Affix ordering and conversion: Looking for the place of zero

AFFIX ORDERING AND CONVERSION: LOOKING FOR THE PLACE OF ZERO

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Abstract: The status of conversions is a long-standing question within morphological theory. Investigating the selectional properties of conversions may help us to shed light on their controversial status as compared to the other morphological processes. In the paper, conversions in two different but cognate languages, Italian and German, are investigated with the aim of identifying commonalities and differences with respect to their suffixal competitors. The results suggest that conversions should be looked at by taking into consideration the dichotomy proposed by Vogel (2005) between lexical multifunctionality and zero-derivation, which leads to opposite interpretations depending on the lexical domain considered.

Keywords: contrastive linguistics, conversion, morphology, word formation, zero morpheme.

1. INTRODUCTION*

What is the place of conversion in affix ordering? In spite of the apparent contradictory nature of this question, it may help us to shed light on the controversial status of conversion as compared to the other morphological processes. As is well known, there is no consensus on how to treat conversions with respect to the rest of word formation. On one hand, conversions have been treated on a par with affixes as morphemes devoid of any phonological content (zero-derivations) whose main function consists in operating a transcategorization. On the other hand, this transcategorization effect has been taken to be qualitatively different from the rest of affixal word formation, which speaks in favour of a different and separate status of conversion intended as a process of relabeling. It is clear that depending on the underlying theoretical model different predictions have to be made with regard to the place occupied by conversion and the rest of affixal word formation. In this sense, we will try to see in what follows whether the question of affix

* Parts of this paper were presented at the *2nd Workshop on Affix Order. In honor of Wolfgang U. Dressler*, held in Vienna on 5-6 June 2009. I am very grateful to Francesca Masini, Vito Pirrelli, and one anonymous reviewer for comments and suggestions. Clearly, I take full responsibility for any error and misunderstanding. The paper is devoted to the dear memory of Dieter Kastovsky. Finally, I thank Martina Della Casa for checking my English.

ordering, i.e. of the selectional properties of affixes, can be used as a sort of litmus paper for assessing the theoretical status of conversion.

To do so, I will investigate two different (although cognate) languages which display conversion as a way for forming new words, namely Italian and German. For the sake of clarity I will normally call conversions the results of the word formation processes at stake, while I will distinguish between a zero-derivation and a relabeling approach as for the possible theoretical understanding of the conversions. The paper is structured as follows: Section 2 introduces the theoretical background for approaching the question of conversion; conversions in Italian and German are contrastively presented in Section 3; in Section 4 the general selectional properties of Italian and German suffixes are briefly discussed, while in Section 5 an empirical investigation of the selectional properties of Italian and German conversions is carried out, whose results are discussed in Section 6. The final Section 7 draws the conclusion.

2. THE PLACE OF CONVERSION WITHIN WORD FORMATION

As has been repeatedly discussed (cf. Lee 2009 for a recent survey), the basic question concerning conversions relates to their status with regard to the rest of word formation, and especially derivation. In this respect, the question arises whether conversions are to be considered on a par with affixes. At least two possible interpretations have been suggested:

(1) a. zero-derivation: $[oil]_N \rightarrow [[oil]_N \text{-}Ø]_V$
b. relabeling: $[oil]_N \rightarrow [oil]_{N \rightarrow V}$

The first analysis sees conversions as a subtype of affixations which happen to be phonologically empty, while the second approach calls into play a different operation of relabeling, which is non-affixal in nature.

The first approach is reductionist in a double sense: it reduces conversion to normal affixation, and at the same time degrades the absence of any overt marking to a purely casual fact. In partial support of this latter point, diachronic evidence can be called into play, because at least for English all conversions go back to earlier suffixations subsequently blurred as a consequence of a general sound change affecting final unstressed vowels (cf. Kastovsky 1994 for a detailed historical survey). Furthermore, the zero-derivation approach is also supported by the so-called approximate conversions, in which the transcategorization is accompanied by an allomorphic or prosodic modification of the base as in *hou*[*s*]$e_N \rightarrow$ *hou*[*z*]e_V, *expórt*$_V \rightarrow$ *éxport*$_N$, etc. (see below). Besides the fact that these modifications generally result from the historical presence of an overt suffix, this allomorphy nicely parallels what is normally observed in the rest of affixation. What is more, a pure relabeling as intended in (1b)

should have no effect on the (supra-)segmental part of the rule.

On the other hand, the relabeling approach "is slightly mysterious: presumably it involves some kind of identity operation [...]. But it is not clear whether such identity operations are subject to the same kind of constraints that operate elsewhere in word-formation, or whether new powers are associated with new processes" (Bauer & Valera 2005: 12). In spite of the mysterious status that conversions assume under the relabeling analysis, Bauer & Valera (2005: 12) remark further that "it is the zero analysis which is currently out of favour".

To shed some light on the mystery of conversions, we will distinguish with Vogel (2005) zero-derivations from what she calls lexical conversions, typical of those language types in which the word classes are less or scarcely profiled, as for instance isolating languages like Chinese. Note that this distinction is particularly relevant for verb-forming conversions, that are quite frequent both cross-linguistically and in child language. In her view, it is legitimate to speak of zero-derivations only "in a noun-verb language with predominant derivational transpositions in the lexicon": in this case, "they should be integrated into the derivational system as zero-derivations because of similar semantic and syntactic structures" and are likely to "represent a pattern for productive derivations" (Vogel 2005: 75). On the other hand, "when the majority of derived verbs in a language is made up of unmarked verbs, it is advisable to speak of lexical conversions instead of zero-derivations", as in Modern English which "underwent a 'break-down' of its part-of-speech system in Middle English" (Vogel 2005: 75). As a result, Vogel sees English as a language with lexical conversion at least in the verbal domain.

More in general, when a full-fledged system of affixal derivation is developed in a language, which usually also fixes the word-categorial properties of derivatives, we are enabled to speak of zero-derivations. On the other hand, when a language displays high multifunctionality, because no morphology is present which also specifies the word-class properties, then we may speak of generalized conversions, or – in our terms – of relabeling. English verb-forming conversions are taken to represent this second case (typical of an isolating language type), because of the historical break-down of its part-of-speech-system due to the massive contact with Middle French and of the predominant role played by conversions in forming verbs.

This idea of treating conversions in dependence of the language type focuses on the prominence of the word classes in a given language which is tightly connected with the occurrence of affixal morphology fixing word-class membership.[1] Accordingly, conversions should be treated as zero-deri-

[1] A third way of dealing with conversions assumes word-class underspecification throughout the lexicon (cf. Don 2005). Accordingly, any lexical root is first categorized after lexical insertion into a syntactic node, with a zero-affix performing the operation of categorization. However, this

vations in the presence of a full-fledged system of affixal derivation. In this light, they should pattern like any other affix and display similar selectional restrictions; otherwise, they were likely to be treated in terms of relabeling. Given the different nature of the latter, they were also to be excluded from the whole question of affix ordering. This view is also in line with Sanders' (1988: 162) criterion of the so-called overt analogue, which notably permits the assumption of zero morphemes only in the presence of "a precise analogue where the same derivational function is marked in the derived word by an overt (nonzero) form". It must be added that the overt analogue criterion taken in its strictest sense can never be applied to word formation, because in the latter two rules never overlap completely in meaning as they are likely to do in inflection. In this connection, Thornton (2004: 503) suggests a loose interpretation whereby the conversions should display a "unitary semantic value" paralleled by affixations at least "from a typological point of view". Moreover, other criteria must be added in order to treat conversions in terms of zero-derivations on a par with the rest of affixations,[2] and in particular the occurrence of a formal correlate of the transcategorization which testifies to the occurrence of the lexeme formation process. Concretely, this consists in the attribution to the conversion of inflectional properties typical of the output category. One potential problem is given here by the direct overt parallel which has to be sought for the zero-derivation, namely a suffix or a prefix. Although the question can be quite serious from a theoretical point of view, its impact loses much of its strength when approached empirically from the perspective of the single language systems concretely investigated. In this regard, one can safely claim that only the option of zero-suffixation comes into play for both German and Italian, because no prefixal counterparts occur for noun-forming word formation rules. In the light of the overt analogue criterion, the assumption of a noun-forming zero-prefixation is therefore highly implausible, even though it cannot be completely excluded. As for verb-forming rules, in both languages a specific word formation type is productive, namely the so-called parasynthetic verbs (cf. Serrano-Dolader in press for a survey). These are verbs formed on the basis of nouns and ad-

view presents the inconvenience of blurring the typological difference between isolating languages, in which we observe lexical multifunctionality, and fusional languages, in which the occurrence of morphological markers also fixes the word class of the lexemes. Even if this inconvenience does not necessarily undermine the underspecification view, it makes it in my opinion too abstract for offering any appeal to solve the question of the conversions as discussed here.

[2] The somehow connected question of directionality can be quite reasonably solved by making reference to semantic (the word whose meaning is conditioned by the other counts as derived, viz. *to knife* vs. *knife*) and distributional (the word with more restricted word-inflectional options counts as derived, viz. *to neighbor* only possible in the form *neighboring*) criteria (see Bauer &Valera 2005: 11-12 for a short discussion).

jectives showing a prefix in the absence of any overt suffixation, as shown by the following German examples of denominal (e.g., *Flasche* 'bottle' → **flaschen* / *einflaschen* 'to bottle' / *entflaschen* 'to empty'; *Fleck* 'spot' → *flecken* / *beflecken* 'to spot' / *entflecken* 'to remove stains') and deadjectival (e.g., *leer* 'empty' → *leeren* / *entleeren* / *ausleeren* 'to empty'; *frei* 'free' → **freien* / *befreien* 'to free') parasynthetic verbs. In principle, it is possible to make the prefix responsible for the derivation, accordingly providing it with head properties (cf. Corbin 1987: 121-139 on French parasynthetic verbs). This might support the assumption of an analysis in terms of zero-prefixation like $[Ø\text{-}\ [fleck]_N\ \text{-}en]_V$ and $[Ø\text{-}\ [leer]_{Adj}\ \text{-}en]_V$. Though perfectly conceivable, this account appears implausible for Italian in the light of the generalized inability of changing the word category of the input base displayed by Romance prefixes (cf. Iacobini 2004: 167). Similar observations also hold true for German: the same prefixes also select verbal bases but cannot be assigned any head property: e.g., *laden* 'to load' → *aufladen* / *beladen* 'to load' / *entladen* 'to unload'; *nehmen* 'to take' → *annehmen* 'to accept'/ *entnehmen* 'to take out'.[3] It must be added that the suffixes usually display head properties, with the only remarkable exception of evaluative suffixes in Italian, that proves the rule (we will come back to this in Section 5). Thus, if we were to postulate zero-prefixations, we would be forced to assume in German two different series respectively of homonymous prefixes proper and of verb particles displaying head properties only with nominal and adjectival bases (and similarly in Italian). Again, the zero-prefixation cannot be excluded *a priori*, but it appears a highly implausible option.

The observations concerning the peculiar selectional behaviour of conversions with respect to the rest of affixal derivations are not new, at least for English: already Marchand (1969) remarked that (deverbal) conversions usually select unsuffixed bases, while prefixed bases are occasionally found (cf. *refit*, *reprint*, etc.). On the other hand, suffixed bases (and compounds) are found with verb-forming conversions: *to profiteer*, *to package*, *to wet-nurse*, *to blue-pencil*, etc. A systematic investigation has, however, never been attempted, especially in a contrastive perspective.

Before carrying out a detailed investigation of the selectional properties of conversions in German and Italian, Lieber's (1992, 2005) view merits a word of comment, because she rejects the whole idea of treating German and English conversions as resulting from a process of word formation, not even from

[3] Notice that this is valid for both types of German prefixes, which are characterized by the absence (see prefixes proper like *ent-*) or the presence (see particles like *an-*) of the so-called morphological (e.g., *entnehmen* 'to take out' → *entnommen* 'pstptcp' vs. *annehmen* 'to accept' → *angenommen* 'pstptcp') and syntactic (e.g., *Die Putzfrau entnimmt täglich der Kaffeekasse Geld* 'The cleaner daily takes money out of the kitty' vs. *Nette Einladungen nimmt Inge gerne an* 'Inge accepts kind invitations with good grace') separation.

relabeling as intended here. Instead, Lieber (2005: 421) assumes that they are due to an operation of relisting whereby "they are simply reentered in the mental lexicon as new forms"; accordingly, "[t]he process is not derivational at all, in fact, but rather is more akin to coinage". While this is the strongest attack ever raised against treating conversions as part of word formation, briefly discussing her view will allow us to focus on further aspects of conversions.

On the basis of data from German and English, Lieber (2005: 421) claims that while "[p]honologically overt affixes typically determine the gender, morphosyntactic features, argument structure, and category of their derived forms", conversions are substantially different because they "often display a variety of genders, morphosyntactic classes, or argument structures". Moreover, conversions are taken to be similar to coinages also from the point of view of productivity, because the latter are usually perceived as "new or odd", as words that "strike us as cute or funny or objectionable [...] the sort of new words that we notice", and in fact her impression is that in English "[n]ew verbs formed by conversion from nouns often do strike us as odd or outlandish" (Lieber 1992: 163).

I will not go into question of the argument structure, for which I refer the reader to the contrastive investigation of Dutch verbalizing conversions carried out by Don (2005: 9), who concludes that "a large number of converted verbs […] can be accounted for by the grammatical apparatus needed to account for derivation". As for the other morphosyntactic properties, Lieber's main criticism focuses on the fact that several zero-affixes are required to account for German and Old English conversions, which display very different properties: to limit our discussion to German, she assumes two different nominalizing zero-affixes (*rufen* 'to call' → *Ruf* 'call'; *antworten* 'to answer'→ *Antwort* 'answer'),[4] plus one further zero-affix forming verbs (*Frühstück* 'breakfast' → *frühstücken*). This allegedly leads to an unrestricted multiplication of zeros, which runs against Ockham's razor. However, as will be seen in more details in the next sections, far from being a problem of the zero-derivation approach the occurrence of several zero-affixes nicely corresponds to the variety of overt affixes displaying different word properties but sharing the same selectional domain: for instance, in several Romance languages action nouns can be productively formed by means of a masculine suffix like It. *-mento* (*trasferire* 'to transfer' → *trasferimento*), or a feminine suffix like *-zione* (*trasformare* 'to transform' → *trasformazione*). Thus, the issue is to be approached empirically: zeros are to multiply if this is required by the occurring evidence. As a matter of fact, Lieber's objection conceals a bias against zeros being treated as putative morphemes similar to the others.

[4] Actually, Lieber does not distinguish true conversions from approximate conversions like *klingen* 'to sound' → *Klang* 'sound', *reissen* 'to tear' → *Riss* 'tear', which are rather to be treated under the label of apophony. See below.

More in general, in Lieber's view all sorts of conversion should be put into the same basket of cases of pure lexical relisting like the German denominal adjectives *banane*, *klasse*, *schrott*, etc., as they occur in expressions like *Der Typ ist echt Banane* 'The guy is really weird (lit. banana)', or *Diese Frau ist Klasse* 'This woman is wonderful (lit. class)', especially found in colloquial varieties of German (cf. Gaeta 2010 for a detailed discussion). These denominal adjectives are true instances of idiosyncratic behaviour, because they display predicative and adverbial but no attributive usage, no inflection, no gradability, and – above all – scarce and unsystematic productivity. In this regard, these cases are problematic because it is not easy to tell exactly which lexical domain the conversion applies to. Thus, while *Banane* can give rise to an adjective in German, for instance, *Ananas* cannot: **Der Typ ist echt Ananas*. In other words, we observe here cases of relisting in Lieber's sense, but they are of little help for assessing the status of true German morphological conversions in terms of either zero-derivation or relabeling, which will be discussed in the next section.[5] On the other hand, word formation rules are generally sensible to restrictions of lexical nature like blocking. Accordingly, unrestricted productivity is a commonly used criterion to distinguish syntactic from morphological conversions in the case of the German and Italian nominalized infinitive: *schlagen* 'to hit'→ *Schlag* / ??*Schlagung* / *das Schlagen*; *colpire* 'to hit' → *colpo* / ??*colpimento* / *il colpire*. Note that, while the morphological conversions *Schlag* and *colpo* exert synonymic blocking on other conceivable suffixed derivatives, the syntactic conversions are not subject to this lexical restriction, which makes them a phenomenon of rather syntactic nature in so far as they operate in an unrestricted way by simply placing any infinitive into the head position of an NP.

A final issue that deserves a word of comment concerns the so-called approximate conversions, namely those derivatives in which an allomorphy of the base is found in the absence of any overt affix. In accordance with the concrete approach adopted here, the question only arises for German, in which two different cases are distinguished, which are both termed as unproductive (cf. Eschenlohr 1999: 97), although the latter is well represented by about fifty (mainly deadjectival) verbs. The first type (e.g., *werfen* 'to throw' → *Wurf* 'throw'; *reißen* 'to tear' → *Riss* 'tear') embodies the apophonic alternation typical of verbs belonging to the so-called strong inflectional macroclass. The latter is synchronically not productive anymore, but fairly stable in terms of the type and token frequency of its members. This signifies

[5] Moreover, Lieber's observations on an alleged intentionality underlying their coinage cannot be maintained because speakers may vary significantly as for the awareness in using their language; on the other hand, intentionality lies at the heart of terminological coinages which are normally made by exploiting productive word formation rules (cf. Bauer 2001: 66-68).

that this instance of non-concatenative morphology represents an important part of the German inflectional system with minor correlates in word formation, but has nothing to do with conversion. As for the second type (e.g., *hart* 'hard' → *härten* 'to harden'; *Farbe* 'color' → *färben* 'to color'), the situation is less clear, because the alternation, going back diachronically to an umlaut rule fronting back vowels followed by an /i/, is due to a previous suffix *-ja-* forming causative verbs with the suffix, subsequently weakened, leaving however the umlaut alternation behind. On the basis of this origin together with the parallel occurrence of umlaut alternations accompanying other suffixes as in *Tag* 'day' → *täglich* 'daily', it may be suggested to treat these cases as resulting from zero-suffixations in which the umlaut alternation is the overt allomorphic manifestation of the zero-suffix (cf. recently Lee 2009). Further evidence in support of this analysis comes from parallel examples of denominal verbs in which the umlaut alternation is accompanied by the occurrence of an overt suffix *-er-*: *Blatt* 'leaf' → *blättern* 'to browse'; *Loch* 'hole' → *löchern* 'to pester', etc. This clearly lends support to this analysis while the relabeling approach is forced either to discard these cases from the domain of conversion or to adopt a "paradigmatic" solution such as the one suggested by Eschenlohr (1999: 100), in which different word forms can be selected in word formation. Accordingly, the word paradigm of *hart*, *Tag* and *Blatt* contains the "derivation forms" *härt-*, *täg-* and *blätter-*, which are then selected by the different word formation rules. Notice that this word-paradigmatic approach generally rejects any difference between conversion and affixation. Accordingly, this solution has nothing to offer with regard to the issue at stake here. However, in the light of the unclear status of this allomorphic alternation which also occurs to mark the plural in nouns like *Vater* 'father' → *Väter*, *Mutter* 'mother' → *Mütter*, etc., and of other verb-noun pairs in which the umlaut alternation appears on the verb although the noun has an abstract meaning like *wählen* 'to choose' / *Wahl* 'choice', *quälen* 'to afflict' / *Qual* 'affliction' (cf. Eschenlohr 1999: 95), I would rather discard approximate conversions from our discussion, although their strength as potential evidence in support of the zero-derivation cannot be denied.

3. CONTRASTING CONVERSIONS IN ITALIAN AND GERMAN

Italian and German display quite similar morphological processes of conversion, which basically are verb-forming and noun-forming:

(2) Italian (Thornton 2004, Grossmann 2004)
Noun-forming conversions

a. $[...]_V \rightarrow [[...]_V \text{-}o]_{NMasc}$ — *acquistare*$_V$ 'to buy' → *acquisto*

b. $[...]_V \rightarrow [[...]_V \text{-}a]_{NFem}$ — *sostare*$_V$ 'to stop' → *sosta*

Verb-forming conversions

c. $[...]_{Adj/N} \rightarrow [[...]_{Adj/N}$ *-are*$]_{V1st}$ — *secco*$_{Adj}$ 'dry' → *seccare*; *sega*$_{N}$ 'saw' → *segare*

d. $[...]_{Adj/N} \rightarrow [[...]_{Adj/N}$ *-ire*$]_{V3st}$ — *chiaro*$_{Adj}$ 'clear' → *chiarire*; *fiore*$_{N}$ 'flower' → *fiorire*

(3) German (Fleischer & Barz 1992)

Noun-forming conversions

a. $[...]_{V} \rightarrow [[...]_{V}]_{NMasc}$ — *schlagen*$_{V}$ 'to beat' → *Schlag*

b. $[...]_{V} \rightarrow [[...]_{V}]_{NFem}$ — *antworten*$_{V}$ 'to answer' → *Antwort*

c. $[...]_{Adj} \rightarrow [[...]_{Adj}]_{NNeut}$ — *gut*$_{Adj}$ 'good' → *Gut*

Verb-forming conversions

d. $[...]_{Adj/N} / \rightarrow [[...]_{Adj/N}$ *-en*$]_{Vweak}$ — *locker*$_{Adj}$ 'relaxed' → *lockern*; *Öl*$_{N}$ 'oil' → *ölen*

Note that both Italian and German present two different patterns for deverbal noun-forming conversions, whose productivity is limited; at any rate, we may generally observe that for both Italian conversions as well as for the German masculine one a number of new formations is attested. The Italian masculine conversions like *acquisto* cannot be considered as resulting from suffixation because the ending vowel *-o* is of an inflectional nature, similar in a way to the thematic vowels normally encountered in Italian verbs (and in verb-forming conversions, see below). Thus, it is purely stipulative to consider them as derivational rather than as the surface manifestation of a process of conversion: as a matter of fact, any Italian noun or verb must be provided with them.

As for the Italian feminine conversions in (2b), Thornton (2004: 524-525) suggests an analysis which opposes a stem-based conversion, in which the feminine gender associated with the final vowel *-a* results from the verb stem ($[[sost]_{Root}$*-a*$]_{Stem}$*-re* → *sosta*) to the masculines which are taken to be root-based ($[[acquist]_{Root}$*-a*$]_{Stem}$*-re* → *acquist-o*). Although this suggestion is not in contrast with my view, because both processes are attributed to two different conversion types, I still prefer treating masculine and feminine Italian conversions in a parallel way, thus resulting from two different gender-specific but similar processes of conversions similar to what we have to assume for German.[6]

As for latter, while the feminine conversion in (3b) is rather rare, the masculine type in (3a) displays a significant number of derivatives, includ-

[6] One problem of Thornton's account is the stipulation of an unmarked gender attribution for the masculine conversions in the light of the masculine gender generally assigned by (syntactic) nominalizations. However, the evidence underlying this assumption is not tremendously compelling as for instance action nouns are mostly formed by suffixes specified for feminine gender. Moreover, true syntactic nominalizations generally create invariable nouns (e.g., *il dopo* 'the after' → pl. *i dopo* / **dopi*), while noun-forming conversions normally follow the most productive masculine class: *acquisto* → pl. *acquisti*. At any rate, see Thornton (2004: 524-525) for a discussion.

ing new formations like *treffen* 'to meet' → *Treff* 'rendez-vous', *stauen* 'to accumulate' → *Stau* 'congestion', etc., although the productivity is quite limited (cf. Eisenberg 1998: 284).

Clearly productive, on the other hand, are the verb-forming conversions, which are represented in Italian by two different patterns, in dependence of the thematic vowel selected. Only the type selecting the thematic vowel *-a-* is productive, which is in agreement with the high productivity of this inflectional class in contrast with the others (cf. Gaeta 2007). Note incidentally that the only verb-forming suffixes also select *-a-*, namely *-eggia-*, *-ifica-*, and *-izza-*. In German verb-forming conversions produce weak verbs similar to what happens in English (and in the other Germanic languages). Similar to Italian, the verb-forming suffixes *-ier-*, *-isier-* and *-ifizier-* also only produce weak verbs. In both languages the denominal type seems to be far more productive than the deadjectival type, which is termed as scarcely productive in Italian (cf. Grossmann 2004: 534) and absolutely unproductive in German (cf. Eschenlohr 1999: 80).

Finally, both Italian and German display syntactic conversions[7] forming nouns from adjectives (*gut* 'good' → *der* / *die* / *das Gute*; *buono* 'good' → *il buono*) and verbs (*revocare* 'to cancel' → *il revocare*; *laufen* 'to run' → *das Laufen*). For a number of reasons, these conversions have to be treated apart from morphological conversions, because for instance they don't change the inflectional properties of the base words. Thus, the nominalized adjective *das Gute* shares the same inflection of the base adjective, whereas the true morphological conversion *Gut* in (3c) produces new inflectional forms like the plural *Güter*. Moreover, as has been discussed above, while syntactic conversions display an unrestricted productivity, the productivity of morphological conversions is lexically governed, and is subject to lexical blocking.

4. SELECTIONAL PROPERTIES OF ITALIAN AND GERMAN SUFFIXES

In what follows, the input and output selectional properties of Italian and German morphological conversions will be investigated in detail. Of particular relevance is the comparison with similar word formation processes, namely

[7] It must be added that in German we also observe true instances of lexical multifunctionality, because adjectives can normally be used in adverbial function, as in classical pairs like *Der Zug ist* / *fährt schnell* lit. the train is / goes quick. As briefly discussed above, lexical multifunctionality is typical of isolating languages like Chinese. Similar examples also occur in Italian (*Il treno è* / *va veloce* lit. the train is / goes quick), but they are much more limited. Although Ricca (2004a: 551) considers this adverb formation productive, in the light of their word properties (viz. the occurrence vs. lack of agreement which is subject to a certain degree of individual variation) this seems to be a case of a different nature than word formation proper.

verb-forming suffixation and abstract-forming suffixation, because these processes select as input the same lexical domain and are therefore potential competitors of conversions. Clearly, this also implies that the focus will be on suffixes, given that only the latter are relevant for conversions, while the hypothesis of a zero-prefixation has been judged above highly implausible.

As for the selectional properties of Italian and German suffixes, I will limit my discussion to their impact on affix ordering, leaving it open, whether there are deeper and more subtle reasons accounting for the effects on the combinatorial properties.

In general, the suffixes seem to display all logical possibilities (cf. Scalise 1994: 243 for Italian and Aronoff & Fuhrhop 2002 for German). In fact, there are initial suffixes which usually occur immediately after the lexical stem (It. *amic-o* 'friend' → *amich-evole* 'friendly'; *amic-o* → *amic-izia* 'friendship'; Ger. *Berg* 'mountain' → *bergig* 'mountainous'; *lab-en* 'to refresh' → *Lab-sal* 'refreshment'); there are closing suffixes, which cannot be further suffixed (It. *gelat-o* 'ice cream' → *gelat-aio* 'ice-cream vendor'; *marcio* 'rotten' → *marci-ume* 'putrefaction'; Ger. *bilden* 'to form' → *Bild-ung* 'formation', *Held* 'hero' → *held-isch* 'heroic'); there are suffixes which are at the same time initial and closing (It. *dormi-re* 'to sleep' → *dormi-torio* 'dormitory'; *prun-o* 'thorn bush' → *prun-eto* 'thicket of thorn bushes'; Ger. *lehr-en* 'to learn' → *Lehr-ling* 'learner'; *rot* 'red' → *Röt-e* 'redness'); and there are completely free suffixes (It. *tip-o* 'type' → *tip-ico* 'typical'; *fam-a* 'fame' → *fam-oso* 'famous'; Ger. *Freund* 'friend' → *Freund-schaft* 'friendship'; *mach-en* 'to make' → *machbar* 'feasible'). This apparently arbitrary variety leads Scalise (1994: 243) to discard as theoretically irrelevant the question of affix ordering in Italian, because each suffix seems to carry its own input/output properties in the absence of any interesting generalization. On the other hand, Aronoff & Fuhrhop (2002) have suggested a number of structural reasons for explaining the behaviour of the German closing affixes. For instance, they observe that the closing suffixes normally correlate with a special compounding stem form and furthermore that "it is possible that there is some connection between the closing suffixes and prosodic wordhood" although they "are not convinced that prosody provides a full explanation" (Aronoff & Fuhrhop 2002: 466).

Among the potential suffixal competitors of the Italian and German conversions seen above, there is a number of abstract-forming suffixes which are highly productive (It. *trasformare* 'to transform' → *trasformazione*, *cambi-are* 'to change' → *cambiamento*; Ger. *scheid-en* 'to separate' → *Scheid-ung* 'separation'), and others far less productive (It. *rasa-re* 'to shave' → *rasa-tura*, *lav-are* 'to wash' → *lav-aggio*; Ger. *knack-en* 'to crack' → *Knack-s*) or totally unproductive (*differ-ire* 'to differ' → *differ-enza*; Ger. *fahren* 'to go' → *Fahr-t*). As for their combinatorial properties, Italian and German behave similarly with respect to their input selection, inasmuch as at least the

most productive suffixes are fairly available for verbal bases formed with the most productive verb-forming suffixes (It. *cort-eggia-re* 'to court' → *corteggia-mento*, *un-ifica-re* 'to unify' → *unifica-zione*, *real-izza-re* 'to realize' → *realizza-zione*; Ger. *experiment-ier-en* 'to experiment' → *Experimentier-ung*, *typ-isier-en* 'to typify' → *Typisier-ung*, *klass-ifizier-en* 'to classify' → *Klassifizier-ung*), even though selective solidarities are observed between the verbal suffixes and their abstract derivatives. Clearly, the latter holds true only for Italian, where a variety of abstract suffixes occurs (cf. Gaeta 2004: 330-331, 2005): thus, for instance, the verbal suffix *-eggia-* forms abstracts by selecting the suffix *-mento*, while the other two preferentially select *-zione*. A certain selective solidarity is also observed in German between the sole abstract suffix *-ung* and prefixed verbal bases, whereas simple bases appear to undergo a number of restrictions, which are however not yet fairly understood (cf. Fleischer & Barz 1992: 173; Eisenberg 1998: 267): *an-hör-en* 'to listen' → *Anhör-ung* / *hör-en* 'to hear' → **Hör-ung*; *be-sprech-en* 'to discuss' → *Besprech-ung* / *sprech-en* 'to speak' → **Sprech-ung*, etc.

Similarly, Italian prefixed verbs also display certain selective solidarities between prefixed bases and their abstract derivatives, inasmuch as for instance parasynthetic verbs preferentially select *-mento*: *in-trappol-are* 'to trap' → *intrappola-mento*; *s-coperchi-are* 'to uncover' → *scoperchia-mento*; etc., while the verbs prefixed with *de-* normally select *-zione* to form abstract nouns: *de-porta-re* 'to deport' → *deporta-zione* (cf. Gaeta 2004: 329-330).

Furthermore, Italian and German behave in a radically different way as for the ouput selection, because the sole German abstract-forming productive suffix *-ung* is closing, while the Italian suffixes are fairly free for further derivation (*trasformazione* 'transformation' → *trasformazion-ale*; *comportamento* 'behaviour' → *comportament-ista*; *differenza* 'difference' → *differenz-iale*, etc.), with the remarkable exception of the closing suffix *-aggio*. Notice that the restriction on the output selectional properties for German abstract-forming suffixations is not of a categorical nature, because there are other suffixes which are totally unproductive but do admit further derivation: e.g., *dien-en* 'to serve' → *Dien-st* → *dienst-lich*.

As for the other type of conversions, we have already discussed the main (and productive) verb-forming Italian and German suffixes. In this regard, we have seen that their output selectional properties display a large combinability, and we can add that their input selection also comprises a variety of suffixed bases (It. *natur-ale* 'natural' → *natural-izzare*; *americ-ano* 'American' → *american-eggiare*; Ger. *effekt-iv* 'effective' → *effektiv-ieren*; *form-al* 'formal' → *formal-isieren*). Notice that while adjectivalizing suffixations are widely accessible to verb-forming suffixes, nominalizing suffixations are normally excluded in German, as well as in Italian in spite of some mostly lexicalized cases like *fatt-ore* 'factor' → *fattor-izzare*; *san-ità* 'health' → *sanit-izzare*;

comun-ista 'communist' → *comunisteggiare* and the like (cf. Gaeta 2005 for details). In German a stratal condition comes into play here,[8] because the only productive verbal suffixes belong to the non-native stratum, and usually apply to non-native bases, although native (suffixed) bases also occur sporadically: *Drang-sal* 'affliction' → *drangsal-ieren*. Moreover, these non-native suffixes usually display a number of peculiar allomorphies which are foreign to the native morphemes, such as for instance (pseudo-)suffix substitutions like *Blam-age* 'disgrace' → *blam-ieren*; *Dikt-at* 'dictation' → *dikt-ieren*, etc.

5. SELECTIONAL PROPERTIES OF ITALIAN AND GERMAN CONVERSIONS

Let us turn now to a detailed analysis of the selectional properties of morphological conversions in order to see whether we can observe substantial differences with regard to what we have briefly been discussing with respect to their suffixal competitors.

As for the noun-forming conversions, Italian presents the following picture with regard to the possibility of selecting already suffixed bases:

Table 1. Noun-forming conversions in Italian

	(Base-)suff-ending	Yes/No	Examples
Feminine	*-eggi-a*	-	
	-ific-a	+	*notifica* 'notification', *verifica* 'verification'
	-izz-a	-	
Masculine	*-eggi-o*	+	*conteggio* 'calculation', *posteggio* 'parking'
	-ific-o	??	*bonifico* 'transfer'
	-izz-o	+	*realizzo* 'realization', *utilizzo* 'use'

As can be gathered from Table 1, Italian noun-forming conversions display a complementary distribution with regard to the suffixed bases they are compatible with, inasmuch as the feminine conversions combine with bases suffixed with *-ifica-re* (cf. *vero* 'true' → *ver-ifica-re* 'to verify' → *verific-a* 'verification'), while the masculine conversions combine with bas-

[8] More in general, there is evidence in German for distinguishing lexical strata which are independent and possibly ordered, so that affixes belonging to the native stratum do not normally apply after those belonging to the non-native one (cf. Wiese 1996: 119-129 for a discussion). However, since the focus of this paper is on conversions which are likely to be entirely assigned to the native stratum, level ordering does not help much in explaining why, for instance, a noun suffixed with a native suffix like *-heit* cannot be converted into a verb (see below). On the other hand, if we were to assign at least some conversions to the non-native stratum, then we were not able to explain why a verb suffixed with the non-native suffix *-izifier(en)* cannot be converted into a noun (see below).

es suffixed with *-eggia-re* and *-izza-re* (cf., respectively, *conto* 'count' → *cont-eggia-re* 'to count' → *conteggi-o* 'counting', and *reale* 'real' → *real-izza-re* 'to realize' → *realizz-o* 'realization'). This complementary distribution is partially disturbed by the masculine derivative *bonific-o* 'transfer', which is however an isolated and opaque case flanked by the transparent feminine conversion: *buono* 'good' → *bon-ifica-re* 'to reclaim' → *bonific-a* 'reclamation'. For this reason, a double question mark is added here as in the other similar sparse examples which will be discussed below.

If we turn to German, no noun-forming conversions from suffixed verbs are observed (cf. Olsen 1990; Eschenlohr 1999; Neef 1999, 2005).[9] A partial exception to this selectional restriction is given by the prefixed verbs mentioned above, for which masculine conversions are largely possible: *be-suchen* 'to visit' → *Besuch*, *er-werben* 'to acquire' → *Erwerb*, etc.

As for the verb-forming conversions, Italian presents the following picture for bases formed with the major noun-forming and adjective-forming suffixes:[10]

Table 2. Verb-forming conversions in Italian

	(Base-) suff-ending	Yes/No	Examples
Nominal suffixes	*-aggi-are*	??	*oltraggiare* 'to insult'
	-ell-are	+	*occhiellare* 'to provide with an eyelet', *tamburellare* 'to drum'
	-ett-are	+	*fascettare* 'to wrap', *palettare* 'to stake'
	-ezz-are	??	*carezzare* 'to stroke', *sciocchezzare* 'to say nonsense'
	-ier-are	??	*calmierare* 'to control prices', *pompierare* 'to calm, stifle'
	-in-are	+	*madrinare* 'to sponsor', *telefoninare* 'to call with a cellular phone'
	-ism-are	-	
	-ist-are	-	
	-it-are	+	*capacitare* 'to persuade', *felicitare* 'to congratulate'
	-ment-are	??	*movimentare* 'to animate', *parlamentare* 'to parley', *regolamentare* 'to regulate'
	-nz-are	??	*influenzare* 'to influence', *scadenzare* 'to set a deadline'
	-on-are	??	*cartonare* 'to carton', *trombonare* 'to blare'
	-tor-are	-	
	-tur-are	??	*fatturare* 'to invoice', *scritturare* 'to engage', *volturare* 'to transfer'
	-zion-are	??	*funzionare* 'to function', *impressionare* 'to impress, touch'

[9] In the light of the scarce presence and productivity of deadjectival conversions like *Gut* and of feminine deverbal conversions like *Antwort*, they have not been considered for the investigation.

[10] Given their complex nature, which can give rise to quite different interpretations as discussed in Section 2 above, parasynthetic verbs formed on suffixed nouns or adjectives (e.g., It. *franc-ese* 'French' → *in-frances-are* 'to contaminate with French expressions', Ger. *staat-lich* 'national' → *ver-staatlich-en* 'to nationalize') were disregarded in the analysis.

Adjectival suffixes	*-al-are*	??	*immortalare* 'to immortalize'
	-es-are	??	*maggesare* 'to lie fallow'
	-ic-are	??	*angelicare* 'to consider/render angelic', *organicare* 'to render organic'
	-iv-are	??	*attivare* 'to activate', *soggettivare* 'to render subjective'
	-os-are	-	
	-bil-ire	??	*stabilire* 'to set'

As can be seen, the combinatorial properties are quite scanty: only bases suffixed with the highly productive suffix *-ità* really come into play as a candidate for conversions, as in *felice* 'glad' → *felic-ità* 'gladness' → *felicit-are* 'to congratulate', etc. In the other cases, we observe sparse derivatives, mostly based on suffixed nouns displaying some sort of formal and/or semantic idiosyncrasy, like in *fare* 'to make' → *fatt-ura* 'invoice' (based on the past participle form in contrast to the productive stem-based pattern, cf. Gaeta 2004: 326) → *fattur-are* 'to invoice', and *parlare* 'to speak' → *parlamento* 'parliament' → *parlament-are* 'to parley', etc. One remarkable systematic exception is constituted by the diminutive suffixes *-ello*, *-etto*, *-ino*, and to a limited extent the augmentative *-one*, which give rise to a considerable number of verbs like in *tamburo* 'drum' → *tambur-ello* 'tambourine' → *tamburell-are* 'to drum'; *fascia* 'band' → *fasc-etta* 'wrapper' → *fascett-are* 'to wrap'; *telefono* 'telephone' → *telefon-ino* 'cellular phone' → *telefonin-are* 'to call with a cellular phone'; *carta* 'paper' → *cart-one* 'cardboard' → *carton-are* 'to carton', etc. This is even more striking, of one considers that evaluative morphology is generally held to have a particular status within word formation, which lies somewhat at the margin of its core domain. Among other things, this is due to the weak head status often shown by evaluative suffixes: for instance, in the case of the Italian evaluative suffixes considered here core word properties like gender and inflectional class percolate down from the base, as in *fascia* 'band (fem.)' → *fasc-etta* 'wrapper (fem.)' with regard to *palo* 'pole (masc.)' → *pal-etto* 'stake (masc.)'. However, in several cases the bases involved in these verb-forming conversions display a certain opacity and/or behave as true heads as in *carta* 'paper (fem.)' → *cart-one* 'cardboard, carton (masc.)' → *carton-are* 'to carton'; *penna* 'pen (fem.)' → *penn-ello* 'brush (masc.)' → *pennell-are* 'to paint', etc.

German verb-forming conversions behave slightly better, because bases formed with the agentive suffix *-er* and with the adjectival suffix *-ig* seem to qualify as possible candidates for forming verbal conversions, as shown by the following table:[11]

[11] Theoretically, we might also analyse a derivative like *einigen* as resulting from a verb-forming suffix *-igen*: *ein* → *ein-igen*, similar to *End* 'end' → *endigen* 'to end', in which the intermediate derivative **endig* does not occur. However, this suffix is completely unproduc-

TABLE 3. VERB-FORMING CONVERSIONS IN GERMAN

	(BASE-) SUFF-ENDING	YES/NO	EXAMPLES
Nominal suffixes	*-er-n*	+	*dienern* 'to bend down', *malern* 'to act as painter, to paint'
	-heit-en	-	
	-ist-en	-	
	-ling-en	-	
	-niss-en	??	*geheimnissen* 'to be secretive'
	-schaft-en	??	*wirtschaften* 'to keep house'
	-ung-en	-	
Adjectival suffixes	*-bar-en*	??	*offenbaren* 'to reveal'
	-ig-en	+	*einigen* 'to unite', *zeitigen* 'to bring about'
	-lich-en	??	*ehelichen* 'to wed'

In the other cases, sparse conversions occur in spite of the high productivity of some of the suffixes displayed by the bases like *-bar* and *-heit*.

As for the output selectional properties of conversions, namely what are the possible suffixes which take conversions as an input, it is not trivial to extract data for the noun-forming conversions which basically form abstract nouns as shown in (2a-b) and (3a). In fact, abstract nouns can theoretically be further derived into adjectives, nouns and even verbs, although we have already seen in the Tables 2 and 3 that verb-forming conversions generally do not select abstract (suffixed) nouns. Thus, it is not easy to delimit the number of the possible suffixes with which noun-forming conversions can potentially combine. I will proceed empirically by looking for derivatives formed with the arguably more productive suffixes which are generally compatible with bases consisting in abstract nouns. Thus, for instance the adjectival suffix *-ese* cannot be among the possible candidates for taking noun-forming conversions as an input because this suffix does not normally select abstract nouns, but bases usually denoting geographical expressions (e.g., *Milano* 'Milan' → *milan-ese*; *Francia* 'France' → *francese*). On the other hand, the suffix *-ico* does belong to the possible candidates for taking noun-forming conversions as an input because it also selects abstract nouns like *storia* 'history' → *storico* 'historical'; *paranoia* 'paranoia' → *paranoico* 'paranoic', etc. Taking into consideration the major adjectival, nominal and verbal suffixes, Italian presents the following picture:

tive and scarcely attested, while the adjective-forming suffix *-ig* occurs in a large number of derivatives, which favours the analysis in terms of conversion (cf. Neef 2005: 117).

TABLE 4. DERIVATIVES OF NOUN-FORMING CONVERSIONS IN ITALIAN

a. Input: $[\ldots]_V \rightarrow [[\ldots]_V$ *-o*$]_{Nmasc}$			E.g.: *acquisto* 'purchase'
	SUFFIX	YES/NO	EXAMPLES
Adjectival suffixes	*-ale*	??	*diluvi-ale* 'deluge-al', *inizi-ale* 'initial', *trionf-ale* 'triumphal'
	-ico	-	
	-oso	?	*azzard-oso* 'daring', *consum-oso* 'consuming', *gioc-oso* 'playful'
Verbal suffixes	*-eggiare*	-	
	-ificare	-	
	-izzare	-	
Nominal suffixes	*-ismo*	?	*arriv-ismo* 'careerism', *consum-ismo* 'consumerism'
	-ista	?	*arriv-ista* 'careerist', *abort-ista* 'abortion-ist'
b. Input: $[\ldots]_V \rightarrow [[\ldots]_V$ *-a*$]_{Nfem}$			E.g.: *sosta* 'stop'
	SUFFIX	YES/NO	EXAMPLES
Adjectival suffixes	*-ale*	-	
	-ico	-	
	-oso	?	*bram-oso* 'avid', *minacci-oso* 'threatening'
Verbal suffixes	*-eggiare*	-	
	-ificare	-	
	-izzare	-	
Nominal suffixes	*-ismo*	?	*domand-ismo* 'question-ism', *riform-ismo* 'reformism'
	-ista	?	*riform-ista* 'reformist', *svolt-ista* 'turn-ist'

As expected, the verb-forming suffixes do not come into play as a possible output selection. Furthermore, only the adjective-forming suffix *-oso* is largely attested as in *gioca-re* 'to play'→ *gioc-o* 'play' → *gioc-oso* 'playful', and *brama-re* 'to crave' → *bram-a* 'crave' → *bram-oso* 'avid', etc. However, the problem hinted at here by the single question mark in Table 4 is that this suffix is generally compatible with verbal bases and displays a larger amount of derivatives lacking a noun-forming conversion like *appiccica-re* 'to stick' → *appiccic-oso* 'sticky'; *pensa-re* 'to think' → *pens-oso* 'thoughtful', etc. (cf. Ricca 2004b: 442). Therefore, even if we might analyse these derivatives as resulting from the suffixation of a conversion, it appears preferable to treat all of them as directly deverbal in the light of the larger number of deverbal derivatives. The rest of suffixal derivation displays only sparse derivatives: note in particular the scanty presence of relational adjectives formed with a suffix like *-ale*, which is highly productive in combination with abstract nouns formed with typical abstract suffixes like *-zione*. Finally, the two cognate suffixes *-ismo* and *-ista* seem to be theoretically compatible with both conversions, because a certain number of

derivatives occur. However, a larger number of deverbal derivatives lacking a noun-forming conversion also occurs in this case (e.g., *apprendere* 'learner' → *apprendista* 'apprentice'; *trasformare* 'to transform' → *trasformismo* 'transformism', etc.), which suggests a directly deverbal derivation, or at least a double motivation.

In contrast to this quite scanty picture, the whole set of deverbal suffixes is largely available for selecting Italian verb-forming conversions as an input as in *fax* 'fax' → *faxa-re* 'to fax' → *faxa-bile* 'fax-able', etc.:

TABLE 5. DERIVATIVES OF VERB-FORMING CONVERSIONS IN ITALIAN

(BASE-)SUFFIX	YES/NO	EXAMPLES
-bile	+	*faxa-bile* 'fax-able', *orecchia-bile* 'catchy (lit. ear-able)'
-mento	+	*etichetta-mento* 'labeling', *tallona-mento* 'tailing (lit. heel-ing)'
-tore	+	*attiva-tore* 'activate-er', *sperona-tore* 'ram-er'
-tura	+	*sala-tura* 'salting', *scheggia-tura* 'splintering'
-zione	+	*ambienta-zione* 'ambienting', *data-zione* 'dating'

German behaves quite similar to Italian, inasmuch as noun-forming conversions are reluctant to being further derived:

TABLE 6. DERIVATIVES OF NOUN-FORMING CONVERSIONS IN GERMAN

Input: $[\ldots]_V \rightarrow [[\ldots]_V]_{Nmasc}$		E.g.: *Schlag* 'beat'	
	SUFFIX	YES/NO	EXAMPLES
Adjectival suffixes	*-lich*	?	*schrecklich* 'awful', *trefflich* 'felicitous'
	-ig	?	*rutschig* 'slippery', *schwindelig* 'dizzy'
Verbal suffixes	*-ieren*	-	
	-ifizieren	-	
	-isieren	-	
Nominal suffixes	*-ismus*	-	
	-ist	-	

Note that adjectival derivatives like *schrecklich* and *rutschig* should also be taken to be directly derived from the respective verbal bases, similar to what we have seen for Italian, because these adjectival suffixes can also select verbs: *zöger-n* 'to hesitate' → *zöger-lich* 'hesitant'; *find-en* 'to find' → *find-ig* 'resourceful', etc. (cf. Fleischer & Barz 1992: 257, 262, who also speak of a "double motivation" in cases like *straf-en* 'to punish' / *Straf-e* 'punishment' / *sträf-lich* 'culpable'). Finally, the entire German set of deverbal suffixes is also largely available for selecting the verb-forming conversions as an input as in *Speicher* 'storehouse' → *speicher-n* 'to store' → *speicher-bar* 'storable', etc.:

Table 7. Derivatives of verb-forming conversions in German

(Base-)suffix	Yes/No	Examples
-bar	+	*lager-bar* 'superposable', *speicher-bar* 'storable'
-er	+	*Geig-er* 'violinist', *Ruder-er* 'oarsman'
-ung	+	*Filter-ung* 'filtering', *Öl-ung* 'oiling'

6. SUMMARY AND DISCUSSION

The results of the previous investigation are summarized in the following table for the two different types of conversion:

Table 8. Selectional properties of Italian and German conversions and their suffixal competitors

Type 1: Noun-forming processes				
	V → N-Suff		V → N	
	Input	Output	Input	Output
Italian	+	+	+	-
German	+	-	-	-
Type 2: Verb-forming processes				
	Adj / N → V-Suff		Adj / N → V	
	Input	Output	Input	Output
Italian	+	+	? (*-ità*, eval. suff.)	+
German	+	+	? (*-er*, *-ig*)	+

Apparently, German and Italian conversions display a rather idiosyncratic selectional behaviour. However, this does not strictly correspond to the behaviour of their suffixal competitors. In particular, Italian noun-forming conversions differ from their suffixal competitors because they admit no further derivation. While the same is observed in German, it generally holds true for the rest of abstract noun formation, thus no real mismatch occurs. Furthermore, severe input selectional restrictions are observed for both German noun-forming and verb-forming conversions: the latter are only partially possible with bases suffixed with *-er* and *-ig* (see Table 3 above), which makes their selective capacity questionable. Similar restrictions are only observed for verb-forming conversions in Italian, which are possible solely with bases suffixed with *-ità* and with the evaluative suffixes (see Table 2 above). Thus, conversions in German and Italian display a behaviour partially distinct from their suffixal competitors. This might be argued to support the relabeling against the zero-derivation approach.

On the other hand, the restrictions sometimes look idiosyncratic while sparse violations occur, resembling the behaviour of the suffixal competi-

tors. For instance, in contrast with German and with what has been observed for English, the Italian noun-forming conversions normally select bases displaying the three productive verbalizing suffixes *-eggiare*, *-ificare* and *-izzare*, as shown in Table 1 above.

More in general, there might be deeper structural (and therefore language-specific) reasons which explain particular selectional restrictions which are independent of conversions as a peculiar word formation process. For instance, it has been suggested that at least for German the limited input selectional properties of verb-forming conversions have to do with the headedness of suffixed derivatives (cf. Eisenberg 1998: 285). Accordingly, a complex word like *Verdeutlichung* 'clarification' has exactly one head, namely the suffix *-ung*, which hinders the conversion process (**verdeutlichung-en*), because the head is categorially so strong that it cannot be overcome by a headless process of transcategorization. In contrast to this, in simplex words the categorial specification is weak because it remains implicit, which favours the process of verbal conversion. This explanation might also be extended to Italian, in which it has been shown that the only group of suffixed bases being freely selected by verb-forming conversions contains evaluative suffixes which do not display typical head properties, as has been shown in Section 5 above.

In a way, the explanation reminds us of Vogel's idea discussed in Section 2 above of treating conversions in connection with the typological character of a language, in particular with regard to the occurrence of morphological marking fixing the word-class membership of a lexeme.

In the same vein, the best argument in support of relabeling comes in my opinion from simplexes: in fact, there are no suffixes in German which productively form verbs from native nouns or adjectives. As observed in Section 4 above, productive suffixes like *-ieren* mostly select the non-native stratum of the lexicon. There are only sparse derivatives formed with native bases and suffixes like *rein* 'clean' → *reinigen* 'to clean' and *Kreuz* 'cross' → *kreuzigen* 'to crucify', displaying a suffix *-ig-*, or others like *blöd* 'stupid' → *blödeln* 'to talk nonsense' and *Nase* 'nose' → *näseln* 'to speak through one's nose', displaying *-el-* accompanied by the umlaut alternation. This is quite unexpected compared to the other major word classes for which transcategorizing suffixation with native bases and suffixes is well attested, and cries for an explanation. If conversions were to be treated as zero-derivations, this peculiarity would be completely overlooked, whereas one might argue that relabeling fills the lacuna left by suffixations. On the other hand, the high productivity of verb-forming conversions with nominal bases might be seen as a signal that relabeling tends to be interpreted as an instance of multifunctionality, similar to what happened in Middle English and gave rise to the actual situation. Therefore, a complex scenario emerges: the question

of zero-derivation vs. relabeling is likely to be not only language-specific, as already suggested by Vogel above. What is more, it might even be domain-specific: while the tendency towards multifunctionality seems to be valid for verb-forming processes as well as for adverb-forming processes (see footnote 7 above), it does not involve noun-forming conversions.

However, an account based on multifunctionality, i.e. on the lack of an explicit categorial marking, might be true for German but surely not for Italian in which verb-forming conversions display a wide spectrum of input selectional properties. In addition, it leaves one problem unresolved: if the absence of explicit categorial marking favours conversions, how is this fact to be interpreted in the light of the strong restriction on the derivability of converted nouns? Given that conversions display by definition implicit categorial marking, it is not clear why nominal conversions should behave differently in this regard from suffixations, provided that denominal adjectives are generally possible as is actually the case in Italian (but admittedly much less so in German). One might suggest that this restriction is due to the ambiguity of a conversion like *acquisto*, which LOOKS LIKE a verbal form and is therefore overlooked by a noun-selecting suffix like *-ale*. However, in the absence of any substantial evidence this suggestion is at present purely stipulative, and requires further research. Furthermore, this explanation crucially relies on the special status of conversions as resulting from a relabeling process with respect to the rest of suffixal word formation which is the issue at stake here.

On the other hand, the absence of adjectives derived from conversions in Italian is paralleled by the behaviour of the closing suffix *-aggio* which does not display any further adjectival formations: *abbordare* 'to board' → *abbordaggio* → **abbordaggiale*. One plausible explanation of the closing attitude of *-aggio*, common to all its Romance cognates: French *-age*, Portuguese *-agem* and Spanish *-aje*, is that it goes back to a Latin adjectivalizing suffix -ATICU(M), which could not be selected by any further adjectivalizing suffix. In other words, there was no model after which a denominal adjective might come into existence. This explanation might also be extended to the noun-forming conversions, because in Latin deverbal conversions forming abstract nouns were quite scanty and effectively became productive only in Late Latin (cf. Grandgent 1914: 18). Admittedly, such an explanation compels one to overestimate the force of inertia, because the suffix *-ale* displays such a huge productivity in modern Italian that one might find it hard to believe in the inhibitory effect given by the absence of a Latin model. At any rate, the parallel restriction affecting conversions and *-aggio* suffixations with regard to the derivability of relational adjectives has to be pointed out, which would pass unnoticed if conversions were to be treated as relabeling in a completely different word formation domain.

A further structural reason may be invoked to explain the selectional restriction of Italian (and indirectly German) verb-forming conversions derived from action nouns (cf. Iacobini 2005 on Italian). As a matter of fact, the latter are possible bases for verb-forming conversions only on condition that either (i) they are base-less derivatives, i.e. pseudo-action nouns displaying an ending relatable to the typical noun-forming suffixes, although the remnant base is not attested: *massaggio* 'massage' → *massaggiare* 'to massage' but **massare*; *relazione* 'relationship' → *relazionare* 'to report' but **relare*, etc.; or (ii) the semantic relation with the extant base has become opaque or 'light': *sancire* 'to sanction, establish' → *sanzione* 'sanction' → *sanzionare* 'to sanction, punish'; *suggerire* 'to suggest' → *suggestione* 'suggestion' → *suggestionare* 'to influence'; *reagire* 'to react' → *reazione* 'reaction' → *reazionare* 'to have a reaction', etc. While the first case can be easily explained away because no actual suffixation occurs, the second one connected with an alleged opacity or lightness of the relation needs a word of comment. Besides a certain opacity of the base-derivative relation as already observed in Section 4 above, such conversions may also arise in specific text types in order to characterize technical expressions. Accordingly, *reazionare* does not designate merely a reaction, but a certain type of strategic organization in football, whereby a team is trained to respond to attacks of the adversary by immediately organizing a certain reaction scheme. Thus, the limited conversion possibilities of action nouns have clearly to do with the lexical blocking which explains why in the absence of the two conditions action nouns cannot normally be verbalized: their expected meaning would be too similar to the meaning of the verbal base. Such a structural factor can be also made responsible for the parallel restriction of action nouns with further verbalizing suffixes: *manifestare* 'to manifest' → *manifestazione* 'manifestation' → **manifestazioneggiare*; *trattare* 'to treat' → *trattamento* 'treatment' → **trattamentizzare*. Unless a certain opacity intervenes: *parlare* 'to speak' → *parlamento* 'parliament' → *parlamentizzare* 'to absorb into the parliament'. On the other hand, sporadic cases of verb-forming conversions based on deverbal noun-forming conversions are observed like *scaricare* 'to unload' → *scarico* 'unloading, flushing' → *scaricare* 'to flush', which are made possible by the partial opacity brought about by the technical expression.

Finally, the restriction found in German on noun-forming conversions formed on suffixed verbs can be straightforwardly explained by stratal conditions, as hinted at in footnote 8 above: in fact, verb-forming suffixes only belong to the non-native stratum of the lexicon and mostly select non-native bases of classical (Greek or Latin) or Romance (generally French) origin, while only native bases, or non-native bases of English origin which clearly behave like the native ones, are usually accessible to noun-forming

conversions (cf. Eschenlohr 1999: 171). Thus, the apparent restriction results from the sharp stratal distinction observed in German between the native and the non-native lexicon, which does not occur in Italian.

7. CONCLUSION

To sum up, the evidence provided by the investigation of the selectional properties of conversions is not clear-cut. On one hand, important differences have been identified with regard to suffixations, and in particular the closing attitude of noun-forming conversions in Italian, while the similar behaviour of German noun-forming conversions side with the rest of abstract-forming suffixations, which are generally closing. On the other hand, we have seen that Italian offers examples of a noun-forming suffixation which is similarly closing and parallels the attitude of the conversions. In this light, the exceptional behaviour of noun-forming conversions results at least tempered by the similar properties displayed by *-aggio*, for which a parallel interpretation in diachronic terms can be provided. This supports the view that a parallel treatment of suffixations and conversions in terms of zero-derivations might be descriptively more adequate and economic. Of course, the theoretical option of relabeling cannot be excluded *a priori*, but it would force us to see the behaviour of German noun-forming conversions as qualitatively different from abstract-forming conversions in the absence of any empirical support, and the similar behaviour of Italian noun-forming conversions and *-aggio* would appear as purely casual and concretely due to very different underlying motivations.

A different picture, however, emerges from verb-forming conversions. Here, a clear asymmetry is observed between conversions and suffixations as for their input selectional properties, which is only partially tempered by sparse cases of complex bases undergoing conversions, with the remarkable exception of bases containing evaluative suffixes in Italian. On the other hand, a number of concomitant factors have been observed which account for this restriction: in addition to the headedness force of suffixations which can be advocated to hinder transcategorizations, most German suffixations belonging to the native lexical stratum are closing and therefore completely excluded from further derivation (cf. Aronoff & Fuhrhop 2002), while the Italian verb-forming suffixations select only a certain type of complex bases, as hinted at above. This signifies that the only real consistent restriction concerns the Italian adjectivalizing suffixations which are generally accessible to verb-forming suffixations, but almost absent in conversions (with sparse exceptions like *immortala-re*). Given the high productivity of verb-forming suffixations with bases displaying adjectivalizing suffixations, this restriction is quite unexpected and can be taken as an argument

in support of the relabeling treatment of conversions. On the other hand, Italian offers cases of adjectivalizing suffixes inaccessible to verb-forming suffixations like *-oso* (again with sparse, and partially opaque, exceptions like *mostro* 'monster' → *mostr-uoso* 'monstrous' → *mostruos-izza-re* 'to render monstrous'), which might be taken to parallel the attitude of verb-forming conversions. In addition, it has to be observed that the conversions based on suffixed bases cannot generally be treated as exceptional or partially opaque: in a verb like It. *calmierare* 'to control' the base *calmo* 'calm' is straightforwardly accessed and the same can be repeated for German *malern* 'to act as a painter' with regard to the base *malen* 'to paint'.

To conclude, if we seriously adopt Vogel's idea of the language-specific efficacy of the dichotomy relabeling/lexical multifunctionality vs. zero-derivation, the picture offered by Italian and German conversions is closer to the latter pole, although some specific traits of the German verb-forming conversions might suggest that a tendency towards lexical multifunctionality is emerging. This is especially to be seen in the absence of native verb-forming suffixations, which makes it impossible – in the light of the neat separation between the native and non-native lexicon – to form verbs from native bases unless conversion is used. This suggestion is strengthened by the wide occurrence of verb-forming conversions with bases assimilated to the native lexicon as for instance Anglicisms (*Brunch* 'brunch' → *brunchen* 'to brunch'; *Shop* 'shop' → *shoppen* 'to shop', etc.) and more in general all those sparse cases which cannot immediately be connected with the classical (Greek or Latin) or Romance lexical prototype (e.g., *Abenteuer* 'adventure' → *abenteuern* 'to adventure'; *Konterfei* 'image' → *konterfeien* 'to portray', etc.) or display a pseudo-suffix *-el-* or *-er-* (e.g., *Orakel* 'oracle' → *orakeln* 'to predict'; *Pharisäer* 'Pharisee' → *pharisäern* 'to be hypocrite', etc.), see Eschenlohr (1999: 171-177) for a detailed discussion. Finally, we observe in German a long-standing weakening process of the profiling of word-class membership, ultimately due to the consequences of the late Medieval phonological change affecting unstressed final syllables which is partially similar to what happened to Middle English and led to the break-down of its part-of-speech system. The effects of this process are also to be seen in the lexical multifunctionality characterizing adjectives/adverbs and in the change of the nominal/adjectival inflectional system from stem-based alternations, typical of a strongly fusional language, to word-based alternations, characteristic of a weakly fusional or rather agglutinative type, in which word-class membership is not overtly manifested by a specific formative. I hope that this conclusion, which attempts to distinguish on an empirical basis a process of relabeling when it substantially differs from suffixations including zero-derivations, may contribute to shed some light on the mysterious status attributed to conversions.

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