Recognition as a factor in lexical change

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This paper aims to draw attention to recognition as a factor in language change. To achieve this, four non-morphemic processes of word formation are discussed: suffix reinterpretation, clipping, libfixing and blending. Contrary to what is generally assumed, it turns out that these processes are systematic and that the notion of recognition is central to them. This contribution builds on analyses in Hamans (2021b).

1 Introduction

The aim of this contribution is to draw attention to an understudied cause of language change: recognition.[1] Traditionally, mainly immanent structural causes, incomplete or imperfect intergenerational transmission, language contact, language variation and prestige have been identified as causes for language change (Luraghi 2010), next to internal factors such as analogy and reanalysis. However, the analysis presented here of some non-morphemic word-formation processes shows that recognition must be added to this list of possible explanations for language change.

 The processes discussed here at length are suffix reinterpretation, clipping and (pseudo-) embellished clipping, and libfixing. Since recognition also

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plays a role in blending, some attention will be paid to this process, although blending is less central to language change than the other processes discussed.

At the end of this paper, the question will also be answered what the difference is between the notion of recognition presented here and more accepted concepts such as analogy and reanalysis/reinterpretation. Suffice it here to indicate that re-recognition is a purely cognitive process, whereas analogy and reanalysis focus rather on language structure.

2 Distinctive morphology

In the analysis presented below, the notion of diacrisis and especially the associated concept of confusivum are central. Both terms are introduced by Zabrocki (1962, 1969, 1980). The theory of diacrisis is also known under the name of distinctive morphology (Bańczerowski 2001a, b).

The starting point for Zabrocki's theory was a critical review of the "Prague School" concept of the phoneme, where this concept was mainly defined in terms of distinctive function. According to Zabrocki this distinctive function is performed in language by segments not necessarily corresponding to a single segment but to units which are sequences of such segments (Awedyk / Hamans 1992: 217–218).

Zabrocki does not define what he means by distinctive function. However, from the examples he presents it becomes clear that he wants to indicate the phonemic differences and similarities between two segments or words that serve to distinguish these segments or words from each other. To identify the perceptual differences and similarities between two language forms he compares members of a "diacritical paradigm" (a list of words with similarities), such as the Polish word lists in (1) or the English examples in (2). Both lists, which are diacritical paradigms in their own languages, are randomly chosen and are not intended for language comparison. The technique of comparison of items of a paradigm is what Zabrocki calls diacrisis.

1   Polish
    dom 'house'
    łom 'volume'
    prom 'ferry'

    grom 'scrap'
    złom 'thunder'
2 English
    mom
    rom
    prom
    from
    glom

In both paradigms -*om* appears to be the identical part, which is called a 'confusivum' in Zabrocki's terminology. The different parts, *d-, m-, ł-, pr-, gr-, zł-* in (1) and *m-, r-, pr-, fr-, gl-* in (2) are called "diffusiva". Confusiva, and also diffusiva, can be word-initial, word-final or can appear in intermediate positions. They also may be discontinuous, as in the pair sl*acke*r – sn*appe*r (confusiva are italicized).

For the word-formation processes under discussion mainly word final confusiva play a role. In blending, however, there is also a role for word initial confusiva. According to Zabrocki, confusiva have a certain psychological reality, which is evident in the case of word final confusiva since they enable people to rhyme. Through this similarity of confusiva, people recognize identical segments in linguistic forms, even in cases where there is no formal or historical relationship between these forms. As will be shown in the remainder of this contribution, speakers often reinterpret new forms on the basis of such recognized confusiva.

For the sake of completeness, confusiva may be morphemes or syllables but this is not necessary. As the confusiva in (1) and (2) show they may as well be non-morphemic or non-syllabic. Coincidence of a confusivum with a formal linguistic boundary is accidental.

Die Grenzen der Diffusiva und Konfusiva können zufällig mit den Grenzen der semantischen und der grammatikalischen Morpheme übereinstimmen, wie im Falle Viel*heit*: Krank*heit.* Das ist aber nur reiner Zufall,

kein Prinzip! Die Grenzen zwischen den Diffusiven [sic] und den konfu-
siven Elementen sind völlig unabhängig von den Morphemgrenzen der
lexikalischen und grammatikalischen Morpheme.[2] (Zabrocki 1980: 107)

3 Suffix reinterpretation[3]

Zabrocki (1980: 108) shows how recognition of a confusivum led to a new Ger-
man suffix -*ling* based on the original suffix -*ing*.[4]

> Die Grenzen zwischen den Diffusiva und den Konfusiva können sich
> sogar stärker als die morphematischen Grenzen erweisen. Das beob-
> achten wir bein Aufkommen von neuen Suffixen. In dieser Weise ent-
> wickelte sich z.B. im Deutschen das Suffix -*ling*. Nach dem Muster *edeling*:
> *wihseling* "filius suppositus": *smerling* ['nobleman'- 'changeling'-'falcon'
> ch], wo wir ein Konfusivum -*ling* haben, das nicht mit dem morphema-
> tischen Suffix -*ing* übereinstimmt, entstand ein neues Suffix -*ling*.

> Die Grenze der distinktiven Morpheme erwies sich somit als stärker
> gegenüber der morphematischen Grenze.[5] (Zabrocki 1980: 108)

This process of suffix reinterpretation, which leads to new suffixes, or
perhaps more precisely to allomorphs, is not restricted to early stages of

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2 The boundaries of the diffusive and confusive elements may accidentally coincide
with the boundaries of semantic and grammatical morphemes, as in *Vielheit*:
Krankheit 'multiplicity: disease'. But that is just a coincidence, not a principle! The
boundaries between diffusive and confusive elements are completely independent
from the morpheme boundaries of lexical and grammatical morphemes.

3 For a much more detailed analysis of suffix reinterpretation see Hamans (2021b:
29–88)

4 A development of -*ling* from -*ing* following a preceding segment ending in *l* is gen-
erally accepted, although different terms are used for this merger (Fuhrhop 1998:
63–64).

5 The boundaries between diffusive and confusive elements may even prove to be
stronger than morphemic boundaries. This is something one may see in the emerg-
ence of new suffixes. In this way for instance the German suffix -*ling* developed.
Following the pattern of *edeling*: *wihseling* "filius suppositus": *smerling* ['noble-
man': 'changeling': 'falcon'], where one may distinguish a confusive element -*ling*,
which does not correspond to the morphemic suffix -*ing*, a new suffix emerged: -
ling. In this way, the boundaries of the distinctive morphemes turned out to be
stronger than the morphemic boundaries.

languages. It can still be found in contemporary English, as in (3), (4) and (5). It should be noted in this and the following examples that it is not claimed that the data presented here occurred in exactly this chronological order. The examples are presented to make it clear how the development could have gone.[6]

3 Suffix *-cide*
homicide
suicide
patricide
confusivum *-icide*

4 Suffix *-icide*
aborticide
Sparticide
adulticide
confusivum *-ticide*

5 Suffix *-ticide*
hospiticide
scabieticide

What happened here is similar to what Zabrocki describes for *-ing/-ling*. Speakers with knowledge of classical Latin may realize that *homicide* comes from a Latin form *homicidium*, which is derived from *homo*, gen *hominis* 'man' and a suffix *-cidium* meaning 'slaughter'. The words *suicide* and *patricide* exhibit a similar origin. However, a naïve speaker of English recognizes a common segment *-icide* in the three forms presented in (3), even though *-icide* does not have any morphological status. As a result of this recognition, speakers assume that this segment must have a certain status and thus meaning, which of course is an instance of reinterpretation or reanalysis. Subsequently they introduce *-icide* as a new suffix or as an allomorph in forms such as the ones in (4). A similar development then takes place in the transition from (4) to (5).

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6 These and other examples, unless explicitly stated otherwise, are taken from the *Oxford English Dictionary* (OED), or from the literature on the phenomena discussed.

Suffix reinterpretation as shown in (3)–(5) is not an isolated case. Two more English examples will do to show how productive this process is.

6   Suffix *-logy*
biology
geology
cryptology
anthropology

7   Suffix *-ology*
algology
dialectology
Kremlinology
boozology

8   Suffix *-cracy*
democracy
autocracy
theocracy
monocracy

9   Suffix *-ocracy*
meritocracy
dollarocracy
teamocracy
mobocracy

In either case, a speaker with knowledge of the classical languages can segment the words of (6) and (8) and determine the original suffix, which is *-logy* from Gr. *logos* 'word' and *-cracy* from Gr. *kratos* 'authority', respectively.[7]

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7   This may be the reason that Bauer et al. (2013: 454–456) treat *-logy* as a neoclassical final combining form, that requires a connecting vowel, *-o-* in this case, when the preceding segment ends in a consonant. Therefore, they do not want to call *-ology* a suffix or an allomorph of a suffix. This analysis is not followed here since Bauer et al. miss the generalization that the same process takes place here as in the case of *-ing — -ling*, forms, that do not have a neoclassical background. In addition, Bauer et al (2013) cannot explain the insertion of *-t-* in *hospiticide* and *scabieticide*, since they can only assume a suffix *-cide* and a linking vowel *-i-*. An anonymous reviewer adds that in English, too, *-iform* has become a word-formational element of its own,

Speakers without such knowledge, however, simply recognize common segments without any morphological status, the confusiva *-ology* and *-ocracy*, which led to the new suffixes or allomorphs *-ology* and *-ocracy*. The moment these last forms can be used productively, they naturally acquire morphological status.

Incidentally, an educated background offers no guarantee against suffix reinterpretation. In scholarly French[8] of the 17th and 18th centuries one finds forms such as *filiforme*, 'filiform', 'wiry', later 'skinny', and *vulviforme*, 'vulva-shaped', in which given the Latin root words *filum* and *vulva*, resp. French *fil* and *vulve*, the *-i-* must be part of the suffix. This *-i-* originates from a confusivum *-iforme*, which must have been recognized and reinterpreted in words such as *pluriforme*, *cubiforme* and *plexiforme*, where *-i-* morphologically belongs to the first part. Similar examples are *algivore*, from Fr. *algues* 'algae', and *aérivore*, from Gr. *aero* 'air', where the vowel *-i-* did not belong to the first part either. The new suffix *-ivore* must be a result of recognition of a confusivum followed by reinterpretation of forms such as *omnivore* and *carnivore*. The suffix *-ivore* still appears to be productive as the example *veggivore* from Fr. *végan* 'vegan' show.

As shown by the example *-ing/-ling*, presented by Zabrocki, the process of recognizing of a common segment in a series of similar forms followed by reinterpretation is not restricted to neo-classical word formation. An example from Dutch, where one finds two interrelated suffixes *-lijk* and *-elijk*, will demonstrate this.

The suffix *-lijk*, OD *-līk*, OHG *-līh* and OE *-līc* (ME. *-ly*) (Marchand 1969²: 329; Schmid 1998: 95–105) is an adjectival[9] suffix, which is already attested in

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as seen from e.g. *acneiform*, where the *-i-* cannot really be considered a linking vowel, the word *acne* already ending in a vowel.

8   Examples from www.lalanguefrancaise.com/dictionnaire and www.dictionnaire-academie.fr.

9   See for a fairly complete description of this suffix in Modern Dutch, De Haas / Trommelen (1993: 294–300). De Haas and Trommelen aim at presenting an analysis of the alternation between *-lijk* and *-elijk* in Modern Dutch on the basis of syllable structure and stress. They must, however, conclude that the distribution is not fully predictable or complementary (De Haas / Trommelen 1993: 298).

Old Dutch of the tenth century, as a suffix attached to nouns, and in Early Middle Dutch, as a suffix attached to verbs and adjectives as well.[10]

10	*eerlijk* 'honestly'	<	*eer* 'honour'
	lelijk 'ugly'	<	*leed* 'sorrow'
	vrolijk 'cheerful'	<	*vro* 'merry'

In Middle Dutch, MD, the suffix was rather productive and led to examples such as (11) and (12).

11	*eindelijk* 'finally'	<	*einde* 'end'
	dege(r)lijk 'solid'	<	MD *dege* 'prosperity'
	redelijk 'reasonable'	<	*rede(n)* 'mind'
12	*kennelijk* 'apparently'	<	*kennen* 'to know'
	sterfelijk 'mortal'	<	*sterven* 'to die'
	lijdelijk 'passively'	<	*lijden* 'to suffer'

The nouns that form the basis for the suffixed adjectives under (11) all end in a schwa. Since final *-n* is not pronounced in Dutch (verbal and plural) endings, the verbs which are the starting point for the forms under (12) also end in a schwa. As a result, all the examples in (11) and (12) share a common ending or confusivum *-elijk*. Small wonder, therefore, that forms with a new suffix or allomorph *-elijk* are found in Early Modern Dutch, seen for example in the three adjectives chosen from many in (13) and three adverbial forms in (14).

13	*gemakkelijk* 'easy'	<	*gemak* 'comfort'
	dadelijk 'immediately'	<	*daad* 'deed'
	heimelijk 'secretly'[11]	<	*heim* 'house'

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10   Data and dates of attestation from Sijs (2010), the digital collection of all Dutch etymology dictionaries and publications.

11   Originally 'familiar' or 'domestic'.

14 *wijselijk* 'wisely' < *wijs* 'wise'
  vrijelijk 'freely' < *vrij* 'free'
  hogelijk 'highly' < *hooh* 'high'

These data and their dates of first attestation show that suffix reinterpretation based on a confusivum that differs from the original suffix is

- based on recognition of common segments followed by reinterpretation
- not limited to opaque neo-classical formations
- a process that not only occurs in contemporary language use but is part of the normal repertoire of word-formation processes that serve the language user past and present.

4 Clipping

Clipping or templatic truncation is a much understudied phenomenon in morphology: "there is no morphological theory that explicitly includes templatic reduction in a principled fashion" (Alber / Arndt-Lappe 2012: 291). In general, it can be said that clipping creates new words by shortening longer ones (Kreidler 1979).[12] Marchand (1969²: 441–448) designs a taxonomy of different formal types: back clipping (*nips* from *nipples*), fore clipping (*plane* from *aeroplane*) and middle clipping[13] (*script* from *prescription*). Marchand (1969: 446), Plag (2003: 121) and Alber / Arndt-Lappe (2012: 298–299) convincingly argue that back clipping is the most frequent and regular pattern in English. Van de Vijver (1997: 223) confirms this observation for Dutch.

Recently, a new process of back clipping has emerged in (American) English.[14] The first examples which, according to the OED, have been attested since 1910, were disyllabic clipped forms ending in -*o* which came from an original "longer" word.

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12 For a more extensive discussion of clipping and for an overview of the literature on clipping, see Hamans (2021b: 89–97).
13 Middle clipping is a confusing term since it is not the middle part that is truncated but just the two edges. However, middle clipping is the accepted term (cf. Hamans 2021b: 94 fn 9). When the middle part is really deleted, one may speak of median clipping (Jamet 2009: 10).
14 See for more details Alber / Arndt-Lappe 2012, Lappe 2007, Hamans 2012, 2014, 2018b, 2020, 2021b: 89–155.

15   Clipping with final *-o*
psycho < psychopath
homo < homosexual
dipso < dipsomaniac

The language user recognized a common final segment, a confusivum *-o*, in the series of clipped nouns in (15). This is a process of diacrisis as described above. In addition, the language user must also have recognized a common metric pattern in the distinctive paradigm of (15). This pattern is a disyllabic trochee, a stressed syllable followed by an unstressed one. Finally, the language user recognized that these forms refer to human beings, and share an informal register as well as a pejorative meaning.

Subsequently, the language user assigned a morphological status to this common element, introduced it as a sort of a suffix and started to use it productively after words clipped to monosyllabic forms, resulting in trochees such as the ones in (16), which are called embellished clippings by Bauer / Huddleston (2002: 1635–1636) and which, according to the OED, emerged up in the 1930s and 1940s.

16   Embellished clippings with final *-o* (or clipped forms + *-o*)
afro < African
lesbo < lesbian
relo < relative

Formally, the suffix *-o* can occur here because the final form is disyllabic and trochaic. The new forms in (16) follow the model of the original disyllabic clipped forms in (15). The suffix *-o* causes these words to belong to an informal register, possibly sharing a pejorative meaning just as the ones presented in (15).

The development did not stop here. The language user gave up the requirement of clipped form in a following stage, that, according to the OED, became clearly observable from the 1970s onwards.

It appeared to be sufficient if the final form resulted in a recognizable trochee ending in *-o*. Therefore, the starting point can now be a monosyllabic adjective or noun. That is why these examples may be called pseudo-embellished clippings.

17 Pseudo-embellished clippings (or monosyllabic words + *-o*)
sicko < sick
weirdo < weird
kiddo < kid

What happened in examples (15)–(17) is comparable to what happened in the case of suffix reinterpretation. The language user recognized a confusivum *-o* in (15), the words in question not only sharing some formal features but also aspects of meaning and register. Therefore, this confusivum could be reinterpreted as a suffix. In (16) and (17) the former confusivum is used as a suffix, the difference between (16) and (17) being only formal. Clipping to a monosyllabic form is still required in (16), whereas in (17) the starting point for the word-formation process is an existing monosyllabic word.

The data discussed in this section indicate that

- recognition of a common segment must be the first step prior to the development of a new suffix
- during the development of this word-formation process the formal shape of the originally clipped forms is followed. In other words, the word-formation process mirrors the model.

5 Libfixing

The third non-morphemic word-formation process in which recognition plays a role is libfixing. The term *libfix* was coined by Zwicky (2010) and refers to bound segments of opaque structures that do not have any morphological status but that can be "liberated". Traditionally the term *splinter* has been used for such non-morphemic portions of words that have been split off (Bauer et al. 2013: 19, 525). However, since the term *splinter* focuses on the result of the process of splitting and not on the morphological potential of this part, the term *libfix* is preferred here. The final part *-fix* directly shows a relation with affixes and thus with word formation.

There is an essential difference between the two processes discussed before and libfixing. Suffix reinterpretation and embellished clipping are the results of the recognition, and subsequent reinterpretation, of a common segment in the members of a series of forms, whereas libfixing concentrates

on the liberating of a part of only one opaque form. In other words, one opaque form serves as the starting point for a new process of word formation. Nevertheless, recognition plays a role in the formation of libfixes, too.

One can distinguish between two types of libfixing:

- type A based on an apparently compound form
- type B based on a completely opaque base form.

The first type is discussed on the basis of some examples mostly taken from Marchand (1969²: 211–213). Examples (18) and (19) show libfixes of type A.

18 *landscape*
    seascape
    mindscape
    soundscape
    memoryscape
19 *bootlegger*
    booklegger
    meatlegger
    foodlegger
    tirelegger

Landscape was originally an opaque form, borrowed from Dutch to describe a painting representing a natural inland scenery. Speakers of English, however, recognized the part land, a confusivum with the English noun *land*. Thus, they reinterpreted *land*scape and concluded that it was possibly a compound or a derived word, whereby they automatically assigned morphological status and meaning to *scape*. Subsequently, this opened up the possibility for new formations. First the new forms strictly followed the model of *landscape* – with a monosyllabic word as the first part – but over time[15] this condition became weakened as shown by the example *memoryscape*.

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15   According to the OED *landscape* was introduced into English around 1605. *Seascape* has been attested from 1799, *mindscape* from 1930 and *soundscape* from 1968

Bootlegger is also an opaque form. The word *bootlegger* in its original meaning of 'liquor smuggler' and all the other forms of the series presented in (19) are now obsolete[16]. They were used at a time when things were rationed in the US. Apparently, the word *bootleg*, meaning the 'leg of a tall boot' was also a thing of the past. The smuggler's custom of hiding valuable goods in the legs of their sea boots was also lost. From *bootlegger*, therefore, only the meaning of 'smuggler', and in particular of liquor, survived. Consequently, the formal structure of the word became opaque. But the naive language user tried to assign a meaningful structure to it. Although bootleggers did not smuggle boots, the part *boot* was recognized as a noun. Moreover, most likely the language user reinterpreted *bootlegger* as a compound of which *legger* was the head. Thus the meaning 'smuggler' came to assigned to *legger*. Consequently *boot* was considered the modifier that could be replaced by any other equivalent word referring to goods. As the examples in (19) show the new forms strictly mirror the model provided by *bootlegger*.

One may explain the reinterpretation of *landscape* and *bootlegger* as a form of folk etymology but then the productive word-formation process that followed recognition and subsequent reinterpretation is misunderstood.

For the sake of completeness, *-gate* from *Watergate* and *-burger* from *hamburger* also belong to this type of libfixes. Speakers "falsely" recognized parts of a compound in the original forms.

Type B libfixes (20)–(22) are the suffix-like segments Zwicky (2010) focuses on. The first difference between type A and type B libfixes is that type B forms are consciously segmented by language innovators, whereas the segmentation in type A libfixes is a matter of "false" recognition comparable to the unconscious recognition in the case of suffix reinterpretation and (embellished) clipping. Secondly, neither the segmentation of libfixes *-(p)ocalypse, -iversary* and *-(ma)geddon* nor that of the non-liberated segments, e.g. *a-, ann-* and *ar-* rely on diacrisis. None of these segments has anything in common with other relevant words. The original words are simply consciously segmented by a language user into two parts as if they were not opaque but the

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onwards. *Memoryscape,* referring to a presentation form of oral history, was coined so recently that the word has not yet been included in the OED. The first references on the internet date from 2009 and 2010.

16   The last recorded occurrence of the word *bootlegger* in this meaning in the OED dates from 1889.

result of a word-formation process. Subsequently, the final part, the libfix, started to be used as a possible suffix-like formative.

20 *-(p)ocalypse*
    apocalypse
    snowpocalypse
    heatpocalypse
    Trumpocalypse
21 *-iversary*
    anniversary
    monthiversary
    blogiversary
    friendiversary
22 *-(ma)geddon*
    Armageddon
    snowmageddon
    carmageddon
    Obamageddon

However, the data in (20)–(22) show that the language user still relates the libfix to the original form, which also is a form of recognition. Because the libfix shares a maximal or almost maximal confusivum with the original form, using this libfix triggers the original form in the mind of the language user. This mirroring is a clear form of searching for recognition. After all, not only the meaning of the original word has been transferred to the libfix but also the original syllabic and especially metric form have been copied into the new formations. For instance, *-pocalypse* can only take an unstressed monosyllable as its first part. *Obamageddon* seems to be an exception to this copying rule just as *orgasmageddon* because the inserted first parts consist of two syllables. However, the extra initial syllable, *o-* or *or-*, is unstressed. Thus, the original stress pattern is maintained. Therefore, the stress shifts to the second syllable of *atom-* in a similar example such as *atomageddon*.

The two forms of libfixing discussed in this section confirm

- the importance of recognition in these non-morphemic processes of word formation

- the mirroring of the model they are "liberated" from by productively used libfixes.

6 Blending

The fourth non-morphemic word-formation process to be discussed here is blending. Traditionally blending is considered a highly unsystematic and irregular form of word creation and therefore not even part of morphology (Bauer 1988: 46–47, Haspelmath 2002: 25, Booij 2005: 20–21). The background for this rejection, of course, lies in the fact that morphology traditionally only covers morphemic word-formation processes and therefore cannot accommodate non-morphemic ones. Since blending, as e.g. Cannon (1986: 725, 737) shows, is a universal process and a process of all times (Koziol (1972²: 42), which is increasingly practiced in contemporary English (Ayto 2003: 185), blending can no longer be dismissed as unimportant, as Spencer (1991: 461) still did. It is better to try to see through the apparent irregularity and unpredictability. Due to limitations of space, only a few remarks will be made about blending. This is all the more so since blending, unlike the three processes discussed above, is more important as a word-formation process for synchronic word formation than for language change. Especially, since quite a few blends do not last long and disappear as soon as they go out of fashion. Several blends are also minted for occasional use only. However, since recognition is an essential aspect of blending some consideration must be given to it here as well.[17]

Lexical blending may be defined as "a word-formation process that combines two or more source words into a single form, called 'blend', losing some phonological material in the process" (Moreton et al. 2017: 349). The length of this phonological material can differ, as the data in (23) and (24) show. That is why blending is often seen as unsystematic and unpredictable. In (23) the lost phonological material consists of phonemes whereas in (24) blending affects syllables.

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17 For a much more detailed analysis of blending see Hamans (2021b: 157–238, 2021a).

23	*smog*	<	*smoke + fog*
	brunch	<	*breakfast + lunch*
	glamping	<	*glamourous + camping*
24	*Danglish*	<	*Danish + English*
	Oxbridge	<	*Oxford + Cambridge*
	stagflation	<	*stagnation + inflation*

Despite this apparent irregularity, it can be established that blend formation follows a set pattern. Blends consist of parts of two source words, sw1 and sw2. Blends consist of the first part of sw1 and the final part of sw2 (Plag 2003: 123):[18]

> 25   *advertisement + editorial*   >   *advertorial*

Blends also exhibit a head, as seen, for example, the Dutch blend *potel* or the German *Sportel* or the English *malware.*

> 26   *(de) Polen + (het) hotel > (het) potel*
> 27   *(die) Sport + (das Hotel) > (das) Sportel*
> 28   *malicious + software > malware*

In all three examples sw2 appears to be the semantic head. A *potel* is a hotel for Polish immigrant workers, just as a *Sportel* is a special hotel for sportsmen and *malware* is software that is designed to damage computer hardware. Sw2 is also formally the head. In (26) *potel* takes the neuter gender (*het*) of *hotel*, just as the number (singular of *hotel*, whereas de *Polen* is plural). Also *Sportel* takes the gender of sw2. In (28), *malware* takes the part of speech of sw2, which is a noun, whereas sw1, *malicious*, is an adjective.

In addition, blends take the stress pattern of the second source word.

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18   Examples such as *sitcom*, from *situation comedy*, *midcult* from *middle culture*, *biopic*, from *biographical picture*, and *cyborg*, from *cybernetic organism*, seem to contradict the AD pattern presented here, since they take an AC structure. However, AC forms exhibit the stress pattern of compounds, whereas AD blends follow the stress pattern of sw2. Therefore AC forms are better described as stub compounds or clipped compounds, compounds of two clipped words (Hamans 2018, Hamans 2021a: 202–208).

29 sw1 + sw2   blend
mótorist + hotél   *motél*
flústered + frustráted   *flustráted*
prestígious + dóminant   *préstinant*

Blends also copy or mirror the syllabic pattern of sw2. In other words, as much syllabic material as is deleted from sw2 must be inserted from sw1.[19]

30 sw1 + sw2   blend
smoke + fog   *smog* (onset deleted of sw2)
Danish + English   *Danglish* (empty onset and nucleus of sw2 deleted)
Oxford + Cambridge   *Oxbridge* (σ (=syllable) deleted of sw2)
prestigious + dominant *prestinant* (σ deleted plus onset following σ of sw2)
advertisement + editorial *advertorial* (σσ deleted from sw2)

The data in (30) show how the process of blending works. It starts with the head, which is sw2. Since sw2 provides the final part of the blend, blends apparently follow the same right-head rule as compounds do. Since the blend takes the stress pattern of sw2, the stressed syllable of sw2 must be part of the blend. However, the segmental content of this stressed syllable may be deleted, as in *Danglish* and *Oxbridge*. In effect, this means that the syllabic skeleton of sw2 remains. Finally, the slots of sw2 that have become empty through deletion must be filled with corresponding syllabic material of sw1, such as an onset or an onset plus a nucleus or one or more syllables.

When language users produce a blend, whether they do this consciously or unconsciously does not seem to matter, they take a sw2, delete unnecessary parts but still keep the original structure of sw2 in mind to fill the empty slots with corresponding material from sw1. In order to understand the newly coined blend the listeners must recognize sw2 as the structural model of the new word. Subsequently, they must be able to recognize sw1 from the often

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19 For a discussion of a very small group of exceptions to this rule, see Hamans (2021b: 228–230, 236).

very short first part of the blend. Basically they need to recognize first the confusivum in sw2 and then the confusivum in sw1.

What is most important to conclude about blending in the context of the analysis presented here, besides the fact that the process is clearly pattern-driven, is

- that the second source word functions as a model for the blend structurally and prosodically
- which means that sticking to this model is essential during the word-formation process
- this implies a form of continuous implicit recognition of the model by the language user or, in other words, keeping in mind a possible confusivum with sw2
- ultimately, the blend must also contain sufficient material to recognize sw1 or, in other words, a confusivum large enough to recognize a formal link with sw1.

Blends can lead to new suffixes, such as *-holic* from blends with *alcoholic*, or *-athon* from blends with *marathon*. In these cases, a process has operated that corresponds to libfixing type A, following blending.

7 Analogy and reinterpretation

One may question whether Zabrocki's theory of diacrisis and especially the extension of his theory to word-formation processes as presented here should not be considered as a form of analogy. If one understands analogy as looking for patterns, then diacrisis is a prime example of analogy. As Fischer (2010: 284) puts it in her discussion of analogy: "Pattern-finding begins in animals and humans with an awareness of iconic relations (similarities and differences) between one object and another, and with learning the indexical relation between and object and its function/use (…). In a next stage, the *repeated correlation* between an object and its use leads to a higher-order level of iconicity and indexicality." The process Fischer describes here is similar to the process of diacrisis that naïve speakers of a language use. This is what analogy in its broad sense means: association of information in the brain (cf. Hofstadter / Sander 2013). Diacrisis – and especially the notion confusivum –

operates in this way: it relates and associates similar language strings in the brain of naïve language users.

In linguistics, the term analogy, however, is normally used to describe proportional relations between language forms. Although there is always a cognitive process underlying these proportional relationships, the emphasis is still on structural relationships. This study focuses on the language users and their intuitive recognition of shapes and patterns. Hence the term analogy is avoided.

The analysis presented above also shows what the difference is between recognition and reinterpretation or reanalysis. Recognition precedes reinterpretation; recognition is a purely cognitive action whereas reinterpretation/reanalysis focuses on assigning structure.

8 Conclusion

The analysis of the four processes of non-morphemic word-formation processes shows how they rely on recognition, either recognition of similar forms or of an original form. This proves how important recognition is for non-morphemic word formation. Since these processes lead to new word-formation patterns, recognition also appears to play a so far barely accepted prominent role in language change. The analysis presented here aims to highlight a cognitive factor such as recognition as one of the driving forces behind language change alongside known structural factors, incomplete intergenerational transmission, language contact, language variation and prestige.

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