

A derivational analysis of foreign stems –
A change in the process of becoming German and its theoretical
interpretation¹

The following speciality of German is often mentioned: A loanword gets the corresponding German suffix, and is therefore not like in English just *princess*, *American*, *musical*, but *Prinzess-in*, *amerikan-isch*, *musikal-isch*. Sometimes it is also possible for a stem to become German without this special suffix, for example *Baroneß*, *Photograph*, *brutal*, but in English *baroness*, *photographer*², *brutal*. The process of becoming German with the help of native suffixes and how this process has changed will be described in this paper and will be interpreted theoretically.

1. Introduction

The primary assumption is the following: foreign stems come into the German system as word-forms and not as abstract entities. For derivation this means that the words don't necessarily have any segmental borders, i.e. the foreign words do not keep the segmentation they had in the original language. So, it is possible that the foreign words may be segmented according to German preferences.

There are different ways for foreign words to be integrated into German, and it is also possible for the process of integration to stop at different points. First, I will describe the differences between 'derivational' integration and 'inflectional' integration. Second, the integration will be shown diachronically. There are two diachronic processes, which should be differentiated. First, the integration may be interpreted as a process, so it is diachronic in itself. Second, the kind of borrowing can be changed. In the first case stems are adapted bit by bit to the German system. Here two systems are somewhat in competition: the original system and the German system. The following questions arise: Which grammatical characteristics are taken over immediately? Which grammatical characteristics – regarding the German system they are 'foreign' characteristics – are kept by the foreign stems and how long are they kept? A good example is given by inflectional morphology: Nouns from Latin keep parts of the Latin inflectional system but not the whole inflectional system. The plural inflection is kept for a long time but the case inflection is not. In the plural inflection there are also two different steps: the stem inflection is kept longer than the inflectional suffixes. Stem inflection with native German suffixes is possible, for example *Zyklus* – *Zyklen*. The integration may be interpreted as an adaptation to an existing system. But these questions are also possible the other way round: How is the German system influenced by foreign stems? For example there are some foreign suffixes which are reanalyzed from foreign stems and which now behave like German native suffixes; now native bases are possible for them too. All stressed suffixes come from foreign languages (see also Fuhrhop 1998). So it may be concluded that stressed suffixes just became possible because of borrowing.

¹ I want to thank Andrew Frost and Antony Green for helpful stylistic comments.

² In English, there are some equivalent cases like *photographer*, but *photograph* is also an English word, whereas for example **musikal* isn't a German word.

But changes which happen to foreign stems need not only be adaptations from the foreign system. They may be changes within the German system. For example, there are some adjectives which had the German suffix *-isch* for some time and lost it again, like *kollegialisch* – *kollegial* ('helpful to one's colleagues'), or two stems with different meanings are now possible like *sentimentalisch*³ – *sentimental*. This process becomes very clear if the process of borrowing is also changing, e.g. Modern German and, for example, Middle High German treat borrowed words differently. In this case especially the derivational analysis is interesting.

2. The inflectional system

If a foreign noun is borrowed, its gender in German will not necessarily be the gender of the original language. There are some characteristics in the native stem which determine the gender, for example the phonological form and the meaning (see Köpcke 1982) and these are also valid for foreign stems. For foreign stems it may also be possible that the gender in German is influenced by the gender in the original language, but this can't be the only criterion. For example, English nouns get different genders in German: *der Computer* (MASC), *das Layout* (NEUT) and nouns from French can also be classified as neuter nouns, e.g. *das Accessoire*, although French has only masculine and feminine nouns.

The borrowed nouns inflect for case and number in German. The number inflection can also be borrowed, at least for some time, but the case inflection cannot (*der Terminus* NomSg, – *des Terminus* GenSg, *die Termini* Pl; *das Universum* NomSg, *des Universums* GenSg, *die Universen* Pl; *der Computer* NomSg, *des Computers* GenSg, *die Computer* Pl (and not **die Computers* as in English). Verb inflection is especially significant because the verb stem always has to be inflected, i.e. it always has an inflectional ending, whereas nouns have a basic form which can be classified at least as the nominative singular and which has no special inflectional ending. Even the 'basic form', the infinitive, gets an inflectional ending, like *joggen*, *layouten*, *scannen*. There is another difference between nouns and verbs in German: borrowed nouns can come in several inflectional classes depending on the gender, the phonological form and the meaning (see Bittner 1991).

For borrowed verbs there is only one possible inflectional class, the class of weak verbs. The German system has more than one inflectional class and, therefore, this is an interesting observation, see also section 5. In addition, borrowed verbs never bring parts of their inflectional system to German, as nouns can (see above). So verbs are integrated all at once, whereas the integration of nouns can take a long time.

For adjectives the German system has only one inflectional class. So borrowed adjectives are in this class too. Some – native and borrowed – adjectives cannot be inflected: *ein lila Auto*⁴, *ein mist Kérl* – *ein Mistkerl* (with different stress patterns), *eine extra Form* – *ein Extrablatt* (with a special meaning). Most of the uninflectionable adjectives are borrowed stems, so this shows a little how the German inflectional system works with borrowed words.

³ The classical poet Friedrich Schiller has formed this expression with his paper 'Über naive und sentimentalische Dichtung'.

⁴ Some speakers inflect this with an interfix: *ein lila-n-es Auto*, but most native speakers do not accept **lila-es Auto*.

The derivational system works in another way and the first reason for this is, in my opinion, that the inflectional system has to work with each stem which is a noun, an adjective or a verb and the derivational system does not have to work with it. It is not necessary to analyze everything in the derivational system but it is possible; all words can be interpreted as derivational simple, so even a foreign stem can be borrowed with a special meaning and does not have to be analyzed. In this case it is lexicalized, which means that it is not analyzable at least at one level (the phonological, the word-categorical or the semantic one). The word formation system is full of lexicalized stems and this is here the important difference between the inflectional and the derivational system. So it is not necessary to analyze any stem derivationally. But also some of the borrowed stems are analyzed and also different stages of integration can be found.

3. Verbs

Many verbs in German end with *-ier(en)*⁵. There are some cases where this ending can be interpreted as a normal derivational suffix like *halb – halbier(en)* ('half' – 'to divide in half'), but most of the cases are like *studier(en)*, where a base **stud* does not exist. So it is not a normal derivational suffix but it is a verbal ending especially used, as we will see, to make foreign stems German, so I will call it an 'Eindeutschungssuffix' – a suffix whose only function is to integrate foreign verbs into the German system. All Latin verbal endings are replaced by the ending *-ier(en)* in German, for example *reparāre – reparieren, studere – studieren*. This is also true of verbal stems coming from French like *raser – rasier(en)* ('to shave') and there are also some from English like *to train – trainier(en)*. One thing is especially interesting: in English there are many verbs ending in *-ate*, but there is no verb in German ending in *-atier(en)* and also not in *-at(en)*: *to concentrate – konzentrieren, to operate – operieren* and so on, but there are at the same time nominal endings in *-at-ion* (*Operation*) and *-at-or* (*Operator*) like in English. Compared with other languages it is clear, that *-ier(en)* is really a German ending, although it does not sound very German. It is stressed, and it is not very common for German suffixes to carry the main stress. A few suffixes carry the main stress, but they all have foreign origins like *-ei* (*Bäckerei*), *-ent* (*Student*) and so on. With Paul (1920: 124) we assume that *-ier(en)* comes from French, but there it is a nominal and not a verbal ending. It is reanalyzed in German as a verbal ending and then it worked for a long time as a verbal 'Eindeutschungssuffix'. But it has nearly lost this function. Nowadays foreign verbs – especially from English – become German verbs just through the inflection system like *jogg(en), scann(en)* and so on. There are still many verbs with *-ier(en)* in the German system, but the ending *-ier(en)* is not productive anymore.

-ier(en) has a special position in the system of foreign endings and suffixes. The derivation of the native German system is organized in the following way: the bases of suffixes are stems. Nominal and adjective stems have the same form as word forms, the verbal stems correspond to an infinitive form minus the infinitive ending *-(e)n*. Most of the complex derivational stems are organized differently. Normally there is no simple base but there are groups of related words like *operier(en) – Operator – operativ*. Very often an

⁵ The infinitive ending *-en* is set in brackets because it is just an inflectional and not a derivational ending. It disappears when a finite form is built: *studier(en) – du studierst*.

ier(en)-verb belongs to these groups. Since *-ier(en)* is semantically empty and just makes verbs, semantically the verbs in groups like the one above are some kind of ‘derivational base’, but the form does not show it clearly. But on the assumption that the verb can be interpreted as the base, the derivational system of foreign stems can be interpreted analogously to the native system in German.

4. Adjectives

Adjectives also have a special ending when becoming German: *-isch*. But it behaves a little differently compared to the verbal ending *-ier(en)* and also its origin is different. *-isch* had already been a German suffix before gaining the function of giving foreign adjectives a German appearance. Nowadays the original function is present in the German system as well in pairs like *Kind – kindisch* (‘child – childish’), *Hund – hündisch* (‘dog – behaving like a dog, servile’) and so on.

- a) *amerikanisch, bolivianisch, brasilianisch, chinesisch, russisch, tibetisch*
- b) *freudianisch, hegelianisch, jungianisch, wagnerianisch*
- c) *linguistisch, morphologisch, studentisch*
- d) *chemisch, logisch, politisch, semantisch, solidarisch*
- e) *grammatikalisch, musikalisch, physikalisch, theatralisch*
- f) *disziplinarisch, fragmentarisch, testamentarisch*
- g) *argumentatorisch, emanzipatorisch, exemplikatorisch,*

a) shows derivations from countries’ names; they are formed with a derivational stem form (see below). In b) we have the same with people’s names. c) shows some derivation from person terms; here the bases are also word forms, so it is a ‘normal’ German derivation. In d) there are different noun suffixes in exchange with *-isch*: *-ie, -ik, -ität* (*Chemie, Logik, Solidarität*). In e) *-isch* follows stems which look like complex adjectives, because in German there are some adjectives ending in *-al* without *-isch* like *kollegial, genial, sozial*. And even in the compounds *-isch* gets lost in those cases: *Solidargemeinschaft*. In f-g) it looks like a coincidence that nominal bases are missing. So in d), e) and f) *-isch* has its typical ‘Eindeutschungsfunktion’ because in derivation and composition the suffix is lost.

Even the words under a) show the German characteristic of having native suffixes. There are many pairs like *amerikanisch* (ADJ.) – *Amerikaner* (NOUN) whereas **amerikan* is not a word in German as it is in English. So, *amerikan* can be interpreted as a derivational stem form, which is the base for the suffixes *-er* and *-isch*. The derivational stem form is an element of the so-called stem paradigm (Fuhrhop 1998: 22ff). The stem paradigm consists at least of the inflectional stem form, the derivational stem form and the compositional stem form. Often, the three have the same form, but sometimes the derivational stem form needs an interfix (like *amerik-an*) and the compositional stem forms are built with linking elements, which are very common in German. So, *amerikan* has a status but it is not a word or a word form. In words like a) the *-isch* is quite stable, in words like e) it is not. There are some words like this which lost the suffix in the history of German like *kollegialisch – kollegial, genialisch – genial* and so on. But there are still many adjectives with the suffix *-isch* and beside them there are related nouns, especially some nouns with the suffix *-ität*, which is very close to the English suffix *-ity*. But it can be shown that *-ität* is a productive

allomorph in German. Foreign adjectives are its bases, for native bases the allomorphs are *-heit*, *-keit* and *-igkeit*. In German there are many pairs like *aktiv* – *Aktivität* and so on. But it never follows the suffix *-isch* like *solidarisch* – **Solidarischtät* and even *-keit*, which is the allomorph for complex adjectives, does not follow *isch*-adjectives like *Kind* – *kindisch* – **Kindischkeit*. That is a special case and should therefore be mentioned. With foreign stems there are pairs like *musikalisch* – *Musikalität*, *physikalisch* – *Physikalität* and *solidarisch* – *Solidarität*, where *musikal*, *physikal* and *solidar* are not word forms in German. Within the stem paradigms they can be interpreted as a derivational stem form if we mention that *solidarisch* is the base for *Solidarität* and even a derivational stem form *solidarisch* does not exist because there is no derivation with this form. A main point in this analysis is that *-isch* has no semantic function in these cases, it just makes adjectives. So the diachronic loss of *-isch* described above clarifies the relation between the adjective and the noun; also the form now shows that the adjective is the base of the noun. This interpretation is also possible for the relation between inhabitants' terms and the corresponding adjectives. But one main difference between these pairs and the others is that all the 'country adjectives' still have the suffix *-isch*, no loss happened there. Since the state of *-isch* is more stable, it may be interpreted a little differently. Even another difference in pairs like *Chinese* – *chinesisch* is shown by the following section: If the schwa is not interpreted as a derivational suffix, the noun may be the base for the adjective in these cases and not the other way round as in cases shown above.

Because of the special function of following foreign stems *-isch* developed a special stress pattern. The foreign stems often carry the stress on the last syllable. So very often the syllable before *-isch* is stressed. Now, sometimes *-isch* demands this pattern even for native German words like the adjectives of the name *Luther*: *lutherisch* – *luthérisch* and even *Buchhalter* ('accountant') *buchhaltérisch*. These cases are surprising because the syllable before *-isch* are schwa-syllables, which are usually unstressable (Eisenberg 1991). With *-isch* they get the main stress, which is very uncommon for the German system.

5. Nouns

Within noun suffixes we can look at the words for persons because here some specific German characteristics can be found. Other – mostly abstract – nouns like *Operation* do not show big differences to related languages but the person terms do.

So at first we have a large number of terms for inhabitants of countries like *Amerikaner*, *Chinese*, *Pole*, *Inder*, *Algerier* and so on.⁶ The system of these formations is shown in Fuhrhop (1998); the system depends on a combination of prosodic, phonological and even morphological features. Here I especially want to discuss cases like *Amerik-an-er*⁷ and *Chin-es-e*. They are built with the so-called 'segment form' (Fuhrhop 1998: 146f), an element comparable to a root, an interfix and a suffix. The analogy with the adjectives *amerik-an-isch* and *chin-es-isch* is clear. The special point is that *amerikan* is not a word or

⁶ In this paper only the terms for inhabitants of countries are viewed. The inhabitants of cities are mostly built with the pattern 'name of the city + *-er*' like *Berlin-er*, *Wuppertal-er*, *Köln-er*. There are a few (irregular) cases like *Hannover-an-er*. So it is a typical native pattern and shows no foreign behaviour.

⁷ The segmentation *amerik-an* is assumed and not *amerika-n* because of the stress pattern. In *amerikan* the stress is at the last syllable and in *Amerika* it is at the second. So the '*-a*'s are different. Cases like *Brasilien* – *brasilian* can also be described similarly.

a word form in German, but in related languages it is. So, *American* in English is the adjective and the plural *Americans* is used for the inhabitants. *Américain* in French is the adjective as well as the noun and in Dutch *amerikaan* is the inhabitant, *amerikaans* the adjective. So within these languages German is the only one which does not use the form *amerikan*; both the adjective and the noun need their own suffix and these suffixes are the common for the corresponding function: *-er* for person terms and *-isch* for adjectives. Even historically there is no loss like in other cases: verbs and adjectives can now be integrated without any suffix; the inhabitants can not.

The other case, *Chinese*, is a little different because the schwa is an ending for person terms but it does not behave like the other suffixes. In Standard German the schwa is pronounced: [çi:ne:zə]. But within the formation of for example the female noun *Chinesin* the schwa is lost, which is common for the word-final schwa in German. So, we assume (with Eisenberg/ Butt 1996: 142f) that the schwa is created prosodically: The word has to be bisyllabic. If there is no other second syllable, then schwa is chosen. Some terms for inhabitants are built without any interfix like *es* and *an*, so just with *-er* or schwa (*Inder*, *Pole*). And even in the cases just with the schwa, the schwa gets lost before other suffixes. But there is an interesting prosodic observation: the syllable before the schwa always has to carry the main stress. Because the interfix *es* is always stressed, it delivers the right prosodic pattern for the schwa. Most of the other inhabitant terms just built with the schwa have only one extra syllable; so it also bears the main stress. The schwa ending is a special case but not just with terms for inhabitants. Together with the prosodic pattern it seems to be a good marker for person terms. All the masculine person terms ending in a schwa belong to the same inflectional class, the class of weak masculines. But not only nouns ending in a schwa belong to this class but even more-syllabic nouns where the final syllable is stressed (Köpcke 1995) (like *Student*, *Doktorand* 'PhD student'). This inflectional class is determined also by a specific semantic pattern. Most members of this class are terms for living creatures, especially human beings (Bittner 1991). So, the inflectional class shows the semantics, which is normally shown by word formation suffixes. And there are some nouns which are built like this:

Architekt, Aristokrat, Astronaut, Bibliograph, Demokrat, Diplomat, Demokrat, Geograph, Literat, Ökonom, Philosoph, Photograph, Psychopath, Stenograph, Theosoph, Therapeut, Kosmopolit, Pharmazeut.

Especially the suffix *-ist* which is often used in English does not have the same role in German, for example *morphologist* is in German *Morphologe*, and even the Middle High German *Theologist* has become *Theologe* in contemporary German. This can be described as 'derivation by a prosodic pattern', no derivational suffix is needed.

6. Conclusion

-isch is formally not a good suffix because it is lost in the compositional stem form. And even semantically it is not a good suffix because with foreign stems it just makes adjectives with no semantic influence. *-ier* is formally a good suffix: It is kept within the derivational stem form (*reparierbar*) and also in the compositional stem form (*Rasierapparat*) but it has no semantic function and just makes verbs.

Schwa as a person suffix is not formally a good suffix because it is caused prosodically and it is lost, when any other suffix appears. Semantically it is – together with the prosodic pattern of the whole word – a suffix; it shows that a person is meant. *-er* is formally and semantically a good suffix.

So we can mention the following general change: in earlier periods of German word classes were shown by unambiguous derivational suffixes. Nowadays they are not shown like this. Therefore the relations in the stem paradigm correspond to the relations in the stem paradigms of the native system. New forms are arising which can also be formally the base of other stems like *kollegial* for *Kollegialität*.

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