel *aero-*. In: Peter O. Müller (ed.), *Fremdwortbildung. Theorie und Praxis in Geschichte und Gegenwart*, 447–483. Frankfurt/M.: Lang.
Klosa, Annette
1996 *Negierende Lehnpräfixe des Gegenwartsdeutschen*. Heidelberg: Winter.
Kocourek, Rostislav
1982 *La langue française de la technique et de la science*. Wiesbaden: Brandstetter.
Kornfeld, Laura Malena
1998 IE, Romance: Spanish. In: Rochelle Lieber and Pavol Štekauer (eds.), *The Oxford Handbook of Compounding*, 436–463. Oxford: Oxford University Press.
Kürschner, Sebastian
2010 *Fuge-n-kitt*, *voeg-en-mes*, *fuge-masse* und *fog-e-ord*: Fugenelemente im Deutschen, Niederländischen, Schwedischen und Dänischen. In: Antje Dammel, Sebastian Kürschner and Damaris Nübling (eds.), *Kontrastive Germanistische Linguistik*. Vol. 2, 827–862. Hildesheim: Olms.
Lehrer, Adrienne
1998 Scapes, holics, and thons: The semantics of English combining forms. *American Speech* 73: 3–28.
Mackensen, Lutz
1972 *Traktat über Fremdwörter*. Heidelberg: Quelle & Meyer.
Marchand, Hans
1969 *The Categories and Types of Present-Day English Word-Formation. A Synchronic-Diachronic Approach.* 2nd ed. München: Beck.
Martinet, André
1970 *Éléments de linguistique générale.* Paris: Armand Colin.
Martinet, André
1979 *Grammaire fonctionnelle du français*. Paris: Didier.
Mel'čuk, Igor A.
1982 *Towards a Language of Linguistics. A system of formal notions for theoretical morphology.* München: Fink.
Müller, Peter O.
2005a Deutsche Fremdwortbildung: Probleme der Analyse und der Kategorisierung. In: Peter O. Müller (ed.), *Fremdwortbildung. Theorie und Praxis in Geschichte und Gegenwart*, 199–218. Frankfurt/M.: Lang.
Müller, Peter O. (ed.)
2005b *Fremdwortbildung. Theorie und Praxis in Geschichte und Gegenwart*. Frankfurt/M.: Lang.

Müller, Peter O. (ed.)
2009 *Studien zur Fremdwortbildung*. Hildesheim: Olms.
Munske, Horst Haider
1988 Ist das Deutsche eine Mischsprache? Zur Stellung der Fremdwörter im deutschen Sprachsystem. In: Horst Haider Munske, Reiner Hildebrandt, Peter von Polenz and Oskar Reichmann (eds.), *Deutscher Wortschatz. Lexikologische Studien*, 46–74. Berlin/New York: de Gruyter.
Munske, Horst Haider and Alan Kirkness (eds.)
1996 *Eurolatein. Das griechische und lateinische Erbe in den europäischen Sprachen*. Tübingen: Niemeyer.
OED
1989 *The Oxford English Dictionary*. Vol. 10 (Moul-Ovum) prepared by J. A. Simpson and E. S. C. Weiner. 2nd ed. Oxford: Clarendon Press.
Olsen, Susan
2000 Composition. In: Geert Booij, Christian Lehmann and Joachim Mugdan (eds.), *Morphology. An International Handbook on Inflection and Word-Formation*. Vol. 1, 897–916. Berlin/New York: de Gruyter.
Paul, Hermann
1995 [1880] *Prinzipien der Sprachgeschichte*. 10th ed. Tübingen: Niemeyer.
Polenz, Peter von
1994 *Deutsche Sprachgeschichte vom Spätmittelalter bis zur Gegenwart*. Vol. 2: *17. und 18. Jahrhundert*. Berlin/New York: de Gruyter.
Rainer, Franz
2004 From Latin to French. In: Geert Booij, Christian Lehmann, Joachim Mugdan and Stavros Skopeteas (eds.), *Morphology. An International Handbook on Inflection and Word-Formation*. Vol. 2, 1698–1712. Berlin/New York: de Gruyter.
Rainer, Franz
2009 Die Integration des lateinischen Kompositionstyps *tauriformis* im Französischen und Italienischen. *Zeitschrift für romanische Philologie* 125: 45–84.
Reis, Marga
1983 Gegen die Kompositionstheorie der Affigierung. *Zeitschrift für Sprachwissenschaft* 2: 110–131.
Ruf, Birgit
1996 *Augmentativbildungen mit Lehnpräfixen. Eine Untersuchung zur Wortbildung der deutschen Gegenwartssprache*. Heidelberg: Winter.
Scheler, Manfred
1977 *Der englische Wortschatz*. Berlin: Schmidt.
Scheller-Boltz, Dennis
2010 *Präponeme und Präponemkonstrukte im Russischen, Polnischen und Deutschen. Zur Terminologie, Morphologie und Semantik einer Wortbildungseinheit und eines produktiven Kompositionstyps*. Frankfurt/M.: Lang.
Schmidt, Günter Dietrich
1987a Vorschlag einer Modellierung der Kombinationen mit entlehnten Konstituenten. In: Gabriele Hoppe, Alan Kirkness, Elisabeth Link, Isolde Nortmeyer, Wolfgang Rettig and Günter Dietrich Schmidt (eds.), *Deutsche Lehnwortbildung. Beiträge zur Erforschung der Wortbildung mit entlehnten WB-Einheiten im Deutschen*, 25–35. Tübingen: Narr.
Schmidt, Günter Dietrich
1987b Das Kombinem: Vorschlag zur Erweiterung des Begriffsfeldes und der Terminologie für den Bereich der Lehnwortbildung. In: Gabriele Hoppe, Alan Kirkness, Elisabeth Link, Isolde Nortmeyer, Wolfgang Rettig and Günter Dietrich Schmidt (eds.), *Deutsche Lehnwortbildung. Beiträge zur Erforschung der Wortbildung mit entlehnten WB-Einheiten im Deutschen*, 37–52. Tübingen: Narr.

Schmitt, Christian
1996 Euromorphologie: Perspektiven einer neuen romanistischen Teildisziplin. In: Wolfgang Dahmen (ed.), *Konvergenz und Divergenz in den romanischen Sprachen. Romanistisches Kolloquium VIII*, 119–146. Tübingen: Narr.
Schmöe, Friederike
1998 *Italianismen im Gegenwartsdeutschen. Unter besonderer Berücksichtigung der Entlehnungen nach 1950*. Bamberg: Collibri.
Scholz, Ulrike
2002 *Fachsprachliche Wortbildung des Spanischen, dargestellt am Beispiel des ökologischen Fachwortschatzes*. Berlin: Rhombos.
Selkirk, Elisabeth
1982 *The Syntax of Words*. Cambridge, MA: MIT Press.
Settekorn, Wolfgang
1988 *Sprachnorm und Sprachnormierung in Frankreich. Einführung in die begrifflichen, historischen und materiellen Grundlagen*. Tübingen: Niemeyer.
St. Clair, Robert N.
2002 Metaphorical blends, recruited frames and metaphors across cultures. *Intercultural Communication Studies* 11(3): 1–24.
Stickel, Gerhard (ed.)
2001 *Neues und Fremdes im deutschen Wortschatz. Aktueller lexikalischer Wandel.* Berlin/New York: de Gruyter.
Szymanek, Bogdan
1998 IE, Slavonic: Polish. In: Rochelle Lieber and Pavol Štekauer (eds.), *The Oxford Handbook of Compounding*, 464–477. Oxford: Oxford University Press.
ten Hacken, Pius
2000 Derivation and compounding. In: Geert Booij, Christian Lehmann and Joachim Mugdan (eds.), *Morphology. An International Handbook on Inflection and Word-Formation*. Vol. 1, 349–360. Berlin/New York: de Gruyter.
Tournier, Jean
1985 *Introduction descriptive à la lexicogénétique de l'anglais contemporain*. Paris/Genf: Champion Slatkine.
Volmert, Johannes
1996 Die Rolle griechischer und lateinischer Morpheme bei der Entstehung von Internationalismen. In: Horst Haider Munske and Alan Kirkness (eds.), *Eurolatein. Das griechische und lateinische Erbe in den europäischen Sprachen*, 219–235. Tübingen: Niemeyer.
Warren, Beatrice
1990 The importance of combining forms. In: Wolfgang U. Dressler (ed.), *Contemporary Morphology*, 111–132. Berlin/New York: de Gruyter.
Wegener, Heide
2010 Fremde Wörter – fremde Strukturen: Durch Fremdwörter bedingte strukturelle Veränderungen im Deutschen. In: Carmen Scherer and Anke Holler (eds.), *Strategien der Integration und Isolation nicht-nativer Einheiten und Strukturen*, 87–104. Berlin/New York: de Gruyter.
Weinrich, Harald
2003 *Textgrammatik der deutschen Sprache.* 2nd ed. Hildesheim: Olms.
Wurzel, Wolfgang U.
2000 Was ist ein Wort? In: Rolf Thieroff and Peter Eisenberg (eds.), *Deutsche Grammatik in Theorie und Praxis*, 29–42. Tübingen: Niemeyer.

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91. Word-formation in Neo-Latin

Abstract

The present article is the first comprehensive attempt at describing the innovations that occurred in word-formation during the Neo-Latin period (from around 1300 up to the present day). It is shown that, contrary to a widely held belief, Neo-Latin word-formation differs from Classical and Medieval Latin word-formation not only at the level of individual words, but also to some extent with respect to patterns of word-formation.

1. Introduction

Neo-Latin (henceforth: NL; cf. Neuhausen 2003) has its origins around 1300 with Italian humanists such as Petrarch (1304−1374), who were critical of their contemporaries' usage of Latin − what is now called *Medieval Latin* (henceforth: ML; on word-formation in ML, cf. Stotz 2000) − and sought to revive the high standards of Classical Latin (henceforth: CL). Some extremists advocated for considering Cicero as the only legitimate model, but generally other authors of the Golden and Silver Age were also admitted. For some, the NL period ends around 1800, which is when, in their terminology, Contemporary Latin is said to begin. But this division is quite arbitrary from a linguistic point of view. Our use of the term will therefore also include the contemporary period. What is important to bear in mind, however, is that NL does not constitute a homogeneous state of language.

If the humanists and their followers had stuck consistently to the program outlined above, the present article would be a tedious undertaking. In fact, it would have to limit itself to an enumeration of new words coined according to the word-formation patterns of CL. Per definition, there could be no such thing as NL word-formation in the sense of a set of patterns of word-formation distinct from those of CL. This seems to be essentially Neuhausen's view who observes that NL authors did indeed coin numerous new words, but always on the basis of the principle of analogy (cf. pp. 928−929). However, as will become apparent from the following description, which is the first of its kind, NL word-formation contains not only words, but also patterns which were unknown to CL as well as to ML.

In the previous paragraphs we have used the existence of novel patterns − as opposed to words − as a necessary condition for speaking of NL word-formation. This certainly

constitutes the fundamental criterion, but we think that it should be made somewhat more flexible and contain the following four degrees of innovation. At the lowest level, we would also like to take into consideration patterns which differ markedly from CL or ML in their frequency of use. The next type of pattern which we would want to include differs from CL or ML with regard to the domain of application, i.e. the kind of bases to which the pattern may be applied. Both of these aspects are often referred to indistinctly as differences in the productivity of a pattern. While some might want to quibble about whether differences in productivity should really be considered as sufficient conditions, it will be easier to achieve unanimity about the fact that a pattern which differs in meaning from a formally identical pattern of CL or ML must be counted as a NL innovation. The fourth and last type of pattern which will be taken into consideration are those which differ from CL or ML even in form. Of course, many innovative patterns will combine more than one of the four aspects distinguished here for analytical purposes.

A dimension orthogonal to the ones mentioned in the last paragraph is the degree of conventionalization. Innovative patterns invariably start out with one deviant coinage. But one swallow does not make a summer, as the proverb goes. If this deviant coinage remains isolated, it should not be equated with an established pattern. In order to qualify for the latter, the original coinage must have given rise to analogical creations. In an overview of NL word-formation, the emphasis should of course be on established patterns, but since occasionalisms and patterns form a cline, we will also to some extent take into consideration one-off formations, where this seems of interest.

A word is also in order concerning our delimitation of the field of word-formation. Though we are well aware that in theories such as construction morphology (see article 12 on construction grammar) such a move is considered to be unwarranted, we will exclude what is often called "syntagmatic" word-formation. That is, we will omit terms − taken from Helfer's dictionary − such as *conductus electricus* 'electrical conductor' (← *conductus* 'conductor', *electricus* 'electrical') or *sectio cadaveris* 'autopsy' (← *sectio* 'dissection', *cadaveris* 'corpse'+GEN.SG), which follow the rules of Latin syntax, even though such combinations clearly have a lexical function. This does not mean that in in-depth studies of NL word-formation it could not be interesting to take them into consideration as well in order to assess under what conditions authors resort to syntagmatic composition rather than compounding proper or affixation. The choice of affixation or compounding proper normally seems to be the more marked option, sounding more refined if not stilted, as when 'brainwashing' is rendered as *cerebrilavium* (← *cerebr-* 'brain' + linking vowel *-i-* + *lav-* 'to wash' + action suffix *-ium*) instead of the more straightforward syntagmatic compound *lavatio cerebri* (← *lavatio* 'washing', *cerebri* 'brain'+GEN.SG), or 'lymph node' as *lymphonodus* (Nomina anatomica Jenensia; ← *lymph-* 'lymph' + linking vowel *-o-* + *nodus* 'node') instead of *nodus lymphaticus* (← *nodus* 'node', *lymphaticus* 'lymphatic').

Another branch of word-formation that will not be taken into account in this article are artificial NL taxonomies which are used in some sciences such as botany up to the present day. In phytosociology (cf. Weber, Moravec and Theurillat 2000), for example, it has been agreed upon that the name of an 'association' of plants should be formed by attaching the suffix *-etum* to the stem of the genus name of the plant in question, the name of an 'alliance', i.e. an association mixed with a similar association or similar associations, by attaching *-ion*, the name of an order by attaching *-etalia*, and that of a

class by attaching *-etea*. A wood − or, to be precise, an association − consisting of alders (Latin *alnus*) is therefore called *Alnetum*, a word Cicero would not have objected to. But beyond that level, designations become rather arbitrary, though they use Latin (or Greek, in the case of *-ion*) building blocks. If the association consists of grey alders, for example, it must be called *Alnetum incanae*, whose second member is the genitive of *Alnus incana*, the NL name of the grey alder (*incanus* meaning 'grey'). An historical study of the introduction and further elaboration of NL taxonomies of this kind would certainly be interesting in itself, but lies beyond the scope of the present article, which will be restricted to innovations which originated from more or less "natural" mechanisms of language change.

As a first comprehensive approximation to NL word-formation, the present article could not but limit itself to a relatively small corpus. As far as the − predominately literary − sources from humanism and the Renaissance are concerned, we could rely on the excellent dictionaries of Hoven (henceforth: Ho) and Ramminger (R). For scientific Latin terminology, which was conspicuously expanded especially in the 17th and 18th centuries, there is no comprehensive modern dictionary, which is a very unfortunate lexicographic lacuna. However, Helfer (He) also constitutes a valuable source, albeit of very limited coverage, for that period. In order to round off the picture, we had to delve into some primary sources from the realm of medicine (Blancard), natural history (Linné), and philosophy (Bruckner). The 19th and 20th centuries are represented almost exclusively by Helfer's dictionary.

A final word concerning the presentation of the examples: In order to save space, bases in non-final position are represented only by the relevant word-formation stem, not by the corresponding lexeme (represented by a citation form). That is, we say that *conductor* is derived from *conduct-* and not from *conducere*, *anuminis* from *numin-*, not from *numen*, etc.

2. Latin and Greek

Beginning with the first extant literary documents dating from the 3rd century BC, Latin has benefitted from a constant flow of loan words and loan translations from Greek (cf. Biville 1990−95). With the advent of humanism, which re-established the study of Greek in Western Europe, this flow gained new momentum to the point of making of the high proportion of Greek words an outstanding characteristic of many NL texts. Any Greek word, one could say, became potentially Latin as long as it was adapted orthographically and grammatically to the Latin host language.

For the present article, which is dedicated to word-formation, only morphologically complex Greek words are of interest. And even among these, some are more relevant than others. In fact, morphologically complex Greek words which are not at least partially transparent for those who do not know Greek may safely be omitted, in analogy to simplex loan words. *Autopsia* 'autopsy', for example, would seem to be a case in point: It is morphologically complex from a Greek perspective (*aut-* 'self' + *ops-* 'to look' + abstract suffix *-ía*), but this structure remains impenetrable for those who do not know Greek. The issue in fact is quite tricky. Since many NL writers knew at least some Greek, even such words were transparent to them, and they were also able to coin Greek

neologisms on the basis of their knowledge of *Greek* word-formation, adapting them to the orthographical and grammatical conventions of Latin only at the end of the process. Such cases, however, should better be considered as acts of word-formation in a foreign language followed by borrowing, both taking place in the head of one and the same individual. *Agatharchia* 'rule of the good', composed of *agath-* '(the) good' + *arch-* 'to rule' + abstract suffix *-ía*, or *bibliotaphium* 'book-grave', composed of *bibli-* 'book' + linking vowel *-o-* + *-taphion* 'grave', could represent pertinent examples, since they do not figure either in Liddell and Scott's dictionary of Ancient Greek nor in dictionaries of Byzantine Greek. As far as their structure and meaning are concerned, they are perfectly Greek, following the model respectively of *oligarkhía* 'rule of the few' (from *olígos* '(the) few', *arkhé* 'government' + suffix *-ía*) and *kenotáphion* 'empty grave' (from *kenós* 'empty' + *taphos* 'grave' + suffix *-ion*). Nevertheless, such words could hardly have been coined by a writer only familiar with Latin (including transparent loan words from Greek).

The point at which Greek word-formations occurring in NL texts in Latin orthography definitely become relevant for our purpose is when we have sufficient clues to believe that they were created exclusively on the basis of lexical material that was already part of the Latin language at the moment of their creation plus the common analogical mechanisms of word-formation. However compelling this criterion may sound in theory, in concrete cases it is not always easy to apply. Hybrid formations which contain elements of both Greek and Latin origin are generally valuable, though not infallible, indicators that the Greek element in question was beginning to be integrated into the word-formation system of the host language. When *orthopontifex* 'rightful pope' (R; ← Greek *ortho-* 'right(ful)' + Latin *pontifex* 'pope') was coined in the 14th century, its creator, Jean de Rocquetaillade, may have isolated the first element from well-established loan words such as *orthodoxus* 'orthodox' or *orthographia* 'orthography', but it is equally possible that he activated his knowledge of Greek (if, indeed, he had such knowledge). The same doubt remains in many early hybrids: *chrysodoctor* 'excellent teacher' (R, b. 1533; ← Greek *chrys-* 'gold' + Greek linking vowel *-o-* + Latin *doctor* 'id.'), *speculitheca* (R, 16th c.; ← Latin *specul-* 'mirror' + Latin linking vowel *-i-* + Greek *-theca* 'receptacle'), *ossilatra* (R, 16th c.; ← Latin *oss-* 'bone' + *-i-* + Greek *-latra* 'worshipping/er'), etc.

The same doubts, by the way, still apply with respect to many modern scientific terms, such as *myofibra* 'muscle fibre' (← Greek *my-* 'muscle' + *-o-* + Latin *fibra* 'fibre'), with the additional complication that in these cases the genesis of the term could also have taken place in a vernacular language such as English and its result then have been borrowed into NL. Normally, only a painstaking study of the history of the term in question in all relevant languages will allow us to gain certainty in such cases. Unfortunately, existing historical and etymological dictionaries are of little help in this task. In some rare cases, purely formal clues allow us to establish with confidence the priority of the vernacular languages, as when *ionosphere* was adapted as *iontosphaera* (He; the word-formation stem of Greek *ion* being *iont-*) or *kilogram* as *chiliogrammum* (He; the numeral for '1000' in Greek being *kilioi*) by some puristically-minded contemporary Neo-Latinist.

3. Composition

3.1. Latin-based composition

NL compounds, as Latin compounds in general (cf. Lindner 1996, 2002), are almost exclusively nouns and adjectives. Most verbal compounds follow the regular pattern with a second member *-ific-* '-ify', the few innovative formations remaining isolated: *animipendere* 'to think about' (R; ← *anim-* 'mind' + *-i-* + *pendere* 'to weigh'), *fabrescul-pere* 'to chisel artfully' (R; ← *fabr-* 'artist' + (*ex*?)*sculpere* 'to chisel'), and few more.

3.1.1. Nominal compounds

New synthetic compounds abound, but almost exclusively with second members already established since CL.

Most such formations are agent nouns. One series contains bound second members created by conversion − *-a* and *-us* representing inflectional endings −, such as *-cen* 'player', *-cida* 'murderer', *-fex* 'maker', *-gena* 'person born in X', *-mimus* 'imitator', etc. Innovative second members only appear in *centonifur* 'one who plagiarizes a *cento*' (R; ← *centon-* 'a type of poem' + *-i-* + *fur* 'thief', a free form), *scholirega* 'headmaster' (R; ← *schol-* 'school' + *-i-* + *reg-* 'to manage'), *quisquilivenda* 'trash-seller' (R; ← *quisquili-* 'trivialities' + *-i-* + *vend-* 'to sell'). Other agentive second members contain explicit deverbal suffixes. Again, most of these compounds follow established patterns in *-cipulum* 'trap', *-cultor* 'cultivator', *-gerulus* 'carrier', etc. But some are innovative in the choice of the second member or the linking vowel (*-o-* instead of *-i-*): *fumivenditor* 'smoke-seller' (Ho; ← *fum-* 'smoke' + *-i-* + *venditor* 'seller'), *Lutherozelator* 'admirer of Luther' (Ho; ← *Luther-* + *-o-* + *zelator* 'admirer'), *tabacobibulus* 'tobacco-smoker' (R; ← *tabac-* 'tobacco' + *-o-* + *bibulus* 'drinker'), *herbisectrum* 'lawn mower' (He, 20th c.; ← *herb-* 'grass' + *-i-* + *sec-* 'to cut' + instrumental suffix *-trum*).

Synthetic action nouns mostly end in the suffix *-ium*. Again, almost all of these formations follow patterns with second members already attested in CL, such as *-cidium* 'murder', *-cinium* 'singing', *-ficium* 'making', *-fragium* 'braking', *-fugium* 'flight', etc. The only formation with a new second member which we have found is *labellitorquium* 'lip-puckering' (R; ← *labell-* 'lip' + *-i-* + *torqu-* 'to pucker' + action suffix *-ium*), coined by Caspar Barth (1587−1658). Ramminger contains a number of rather extravagant synthetic action nouns with second members in *-io*, but these are also all taken from the work of this same author: *animambulatio* 'walk of the souls' (← *anim-* 'soul' + *ambula-tio* 'walk'), *animimistio* 'union of souls' (← *anim(a)* 'soul' + *-i-* + *mistio* 'union'), etc. In Contemporary Latin we find compounds such as *astronavigatio* 'space travel' (← *astr-* 'star' + *-o-* + *navigatio* 'travel'), *vasodilatatio* 'vascular dilatation' (← *vas-* 'vessel' + *-o-* + *dilatatio* 'dilatation') or even *tendovaginitis* 'tendinitis; lit. inflammation of the vagina of a tendon' (← *tend(in/on)-* + *-o-* + *vaginitis* 'inflammation of the vagina'), which may have been influenced by a vernacular language.

Root compounds − in the modern sense of 'compounds where no noun is an argument of the other noun' − were rare in CL and continue to be so in NL: *dentiforceps* 'dental forceps' (R; ← *dent-* 'tooth' + *-i-* + *forceps* 'id.'), *navidominus* 'admiral' (R; ←

nav- 'ship' + *-i-* + *dominus* 'master'), *pedifollis* 'football' (He, 20th c.; ← *ped-* 'foot' + *-i-* + *follis* 'ball'), *burgomagister* 'Lord Mayor' (Ho; ← *burg-* 'town' + *-o-* + *magister* 'master'), etc. Some of these root compounds betray a Germanic background. Sometimes it is unclear whether we are dealing with a root compound or a synthetic compound: since Latin *-i* is not only a linking vowel, but also a genitive ending; Contemporary Latin words like *oleiductus* 'pipeline' or *ferrivia* 'railway' could also be analysed as *olei ductus* lit. 'oil+GEN conduit' and *ferri via* lit. 'iron+GEN way'.

Adjective-noun compounds have also remained rare, generally following the few established patterns such as *omni-* 'all' + noun: *omnimaiestas* 'all-embracing majesty', etc. Occasionally, however, more innovative formations have been ventured: *comicotragoedia* (Ho; ← *comic-* 'comic' + *-o-* + *tragoedia*), *tragicocomoedia* 'tragicomedy' (R; ← *tragic-* 'tragic' + *-o-* + *comoedia*; a remake of Plautinian *tragicomoedia*), *Anglocalvinismus* 'English Calvinism' (R; ← *Angl(ic)-* 'English' + *-o-* + *Calvinismus*), *Graecobarbarismus* 'a barbarism in Greek' (R; ← *Graec-* 'Greek' + *-o-* + *barbarismus*), *electromagnetismus* 'electromagnetism' (He, 19th c.; ← *electr(ic)-* 'electric' + *-o-* + *magnetismus*), etc.

Copulative compounds are extremely rare: *iuristotheologus* 'lawyer (*iurista*) and theologist (*theologus*) at the same time' (R), *gallopavo* 'turkey' (R; ← *gall-* 'cock' + *-o-* + *pavo* 'peacock'). Formations without a linking vowel such as *vir lupus* 'werewolf' (← *vir* 'man' + *lupus* 'wolf'), also written as *vir-lupus* or *virlupus*, are better viewed as appositions, and hence syntagmatic compounds. A case interpretable in both senses is *caropanis* 'flesh (*caro*) and bread (*panis*) at the same time' (R). A special kind of copulative compound is constituted by the innovative type *Lutheropapismus* 'belief in Luther and the pope at the same time' (R), which looks like a conflation of *Lutherismus* and *papismus*.

3.1.2. Adjectival compounds

Adjectival compounds, which abound in NL, fall into three main groups.

The first one is constituted by synthetic compounds closely related to those seen in the previous paragraph. Some noun compounds, in fact, could probably also be analysed as conversions of adjectival compounds. Again, most neologisms follow established patterns with second elements such as *-bibus* 'drinking', *-cola* 'adoring, inhabiting', *-crepus* 'clashing', *-fer(us)* 'bearing, producing', etc. But one also finds a sizeable number of innovative second elements, especially in poetry: *animiclepa* 'sense-stealing' (R; ← *anim-* 'sense' + *-i-* + *clep-* 'to steal'), *auricreus* 'gold-creating' (R; ← *aur-* 'gold' + *-i-* + *cre-* 'to create'), *multicubus* 'having many mistresses' (Ho; ← *multi-* 'many' + *cub-* 'to lie down'), *artidocus* 'art-teaching' (R; ← *art-* 'art' + *-i-* + *doc-* 'to teach'), *omnidomus* 'all-taming' (R; ← *omni-* 'all' + *dom-* 'to tame'), *radiineca* 'ray-killing' (R; ← *radi-* 'ray' + *-i-* + *nec-* 'to kill'), *auripluus* 'gold-raining' (R; ← *aur-* 'gold' + *-i-* + *plu-* 'to rain'), *fortipremus* 'hard-pressing' (R; ← *fort-* 'hard' + *-i-* + *prem-* 'to press'), *radiispuus* 'ray-spewing' (*radi-* 'ray' + *-i-* + *spu-* 'to spew'), *grandistrepus* 'making much noise' (Ho; ← *grand-* 'big' + *-i-* + *strep-* 'to make noise'), *oculitega* 'covering the eyes' (R; ← *ocul-* 'eye' + *-i-* + *teg-* 'to cover'). While these second elements are derived from verbs by conversion, in others we find an explicit suffix

(normally the present participle suffix *-ns*, or *-ax*). Again, most neologisms follow established patterns, but there are also some innovative second elements: *undifremens* 'wave-raging' (R; ← *und-* 'wave' + *-i-* + *freme-* 'to rage'), *soporiacens* 'asleep' (R; ← *sopor-* 'sleep' (+ *-i-*) + *iace-* 'to lie'), *tergisequens* 'running behind' (R; ← *terg-* 'back' + *-i-* + *seque-* 'to follow'), *iuristudens* 'studying law' (R; ← *iur-* 'law' + *-i-* + *stude-* 'to study'), *omnivorans* 'all-devouring' (R; ← *omni-* 'all' + *vora-* 'to devour'), *urinificax* 'diuretic' (R; ← *urin-* 'urine' + *-i-* + *fic-* 'to make'). *Saccogerulus* 'wearing a sack dress' (R; ← *sacc-* 'sack (dress)' + *-o-* + *ger-* 'to wear' + *-ulus* '-ing') is notworthy for its linking vowel *-o-*.

A second group of adjectival compounds which is well represented both in CL and in NL are possessive compounds (*bahuvrīhi*, in the Indian terminology). Their first element can be anything except a verb, their second element is invariably a noun, and the whole sequence is converted into one of the adjectival declension-classes. Most neologisms again follow established patterns, but some show innovative second elements: *polycarmen* 'rich in verses' (R; ← *poly-* 'many' + *carmen* 'poem'), *tauricerebrus* 'with the brains of a bull' (R; ← *taur-* 'bull' + *-i-* + *cerebr-* 'brain'), *flexilicollus* 'with an agile neck' (R; ← *flexil-* 'agile' + *-i-* + *coll-* 'neck'), *tricoronis* 'with three crowns' (R; ← *tri-* 'three' + *coron-* 'crown'), *multicubitus* 'many cubits long' (R; ← *multi-* 'many' + *cubit-* 'cubit'), *quinquelobus* 'five-lobed' (Linné p. 20; ← *quinque* 'five' + *lob-* 'lobe'), *multinominus* 'with many names' (R; ← *multi-* 'many' + *nomin-* 'name'), *anuminis* 'godless' (Ho; ← *a-* 'without' + *numin-* 'god'), *enummis* 'without money' (Ho; ← *e* 'out' + *numm-* 'coin'), *multitalentus* 'rich' (R; ← *multi-* 'many' + *talent-* 'talent'), *univalvis* 'univalve' (Linné p. xxvii; ← *uni-* 'one' + *valv-* 'valve'), *avenis* 'without veins' (Linné p. xxiv; ← *a-* 'without' + *ven-* 'vein'). *Aenochordus* 'with metallic strings' (R; ← *aen-* 'made of ore' + *-o-* + *chord-* 'string') is noteworthy for its linking vowel *-o-*. With some nouns, an explicit suffix indicates the feature 'possession': *arcuferreus* 'with an iron bow' (R; ← *arc-* 'bow' + *-u-* [the choice of *-u-* as a linking vowel being due to the fact that *arcus* pertains to the forth declension with a thematic vowel *u*] + *ferreus* 'of iron'), *tetrarotatus* 'with four wheels', etc. (← *tetra-* 'four' + *rot-* 'wheel' + possessive *-atus*), etc.

It must also be mentioned that some second elements, though not unknown to CL and ML, witnessed a spectacular rise in productivity when they were adopted in scientific terminologies with a great need of descriptive adjectives. This is especially true of *-florus* 'with X flowers' and *-folius* 'with X leaves' (cf. Selosse 2006) in botany, and *-fer(us)* 'X-bearing, producing' (cf. Rainer 2013) and *-formis* 'having the form of X' (cf. Rainer 2009) in medicine and natural history. For the latter, only 3 examples are attested in CL, while at present they outnumber 150. This increase in number was also accompanied by semantic and formal diversification, for example the use of *-ae-* as a linking vowel with feminine first members in *-a*, where *-ae* is the genitive ending (*crateraeformis* 'crateriform' ← *crater-* 'cup' + *-ae-* + *-formis*, etc.). Apparently the linking vowel *-i-* has been reanalysed as a genitive ending. Innovations regarding meaning and domain were subtler, as when *-formis* was added to mass nouns (*gummiformis* 'rubber-like' ← *gumm-* 'rubber' + *-i-* + *-formis*, etc.), denoting consistency rather than form, or in the 19th century to names of diseases (*herpetiformis* 'herpetiform' ← *herpet-* 'herpes' + *-i-* + *-formis*, etc.).

The remaining non-copulative compounds are few in number and do not form a homogeneous set. Some of the more innovative neologisms must suffice here as an illustration of what was deemed possible: *prosocarmineus* 'combining prose and verse'

(R; ← *pros-* 'prose' + *-o-* + *carmineus* 'pertaining to poetry', itself a neologism), *cordintimus* 'heartfelt' (*cord-* 'heart' + *intimus* 'innermost'), *nimicredulus* 'too credulous' (R; ← *nimis* 'too' + *credulus* 'credulous'). Compounds such as *spumagenitus* 'foam-born' (R; ←*spumā* 'from foam' + *genitus* 'born') or *auriplenus* 'rich' (R; ← *auri* 'of gold' + *plenus* 'full') are to be considered syntagmatic.

By far the most important innovation in the realm of adjectival compounding, however, is constituted by the third type, the novel pattern of copulative compounds of the type *politico-moralis* 'politico-moral' with a linking vowel *-o-*, already studied in depth by Hatcher (1951: 54−132). According to Hatcher, this type of compound, unknown both to CL and to ML, has been attested sporadically in German NL texts since the middle of the 16th century and "by the middle of the seventeenth century [...] has become an international type" (p. 87). Among the CL forerunners she points to nominal compounds of the type *Gallo-Graeci* 'Gauls who settled in Greece', which, however, were semantically determinative. The link to our adjectival compounds seems to have been constituted by names of dictionaries such as *Lexicon Graeco-Latinum* (1530), which involved "the metaphorical application of the immigration-pattern to the theme of translation" (p. 62). The semantics is more clearly coordinative in *editio Graeco-Latina* 'Greek and Latin edition' (1546), *monomachia Hungaro-Turcica* 'duel between Hungary and Turkey' (1590), or *Tychonico-Kepleriana* [*nova*] 'new findings by Tycho and Kepler' (1629). The oldest toponymic example from our corpus is *Ecclesia Belgiogermanica* 'Belgian-German Church' (R, 1572), the Latin name of the Dutch-speaking "Duyddsch-Nederlandische Gemeine" at London. This example suggests that Germanic influence could also have been at stake. It also attests to the possibility of using the corresponding noun as the first member of the compound instead of the adjective (*Belgium*, in our example, instead of the adjective *Belgicus*, which would yield *Belgicogermanica*), a feature inherited from the *Gallo-Graeci* pattern. This subtype with a nominal first element became very popular in medical terminology in the 17th century (Hatcher 1951: 91−92): *sterno-thyroidalis* (← *stern-* 'breastbone' + *-o-* + *thyroidalis* 'thyroidal'), etc. It can also be found with personal names: *Lutheropuritanus* 'concerning pure Lutheran doctrine' (R; ← *Luther(us)* 'Luther' + *-o-* + *puritanus* 'puritan'), *philosophia Leibnizio-Wolfiana* 'the philosophy of Leibniz and Wolf' (Bruckner p. 394; ← *Leibnizi(us)* 'Leibniz' + *-o-* + *Wolfianus* 'Wolfian'), etc.

Another, apparently less important source for our copulative type was constituted by the adjectival compound *comico-tragicus* 'tragicomic' (1540), which involves the common nouns *comoedia* and *tragoedia* − *tragicomoedia* was already used by Plautus − and was "tied up with the rise of the dramatic form called 'tragicomedy'" (Hatcher 1951: 71). The adjective *sacrosanctus* 'sacrosanct' (← *sacr-* 'sacred' + *-o-* + *sanctus* 'holy'), which already existed in CL, does not seem to have had any influence.

Adjectives participating in our type of copulative compounds are mostly relational adjectives. Nevertheless, some combinations of qualitative adjectives also occur. Ancient *dulcacidus* 'soursweet' (← *dulc-* 'sweet' + *acidus* 'sour') and Medieval *dulcamarus* 'bittersweet' (← *dulc-* 'sweet' + *amarus* 'bitter'; cf. Hatcher 1951: 18), both translated from Greek, paved the way. This non-relational subtype witnessed a sharp rise in productivity in natural history: *folii oblongo-ovati* 'elongated and oval leaves' (Linné p. 17; ← *oblong-* 'elongated' + *-o-* + *ovatus* 'oval'), *iris caeruleo-violacea* 'dark blue-purple iris' (Linné p. 50; ← *caerule-* 'dark blue' + *-o-* + *violaceus* 'purple'), etc.

As a consequence of their origin, our copulative compounds have always had a very strong predilection for first members of the Latin second declension with a thematic vowel *o*. First members of the third declension with a stem vowel *i* have remained rare, but do occasionally occur. The linking vowel then must be *-i-* (which coincides with the thematic vowel): *levidensis* 'light and dense' (R, 16th c.; ← *lev(is)* 'light' + *-i-* + *densis* 'dense'), *viridi-argenteus* (Linné p. 77; ← *virid(is)* 'green' + *-i-* + *argenteus* 'silver (adj.)'), *clavipectoralis* 'of the collarbone and the breast' (← *clav(is)* 'collarbone' + *-i-* + *pectoralis* 'of the breast'), *nationalisocialisticus* 'national-socialist' (He, 20th c.; ← *national(is)* 'national' + *-i-* + *socialisticus* 'socialist'), etc.

3.2. Greek-based composition

As argued in section 2, compounds only interpretable on the basis of the rules of Greek word-formation may safely be omitted from a description of Neo-Latin word-formation. We will therefore only take into consideration here types of compounds with first and second members which were already on the way to being integrated into the system of (Neo-)Latin word-formation. Some of them, by the way, could be classified with good reason as prefixes from the point of view of NL.

Among the first members, we may distinguish different semantic subgroups.

Numeral first members of Greek origin were commonly used, especially with bases of Greek origin, as witnessed for example by Linné's series *monoandria*, *diandria*, *triandria*, *tetrandria*, *pentandria*, *hexandria*, *heptandria*, *octandria*, *enneandria*, *decandria*, etc. When introducing these neologisms, Linné (cf. p. xxxii), however, still felt obliged to translate the constituents into Latin: "μόνος unicus, & ἀνδρ maritus. Maritus unicus in matrimonio. Stamen unicum in flore hermaphrodite" [μόνος one, & ἀνδρ husband. One husband only in the marriage. One stamen only in a hermaphrodite flower]. The integration was facilitated by formations readily interpretable on a Latin basis, such as *monocentricus* 'monocentric', whose base can not only be referred to Greek *kentron* 'centre' but also to Latin *centrum* 'id.'. Its antonym *poly-* was also attached to Latin bases: *polycarmen* 'rich in verses' (*carmen* 'poem'), etc. *Chilio-* 'thousand', as in *chiliometrum* 'kilometer', was not directly taken from Greek, but constituted an attempt at making vernacular *kilo-* sound more Greek.

Another group of first members has an adjectival or adverbial meaning. A first subgroup equally relates to quantity and measurement. Many of the more recent uses of the dimensional first members *micr(o)-* 'small' (*microscopium* 'microscope', *microelementum* 'trace element', with a Latin second member, etc.), *macr(o)-* 'big' (*macrologus* 'boastful; lit. big-speaking'; cf. German *großsprecherisch*, etc.), and *mega-* 'big' (from Greek *megas* 'big'; *megavattium* 'megawatt', etc.) have clearly been influenced by the vernacular languages. Furthermore, we should also mention *is(o)-* 'same' (*isoperimetria* 'same perimeter', etc.), *hom(o)-* 'same' (*homocentricus* 'having the same centre', etc.), *heter(o)-* 'different' (*heteroglossus* 'speaking a different language', etc.), and *pan-* 'all' (*panharmonia* 'harmony among all members', etc.). Spatial dimensions are expressed by *endo-* 'inside' (*endolympha* 'lymph contained in the inner ear', etc.) and *epi-* 'above' (*epidermis* 'outer layer of the skin'), *hyper-* 'above' (*hyperphysicus* (R) 'beyond the body', etc.) and *hypo-* 'below' (*hypothalamus* 'that part

situated below the thalamus', etc.), *mes(o)-* 'middle' (*mesotendineum* 'the connective tissue sheath attaching a tendon to its synovial sheath', etc.), *peri-* 'around' (*peritendineum* 'any of the fibrous sheaths surrounding the primary bundles of fibers in a tendon'), *tele-* 'far, away' (*telescopium* 'telescope', *televisorium* 'TV', backtranslated from a vernacular language, etc.), and others. The temporal dimension is present in the couple *prot(o)-* 'original' (*protomater* (R) 'first mother', etc.) vs. *ne(o)-* 'new, recent' (*neopropheta* 'new prophet', *neochristianismus* (R) 'neo-christianity', etc.; on *neo-* cf. Rainer 2008). The first of these is also used in a hierarchical sense: *protoepiscopus* (R) 'first, i.e. highest-ranked bishop', etc. Another subgroup is evaluative in character: *eu-* (*euloquium* (R) 'eloquence', with a Latin base, etc.), *chrys(o)-* (*chrysodoctor* (R) 'excellent teacher', from *chrys-* 'gold', with a Latin basis, etc.), and *orth(o)-* 'right' (*orthotypographia* (R) 'correct printing', etc.) represent the positive pole, *cac(o)-* 'bad' (*cacomedicus* (R) 'bad physician', etc.) the negative one. Highly productive *pseudo-* 'false' (*pseudo-philosophia* (Bruckner p. 456), etc.), as well as *crypt(o)-* 'hidden' (*Crypto-Iudaei* 'crypto-jews' (Bruckner p. 779), etc.) should also be mentioned here. The same meaning was also expressed occasionally by *par(a)-* (*parepiscopus* 'false bishop', *paradiatriba* (R) 'pseudophilosophical diatribe', etc.). Last but not least, one should mention privative *a-* (*achristianus* (Ho) 'non-christian', etc.) and reflexive *aut(o)-* (*automobilis* (He, 19th c.) 'self-propelling', probably a backtranslation from a vernacular language, etc.).

A third, largely open subgroup is constituted by nominal first members such as *hydr(o)-* 'water' (*hydrophobus* 'scared of water', etc.), *psych(o)-* 'soul' (*psychotyrannus* 'tyrant of the soul', etc.), *zo(o)-* 'animal' (*zoophytum* (He, 17th c.) 'an animal that visually resembles a plant', etc.), etc.

Last but not least, we should mention two very productive first members of verbal origin, *phil(o)-* 'loving' (*philerasmius* 'one loving Erasmus', where *-ius* represents a Latin adjectival ending), and its antonym *mis(o)-* (*misobarbarus* (Ho) 'one hating the barbarians', etc.).

A very similar situation obtains with respect to second members, of which we can also only mention the most important which were on the way of becoming established parts of Neo-Latin word-formation, as witnessed by hybrids or combinations with well-integrated first members of Greek origin: *-archa/us* 'chief' (*Austriarchus* (R) 'chief of Austria', etc.), *-cratia* 'government' (*gynaecocratia* (He, 17th c.) 'government of women', etc.), *-gamia* 'marriage' (*clerogamia* (R) 'marriage of priests', etc.), *-gamus* 'married' (*unigamus* 'married only once', with Latin *uni-* instead of Greek *mono-*, etc.), *-graphia* 'description' (*hydrographia* (Ho) 'hydrography', etc.), *-graphus* 'writer' (*calendariographus* (R) 'writer of calendars', etc.), *-latra* 'adorer' (*daemonilatra* (R) 'adorer of the demon', with the Latin linking vowel, *lutherolatra* (Ho) 'adorer of Luther', etc.), *-latria* 'adoration' (*astrolatria* 'adoration of the stars', etc.), *-logia* 'science' (*tabacologia* (R) 'science of tobacco', *terrelogia* 'science of the earth', remarkable for its linking vowel *-e-* − originally a genitive ending − copied from *terremotus* 'earthquake', etc.), *-machia* 'fight' (*monachomachia* (Ho) 'fight among monks', etc.), *-mania* 'mania' (*papimania*, with the Latin linking vowel, and *papomania* 'popemania', etc.; on *-mania* cf. Höfler 1972), *-mastix* 'basher' (*erasmiomastix* (Ho) 'Erasmus-basher', etc.), *-metria* 'measurement' (*longimetria* 'measurement of the length', etc.), *-metrum* 'measuring instrument' (*barometrum* 'id.' (17th c.), *gasometrum* 'id.' (20th c.), etc.), *-phagus* 'eating' (*porrophagus* (Ho) 'leek-eating', from Latin *porrum* 'leek', etc.), *-philus* 'loving' (*nummophilus* (He, 20th c.) 'collectionist', from Latin *nummus* 'coin', etc.), *-scopia* 'examina-

tion' (*uroscopia* (He, 19th c.) 'examination of urine', etc.), *-scopus* 'watcher' (*fatoscopus* (Ho) lit. 'fate-watcher', from Latin *fatum* 'fate', etc.), *-theca* 'depot' (*metallotheca* 'receptacle for keeping metallic objects', etc.), etc.

4. Derivation

CL derivation (cf. Leumann 1977; Kircher-Durand 2002) in all its ramifications continued to be used abundantly in NL. Again, only innovative aspects will be highlighted in the following paragraphs.

4.1. Nominal derivation

4.1.1. Denominal nouns

Personal nouns are formed both by prefixes and suffixes.

In the domain of prefixes, NL expanded the use of *co-/com-* (*co-elector* 'co-Elector' (R), *comprofessor* 'colleague (said of a teacher)' (R), etc.), *ex-* (*exiesuita* 'ex-Jesuit' (R), etc.) and *non-* (*non-fumator* 'non-smoker' (He, 20th c.), etc.), which all reach back to Late Latin (for *non-*, cf. Stotz 2000, § 131). Of the prefixes indicating hierarchy, the most current ones go back at least to ML: *praeconsul* 'Lord Mayor' (R), *procancellarius* 'vice-chancelor' (R), *subgubernator* 'vice-governor' (Ho), *vicebibliothecarius* 'deputy librarian' (R), etc. *Super-* and *supra-* seem to be new in this function, but are only attested sporadically: *superarbiter* 'higher arbiter' (Ho), *supracoquus* 'head cook' (R). A NL innovation is constituted by the intensive use of *sesqui-* lit. 'one and a half', which must have been transferred from the figurative use of *sesquipedalis* 'very long; lit. one and a half feet long': *sesquiCato* 'a person stricter than Cato' (R), *sesquihaereticus* 'an arch-heretic' (R), etc.

Among the suffixes, one group denotes professionals. The productivity of *-arius* continues unabated, while *-erius*, a Medieval loan-suffix from vernacular languages, becomes rare (but cf. *musquetterius*, besides *musquetarius* 'musketeer' (R)). The suffix *-ista*, as in ML, is used for denoting experts of all kind (*Dantista* 'Dante scholar' (R), etc.). The use of *-aster* in this sense − to be distinguished from pejorative *-aster*! − could be an innovation: *arabicaster* 'scholar of Arabic' (Ho), *scholaster* 'head master, student' (Ho, R; ← *schol-* 'school'), etc. Isolated innovations: *emporiandus* 'merchant' (R; ← *empori-* 'staple'), *caeremoniasta* 'performer of ceremonies' (R), *epitomastes* 'author of epitomes' (R), *symphoniscus* 'member of an orchestra' (R), *aeroplaniga* 'captain of an aircraft' (He, 20th c.; after *auriga* 'driver'). Though relatively rare, the playful use of *-ista* in words like *colaphista* 'someone giving punches' (Ho; ← *colaph-* 'punch') or *potista* 'drunkard' (Ho; ← *pot-* 'drink') is worth mentioning, since it seems to constitute a semantic innovation. A use of *-ista* which gets a remarkable boost in the Renaissance is that for designating followers: *Calvinista* (Ho), *Reuchlinista* (Ho), *Romanista* 'papist' (Ho), etc. The paradigmatic relationship to nouns of doctrines in *-ismus* (see below) was already firmly established: *anabaptismus* ↔ *anabaptista*, *atheismus* ↔ *atheista*, etc. In the 'follower' meaning, *-ista* was rivalled by *-ita*, which was not yet used in this sense

in CL: *Vuyclevita* 'follower of Wyclyff' (Ho), *Calvinita* 'calvinist' (R), *Machiavellita* 'machiavellist' (R), etc. Much rarer was *-icanus*, which constitutes an innovation in this sense: *Apellicanus* 'follower of Apelles' (Ho). The suffix *-aster* added a pejorative tinge: *Calvinaster* 'calvinist' (R), *Machiavellaster* 'Machivellist' (R). For the designation of descendants, several Greek suffixes were imported: *Gonzagiades* 'descendant of the Gonzaga' (R), *Gonzagida* 'id.' (R), *angelida* 'descendant of an angel' (R), *Iesuides* 'descendant of Jesus' (R). Erroneously, *-ita* was also sometimes used in this meaning: *angelita* 'descendant of an angel' (R), *Danita* 'descendant of Dan' (R). *Quitoita* 'inhabitant of Quito' (R) probably follows the Classical locative type *eremita*. The hierarchical use of *-issimus* in *ministrissimus* 'highest-ranked minister' (R) is to be considered innovative, but seems to have remained isolated.

In the realm of status nouns, *-atus*, *-ia* and *-ura* (substituted for *-or*) continue to dominate the picture. An innovation seems to be constituted by the use of *-itas* in this function: *admiralitas* 'rank of an admiral (*admirali(us)*)' (Ho), *gentilhominitas* 'rank of a *gentilhomme* (latinized as *gentilhomo*, stem: *gentilhomin-*)' (R), *landsassitas* 'status of a *Landsasse* (latinized as *landsassius*)' (R), etc. This use is of course based on the suffix's use in denominal abstract nouns such as *asinitas* 'ass-hood' (← *asin-* 'ass'), already known from ML.

Place nouns continue to be coined with *-arium*, *-etum*, *-ia* and *-ile*, in their respective semantic domains. More noteworthy are several neologisms in *-(a)eum* (cf. already Classical *mausoleum*, name for the grave of king *Mausolus*): *alphabeum* 'lower school' (R), *typograph(a)eum* 'printery' (R; ← *typograph-* 'printer'), *cafeum* 'café' (He, 20th c.; ← *cafe-* 'coffee'). Equally interesting, some denominal formations in *-orium*: *armamentorium* 'depot for arms' (R; ← *armament-* 'arms'), *eremitorium* 'hermitage' (Ho; ← *eremit-* 'hermite').

A suffix which witnessed a spectacular rise in use in NL was *-ismus*. Originally forming action nouns corresponding to verbs in *-izein* in Greek, it has been reanalysed as denominal and deadjectival in Latin. The choice of a nominal or adjectival base is arbitrary up to a certain point: *Calvinismus* = *Calvinianismus*, *Epicurismus* = *Epicureismus*, *Lutherismus* = *Lutheranismus*, all taken from Hoven's dictionary. Since the names of followers were derived with the same suffix as the relational adjectives (cf. *Cartesianus* 'of Cartesius/Descartes' / *Cartesiani* 'the followers of Cartesius'), by reanalysis − along the lines of the hypothetical example *Cartesianismus* 'the doctrine of the *Cartesiani*' > 'the doctrine of Cartesius' − the relational adjective could eventually also be used as a base.

From a semantic point of view, we must distinguish several subpatterns. One set, which is relatively small and still reflects the original Greek 'action' meaning, designates a behaviour characterized by what the base refers to: *echetismus* 'cruelty worthy of Echetos' (Ho), *italismus* 'imitation of the Italians' (Ho), *egoismus* 'id.' (He, 18th c.), etc. Medical terms such as *priapismus*, derived from the name of the Greek god Priapos, or *strabismus* (R; ← *strab-* 'cross-eyed') come close to this behavioural set, though at a closer look 'condition, disease', in the absence of intentionality, is a more correct classification than 'behaviour'. Such medical terms reach back to Antiquity, but where greatly expanded in NL times: *alcoholismus* (19th c.), etc. Some words of the behavioural set, such as *Asiatismus*/*Asiaticismus* 'Asian, i.e. elaborated style' form a smooth transition to the following two linguistic sets. In the first one, already present in CL (cf. *iotacismus* 'id.', etc.), *-ismus* refers to a linguistic peculiarity: *cappacismus* 'the

peculiarity of pronouncing Latin *c* as *k* [Greek: *kappa*]' (Ho), *Germanismus* 'germanism' (Ho), etc. In a closely related set, which seems to be a NL innovation directly influenced by Greek, the suffix designates a language: *Anglicismus* 'the English language' (R), *Germanismus* 'the German language' (R), etc. The most important subset, however, which saw its productivity soar beginning with the Renaissance, is constituted by names of all kinds of doctrines. The base denotes a crucial ingredient of the doctrine in question, such as its founder, its followers, or simply some salient feature: *absolutismus* (Bruckner p. 156), *atheismus* (Ho), *Cartesianismus* (Bruckner p. 5), *Deismus* (Bruckner p. 384), *fatalismus* (Bruckner p. 427), *materialismus* (Bruckner p. 155), *optimismus* (Bruckner p. 385), *papismus* (Ho), *Spinozismus* (Bruckner p. 38), *Zuinglianismus* (Ho), etc. In some cases, the meaning has been extended metonymically, referring to the corresponding period of time: *saeculo Islamismi secundo* 'in the second century of Islamism' (Bruckner p. 807).

Occasional innovations can also be found in other denominal categories. The temporal meaning of *pro-* in *propascha* 'day before Easter' (R) and *prosabbathum* 'day before Sabbath' (R) has been borrowed from Greek. Occasionally, Medieval *-(ist)ria* (cf. Stotz 2000, § 46) is still used in NL times: *papistria* 'papistry' (R; ← *pap-* 'pope' or *papist-* 'papist'), *theologistria* 'theological speculation' (R; ← *theolog-* or *theologist-* 'theologist'). *Maiorascum* 'right of primogeniture' (R; ← *maior-* 'older') is a loan-word, either from Italian *maiorasco* or from Spanish *mayorazgo*. In botany, names of plants began to be coined by adding *-ia* to a proper name: *Adansonia* (← *Michael Adanson*), etc. In pharmacy and chemistry, names of substances were coined with *-inum* or *-ina*: *chininum* 'quinine' (19th c.; ← *Chin-* 'Quina-tree'), *gelatina* 'gelatine' (17th c.; ← *gelat-* 'frozen (stuff)'), etc. Names of chemical elements were formed by attaching *-ium*: *silicium* (19th c.; ← *silic-* 'flint'), etc.

Diminutives of all kinds continued to be coined in great abundance, following CL patterns. One aspect worth mentioning is that scientists frequently had recourse to diminutives for terminological purposes: just think of *areola* 'id.; lit. small area', *cerebellum* 'id.; lit. small brain', *funiculus* 'umbilical cord; lit. small rope', *malleolus* 'id.; lit. small hammer', etc. in medicine. Occasionally, we find loans from Italian, some in *-et(t)us* and one in *-ucius*/*-utius*: *coffinetus* 'small chest' (R; ← *cophin-* 'chest', cf. It. *cofanetto*), *lancetta* 'lancet' (Blancard; ← *lance-* 'lance'; cf. It. *lancetta*), *epistolucia* or *epistolutia* 'unimportant letter' (R; ← *epistol-* 'letter'; cf. It. *epistoluccia*).

4.1.2. Deadjectival nouns

The most important group of deadjectival nouns in Latin are quality nouns, which continue to be very frequent in NL, but mostly along CL lines. The only remarkable fact in this area from a NL perspective is that authors continued to form abstract nouns in *-itas* or *-etas* from adverbs and other unorthodox bases in the style of the Scholastic philosophers, despite the ridicule poured on this usage by some humanists: *alicubietas* (Bruckner p. 483; ← *alicubi* 'somewhere'), *nullibietas* (R; ← *nullibi* 'nowhere'), *ubiqueitas* (R; ← *ubique* 'everywhere'), *aseitas* (Bruckner p. 485; ← *a se* 'from himself'), etc. On deadjectival nouns in *-ismus* see section 4.1.1.

4.1.3. Deverbal nouns

Action nouns continued to be coined productively, sometimes using even relatively unproductive CL suffixes: *ludibulum* 'play' (R; ← *ludi-* 'to play'), *divinaculum* 'soothsaying' (R; ← *divina-* 'to foretell'), *deceptela* 'deception' (R; ← *decept-* 'to deceive'), *allegorismus* 'use of allegory' (R; ← *allegor(iz)-* 'to use allegory', if it was not a loan from Greek), *respirium* 'pause' (Ho; ← *respir-* 'to breathe'), *blateramen* 'chattering' (R; ← *blatera-* 'to chatter'), etc. The most productive suffixes, however, were *-io* (*allegorisatio* 'use of allegories' (R), etc.), conversions of the type *cantus*, *-ura* and *-mentum*. The latter suffix retained the high productivity it had already acquired in ML (cf. Stotz 2000, § 64): only a detailed textual analysis of the many doublets (*aberramentum* (Ho) instead of Classical *aberratio* [← *aberr(at)-* 'to go astray'], etc.) could show whether there were semantic or stylistic differences with respect to *-io*. The type *cantus* seems to have gained new momentum in NL following the model of CL, after its relative neglect in ML (cf. Stotz 2000, § 56).

Agent nouns stick to Classical patterns: *clamitator* 'bawler' (Ho; ← *clamitat-* 'to bawl'), *Protestans* 'protestant' (← *protesta-* 'to testify'), *connugo* 'one who makes jokes together' (R; ← *connug-* 'to make jokes together'), etc. The only noteworthy innovation is the extension, apparently beginning with Vesalius, of agent nouns in *-or* to designate muscles: *supinator* 'id.' (← *supinat-* 'to supinate'), etc. A substantial increase of neologisms is found with gerundival nouns in *-ndus*: *graduandus* 'one who is going to get a degree' (Ho; ← *gradua-* 'to confer a degree'). It seems that this type has been reanalysed as denominal, the suffix becoming *-andus*: *baccalaureandus* 'bachelor candidate' (Ho; ← *baccalaure-* 'bachelor'), *magistrandus* 'master candidate' (Ho; ← *magistr-* 'master'), etc.

Much more interesting was the fate of instrument nouns in NL. Here, the scientific revolution of the 17th century and the industrial revolution of the 18th and 19th centuries created a great demand for new designations. All instrumental suffixes of CL were put to work, the choice depending on the availability of analogical models or simply the discretion of the coiner: *retinaculum* 'vice' (He, 18th c.; ← *retin-* 'to hold back'), *lactisugium* 'milking machine' (He, 20th c.; ← *lact-* 'milk' + *-i-* + *sug-* 'to suck' + instrumental suffix *-ium*), *adglutinamen* 'adhesive' (R; ← *adglutina-* 'to stick'), *irretimentum* 'net, trap' (Ho; ← *irreti-* 'to capture with a net'), *extinctorium* 'extinguisher' (He, 20th c; ← *extinct-* 'to extinguish'), *acceleratrum* 'accelerator' (He, 20th c.; ← *accelera-* 'to accelerate'), etc. The most striking innovation in this semantic category was the use of agentive *-or* to form instrument nouns, unknown to CL. The oldest attested example is *conductor fulminis* 'lightning conductor' (He, 1782; ← *conduct-* 'to conduce'). With high probability, this new function, which Helfer regards as "non commendabilis" in his dictionary, was due to loan-translations from English, where *-or* had inherited the instrumental meaning from homophonous *-er* (cf. Hales' *ventilator*, 1744). The new pattern then became established in NL: *exsiccator* 'id.' (*exsiccat-* 'to dry'), etc.

Place nouns remained within the limits of CL.

4.2. Adjectival derivation

4.2.1. Denominal adjectives

By far the biggest group of denominal adjectives in NL are relational adjectives, which enjoyed greater popularity than in CL. Most of those derived from common nouns

follow the established patterns in the choice of suffix. This is also true of the combinations with prefixes, adverbs, prepositions, or numerals, of the type *retropubicus* 'situated behind the pubis' (← *retro* 'behind', *pub-* 'pubis'), which also became more frequent. Among the most noteworthy aspects one can mention the continued use of the pleonastic form *-icalis*, which goes back to Late Latin and was greatly expanded in ML: *rhetoricalis* 'rhetorical' (R) beside *rhetoricus* 'rhetoric', etc. The suffix *-isticus* received a new boost thanks to the popularity of both *-ista* and *-ismus*, to which it can be related via suffix substitution: *systema atomisticum* 'atomistic system' (Bruckner, p. 38), for example, can be analysed either as 'of the atomists [*atomistarum*]' or as 'of atomism [*atomismi*]'). A final remarkable feature, which remains to be studied in detail, is the relational use of adjectives in *-trix*. Hoven's dictionary contains many such − formally deverbal − adjectives which are glossed referring to the corresponding noun: *auditrix* 'qui concerne l'ouïe (concerning hearing)', *commutatrix* 'qui concerne les échanges de marchandises (concerning the exchange of goods)', etc. Blancard contains *facultas retentrix* and similar expressions, which are also more naturally paraphrased by a noun than by a verb: 'the capacity of retention, of retaining, *which retains'. The same reanalysis had already occurred in CL with *-ivus* and *-orius*.

Deonymic relational adjectives, i.e. adjectives derived from proper names, enjoyed enormous popularity in NL times. With names of persons, the relative abundance of synonyms seems to indicate that stylistic factors were at stake here (the following are all attested in R): *Ciceronianus* = *Ciceronicus* = *Ciceronius* = *Ciceron(a)eus* = *Ciceroniacus*, *Erasmianus* = *Erasmicus* = *Erasminus* = *Erasmiacus*, etc. In more sober texts, *-ianus* predominates, except where special conditions dictate another choice. With place names, *-ensis* and *-icus* were the favorite suffixes in NL times, followed by *-anus* and *-inus*: *Dresdensis* ← *Dresda*, *Suecicus* ← *Suecia*, *groeninganus* ← *Groeninga*, *Altendorfinus* ← *Altendorf*, etc.

There were hardly any innovations in the rest of denominal adjectives which express possession or resemblance. Some, like *-aceus* or *-atus* witnessed a sharp rise in scientific terminologies, for example in botany: *setaceus* 'silky', *petiolatus* 'provided with a stalk', etc. The only noteworthy innovation seems to be constituted by the pleonastic suffixes *-oideus* and *-oidalis*, which in part replaced the less well integrated Greek suffix *-oides*: *os ethmoides* 'ethmoid bone (having the form of a sieve)' > *os ethmoideum*, *os ethmoidale*, etc.

4.2.2. Deadjectival adjectives

In the realm of deadjectival adjectives, there is a wealth of diminutive, intensive and negative adjectives following established patterns. Among diminutive formations we noted extravagant *nosterculus* and *nostrollus* 'our' (R; ← *noster* 'our' + diminutive *-culus* and *-ulus*), with a pejorative overtone. New intensive prefixes were *archi-* and *sesqui-*: *archicatholicus* 'arch-catholic' (R), *sesquifuriosus* 'very furious' (Ho), etc. *Super-* continues the rise witnessed already in ML (Stotz 2000, § 138): *superinfelix* 'very unhappy' (R), etc. With respect to *-issimus*, only its combination with possessive adjectives commands attention: *meissimus* 'completely mine' (Ho; ← *meus* 'my, mine'), etc. As far as negative prefixation is concerned, *non* retained its popularity gained in ML (Stotz 2000, § 131): *nonperemptorius* 'non-compulsory' (R), etc.

4.2.3. Deverbal adjectives

Both new active and passive adjectives were formed quite frequently, but almost exclusively along Classical lines. The relational use of *-trix* has already been mentioned in section 4.2.1.

4.3. Verbal derivation

4.3.1. Denominal and deadjectival verbs

Prefixed verbs were productively formed, but apparently only according to Classical patterns. Among neologisms by suffixation, there are many inchoative formations in *-ascere* and *-escere*: *adverbiascere* 'to become an adverb' (Ho, R), *aerescere* 'to become a gas' (R; ← *aer-* 'air'), *obscurascere* 'to become dark' (R; ← *obscur-* 'dark'), *meliorescere* 'to become better' (R; ← *melior-* 'better'), etc. The suffix *-izare* (also written *-isare* or *-issare*) continued to be highly productive. It was mainly intransitive (*Calvinizare*/*Calvinianizare* 'to follow Calvin's doctrine' (R), etc.) in literary texts, but transitive in scientific texts (*alcoholisare* 'to add alcohol' (R), *saecularisare* 'to secularize' (He, 17th c.), etc.). In the following verb, the suffix *-ito* is used like *-izo*: *graecitare* 'to study, use Greek' (R; ← *graec-* 'Greek').

4.3.2. Deverbal verbs

CL had a very rich system of prefixed deverbal verbs − some of which could also be analysed as compounds, following the Latin tradition −, which was also exploited in full in NL times. Since there is no comprehensive classification of the plethora of subpatterns, it is difficult to say whether among the many NL neologisms there are any innovations. As a pis aller, we must content ourselves here with providing some examples of the more unexpected kind: *contraconcupiscere* 'to have an opposed wish' (R; ← *contra-* 'against' + *concupiscere* 'to wish'), *dispotare* 'to drink twice' (R; *dis-* 'away' + *potare* 'to drink'), *exbaptizare* 'to recall christening' (R; ← *ex-* 'out' + *baptizare* 'to christen'), *interoblivisci* 'to forget in the meantime' (R; ← *inter-* 'between' + *oblivisci* 'to forget'), *introexistere* 'to be inside' (R; ← *intro-* 'in(to)' + *existere* 'to exist'), *semiambire* 'to revolve around half-way' (R; ← *semi-* 'half' + *ambire* 'to revolve around'), etc.

Suffixed deverbal verbs are rarer and are mainly formed by frequentative *-itare* (*erratitare* 'to err again and again' (R) ← *errat-* 'to err', etc.), or desiderative *-urire* (*bibiturire* 'to want to drink' (R) ← *bibit-* 'to drink', etc.). This latter pattern seems to have been a favorite of the humanists, since Hoven's dictionary alone contains more neologisms than there are attested formations in CL.

4.4. Adverbial derivation

New adverbs were formed abundantly in NL, but normally with full respect for the intricacies of Classical patterns, which in part allowed multiple solutions and had

evolved over time: *Epicuriter* 'in the manner of Epicurus' (R; denominal!), *deitus* 'from God' (Ho; ← *De-* 'God'), *concisim* 'concisely' (R; ← *concis-* 'concise', vs. CL *concise*), *guttulatim* 'in dribs and drabs' (R; ← *guttul-* 'small drop'), *promiscuo* 'promiscuously' (Ho; ← *promiscu-* 'promiscuous', vs. CL *promisce* or *promiscue*), etc.

5. Conversion

There is nothing noteworthy with respect to noun-noun conversion expressing feminization: *burggrafia* 'wife of a Burgrave' (R; ← *Burgrafius* 'Burgrave'), etc.

Adjective-noun conversions were very frequent, just like in CL, especially for denoting followers (*Cartesiani*, etc.), inhabitants (*Canadenses*, etc.), or medicines (*vomitorium* 'emetic', etc.). The latter group, which involved ellipsis of *medicamen* or *medicamentum*, was at least initially highly productive in pharmacy and medicine. Another originally elliptical pattern which gained autonomy over time and was boosted by scientific progress was the one designating a field (*res*), art (*ars*) or science (*scientia*): *horologica* 'horology' (R), *aeronautica* (He, 17th c.), *rhinoplastica* 'rhinoplasty' (He, 19th c.), etc. With adjectives of Greek origin, *-ice* (genitive *-ices*) could be used alternatively: *botanica* 'botany' = *botanice*, etc.

The only aspect worth mentioning with respect to adjectival conversion, which is marginal anyway in Latin, are some relational adjectives where the suffix-like ending of the base inhibits explicit derivation: *Calixtinus* 'of Calixtinus' (Ho), *Franciscanus* 'of *Franciscani*, i.e. Fransciscan friars'), etc. This phenomenon, however, existed already in CL.

Verbal conversion, both from nouns and from adjectives, was much more important, but there do not seem to be any innovations with respect to CL, where the semantics of noun-verb conversion was already quite flexible: *adverbiare* 'to use as an adverb' (Ho), *haereticare* 'to declare a heretic' (R), *haereticari* 'to be a heretic' (R), *dialecticari* 'to argue dialectically' (R), *divitare* 'to make rich' (R; ← *divit-* 'rich'), etc.

6. Blending

As a potentially universal technique, blending is also occasionally practiced in NL: *Daemonicanus* (Ho; ← *daemon* 'demon' x *Dominicanus* 'Dominican friar'), *philosophistoricus* 'someone who is at the same time a philosopher (*philosophus*) and an historian (*historicus*)' (Ho). *Lutheropapismus*, already mentioned at the end of section 3.1.1, could also be analysed as a case of blending.

7. References

Biville, Frédérique
1990–95 *Les emprunts du latin au grec*. 2 Vol. Louvain: Peeters.
Blancardus, Stephanus
1683 *Lexicon medicum Graeco-Latinum.* Jena: Müller.

Bruckner, Jakob
1744 *Historia critica philosophiae*. Vol. 4: *Pars altera*. Leipzig: Breitkopf.
Hatcher, Anna Granville
1951 *Modern English Word-Formation and Neo-Latin. A study of the origin of English (French, Italian, German) copulative compounds*. Baltimore, MD: John Hopkins Press.
Helfer, Christian
1982 *Lexicon auxiliare. Ein deutsch-lateinisches Wörterbuch*. Saarbrücken: Societas Latina.
Höfler, Manfred
1972 *Zur Integration der neulateinischen Kompositionsweise im Französischen. Dargestellt an den Bildungen auf* -(o)manie, -(o)mane. Tübingen: Niemeyer.
Hoven, René
1994 *Lexique de la prose latine de la Renaissance*. Leiden: Brill [2nd ed. 2006].
Kircher-Durand, Chantal (ed.)
2002 *Création lexicale. La formation des noms par dérivation suffixale*. Louvain: Peeters.
Leumann, Manu
1977 *Lateinische Laut- und Formenlehre*. München: Beck.
Lindner, Thomas
1996 *Lateinische Komposita. Ein Glossar vornehmlich zum Wortschatz der Dichtersprache*. Innsbruck: Institut für Sprachwissenschaft.
Lindner, Thomas
2002 *Lateinische Komposita. Morphologische, historische und lexikalische Studien*. Innsbruck: Institut für Sprachen und Literaturen.
Linné, Carl von
1785 *Systema plantarum Europae. Tomus III*. Colonia: Piestre and Delamolliere.
Neuhausen, Karl August
2003 Neulatein I. Sprache. In: Manfred Landfester (ed.), *Der neue Pauly. Enzyklopädie der Antike*. Vol. 15/I, 926–931. Stuttgart/Weimar: Metzler.
Rainer, Franz
2008 *Neo-* and Neo-Latin. *Word Structure* 1: 53–64.
Rainer, Franz
2009 Die Integration des lateinischen Kompositionstyps *tauriformis* im Französischen und Italienischen. *Zeitschrift für romanische Philologie* 125: 45–84.
Rainer, Franz
2013 L'intégration des composés latins du type *aurifer* en français. In: Georgette Dal and Dany Amiot (eds.), *Repères en morphologie*. Lille: http://stl.recherche.univ-lille3.fr/textesenligne/Reperes-Morphologie/Rainer-Reperes_morphologie_p182-214.pdf [last access 30 Apr 2015].
Ramminger, Johann
Neulateinische Wortliste. Ein Wörterbuch des Lateinischen von Petrarca bis 1700. http://www.lrz.de/~ramminger/ [last access 1 May 2015].
Selosse, Philippe
2006 La traduction française des "bahuvrīhi" du néo-latin botanique de la Renaissance. *Le français préclassique* 9: 85–118.
Stotz, Peter
2000 *Handbuch zur lateinischen Sprache des Mittelalters*. Vol. 2: *Bedeutungswandel und Wortbildung*. München: Beck.
Weber, Heinrich E., Jaroslav Moravec and Jean-Paul Theurillat
2000 International code of phytosociological nomenclature. *Journal of Vegetation Science* 11(5): 739–768.

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92. Foreign word-formation, language planning and purism

Abstract

Although word-formation by means of non-native linguistic elements is a widespread technique to enrich the vocabulary of languages, it has scarcely been taken into consideration by grammarians and linguists in a systematic way. Thus, many methodological problems have to be discussed in this field, and terminological confusion has to be clarified. The present article sketches differences among national attitudes towards foreign word-formation in the areas of linguistic research, language planning (and engineering), terminology planning, and purism. It is pointed out that foreign word-formation plays an increasingly important role in all types of texts and linguistic varieties.

1. Terminological inconsistencies

In the field of word-formation, linguistic terminology is generally rather unclear. Even the boundaries between well-established terms, such as *derivation* and *composition*, are disputed. Nowadays, with more and more attention being paid to what have hitherto been fringe areas of word-formation, such as contamination, abbreviation or foreign word-formation, new terms have to be defined. Some advocate efficient use of a small number of terms that have a long tradition, while others prefer a more detailed terminology and differentiate, for instance, between *affixes* and *semi-affixes* (*suffixes* and *semi-suffixes*, etc.). German linguists are particularly prolific in creating new terms (*Affix*, *Halb-Affix*, *Eurofix*, etc.); to Schmidt (1987) we owe terms like *Kombinem*, *Komponem*, *Basem*, *Basokomponem*, *Präponem*, *Postponem*, etc. In French grammatical theory we find a multitude of different descriptive terms for bound morphemes such as *géo-* or *-thèque*, which are by no means being used in a consistent way. The *Trésor de la langue française* (1971–94), the most prestigious French lexicographic undertaking, uses different terms for elements that perform the exact same function: *anglo-*: élément préfixal, *germano-*: élément formant, *hispano-*: élément de composition.

Today, some European linguists would call these elements *confixes*. The new term *confix* is an excellent example of the terminological confusion that reigns in the area of word-formation theory, especially when we take into account various national traditions.

Scholars of Romance languages and of German philology would see André Martinet (1979: 20) as the inventor of the term, which he used for elements of "composés […] comme *thermostat* ou *philosophe*". It was taken up by Kocourek (1982) and from there adopted by Schmidt (1987). But while the term *confixe* has not been very fortunate in French linguistics, the correspondent German term *Konfix* enjoys a huge popularity (cf., for instance, various articles in Müller 2009). In the English-speaking world and in Slavic philology, however, the term is used to denote a (native) discontinuous morpheme or sort of circumfix (cf. Baiandina 2010, who describes the results of confixation in Russian as "formations préfixo-suffixales"). In German publications and dictionaries of linguistics we sometimes find *Konfix* translated by *combining form*, but Elsen (2013) has convincingly demonstrated that the two terms are not to be considered as synonyms. To resolve the issue of false friends at least for the present contribution, the decision has been taken to use the term *confix* in its English form, but with the meaning the term has in French and German linguistics.

2. Research traditions

The linguistic approach to scientific research into the processes and products of foreign word-formation in different languages can be linked to the practice of using foreign elements in the common language and integrating them into the vocabulary of the language in question. The English-speaking world has a tradition of treating this practice differently from speakers of German, French or Spanish.

It is widely known that the English language started to enrich its vocabulary in the Middle-English period by integrating loan words from Latin, often through French as an intermediary. This high number of loan words leads to a certain habituation, which would have long-term consequences for English word-formation, an observation made by Henry Bradley as early as the beginning of the 20th century.

> The custom of adopting Latin words at second-hand − through French − paved the way to the extensive introduction of words directly from Latin. This is the reason why the Latin element is so very much larger in the English vocabulary than in that of any other Germanic language […]. Germany and Holland have certainly not been less, but probably much more, devoted to classical scholarship than England has; but their languages were not, in their middle stages, saturated with French loan-words, and consequently they were led to find expression for new ideas by development of their native sources, instead of drawing on the stores of the Latin vocabulary. (Bradley 1904: 93)

When the late Middle-Ages turned into an Early Modern era and English established itself as a language of science and the courts, English-speaking authors started to create more and more new words from Latin roots.

> The greater part of modern English literature has been written by men who were classically educated, and for readers who were presumed to have more or less knowledge of Latin. Probably there are very few of our scholarly writers who are not responsible for the introduction of some new word of Latin derivation. It has come to be felt that the whole Latin vocabulary […] is potentially English, and when a new word is wanted it is often easier, and more in

> accordance with our literary habits, to anglicise a Latin word, or to form a compound from Latin elements, than to invent a native English compound or derivative which will answer the purpose. So much is this the case, that probably the authors of many of these coinages would be greatly surprised to learn that the words had never been used before, or even that they were not to be found in the ordinary dictionaries. (Bradley 1904: 94–95)

Taking this historical development into account, it is not surprising that those who work in the field of English linguistics have always described elements imported from other languages in rather matter-of-fact terms. They are not called *foreign words* or *elements*, but *borrowings* or *loanwords* (or *-suffixes*, etc.) and are seen as having enriched and enlarged the English vocabulary.

In contrast, the German-speaking world pays a great deal of attention to foreign words. This can be seen above all in the specialist dictionaries that are produced to record this section of the vocabulary and that do more to isolate these terms than to integrate them. So it has taken longer for the topic to reach specialised literature and for foreign morphemes to become the object of extensive and systematic analyses (cf. Müller 2005 and article 93 on foreign word-formation in German).

One reason for this could be that in German philology the vocabulary has been traditionally defined as being composed of a) native words, b) loan words and c) words formed from already existing elements. It is tempting to automatically group those three categories as a) and c) (= native) and b) (= foreign).

As can be seen by analysing the structure of a number of word families, word-formation based on foreign elements plays an important role in Romance languages. Frequently, a noun from the basic vocabulary coexists with an adjective of Latin or Greek origin and further derivations are based on the adjective (this is also common for English); just compare the German words *Stadt* / *städtisch* / *Städtebau* (→ *städtebaulich*), etc. with the French *ville* / *urbain* → *urbanisme*, *urbaniste*, *urbanité*; *urbaniser* → *urbanisation*, etc.) and the English word pair *town* / *urban*, etc.

The best publications in the field of Romance lexicography take this dissociation of word families into account by listing references to corresponding foreign elements under the headword from the basic vocabulary (for example under *ville* a reference to *-pole*; cf. *métropole*). The *Grand* (Rey 2001) as well as the *Petit Robert* (Rey-Debove and Rey 1993a), which define themselves as *dictionnaires analogiques*, highlight these elements by printing them in bold letters. In the Spanish *Diccionario de uso* by María Moliner (1998) we find similar entries (e.g., under *bosque* ‘wood’ the explanation: “otras raíces: ‘daso-’, ‘forest-’, ‘nemo-’, ‘selv-’”).

3. Methodical problems

When words formed from non-native lexical elements are to be analysed, there is often a difference between the judgment of speakers without linguistic knowledge, who can only go by their intuition, and the analysis of linguists basing their opinion on a linguistic theory. The main reason for these differences seems to be that theories of word-formation are generally based on the assumption that all processes and mechanisms of a language have to be explained rationally, while “naïve” users of a language simply activate their knowledge about other languages to get to (what they believe is) the meaning of a foreign word. This

is why, for methodological reasons, the scholar of word-formation will often classify a loan word as a simplex, while ordinary native speakers who lack any theoretical knowledge will see it as a complex formation, which they will try to analyse.

Furthermore, even within the academic circles, there are controversies about how foreign words are to be analysed. Müller (2005: 23−24) uses three groups of German nouns that seem very similar at first glance to show three different opinions on what should be covered by word-formation theory (either only a), or a) and b), or a), b) and c)).

a) *Aktivität*, *Relativität*, *Rigorosität*
b) *Laszivität*, *Naivität*, *Neutralität*
c) *Gravität*, *Kapazität*, *Pietät*

The first group has been formed regularly, based on adjectives (*aktiv* → *Aktivität*); the examples of the second group, although the nouns are loan words, correspond to existing adjectives and can be analysed using regular word-formation rules (*naiv* → *Naivität*) while the third group must be considered to constitute opaque words without linguistic motivation, because no adjectives with the same root exist in German.

It is lucky that we are able to exactly reconstruct the etymological origin of the examples above, but this is not normally the case. Almost every single one of the rare case studies that have been conducted show that when neoclassical elements are involved, the hypotheses about the word-formation processes (especially in the field of "internationalisms" or "Europeanisms") stand on rather shaky ground − even those about terms from languages with a well-documented history. It is often impossible to research the history of a term without an exact and extensive knowledge about the history of the culture and the subject the term pertains to, but even with that basis there are many details that need a lot of work or luck to be convincingly proven.

Word-formation theories adopting the perspective of "ordinary speakers" (whose knowledge of foreign languages is supposed to be non-existent) and thus working strictly synchronically within one single language may lead to segmentations that possibly differ from the analyses that might be made by speakers with a background in humanities. To give an example: In the very extensive work on Spanish word-formation by Rainer (1993) we find the prefix *filo-* (*filoespañol*, *filocomunista*) next to the suffix *-ófilo* (*hispanófilo*, *bibliófilo*) (pp. 335−336, 624−625).

There is another problem of word segmentation that relates to both the form of the derivational morpheme and the form of the base, and has been mentioned in several publications, the latest of which is Elsen (2012). The following German verbs and their corresponding nouns − *informieren* / *Information*, *investieren* / *Investition*, *intervenieren* / *Intervention*, *exekutieren* / *Exekution* − show that the analysis of the verbs is easy to perform and is always identical (root + suffix *-ieren*), while we have to decide for the nouns if we want to accept an allomorphy for the suffixes (*-ation*, *-ition*, *-tion*, *-ion*) or opt for inconsistent roots. This shows that the boundary between base morphemes and derivational morphemes is not as clearly defined as could be expected.

4. Language structure and foreign word-formation

The way a language is structured naturally has a key influence on the potential for foreign word-formation. Starting from Bloomfield's universal principle that "[n]ormal roots combine with normal affixes, learned roots with learned affixes" (Bloomfield 1970:

252), Plank (1981: 132) introduced a refined scheme of compatibilities, that has become accepted as a guideline, at least for Indo-European languages (of course there are exceptions, even if they are not intended as a violation of the rules). According to this classification, the following morphemes can be combined:

- native base + native affix
- foreign base + native affix
- foreign base + foreign affix

but it is not possible to combine

- native base + foreign affix

This classification cannot be used, however, for derivations of proper names. An Italian dictionary of neologisms (Adamo and Della Valle 2003) contains terms like *pinocchiomania*, *benignimania* as well as *pottermania*, *tolkienmaniaco* found in newspaper articles published around the turn of the millennium.

Another area where Plank's classification is less and less applicable are formations with initial confixes. For example, many languages nowadays allow a combination of *bio-* with native words (German *Bioabfall* 'biological waste', *Bioladen* 'health food shop', *Bioreiniger* 'biological detergent'; Polish *biomasło* 'organic butter', *biopiwo* 'organic beer', *biosok* 'organic juice'; cf. Scheller-Boltz 2010: 343–344, 354–357).

Especially in languages that do not easily form compounds, derivation is used prolifically and in a variety of ways when forming words. The Romance languages are widely believed to be part of this category, with the explanation given that the Latin language itself was not very flexible when it came to forming compounds (this opinion was contradicted by Lindner 2002).

When looking into derivations occurring in Romance languages, we can observe an interesting phenomenon that has been interpreted by scholars of word-formation in different ways, namely the question of the extent to which point morphemes can be considered as base allomorphs. This is because in many cases an adjective is not derived from the noun, but made its own way into the language from the Latin (*cœur* 'heart' – *cordial* < Latin *cordialis*) or from the corresponding Greek adjective (*cœur* – *cardiaque* < *καρδιακός*), or it was even based on a reconstructed form (this happens frequently with anthroponyms: *Giraudoux* – *giralducien* < **Giralducus*).

Languages do not always choose the same derivational suffixes when integrating foreign words into their vocabulary. This can lead to false friends on the morphological level, as in the following examples: French *catastrophique* (like in the other Romance languages) – German *katastrophal* – English *catastrophic(al)*; French *pédagogie* – German *Pädagogik*, English *pedagogics*; French *despotisme* – German *Despotie*; French *conservateur* – German *konservativ* / English *conservative* etc.

At times, the suffixes themselves turn into false friends semantically: In Italian and Spanish, words with the suffix *-esco* have long been used primarily as relational adjectives (It. *lo stile dantesco* – 'Dante's style'; Sp. *la novela cervantesca* – 'Cervantes' novel'), while most other languages use the suffix only in a qualifying way; e.g., English *-esque*: "forms adjectives with the meaning, having the (artistic, bizarre, picturesque) style of –" (Marchand 1969: 286).

Pseudoanglicisms are a similar phenomenon – they seem to be loan words but actually do not correspond to any existing word of the English language. The German words

Beamer ‘overhead projector’, *Layouter* ‘layout man’, *Looping* ‘aerobatic loop’, etc. would probably not be understood by English native speakers. Compound forms occur particularly frequently and are sometimes shared across a number of European languages. *Longseller* ‘product sold successfully over a long period’, *Oldtimer* ‘veteran car’ and *Autostopp* ‘hitchhiking’ are used in German, Italian, French and Russian (Pöllmann 2011). The word *wellness*, which is probably a German creation, has achieved such a high level of acceptance that authors of English texts are starting to use it. From a strictly synchronic point of view, this is the point at which it stops being a pseudoanglicism.

Languages with a rich tradition of forming compounds can normally integrate foreign words without changing native patterns. In German, foreign elements can be used as the initial or final part of the compound (*Chefkoch* ‘chef, head cook’, *Börsencrash* ‘crash, collapse of the stock market’). In the English language, we find a pattern of word-formation that dates from the time of French rule but is not productive any longer and has the order determinatum − determinant: *brother*/*sister german*, *heir presumptive*, *court martial*, *postmaster general* (Marchand 1969: 81).

All modern Indo-European languages used in the area of technical communication have developed a form of composition which follows the Neo-Latin model and accounts for very interesting cross-language similarities. As technical terminology is generally regarded as highly prestigious in the modern world and has a high tendency to enter everyday language, it cannot be dismissed any more (as frequently occurred in linguistics until at least the 1970s) as epiphenomenon.

The models for this kind of word-formation were integrated into modern languages as loan words in the late middle ages and the early modern age, as for example Greek/Latin *bibliotheca* ‘library’ > French *bibliothèque*, Italian *biblioteca*, German *Bibliothek* (note that there is no corresponding loan word in the English language). One can observe an increased tendency to take apart compounds consisting of confixes and to use them to create new words. A modern example would be the French *biblio-* and *-métrie* (coined by Paul Otlet in 1934), which soon spread all over the Western World (English *bibliometrics* was introduced by Alan Pritchard in 1969).

This type of word-formation was so productive that many languages almost systematically increased their basic vocabulary by creating one new term from the Latin and one from the Greek.

Tab. 92.1: Etymological dissociation of the vocabulary in modern languages

English	*sun*	*solar*	*helio*centric
German	*Sonne*	*solar*	*helio*zentrisch
French	*soleil*	*solaire*	*hélio*centrique
Spanish	*sol*	*solar*	*helio*céntrico

English	*eye*	*ocular*	*ophthalmic*
German	*Auge*	*okular*	*ophthalmisch*
French	*œil*	*oculaire*	*ophtalmique*
Spanish	*ojo*	*ocular*	*oftálmico*

Numerical terms also show this kind of feature: *half* = *semi-*/*hemi-*, *one* = *uni-*/*mono-*, *two* = *bi-*/*di-*, etc. Other examples are the term 'twelve-tone music', which is *dodécaphonie* in French, and the fear of Friday the 13th, which is called *paraskevidekatriaphobia* in English.

In some fields of knowledge (as, for instance, medicine) most European languages have integrated the learned technical terms into common language. In German, however, there is usually − due to purist tendencies in the late 18th and the 19th century − a native alternative to the international term. This solution makes it easier to address different audiences in the proper way: Depending on whether they are addressing colleagues or patients, a doctor can, for example, say or write *Apoplexie* or *Schlaganfall*, *Diabetes* or *Zuckerkrankheit*, *Gastritis* or *Magenschleimhautentzündung*, *Gynäkologe* or *Frauenarzt*, *Dermatologe* or *Hautarzt*, *Neurologe* or *Nervenarzt*. This kind of word-formation on two levels is also used in many kinds of texts for stylistic reasons because it helps to avoid repetition.

In recent times, techniques of foreign word-formation have increasingly been used for humorous constructions, the comical effect often being based on the hybrid form of the resulting words. To this end, neoclassical elements are combined with a colloquial word, or a word from specialist terminology or a modern foreign language (Pöckl 2009).

This kind of word-formation was found in the language of the students of 18th century Germany. One has to notice, however, that examples like the German lexicalised adjective *burschikos* 'pert' (from the German *Bursch* 'young man' and the Greek suffix *-ικός*) have lost their humorous touch over time (this might in time also happen to more recent formations of a similar type, as, for example, *Chefitäten* 'superiors', 'bosses').

Derivations based on patterns that are familiar from technical terminology are especially prolific. One example is medical terminology. Nowadays, most people know that the German medical suffix *-itis* means 'inflammation' and *-ose* means 'chronical or degenerative disease'. The base is made up from the name of the affected body part (e.g., *Hepatitis*, *Phlebitis*). In the word-formation process described above, the medical suffix *-itis* is used to indicate a pathological degree of the "content" indicated in the base: German *Telefonitis* (*Duden* 2009 entry), French *espionite* 'exaggerated fear of spies', *réunionite* 'excess of meetings' (both with entries in the *Petit Robert*, also found with *-nn-*) or Spanish *mieditis* 'excess of anxiety', *cuentitis* 'habit of making lame excuses' (both with entries in María Moliner's *Diccionario* 1998).

5. Language planning and foreign word-formation

The term *language planning* was introduced at the end of the 1950s by the Norwegian Einar Haugen, who today is mainly known for his *matrix of language planning processes* (Haugen 1987: 627). In this matrix, he looks at language planning from two perspectives: *status planning* and *corpus planning*. Today, we usually add a third factor: *prestige planning* (Haarmann 1990).

Status planning means that the authorities need to decide on the functions that the language should carry out in the present and/or the future (language of education, of administration, of the church, etc.).

Corpus planning is needed to ensure that the language can live up to all those functions in practice. For example: When in 1988 the Ladin language (*ladin dolomitan*) was declared an official language of the administration in the area of South Tyrol where it

was spoken, there was no administrative terminology in this language and the local authorities did not possess any forms in Ladin (Lardschneider McLean 1994). In this case, corpus planning had not kept up with status planning and so the long hoped for presidential decree could not be put into practice right away (cf. article 148 on Ladin).

The term *prestige planning* describes all measures designed to improve the acceptance of a certain language in its diverse functions − with members of other language communities spoken in the same area, but also with its own speakers. It is often noted that members of smaller language communities see an increased status of their own language as a burden, because they are now faced with the need to study the rules of their mother tongue, which they had mainly used orally before, in addition to those of the high status language they use at school or in their professional lives. Many speakers of the creole language Papiamentu, spoken on the Lesser Antilles, have huge reservations about its introduction as a language of instruction, as a large part of the population already has to master two or three major languages, namely Dutch, Spanish and English (Eckkrammer 2007). Another issue that is not always seen in a positive light is the use of a language in new domains, which, in theory, means an important increase in prestige. So, while Maltese translators and interpreters are doing their best to import EU-terminology into their language, many inhabitants of the island think that this is changing the nature of the Maltese language and that it would therefore have been better to use English as the official language for the EU (Pace 2011).

Linguists with specialisations other than the languages of the Western world see the language planning problems in Europe and the USA mainly as a cosmetic matter, and refer to the process as *language cultivation*. In contrast, language planning in countries where extensive changes have to be accomplished in a short period of time has been referred to as *language engineering* (Alisyahbana 1976). It is of course true that there are languages of the Far East and Africa for which fundamental decisions have to be made and carried out, but this also applies to a number of small European languages (cf. article 99 on word-formation and purism in Croatian and article 100 on word-formation and language planning in Estonian).

The sociolinguist Heinz Kloss (1978) looked at this discussion from an alternative point of view and coined two important terms which were to become central to the linguistic debate on the topic. Sometimes, speakers (or language planners) are mainly concerned with distancing their language from genetically related (and usually geographically neighboured) languages. The term Kloss uses for this goal is *Abstand* ‘distance’. Most European languages that have only recently been recognised as languages in their own right have this concern: Bosnian, Croatian and Serbian (in relation to each other), Galician (in relation to Spanish), Sardinian, Corsican (in relation to Italian) or Moldavian (in relation to Rumanian). It is of course easier for a linguistic variety to be recognised as a language if obvious differences can be demonstrated. Another dimension is the extension of the language into new domains, an activity that Kloss calls *Ausbau* ‘elaboration, upgrade’. Languages that have not traditionally been used for communication in administration, economy and science need to be fitted for such purposes if they want to be able to compete. This is something that Catalan language planners managed especially well, because they could, on the one hand, take up an old and well-established written language tradition and, on the other, rely on the work of several visionary Catalan sociolinguists from as early as the Franco era. These circumstances allowed Catalonia to take a leading position in terminology science and practical terminology work on the Iberian Peninsula (cf. the reference work by Cabré Castellví 1993).

It is often neglected that one has to carefully distinguish between language planning in a general sense and terminology planning (which fits into the concept of *language engineering*). Language planning is primarily concerned with aspects of everyday language use. One example for a rather successful language planning effort in several western languages is the introduction of a gender-neutral/non-sexist language. Female versions of official as well as occupational titles have been created as part of this process, sometimes with a Latinizing suffix (there are examples that have been in use for a long time like It. *attore − attrice*, Sp. *actor − actriz*, Fr. *acteur − actrice* vs. It. *dottore − dottoressa*, Sp. *doctor − doctora*; Fr. *docteur* has a feminine form *docteure* only in Canada). In German, some titles are used in their Latin form (*Magister − Magistra*), some are created in accordance with native norms (*Doktor − Doktorin*; the Latin form *doctrix* has never been taken into consideration). In cases where symmetry is hardly possible, like with the French term for midwife, *sage-femme*, the traditional solution is to go back to the treasure of antique vocabulary: *obstétricien* (Latin) or *maïeuticien* (both terms allow the regular creation of female forms).

Terminologies for administration, economy, science and technology are nowadays usually elaborated by national or international committees. Most of the numerous standardisation organisations are included in a network of organisations from the same or a similar field and related organisations in other countries. Their umbrella organisation is the *International Organization for Standardization* (ISO) established in Geneva, which maintains its own *Technical Committee* (ISO/TC 37) dealing with the principles of creating new terms or whole terminologies. Even though linguists often criticise the theoretical foundations of this kind of standardisation, they usually accept the outcome. One reason for this acceptance is that ISO limits its work to areas where terminology is standardised along with the objects that are to be named, while terms pertaining to the various fields of the humanities usually are not subject to standardisation.

At the ISO, a proposal for standardisation needs to pass six stages (proposal, preparatory, committee, enquiry, approval, publication stage), which takes a lot of time.

In scientific literature, a list of criteria has been established that is designed to help measure the quality of a term. Some of these criteria, however, contradict each other, so that no term can fulfil all criteria at the same time (cf. discussion in Pöckl 1999: 1495). According to this list, a term should

- be biunique and understandable without context
- have no synonyms
- be as short as possible
- be transparent
- have no connotations
- conform to the system of the language
- be easy to translate (i.e. ideally be a potential internationalism).

These principles, even though they can only ever be fulfilled partially and sometimes are outright unrealistic (especially the first one), foster terminological convergence and further linguistic globalisation. At the same time, the linguistic “raw material” is taken from the classical languages, which among some speech communities is a fairly good prerequisite for their acceptance (even if the terms are still mainly circulated through the English language).

If smaller languages follow this model in the elaboration process (*Ausbau*) of their language, speakers might get the impression that the distance to the dominating languages of culture is dangerously decreasing. The alternative however − to disregard this strategy and create artificial native terms which a large part of the speakers might have difficulty identifying with − can easily lead into isolation.

6. Linguistic purism

6.1. Linguistic purism versus language planning

While both language planning and linguistic purism are activities through which people try to influence the way languages develop, they usually work on opposing goals and can therefore not be seen as two sides of the same coin.

Language planners usually work towards an *Ausbau* of the language, towards an extending of domains and the expressive potential of a language, whereas purists aim at the elimination of elements seen as foreign or, prophylactically, at the protection of their language from any non-native linguistic signs, an aim which basically means a reduction of linguistic resources.

Nearly all languages have seen periods in their history when linguistic purism was especially prevalent. In the 19th century, Europe was a place of deep political nationalism, and this mindset penetrated into national languages in almost all countries. As the idealist world view spread, even words that were formed from native elements but used the patterns of another language were regarded with suspicion, as they were seen as a threat to the "spirit of the language" (French *génie de la langue*). In 19th century Czech, for example, compound nouns were disapproved of as being too "German" (cf. Woldt 2010). Today, linguistic purism often takes place in the context of postcolonial discourse.

Nowadays, however, purists tend to concentrate on words and − less frequently − on sounds or on phraseology, but only very rarely on word-formation. The table of contents in Thomas' (1991) classic work on purism shows that word-formation is not an established category in the discussion about the purity of language. The chapter on morphology at least mentions not only inflectional but also derivational morphology. The examples from Slavic and Germanic languages discussed in the paragraph dedicated to derivation show the concern about maintaining a proper distance − a sufficient *Abstand* − to genetically related languages. "It is instructive that in all these instances the morphemes to be rejected belonged to closely related languages. The separate identity and autonomy of the language were threatened if it followed the word-building elements of a related idiom too closely" (Thomas 1991: 64). On the other hand, there do not seem to be too many serious reservations left about word-formations based on confixes from classical languages. This is even more surprising if we take into account the steady decline of Greek and even Latin in the curricula of Europe's schools.

6.2. A comparison of major languages

If we compare the role of linguistic purism in the major European languages, there is one detail that stands out: the English language, which is by far the most widespread

language in our modern world, has never seen a strong purist movement and still entertains no institution that might be comparable in its importance to the language academies on the continent (Löffler 2002).

The enrichment of the English vocabulary in the Middle English period through complex words from Latin (often transmitted through French) founded a tradition of linguistic openness. This tradition could be shaken neither by the *inkhorn controversy* of the 16th century, which was mainly concerned with arguments about the comprehensibility of the bible translations, nor by the impetus of initiatives for the education of the people in the 19th century (Fill 1988). The history of linguistic purism can be seen as a chronicle of vain efforts, filled with anecdotes such as that of William Barnes, a figurehead of the British purist movement, who is said to have complained about the word *bicycle*, which he wanted to exchange with *wheel-saddle*, when he was already on his deathbed (Fill 1988: 231).

On the other side of the spectrum we find French, which has always been a classic example of unyielding linguistic purism, partly because this purism has been very thoroughly documented from the inside as well as the outside (cf. article 98 on word-formation and purism in French). The most striking characteristic of French purism is the casuistic approach to problems which was founded by Vaugelas and the *Académie Française* in the first half of the 17th century. Vaugelas' way of introducing a rule for every single case led to a permanent insecurity for the speakers (*insécurité linguistique*), which also put a stop to any kind of linguistic creativity. Vaugelas himself, whose ideal was the use of language at court, made the rather authoritative pronouncement that no one, not even the king, was allowed to coin new words. Technical terms were strictly banished from conversation at court and, consequently, did not find their way into the Academy's dictionary. It was only in the first half of the 20th century that the presence of technical terms in everyday language could no longer be held at bay. This linguistic change and the favourable attitude of many speakers towards a modernisation of the language provoked the so-called "crise du français". As a reaction to this crisis, foreign elements were fought by purists with a passion, especially when they originated from the English language and particularly if they looked likely to become productive in the word-formation process. Temporary linguistic fashions such as the suffixes *-ing* (*footing* [as in *jogging*], *caravaning*) or *-rama* prompted long and heated discussions among linguists and non-linguists alike. The latter suffix is of course not based on the Greek ὅραμα, but is an etymologically erroneous segmentation of the word *panorama* in imitation of the English use. The magazine *Défense de la langue française* (the voice of a purist organisation of the same name) expressed its outrage about this formation as follows: "Ce qui est le plus cocasse, c'est que jamais *rama* n'a rien signifié en grec: C'est *horama* qui veut dire spectacle. Mais on ne sait pas le grec et on veut parler grec: de là les monstres tirés d'un *panorama* mal coupé qui sont *cinérama*, et même *drapeaurama*" (cited in Klein-Zirbes 2001: 201) [The most comical is that *rama* has never meant anything in Greek: *horama* means show. But people don't know Greek and want to speak Greek all the same. It leads to monsters such as *cinérama* and *drapeaurama* coming from a *panorama* that was badly cut]. The vehement defender of the French language René Etiemble took the same line in his famous book *Parlez-vous franglais?*, where he listed many well documented examples (*babyrama*, *discorama*, *télérama*, etc.) (Etiemble 1964: 149–150).

When at the beginning of the 1970s it became clear that the modern world with its increase of technical equipment in every home and in the professional world could not be kept free of technical terminology, the French government decided to create a dedicated terminology committee in each ministry which was to create French words to replace the English terms that were already rather commonly used in France. The *Dictionnaire des termes officiels de la langue française* (1994) is the result of two decades of terminological work. Interestingly enough, many of these terms violate the principles of French word-formation once so fiercely defended by works of normative grammar. The dictionary includes compounds whose first elements are the result of an apocope, such as *gravidéviation* (< *gravité*; English *swing by*), *hélistation* (plateforme destinée à recevoir exclusivement des hélicoptères; English *helistop*), *mémomarque* (mesure de la mémorisation d'une marque, English *brand name recall*), which could be seen in a similarily critical light to *-rama*, but also a high number of formations using confixation, reversing the traditional order of morphemes in French compounds: *génothèque*, *géocodage*, *scannoscope*, *hydrocraquage*, *limbosondage*, *hydrodynamique*, *hydrorésistant*, *hémotoxique*. Notwithstanding the fact that the French language had developed predetermining traits as early on as the change from Middle French to Modern French, we have to note that the terminology committees (always supported by the *Académie Française*!) made a considerable contribution to the typological shift from the "Romance" practice of postdetermination to predetermination (which increased international convergence).

This is exactly the process that is in full swing now − it was confirmed as early as 1993 by the editors of the most popular dictionary in their introduction. Under the keyword *mots composés* they diagnosed (and predicted) something that did not come as a surprise for many users of the dictionary, but obviously still needed to be worded in a diplomatic way:

> Les mots savants sont traditionnellement formés avec des radicaux latins (*octogénaires*) ou grecs (*stéthoscope*), parfois hybrides (*monocle*) et autrefois critiqués par les puristes. Aujourd'hui on va plus loin: un très grand nombre de mots mêlent le grec ou le latin au français, et ce modèle est de plus en plus productif (*stratosphère*, *agroalimentaire* […] *pochothèque* […]). Parfois même, on compose de cette façon avec deux mots français ([…] *filoguidé*, *vagotonique*, *riziculture*). Cette composition des mots reste 'savante' dans la mesure où l'ordre des mots est inversé par rapport à la désignation ordinaire ([…] *riziculture*: *culture du riz*; *filoguidé*: *guidé par un fil*). Nous pouvons donc maintenant, comme les anglophones, produire des composés courants de ce type en disposant du système sans inversion […].
>
> On voit comment, partie de règles très contraignantes, la composition des mots s'est libérée au profit de la néologie. Il n'est plus possible aujourd'hui de dire que la morphologie lexicale du français est une entrave à la créativité. Ce point de vue puriste est dépassé par les faits, et il faut accepter qu'une langue vivante change de normes. (Rey-Debove and Rey 1993b: XIV)
>
> [Learned words are traditionally formed with Latin stems (*octogénaire*) or Greek stems (*stéthoscope*), sometimes hybrid (*monocle*) and therefore once criticized by the purists. Nowadays, one goes further: many words mix Greek or Latin with French, and this model is more and more productive (*stratosphère*, *agroalimentaire* […] *pochothèque* […]). Sometimes, one even makes up in this way with two French words ([…] *filoguidé*, *vagotonique*, *riziculture*). This composition of words remains "learned" insofar as word order is reversed in comparison with the ordinary construction ([…] *riziculture*: *culture du riz*; *filoguidé*: *guidé par un fil*). Thus we can now, like English speakers, make this kind of common compositions by using the system without inversion […].

> We see how word-formation has rid itself from the restrictive rules to which it was once submitted. Nowadays, it is not possible anymore to say that French lexical morphology is a hindrance to creativity. This purist point of view is exceeded by the facts and one has to accept that the norms of a modern language change.]

It can therefore be stated that neoclassical confix formations have served as a model for predetermined native French compounds. Lexicographers are normally the first ones to recognise new tendencies (cf. for Italian Adamo 2013).

In Germany, purism began to play an important role in the 17th century (cf. article 97 on word-formation and purism in German). The two most important chroniclers of German linguistic purism, Kirkness (1975) and Schiewe (1988), made it clear that the more perspicacious representatives of the movement between the Baroque period and the 19th century not only strove for reasonable goals, but were also quite successful in achieving them. The bad reputation of German linguistic purism stems, on the one hand, from the exaggerations of fanatics, and, on the other, from a generally negative attitude toward all prescriptive tendencies in language that has prevailed since the end of the Second World War.

In the 17th century, it was hoped that a unified German language would pave the way for the political union of a divided nation. France, having successfully completed its linguistic and politic unification a long time ago, was a good model for this endeavour. At the same time, and perhaps especially because of its success, it was felt to be important to reduce the influence of the French language on German vocabulary and word-formation. For many purists, the most important idea was an improvement in levels of education. They tried to reduce barriers to education by replacing Latin or French terms in school books and in public life (this is the reason why, for example, grammatical terms such as *Substantivum* or *Partizipium* were substituted by their German equivalents *Hauptwort* and *Mittelwort*).

During the Enlightenment, Latin was slowly replaced by German as the language of instruction at universities and the question arose as to whether scientific terminology should be Germanised as well. Joachim Heinrich Campe, whose dictionary of German terms (1801) contains many successful word-formations (*Rechtschreibung* for *Orthographie*, *Fernglas* for *Teleskop*), advocated a more radical solution than Christian Thomasius and Christian Wolff before him and Carl Gustav Jochmann after him. Jochmann argued against a total elimination of the neoclassical vocabulary by explaining that those terms constituted arbitrary signs which not only facilitated international communication but also made the integration of new scientific findings into the language easier (Schiewe 1988: 81). A modern example for this problem is the creation of the German word *Atomspaltung* ‘atomic fission’, which was created after the first successful act of atom-splitting and would not have been allowed because of its semantic *contradictio in adiecto* if such strict rules had been obeyed.

To be able to judge these endeavours to achieve a purely German language of science fairly, one has to take into account that in the 19th century French was seen as the language of politics and diplomacy, English as the language of trade and German as the language of humanities and science.

Generally it can be said that since the end of the 19th century no productive initiatives have been launched by the German purist movement. The *Allgemeiner Deutscher Sprachverein* [General Association for the German Language], founded in 1885 and

initially moderate, provoked its own end by becoming more and more hostile towards foreign words, a tendency which irritated the National Socialists, who liked to use foreign words for their manipulations and therefore banned the association in 1940 (cf. Steinhauer 2002: 38). German linguistic purism, having definitely lost its credibility after 1945, therefore had to give way to more or less scientifically based language cultivation.

6.3. Purism in less widely used languages

In general, there is greater approval for the pursuance of purist activities in defence of "smaller" languages, which are often in competition with major ones, than of official languages that are not in danger of extinction and have a large number of speakers. This fact is the result of sociolinguistic research and today's generally positive attitude towards linguistic diversity and multilingualism.

But a deeper look into the topic shows that there are practically no universal rules to be detected, because every language is situated in an individual context: it has a specific history, a specific politico-linguistic situation, and it belongs to a specific genetic family and typological group.

It is difficult to draw comparisons between a small language with a good sociodemographic position and a tradition of self-sufficiency, such as the Icelandic language, and a language like Latvian, which has had a turbulent history and only became the language of an independent state in 1991 (except for a short period of Latvian political independence between the two world wars). A relatively short time later (May 1, 2004), Latvia became a member of the European Union and had to translate huge amounts of text with an extremely large number of terms which, before, had only been available in Russian or − because of the different economic system − not at all (this is explained in more detail in Landrø 2008: 383–474). Latvia's solution to these linguistic challenges was a network of state commissions that was about as changeable and intricate as the French system.

Looking at discussions of language purism in diverse small languages, one can get the impression that the use of neoclassical elements (if they even occur in significant numbers) is rather widely accepted. The main problem for such languages is normally the elimination of or protection from elements coming from the (formerly) dominant language (like Russian for Baltic languages), the overpowering (co-)official language (like Castilian Spanish for Catalan, Galician and Basque; French for Occitan, Corsican, Breton) or the global lingua franca, English.

7. Conclusion

If we want to name common tendencies for different languages in the area of foreign word-formation, it can be said that the suspicion towards hybrid formations of all kinds, which once were strongly criticised, has diminished to the same extent as the occurrence of such formations has increased.

During the last century, there has certainly been a growing number of foreign languages that are a source for elements used in foreign word-formation. This helps to mask the fact that the frequency of use has probably increased in all types of text.

A higher level of acceptance of such word-formations is also due to the fact that linguistic creativity (especially in the advertising business and in the press) is highly regarded today and even expected by readers and consumers of media in general.

And finally there is the rapid technical and scientific progress in which the majority of the population wishes to participate. This social development leads to the dissemination of new words following well-established patterns of foreign word-formation and to the adoption of "modular" elements such as confixes. Today, both categories are entered in general dictionaries by lexicographers, making them in the eyes of the speakers an official part of the vocabulary.

8. References

Adamo, Giovanni
2013 Neologismi italiani degli anni Duemila: Tipi, fenomeni e tendenze più recenti rilevati nella stampa quotidiana. In: Joachim Born and Wolfgang Pöckl (eds.), *„Wenn die Ränder ins Zentrum drängen …". Außenseiter der Wortbildung(sforschung)*, 85–99. Berlin: Frank & Timme.

Adamo, Giovanni and Valeria Della Valle
2003 *Neologismi quotidiani. Un dizionario a cavallo del millennio*. Firenze: Olschki.

Alisyahbana, S. Takdir
1976 *Language Planning for Modernization. The Case of Indonesian and Malaysian*. The Hague: Mouton.

Baiandina, Natalia
2010 *La confixation en russe moderne*. http://www.e-sorbonne.fr/sites/www.e-sorbonne.fr/files/theses/these-BAIANDINA.pdf [last access 4 Dec 2014].

Bloomfield, Leonard
1970 The structure of learned words. In: Charles F. Hockett (ed.), *A Leonard Bloomfield Anthology*, 252–256. Bloomington: Indiana University Press. [First published 1933].

Bradley, Henry
1904 *The Making of English*. London/New York: Macmillan.

Cabré Castellví, M. Teresa
1993 *La terminologia. La teoria, els mètodes, les aplicacions*. Barcelona: Editorial Empúries.

Campe, Joachim Heinrich
1801 *Wörterbuch zur Erklärung und Verdeutschung der unserer Sprache aufgedrungenen fremden Ausdrücke*. Braunschweig: In der Schulbuchhandlung.

Dictionnaire des termes officiels de la langue française
1994 Paris: Journal Officiel de la République Française.

Duden
2009 *Duden. Die deutsche Rechtschreibung*. 25th ed. Mannheim: Bibliographisches Institut.

Eckkrammer, Eva Martha
2007 Papiamentu, cultural resistance, and socio-cultural challenges: The ABC islands in a nutshell. *Journal of Caribbean Literatures* 5(1): 73–93.

Elsen, Hilke
2013 Zwischen Simplex und komplexem Wort – eine holistische Sichtweise. In: Joachim Born and Wolfgang Pöckl (eds.), *„Wenn die Ränder ins Zentrum drängen …". Außenseiter der Wortbildung(sforschung)*, 25–42. Berlin: Frank & Timme.

Etiemble, René
1964 *Parlez-vous franglais?* Paris: Gallimard.
Fill, Alwin
1988 Purism and word formation: Word substitution in 16th and 19th century English. In: Manfred Markus (ed.), *Historical English*, 231–244. Innsbruck: Institut für Sprachwissenschaft.
Haarmann, Harald
1990 Sprache und Prestige: Sprachtheoretische Parameter zur Formalisierung einer zentralen Beziehung. *Zeitschrift für romanische Philologie* 106: 1–21.
Haugen, Einar
1987 Language planning. In: Ulrich Ammon, Norbert Dittmar and Klaus J. Mattheier (eds.), *Sociolinguistics. An International Handbook of the Science of Language and Society.* Vol. 1, 626–637. Berlin/New York: de Gruyter.
Kirkness, Alan
1975 *Zur Sprachreinigung im Deutschen 1789–1871. Eine historische Dokumentation*. Vol. 2. Tübingen: Narr.
Klein-Zirbes, Anja
2001 *Die* Défense de la langue française *als Zeugnis des französischen Sprachpurismus*. Frankfurt/M.: Lang.
Kloss, Heinz
1978 *Die Entwicklung neuer germanischer Kultursprachen seit 1800*. 2nd ed. Düsseldorf: Schwann.
Kocourek, Rostislav
1982 *La langue française de la technique et de la science*. Wiesbaden: Brandstetter.
Landrø, Judith
2008 *Purismus als Strategie europäischer Sprachpolitik. Eine Untersuchung am Beispiel der "Kleinsprachen" Sardisch, Isländisch, Lettisch*. Hamburg: Kovač.
Lardschneider McLean, Margareth
1994 Die ladinische Verwaltungssprache zwischen Italienisch und Deutsch. In: Bernhard Pöll (ed.), *Fachsprache − kontrastiv*, 9–26. Bonn: Romanistischer Verlag.
Lindner, Thomas
2002 *Lateinische Komposita. Morphologische, historische und lexikalische Studien*. Innsbruck: Institut für Sprachwissenschaft.
Löffler, Marion
2002 Britisches Englisch. In: Nina Janich and Albrecht Greule (eds.), *Sprachkulturen in Europa*, 19–26. Tübingen: Narr.
Marchand, Hans
1969 *The Categories and Types of Present-Day English Word-Formation. A Synchronic-Diachronic Approach*. 2nd ed. München: Beck.
Martinet, André
1979 *Grammaire fonctionnelle du français*. Paris: Crédif/Didier.
Moliner, María
1998 *Diccionario de uso del español*. 2nd ed. Madrid: Gredos.
Müller, Peter O.
2005 Einführung. In: Peter O. Müller (ed.), *Fremdwortbildung. Theorie und Praxis in Geschichte und Gegenwart*, 11–45. Frankfurt/M.: Lang.
Müller, Peter O. (ed.)
2009 *Studien zur Fremdwortbildung*. Hildesheim: Olms.
Pace, Lara
2011 The adventure of Maltese: From a spoken vernacular to one of the official working languages of the European Union. *Moderne Sprachen* 55(2): 109–121.
Plank, Frans
1981 *Morphologische (Ir-)Regularitäten. Aspekte der Wortstrukturtheorie*. Tübingen: Narr.

Pöckl, Wolfgang
1999 Die französischen Fachsprachen im 20. Jahrhundert und ihre Erforschung: Eine Übersicht. In: Lothar Hoffmann, Hartwig Kalverkämper and Herbert Ernst Wiegand (eds.), *Languages for Special Purposes. An International Handbook of Special-Language and Terminology Research*. Vol. 2, 1491–1503. Berlin/New York: de Gruyter.

Pöckl, Wolfgang
2009 Unser tägliches Griechisch: Scherzbildungen mit Morphemen griechischer Herkunft in germanischen und romanischen Sprachen. In: Konstantina Glykioti and Doris Kinne (eds.), *Griechisch – Ελληνικά – Grekiska. Festschrift für Hans Ruge*, 185–192. Frankfurt/M.: Lang.

Pöllmann, Magdalena
2011 *Handy*, *castingshow* und *public viewing*: Pseudoanglizismen als Internationalismen – ein Vergleich in vier Sprachen. Ph.D. dissertation, Universität Innsbruck.

Rainer, Franz
1993 *Spanische Wortbildungslehre*. Tübingen: Niemeyer.

Rey, Alain (dir.)
2001 *Le Grand Robert de la langue française. Dictionnaire alphabétique et analogique de la langue française*. Paris: Dictionnaires Le Robert.

Rey-Debove, Josette and Alain Rey
1993a *Le nouveau Petit Robert. Dictionnaire alphabétique et analogique de la langue française*. Paris: Dictionnaires Le Robert.

Rey-Debove, Josette and Alain Rey
1993b Préface du *Nouveau Petit Robert*. In: Josette Rey-Debove and Alain Rey, *Le nouveau Petit Robert. Dictionnaire alphabétique et analogique de la langue française*, IX–XIX. Paris: Dictionnaires Le Robert.

Scheller-Boltz, Dennis
2010 *Präponeme und Präponemkonstrukte im Russischen, Polnischen und Deutschen. Zur Terminologie, Morphologie und Semantik einer Wortbildungseinheit und eines produktiven Kompositionstypus*. Frankfurt/M.: Lang.

Schiewe, Jürgen
1988 *Sprachpurismus und Emanzipation. Joachim Heinrich Campes Verdeutschungsprogramm als Voraussetzung für Gesellschaftsveränderungen*. Hildesheim: Olms.

Schmidt, Günter Dietrich
1987 Das Kombinem: Vorschläge zur Erweiterung des Begriffsfeldes und der Terminologie für den Bereich der Lehnwortbildung. In: Gabriele Hoppe, Alan Kirkness, Elisabeth Link, Isolde Nortmeyer, Wolfgang Rettig and Günter Dietrich Schmidt (eds.), *Deutsche Lehnwortbildung. Beiträge zur Erforschung der Wortbildung mit entlehnten WB-Einheiten im Deutschen*, 37–52. Tübingen: Narr.

Steinhauer, Anja
2002 Deutsch. In: Nina Janich and Albrecht Greule (eds.), *Sprachkulturen in Europa*, 36–44. Tübingen: Narr.

Thomas, George
1991 *Linguistic Purism*. London/New York: Longman.

Trésor de la langue française
1971–1994 Publié sous la direction de Paul Imbs. Paris: Editions du CNRS. Le TLF informatisé: http://atilf.atilf.fr [last access 4 Dec 2014].

Woldt, Claudia
2010 *Sprache als Wert – Werte in der Sprache. Untersuchungen zu Bewertungen von Sprache allgemein und Komposita im Besonderen in der tschechischen Sprachgeschichte*. München: Sagner.

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IX. Foreign word-formation, language planning and purism II: Special cases

93. Foreign word-formation in German

Abstract

The article first offers an overview of research on foreign word-formation in German. Subsequently, the main features of the historical development of foreign word-formation are traced. A presentation of foreign word-formation follows, which offers an overview of the inventory of central elements of foreign word-formation and addresses problems of categorization and analysis. Subsequently, possibilities of and restrictions on the combinability of exogenous and indigenous morphemes in the context of hybrid formations are presented.

1. Current state of research

The investigation of foreign word-formation in the framework of research on German word-formation was for a long time virtually ignored. A glance in traditional handbooks such as Wilmanns (1899) or Henzen (1965) confirms this finding. There, foreign elements of word-formation are at best marginally attended to. Thus, Hans Marchand can as late as 1955 rightly ascertain: "Books on German word-formation systematically omit treatment of foreign-coined words, obviously on the assumption that only morphemes of Germanic origin have a legitimate claim to a place in word-formation" (Marchand 1955 [1974: 182]). This great degree of abstinence with respect to the topic of research "foreign word-formation", which subsisted until the 60s of the 20th century, turns out to be the result of a scholarly tabu: This developed in the context of a purism with respect to foreign words (see article 97 on word-formation and purism in German), which had developed in German speaking areas since the 17th century and which in lexicography led to a great dichotomy between the documentation of the native vocabulary and the foreign vocabulary. Accordingly, tendencies toward a stigmatization of products of foreign word-formation can also be found in descriptions of word-formation. Thus, for example, Wilmanns declares with respect to verbs with *-ieren* that they "wie Schlingenkraut den ebnen Boden unserer Rede [überziehen]" [cover the even ground of our speech like strangleweed], and sees it as "Missbrauch" [abuse], "die Endung *-ieren* auch deut-

schen Stämmen anzuhängen" [to hang the ending -*ieren* on German stems as well] (Wilmanns 1899: 114).

Foreign word-formation was only subjected to greater scrutiny during the transition from a more diachronic research tradition oriented towards individual means of word-formation, to a theory of word-formation focused on the contemporary language, which puts the systematic interaction of the means of word-formation in the center of attention and also emphasizes the function of non-native elements of word-formation. Added to this was the criticism of the traditional (purist) concept of foreign word, which Peter von Polenz (1967) combined with the requirement to systematically include productive, non-native elements of word-formation in German research on word-formation and to describe this as "Lehnwortbildung" [loan word-formation]. Within the framework of the research project on "Lehnwortbildung" (cf. Hoppe et al. 1987) carried out since 1985 at the Institut für deutsche Sprache (Mannheim), which was proposed by Polenz, the non-native word-formation of German became its own field of research. Even though the actual goal of this project, the compilation of a lexicon of German loan word-formation, could not be realized − only individual studies on foreign morphemes were published (overview in Müller 2005b and 2009b, most recently the papers by Hoppe 2009, 2010) − this research project forms an important base for further investigation. An overview of the state of research up to the year 2005 is provided in Müller (2005b). This volume (Müller 2005a) traces the history of German research on foreign word-formation on the basis of 31 reprinted articles. Among more recently published contributions are the dissertations by Banholzer (2005) on -(*i*)*tät*, by Eins (2008) on the concept of confix, by Seiffert (2008) on word-formation with numerals, by Heimbecher (2008) on reanalysis and integration of foreign elements as well as by Scheller-Boltz (2010) on the use of "preponemes" (i.e. initial confixes which cannot occur as bases) in German, Russian and Polish. The "Studien zur Fremdwortbildung" [Studies on foreign word-formation] (Müller 2009a) also contain important contributions on problems of morphological analysis (Seiffert 2009), on the concept of confix (Donalies 2009; Eins 2009; Michel 2009; Ronneberger-Sibold 2009), on the analysis of individual confixes such as *phob* (Trunkwalter 2009), *man* (Feine 2009), *drom* (Fließ 2009), *krat* and *naut* (Heimbecher 2009), on the linking element -*s*- in N+N compounds with exogenous determinant (Nübling and Szczepaniak 2009) as well as hybrid formations (Munske 2009). Eisenberg (2012) discusses foreign word-formation in the context of his description of foreign words in German. While research long concentrated on such non-native elements of word-formation as represent the Greco-Latin heritage and are designated as "neoclassical" (Lüdeling, Schmid and Kiokpasoglou 2002) or "Euro-Latin" (Kirkness 1996), there has recently been an increasing interest in "Euro-Anglicisms" (Scott 2007; Barz 2008; Feine 2008; Dargiewicz 2013 on hybrid formations), of which the *Anglizismen-Wörterbuch* (AWB 1993−96) documents a selection.

Even though research on the long neglected area of foreign word-formation is currently making progress, the publications available to date don't yet offer a full and complete picture. There still remain larger differences of opinion regarding the analysis of products of foreign word-formation and the concept of confix (cf. section 3.2), and for numerous bound foreign morphemes − Schmidt (1987: 48) unites these under the general term "Kombineme" [combinemes] (= affixes and confixes) − knowledge about the path by which they were borrowed, about processes of morphological-semantic development, combinatory behavior, radius of use and productivity is still too limited. German is

also lacking a specialized dictionary of foreign word-formation as an important research instrument, since even relevant works such as the *Deutsches Fremdwörterbuch* (DFWB 1913−88, [2]DFWB 1995 ff.) or the *Anglizismen-Wörterbuch* (AWB 1993−96) offer only a selection of lemmatized borrowed combinemes (affixes, confixes) (cf. Müller forthc.). Thus no broad-based comparison with corresponding works in other languages is currently possible (cf. Cottez 1988 for French; Stein 2007 for English) and a "paneuropäische lexikographische Dokumentation eurolateinischer Wortbildungseinheiten" [pan-European lexicographical documentation of Euro-Latin elements of word-formation] (Kirkness 1996: 272) remains a long-term goal.

2. Historical development of foreign word-formation

The historical development of German foreign word-formation mirrors the history of German language contact. For a long time, this was characterized by the dominant influence of Latin as early as the early Middle ages, as well as of French since the 12th century. Other languages such as Italian or Spanish have, since the early modern period, been far less influential and English played virtually no role before the 18th/19th century.

A prerequisite for foreign word-formation is borrowing. Borrowings into German predominantly involve Greco-Latin vocabulary, which partly come from Greek or Latin, but partly also from other European languages (French, Italian and English dominate as contact languages). Also involved are products of foreign word-formation from living foreign languages, which likewise demonstrate the far-reaching Greco-Latin foundation of the languages of Europe. The origin of these words cannot always be unambiguously clarified. Since reciprocal influence and polygenesis can be expected as well, these are then frequently internationalisms with "euromorphemes". Borrowing occurs partly without formal adaptation (Lat. *luxus* > *Luxus* 'luxury'), partly with shortening (Lat. *elementum* > *Element* 'element') or with further morphological integration. From the very beginning, borrowing takes place partly with integrational suffixes, which guarantee adaptation to the morphological system of German (cf. Lat. *canin-us* > Old High German *kanin-isc* 'dog-like; lit. doggish'; Lat. *congel-are* > Early New High German *congelieren* 'to freeze; lit. congeal'). As long as such lexemes are morphologically unmotivated within German, they must be viewed as simplex forms. This is, for example, valid for the noun *Stupidität* 'stupidity', which was borrowed from French *stupidité* in the 17th century, and which only secondarily, after the borrowing of the adjective *stupid* 'stupid' in the 18th century, can be grasped from a synchronic perspective as a morphologically-semantically motivated product of word-formation with the suffix *-ität*, albeit − diachronically seen − not as German foreign word-formation, since the formation was not coined in German.

The formal assimilation of loan words, which makes it difficult to discern their origin (cf. Lat. *musica* > *Musik* 'music' with final word stress following Fr. *musique*, Fr. *polémique* > *Polemik* 'polemic'), builds at the same time the foundation for their further use in the context of German foreign word-formation. This is because the products of German foreign word-formation − diachronically understood as those products of word-formation which were created in German from borrowed morphemes − are a consequence of the borrowing of (complex) words, the structural shapes of which could pro-

vide a model for the coinage of further lexemes (neologisms). At the same time, two different operations underlie foreign word-formation: the activation of foreign morphemes (lexemes, prefixes, suffixes) as well as morphematization, a process by which foreign lexeme segments acquire the status of morphemes. In the first case, foreign lexemes are made usable for new formations on the basis of foreign words (cf. Lat. *luxus* > *Luxus* 'luxury' → *Luxusartikel* 'luxury article', *Luxusauto* 'luxury car', *Luxusweibchen* 'spoiled woman; lit. luxury female dim.') or foreign affixes (prefixes such as Lat. *re-*: *resozialisieren* 'to resocialize' or suffixes such as Lat. *-ismus*: *Darwinismus* 'Darwinism'). Whereby morphemes that can occur as words in the contact language often only occur as bound forms in German (cf. Lat. *post* 'after, behind': *postmodern* 'postmodern'). In the second case, the use of foreign word material as a source of elements for word-formation results from a reanalysis. In the process, those components of foreign words generally undergo morphematization which in the language of origin (contact language) do not constitute affixes, but which also have not been adopted as foreign words in German. To the class of corresponding morphemes, which are usually designated as "confixes" in German research on word-formation (cf. section 3.2) and only occur as bound forms, belong, for example, *meter* (in Gr. *métron* 'measure': *Barometer* 'barometer', *Gasometer* 'gasometer', *Thermometer* 'thermometer') and *therm* (in Gr. *thermós* 'warm': *Thermostat* 'thermostat', *thermophil* 'thermophilic', *isotherm* 'isothermal').

The history of German foreign word-formation has not yet been adequately investigated. Thus only for individual foreign morphemes have there been detailed analyses regarding which loan words serve as the model for new formations (key words such as *Anti-Christ* 'Antichrist', *Post-Moderne* 'post-modernism' or *Ex-Jesuit* 'ex-Jesuit'), which productivity quota and which morphological, semantic or pragmatic developmental processes are exhibited. Furthermore, it must be considered that in many cases the delimitation between borrowing and German foreign word-formation proves to be difficult, and indeed is not always possible, not even on the basis of detailed analyses. Even today, the most important resource can be considered to be the *Deutsches Fremdwörterbuch* (DFWB, ^{2}DFWB) and in particular the index volume (with indexes based on regular and reverse spelling, chronology, and origin). Admittedly though, only preliminary conclusions can be based on this work because of its age, since the volumes 1 and 2 (A–P, 1913–1942) clearly fall quantitatively and qualitatively behind the section of the alphabet R–Z, compiled in 1977–1988. Additionally, it must be considered that such hybrid formations (cf. section 4) are also counted as "deutsche Fremdwortbildungen" [products of German foreign word-formation], in which native morphemes drive word-formation, which therefore do not belong to the subject area of foreign word-formation (e.g., *ent-nerven* 'to enervate', *Reformier-ung* 'reformation'). Example analyses can be found in several descriptions, for example, in Polenz (1999–2013) or Eisenberg (2012).

Altogether, it appears that only since the early modern period has the phenomenon "deutsche Fremdwortbildung" [German foreign word-formation] led to sustained changes in German word-formation, even though the beginnings lie as early as the early Middle Ages with the foreign suffix *-āri* (< Lat. *-ārius*, *-ārium*, New High German *-er*: *Lehr-er* 'teacher'; cf. Müller 2011) and are continued in the 12th/13th century with further suffixes of French or Latin origin (*-ier-*: NHG *add-ier-en* 'to add up sth.', *-ier*: NHG *Bank-ier* 'banker', *-(er)īe*: NHG *Lauf-erei* 'running around', *-lei*: NHG *vieler-lei* 'all kinds of') (cf. the papers by Öhmann in Müller 2005a). Only between 1500 and 1800 did the deciding change occur, which transformed German word-formation in the long

term (see article 109 on historical word-formation in German and article 134 on German). While only sporadic instances of foreign suffixes can be found during the beginning of the modern period, their occurrence increases rapidly during the following three centuries and around 1800 they are used on a par with native affixes. Humanism, the courtly culture of the Baroque, and the Enlightenment bring about an extensive attachment to Greco-Latin (Neo-Latin) or French bases of borrowing and thus create requirements for their further effects in the framework of German foreign word-formation. Thus, according to an evaluation by Polenz (1999−2013 Vol. 2: 102), "until 1350 only 18, until 1500 a further 68, until 1600 a further 216, until 1700 a further 266, until 1800 a further 596 products of German loan word-formation" (English translation) are recorded in the chronological index of the *Deutsches Fremdwörterbuch* (DFWB), and "the 'foreign words' first attested in the 19th and 20th centuries are for the most part loan word-formations with the index marking 'G'" (English translation). While the use of the verbal suffix *-ier-* as well as nominal suffixes for the designation of persons (e.g., *-ist*, *-ant*) is already on the increase in the 17th century, only since about 1700 does an initial rise in the use of adjectival suffixes ensue (*-abel*/*-ibel*, *-al*/*-ell*, *-ant*/*-ent*, *-är*/*-ar*, *-iv*, *-ös*/*-os*). At the end of the 18th century first outlines of foreign word-formation with confixes appear (e.g., *graph*, *log*, *meter*, *phil*, *therm*) as well as a gradual increase in foreign prefixes of Euro-Latin origin (cf. Polenz 1999−2013 Vol. 3: 396): *anti-*, *de(s)-*, *ex-*, *extra-*, *hyper-*, *in-*, *inter-*, *para-*, *post-*, *prä-*, *pseudo-*, *re-*, *sub-*, *trans-*, *ultra-*. In the 19th and 20th century further confixes (*audio*, *bio*, *geo*, *öko*, *phon*, *tele*, *thek*, *video*, etc.) and prefixes (for example the augmentative prefixes *mega-* und *super-*) are added (examples for the use of all these combinemes in section 3.2). "Chronologically […], the majority of the Latin borrowings are situated in the 16th/17th century, the French borrowings in the 17th/18th century, the products of German loan word-formation in the late 18th, 19th and 20th century" (Polenz 1999−2013 Vol. 2: 104; English translation). This finding reflects as well the emancipation of German as a language of science, together with the gradual replacement of the humanistic Neo-Latin as a scholarly lingua franca.

The relationship between borrowing and German foreign word-formation is quantitatively and qualitatively developed to very different degrees and also associated with considerable divergence in their chronological order, so that generalizations are hardly possible. The examples *-thek* and *ex-* shall make this clear (cf. Hoppe 1999, 2000):

The confix *-thek* can initially be attested in the 16th century in Greco-Latin loan words (1511 *Bibliothek* 'library', 1548 *Pinakothek* 'pinacotheca'). Only much later − beginning in the early 19th century − was it sporadically used in products of German word-formation: 1816 *Glyptothek* 'glyptotheque', 1905 *Kartothek* 'place of a collection of index cards', 1927 *Pianothek* 'place of a collection of pianos'. But as a productive foreign morpheme, *-thek* has only recently been documented − since the 60s of the 20th century − the numerous new formations diverging with regard to currency, connotation and radius of use, e.g., 1960 *Filmothek* 'film library', *Phonothek* 'place of a collection of phonograph records', 1975 *Hobbythek* 'place of a collection related to a hobby', 1981 *Spielothek* 'place of a selection of games', 1988 *Quatschothek* 'place where one can chat', *Salatothek* 'place of a selection of salads', 1994 *Puffothek* 'brothel', *Schnapsothek* 'place where one can drink/buy schnaps'.

Another picture arises, on the other hand, with the foreign prefix *ex-* 'former': Initially, it is only sporadically documented in Neo-Latin loan words (e.g., 1746 *Excalvinist* 'ex-Calvinist'), but then very soon undergoes, originating with the key word *Exjesuit* 'ex-Jesu-

it' (coined in 1773 in the context of the dissolution of the Jesuit order) an increase in productivity and is documented, still in the 18th century, in many new formations with exogenous or native bases (*Exgeneral* 'ex-general', *Exminister* 'ex-minister', *Exnonne* 'ex-nun', *Exschuster* 'ex-shoemaker', *Exfrau* 'ex-wife', *Exnachtwächter* 'ex-night-watchman', etc.). This productivity has been preserved until today, when *ex-* is used more and more as a free morpheme (e.g., *mein Ex* = 'ex-boy, ex-husband, ex-lover, ex-partner, etc.').

In contrast to words formed with *-thek* and *ex-*, which make clear the productivity of both combinemes, there are also patterns of word-formation, which display no or only very limited activity in the context of word-formation in German. They are components of loan words which can be morphologically-semantically motivated in German via related words and are thus analyzable. Among these are quite a few of the prefixes and suffixes which have been assembled in section 3.2 such as *-and* (*Habilitand* 'person qualifying as a university lecturer') or *-esse* (*Baronesse* 'baroness'), which can usually only be attested in a few formations and probably also for this reason remain inactive with respect to word-formation. With regard to the quantitative proportion of both groups of morphemes, the observation by Munske (2009: 247) is doubtlessly accurate, that the "Zahl der auch im Deutschen motivierten Entlehnungen (im Sinne analysierbarer Muster) […] um ein Vielfaches höher [ist] als die der produktiv im Deutschen entstandenen Lehnwortbildungen" [number of borrowed forms which are also motivated in German (in the sense of an analyzable pattern) [...] is many times higher than the number of loan words formed productively in German]. I will return to this in the context of the synopsis of bound foreign morphemes in German (cf. section 3.2).

3. Principles of foreign word-formation

Even if native and non-native word-formation in German partially bear isonomic traits, interact and, in the framework of hybrid word-formation, converge (cf. section 4), foreign word-formation exhibits multiple particularities which lead to questions and problems. These concern the domain of study, the terminology, the status and the categorization of non-native elements of word-formation as well as the potential for modeling foreign word-formation and types of word-formation. I will elaborate on these aspects in the following.

3.1. Synchronic vs. diachronic perspective

The domain of foreign word-formation encompasses all morphemes which are not assimilated in terms of form, that is which show phonological, graphematic or morphological foreign features and in particular are combined with foreign morphemes. As this does not apply to borrowed, but assimilated, word-formation morphemes such as *-er* (< Lat. *-ārius*, e.g., *Lehr-er* 'teacher') or *erz-* (< Late Latin *archi-*, e.g., *Erz-Bischof* 'archbishop'), they also do not belong to the domain of research on foreign word-formation oriented towards the contemporary language. This speaks against the term *Lehnwortbildung* [loan word-formation] which is used alongside *Fremdwortbildung* [foreign word-formation], and whose proponents − in my opinion without foundation − reject the term

Fremdwortbildung [foreign word-formation] as a "stigmatisierenden Begriff" [stigmatizing term] through which "aus Gründen der fachsprachlichen Plausibilität eine unselige puristische Tradition wiederbelebt [wird]" [for reasons of plausibility of technical vocabulary an unfortunate puristic tradition [is] revived] (Munske 2009: 251).

If one considers foreign word-formation under synchronic or diachronic aspects, then differences in the domain of research on foreign word-formation ensue, which will be illustrated on the basis of formations with the foreign suffix *-(i)tät* in (1):

(1) *-(i)tät* in loan words and products of foreign word-formation
   a. *Rigorosität* 'rigorousness; lit. rigorosity', *Synonymität* 'synonymy', *Vertikalität* 'verticality'
   b. *Laszivität* 'lascivity', *Naivität* 'naivety', *Neutralität* 'neutrality'
   c. *Gravität* 'gravity', *Kapazität* 'capacity', *Pietät* 'piety'

According to the *Deutsches Fremdwörterbuch* (DFWB 7: 416–418) this series of examples involves lexemes, some of which were formed in German (a), but some of which were also borrowed from other languages (b, c). From a diachronic perspective, only those lexemes which were formed in German belong to the domain of German foreign word-formation, that is *Rigorosität* 'rigorousness; lit. rigorosity' (← *rigoros* 'rigorous'), *Synonymität* 'synonymy' (← *synonym* 'synonymous') and *Vertikalität* 'verticality' (← *vertikal* 'vertical'). The crucial opposition is then: borrowed vs. formed in German. From a synchronic perspective, on the other hand, the domain of German research on foreign word-formation has been interpreted more broadly, as in principle all formations are taken into account which can be motivated at a particular time by word-formation bases, that is also those which were borrowed but are analyzable within the word-formation system of German. This is the case for the lexemes in (b), which were borrowed from Latin/French, but are also motivated in German through the (equally borrowed) adjectives (*lasziv* 'lascive', *naiv* 'naive', *neutral* 'neutral') and are thus classifiable as derivatives with *-ität* (quality nouns). In the descriptions of German (foreign) word-formation, the use of foreign affixes and confixes has been documented precisely on the basis of examples from this group (and not from group a). This is in contrast to borrowings such as the lexemes in (c), as they are not motivated by a word-formation base in German, but only in the language of origin, Latin (*Gravität* 'gravity' < *gravitas* ← *gravis*, *Kapazität* 'capacity' < *capacitas* ← *capax*, *Pietät* 'piety' < *pietas* ← *pius*). A result of this generally practiced procedure is that, for example, the inventory of foreign affixes in the contemporary language includes on the one hand those affixes which occur in analyzable formations but are not productive, and on the other hand those which are productively used in German foreign word-formation and thus serve as models (cf. section 3.2). The determining factor is thus not the diachronic criterion "formed in German" (and not borrowed), but rather the synchronic criterion of morphosemantic motivation (relation to a base, morpheme status of a word's components).

3.2. Elements and types of foreign word-formation

Besides foreign morphemes which can occur as words such as the noun *Ruin* 'ruin' or the adjective *real* 'real', prefixes (*a-sozial* 'asocial', *ir-real* 'irreal') and suffixes (*Marx-*

ist 'Marxist', *verbal-isier-en* 'to verbalize'), research in German word-formation has introduced the morpheme category "confix" (Konfix), the definition of which, and its differentiation from affixes are, however, associated with an ensemble of problems. This term was introduced by Schmidt (1987) following a French model, who uses it to differentiate bound morphemes such as *therm-*/*-therm* (e.g., *therm-al* 'thermal', *iso-therm* 'isothermal') from affixes according to the criteria "ability to function as a base" (Basisfähigkeit) or "ability to function as an element of a compound" (Kompositionsgliedfähigkeit). This is, however, in many cases not so easily possible, which is the reason why a good number of publications dealing with the concept of "confix" have in the meantime become available (cf. Eins 2008 as well as corresponding papers in Müller 2005a or 2009a). As a general rule, the criteria "being bound" (Gebundenheit) (in contrast to free morphemes) as well as "lexical-conceptual meaning" (lexikalisch-begriffliche Bedeutung) (in contrast to affixes) are seen as being particularly relevant, but precisely the semantic differentiation from affixes poses problems, so that elements of word-formation such as *auto-* (e.g., *Auto-krat* 'autocrat'), *mikro-* (e.g., *Mikro-skop* 'microscope'), *mono-* (e.g., *mono-gam* 'monogamous'), *neo-* (e.g., *neo-klassisch* 'neoclassical') and *pseudo-* (e.g., *Pseudo-Kritik* 'pseudocriticism') are sometimes classified as prefixes, sometimes as confixes (i.e. bound bases). And *-itis*, which is customarily classified as a "suffix" (e.g., *Gastr-itis* 'gastritis', *Hepa-t-itis* 'hepatitis'), would be interpretable as a "confix" because of its meaning 'inflammation'.

A valid criterion of differentiation between "affix" and "confix" can initially be the fact that only confixes can occur both initially (= preconfix) and terminally (= postconfix), which however only applies to relatively few confixes such as *therm* (see above), *phob* (e.g., *Phob-ie* 'phobia', *hydr-o-phob* 'hydrophobic') or *phil* (e.g., *Phil-o-soph* 'philosopher', *biblio-phil* 'bibliophile' − here *-o* functions as a fixed preconfix component). The criterion "ability to function as a base" also leads − at least according to a broad concept of confix (see below) − to a morpheme category "confix" (e.g., *psych-isch* 'psychic, psychological', *Polem-ik* 'polemic'), but this feature also does not apply to all "confixes". A further distributional criterion which presents itself is the ability to combine with other confixes, which as a rule is not possible for prefixes. It therefore follows that bound pre-elements, which are combined with a postconfix, are not prefixes, but rather preconfixes (e.g., *Mikro-skop* 'microscope'). Thus also *mega-* would be a confix, as it combines with other confixes as in *Mega-lith* ('megalith, a large block of stone from prehistoric tombs'). In words such as *mega-cool* ('especially cool') or *mega-schlau* ('especially clever'), *mega-* is used augmentatively however, and thus fulfills a typical function of prefixes, but in which it doesn't combine with postconfixes, so that in this case one could postulate two foreign morphemes for semantic as well as distributional reasons. At least at the edges, the concept of confix remains blurry, which is true in the same way as for its English counterpart "combining form" (cf. Kastovsky 2009).

Differentiating between postconfixes and suffixes is, on the other hand, not distributionally possible. One could accordingly dispense with the category "confix" and consistently classify elements such as *-ik* (e.g., *Therm-ik* 'thermal') and *-phil* (e.g., *therm-o-phil* 'thermophilic') as suffixes (terminal bound morphemes) in the context of a foreign word-formation type "affix combination" (Affixkombination) (cf. Müller 2000: 127−129) − understood as a "combination of bound morphemes". (Also the distinction between preconfixes and prefixes would be unnecessary if one were to dispense with semantic or distributional criteria; *thermophil* 'thermophilic' would thus be a prefix-

suffix combination.) If one wishes to retain a differentiation between both morpheme categories, then only semantics remain as a deciding criterion: If a terminal bound foreign morpheme displays functions typical of affixes (cf. section 3.2), then it is a "suffix", otherwise a "postconfix". Accordingly, elements such as *-itis* (medical: 'inflammation', e.g., *Hepatitis* 'hepatitis, inflammation of the liver'; non-medical: 'exaggerated behavior perceived as sick', e.g., *Computeritis* 'computeritis, exaggerated usage of a computer, perceived as sick') or *-ose* ('illness'; e.g., *Psychose* 'psychosis, mental illness') would however also be confixes, despite their etymology as Greek suffixes.

A further problem with respect to the morpheme status of exogenous elements of word-formation stems from the fact that some bound foreign morphemes are increasingly used as free morphemes (lexemes). Such a − perhaps temporary − process of degrammaticalization, which is not characteristic for the native domain (here only processes of grammaticalization (lexeme > affix) usually occur), has already been lexicographically documented for morphemes such as *video*, *top*, *super*, *ex* and *mini*. In other cases, such as *neo* or *pseudo*, at least occasionalisms show that the morpheme status of foreign elements of word-formation is not a stable dimension and synchronic findings in foreign word-formation represent snapshots even more than in the native domain. Whether the product of degrammaticalization is a change in the morpheme category (combineme > lexeme) or whether a morpheme split results from this (combineme vs. lexeme), can only be decided semantically, and yet here differences between free and bound usage often become apparent. Two examples of this: *top* is used as a prefix in augmentative function ('very, to a high degree'; e.g., *top-aktuell* 'very current', *top-modisch* 'very fashionable'), but as an adjective it has in contrast the meaning 'first class, outstanding' (e.g., *Diese Leistung ist top* 'This performance is outstanding'). And *extra* also exhibits different meanings: As a prefix it performs a spatial function in technical terminology ('outside'; e.g., *extra-zellulär* 'extracellular', *extra-mental* 'extramental'), in general language it is augmentative ('very, exceedingly'; e.g., *extra-kommunikativ* 'very communicative'), but is also used as a polysemous lexeme: 'separated from others', e.g., *etwas extra einpacken* 'to pack something separately'; 'more than the usual', e.g., *Dies kostet extra* 'This costs more than usual'; 'only for a particular purpose', e.g., *Dies ist extra für dich* 'This is only for you'.

On the basis of the above categorization of foreign morphemes, the following models of composition (2) and derivation (3) result for foreign word-formation in German:

(2) Composition
  a. lexeme (stem) + lexeme (stem): *Luxus-Suite* 'luxury suite'
  b. confix + lexeme (stem): *Bio-Gas* 'biogas'
  c. lexeme (stem) + confix: *Kosm-o-naut* 'cosmonaut'
  d. confix + confix: *therm-o-phil* 'thermophilic'

(3) Derivation
  a. prefix + lexeme (stem): *in-aktiv* 'inactive'
  b. lexeme (stem) + suffix: *Hotel-ier* 'hotel keeper'
  c. confix + suffix: *Polem-ik* 'polemic'

According to this combinatorial analysis, German foreign word-formation exhibits both confix compounds (2b−d) and confix derivatives (3c). In the case of a narrower concept

of confix, such as the one supported by Eisenberg (2012: 310), there are in contrast only confix compounds as the "confix" is seen here as a "morphologische Einheit, die als Erstglied eines Kompositums mit Fugenelement oder als Zweitglied eines Kompositums auftritt und kein Stamm ist" [morphological element which appears as the first member of a compound with a linking element or as the second member of a compound and is not a stem]. On this view, neither *therm* (e.g., *therm-isch* 'thermic') nor *graph* (e.g., *Graph-ie* 'spelling') and *naut* (e.g., *naut-isch* 'nautical') are confixes, since these elements are seen as bound stems based on their combinability with affixes. Accordingly, confixes are also ruled out in the case of anglicisms, since no linking elements occur here. Correspondingly, the combineme *allround* (e.g., *Allround-Talent* 'all-round talent', *Allround-Manager* 'all-round manager') is also a "bound stem".

In the following I will present, on the basis of a broad concept of confix, an overview of the central combinemes of foreign word-formation in contemporary German. The affixes are grouped by word class, the confixes according to their status as initial and/or terminal elements of word-formation. There is, as stated, no consensus regarding the classification of particular morphemes as "affix" or "confix". For the following classification, the criteria named above are decisive. Only combinemes are taken into consideration which have a certain relevance for the general language, whereby here as well the demarcation is difficult.

(4) Foreign prefixes

a. Nouns:
a-/*an-* (*Amoral* 'amorality'), *anti-* (*Antithese* 'antithesis'), *bi-* (*Bimetall* 'bimetallic strip'), *de-*/*des-* (*Desinteresse* 'disinterest'), *dis-* (*Disharmonie* 'disharmony'), *ex-* (*Ex-Monarch* 'ex-monarch'), *hyper-* (*Hyperproduktion* 'hyperproduction'), *inter-* (*Interdisziplin* 'interdiscipline'), *ko-*/*kol-*/*kom-*/*kon-*/*kor-* (*Koautor* 'co-author'), *mega-* (*Mega-Hit* 'mega-hit'), *meta-* (*Metakommunikation* 'meta-communication'), *non-* (*Nonexistenz* 'nonexistence'), *pan-* (*Paneuropa* 'Pan-Europe'), *post-* (*Postmaterialismus* 'post-materialism'), *prä-* (*Präexistenz* 'pre-existence'), *pro-* (*Prorektor* 'prorector'), *re-* (*Reimport* 'reimport'), *semi-* (*Semifinale* 'semifinal'), *sub-* (*Subkultur* 'subculture'), *super-* (*Supertalent* 'supertalent'), *supra-* (*Suprasystem* 'suprasystem'), *top-* (*Topagent* 'top agent'), *trans-* (*Transaktion* 'transaction'), *ultra-* (*Ultrafaschist* 'ultra-fascist'), *vize-* (*Vizepräsident* 'vice president')

b. Adjectives:
a-/*an-* (*asozial* 'asocial'), *anti-* (*antiliberal* 'anti-liberal'), *bi-* (*bilateral* 'bilateral'), *de-*/*des-* (*dezentral* 'de-central'), *dis-* (*disproportional* 'disproportional'), *ex-* (*exradikal* 'ex-radical'), *extra-* (*extrakommunikativ* 'extra-communicative'), *hyper-* (*hypernervös* 'hyper-nervous'), *in-*/*il-*/*im-*/*ir-* (*irregulär* 'irregular'), *inter-* (*interaktiv* 'interactive'), *intra-* (*intrafamiliär* 'intrafamilial'), *mega-* (*megacool* 'mega-cool'), *meta-* (*metakommunikativ* 'meta-communicative'), *non-* (*nonverbal* 'non-verbal'), *pan-* (*panarabisch* 'pan-Arabic'), *post-* (*postpubertär* 'post-pubescent'), *prä-* (*pränatal* 'prenatal'), *pro-* (*proenglisch* 'pro-English'), *semi-* (*semiprofessionell* 'semi-professional'), *sub-* (*subnormal* 'subnormal'), *super-* (*superintelligent* 'superintelligent'), *supra-* (*supranational* 'supranational'), *top-* (*topaktuell* 'cutting-edge'), *trans-* (*transsexuell* 'transsexual'), *ultra-* (*ultrakonservativ* 'ultraconservative')

c. Verbs:
de-/*des-* (*deaktivieren* ‘to deactivate’), *dis-* (*disqualifizieren* ‘to disqualify’), *in-* (*inaktivieren* ‘to inactivate’), *ko-*/*kol-*/*kom-*/*kon-*/*kor-* (*koexistieren* ‘to coexist’), *re-* (*resozialisieren* ‘to resocialize’)

As this overview shows, numerous prefixes are used across word classes for the modification of base nouns, adjectives and verbs. The degree of productivity of foreign prefixes is − and this is also true for suffixes and confixes (see below) − not always easy to determine. It can stay stable over a longer period of time, but can also be subject to fluctuations which are reflected in the proliferation or decline of neologisms and in extreme cases can lead to inactivity. Other foreign morphemes have, in contrast, never developed an appreciable productivity. They are analyzable within the framework of products of foreign word-formation which are motivated in German, but do not serve as models for new formations. The at times very specific links to particular text types which can be observed in foreign morphemes with a preference for texts from (special) branches of science or for journalistic texts must also be taken into consideration. A disparate picture results for foreign prefixes which range from elements which are inactive or only sporadically used for new formations to significantly productive elements. These include the prefixes *anti-*, *ex-*, *mega-*, *super-* and *top-*, whereby word-class-specific differences result as in the case of *ex-*, which in the meaning ‘former’ of the general language is only productive with nouns, and not with adjectives.

From a semantic perspective, the foreign prefixes can essentially be assigned to the categories ‘negation’ (*a-*/*an-*, *de-*/*des-*, *dis-*, *in-*/*il-*/*im-*/*ir-*, *non-*), ‘augmentation’ (*extra-*, *hyper-*, *mega-*, *super-*, *top-*, *ultra-*), ‘temporal relation’ (*ex-*, *post-*, *prä-*, *re-*), ‘spatial relation’ (*meta-*, *extra-*, *inter-*, *intra-*, *pan-*, *sub-*, *supra-*, *trans-*) and ‘quantification’ (*bi-*). Beside these groups we find the prefixes *anti-* (‘against’), *ko-*/*kol-*/*kom-*/*kon-*/*kor-* (‘together with’), *pro-* (‘instead of’), *semi-* (‘half’) und *vize-* (‘deputy’). Not only quantitatively, but also qualitatively, differences thus ensue compared to the small group of native prefixes, in which augmentation plays a much lesser role − this function being filled primarily by prefixoids (e.g., *mords-*: *Mordshunger* ‘very great hunger; lit. murder-hunger’; *sau-*: *saukalt* ‘very cold; lit. sow-cold’; *tod-*: *todtraurig* ‘very sad; lit. death-sad’) − and functions of spatio-temporal modification are lacking.

(5) Foreign suffixes
a. Nouns:
-ade (*Robinsonade* ‘robinsonade’), *-age* (*Kartonage* ‘cardboard packaging’), *-aille* (*Journaille* ‘journalists who conduct smear campaigns with their articles’), *-alien* (*Archivalien* ‘documents in/from an archive’), *-ament*/*-ement* (*Bombardement* ‘bombardment’), *-and*/*-end* (*Doktorand* ‘doctoral candidate’), *-aner* (*Afrikaner* ‘African’), *-ant*/*-ent* (*Fabrikant* ‘factory owner’), *-anz*/*-enz* (*Dominanz* ‘dominance’), *-ar*/*-är* (*Revolutuionär* ‘revolutionary’), *-arium* (*Planetarium* ‘planetarium’), *-at* (*Konsulat* ‘consulate’), *-ee* (*Resümee* ‘résumé’), *-ese*/*-iese* (*Vietnamese* ‘Vietnamese’), *-ess* (*Stewardess* ‘stewardess’), *-esse* (*Delikatesse* ‘delicacy’), *-ette* (*Operette* ‘operetta’), *-erie* (*Galanterie* ‘gallantry’), *-eur* (*Boykotteur* ‘boycotter’), *-euse* (*Friseuse* ‘hair dresser’), *-ie* (*Aristokratie* ‘aristocracy’), *-ine* (*Blondine* ‘blonde’), *-ing* (*Coaching* ‘coaching’), *-ier* (*Bankier* ‘banker’), *-iere* (*Garderobiere* ‘(female) dresser’), *-ik*

(*Problematik* ‘difficulty’), *-iker* (*Alkoholiker* ‘alcoholic’), *-ion* (*Diskretion* ‘discretion’), *-ismus* (*Aktivismus* ‘activism’), *-ist* (*Terrorist* ‘terrorist’), *-it* (*Israelit* ‘Isrealite’), *-ität* (*Banalität* ‘banality’), *-ness* (*Fairness* ‘fairness’), *-or* (*Illustrator* ‘illustrator’), *-ur* (*Architektur* ‘architecture’)

b. Adjectives:
-abel/*-ibel* (*diskutabel* ‘debateable; lit. discussable’), *-al*/*-ell* (*regional* ‘regional’), *-ant*/*-ent* (*charmant* ‘charming’), *-ar*/*är* (*atomar* ‘atomic’), *-esk* (*clownesk* ‘clownish’), *-iv* (*instinktiv* ‘instinctive’), *-oid* (*faschistoid* ‘fascistic’), *-os*/*-ös* (*medikamentös* ‘medicinal’)

c. Verbs:
-ier- (*asphaltieren* ‘to asphalt’), *-ifizier-* (*personifizieren* ‘to personify’), *-isier-* (*stabilisieren* ‘to stabilize’)

Just as in the area of native word-formation, it is also the case in foreign word-formation in German that the proportion of nominal suffixes is considerably higher than of adjectival and especially verbal suffixes. Unlike prefixes, suffixes are not only combinable with lexemes, but also with confixes, which can lead to problems and varying solutions with respect to assumed motivating bases (cf. section 3.3). From a semantic perspective, as in the case of prefixes, monosemic suffixes such as *-oid* (‘similar’, e.g., *faschistoid* ‘fascistic’, *snoboid* ‘snobby’, *grippoid* ‘influenzal’, i.e. ‘behavior or illness, which is similar to a fascist/snob or influenza’) must be differentiated from polysemous suffixes. Thus derivatives with *-or* designate both agent nouns (e.g., *Illustrator* ‘somebody who illustrates something’) as well as instrument nouns (e.g., *Isolator* ‘substance, with which one insulates something’).

The word-formation meanings of foreign suffixes generally correspond to those of the native domain. Among the nouns we find personal nouns (e.g., agent nouns such as *Kompon-ist* ‘composer’), place nouns (e.g., *Konsul-at* ‘consulate’), status nouns (e.g., *Monarch-ie* ‘monarchy’), quality nouns (e.g., *Naiv-ität* ‘naivety’), action nouns (e.g., *Mass-age* ‘massage’), result nouns (e.g., *Filtr-at* ‘filtrate’), instrument nouns (e.g., *Gener-ator* ‘generator’), gender marking (e.g., *Baron-esse* ‘baroness’), collective nouns (e.g., *Archiv-alien* ‘documents in/from an archive’) and diminutive nouns (e.g., *Oper-ette* ‘operetta’). In the domain of adjectives, relational adjectives motivated by base nouns (e.g., *region-al* ‘concerning the region’), comparative adjectives (e.g., *clown-esk* ‘like a clown’) and ornative adjectives (e.g., *charm-ant* ‘furnished with charm’) dominate as well as derivatives motivated by verbs with a passive-modal meaning (e.g., *diskut-abel* ‘can be discussed’). The verbal suffixes *-ier-*, *-ifizier-* and *-isier-*, to some extent seen as allomorphs, prove to be decidedly polysemous. Among the formations motivated by nouns, we find especially ornative verbs (e.g., *asphalt-ier-en* ‘to asphalt’), factitive verbs (e.g., *pulver-isier-en* ‘to turn into powder’) and agentive verbs (e.g., *spion-ier-en* ‘to work as a spy’). Derivatives motivated by adjectives are usually factitive verbs (e.g., *legal-isier-en* ‘to make legal’). When verbs are formed from confixes, then *-ier-*, *-ifizier-* and *-isier-* are, as verbalizers, inherent parts of such formations (e.g., *stud-ier-en* ‘to study’, *elektr-ifizier-en* ‘to electrify’, *polit-isier-en* ‘to politicize’). The suffix *-ier-*, though, functions not only as a derivational suffix, but has also been used since the 12th century as an integrational suffix, which incorporates foreign verbs into the German inflectional system. Not all of these verbs constitute products of word-formation which

are motivated in German (e.g., *edieren* ‘to edit, to publish books’ < Lat. *edere* ‘to put forth’ ← *ex* + *dare*).

Great differences in productivity result in the case of foreign suffixes as well, and here too it is the case that the majority of suffixes are not significantly productive. The inventory of lexemes is to some extent very limited, and apart from borrowed, but synchronically motivated formations, hardly any neologisms are documented. Among the exceptions are the nominal suffixes *-ismus*, *-ist*, *-ität* und *-ion*, adjectival *-abel* as well as verbal *-isier-*.

Most affixes belong to the Greco-Latin heritage of German, which in some cases was transmitted via relay languages (French, Italian, English). Only a few morphemes of word-formation are of French (*-ade*, *-age*, *-ee*, *-esse*, *-ette*, *-eur*, *-euse*, *-ier*), Italian (*-esk*) or English (*-ing*, *-ness*) origin.

(6) Confixes

a. Preconfixes/Postconfixes:
drom-/-drom (*Dromomanie* ‘pathological urge to wander’, *Hippodrom* ‘riding arena’), *graph-/-graph* (*Telegraph* ‘telegraph’, *Graphologe* ‘graphologist’), *log-/-log* (*Logik* ‘logic’, *Monolog* ‘monologue’), *man-/-man* (*Manie* ‘mania’, *monoman* ‘monomaniacal’), *naut-/-naut* (*Nautik* ‘nautics’, *Astronaut* ‘astronaut’), *phil-/-phil* (*Philosoph* ‘philosopher’, *bibliophil* ‘bibliophile’), *phob-/-phob* (*Phobie* ‘phobia’, *anglophob* ‘anglophobe’), *phon-/-phon* (*Phonograph* ‘device for recording tones’, *anglophon* ‘anglophone’), *therm-/-therm* (*thermophil* ‘thermophilic’, *isotherm* ‘having the same temperature’)

b. Preconfixes:
aero- (*Aeronaut* ‘aeronaut’), *agrar-* (*Agrarhandel* ‘agricultural trade’), *allround-* (*Allround-Talent* ‘all-round talent’), *astro-* (*Astronaut* ‘astronaut’), *audio-* (*Audiometer* ‘device for measuring the ability to hear’), *auto-* (*autonom* ‘autonomous’), *bio-* (*Biotop* ‘habitat characterized by particular plants/animals’), *biblio-* (*Bibliothek* ‘library’), *chem-* (*Chemie* ‘chemistry’), *cyber-* (*Cybernaut* ‘someone who is currently in an illusory world created by computers’), *elektr-* (*elektrifizieren* ‘to electrify’), *euro-* (*Eurokrat* ‘politician who advocates for the interests of the European Union’), *fanat-* (*Fanatiker* ‘fanatic’), *gastr*(*o*)- (*Gastronom* ‘gastronomer’), *geo-* (*Geologe* ‘geologist’), *hetero-* (*heterogen* ‘heterogeneous’), *homo-* (*homogen* ‘homogeneous’), *hydr*(*o*)- (*Hydroskop* ‘water meter’), *makro-* (*Makroglossie* ‘enlargement of the tongue’), *mechan-* (*Mechanismus* ‘mechanism’), *mikro-* (*Mikroskop* ‘microscope’), *mono-* (*monogam* ‘monogamous’), *mont-* (*Monteur* ‘fitter, mechanic, electrician’), *multi-* (*Multitalent* ‘versatile person’), *neo-* (*Neologismus* ‘neologism’), *öko-* (*Ökonom* ‘economist’), *optim-* (*Optimist* ‘optimist’), *polem-* (*Polemik* ‘polemic’), *polit-* (*Politik* ‘politics’), *poly-* (*polygam* ‘polygamous’), *pseudo-* (*Pseudonym* ‘pseudonym’), *psych*(*o*)- (*Psychopath* ‘psychopath’), *retro-* (*retrophil* ‘having a preference for things from a bygone era’), *tele-* (*Telekratie* ‘excessive influence of television’), *techn-* (*Technik* ‘technology’)

c. Postconfixes:
-a/*-oholic* (*Smartaholic* ‘person who is addicted to the Smart Car’), *-gate* (*Kofigate* ‘political scandal relating to the UN General Secretary *Kofi* Annan’), *-gen* (*telegen* ‘telegenic’), *-ical* (*Jazzical* ‘an effective work (perfor-

mance, film) which targets the emotions, for which *Jazz* is characteristic'), *-itis* (*Computeritis* 'excessive use of a *computer*, experienced as pathological'), *-krat* (*Demokrat* 'democrat'), *-kratie* (*Expertokratie* 'rule by experts'), *-lekt* (*Soziolekt* 'sociolect'), *-mat* (*Automat* 'machine'), *-meter* (*Thermometer* 'thermometer'), *-nom* (*autonom* 'autonomous'), *-nym* (*Pseudonym* 'pseudonym'), *-ose* (*Psychose* 'mental illness'), *-skop* (*Teleskop* 'telescope'), *-thek* (*Videothek* 'video store')

Unlike affixes, in the case of confixes it is impossible to even come close to reaching completeness. The compilation in (6) offers a selection of confixes, oriented towards descriptions of word-formation, to which a certain importance in the general language is attached. The overview is subdivided according to distributional criteria: Confixes of group (a) occur both initially (bound to the right) as preconfixes − bound to lexemes, postconfixes or suffixes − as well as terminally (bound to the left) as postconfixes, combined with lexemes or preconfixes. Confixes of group (b) occur only initially (preconfixes), those of group (c) only terminally (postconfixes). The overview shows that preconfixes clearly predominate with respect to postconfixes, which is perhaps related to their wider radius of action (also combining with affixes). The parallels with respect to native word-formation are also greater, in which the combination "base + suffix" is indeed encountered, but to which the terminal usage of bound base morphemes is alien. While preconfixes are in many cases applicable across word classes (e.g., *Thermometer* 'thermometer', *thermal* 'thermal'; *Bibliothek* 'library', *bibliophil* 'bibliophile'), only a few postconfixes are documented which constitute nouns and adjectives (e.g., *Pseudonym* 'pseudonym', *antonym* 'antonymous').

Confixes behave differently with respect to their ability to combine with other items: Some can only function as members of compounds and combine with other confixes or lexemes (e.g., *astro-*: *Astronaut* 'astronaut', *Astro-Show* 'astro show'), others can function as members of compounds and as bases (e.g., *techn-*: *Technik* 'technology', *Technokrat* 'technocrat') and some can only function as bases, and thus combine neither with confixes nor with lexemes, but rather only with suffixes (e.g., *polem-*: *polemisch* 'polemical', *Polemik* 'polemic', *polemisieren* 'to polemicize', *Polemiker* 'polemicist'). The analysis of this last group as products of word-formation via confixes is however controversial, as here both a stem-based as well as a word-based analysis is possible, so that confixes must not necessarily be assumed as bases, but rather lexemes can also be seen as bases of word-formation (e.g., *Polemik*: 'polemical attitude/position'). I will elaborate on this aspect in section 3.3.

In the case of confixes as well, which in their majority embody the Greco-Latin heritage of German, a difference in productivity can be attested: Here as well, the spectrum ranges from elements which in the context of the German system of foreign word-formation are not or only marginally used for new formations, despite their status as morphemes, to productive elements such as *bio-*, *cyber-*, *euro-*, *öko-*, *retro-* or *tele-*, which are in vogue and in some cases have developed a considerable degree of activity in word-formation. This is not (yet) the case for the more recent anglicisms *-a*/*-oholic*, *allround-*, *-gate* and *-ical*, but nevertheless these confixes are used for neologisms. Several are distilled out of source words (E. *alcoholic*, *watergate*, *musical*) as splinters (just as in the case of *cyber-* from *cybernetics* 'cybernetics'). They function as confixes be-

cause they exhibit an individual meaning which is atypical of affixes (in article 21 on blending, section 6.4, however, they are classified as "secreted affixes").

Besides compounding and derivation, foreign word-formation also has a share in further types of word-formation. These include conversion (e.g., *Google* → *googlen*/*googeln* 'to google', *E-Mail* 'email' → *emailen* 'to email', *scannen* 'to scan' → *das Scannen* 'the scanning'), backformation (e.g., *Powerwalking* 'power walking' → *powerwalken* 'to power walk', *Windsurfing* 'wind surfing' → *windsurfen* 'to windsurf'), blending (e.g., *Magalog* 'journal which is a mix of magazine and catalogue', *Bistrorant* 'public house which is a mix of bistro and restaurant'), formation of short forms (e.g., *Homo* 'homo' ← *Homosexueller* 'homosexual', *inlinen* 'to inline' ← *inlineskaten* 'to inline skate') and word-creation. The focus of this is in the domain of such (international) company and brand names which do not have parts that can be (clearly) etymologically analyzed, so that they must be classified as morphologically unmotivated (e.g., *Elmex* 'toothpaste', *Biskin* 'frying oil', *Exxon* 'mineral oil'; see also article 124 on word-formation and brand names).

3.3. Problems of morphological analysis

Beside the inconsistent classification of confixes and the demarcation between confixes and affixes, which has an effect on the classification of products of foreign word-formation (cf. section 3.2), the morphological analysis of products of foreign word-formation also causes problems which lead to different approaches towards solutions. This is the case for the question of motivation via bases of word-formation as well as the demarcation of the components of word-formation "base lexeme/confix", "linking element" and "affix/confix".

A first point concerns the relation to a base of products of foreign word-formation of the combination "confix + suffix" (e.g., *Polem-ik* 'polemic'). Here, there are two suggested solutions, depending on whether one prefers a stem-based or a word-based solution (cf. Plank 1981: 204 ff.: sign-based vs. lexeme-based analysis). This concerns relations to a base which are synchronically motivated, not etymological or having to do with a source language. Here as examples are formations containing the preconfix *polem-*:

(7) stem-based vs. word-based analysis
   a. *Polem-ik* 'polemic', *Polem-iker* 'polemicist', *polem-isch* 'polemical', *polem-isier-en* 'to polemicize'
   b. *Polemik* 'polemic' ↔ *polemisch* 'polemical', *polemisieren* 'to polemicize' ← *polemisch* 'polemical', *Polemiker* 'polemicist' ← *polemisch*/*Polemik*/*polemisieren*

The analysis in (7a) leads to a stem-based word-formation analysis with the confix *polem-* as motivating base. It has the advantage that a search can be omitted for source words which do not always lead to unambiguous classification (see below). On the other hand, problems of semantic motivation arise, as the meaning of *polem-* is synchronically rather vague, the more so as the Greek source meaning of *pólemos* 'war, battle, struggle' is no longer clear. This problem does not arise with a word-based analysis. Thus *Polemik*

'polemic' can be paraphrased by *polemisch* 'polemical' (*polemische Haltung* 'polemical stance') and *polemisieren* 'to polemicize' by *polemisch* 'polemical' (*sich polemisch äußern* 'to express oneself polemically'). The word-based analysis though does not lead to base morphemes, but rather to (bimorphemic) base lexemes. While in German native word-formation suffixation takes place as suffix addition (e.g., model X → X*heit*: *neu* 'new' → *Neuheit* 'novelty'), suffix substitution follows for foreign word-formation (e.g., model X*isch* → X*ik*: *polemisch* → *Polemik*; model X*isch* → X*isier*: *polemisch* → *polemisieren*). However, multiple strands of motivating relations regularly follow, which leads to the assumption of double or multiple motivation or rather to reversible (i.e. invertible) relations of motivation. Thus *Polemiker* 'polemicist' can be motivated both by *polemisch* 'polemical' ('somebody who acts polemically') as well as by *Polemik* 'polemic' ('somebody who tends to polemics') and *polemisieren* 'to polemicize' ('somebody who polemicizes'), and the motivational relation between *polemisch* 'polemical' ('in the manner of a polemic') and *Polemik* 'polemic' ('polemical stance') is reversible.

A further problem of the morphological analysis of products of foreign word-formation concerns the demarcation of the morphological components "base lexeme/confix", "linking element" and "affix/confix". Cf. in (8) the examples *Chinese* 'Chinese', *Afrikaner* 'African', *Demonstration* 'demonstration' and *Filmothek* 'film library' (individual attestations and further examples in Müller 2005b: 32 f.; Seiffert 2009: 24–38):

(8) Structural analyses of products of foreign word-formation
   a. *Chin-es-e* vs. *Chines-e* vs. *Chin-ese* 'Chinese'
   b. *Afrika-ner* vs. *Afrika-n-er* vs. *Afrikan-er* vs. *Afrik-aner* 'African'
   c. *Demonstr-at-ion* vs. *Demonstra-tion* vs. *Demonstr-ation* 'demonstration'
   d. *Film-o-thek* vs. *Film-othek* vs. *Filmo-thek* 'film library'

The different analyses for *Chinese* 'Chinese' (8a) lead to two suffixes, the native suffix *-e* in *Chin-es-e* (with linking element *-es-*) and *Chines-e* (with derivational stem form *chines-*) as well as the foreign suffix *-ese* (< Lat. *-ensem*, transmitted via It. *-ese*) in *Chin-ese*.

The same holds for *Afrikaner* 'African' (8b), in which the different analyses even lead to three suffixes, two native and one foreign. The analysis *Afrika-ner* yields the native suffix *-ner*, the structuring in *Afrika-n-er* (with linking element *-n-*) and *Afrikaner* (with *afrikan-* as derivational stem form) the suffix *-er* (i.e. the oldest loan suffix of German, cf. section 2), while the interpretation *Afrik-aner* leads to the foreign suffix *-aner* (from Lat. *-(i)ānus*), which − as is characteristic for non-native suffixes − carries main word stress.

The noun *Demonstration* 'demonstration' (8c), which can be interpreted both in a word-based manner (as an action noun based on the verb *demonstrieren* 'to demonstrate') as well as in a stem-based manner (as a formation based on the confix *demonstr-*), exhibits in the various approaches a differing suffix form: in the case of *Demonstr-ation* it is *-ion* with the linking element *-at-*, in the case of *Demonstra-tion* it is *-tion* with *demonstra-* as (questionable) base form, and in the case of *Demonstr-ation* it is *-ation* with *demonstr-* as derivational stem form (similarly as well in *Demonstr-ant*, *demonstrieren*). While the assumption of a uniform suffix form *-ion* requires base allomorphy or interspersed linking elements, the assumption of suffix allomorphy leads in many, but not in all cases to uniform derivational stem forms (e.g., *stagn-ieren*, *Stagn-ation*; *interven-*

ieren, *Interven-tion*, *diskut-ieren*, *diskut-abel*, *Diskut-ant* vs. *Diskuss-ion*). The stem form allomorphy is etymologically justified and only explainable with reference to the morphology of the source language (e.g., Late Lat. *discutere* 'to investigate, debate' and G. *diskutieren* 'to discuss' vs. Late Lat. *discussio* 'investigation' and G. *Diskussion* 'discussion').

Among the characteristics of foreign word-formation we also find, alongside the morpheme category "confix" and foreign suffixes with main word stress, the linking elements *-o-* and (rarely) *-i-* (e.g., *Stratigraphie* 'stratigraphy'), which can be traced back to the compounding vowels of Greek (*-o-*) or Latin (*-i-*). They generally occur in nominal and adjectival products of foreign word-formation which contain at least one Greco-Latin confix. The interpretation of corresponding confix compounds occurs inconsistently, which is why a three-way structuring is possible for the noun *Filmothek* 'film library' (8d): with the linking element *-o-* (*Film-o-thek*), with the compounding stem form *filmo-* (*Filmo-thek*) and with the postconfix allomorph *-othek* (*Film-othek*). The use of *-o-* depends fundamentally on the presence or absence of a final vowel of the first element or an initial vowel of the second element. This is why *-o-* is lacking in *Hobbythek* '[place of a] collection related to a hobby' (vowel-final initial element) and in *thermal* 'thermal' (vowel-initial foreign suffix *-al*), and why *-o-* is also generally lacking in combinations of preconfixes with verbs, since here the vowel-initial and main word stress carrying suffix *-ier-* (*-ifizier-*, *-isier-*) is an integral part (e.g., *hydr-ieren* 'to hydrate' vs. *Hydr-o-phobie* 'hydrophobia', *Hydr-o-skop* 'hydroscope', *hydr-o-phil* 'hydrophile'). In formations such as *Filmothek* 'film library', the linking element *-o-* guarantees a stress shift to the postconfixes (further examples in Kempf 2010: 135−139), which carry main word stress, just as do the neoclassical foreign suffixes. Indigenous initial elements are thus adapted to the stress pattern of postconfix formations. This is, however, not the only function of *-o-*, since in hybrid formations with the pattern "preconfix + indigenous lexeme" (e.g., *Thermo-Hose* 'thermal pants'), the stress pattern of native determinative compounds is preserved. The use of the linking element *-o-* is apparently right or left driven, depending on the confix, with the result that it clearly differs in its function from the native linking elements.

4. Hybrid formations

Hybrid formations (mixed formations) are products of word-formation which develop from combinations of exogenous and native morphemes. The following overview offers a compilation of the possible combinations, which are subdivided according to the word-formation types compounding (9a−d) and derivation (9e−j):

(9) Hybrid compounds and derivatives
   a. exogenous lexeme + indigenous lexeme: *Luxus+wohnung* 'luxury apartment'
   b. indigenous lexeme + exogenous lexeme: *Glas+manufaktur* 'glass manufactory'
   c. indigenous lexeme + confix: *Grün+itis* ('preference for the color green, experienced as pathological')
   d. confix + indigenous lexeme: *Hydro+werk* 'hydroplant'

e. exogenous prefix + indigenous lexeme: *Ex+König* ‘ex-king’
f. indigenous prefix + exogenous lexeme: *ab+montieren* ‘to dismantle’
g. indigenous lexeme + exogenous suffix: *hof+ier-en* ‘to pay court to’
h. exogenous lexeme + indigenous suffix: *Autor+schaft* ‘authorship’
i. exogenous confix + indigenous suffix: *stat+isch* ‘static’
j. indigenous prefix + exogenous lexeme + exogenous suffix: *ver+absolut+ier-en* ‘to make into an absolute’

Large differences in frequency can be attested for these subtypes. For compounding (9a–d) there are no restrictions for the models (a) and (b); they are used on a massive scale. The combinations of foreign confixes with indigenous lexemes (types c, d) count, on the other hand, among the rarely used models, whereby in recent years stylistically conspicuous combinations with *-thek* (e.g., *Quatsch-o-thek* ‘place where one can chat’) and *-itis* (model c) are on the increase (cf. Hoppe 2000; Feine 2003).

While, apart from hybrid confix compounds, hardly any restrictions on formation exist in the domain of nominal and adjectival compounding stronger restrictions can be observed for derivation. In the domain of suffixation, hybrid formations correspond predominantly to the structural types (h) and (i) − although the latter require a stem-based analysis (cf. section 3.3). The indigenous suffix appears here to have an assimilating function. The following suffixes are very productive: *-ung* (e.g., *Klassifizier-ung* ‘classification’), *-in* (e.g., *Sekretär-in* ‘(female) secretary’), *-isch* (e.g., *elektr-isch* ‘electric’) and *-bar* (e.g., *praktizier-bar* ‘practicable’). The reverse case (model g), in which the exogenous suffix “alienates” the indigenous base, is to the contrary rare. To these belong formations with *-ist* (e.g., *Lager-ist* ‘warehousman’), *-ität* (e.g., *Schwul-ität* ‘embarrassing situation’) and *-ier-* (e.g., *gast-ier-en* ‘to make a guest appearance’).

Divergence can also be observed with prefix derivatives: While in the case of verbs, hybrid formations of the type “indigenous prefix/particle + exogenous lexeme” (model f) are common, (e.g., *ent-tabuisieren* ‘to free from tabus’, *ab-montieren* ‘to dismantle’, *um-sortieren* ‘to sort in a different manner’), partly also as denominal formations with prefix-suffix structure (model j, e.g., *ver-absolut-ieren* ‘to make into an absolute’), in the nominal domain only formations with *un-* are familiar, especially with adjectives (e.g., *un-exakt* ‘inexact’, *un-präzise* ‘imprecise’). Instead, many examples for model (e) can be found in the nominal domain, among them many augmentative formations with *mega-* (e.g., *Mega-Stau* ‘mega-traffic jam’), *hyper-* (e.g., *hyper-genau* ‘hyper-accurate’) and *ultra-* (e.g., *ultra-stark* ‘ultra-strong’) as well as derivatives with *ex-* (e.g., *Ex-Fußballer* ‘ex-footballer’) and *anti-* (e.g., *anti-deutsch* ‘anti-German’).

There are large differences not only with respect to the frequency of the individual models of hybrid word-formation, but also relating to the degree of activity of native and exogenous affixes in word-formation. Thus, verbal foreign prefixes (*de-*, *dis-*, *in-*, *ko-*, *re-*, cf. section 3.2) are not used at all for hybrid formations, while in the nominal domain, prefixes with a high productivity are encountered (e.g., *ex-*, *hyper-*, *mega-*). Munske (2009: 253) explains this in saying “daß Lehnbildungsmodelle in morphologisch und semantisch eindeutigen Nischen besonders erfolgreich sind und hier auch Modelle der indigenen Wortbildung verdrängen und ersetzen können” [that loan formation models are particularly successful in morphologically and semantically explicit niches, and here can also suppress and replace models of indigenous word-formation]. However, frequency presumably also plays an important role, as precisely the analyzable, but unproduc-