The productivity of blending: linguistic or cognitive? Or how to deal with 'administrivia' and 'ostalgia'

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The productivity of blending: Linguistic or cognitive?  
Or how to deal with administrivia and nostalgia

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1. Introduction

Morphological processes are usually rule-governed and, therefore, more or less regular. Blending, however, seems to be rather irregular as is illustrated by some classical examples of blending or portmanteau words.

(1)  
\[ \text{brunch} < \text{breakfast} + \text{lunch} \]
\[ \text{smog} < \text{smoke} + \text{fog} \]
\[ \text{Chunnel} < \text{Channel} + \text{tunnel} \]

In these forms, the first segment or cluster of the first word is combined with the final part of the second word, although a form like chunnel can also be explained as a combination of the whole consonantal skeleton of the form channel plus the vowel of the word tunnel.

In the words under (2) the source words seem to have been analysed as quasi-compounds, which are composed of possible words or morphemes that subsequently form the building blocks of new “compounds”:

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1 Pieter Seuren was kind enough to comment upon an earlier draft of this article, which has resulted in quite a few improvements.
But there are also examples of blends in which one of the source words remains unaffected. In (3), a few such French “mot-valises” are given:

(3)  
\begin{align*}
\text{franglais} & \quad < \quad \text{fr(ançais)} & + & \text{anglais} \\
\text{cochonglier} & \quad < \quad \text{cochin} & + & \text{(sa)nglier} \\
\text{partitocratie} & \quad < \quad \text{parti} & + & \text{(aris)tocratie}
\end{align*}

Sometimes the “clipped” part turns out not to be stable:

(4)  
\begin{align*}
\text{(a) administaff} & \quad < \quad \text{admini(stration)} & + & \text{staff} \\
\text{(b) administrivia} & \quad < \quad \text{adminis(tration)} & + & \text{trivia}
\end{align*}

Although the fourth syllable of both examples starts with a cluster \(st(r)\), this cluster is not the result of the same process of truncation. In the source word administration of (4a), truncation takes place at the right boundary of the third syllable, whereas in (4b) division applies in the onset of the fourth syllable. It is only after resyllabification that the first “parts” of administrivia and of administaff seem to have the identical form admini-.  

There are even examples in which it looks as if some material has been deleted without anything have been put in its place, as in the German portmanteau word

(5)  
\begin{align*}
\text{(a) } \text{Ostalgie} & \quad (N)ostalgie \\
\text{(b) } \text{Ostalgie} & \quad < \quad \text{Ost} & + & (Nost)algie
\end{align*}

This analysis, however, cannot be correct because it does not explain why the word \textit{Ostalgie} refers to the former DDR, East Germany, ‘Ost Deutschland’. Therefore, \textit{Ostalgie} should be analysed as:

(5)  
\begin{align*}
\text{(b) } \text{Ostalgie} & \quad < \quad \text{Ost} & + & (Nost)algie
\end{align*}

Presumably, the word became so successful because of the phonological and/or graphemic similarity of \textit{ost} and \textit{nost}. On this evidence one is inclined to conclude that blending is indeed fairly irregular.
2. Paradigmatic productivity

Yet blends prove to be productive, a fact that requires at least a certain amount of regularity. *Ostalgie*, for example, did not stop at the German borders. *Ostalgia* is attested for English as early as 1993. The form, or the variant form -*stalgia*, became more or less productive in examples like:

(6) *technostalgia*

*nanostalgia* (nostalgia for an event that has only just occurred)

*Yugostalgia*

*Yugostalgia* has been attested in Italian, French (*Yougostalgie*), and in Dutch (*Joegostalgia*).

Perhaps these few forms have not yet achieved the degree of frequency necessary to claim a productive pattern or paradigm, but even so they may be compared to examples like:

(7) *netware*

*tofuburger*

*votegate*

or:

(8) (a) *edutainment*

*schockumentary*

*Londonistan*

The examples in (7) belong to paradigms, which suggests a certain degree of regularity:

(7) (a) *hardware*

*software*

*netware*

*adware*

(b) *hamburger*

*cheeseburger*

*veggieburger*

*tofuburger*

(c) *Watergate*

*Camillagate*

*zippergate*

*votegate*
Although the examples under (7) are traditionally treated as blends, Frath (2005) calls them “composition with a difference”. According to him, forms such as software, hamburger or Watergate are the product of an initial reanalysis. Subsequently, the meaning of the “parent word” was transferred to the final part – that is, to -ware, -burger and -gate, whereby one should note that it is not, of course, the original meaning ‘gate’ that was transplanted but that of political scandal.

Actually what happened here is that a long form such as Watergate or Hamburger (steak) was shortened. Even if the resulting forms are not free forms, they have become generators of series of new formations that have the appearance of compounds. For Frath, this is sufficient reason to describe this type of blends as H-type (Hamburger-type) word creation (Frath 2005: 6):

Why does the literature lump H-types with portmanteaus? Probably because it could be argued that cheeseburger is a portmanteau blend of cheese and hamburger. This argument may hold for the initial creation of the first -burger word (cheeseburger in 1938), but not for subsequent blends. Tofuburger is clearly constructed on burger alone: it does not result from the shortening of tofu-hamburger. […] Yet some portmanteau words are potential H-types, for example sexcapade (drugscapade and boozecapade are conceivable). In that case, the -capade morpheme would be endowed with some semantic autonomy. […] To sum up […] the hamburger series functions in exactly the same way as normal compounds (such as apple pie and green belt). The only difference is the morphemisation of burger.

And again (Frath 2005: 7):

H-types are constructed on a polysyllabic parent word by semantic reanalysis, segmentation and morphemisation, and transfer of meaning to the last part and paradigmatic permutation of the first part. In some cases the last part is an existing noun, such as in software, or Watergate. In other cases, a folk morphemisation takes place, as in sequel, hamburger or literati. In both cases the last part of the parent word carries the meaning of the whole and serves as a basis for the new series.

On this evidence it looks as if one should distinguish between blends tout court, which are not part of a productive pattern and a special kind of compounding in
which the first one or more items of the paradigm are a result of blending and function as a model for normal productive word formation after reanalysis.

3. *Entertainment*

Hamans (2006) discusses examples such as those in (8). Although these examples are usually considered to be pure blends, a certain degree of productivity does play a role. For example, *shockumentary* appears to be an unproblematic blend of *shock* + *documentary*. It resembles the type of blending summed up under (3). But next to *shockumentary* there is a form *mockumentary*, from *mock* + *documentary*. Perhaps we had better described these forms as compounds from *shock/mock* + -mentary, where -mentary is the remaining, reanalysed part after *documentary* has been clipped to *docu*, as in *docudrama, docusoap, documusical* etc. It is also possible, however, that the identical part -o(c)kumentary is essential and is responsible for the rhyming puns.

(8) (b)  
\[
\begin{align*}
documentary \\
mockumentary \\
shockumentary
\end{align*}
\]

In that case, these examples are more reminiscent of the *brunch*-type of blends under (1) than of the *franglais*-type of (3).

*Edutainment* can be described as a blend of *education* + *entertainment*, but *edutainment* is not an isolated case. There is a whole list of -tainments:

(9) (a)  
\[
\begin{align*}
infotainment \\
militainment \\
ecotainment \\
meditainment \\
spiritainment \\
relitainment
\end{align*}
\]

and even:
The examples in (9b) suggest that the -tainment forms are instances of H-type blending and behave like compounds of a noun (web) + a morphemised final part, whereas some words of (9a) still look like blends of two nouns.

Other examples such as those in (9c) suggest that the resultant form is derived from a combination of an adjective and a head noun, which may be a shortened form:

Whether one should call this kind of process a blending process or “composition with a difference” is not clear. If one wants to describe the -tainment examples as instances of H-type composition one should accept that -tainment has a certain independent morphological status, just as -capade in the examples of Frath.

So far we have seen that clear-cut blends may give rise to a more or less productive process of word formation. We may call the starting point of such a process “creative” in that it implies a conscious process of word coining. In subsequent stages, however, the process is clearly no longer fully conscious and slips into the unconscious process of normal, productive word formation.
4. Europistan

The Londonistan example under (8) may be described as a normal blend, just as the Dutch literary neologisms in (10).

(10) Vertalië (a country of translators) from vertalen (translate) + Italië (Italy)

Poehazië (a country of hoo-ha) from poeha + Azië/Abchazië (Asia/Abchazie)

Londonistan may thus be a blend of London plus, say, Pakistan. But since there is a whole list of -istans / -stans it seems more adequate to describe the Londonistan paradigm as an instance of H-type blending.

Most of these words share a meaning ‘centre of a supposedly fundamentalist Muslim population’, as in (11b), but there also exists an older form, especially, but not only, in Dutch, with a meaning ‘unknown primitive country where strange habits and rules govern over daily life’ as in (11c). Stan itself seems to be an old but well known Persian, Urdu and Hindi form meaning country, which was already used to coin the neologism bantustan (‘homeland’, ‘tuisland’) in South Africa during the 1940s.

(11) (a) -istan -stan
Pakistan Kazachstan
Afghanistan Dagestan
Turkmenistan Hindustan (India)
Kurdistan Bantustan
Lechistan (old Turkish form for Poland ‘country of Lech’)

(b) Islamistan Hamasstan
Londonistan Hezbollahstan
Europistan
Hollandistan

(c) Bizaristan Homostan (Holland)
Absurdistan
Verweggistan (Faraway-istan)
Hakkiafistan (Cut off-istan)
Boerepummelistan (Dumbfuckistan)
Even blends that are at first sight clear-cut and unique \textit{ad-hoc} formations, such as the neologisms under (10), may become part of a pattern or a paradigm that is formed consciously, as in (12). This makes it less obvious that two kinds of blends must be distinguished.

\begin{itemize}
  \item \textit{Vertalië} ‘country of translators’ (Dutch \textit{vertalen} ‘translate’)
  \item \textit{Betalië} ‘country where you have to pay for everything’ (Dutch \textit{betalen} ‘pay’)
  \item \textit{Herhalië} ‘country where you have to repeat everything’ (Dutch \textit{herhalen} ‘repeat’)
\end{itemize}

As Hüning (2000: 125) has shown in his discussion of \textit{-gate} cases, a possible productive word formation process may arise from one word or one name only, such as \textit{Vertalië}.

Kastowsky (1982), following Motsch, suggests that one should go back to Herman Paul’s notion of proportional analogy to explain this kind of word formation. On the basis of examples such as \textit{seascape} from \textit{landscape} or \textit{foodlegger} from \textit{bootlegger} or \textit{autocode} from \textit{cavalcade}, he concludes (Kastowsky 1982: 194):

[These forms] are coined in direct analogy to some existing formation. […] If the number of such analogical formations increases and if one constituent loses some of its semantic specificity, such analogical patterns may eventually develop into a rule.

This is how he accounts for new formations such as those in (12a):

\begin{itemize}
  \item \textit{landscape} \textit{bootlegger} \textit{cavalcade}
  \item \textit{seascape} \textit{foodlegger} \textit{autocode}
  \item \textit{cloudscape} \textit{meatlegger} \textit{camelcade}
  \item \textit{earthscape} \textit{tirelegger} \textit{motorcade}
\end{itemize}

etc.
5. Motel

As we have seen, the rationale for the distinction between real blends and compounds using clipped material or reanalysed morphemes lies in different degrees of paradigmatic productivity. However, it appears that almost every blend or reanalysable form (cp. 12a) may be used as a model for neologisms.

In Dutch, for example, the classical and unique blend *Chunnel* has served as a model for the nickname of another tunnel, *Grhunnel*, which is the TGV tunnel under the so called Groene Hart (“Green Heart”), the grass lands in the centre of the province of Zuid Holland, not far from The Hague. It can definitely not have been the word *tunnel* which was at the basis of this new formation. The graphemic form makes it clear that *Chunnel* was the point of departure, not only because of the capital letter but also because of the otherwise inexplicable *h* in the spelling of the word. There is no *h* in either the Dutch word *groen* (green) or the word *tunnel* (though the *h* may have been inserted because of the word *Hart*, ‘heart’).

In addition, we note that a well-known example such as the undisputed portmanteau word *motel* has already generated a paradigm (cp. Hamans 1988, 1993):

\[
(13) (a) \begin{array}{ccc}
\text{motel} & < & \text{motorist} & + & \text{hotel} \\
\text{bo(a)tel} & < & \text{boat} & + & \text{hotel} \\
\text{apartotel} & < & \text{apartment} & + & \text{hotel} \\
\text{scoutel} & < & \text{scout} & + & \text{hotel} \\
\text{stutel} & < & \text{student} & + & \text{hotel} \\
\end{array}
\]

Therefore, being of a quasi-compound nature, such as *hamburger* or *hardware*, is not the only relevant factor in the coming about of productivity.

A further factor that counts is the question of whether the form of the blend resembles the source words to a sufficient degree for the original meaning to be recoverable. When the form of the blend immediately suggests a part of the original meanings, the blend may be used as a model for new coinages. The degree of similarity with the original form or the possible recoverability of the original also plays a role. Perhaps emergent productivity of a given class of blends requires not only a certain frequency or popularity but also a sufficient degree of semantic transparency so that the original source words are still recognisable or understood.
as expressing their meanings. This condition is fulfilled in the case of motel. The formal relation with hotel is clear because of the rhyme of -otel. And although few will be acquainted with the fact that the m- is taken from motorist, the word is so widely known that everybody realises that motel is a special type of hotel along motorways. More such formations referring to special types of hotel may thus be coined according to this formal and semantic pattern.

The word hotel resonates in motel. Therefore, the rhyming part -otel is formally and semantically so closely related to hotel that all new forms ending in -otel will automatically be associated with hotel.

The Dutch word zotel must therefore be a kind of hotel. Actually, it is a blend of ziekenhuis (‘hospital’) and hotel, although the initial z- is by itself too small to evoke the word ziekenhuis directly and automatically. Yet all native Dutch speakers know that the first elements in the blends of (13b) are meant to select a special category among hotels.

\[
(13) \quad \text{(b)} \quad \text{motel} \\
\quad \text{botel} \\
\quad \text{rotel} \\
\quad \text{zotel}
\]

In bo(a)tel there is also a certain similarity with boat (Dutch boot), which makes its meaning relatively easily accessible. Rotel, with [o], is derived from German rollendes (‘rolling’). This is the name of a coach company which allows passengers on a holiday trip to take their bicycles with them. The reason for carrying this name is no doubt that the company in question expects it to leave a more than fleeting impression on people’s minds. And since most publicity is visual, the graphemic similarity of the initial part ro- with the verb rollen (‘roll’) may well play an additional role.

In zotel the first part itself is too light to be recognisable, so that the meaning of the blend must be made explicit. After a period of frequent use, such a name may become a brand name. When this happens, everybody will know that the z- refers to ziekenhuis, but this requires frequent use by large or influential sections of the population. Clearly, the larger the initial component, the easier the recognition or the recoverability. Fotel (Hamans 1988), for example, will be recognised more easily as a special type of hotel for photographers (Dutch foto) than as a hotel for
cyclists (Dutch fietser). Forms like hospitel or hospotel thus seem to be preferable to zotel because of their larger initial component and thus their higher degree of recoverability.

The forms stutel and scoutel suggest that a “suffix” -tel may have taken over the role of -otel (see Hamans 1988 on -logy/-ology etc.). Perhaps hospitel will have a better chance of survival because of the greater resemblance with hospital.

Just as -otel has a high degree of similarity with hotel, the -tainment forms resemble the source word entertainment. Of course, there are more words ending in -tainment, such as containment, but context and frequency help to interpret -tainment as being related to entertainment rather than to containment.

This raises the question of what is the minimum length of the parts of a blend for them to be recognisable. And also: is there a difference in this respect between the first and the second part? These and other questions have been dealt with by, among others, Beard (1998), Kelly (1998), Plag (2003), Gries (2004a, 2004b, 2004c).

6. Similarity

A certain similarity with the source words is a requirement for a successful blend. In the linguistic or morphological literature the internal structure of blends gets more attention than the comparison with the original forms.

Beard (1998), however, who studies analogical formation, observes that the prosodic structure of the derived forms must be identical with that of the model, the model being the source word of the final part.

(14) (a) editorial advertorial
    alcoholic workaholic
    watergate zipergate

This observation seems to be correct, as is shown by the examples in (14a). Yet this regularity is not absolute, as the examples in (14b) show.
In these examples neither the number of syllables nor the stress pattern is identical with that of the model.

Fradin (2000) and Grésillon (1984) discuss the internal phonological structure of the derived form. They go so far as to claim that a successful blend must contain what they call a “homophonous element”, meaning that the blend must contain a common segment which is an identical part shared by both source words: “nous tenons la donnée du segment homophone pour la condition sine qua non de la formation du mot-valise” (Grésillon 1984: 15).

This might be true for forms like franglais and Chunnel, where one discerns the homophonous or homographic elements [ã–ε] and [-nnel], but it does not hold for Oxbridge and many other cases, where the resulting blend contains an element from both source words, without there being a segment shared between the two component words.

Kelly (1998) notes that the first word represented in blends

- tends to be higher in frequency,
- contains fewer syllables (and is therefore shorter),
- denotes more prototypical category members.

He also notices that the boundary of the two components of a blend tends to fall at major phonological joints, such as syllable, onset or rhyme boundary. There are also breaks at “body-coda” boundaries, but such cases form a minority. Phonemes at the boundary of the blend components tend to be phonologically similar.

As is clear from the way Kelly formulates his observations, there appear to be no absolute rules for the derivation of blends. There are only tendencies, as is again shown by the examples in (15).
The blend coiner blends the identified source words in such a way that
(i) the source words are still recognisable and
(ii) the resulting blend is still sufficiently similar to both source words in terms of
letters, phonemes, length and stress pattern.
It is interesting to note, though, that the degree of recognisability of the source
words interacts with the desire to maximise similarity.

However, the source words do not have to make an equal contribution to the final
result (Gries 2004c: 204):

Shorter words contribute more to the resulting blends [...] and there is a clear
tendency for source word 2 to contribute more to the blend. [...] The two source
words usually contribute different portions of themselves: typically, the first word
contributes its beginning whereas the second word its end.

This, of course, is not an absolute requirement, as the example *modem* shows.
*Modem* comes from *modulator* + *demodulator*. The possible blend *motor* is
probably excluded because of the homophony with the existing form *motor* (cf.
Bauer 1983: 235). The alternative *modor* still resembles the existing word *motor*
too much. Moreover, it goes against the normal formation “rules” of blends since it
takes more elements from source word 1 than from source word 2.

Gries refers to a study by the phonetician Sieb Noteboom (1981) who found
that, in general, a number of $x$ segments at the end of a word make for a better

Gries (2004a, b, c) discusses the similarity between blends (both intentional blends
and speech errors) and their source words. On the basis of sophisticated statistical
analysis he concludes (Gries 2004b: 427):

(15) *brunch* < *breakfast* + *lunch*
    (*breakfast* longer)
*flumpet* < *flugelhorn* + *trumpet*
    (*flugelhorn* longer, less frequent and less prototypical)
*franglais* < *français* + *anglais*
    (both forms disyllabic; *français* more prototypical than *anglais*?)
chance of being recognised than $x$ segments at the beginning. Gries comments (Gries 2004c: 204):

Therefore, it makes sense that, if both source words are equally long, the second word contributes more because this would enhance its recognisability by compensating for the fact that is not processed in the normal way.

Apparently, Gries makes a functionalist attempt at applying information theory to strict linguistic research.

In Gries (2004a: 662), where he compares intentional and speech-error-type blends on the one hand to randomly generated blending forms on the other, his conclusion is that:

on average, both intentional blends and speech-error blends exhibit a much higher degree of similarity to their source words than blends created randomly.

A first conclusion may be, therefore, that there is more system in the formation of blends than has traditionally been thought.

7. Regularity

Ingo Plag, in his *Word-Formation in English*, is one of the few morphologists who study processes of blending carefully. In most cases, morphological theory does not deal with irregular word formation and since blends are considered to be a product of creative, and thus often irregular, processes, morphological handbooks do not pay much attention to blending.

Plag (2003: 122), however, finds “a surprising degree of regularity”. For example:

- the two source words tend to be of the same category, usually nouns;
- most of the source words have the same size, measured in syllables (usually $2\sigma + 2\,\sigma$);
- the initial part of the first source word is combined with the final part of the second source word. In a rule $AB + CD \rightarrow AD$;
– usually the longer element fills the second position, but this may be counteracted by semantic arguments (as the temporal order in \textit{brunch});
– the possible cut in the source words is constrained by prosodic categories. Blends only combine syllable constituents, such as onsets, nuclei, codas, rhymes or complete syllables.

\begin{align*}
\text{(16) (a) } & \textit{boatel} & < & \textit{boa} + \textit{tel} \\
& \text{onset + nucleus} & & \text{final syllable} \\
& b & + & o(a)tel \\
& \text{onset} & & \text{penultimate rhyme + final syllable} \\
& \textit{boat} & + & \textit{el} \\
& \text{complete syllable} & & \text{rhyme} \\
\text{(b) } & \textit{Spanglish} & < & \textit{Spanish} + \textit{English} \\
& \text{onset + nucleus} & & \text{coda + final syllable}
\end{align*}

According to Plag, blends are less irregular than expected, yet there are no strict, categorical rules. The “rules” he gives are only tendencies. There are always exceptions, so that the rules are only descriptive and to some extent even explanatory, but they cannot be used to generate all and only successful blends.

Plag does not discuss the question of similarity with the source words explicitly, but since his combination rule (AB + CD → AD) makes blending a relatively regular process, similarity, and thus also recoverability, play an important but implicit role in his description.

\section*{8. \textit{Glitterati}}

Suzanne Kemmer, who works in a cognitive framework, is one of the more prolific authors on blends (1999, 2000, 2003). Like Grésillon and Fradin, she distinguishes between overlap blends (17) and substitution blends (18).
Kemmer’s taxonomy is a neat enumeration but, like all taxonomies, it does not give much of an explanation. In particular, it fails to touch on the problem of productivity. Quite a few of the substitution examples almost automatically suggest lists of similar examples, as for example *edutainment*, but also overlap blends often function as input for paradigmatic productivity.

As a consequence, one sees *glitterati* listed in (17) as an instance of the category overlap blend, whereas *digerati* in (18b), though clearly derived from *glitterati*, is treated as an instance of substitution, which obfuscates the obvious relation with *glitterati*. *Literati/glitterati* has become a productive (substitution) pattern, in which -(itt)erati operates as -tainment in (9).

(17)  
<table>
<thead>
<tr>
<th></th>
<th>glitter</th>
<th>+</th>
<th>literati</th>
</tr>
</thead>
<tbody>
<tr>
<td>glitterati</td>
<td>&lt; glitter</td>
<td>+</td>
<td>literati</td>
</tr>
<tr>
<td>stalkerazzi</td>
<td>&lt; stalker</td>
<td>+</td>
<td>paparazzi</td>
</tr>
<tr>
<td>popaganda</td>
<td>&lt; pop</td>
<td>+</td>
<td>propaganda</td>
</tr>
<tr>
<td>gayby</td>
<td>&lt; gay</td>
<td>+</td>
<td>baby (baby raised by a gay couple)</td>
</tr>
</tbody>
</table>

(18)  
(a)  
<table>
<thead>
<tr>
<th>lexeme substitution</th>
</tr>
</thead>
<tbody>
<tr>
<td>carjacking</td>
</tr>
<tr>
<td>ranchurbia</td>
</tr>
<tr>
<td>edutainment</td>
</tr>
</tbody>
</table>

(b)  
<table>
<thead>
<tr>
<th>syllable substitution</th>
</tr>
</thead>
<tbody>
<tr>
<td>ginormous</td>
</tr>
<tr>
<td>digerati</td>
</tr>
</tbody>
</table>

(c)  
<table>
<thead>
<tr>
<th>segmental string substitution</th>
</tr>
</thead>
<tbody>
<tr>
<td>smog</td>
</tr>
<tr>
<td>spork</td>
</tr>
<tr>
<td>froghurt</td>
</tr>
</tbody>
</table>

(19)  
| glitterati |
| splitterati |
| clutterati |
| (baby-)sitterati |
| digerati |
Furthermore, Kemmer’s distinction fails to make clear how, for example, reanalysis works in hijacking / carjacking or entertainment / edutainment and the corresponding paradigms.

In Kemmer (2003: 72), a further distinction is introduced between intercalative blends as chortle from chuckle + snort and nonintercalative, or sequential, blends. Gries (2004b: 644) is not convinced by this new distinction:

There are two problems with this distinction: on the one hand, Kemmer states that “[t]here are no intercalative blends in my data that do not also have a possible nonintercalative analysis”, which, if true, raises the question of the explanatory value of this distinction (cf. Occam’s razor). On the other hand, Kemmer undermines her own distinction by citing examples which are in fact intercalative without having a linear analysis, namely chortle and slithy (slimy x lithe).

It will be clear that Kemmer’s work does not add much to the description of blends. Yet her collection of blends is impressive and the arrangement of her numerous data is impeccable. One must also take into consideration that questions of similarity or recoverability are not a central concern in her papers.

9. Cognitive linguistics

Blending or conceptual integration is one of the key words of cognitive linguistics, especially in Turner and Fauconnier’s theory of conceptual blending (e.g. Turner and Fauconnier 1995; Fauconnier and Turner 2002). This theory is meant to apply across the board in human cognition. As far as language is concerned, it is taken to apply equally to the lexicon and to grammar. In grammar, it is taken to be manifest in constructions like He sneezed the napkin off the table. In the lexicon, it is manifest in lexical compounding (e.g. dolphin-safe, shark-safe, child-safe, where the compound’s meaning is not compositionally derivable but the result of conceptual blending). The authors ascribe formations like Chunnel to “a fortuitous accident” (Turner and Fauconnier 1995: 10), since the English word Channel has a phonological segment in common with tunnel. French does not afford such an opportunity, so that French can do no better than tunnel sous la Manche.
Blending in this sense thus encompasses much more than the lexical processes described above. In the words of Janssen and Redeker (1999: 3-4):

Blending [is] the conceptual integration of elements from different domains as found in metaphors, framing effects, and so forth, but also in the simple default mappings involved in the understanding of relational information as in the top of the building or Sally’s father. [...] The conceptual integration (blending) operations proposed in mental space theory [Fauconnier Espaces mentaux 1984] were conceived to explain semantic phenomena [...].

On the website on “Blending and Conceptual Integration”, the founding fathers of blending theory describe their own hypotheses as being crucial for the development of human mind (http://markturner.org/blending.html):

During the Upper Palaeolithic, human beings developed an unprecedented ability to innovate. They acquired a modern human imagination, which gave them the ability to invent new concepts and to assemble new and dynamic mental patterns. The results of this change were awesome: human beings developed art, science, religion, culture, refined tool use and language. Our ancestors gained this superiority through the evolution of the mental capacity for conceptual blending. Conceptual blending has a fascinating dynamics and a crucial role in how we think and live. It largely operates behind the scenes. [...] Blending is a process of conceptual mapping and integration that pervades human thought.

This enterprise is far more ambitious than the simple description of lexical blends. As Frath (2005: 4) rightly comments:

For Turner and Fauconnier (and also for Kemmer), blends are evidence of a more general blending phenomenon which takes place at the conceptual level and which produces lexical and sentential blends. The authors use blends as a way to bypass the compositionalist problem and to account for the link between language and mental representations.

This explains why lexical blends, the examples under discussion in this paper, are not paid too much attention in the Fauconnier-Turner school of conceptual
integration. Nevertheless, their idea that “a blend inherits partial structure from the input spaces [or words], and has emergent structure of its own” (Frath 2005: 4) may well be useful. It might contribute to an explanation of how “old blends” such as motel and infotainment can function as a model for new productive processes without having to go back to the original source words (motorist + hotel or information + entertainment) any more for each new coinage or each new word in a paradigm.

The work and the approach of another scholar in the school of cognitive linguistics, Eve Sweetser (e.g. Sweetser 2006), may also be useful for the discussion of lexical blends. In this intriguing article, Sweetser analyses the rhymes in Cyrano de Bergerac (1897) from the French playwright Edmond Rostand. Although these rhymes do not stand in any direct relation to the types of lexical blends discussed here, Sweetser’s finding that rhyme may relate otherwise unrelated forms is quite useful for the study of blends (Sweetser 2006: 33-34):

[P]artially shared forms are often (though not always) understood to have related meanings. In everyday language, this is the basic principle of morphology: baseball and football each have ball in them, or walks and walked each have walk in them, so they must be related in meaning. In poetics, this is the basis for a semantic interpretation of rhyme. Even morphologically and semantically unrelated words can echo each other’s final phonological sequence in an appropriate way […] and this can be exploited to create formal patterns.

In a way, this is a refinement of Humboldt’s principle that there should be a one-to-one relation between form and meaning.

10. Zabrocki

This brings us to the Polish linguist Ludwik Zabrocki and his theory of distinctive morphology (Zabrocki 1962, 1967; for the work and theories of Zabrocki see Bańczerowski 2001). In Zabrocki’s theory, which actually is an attack against the Prague School of distinctive feature phonology, he develops the notions “confusivum” and “diffusivum”. In short, when one compares lexical forms they may have elements in common, a so called confusivum. The elements which differ
form the *diffusivum*. See, for example, the cases in (20), where the confusiva are in bold

<table>
<thead>
<tr>
<th>(20)</th>
<th>tak</th>
<th>tak</th>
<th>tak</th>
<th>tak</th>
<th>tam</th>
</tr>
</thead>
<tbody>
<tr>
<td>dak</td>
<td>dal</td>
<td>plak</td>
<td>tok</td>
<td>tal</td>
<td></td>
</tr>
<tr>
<td>plak</td>
<td>ham</td>
<td>smak</td>
<td>tik</td>
<td>tap</td>
<td></td>
</tr>
</tbody>
</table>

As the examples show, *confusiva* and *diffusiva* may be discontinuous. In *Channel* and *Chunnel*, for example, the confusive part is discontinuous.

As regards blends, *confusiva* play a specific role, since the *confusivum* is the part shared by the source word and the final word in the blend (*ch–nnel*). The notion *confusivum* is not just a descriptive term: confusive elements have a certain mental or psychological reality, just like rhymes.

In Hamans (1988) it is shown that reinterpretation of suffixes can be explained by using the notion of *confusiva*. In Hamans (1993, 2000) examples such as those in (21) are discussed.

<table>
<thead>
<tr>
<th>(21)</th>
<th>secretaris</th>
<th>secretary</th>
</tr>
</thead>
<tbody>
<tr>
<td>notaris</td>
<td>notary public</td>
<td></td>
</tr>
<tr>
<td>mandataris</td>
<td>trustee</td>
<td></td>
</tr>
<tr>
<td>testamentar</td>
<td>testator</td>
<td></td>
</tr>
</tbody>
</table>

These forms share a *confusivum* -*taris*. These words also share a common semantic aspect, which is that the person named by this word functions in a world of administration, legal affairs and paper work. Therefore it does not come as a total surprise to learn that the administration officers in the Dutch navy are called *taris*.

This process also applies to blend formation. For example, the word *google* is nowadays popular and in frequent use. Almost everybody “googles”. Since there are no words with the same, or approximately the same, phonological or graphemic structure, the part *-oogle* suffices to carry the entire semantic load. According to the description of Plag (2003), the part *-oogle* is a possible word-ending of a blend, so that a form like *froogle* should be easy to process. In fact, *froogle* has already made its appearance. The question is now: what is the meaning of *froogle*? It is most likely that the cluster *fr-* is the onset of a disyllabic word. Since successful
blends tend to maximise their shared elements, chances are that the nucleus of the first source word is /u/. One of the few possibilities is frugal, which indeed turns out to be source word 1, as the meaning of froogle is ‘pick up bargains on the web’.

(22) froogle < frugal + google

Most of the requirements of Kelly, Gries and Plag have thus been fulfilled in the form froogle. Although the source words are not of the same category and are not nouns, the size of the words is the same (2 x 2 σ). The combination follows the structural formation rule AB + CD → AD. The first word has contributed its beginning to the resulting blend, whereas the final part is taken from source word 2. The homophonous /u/ creates an overlap, which makes it difficult to establish which part is the longer, but intuitively one feels that it is most likely that /u/ stems from google, so that the longer element has taken the final position. The cut in the two source words is at phonological junctures or “prosodic boundaries”. In source word 1, the cut falls at the edge of the onset or perhaps at the onset + nucleus. In source word 2, it falls at the penultimate rhyme + final syllable, or maybe only at the edge of the final syllable. There is even a homophonous element /u/.

The word flexicurity can be explained in the same way. The part flexi- forms a confusivum with flexibility and -curity is a confusivum with security. Indeed, the meaning of this current socio-political term is a combination of social security and market flexibility. Actually the former Danish prime minister, now leader of the Party of European Socialists, PES, Poul Nyrup Rasmussen, coined this term and the underlying notion in the early 1990s.

(23) flexicurity < flexibility + security

Here the two source words are of the same nominal category, but their actual size (Kelly) and the size in terms of syllables (Plag) contradict the tendencies stated by these authors. However, the rest of the formation process is in complete conformity with Gries’s and Plag’s claims. The derivation again follows the pattern AB + CD → AD. The first source word contributes its beginning, the second its ending. The second part is longer and takes the right position. Both cuts are at syllabic boundaries.
The formal aspects of blend formation are thus seen not to be completely unpredictable. This also applies to the morpho-semantic aspect in Zabrocki’s theory of distinctive morphology. His theory implies that common segments acquire a certain psychological or semantic reality in the mind of the speaker and can thus function as if they were free forms.

The notion of a *confusivum*, developed already in the 1960s by Ludwik Zabrocki, functions more or less in the same way as the mental space of cognitive linguistics, although for Zabrocki the starting point of the whole process is not a mental concept but a purely formal linguistic element which must, however, have a mental status in the sense that it has some psychological reality, as is shown not only by rhyme and suffix reinterpretation but also by the highly productive processes of blending.

One problem had to remain unsolved here: the question of how long the similar or confusive element must be. As has been shown, it is difficult to give an exact answer. The answer is, of course, “long enough to become recognisable or recoverable”. But how long this is, depends on frequency and context, as the *hotel-botel-zotel* examples of (13) show. It thus appears that the answer is to be sought in non-linguistic factors of general cognition.

**Bibliography**


