

## 22. BLENDING

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### **Abstract**

*In this chapter, the most typical features of blending are first presented and the way they shape the status of blends relative to grammar is discussed. The issue of the phonology of blends, which plays a crucial role in the way their parts are combined, is then addressed. Many of the approaches that have been proposed are discussed and the main conclusion to be drawn is that neither purely categorical nor purely statistical treatments can cope with all the data. Consequently, these approaches must be viewed as complementary rather as alternatives. The various interpretations observed in blends are sorted out and some descriptive proposals are made. The last section aims at disentangling blends from the constructs they are often mixed with.*

### **1. Introduction**

On a first approximation, blends (Ger. *Wortkreuzung*, *Wortverschmelzung*, Fr. *mots-valises*, *amalgames*, It. *parole macedonia*, *incroci*) are lexemes formed by means of fusing two already existing lexemes into a new one, where the stems of the initial lexemes have often been shortened. English *smog* ← *smoke* × *fog* is an example of blend. Blending shares with compounding the fact that it takes two lexemes as bases (rarely more). To that extent, both processes contrast with derivation, which involves one base lexeme only. This proximity makes it worthwhile to undertake a systematic comparison of blending with compounding in order to bring to light the properties that uniquely characterize blending (section 2). In addition, this will allow us to address the controversial issue of the status of blending in relation to grammar (section 3). Insofar as blends are complex linguistic signs, albeit not straightforward ones, the subsequent sections of this chapter will be devoted to each of the dimensions constituting a sign in turn. I refer to (Cannon 1986) for a discussion of terminological issues.

Giving a general, but accurate enough, picture of blending is not an easy task for several reasons. The first one is that any serious study of this phenomenon has to rely on attested examples. However, as blends do not fit the regular patterns of word-building morphology, they will not be detected by an automatic processing system. Therefore, I must resort to the lists of blends mentioned in the previous studies, which include (Pound 1914; Bauer 1983; Kelly 1998; Cannon 1986; Algeo 1991; Cannon 2000; Enarsson 2006; Hong 2005) for English, (Grésillon 1984), (Ronneberger-Sibold 2006) for German, (Thornton 1996; Bertinetto 2001; Thornton 2004) for Italian, (Pharies 1987; Piñeros 2004) for Spanish, (Bat-El 1996) for Hebrew, (Galisson 1987; Léturgie 2012), Grésillon plus my own data, most part of which is given in (Bertinetto 2001), for French. Data from other languages will be provided by the works referred to in the text. Note that in many languages, blending is (almost) non-existent. The second reason is that blending is very dependent on the prosodic structure of the word in each distinct language, which makes it difficult to express cross-linguistic generalizations (cf. section 4). The third reason is that the blends that circulate in the literature are very heterogenous, because the sources they come from (literary texts, medical reports,

newspapers and journals, advertisement, and even fictional dictionaries of blends (17 of them have been published for French between 1979 and 2008 cf. Léturgie 2011) are heterogenous too; moreover, some of them are mixed up with expressions which should not be regarded as blends (section 5). The fourth reason is that the blends in question are not equally considered felicitous, or even acceptable, by native speakers, a fact sometimes acknowledged (Thornton 1993; Piñeros 2004: 234) but never seriously taken into account. Therefore, trying to elaborate a fair account of blending is probably out of reach for the time being.

## 2. Characteristic properties of blends

Let's admit the uncontroversial claim that word-building processes belonging to the grammar of a given language *L* normally satisfy the properties stated in (1). The first clause expresses compositionality, the second one guarantees that a given morphological process is embodied in a fixed phonological pattern, and the third one states that the association of sound with meaning is stable for any given morphological process.

- (1)(i) The meaning of a morphological construct is the regular combination of the meaning of the source lexemes together with the instruction associated with the rule itself.
- (ii) In a given morphological process, the phonological link between the input unit(s) and the output unit (the construct) is held constant for each construct which belongs to the process in question.
- (iii) There is a link between the way phonological parts are combined, on the one hand, and the way semantic contents are, on the other, and this linking is held constant for each construct exemplifying the process.

If we agree that compounding belongs to plain morphology (Booij 2005: ch. 4), then compounds should meet the requirements in (1). Indeed, French VN compounds satisfy properties (i) and (iii) since they are interpreted in 90% of cases as ‘*x* such that *x* V’ N’, where V’ is the semantic counterpart of V, and N’ that of N e.g. GARDE-BARRIÈRE ‘level-crossing keeper’ = ‘*x* such that *x* keeps level-crossing’. The same is true of Germanic nominal determinative compounds, even though their constructed meaning often remains largely underspecified. Their interpretation follows their structure (Olsen 2000: 898) which, in turn, depends on the stress position; then, in certain varieties of German, while LEBENSMITTELPUNKT, the structure of which is ‘N<sub>1</sub> (N<sub>2</sub> N<sub>3</sub>)’, means ‘centre of life’, LEBENSMITTELPUNKT, the structure of which is ‘(N<sub>1</sub> + N<sub>2</sub>) N<sub>3</sub>’, is interpreted as ‘marker on groceries’ (Neef 2009: 394). These compounds also satisfy property (ii) insofar as the phonology of the compound results from the concatenation of the appropriate stems associated with the lexemes involved the compounding process, following the order lexeme<sub>1</sub>, lexeme<sub>2</sub> (lexeme<sub>n+1</sub>). If we compare these compounds with French binominal blends HIPPIDÉMIE, ÉLEVACHE, and ORDINOSAURE given in Table 1, we see that the latter do not satisfy (iii) because the linear adjustment of the segments correlated to the base lexemes does not allow us to predict the way these lexemes are semantically combined. For instance, whereas the semantic head is LXM2 in HIPPIDÉMIE, it is LXM1 in ÉLEVACHE and ORDINOSAURE. In addition, (i) is not satisfied because the semantic combination of the lexemic contents varies: in HIPPIDÉMIE the content of LXM1 is what the epidemic is the vector of; in ÉLEVACHE, the content of LXM2 is the argument of the verb underlying LXM1, while in ORDINOSAURE

the connotative content of LXM2 is predicated of the first unit. Property (ii) is not satisfied either, since the combination of the phonological stems belonging to each of the source lexemes greatly varies (cf. section 4). The more striking feature is that the integrity of the lexical stems corresponding to each of the source units is rarely kept intact in blending, and the part which is kept cannot be known in advance. In most cases, the stems are shortened in a way that depends on strictly local phonological parameters (section 4). As Table 1 shows, the suppressed segments can be part of either one of the source lexemes or of both.

LXM 1	Gloss	LXM 2	Gloss	Phonol.	Meaning
<i>hippie</i>	‘hippie’	<épi> <i>démie</i>	‘epidemic’	1 ⊕ 2	‘epidemic of hippies’
<i>éle</i> < <i>vage</i> >	‘breeding’	<i>vache</i>	‘cow’	1 ⊕ 2	‘cow breeding’
<i>ordi</i> < <i>nateur</i> >	‘computer’	< <i>di</i> > <i>nosaur</i>	‘dinosaur’	1 ⊕ 2	‘very old computer’

Table 1. Form meaning combination with blends. The deleted parts are between angle brackets.

This sample of examples, however small, shows that blending does not comply with the most basic principles of grammatical word-formation, namely (1)(ii) and (1)(iii).

If we take into account paradigmatic relations (in the Saussure’s sense), we discover another feature distinguishing blending from compounding that we might call the hapactic nature of blends: blends do not constitute series (see section 6.5). For instance, on the model of *élevache* it would be utterly awkward to coin *\*élechien* ‘dog breeding’ or *\*élanguille* ‘eel breeding’, and this is so because the phonological overlap (cf. section 4.1) motivating the original blend has disappeared. This holds true even when no overlap takes place as in English *?\*smist* ← *smoke* × *mist*, *?brinner* ← *breakfast* × *dinner* (although pragmatic reasons could explain the non-occurrence of the latter). To sum up, blends show three salient properties (in a weak sense, since all are negative properties):

(a) No preservation of lexical integrity. In contrast to derivational morphology and compounding, the integrity of the stems corresponding to each of the source units is rarely maintained in blending and, moreover, the manner in which they are altered does not follow a predetermined pattern. Hence clause (1)(ii). In most cases, they are shortened in a way that depends on the interaction of one stem upon the other (section 4).

(b) No fixed pattern of compositionality. Insofar as there is no specific instruction, however coarse, attached to the process of blending (cf. (1)(i)), the semantic combination of the source units’ content is left floating. The absence of clause (1)(iii) strengthens this effect. Note however that it would be inaccurate to say that blends are not compositional, insofar as their meaning results from the combination of the meaning of their parts. But this combination is constrained only by general conceptual categories. To that extent, blends show as much compositionality as the most underspecified compounds do, namely attributive (determinative) N1N2 compounds. For instance, while Ger. (coordinate compound) *Kinder•pilot* can only mean ‘child pilot’, (attributive) *Fisch•frau* may have half a dozen of meanings (Neef 2009 : 395) except the ‘fish maid’ meaning (cf. section 5).

(c) Blends are type hapaxes. Unlike derived or compound units, they cannot form series. Each one is a (lexeme) type which is the only one to instantiate the morphological pattern it belongs to.

### 3. Blending and grammar

### 3.1. Clarifying the issue

According to Dressler (Dressler 2000), Bauer (Bauer 1988: 39) and others, the combination of lexemes in blends does not follow any explicit grammatical rule indicating how the combination has to be carried out, in contrast to what happens in compounding. Other linguists, however, hold the opposite view, according to which blending is rule-governed and should be considered as a completely grammatical phenomenon on a par with other word-building morphological processes (Kubozono 1990; Bat-El 1996; Plag 2003). These opposing views raise the question of the link between blending and grammar, a question which repeatedly crops up in various forms in the literature. Actually, the debate involves two separate issues corresponding to the conceptual oppositions between regular / irregular on one hand, and between grammatical / extragrammatical on the other. The key point is to determine the criteria allowing one to say that a given process pertains or not to grammar.

Advocates of the view according to which “blending is part of derivational morphology” (Bat-El 1996: 316) emphasize that the phonology of blends is regular and obeys the general prosodic constraints that apply throughout the lexicon. Kubozono already assumed that blending was plainly a word-formation process (Kubozono 1990). Plag recalls that truncations (cf. section 4.1.) that take place in blends are highly systematic and follow the same patterns as those observed in clipping (cf. definition section 6.3.), which shows that blending is “part of the morphological competence of the speakers” (Plag 2003: 177). He claims that rule (2) may account for the most frequent types of blends in English e.g. *guess* × *estimate* → *gestimate* (B or C may be null).

(2) A B + C D → A D

(Plag 2003: 123)

Actually, the fact that the phonology of blends is not completely special is not disputed by anybody. Dressler even says that “universal preferences” are expected to apply more consistently to extragrammatical phenomena than to the morphological rules encapsulated within grammar (Dressler 2000: 6). In other words, saying that blending pertains to extragrammatical morphology does not mean that it lies out of the realm of linguistic mechanisms, especially the phonological ones (Fradin, Montermini & Plénat 2009), or that it is governed by a “distorted version of them” (Piñeros 2004: 209). Assuming that a given process is extragrammatical does not entail that it is irregular but either that it includes properties which do not match the grammar of the language in question, or that it lacks properties regularly associated with processes of similar type (in the language in question). (Extra)grammaticality should be measured against the grammar of a particular language, not in general. From this perspective, besides (i) regular vs. irregular, the other relevant dimension to take into account is (ii) universal vs. specific. The grammar of a particular language may include phenomena which are:

(a) regular and specific. Constraints applying in lexeme-building morphology are such, either because they simultaneously bear on several planes of the linguistic signs e.g. ‘suffix /X/ to the phonology of the base if it is a verb and if its first argument denotes an Agent’ or because they reflect a deeply entrenched historical conditioning e.g. the Monosuffix constraint in English (‘Suffixes that select Germanic bases select unsuffixed bases’) (Aronoff & Fuhrhop 2002: 473). By nature, morphophonology includes constraints which are very specific as illustrated by English *-al*, *-ance* which “need to occur next to syllables that have main stress” e.g. *relúct-ance*, *refús-al* vs. *\*deep-en-ance* (Plag 2003: 174-175; also Pierrehumbert & Nair 1995: 95). Similar constraints are not uncommon in compounding however. French VN compounds are the

case in point, since their verbal base is required to be monosyllabic (Villoing 2012) and it always corresponds to the ‘Indicative present singular’ stem of the verb (Bonami, Boyé & Kerleroux 2009).

(b) regular and universal. Constraints such as OCP illustrate this case (McCarthy 1986; Prince & Smolensky 1993).

(c) irregular and specific e.g. the plural of OX in English.

The fourth case (irregular and universal) cannot exist. As for extragrammatical phenomena, the claim is that they are the concern of very general mechanisms only, those of type (b) and the less specific of those of type (a) e.g. the phonotactic constraints of a given language (cf. 4.3.1)(but not of very specific constraints such as those exemplified in (a) above). This position has been endorsed by scientists describing extragrammatical phenomena other than blending, such as hypocoristic clipping (cf. section 6.3.) e.g. It. *Vico* ← *Lodovico* (Thornton 1996; Montermini 2007) or secret languages e.g. French verlan [ridako] ← *corrida* [korida] ‘corrida’ (Plénat 1995). As hinted before, blending qualifies as extragrammatical also because it may include processes which are not present elsewhere in the morphology of the language in question. These can be phonological operations which never occur in the language, as infixation e.g. Fr. MÉT<AMOUR>PHOSE ← MÉTAMORPHOSE ‘metamorphosis’ × AMOUR ‘love’, E. S<LITH>Y ← SLIMY × LITHE (L. Carroll) or combinations of units which are never used as bases in normal compounding. For French this includes proper names e.g. BOKHASSAN II ← BOKASSA × HASSAN II, adverbs e.g. INTELLIGEMENT ← INTELLIGEMMENT ‘cleverly’ × GENTIMENT ‘kindly’, verbs e.g. SE BARRICANER ← SE BARRICADER ‘to barricade oneself’ × RICANER ‘to snigger’, onomatopoeia and adverbial phrases e.g. TURLUTUTÊTE ← TURLUTUTU ‘onomatopoeia imitating flute’s song’ × TUE-TÊTE ‘(to sing) at the top of one’s voice’. The fact that blends are conscious creations has been given as an additional argument in favour of considering them extragrammatical (Ronneberger-Sibold 2010), insofar as ordinary morphological rules are executed non-consciously but with perfect mastery by speakers and yield expressions indistinguishable from already existing lexemes (Van Marle 1985; Baayen 1993). Blends resulting from slips of tongue will be discussed in section 6.1.

### 3.2. Unexpected behaviour

Most of the proponents of the ‘grammatical view’ pay more attention to the phonological aspect of blends than to their semantic aspect. When we take the latter into account, it becomes clear that blends never show some properties that one would expect them to exhibit. For instance, quite often compounds develop special meanings. In Dutch NA compounds, the N provides a point of comparison with respect to the property expressed by the adjective e.g. *boter•zacht* butter-soft ‘as soft as butter’, *ijzer•sterk* iron-strong ‘as strong as iron’ (Booij 2002: 155-156). But the N can function as a mere intensifier, in which case it bears the main stress of the word e.g. *boterzacht* ‘very soft’, etc. Meaning specializations of this sort presuppose the emergence of a compounding subpattern which is the basis out of which the variation grows. No such patterns can emerge with blends because each blend is by nature a hapax.

### 3.3. Consequences of a major gap

Up to now, all the criteria used as evidence to support the view that blending is extragrammatical concern the type of mechanisms involved in blending. These mechanisms are non-specific to blending to the extent that they may be involved in other morphological processes as well. There is however one property constitutive of blending which strongly supports the extragrammatical view, namely the non-

satisfaction of (1)(iii). To fully acknowledge this point, it is worth recording that, if we leave aside the issue of shortening, the phonology of blends is rule-governed (by very general rules or constraints) and their semantics is underspecified (as it is for some compounds) but not at all specific (section 5). In other words, when we consider the sound and the meaning of blends separately, each of them is unremarkable and non-problematic. The crucial point is that no sound / meaning correlation is stated contrarily to what is required in morphology (Zwicky 1992). This has two major consequences. The first is the fact that the burden of combining the (parts of) source units will hinge on phonology. The second is the fact that the well-formedness of blends qua signs will be referred to semiotic principles, inasmuch as no morphological rules state the correlation between the phonological and the semantic plane (cf. section 3.4.). As expected, this has also an immediate consequence for the correlations involving what Mel'čuk, following American structuralists, calls the *syntactics*, roughly the information determining how the unit combines with other units (Mel'čuk 1993: 117). This can be illustrated for category (and gender) assignment. This assignment is stable and well-defined for any word-building process. For instance, in Romance VN compounds e.g. It. *cava\*tapo* pull-cork 'corkscrew' are always masculine Ns, while N1N2 compounds inherit their category and gender from N1 e.g. Fr. *camion-citerne* 'tanker-truck' is a masculine N (as *camion*) but *émission-phare* program lighthouse 'flagship program' is a feminine N (as *émission*). In blends, this assignment is not fixed but instead depends on the unit which corresponds to the semantic head. When the blend combines a N with an A, the N, as expected, determines the category and gender e.g. *ennuiversel* ← *ennui* 'tiresomeness', *universel* 'universal' is a masculine N (as *ennui*). When the blend involves two Ns, LXM2 is the morphological head e.g. *hippidémie*, *ordinosaure* but sometimes there is a conflict between the semantic and the morphological head: *suicidéurgie* (← *suicide* 'suicide' × *sidérurgie* 'steel metallurgy') is a feminine N as *sidérurgie*, yet it means 'suicide of steel metallurgy'. LXM1 is the semantic head, as in normal compounds e.g. *chou-fleur* cabbage flower 'cauliflower', but in *hippidémie*, it is LXM2.

The position assumed here entails that blending should not be considered a word-formation process, contrary to what is claimed in the majority of studies devoted to blending (Pharies 1987; Kubozono 1990; Gries 2004a : 639; Renner 2006). What is true, nevertheless, is that blends quite often enter the lexicon of languages as the result of lexicalization. But this is not special to blends, since almost any kind of expression, be it constructed by morphology or syntax, may eventually be lexicalized (Hohenhaus 2005). Lexicalization is orthogonal to word-formation and this is why erratic formations can enter the lexicon and become well-behaved lexemes e.g. Fr. *chandail* '(thick) jumper' by aphaeresis of *marchand d'ail* 'garlic retailer'. If blending is not a word-formation process, it become meaningless to speak of the productivity of blending, let alone of blends. Following Baayen and his colleagues, many people agree that metric  $\mathcal{P}$ , based on *hapax legomena*, gives a fairly good approximation of morphological productivity in the narrow sense (Baayen 1992, 1993)[cf. productivity]. Therefore a given word-formation rule e.g. the formation of *-bar* suffixed adjectives in German (Riehemann 1998) will be said to be productive only if the number of new lexemes that fit the pattern increases, and the measure of productivity is necessarily relative to a (well-balanced) corpus (Baayen & Lieber 1991; Gaeta & Ricca 2003). In the case of blends, we have neither the pattern, nor the corpus. Speaking of productivity only amounts then to loosely saying that blends, on the whole, are numerous vs. scarce in some varieties of discourse.

### 3.4. The semiotic tension in blending

Many authors (Thornton 1993: 148; Kelly 1998; Gries 2004a; Ronneberger-Sibold 2006) have noted in various ways that blending has to accommodate two contradictory requirements, namely (a) to shorten the source lexemes in order to make the blend resemble a single lexeme, and (b) to preserve as many segments (Bat-El 2006:66-67) or relevant phonological properties from the source lexemes as possible (Ronneberger-Sibold 2006) in order to maximize the semantic transparency of the blend. Compounds are not put under a similar strain, since their base lexemes need not be shortened. But blends give the speaker something that compounds do not, namely the opportunity to show her capacity to play with language, which is a socially praised ability, creating an unconventional witty semantic association between two (or *n*) lexical meanings packed in one word. Coining blends is part of the epilinguistic competence of native speakers, which also manifests itself through puns, spoonerisms, witticisms, and other language games. From a semiotic point of view, (a) diminishes the understanding (while possibly enhancing social rewarding), whereas (b) maximizes it. Diminution vs. maximization may involve three operations: (A) truncation, (B) linearization and (C) overlap, which can be used as parameters to classify blends (section 4.1.).

## 3. Phonological conditioning

### 4.1. Phonological issues in blending

In contradistinction to what happens in regular morphology, in blending phonology is not strictly limited to phonological matters (viz. to determine the phonic shape of derived lexemes) since it has a direct bearing on the way the source constituents combine to form the blend. The fact “that prosodic and other phonological constraints have the power to determine even the order of the elements [in blends]” is rightly underlined by Bat-El (Bat-El 1996: 317). This power, which never shows up in syntax, directly follows from the fact that blending is an extragrammatical process, that is a process without a combinatorics of its own (no clause (1)(iii)). An example will help us to see what is at stake. Starting from the two words  $W_1$  *smoke* and  $W_2$  *haze*, (Kelly 1998: 580) says that they can be blended to form either *smaze*, or *hoke*, or *smoze*, but that the former is arguably better than the two others. If we agree with Kelly, this means (i) that the order ‘ $W_1$  before  $W_2$ ’ has to be selected by some instance, and (ii) that the switching point, i.e. the point where the first constituent of the blend ends and the second begins, has also to be determined by a mechanism sensitive to fine-grained phonological distinctions at the level of syllables or below. Phonologically oriented approaches assume that both tasks (i) and (ii) are in the realm of phonology (Bat-El 1996: 288; Kubozono 1990). This assumption is probably founded as regards (ii), but it is much more controversial with respect to (i). Actually, even though the decision about (i) is based on information concerning the phonology of  $W_1$  and  $W_2$  (number of syllables, etc.), the conditions allowing to choose the best order are not strictly phonological and some of them are more appropriately expressed in quantitative than in phonological terms (section 4.3). In order to have a better grasp of the mechanisms carrying out tasks (i) and (ii), we must have an idea of the variety of blends that may exist. To achieve this goal, we shall classify blends in function of their using the three operations mentioned above, (A) truncation, (B) linearization and (C) overlap. If we assume that the commonest blends involve two source units only, the combination of these parameters results in table 2, which corresponds to Gries’s classification of blends (Gries 2004a: 646; see also Pharies 1987: 284). Actually this classification encompasses more than blends, since it is a classification of two-lexeme combinations.

Such a classification is helpful precisely because it allows us to delimit what place blending occupies among the morphological phenomena involving two (or more) lexemes. The notation follows Bat-El's (1996): non-occurring material is enclosed in angle brackets, similar segments are underlined, and the bullet indicates a lexeme boundary.

(A) Truncation ( $\pm$ trunc) can be distributed over the constituents of the blend or limited to just one. *Truncation* means here that a segment of a source lexeme is without correlate in the blend. For instance, in A1 Table 2 segments /áf/ and /lax/, present in *daxáf* and *laxpór* respectively, have disappeared from *daxpór*. But *dies* /di:z/ in D1 has not since this segment occurs in the blend. What we have instead here is a case of overlap (cf. below).

(B) Linearization of constituents. The constituents of a blend are linearly ordered (+lin) when no part of a blend correlated to the first source lexeme needs to be processed after parts belonging to the second source lexeme have been processed (where a part includes at the least one onset). This usually corresponds to configuration PART1 <...•...> PART2 (cf. section 4.5.2). Otherwise, the order is non-linear (-lin). Parameters involved in ordering can be tied either to the source units (section 4.3.1.), or to systemic constraints on blending, which impose restriction on the output or take advantage of the phonotactics of the language (section 4.3.2).

(C) Overlap of constituents ( $\pm$ ov). Two phonologically similar segments overlap when both appear in the source lexemes whereas only one remains in the blend. The overlap can be local or global (section 3.4). Although overlap includes contiguous segments (+con) in most languages, this is not always so (section 3.5.2.). Overlap is the same as haplogy.

	A. Trunc. = both	B. Trunc. = 1	C. Trunc. = 2	D. Trunc. = 0
+OV	<i>daxpór</i>	<i>knáuros</i>	<i>Müllionärin</i>	<i>Paradiesel</i>
+LIN	<i>daxáf</i> × <i>laxpór</i>	<i>knástos</i> × <i>áuros</i>	<i>Müll</i> × <i>Millionärin</i>	<i>Paradies</i> × <i>Diesel</i>
+OV	<i>dialügisch</i>	<i>carnibbleous</i>	—	<i>hypocritiquement</i>
-LIN	<i>dialogisch</i> × <i>Lüge</i>	<i>carniverous</i> × <i>nibble</i>	×	<i>hypocritement</i> × <i>critique</i>
-OV	<i>brunch</i>	<i>klafüda</i>	<i>smothercate</i>	<i>sákkal</i>
+LIN	<i>breakfast</i> × <i>lunch</i>	<i>klára</i> × <i>füda</i>	<i>smother</i> × <i>suffocate</i>	<i>sál</i> × <i>kál</i>
-OV	<i>agitprop</i>	—	—	<i>rajolivissant</i>
-LIN	<i>agitation</i> × <i>propag.</i>			<i>ravissant</i> × <i>joli</i>

Table 2. The classification of blends and two-lexeme units (cf. Gries 2004 : 646)

- (A1) Heb *daxpór* ‘bulldozer’ ← *daxáf* ‘to push’ × *laxpór* ‘to dig’, da<xáf•la>xpór  
(A2) Ger. *dialügisch* ← *dialogisch* ‘dialogal’ × *Lüge* ‘lies’, dia<lo>•Lü<ge>•gisch  
(A3) E. *brunch* ← *breakfast* × *lunch*, br<eakfast•l>unch  
(A4) E. *agitprop* ← *agitation* × *propaganda*, agit<tation>•prop<aganda>  
(B1) Gr. *knáuros* ‘ripe but green’ ← *knástos* ‘ripe’ × *áuros* ‘unripe’, kn<ástos>•áuros  
(B2) E. *carnibbleous* ← *carniverous* × (to) *nibble*, car<niver>•nibble•ous (Pound 1914: 45)  
(B3) Gr. *klafüda* ‘branch with a tuft’ ← *klára* ‘branch’ × *füda* ‘tuft’, kla<ra>•füda  
(B4) no attested example  
(C1) Ger. *Müllionärin* ← *Müll* ‘trash’ × *Millionärin* ‘millionaire:F’, müll•<mil>ionärin  
(C2) No attested example (most intercalated blends show no truncation cf. 4.4.2.)

- (C3) E. *smothercate* ← *smother* × *suffocate*, smother•<uffo>cate  
 (C4) no attested example  
 (D1) Ger. *Paradiesel* ← *Paradies* ‘paradise’ × *Diesel* ‘diesel’, Para<dies>•diesel  
 (D2) Fr. *hypocritiquement* (Rabelais) ← *hypocritement* ‘hypocritically’ × *critique* ‘critical’, hypo<crite>•critique•ment (\**critiquement* does not exist by itself).  
 (D3) Heb *sáلكal* ‘baby car seat’ ← *sál* ‘basket’ × *kál* ‘easy, light’, sál•kal  
 (D4) Fr. *rajolivissant* ← *ravissant* ‘charming’ × *joli* ‘pretty’, ra•joli•vissant

Not all cells of table 2 correspond to widespread patterns, either cross-linguistically or language internally. The prevalent ones are those that combine overlap and contiguity (line 1), most of which including a truncation (A1 = rule (2), B1, C1). Patterns of line 2 illustrate ‘intercalative blends’, which are also quite common unlike patterns without overlap (lines 3 and 4). These blends strongly prefer overlapping (section 4.5.1.), hence their absence in C2. Actually, cell D3 may include expressions whose pattern is outside of the blending system, namely compounds e.g. E. *bow-tie*; *sáلكal* is not a blend in Hebrew (Bat-El 1996: 287). This is also the case of patterns in cell A4 (section 3.4.3). Cell D4 includes untypical blends, which “are not very witty” precisely because their components have not been shortened but “just stuck together” (Gries 2006: 538-539). These are hardly blends, which is confirmed by the fact that they are sparse and even non-existent in most languages with blends (more examples in Fradin 2000). Table 2 provides us with a systematic classification of blends but gives no information about the actual possibilities or impossibilities we observe in languages. These possibilities depend on fine-grained phonological constraints and structural (segmental and prosodic) preferences (sections 3.4, 3.5). Moreover, some patterns allow variations on overlap or truncation which seem to be language dependent (section 3.4.2).

The classification of blends in Table 2, based on formal properties of blends, does not preclude one from distinguishing among blend classes based on other properties, such as the interlocutor’s capacity to understand the blend. The most widely accepted distinction among scientists is the one between telescope (Piñeros, Ronneberger-Sibold) / overlap (Kemmer) blends on the one hand e.g. A1, A3, B1, B3, C3, and substitute (Kemmer) / portemanteau (Piñeros) / intersective (Ronneberger-Sibold) blends on the other e.g. (B2), C1, D1, D2 (section 3.4.2). This classification is based on semiotic instead of formal properties. In telescope / overlap blends (= A blends), the source lexemes are juxtaposed like in a phrase or compound e.g. E. *alcoholidays* ← *alcohol* × *holidays*, alco<•hol>holidays. In intersective / substitute / portemanteau blends (= B blends), one source lexeme includes (part of) the other as part of its sound chain e.g. Ger. *wildschön* ← *wild* ‘wild’ × *bildschön* ‘beautiful’, wild•<bild>schön.

Each of the parameters (A)-(C) may be triggered by phonological and non-phonological factors. But before discussing the factors playing a role in the combination of source units, we must say a word about the constraints bearing on source units independently of their combination. These constraints, which target the nature of the source (word vs. lexeme), its categorial status, and the nature of the medium (phonemic vs. orthographic), will be addressed in turn in section 4.2.

## 4.2. General constraints on source units

**4.2.1.** The first issue (nature of the source) has seldom been addressed, although it should be once one assumes the distinction between *word-form* (the inflected form) and *lexeme* (the abstract unit) (Matthews 1974). Some linguists claim that the bases of blends are “full surface forms” (Bat-El 1996 : 290) and many speak of “source words”

(SW), but it is not certain that they refer to “word-form”, since the above distinction is not operative in their works. There are few attested examples supporting the idea that the sources of blends are word-forms and they always involve plural or gender features. It. *Alitalia* (company name) ← *ali* wing:PL × *Italia* ‘Italy’, and Fr. *animocratie* ← *animaux* ‘animal:PL’ × *démocratie* ‘democracy’ belong to the first type. Examples involving gender include Fr. *spermissive* ← *sperme* ‘sperm’ × *permissive* ‘permissive:F’. For this, it could be argued that we have to do with the inflected form of lexeme SPERMISSIF and that the latter is the originally created blend. The same reasoning cannot apply to *Alitalia* and *animocratie* though, because ALETALIA and ANIMALCRATIE do not constitute blends in their respective languages. This reasoning is not totally compelling however, insofar as the Number feature can be an inherent inflectional feature (Booij 1996) and as such may appear in derivation e.g. Nld *heldendom* hero:PL-NZR ‘heroism’ (Booij 2002: 84). What is sure, is that the sources of blends are full-fledged forms generated by morphology and endowed with prosodic structure. The idea according to which word-forms are the source of blends would receive better support if one of them could be an inflected verb, as in the invented Fr. *viendracula* ← *viendra* come:IND.FUT.3SG × *Dracula* ‘Dracula’. Unfortunately I have not been able to come across any relevant example of this sort in the languages investigated. For lack of evidence to the contrary, I will keep saying that blends are formed with lexemes. This viewpoint copes with the fact that some blends may select allomorphs which differ from the citation form of their source lexemes e.g. Fr. *foluptueux* ← *fol*•<*vol*>uptueux with *fol* ‘mad’ × *voluptueux* ‘voluptuous’, where *fol* [fɔl] is one of the stems of the adjective FOU (Bonami & Boyé 2005) (note that FOULUPTUEUX is pretty bad). For reasons of convenience, I will make use of *word* when discussing the views of authors who use this term.

As for phrasal blends that include several inflected units e.g. Fr. *Saturne pas rond* ← *Saturne* ‘Saturn’ × *ça tourne pas rond* ‘it goes wrong’, Sp. *¿dónde estuvo?* ← *¿dónde estuvo?* ‘where were you?’ × *túfo* ‘breath smelling of alcohol’ (Piñeros 2004: 235), they look rather like analogical creations instead of true word formations and can be dealt with saying that a part of the matrix phrase has been replaced by (a part of) another lexical unit whose phonology is similar or very close. All so-called phrasal blends seem to follow that pattern (more examples in Grésillon 1984).

**4.2.2.** Kubozono contends that the source lexemes must be of the same category (Kubozono 1990: 3). This is certainly not a mandatory requirement. There are many cases where the constituents are N and A e.g. Ger. *dämondän* ← *Dämon* ‘demon’ × *mondän* ‘chic’, *Nacktrice* ← *nackt* ‘nude’ × *Actrice* ‘actrice’, *Spätник* ← *spät* ‘late’ × *Sputnik* ‘sputnik’, Fr. *jaloup-garou* ← *jaloux* ‘jealous’ × *loup-garou* ‘werewolf’ or N and V e.g. Fr. *giraffoler* ← *girafe* ‘giraffe’ × *raffoler* ‘be crazy about’. Cross-linguistic differences are expected to exist for this parameter.

**4.2.3.** The fact that blending does not confine itself to strict phonology but, in many cases, involves the graphemic dimension has been noticed by several authors (Grésillon 1984; Cannon 2000; Gries 2004a). For instance, (Cannon 2000 : 954) notes that in *smog* the shared ‘o’ is pronounced differently in each of the source units *smoke* and *fog*, which implies that the overlap is graphemically licenced by the spelling conventions of the language. Blends uniquely motivated by graphemics are those where the pronunciation of the blend is identical to the pronunciation of the longer source lexeme e.g. Fr. *fessetival* ← *fesse* ‘buttock’ × *festival* ‘festival’, *délyrer* (Audiberti) ← *lyre*

‘lyre’ × *délirer* ‘be delirious’, E. *jewbilee* ← *Jew* × *jubilee*, Sp. *comercio* ← *comer* ‘to eat’ × *comercio* ‘trade’. They are what Ronneberger-Sibold calls ‘inclusive blending’ e.g. Ger. *alternatief* ← *alternatif* ‘alternative’ × *tief* ‘deep’ (Ronneberger-Sibold 2006). Although they are quite numerous, these blends will be left aside in this article since I consider the phonemic dimension as the fundamental one.

### 4.3. Ordering issues

**4.3.1.** Several authors have suggested that the order of occurrence of the source lexemes within a blend is correlated to their length. Kubozono observes that in 86% of the error blends in English and 80% of blends in his database “the righthand source word and the resultant blend form consist, in most instances, of the same number of syllables” (Kubozono 1990: 12). He notes that a similar correlation holds for Japanese but with morae as count units. Even though many counter-examples can be found Ger. *Denkmaler* ← *Denkmal* ‘monument’ × *Maler* ‘painter’, Fr. *calembourbier* ← *calembour* ‘pun’ × *bourbier* ‘quagmire’, E. *ambisextrous* ← *ambidextrous* × *sex*, Kubozono’s observation indicates that the shorter source lexeme tends to come first. This view is explicitly advocated by Kelly on the basis of a statistical study of 320 two-word English blends (where the source units co-occur sequentially as if they were coordinated e.g. *scandalous* × *ridiculous* → *scandiculous*). He shows that shorter and more frequent lexemes occur first and that the length effect holds even when both source units have the same frequency (Kelly 1998). He also demonstrates that the source lexeme which denotes the most prototypical entity in a given domain appears in the first position in the blend e.g. *spoon, fork* → *spork* vs. *\*foon*. But other parameters could intervene, he notes, such as the temporal order of events e.g. *brunch* ← *breakfast* × *lunch*. In the same vein, Bat-El argues that segmental maximization determines the order of the base lexemes in exocentric blends (i.e. blends without a semantic head), since it leads speakers to adopt “the number of syllables from the longer rather than the shorter base word” (Bat-El 2006:67-68). When the number of syllables is identical, segments are substituted for syllables. The maximization of the number of segments makes a lexeme with a complex onset occur first and a lexeme with a complex coda second. Hence the contrast : *glaze* ← *glare* × *gaze* vs. *\*gare* ← *gaze* × *glare*. Piñeros argues contra Kelly that, in Spanish, phonological resemblance between source words is what determines their order in the blend. He illustrates this point by the contrast between Sp. *gònoréa* ‘gonorrhoea’ × *gòrdo* ‘fat’ → *gòrdoréa* ‘nasty person’ vs. *drama* ‘drama’ × *krùsigráma* ‘crossword’ → *krùsidráma* ‘a serious mess’ (Piñeros 2004: 226).

**4.3.2.** The order of elements in blends can also be determined by systemic constraints following from the lexical integrity constraint or from higher levels constraints. The Linearity constraint, which guarantees that the respective order of the subparts of the source lexemes is preserved in the blend, is of the first type. Normally it aptly rules the order of subparts in blends. For instance, since /by/ precedes /sefal/ in *Bucéphale* and /lobil/ in *Buffalo-Bill*, the only possible blend will be *Bucéphalo-Bill* (but see section 3.5.2). (This means that reordering subparts of a lexeme more strongly violates lexical integrity than subtracting a part of it). Phonotactic constraints belong to the second type and any blend must comply with them e.g. E. *bang, smash* → *bash* vs. *\*smang*. Since the latter blend is impossible because English does not allow the sequence sCVC where the two C are nasal (Bat-El 2006: 68), the only licit order is then *bang* × *smash*. A very general constraint seems to exist, which prohibits a process from having an output phonologically similar to its input. This constraint had been invoked for blends

by Bauer long ago (Bauer 1983) and it has been restated by Bat-El as the Uniqueness constraint: “a blend must be phonologically different from each of its base elements” (Bat-El 1996: 288) e.g. Heb. *mešuxzár* ‘reconstructed’ × *mešupác* ‘renovated’ → *mešuxpác* vs. \**mešupác*, which excludes the reverse order (other examples in Koutita-Kaimaki & Fliatouras 2001: 128). A similar constraint is in force in derivation too e.g. Fr. *papier* ‘paper’ (Agent nominal derivation) → *papier-ier* ‘paper-AGT’ ‘paper-maker’ (haplology) → \**papier* ‘paper-maker’ (the actual form is *papet-ier*).

#### 4.4. Maximization

**4.4.1.** The semiotic challenge any blend has to face is to allow the listener to recover the source units while she has no access to their integral phonological form. Among the means available to the speaker to help her reach this goal, and thereby to further maximization, there are length limitations, segment sharing, similarity in prosodic structure and phonemic / graphemic clues associated to lexical items (the situation is slightly different for blends which are trademarks). Many authors have claimed that limitations are imposed on the length of blends. They must not have more syllables than the longer of two source elements (Cannon 2000), which is also Bat-El’s opinion: “adopting the number of syllables from the longer rather than the shorter base word, the blend (...) maximizes its size. Maximization facilitates the semantic recoverability of the base words.” (Bat-El 2006:67-68). In the same vein, Piñeros notes that Spanish blends tend to be faithful to the source lexeme that functions as the head with regards to prosodic structure (Piñeros 2004: 219). Exceptions to these proposals are numerous however (cf. B2, D2).

**4.4.2.** Overlap at the edges is the more common segment sharing phenomenon in blending. Overlap clearly weakens the effect of shortening since it allows one to shorten the outcome without truncating the source lexemes, which makes them readily identifiable e.g. Ger. *Fantasiegel* ← *Fantasie* ‘imagination’ × *Siegel* ‘seal’. For many authors (Grésillon, Plag, Piñeros), overlap is a crucial feature of blending and for some a typical blend must have an element that has correspondents in both source lexemes (Bat-El, Cannon). The fact that overlapping acts as a driving force in blending can be deduced from several facts: (i) there are more patterns with overlap than without, (ii) these patterns exhibit many examples, (iii) overlap furthers the creation of intercalated blends allowing the insertion of a segment of which it is a subpart e.g. *autoimmobiliste* ← *automobiliste* ‘driver’ × *immobile* ‘immobile’ *auto•immobile•<mobil>iste*, (iv) there are no intercalated blends without overlap (cf. A2, B2; D4 is highly marked), (v) examples without overlap are less numerous and more contrived (in a given language)(cf. also Piñeros 2004: 234-235). However, overlap depends on language. From a comparative study, Bertinetto concludes that it is more frequent in German and French than in English or Italian (Bertinetto 2001). The overlap needs not be completely faithful (Pharies’s ‘imperfect overlapping’). Consonants may not be identical in all their features e.g. Sp. *čándafé* ← *čánda* ‘lousy’ × *Santafé* ‘a Bogota’s soccer team’, *čánda•<santa>fé* [d ≠ t] (Piñeros 2004: 219), E. *ambisextrous* ← *ambidextrous* × *sex* [dɛks ≠ sɛks], and the same holds for vowels cf. Ger. *Müllionärin* (C1), E. *smog*. Even metathesis is licensed in some languages (but not in other as Hebrew) e.g. Fr. *caveaubulaire* ← *caveau* ‘sepulcher’ × *vocabulaire* ‘vocabulary’, *caveau•<voca>bulaire* [kavo ≠ voka] (more examples in Fradin 2000). These data show the importance of taking into account the whole phonological / prosodic structure instead of just the segments. Tuning variables in this way makes similarities between the blend and its source lexemes become more evident e.g. Fr. *saxogénaire* ← *saxophone* ‘saxophone’ ×

*sexagénaire* ‘sixty year old person’ [sVksV, ε/a, o/a]. According to Kemmer “speakers are operating with a facility for global pattern-matching that allows similarities on many different dimensions to count, as long as there are many of them.” (Kemmer 2003: 77), and the more familiar the patterns, the easier the recovering of the source lexemes is. The necessity of adopting a global viewpoint to deal with the communicative transparency of blends also motivates the introduction of ‘contour blends’ by Ronneberger-Sibold. These are characterized by their “overall rhymical contour defined by its number of syllables and the place of its main stress” (Ronneberger-Sibold 2006: 170-173) because she hypothesizes that the listener “recognizes the matrix word by its rhymical shape in combination with its stressed vowel and (...) the rest of its rhyme” (Ronneberger-Sibold 2006: 172). Concretely, *Lüge* can adjust its stress pattern ‘-’ to that of the matrix word *dialogisch* ‘-’ only if it is inserted within the latter, a situation which strengthens the phonological overlap (cf. A2). Contour blends encompass non-overlapping blends as well. For instance *lunch* and *breakfast*, whose stress pattern is ‘-’, have to combine as *brunch* in order to keep the stress pattern of the matrix word *lunch* intact. *Brench* is impossible, since that would suppose a stressed monosyllabic word whose rhyme is /εnč/ (as *bench*). Contour blends recall a proposal expressed by Cannon, which says that blends must retain the same stress that occurs in one of the source words (Cannon 2000).

**4.4.3.** The idea according to which the match between a blend and its source lexemes has to be globally and not locally evaluated has been taken up again by Gries in a more cognitive perspective (Gries 2004a). His original aim was to empirically test the validity of the claims put forward by Kelly (1998) and, more generally, to establish on objective and data-driven bases how speakers (resp. listeners) coin (resp. understand) blends. Starting from the claim made by Kaunisto that the shorter lexeme in a blend contributes a larger percentage of itself to the blend than the longer lexeme in order to preserve its recognizability (Kaunisto 2000), Gries proposes to calculate how much each source word (SW) contributes to the blend. The contribution is based on the respective number of phonemes or graphemes each SW shares with the blend. Gries argues that the phonemes (graphemes) taken into account should not be limited to the switching point area, as Kelly, Kaunisto and most authors do, but extended to elements similar in the whole SW. According to this method (which he dubs analysis 2), the contribution of both source lexemes is very similar in *chunnel*, whereas limiting the similarity around the switching point (noted by ‘|’), the contribution of *channel* drops to 28,6% (only the letters ‘ch’ are shared). For *brunch*, the same method shows that *lunch* contributes 80% of itself to the blend (viz. ‘unch’) whereas *breakfast* only contributes 22,2% (viz. ‘br’). On the basis of a list of 585 English blends, Gries determined statistically the graphemic / phonemic contribution of each SW to the blend

SW <sub>1</sub>	a	⇒ 1/7 not in the blend = 14%
<i>channel</i>	c h   n n e l	⇒ 6/7 in the blend = 85,7%
SW <sub>2</sub>	u n n e l	⇒ 5/6 in the blend = 83,3%
<i>tunnel</i>	t	⇒ 1/6 not in the blend = 16,7%

Table 3. Quantitative contribution of source words in *chunnel* (Gries 2004: 652)

as well as their graphemic / phonemic length. He demonstrated that when SW<sub>1</sub> is longer, then SW<sub>2</sub> contributes more, and when SW<sub>2</sub> is longer, the opposite is true (which supports Kaunisto’s hypothesis). He also found out that both sources contribute equally to the blend when they are equally long. In a second case study, Gries offers a method

to determine the similarity index (*SI*) between the source words and the blend. This method allows him to establish that « both values of authentic blends are significantly higher than the corresponding *SI* values for the simulated blends » (Gries 2004a: 658). In other words, blend coiners choose source words that are more similar to each other than one would expect on the basis of mere chance. This result is very important because it empirically supports, for the first time, the hypothesis that the similarity between source words and the blends plays a decisive role in blending. I refer to Gries's study for more results and details. Gries also investigates whether the coiners of blends make use of the recognition point (*RP*) of the source words in order to ensure that the blend is neither too long, and hence not very witty, nor too short to be recognized in the first place (Gries 2006). The recognition point is the empirical estimate of the uniqueness point (*UP*) of a word *W*, the *UP* being « the point at which *W* can be uniquely identified from a set of candidate words ». Three results of this study are worth mentioning here. The first is that for both source words of blends, the average cut-off for *SW*<sub>1</sub> is nearly exactly the random cut-off point to the *RP*, but the average cut-off point for *SW*<sub>2</sub> is half an element (letter, phoneme) too early in comparison with the random cut-off point. The second is that data indicate that blends make an extensive use of overlap, which makes the retrieval of source words easier and obviates the need for adhering to the *RP* for *SW*<sub>2</sub>. The third is that “complex clippings” (e.g. *agitprop*) behave totally differently (cf. section 5.3). Their cut-off points to the *RP* are three times as high as the ones expected by chance, and they greatly underuse overlap (Gries 2006: 547-548).

#### 4.5. Phonological splicing

**4.5.1.** Although quantitative approaches to lexeme formation offer invaluable insights into the splicing of blends, some of these splicings involve phonological intricacies that lie beyond their reach for the time being. Those tied to syllable structure are a case in point. Assuming constituents On(set), Nu(cleus), Co(da), syllable structure can be (i) flat viz. [On Nu Co], (ii) left-branching viz. [[Bo(dy) On Nu] Co]], or (iii) right-branching [On [Rh(y)me Nu Co]]. Contrary to English, which by far favors structure (iii) (but see Pierrehumbert 2012), tasks of substitution and blending carried out with Italian subjects show that Italian gives a very strong advantage to final elements over initial ones and is therefore not oriented towards structure (iii), contrary to the expectations (Bertinetto 1999). In keeping with these results, the major switching point in Italian natural blends is localized at the juncture of two whole syllables (half of the data surveyed by Bertinetto). The other major switching point is after the On of *SW*<sub>1</sub> e.g. *polstrada* ← *polizia* ‘police’ × *strada* ‘road’, po.l<i.zia>•stra.da, which in very few cases corresponds to structure (iii) e.g. *farmitalia* ← *farmacia* ‘pharmacy’ × *Italia* ‘Italy’, far.m<a.ci.a>•i.ta.lia. In conclusion, Italian would be weakly oriented toward type (iii), English strongly, and Korean would illustrate type (ii). According to Bertinetto, such variations support the idea that the syllable should be conceived of as a shallow structure emerging dynamically at late stages of processing under the pressure of phonotactic and prosodic constraints rather than a rigid template (cf. also Pierrehumbert & Nair 1995). In a subsequent comparative study of blends in English, German, French and Italian, Bertinetto shows that in lexical blends without overlap the switching point is localized between two whole syllables (neutral type) in all these languages but English (39.4% only). English prefers structure (iii), which is the second choice for the other languages. When the switching point is in *SW*<sub>1</sub>, German and French strongly prefer the neutral type, whereas English and Italian prefer right-branching structure (iii).

When it is in SW<sub>2</sub>, the neutral type drops, except in Italian, while type (iii) rises. Even though the treatment of phenomena such as ambisyllabicity could slightly alter the picture, these results show that fine-grained phonological parameters need to be taken into account anyway (for details cf. Bertinetto 2001).

**4.5.2.** Haplogenic overlap is not exclusive to blends. This phenomenon also occurs in learned compounding e.g. Fr. *minéralogie* ‘mineralogy’ ← *minéral-o-logie* ‘mineral-RFX-logy’ (Corbin & Plénat 1992). In this case, the suppressed part is limited to the adjacent edges of base lexemes, a fact that can be attributed to the Contiguity constraint: haplology is limited to contiguous segments. In (Fradin, Montermini & Plénat 2009), it has been claimed that in French, and probably some other languages, a key property of blending is the extension of haplology to non-contiguous segments. The behaviour of many blends stems from the relaxation of the Contiguity constraint. Let’s take a few examples. When the source lexemes have an identical segment on opposite edges, as in (3a), they can be combined in the two ways illustrated in (3b, c). In (3b), the two similar segments overlap and a blend of type D1 obtains. In (3c) however, no overlap is possible and the result is not a blend but just two lexemes stuck together. *Mystiquoptimiste* is unpalatable (too long, unwitty) and runs afoul the constraints we have seen up to now (sections 3.3., 3.4.).

- (3) a. *optimiste* /optimist/ ‘optimist’, *mystique* /mistik/ ‘mystical’  
 b. *optimiste* + *mystique*, /optimist + mistik/ → *optimystique*  
 c. *mystique* + *optimiste*, /mistik + optimist/ → \**mystiquoptimiste*

When the source lexemes have an identical segment located on the same side, they can combine in the two ways illustrated in (4b-c). While (4b) is a perfect and attested blend, (4c) is markedly worse and unattested.

- (4) a. *chérubin* /ʃerybẽ/ ‘cherubim’, *bambin* /bãbẽ/ ‘small child’  
 b. *chérubin* + *bambin*, /ʃerybẽ + bãbẽ/ → *chérubambin*  
 c. *bambin* + *chérubin*, /bãbẽ + ʃerybẽ/ → ?\**banchérubin*

The fact that examples such as (4b) exist supports the idea that the internal segment (‘bin’, /bẽ/) has been deleted under identity with the final segment of the other source lexeme. The hypothesis defended in (Fradin, Montermini & Plénat 2009) is that this deletion is an instance of haplology, which can take place because the Contiguity constraint has been relaxed: in *chérubambin*, the segment /chéru/ is separated from segment /bin/ by one syllable (/bam/), whereas in (3b) the segment /opti/ is not separated from segment /mist/ even in the blend (for convenience, I use plain writing conventions). The very low acceptability of (4c) shows that the violation of the Contiguity constraint cannot be extended to two or more syllables. The same pattern of acceptability is observed with other blends based on source lexemes ending in similar segments e.g. *délicieuse* ‘delicious:F’, *vicieuse* ‘vicious:F’ → *délicieuse*, dé.li.<cieuse>•vi.cieuse vs. \**vidélicieuse*, vi.<cieuse>•dé.li.cieuse; *illusoire* ‘illusory’, *provisoire* ‘provisory’ → *provillusoire* vs. \**illuprovisoire*; *marron* ‘chestnut’, *potiron* ‘pumpkin’ → *potimarron* vs. \**mapotiron*. The same phenomenon is observed when the source lexemes share the same beginning: *cinéma* ‘cinema’, *cyber* ‘cyber’ → *cybernéma*, cy.ber•<ci>.né.ma vs. \**sinémaber*, ci.né.ma•<cy>.ber. In (Fradin 2000: 28 nt 27), it had been pointed out that source lexemes beginning with a similar segment

cannot yield acceptable blends, in French. Actually three cases have to be distinguished. The first one has to do with examples that violate the Contiguity constraint in the same way as *banchérubin* or *sinémaber* do e.g. *imbécile* ‘stupid’, *important* ‘important’ → \**imbécileportant*, im.bé.cile•<im>.por.tant vs. \**importantbécile*, im.por.tant•<im>.bé.cile. The part belonging to the second source lexeme is too far from the initial segment of the blend (2 syllables). The second case is illustrated by *cobaye* ‘guinea-pig’, *copain* ‘pal’ → \**cobayepain*, co.baye•<co>.pain and \**copainbaye*, co.pain•<co>.baye. Since the Contiguity constraint cannot be invoked in this case (cf. *chérubambin*), it can be suggested that the remaining part of the second source lexeme is too small (one syllable) for the latter to be identified. Maximization would require two consecutive syllables at least from each source lexeme (Two-syllable constraint). This constraint also accounts for the contrast between *Rocarbespierre* Ro.card•<Ro>.bes.pierre vs. \**Robespierrecard* Ro.bes.pierre•<Ro>.card, formed on the name of political leaders *Robespierre* and *Rocard*. The third case concerns blends formed on source lexemes such as *citoyen* ‘citizen’, *cynique* ‘cynical’. Whereas the unacceptability of \**citoyenique* /si.twa.jẽ•<si>.nik/ is predicted on the basis of both the Contiguity and the Two-syllable constraints, the unacceptability of \**cyniquetoyen* /si.nik•<si>.twa.jẽ/ is unaccounted for. A possible explanation (which I originally owe to E. Ronneberger-Sibold) could be that after the first two syllables the word *cynique* has been identified and the procedure stops in spite of the fact that the part corresponding to the second source lexeme has not been decoded. This would explain the low acceptability of *infiniverti* ← *infini* ‘infinite’ × *inverti* ‘homosexual’ (Michaux) and the contrast between Fr. \**mélassemé* vs. *mémélasse* ← *mémé* ‘grandma’ × *mélasse* ‘muck’. This problem occurs neither for *chérubambin* since /ʃery/ does not correspond to a whole lexeme, nor for *Müllionärin*, since the first lexeme (*Müll*) is included in the second one. German seems to behave in the same way as French for source lexemes exhibiting parallel edge similarity e.g. *Laufbahnmasche* ← *Laufbahn* ‘career’ × *Laufmasche* ‘ladder’, *begleitdigen* ← *begleiten* ‘to accompany’ × *beleidigen* ‘to offend’. For reasons that cannot be discussed here, some intercalated blends may not obey the Contiguity constraint e.g. Fr. *emmiterrantouflé* ← *emmitouflé* ‘wrapped up’ × *Miterrand*, even though most do. Note also that in all examples involving similar initial vs. final segments, the Linearity constraint is never violated and therefore cannot be adduced to account for the observed impossible cases. To sum up, the fact that some blends are unacceptable proves that everything is not possible in blending contrary to what is sometimes assumed. The discussion of French data has shown that the unacceptable blends can be dealt with by very general constraints such as Contiguity and Linearity constraints. All in all, blends are rather faithful to their source lexemes as the Contiguity constraint itself shows: when it is infringed, it tends to be minimally infringed (more in Fradin, Montermini & Plénat 2009).

## 5. Semantic conditioning

### 5.1. General considerations

All types of semantic relations observed with compounds in a given language should be found with blends. Actually, there are even more, since blending puts no ban on the categories that may combine, in contradistinction to compounding (section 2). In these conditions, it is strange that the observed range of interpretations proposed for blends in the scholarship should be so limited. The formal pattern of blends, i.e. the way the (splinters of) source lexemes are phonologically combined, is not supposed to have an

impact on its interpretation and it has none (section 2). On the contrary, the category of the source lexemes plays a crucial role. With two As or Vs, a coordinative interpretation is the rule; with two Ns, an additional determinative or copulative reading may be available; with an N and a V an argumental reading is frequent but not mandatory. In brief, the semantic combinations we come across are those usually allowed by grammar with units exhibiting the categories in question. Some of these combinations correspond to the linguistic material that (conceptual) blends, put forward by cognitive linguists, are made of (Fauconnier 1997: ch. 6; Fauconnier & Turner 2002). Finally, the semiotic perspective according to which a blend is coined seems to have a bearing on the way it is interpreted. At least two such “semiotic perspectives” come to mind. According to the first, blending is conceived of as a denominating activity, the scope of which is to give a name to (new) objects or substances; according to the second, it amounts to introducing a word into the discourse expressions without any particular prerogative except to be a witty substitute for an ordinary lexical unit. From the first perspective, blends may be coined and used outside discourse, simply as objects’ names occurring on labels, catalogs or posters. Blends of this type are frequent in advertising e.g. Fr. *Olympiaf* [name of a show] ← *Olympia* × *E. Piaf*, and some of them function as trademarks e.g. Ger. *Bowlero* [kind of punch] ← *Bowle* ‘punch’ × *bolero* ‘bolero’ (Ronneberger-Sibold 2006) (section 5.3). Blends created with the communicative purpose of providing an entity with a name are eagerly promoted by language planners and generally have a coordinative reading e.g. E. *quasar*, *pulsar*, Fr. *rurbain* ‘rural urban’, *courriel* ‘electronic mail’.

## 5.2. Semantic patterns

Four major patterns of interpretation can be distinguished for blends. In the first, the two lexemes are on an equal footing and their semantic import is equivalent. To that extent, this type corresponds to co-compounding (dvandvas). But whereas co-compounds express a natural coordination of items closely related by meaning and forming a conceptual unit (Wälchli 2005: 5), the coordination in blends is always artificial and the units are fused instead of being kept conceptually distinct. Even though blends are not co-compounds strictly speaking, some of the meanings Wälchli mentions for them are widespread in blends, such as the additive and synonym readings (but some never occur e.g. collective and scalar meanings).

		Lg	Blend	P’_Q’(x)
(a)	A	Fr.	<i>optimystique</i>	optimist’_mystical’(x)
		Ger.	<i>unanbequem</i>	unpleasant’_uncomfortable’(x)
		Gr.	<i>psidrós</i>	slender’_fat’(x)
	N	E.	<i>smog</i>	smoke’_fog’(x)
		Gr.	<i>xarabúri</i>	joy’_fun’(x)
		Heb.	<i>šezifarsék</i>	plum’_peach’(x)
	V	E.	<i>smothercate</i>	to smother’_to suffocate’(x)
		Fr.	<i>bavardîner</i>	to chat’_to dinner’(x)
		Gr.	<i>sidrivulázo</i>	‘to crash’_to sink’(x)
	PN	E.	<i>Oxbridge</i>	Oxford’_Cambridge’(x)
		Fr.	<i>Bokhassan II</i>	Bokassa’_Hassan II’(x)
	(b)	N	Ger.	<i>Erdtoffel</i>
Gr.			<i>frimos</i>	horror’_terror’(x)

Table 4. Pattern (I). Coordinated interpretation

(a) additive reading : the blend denotes “pairs, each consisting of the parts A and B” (Wälchli 2005: 137). More generally, the meaning of the blend is the union of the meanings of its source lexemes (Bauer 2008). But for categories other than nouns, this union may be controversial. Here are the glosses : Ger. *unanbequem* ← *unangehehm* ‘unpleasant’ × *unbequem* ‘uncomfortable’, Gr. *psidrós* ← *psilós* ‘slender’ × *xodrós* ‘fat’; Gr. *xarabúri* ← *xará* ‘joy’ × *kalabúri* ‘fun’; Ger. *sidrivulázo* ← *sidrivo* ‘to crash’ × *vułázo* ‘to sink’; Heb. *šezifarsék* ‘nectarine’ ← *šezik* ‘plum’ × *ʔafarsék* ‘peach’.

(b) synonym reading : the parts A, B and the whole blend have almost the same meaning (Wälchli 2005: 143) e.g. Gr. *frimos* ‘more than terror’ ← *fríci* ‘horror’ × *trómos* ‘terror’.

The second pattern (II) corresponds to intersective meaning. Such interpretation occurs in what Wälchli calls appositional compounds e.g. Ger. *berühmt-berüchtig* ‘famous and ill-famed’. The semantics of many blends follows this pattern.

	Lg	Blend	$P'(x) \wedge Q'(x)$
A, N	Ger	<i>dialügisch</i>	dialogal'(x) ∧ lies'(x)
	Fr.	<i>saxogénaire</i>	saxophonist'(x) ∧ 60-year-old'(x)
	Heb.	<i>demoktátor</i>	democrat'(x) ∧ diktator'(x)
	E.	<i>fantabulous</i>	fantastic'(x) ∧ fabulous'(x)
	Fr.	<i>autoimmobiliste</i>	car_driver'(x) ∧ immobile'(x)
	Sp.	<i>brujeres</i>	witch'(x) ∧ women'(x)
V	Gr.	<i>saxlaburízo</i>	to talk_nonsense'(x) ∧ to make_jokes'(x)

Table 5. Pattern (II). Intersective interpretation

Glosses: Gr. *saxlaburízo* ‘to make nonsense jokes’ ← *saxláro* ‘to talk nonsense’ × *kalaburízo* ‘to make jokes’ (Koutita-Kaimaki & Fliatouras 2001: 123-124; cf. also Ralli 2009); Sp. *brujeres* ← *bruja* ‘witch’ × *mujeres* ‘women’.

Pattern (III) includes blends where one of the source lexeme provides the second lexeme with a predicate of which this second lexeme is an argument. The predicate can be the source lexeme itself or a verb inferable from the source lexeme. Variable *e* is Carlson’s eventuality variable, and *s* is for states.

	Lg	Blend	$P'(x_1, \dots, x_n, e) \wedge Q'(x_i)$
N, N	Ger	<i>Witzenschaft</i>	science'(x) ∧ object_of'(x, y) ∧ joke'(y)
N, V	E.	<i>sneakret</i>	to sneak'(x, y, e) ∧ secret'(y)
	Fr.	<i>élevache</i>	to breed'(x, y, e) ∧ cow'(y)
	Fr.	<i>embellemerder</i>	to bore_stiff'(x, y, e) ∧ step_mother'(x)

Table 6. Pattern (III). Argumental interpretation

Glosses: Ger. *Witzenschaft* (E. Jandl) ← *Witz* ‘joke’ × *Wissenschaft* ‘science’; Fr. *embellemerder* ← *emmerder* ‘to bore stiff’ × *belle-mère* ‘step-mother’.

The fourth pattern involves a causal relation between an event, of which one of the source lexemes is an argument, and a causer, which may be an Agent or another event. There are no limits to the complexity of the causal chain that may be constructed, except those imposed by human processing. The relation can appropriately be recast in terms of a result relation, but for simplicity reasons I refrain from modifying the proposed formulation.

Lg	Blend	$CAUSE(x, e) \wedge P'(y_1, \dots, y_n, e) \wedge Q'(x)$
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Ger	<i>Müllionärin</i>	CAUSE(x, s) $\wedge$ millionairess'(y, s) $\wedge$ trash'(x)
Fr.	<i>s'étrangueuler</i>	CAUSE(e <sub>1</sub> , e <sub>2</sub> ) $\wedge$ to have_a_row'(x, y, e <sub>1</sub> ) $\wedge$ to choke'(x, e <sub>2</sub> )
Gr.	<i>xaranio</i>	CAUSE(e <sub>1</sub> , e <sub>2</sub> ) $\wedge$ engrave'(x, y, e <sub>1</sub> ) $\wedge$ open'(x, y, e <sub>2</sub> )
Heb.	<i>ricpáz</i>	CAUSE(x, e <sub>1</sub> ) $\wedge$ to shine'(y, e <sub>1</sub> ) $\wedge$ floor'(y)

Table 7. Pattern (IV). Causal interpretation

Glosses: Fr. *s'étrangueuler*  $\leftarrow$  *s'engueuler* 'to have a row'  $\times$  *s'étrangler* 'to choke'; Gr. *xaranio*  $\leftarrow$  *xarázo* 'to engrave'  $\times$  *aníó* 'to open'; Heb. *ricpáz* 'floor cleaning detergent'  $\leftarrow$  *ricpá* 'floor'  $\times$  *páz* 'shining'. Note that *photocopillage*  $\leftarrow$  *photocopie* 'photocopy'  $\times$  *pillage* 'plundering' is interpreted as 'CAUSE(e<sub>1</sub>, e<sub>2</sub>)  $\wedge$  photocopy'(x, y, e<sub>1</sub>)  $\wedge$  plunder'(x, y, e<sub>2</sub>)'.

A fifth pattern involving the equative relation 'isa' could be added to the preceding relations. This relation explicits the class of the referent of one of the two nominal source lexemes. It has a strong connotative flavour since it introduces a side predication about the referent denoted by the blend (actually an implicature (Potts 2005)). For instance, when one says *Juan mira telebobelas todo el día* 'John watches soap-operas all the day long', one says both (i) that Juan watches soap-operas and (ii) that these soap-operas are stupid. Such blends typically illustrate the conceptual integration exhibited by conceptual blends (according to Cognitive Linguistics), where the blend's denotatum belongs to a mental space sharing properties of the two input spaces containing the sources referents (TV-shows, stupidity) (Fauconnier & Turner 2002; Kemmer 2003).

	Lg	Blend	isa'(x, y) $\wedge$ P'(x) $\wedge$ Q'(y)
N, N	Fr.	<i>Chirouette</i>	isa'(x, y) $\wedge$ Chirac'(x) $\wedge$ weathercock'(y)
	Sp.	<i>telebobela</i>	isa'(x, y) $\wedge$ soap-opera'(x) $\wedge$ stupidity'(y)

Table 8. Pattern (V). The equative interpretation

Glosses: Fr. *Chirouette*  $\leftarrow$  *Chirac*  $\times$  *girouette* 'weathercock' (= person who always changes her mind); Sp. *telebobela* (Colombia)  $\leftarrow$  *telenovela* 'soap-opera'  $\times$  *boba* 'stupid thing'. Note that conceptual integration is frequent also in blends with a coordinated interpretation e.g. E. *webzine* (*Web*, *magazine*), but unlikely with those having an intersective, an argumental, or a causal interpretation.

Two final remarks. First, as evidenced long ago by (Lehrer 1996), blends are more easily identified in context, and when the context proves to be indispensable, it means that the blend is too opaque to stand by itself (cf. *magalog* (*magazine*, *catalog*) quoted in Brdar-Szabó & Brdar 2008: 175). Second, blending permits interpretive combinations not allowed by grammatical morphology. Fr. *élevache* (*élevage*, *vache*) is a case in point since N1N2 compounds such as Ger. *Schiffbau* 'shipbuilding', are not well-formed in French or Romance languages in general e.g. *\*traitement-données* 'data processing'. These compounds are characterized by the fact that one of the Ns is a deverbal that introduces a predicate which takes as argument the semantic content of the other N (subordinative reading).

## 6. Delimiting blending

### 6.1. Blending and speech-errors

Gries has shown that speech-error blends, sometimes called "interference blends", e.g. E. *stragedy*  $\leftarrow$  *strategy*  $\times$  *tragedy* (and simulated blends) differ significantly from

intentional blends in a way predicted by Kaunisto's hypothesis (section 4.4.3.) (Gries 2004a, b). This reason is sufficient to treat them separately (cf. also Pharies 1987).

## 6.2. Neoclassical compounds

Blends differ from neoclassical compounds e.g. *anthropomorphous* by several properties. In their great majority, their sources are homolexical lexemes while they are heterolexical lexemes for neoclassical compounds; they have no interfix while the latter generally have one e.g. /o/ in *cardi-o-logy*; their parts may be absolute forms e.g. Ger. *Spät* in *Spätник*, whereas neoclassical compounds' forms are conjunct forms e.g. E. *°logy*; the order of constitutive elements is ruled by the phonology in blends (section 4.3.) but by the semantics in neoclassical compounds e.g. Fr. *techn-o-logy* 'technology', *pyro-technie* 'pyrotechnics'.

## 6.3. Blending and shortening

Since blending involves shortening (section 4.1.), shortening techniques used by speakers have often been considered non distinct in blending and elsewhere (Bauer 1988: 40). These techniques come in two types, depending on whether they take the formal structure of the source into account (acronymy) or not (clipping) (Ronneberger-Sibold 2013 (forthcoming)). While the source of shortening is normally a well-formed existing expression (word or phrase) e.g. *lab* ← *laboratory*, *VAT* ← *value added tax*, the same does not necessarily hold for blends e.g. neither *fantastic fabulous* (cf. *fantabulous*), nor *sneak secret* (cf. *sneakret*) are possible English phrases. Moreover, since shortening only affects the phonological or graphemic aspect of the sign, the expression resulting from the application of a shortening technique to a given source denotes the same entity as this source (Kreidler 2000: 959). Once again, this is not true of blends, which combine the meaning of their sources in various ways (section 4.2.). We have then principled reasons to distinguish blends from any variety of shortenings. At a lower level, new differences emerge.

Traditionally, acronyms are formed from the initial letters of a phrase used as a name. Only acronyms that can be pronounced as words (rather than by letter-naming) could possibly be considered as blends. Taking advantage of this, many authors assume that e.g. E. *modem* ← *mod<ulator>*, *dem<odulator>*, It *afoterm* <*afo<no>* 'aphone', *term<ico>* 'thermic', Sp. *bañoftal* ← *ba<ño>*, *oftal<mológico>*, are blends. But these constructs are syllabic acronyms (Bertinetto 2001: 19) rather than blends (or clipped compounds (Cacchiani 2011)) because (i) they have the same meaning as their source, (ii) they do not behave like blends (cf. section 4.4.3.), and (iii) "they do not leave enough of the etymon intact so that it can be recognizable" (Pharies 1987: 283). Note that trade names formed through shortening e.g. *Cujasuma* [tobacco brand] ← *Cu<ba>* × *Ja<va>* × *Suma<tra>*, or *nylon* ← <*vi>**nyl*, <*cott>**on* may still be a special kind of blends since their source does not constitute an existing phrase (Ronneberger-Sibold 2006). While acronyms can be derivational bases e.g. Fr. *radar* → *radariste* 'radar specialist', *ONU* 'UNO' → *onus-ien* ONU-AZR, blends cannot.

A clipping is an expression resulting from the suppression of a phonological subpart of a word, the meaning of the source word being kept intact. The process of clipping exists in two versions, fore-clipping (apocope) e.g. *professor* 'professor' → *prof* and back-clipping (aphaeresis) e.g. Fr. *capitaine* 'captain' → *pitaine*. For what regards phonology, clipping is the mapping of a base onto a template which coincides with the minimal prosodic word of the language (Kilani-Schoch 1996; Plénat 1984; Thornton 1996). This is illustrated by Italian *pattu* ← *pattum-iera* 'garbage bin', where the minimal word for nouns is a disyllabic trochaic foot ending in a vowel. The minimal

word requirement predicts that clippings will always be absolute forms, which they are. This is not the case of the constitutive subparts of blends, however: E. /unch/ cf. *brunch*, It. /llo/ cf. *zebrallo* ← *ze.bra* ‘zebra’ × *ca.val.lo* ‘horse’ do not constitute minimal words in the languages in question, not to mention E. /sm/ a subpart of *smog*. The suppression observed in blends originates neither in mapping onto a template, as in clipping, nor in circumscription, as in prosodic morphology (cf. McCarthy & Lombardi 1991), but in a mere truncation. To that extent it is misleading to claim that blends are formed through clipping as some authors do (Lehrer 1996; Clas 2001).

The so-called “stump compounds”, illustrated in (5) with Russian data, consist in the juxtaposition of two or more words, of which one at least is shortened (Mel’čuk 1997: 93). The shortened elements are mapped onto the template of the minimal prosodic word in Russian, which is a bimoraic (closed) syllable (Arcodia & Montermini 2012). Only apocope seems to be allowed.

- (5) a. *sovhoz* ← *sov*<*et-skoe*> *xoz*<*jajstvo*> soviet-AZR economy ‘Soviet farm’  
 b. *zavsektorom* ← *zav*<*ed-ujuščij*> *sektor-om* to direct-ACT.PRSPT sector-INS ‘sector director’

The fact that a prosodic mapping takes place indicates that these constructs are not blends. They should rather be considered reduced phrases since, as in acronyms, (i) the order of the elements follows the order of the constituents of the source, and (ii) they have no meaning of their own. English *Chinglish* ‘mix of Chinese and English’, *Malglish* ‘mix of Malay and English’, *Japlish* etc. are formed on the model of (5a), even though their source is not a phrase. I will come back to constructs (5) in section 6.5.

#### 6.4. Blending and secreted affixation

Blending has often been endowed with the capacity to trigger processes leading to the apparition of new elements, such as E. *-burger*, *-gate*, *-(a)holic* or Fr. *-stroïka* (Cannon 2000: 734; Bauer 1983: 236). These elements have received various names: *splinters* (Lehrer 1996), *fractomorphemes* (Tournier 1985).

- (6) a. *Irangate*, *Inkhatagate*, *Westlandgate*, *Monicagate*, *Rubygate*...  
 b. *Workaholic*, *spendaholic*, *shopaholic*, *cleanaholic*, *fruitaholic*...  
 c. *Castroïka*, *Mongolstroïka*, *Pretoriastroïka*, *Béréstroïka*...

Many authors assume that there is a genetic link between these elements and blends, the clearest expression of which is given by Tournier: “We remark that *telecast* is actually a blend of *television broadcast*. We must point out that practically the difference between a fractomorpheme and a part of a blend is that the part of a blend may occur only in one form (e.g., *og* in *smog*). It becomes a fractomorpheme when it is reused in other forms” (Tournier 1985: 87, ft 7 my translation BF). This hypothesis adequately captures the idea that blends are by nature at odds with series. However, it supposes that the elements ending the constructs in (6) arose out of blending, which is wrong: none of the forms in (6a) has a two-lexeme source, the second lexeme of which would be *Watergate*. Facing *telecast*, a production pattern such as *Irangate* ← *Iran* × *Watergate* does not correspond to reality. The elements under discussion originate instead from a unique model lexeme, either simple (*perestroïka*) or complex (*Watergate*, *alcoholic*) in the language in question, through a process of secretion. For this reason they will be called secretive affixes. Secretion can be characterized as the combination of three operations. On the phonological plane, a shortening takes place whereby the output is

associated with a segmental string  $F_2$  which is a substring of the input string  $F_1$ : (i)  $|F_2| < |F_1|$  e.g. /watergate/ → /gate/. As the above mentioned authors rightly point out, this substring usually emerges from reinterpreting a splinter of the existing model lexeme as an affix on the basis of a series of forms exhibiting the same substring (cf. (6)). On the semantic plane, an operation of selection keeps certain salient meaning units of the meaning of the input lexeme and discards others (this is secretion proper (cf. Warren 1990: 119)): (ii)  $|S_2| < |S_1|$ , ( $S_i$  = semantic unit). In parallel, an operation of abstraction replaces one (or several) argument constants by variables, transforming the expression into a function (i.e. a lambda expression), for instance: (iii)  $\lambda P. \lambda e. \exists xy. \text{involve}'(x, y, e) \wedge \text{scandal}'(e) \wedge \text{high-ranking}'(y) \wedge \text{connected\_with}'(x, e) \wedge P'(x)$  (see Fradin 2000). In the present case, this formula would be the semantic correlate of exponent *-gate*. In brief, the secretion process results in new lexeme formation rules which then apply to lexemes such as IRAN, INKHATA... or SHOP, FRUIT, etc. Hence *Irangate* = ‘scandal connected with Iran involving high-ranking people’. Secretive affixation is therefore markedly distinct from blending, since neither operation (ii) nor (iii) is involved in blending. It is also distinct from shortening, insofar as both only share the abbreviation operation (i). It should be kept in mind that secretive affixation, like all derivational processes, crucially depends on series of forms showing identical correlations, such as (6), since abstraction presupposes repetition. Jespersen is the first one who pointed out the phenomenon of secretion and gave it a name (Jespersen 1922 : XIX §13).

### 6.5. Concealed compounding

Repetition obviously does not always result in a secretive affixion rule. In (7), substrings *-ware*, *-tique*, *san-* are not secretive affixes but subparts of full-fledged lexemes, respectively SOFTWARE, INFORMATIQUE ‘computer science’, SANITARNYJ ‘sanitary’ (Mel’čuk 1997: 93).

- (7) a. E. *fontware, freeware, groupware, shareware, vapourware*...  
 b. Fr. *bureautique, domotique, éducatique, ludotique, monnétique*...  
 c. Rus. *sanvrač, sanpunkt, sanobrabotka, sanprosveščenie, santexnika*...

Actually, this is the situation we had with *telecast*, where *tele-* abbreviates *television* e.g. *telegame, telegenic, teleplay, televisual*. Contrary to what is often claimed, constructs in (7) cannot be blends because they constitute series and blends are antithetic to series. The only property they share with blending is (i) (i.e. shortening). They do not involve secretion proper nor, by the same token, abstraction since the meaning of the substring is equivalent to that of the whole source lexeme. This is confirmed by the fact that their interpretation is the combination of the meaning of the two source lexemes, on the model of what happens in compounding e.g. E. *fontware* ‘software for fonts’, *freeware* ‘software free of charges’; Fr. *bureautique* ‘computer science devoted to office’, *domotique* ‘computer science for house’; Rus. ‘*sanvrač* = ‘sanitary doctor’, *sanpunkt* = ‘sanitary station’, etc. For this reason, these constructs have been dubbed concealed compounds (more on this in Fradin 2000 :47). Some of them may stem from series based on a source lexeme which is a reduced phrase (Mel’čuk 1996: 58) such as (5b) or even (5a) e.g. Rus. *profsojuz* ← *professionalnyj sojuz* professional union ‘trade-union’ abbreviated as *prof* in *profsobranie* ‘trade-union meeting’, *profdvizhenie* ‘trade-union movement’, *profrabotnik* ‘trade-union worker’, etc. Concealed compounding is quite common in many languages, especially in the technological or administrative speech. In Chinese, this phenomenon seems to be widespread in ordinary language too (Arcodia &

Montermini 2012) e.g. *fēijī* fly-machine ‘airplane’ → *jīchāng* machine-field ‘airport’, *jīcāng* machine-cabin ‘airplane cabin’, where *jī* stands for ‘airplane’.

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