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Georgette Dal and Fiammetta Namer

Playful nonce-formations in French: Creativity and productivity

Abstract: Nonce-formations, conceived as “[n]ew complex word[s] created by a speaker / writer on the spur of the moment to cover some immediate need” (Bauer 1983: 45), have been a theme in Anglo-Saxon and Germanic studies for several decades now (cf. among others Lipka 1975; Bauer 1983; Hohenhaus 1996; Crystal 2000; Štekauer 2002; Kerremans 2015), but they have received very little investigation in the French domain. Although nowadays all the conditions are met for the capture of observable data with the use of large corpora, French morphologists tend to be suspicious of individual coinages, especially if they are playful and diverge from what they consider established word formation rules. In French studies, despite the emergence of corpus-based studies, context is rarely taken into consideration, and the generative distinction between competence and performance often remains active: nonce-formations are in the scope of performance, (socio-)pragmatics or stylistics; therefore, they are not to be taken into account in morphological studies. However, nonce-formations address some interesting morphological issues: do they have to be taken into account for productivity measures? What about the clear-cut distinction between productivity and creativity? In the vein of Dal and Namer (2016a), this paper focuses on patterns of emergence of playful nonce-formations in French. After a brief definition of nonce-formations (§ 1), we first identify several recurring patterns of emergence of nonce-formations (§ 2). We then use these patterns to build a continuum among playful nonce-formations (§ 3.1). Lastly, issues related to productivity are discussed (§ 3.2).

1 Introduction

Nonce-formations are “[n]ew complex word[s] created by a speaker / writer on the spur of the moment to cover some immediate need” (Bauer 1983: 45). By definition, a nonce-formation is a contextual coinage in a given communication situation, and the speaker / writer does not aim to impose her / his spontaneous coinage on everyone (Bauer 1983: 45; Crystal 2000: 219).

According to Hohenhaus, who has devoted a considerable amount of research to this topic (cf. 1996, 1998, 2005, 2007, 2015), the common feature of all

nonce-formations is their newness, not with respect to any institutionalized¹ repertoire such as dictionaries but with respect to the speaker / writer:

Formation is new in a psycholinguistic sense, i.e. formed actively (by whatever means) by a speaker – as opposed to retrieved ready-made from his / her storage of already existing listemes in the lexicon. (Hohenhaus 2005: 364)

As a result, even if previous studies are not always clear on this point, a well-established word can be regarded as new by the speaker / writer, because he / she has never been exposed to it; put another way, the word does not belong to his / her mental lexicon:

Nonce-formations can be regular according to productive Lexeme Formation Rules henceforth LFR (see Fradin 2003 for a justification for the use of this term instead of that of ‘Word Formation Rules’) like heroid in the following quotation from Time Magazine, or intentionally deviant with regard to them like *oid-y*:

It’s an oid-y world out there. Tabloids run factoids about humanoids on steroids. In a world gone synthetic, why should movies offer something as organic as a hero? Welcome, then, to the age of the Heroid. (Hohenhaus 2005: 363)

Despite their explicit or implicit rejection from the field of investigation by many morphologists on the grounds that they would be in the scope of performance, (socio-)pragmatics or stylistics, nonce-formations give some interesting indications on the speaker / writer’s perception of the morphological system. They also address interesting theoretical issues: are they taken into account for productivity measures? Is there a clear-cut distinction between productivity and creativity? (See also the contribution by Arndt-Lappe, this volume).

In view of the above definition, a major problem with nonce-formations is their detection, because morphologists have no access to the speaker’s mental lexicon: as mentioned by Kerremans (2015: 92), appealing to external native-speaker judgment of novelty is not reliable, because such a procedure gives rise to suboptimal results; automatic detection, based on the search for unknown forms such as the *Logoscope* project, which aims to provide means for observation of new words in an enlarged textual context (for a presentation, see Falk, Bernhard, and Gérard 2014; Gérard, Falk, and Bernhard 2014), can be helpful.

¹ Among others, see Hohenhaus (2005) for a presentation of the difference between ‘lexicalization’ and ‘institutionalization’.

However, such (semi-)automatic systems are mostly based on filters, and, perhaps more problematically, they fail to catch the use of lexicalized words as nonce-formations by the speaker / writer.

One of the surest ways to detect nonce-formations is to rely upon clues furnished by the speaker / writer him- / herself to his / her own productions or to identify discursive schemas fostering the emergence of such coinages. This is the aim of the present paper. In section 2, recurring patterns of emergence of nonce-formations are identified. In section 3, after a summary, issues of nonce-formations in regard to theoretical morphology are discussed.

2 Patterns of emergence of nonce-formations

In what follows, we make use of examples collected on the Web (or on its avatar frWac²) for various morphological studies (cf. Dal and Namer 2010a, 2010b; Lignon and Namer 2010; Koehl 2010, 2012; Namer 2013b; Namer and Villoing 2015; Dal and Namer 2016a). When necessary, these examples are complemented by others.

Indeed, a very large amount of contextualized Web data has been collected since the early 2000s in the context of various research projects in morphology. Initially, this data was gathered by means of Web Search Engine API-based tools. These applications replace human users in performing Web searches. At least two programs using such APIs have been specifically developed to make Web search for word formation automatic: Webaffix (Tanguy and Hathout 2002) was designed to collect data with the Altavista engine, and WaliM (Namer 2013a) was initially used to work first with Yahoo, then with Bing. The user provides both systems with a list of words which have to be checked online, in order to assess his / her underlying intuitions and theoretical hypotheses. For each successful query, the program displays the global word count, and, for each indexed URL, a text sequence containing the searchword. From the results obtained, the morphologist can then construct new word-formation hypotheses and assertions (for a more detailed description, cf. Dal and Namer 2015).

² The WaCky project is an informal consortium of researchers who constructed four very large freely available language specific corpora from the Web for English, German, French and Italian (Ferraresi 2007; Ferraresi et al. 2008; Baroni, Guevara, and Zamparelli 2009). Each corpus size is approximately 2 billion words. The WaCky approach consists of a BootCat-style crawl using seed URLs. Each corpus has been obtained by limiting crawls to the country domains. Initial seed words come from two distinct sources: the language's basic vocabulary and lexical items from well-established large resources. Each corpus is tagged for part of speech and lemmatized.

In our corpus, several patterns of emergence can be identified. The most obvious pattern is the case when the speaker / writer flags his / her nonce-formation with quotation marks and / or (meta-)discursive comments (section 2.1). A second general case (section 2.2) is the insertion into discursive patterns such as parallels, chiasmas, outbursts and affix swappings.

The examples displayed throughout the article originate from any kind of Web document: forums, blogs, and electronic versions of newspapers or scientific articles. We have not annotated the exact source of our examples, since the original Webpage is often no longer available.

2.1 Quotation marks and / or (meta-)discursive comments³

When he / she coins (what he / she considers) a new word, the speaker / writer can use quotation marks as in (1):⁴

- (1) a. Ce n'est pas tant par ce qu'on pourrait appeler son "iranianité" que l'œuvre de Narmine Sadeg s'inscrit dans une problématique d'exil.
[It is not so much because of what one might call its "Iranian-ity" that the work of Narmine Sadeg is part of an exile problematic.]
- b. Je ne peux m'empêcher de m'inquiéter pour des enseignants, qui se font embarquer, interroger et "juridictionner".
[I cannot help but worry about teachers, who get drawn in, interrogated and "jurisdictionv".]
- c. Ma terre étant loin d'être argileuse, il n'était pas question de creuser une petite mare... Jamais eu de "verdâtrerie" en une saison...!
[My soil being far from clayey, there was no question of digging a small pond... Never had "greenish-ery" in one season...!]

In our corpus, a second recurrent case is the use of (meta-)discursive comments. When he / she uses one of the most frequent formulas *Je sais pas si ça se dit* 'I don't know if it is the right word' (or any variant of it), the speaker / writer announces his / her insecurity with respect to the adequacy of the sequence (cf. Dal and Namer 2012):

³ For metalinguistic comments and lexicographic marks pointing to the speakers' perception of ludic items, see also the contributions by Kremer and Stricker, this volume; Moulin, this volume, and Winter-Froemel, this volume.

⁴ The present analysis is based on a written corpus. It would be interesting to work on oral data, and study prosody and para-verbal markers such as spatio-gestural quotation marks.

- (2) a. Est-ce que les brévistes (je sais pas si ça se dit) sont obligés de faire des chutes à chacune de leurs brèves?
[Are news headlines (I don't know if that is the right word) obliged to end each of their headlines with a punchline?]
- b. Il est visitable (je sais pas si ça se dit).
[It is visitable (I don't know if that is the right word).]
- c. Mais son visage est reconnu pour sa juvénilité (je sais pas si ça se dit)!
[But his face is known for its youthfulness (I don't know if that is the right word)!]
- d. Alors si tu te plains pour 5 centimes [...], t'as un sérieux problème d'avarisme (chais pas si ça se dit).
[Then, if you complain about 5 cents [...], you have a serious problem of stingy-ism (dunno if that's what you say).]
- e. Ah je pense que c'est dans l'écriture qui a été françaisée (je sais pas si ça se dit).
[Ah, I think that it is through the writing that it has been French-ized (I don't know if you say that).]
- f. Il existe des claviers souples, en matière caoutchouteuse (je sais pas si ça se dit ce mot).
[There are soft keyboards, in rubbery (I don't know if you say that, that word) material.]

Sometimes, the speaker / writer uses (meta-)linguistic comments to claim his / her inventiveness and / or to formulate an aesthetic judgement on his / her novelty:

- (3) a. Aujourd'hui, incivilités et incourtoisies (ça n'existe pas ce mot, je viens de l'inventer mais ça se pratique, je vous assure!!) sont très usitées.
[Nowadays, incivilities and un-courtesies (that word, it does not exist, I've just invented it, but the practice does, I can assure you!!) are very frequent.]
- b. un bouquin qui nous donne en quelque 250 grandes pages une vision élargie et différente de l'univers tolkienien (quel beau néologisme!).
[a book which gives us in some 250 pages an enlarged and different view of the Tolkienian (what a beautiful neologism!) universe.]
- c. Peut-être un nouvel élément de réponse sur le rôle du biologique sur notre comportement progénital (il est pas beau ce néologisme?)
[Perhaps a new element in the answer about the role of biology in our progeny-al (this neologism is nice, isn't?) behaviour.]

The two previous methods, quotation marks and (meta-)linguistic comments, can be associated, as in (4):

- (4) a. Il évoque, me semble-t-il, des particules solaires dont il suppose la "supracélérité" (je sais pas si ça se dit).
[It evokes, it seems to me, solar particles, which he assumes have "supracelerity" (I don't know you say that).]
- b. Les fils sont bien embrouillés et tous sont potentiellement "suspectables" (quel beau néologisme!).

[The threads are quite tangled and everybody is potentially “suspect-able” (what a nice neologism!).]

- c. Machin indigeste et totalement “inimplicatif” (j’ai pas trouvé mieux que ce néologisme moche).

[Both indigestible and absolutely “unimplicative” (I didn’t find anything better than this ugly neologism) gizmo.]

In the above examples, lexical innovations, from the point of view of the speaker / writer, may occur only infrequently. For example, *iranianité* ‘Iranianity’ (1a), *juridictionner* ‘jurisdiction_v’ (1b), *verdâtrerie* ‘greenish-ery’ (1c) have fewer than ten occurrences on the Web. However, others are well on the way to becoming institutionalized or are already in current use in a given specialized language: for example, *bréviste* ‘news headliner’ (2a), which occurs about 650 times on the Web, is the usual way of referring to a journalist who writes short news items. Some of them have been fully lexicalized, sometimes for a long time: for example, *visitable* (2b), *juvénilité* ‘youthfulness’ (2c), *caoutchouteux* ‘rubbery’ (2f) are long-established French lexemes which appear in dictionaries. However, what matters is the impression of novelty for the speaker / writer.

In this first pattern, nonce-formations mainly involve productive patterns: in our dataset, suffixations in *-able*, *-al*, *-eux*, *-ien*, *-iser*, *-iste*, *-isme*, *-ité*, prefixations in *dé-*, *in-*, and conversion from noun to verb are very frequent. The nonce-formation itself is rarely formally problematic: in the previous examples, only *iranianité* and *tolkienien* ‘Tolken-ian’ do not respect the dissimilatory constraint (Grammont 1895), which prevents two identical or similar (mainly consonantic) phonemes at the stem-affix boundary.⁵ We agree here with Štekauer (2002), who claims that, from an inherent word-formation point of view, such nonce-formations are (mainly) regular coinages generated by productive word-formation rules. They are coined by the speaker / writer in order to satisfy a semantic need.

2.2 Insertion into discursive patterns

In our dataset, we identified three recurrent discursive patterns in which nonce-formations appear: parallel and crossed structures (§ 2.2.1), outbursts (§ 2.2.2) and swapping *in praesentia* and *in absentia* (§ 2.2.3).

⁵ On the avoidance of /njanite/–/mjanite/ sequences in French property nouns in *-ité* based on toponyms, cf. Dal and Namer (2010a).

2.2.1 Parallels and chiasmas

In our corpus, the use of parallel structures (henceforth: parallels) and crossed structures (henceforth: chiasmas) fosters the emergence of nonce-formations, mostly for rhyme purposes.

These two figures are based on the repetition of at least two words or phrases A and B. The repeated form may or may not be identical to the original one. In what follows, A' (resp. B') indicates the repetition of A (resp. B). Parallels correspond to a schema ABA'B', where the A' / B' pair presents the same syntactic structure as A / B (cf. 5); chiasmas correspond to a schema ABB'A' (cf. 6):

- (5) Une vie sans avenir est souvent une vie sans souvenir
 A B A' B'
 [A life with no future is often a life without memories]
- (6) Il faut manger pour vivre et non pas vivre pour manger
 A B B' A'
 [One must eat to live and not live to eat]

Dubremetz (2013) proposes a classification of parallels and chiasmas, following the literature dedicated to this issue (cf. among others Nordahl 1971; Rabatel 2008). Both are stylistic devices relying on the comparison of the sequences X and X'. They can be strictly identical as in (6), they can rhyme, as *avenir* 'future' and *souvenir* in (5), or be semantically related, but formally unconnected, and share no phonological similarity, as in (7): in the chiasma (7a), X and X' are co-hyponyms (*bouche* 'mouth' and *main* 'hand' refer to body-parts, while *bâillon* 'gag' and *clou* 'nail' can be treated as instruments); in (7b), they are in opposition (*ajoutez* 'add' / *effacez* 'delete'; *quelquefois* 'sometimes' / *souvent* 'often'):

- (7) a. Un bâillon pour la bouche et pour la main le clou.
 A B B' A'
 [A gag for the mouth and for the hand the nail.]
- b. Ajoutez quelquefois, et souvent effacez.
 A B B' A'
 [Add sometimes, and often delete.]

Chiasmas and parallels usually combine rhyming properties, semantic relations, formal resemblance and morphological parenthood between X and X', as shown by chiasmas in (8). Rhyme's effect in (8a) is due to both the morphological relation between *entière* 'entire' (B) and *entièrement* 'entirely' (B') and the formal identity of A and A' (A = A' = *part*). In (8b), the figure combines semantic and formal similarities: B and B' (*morts* / *mortes*) are inflectional variants of the same

adjective *mort* ‘dead’, and A (*désespoirs* ‘despair’) and A’ (*douleurs* ‘pain’) are (quasi-)synonyms⁶:

- (8) a. Les Réunionnais sont des Français à part entière... ils sont entièrement à part.
 A B B’ A’
 [The Réunionnais are entirely French citizens ... they are entirely apart.]
- b. Les désespoirs sont morts, et mortes les douleurs.
 A B B’ A’
 [Despair is dead and dead is pain.]

The function of rhyme creation and semantic relatedness are two defining properties of chiasmas and parallels that derivational morphology makes a large contribution to. Therefore, achieving rhyme patterns is a motivation for speakers to coin nonce-formations. When X and X’ belong to the same derivational family, rhyme creation consists of creating Y’, where Y’ is morphologically related to Y and belongs to the same derivational series of either X or X’. This is what happens with the chiasma in (9). In order to ensure a rhyme with A (*moderniser* ‘modernize’), morphologically related to A’ (*modernité* ‘modernity’) the speaker coins *islamiser* ‘islam-ize’ (B’), which belongs to both the derivational family of *Islam* (B) and the derivational series of A (both B’ and A’ are verbs derived in *-iser*):

- (9) Moderniser l’Islam plutôt qu’islamiser la modernité.
 A B B’ A’
 [Modernize Islam rather than Islam-ize modernity.]

Let us add that parallels and chiasmas are important rhetorical devices which strengthen the sense of contrast or similarity in (especially written) speeches. Not surprisingly, a wide range of parallels and chiasmas are found in the vast virtual marketplace of the Internet, where rythming, rhyming, and semantic effects are guaranteed by the creation of a derived word X’ morphologically related to the word X and / or semantically connected to the word Y or Y’, and thus contribute to the power of conviction of the whole figure (whose terms are X, X’, Y and Y’).

The following examples have been collected on the Web among Google low-frequency results, within the context of various studies aiming at identifying regular properties of morphologically complex neologisms found in online French written texts. Each study being devoted to a particular derivational pattern, automatic collections of wordforms from the Web were affix-driven (see Namer 2013a for the search methodology applied to extract newly coined words from the web used as a corpus). The aim in Lignon and Namer (2010), for instance, was to

⁶ Examples (5) to (8) are borrowed from Dubremetz (2013).

investigate the reasons for the co-occurrence of long-term stored verbs X (*converser* ‘converse_v’) with Xionner verbal neologisms (*conversationner* ‘conversation_v’), both related to a Xion noun (*conversation* ‘conversation_n’). Likewise, Lignon (2013) and Namer (2013b) questioned the formal, semantic and quantitative aspects of the competition between *-iser* and *-ifier* suffixed verbs. The specificity of these search tasks is the reason why the chiasmas and parallels below contain verbal nonce-formations mainly suffixed in *-iser*, *-ifier* and *-ionner*.

Examples (10–13) are instances of different sorts of parallels and chiasmas according to two parameters: the place of the nonce word in the schema, and the nature of its relation (semantic, formal, derivational) to the three other components.

In (10), nonce-formations correspond to the item B’ (10a, c, d) or A (10b) in chiasmas ABB’A’. In (10a, b, c) A / B’ form derivational series where both are suffixed with *-iser* (*chienniser* / *humaniser* ‘dog-ize / humanize’, *contemporaniser* / *archéologiser* ‘contemporan-ize / archaeologize’, *architecturiser* / *végétaliser* ‘architecture-ize / vegetalize’). In (10a, b), the echo effect is total, because both pairs A / A’ and B / B’ are morphologically related. In (10a), the opposition between the concepts (human / dog) is reinforced by a double syntactic negation. There is no derivational parenthood in (10c) between X and X’, but the concepts are synonymous (A: ‘perform archaeology’ / A’: ‘past’, and B: ‘nowadays’ / B’: ‘make contemporary’). Moreover, X and X’ are in the ‘nowadays vs. formerly’ temporal opposition with both Y and Y’: A with B and with B’, B with A and with A’.

In (10d), the A / B’ pair embodies two close concepts: creation (*accomplir* ‘achieve’) and transformation (*miraculiser* ‘transform into a miracle’), counterbalancing the *miracles / faits* ‘miracles / facts’ semantic opposition in B / A’.

- (10) a. On ne peut humaniser le chien, pas plus qu’on peut chienniser l’homme.

A B B’ A’

[We cannot humanize dogs, no more than we can dog-ize humans.]

- b. Architecturiser la végétation et végétaliser l’architecture.

A B B’ A’

[Architecture-ize vegetation, and vegetalize architecture.]

- c. Archéologiser l’étude de son époque et actualiser (on aimerait dire...

A B

[Archeologize the study of his time and actualize (we would say...
...« contemporaniser ») l’étude du passé.

B’ A’

...“contemporan-ize” the study of the past.]

- d. [...] d’accomplir des miracles ou de miraculiser des faits.

A B B’ A’

[...] achieve miracles or miracle-ize facts.]

Examples (11) illustrate various realizations of parallels AA'BB'. The variation concerns the position of the nonce word X (it may correspond to any of the items A, A', B, B', or even to two of them), and the kind of relation between X and X' (semantic relation, derivational relatedness, or belonging to the same derivational series).

In (11a) and (11b), the nonce word is in B. In (11a), its connection with the prime A is semantically motivated: *(re)sucrer* 'provide with sugar (again)' is opposed – physiologically – to *insuliniser* 'provide with insulin'. The contrast between A' ('the ones') to B' ('the others') strengthens the opposition. In (10b), the opposition value is enhanced by morphological relations: A and B belong to the same derivational family, the possessive pronouns *mon* 'my' and *le tien* 'yours' are inflectional and syntactic variants of each other.

In (11c), the neologism, in B', is a relational adjective based on the patronym *Valls* (a French center-left politician), corresponding to the adjective A', derived from the patronym of Sarkozy, a French right-wing politician. Both adjectives result from competing adjectivizing suffixes. So, in this chiasma, there is no rhyme. The rhythm in the figure is achieved by the contiguity relation of similarity between A and B (reinforced by the repeated quotation marks, expressing the distance of the writer with respect to the marked words), which, in turn, affects also A' and B', and, consequently, Sarkozy's and Valls' political actions, in the writer's opinion. The parallelism in (11d) is derivationally and semantically grounded: both A and B are action nouns, related respectively to the verbs A' and B', the latter being coined for the occasion. Moreover, both A and B (as well as A' and B') are related notions in the field of economics. Note however that the A / A' vs B / B' likeness is offset by the negation marker in the B / B' structure.

In (11e), the parallelism is supported by the semantic resemblance between speech (represented by A and A') and eating (in B and B'). The newly coined word is A, morphologically related to A'. The similarity with the elements of B / B' is derivational (A' and B' are suffixed with *-able*) and semantic (both A' and B' are negatively marked, the former by morphology, the latter, by syntax).

The A / A' and B / B' organization in (11f) makes this rhyming parallel structure both semantically and derivationally motivated: A' is a verb derived from the noun A, as B' is from B, A' and B' are both suffixed with *-iser*. The original aspect of this example is the fact that both A' and B' are nonce-formations:

- (11) a. Resucrer les uns, insuliniser les autres.
 A A' B B'
 [re-sugar the ones, insulin-ize the others.]

- b. Et pour exemplifier mon propos, et contre-exemplifier le tien
 A A' B B'
 [And to exemplify my remarks, and counter-exemplify yours]
- c. de « simplification » sarkozyenne en « assouplissement » vallsique
 A A' B B'
 [from “simplification” Sarkozy-ianA to “easing” Valls-icA]
- d. Le ralentissement on peut le ralentir, la récession on peut pas la récessionner.
 A A' B B'
 [Deceleration can be decelerated, recession cannot be recessionned.]
- e. [...] vous narrationner l'inénarrable et vous faire digérer le pas mangeable
 A A' B B'
 [[...] you narration_v the unnarratable, and to make you digest the uneatable]
- f. [...] les équipiers pour équipiériser et le leader pour leaderiser.
 A A' B B'
 [[...] the crewmen to crewman-ize, and the leader to leader-ize.]

Parallel structures can be multi-levelled, as shown in the examples below. In (12a), the series of nonce-formations is driven by contiguity relations: all the verbs *X'* are derived from nouns whose relation with *X* stems from the same extralinguistic field, that of terrorist attacks. The same is observed with (12b), where the three created verbs *A*, *A'* and *A''* belong to the area of ethnicity. Moreover, the echo provided to *hispaniser* ‘Hispanicize’ (*A'*) by its derivational base, expressed by the inflected form *Espagnols* ‘Spaniards’ (*B'*) gives the structure the cross feature of chiasmas:

- (12) a. [...] sariner le métro, avioniser des buildings, grenader des touristes
 A B A' B' A'' B''
 [[...] to sarin the subway, airplane-ize buildings, grenade tourists]
- b. Mais l'objectif est bien d'hispaniser les ouvriers français...
 A B
 [But the aim is that to Hispanicize the French workers...
 ...comme ont été turkisés les Espagnols...
 A' B'
 ...as have been Turkized the Spaniards...
 ...avant de maroquiniser et d'algérieniser tout ce petit monde.
 A'' A''' B''
 ... before Moroccan-ing and Algerian-ing everybody.]

In fact, combinations of parallels and chiasmas are not uncommon. In (13a), *A* / *B* / *C* and *B'* / *A'* / *C'* are parallel structures from a syntactic point of view, and are marked by a dual relation: contiguity (*moyen-orientaliser* / *libaniser* ‘Middle-East-ize / Lebanon-ize’) and antonymy (*conflit* / *paix* ‘conflict / peace’). Meanwhile, (13a) is also an *ABB'A'* chiasma, where the nonce verbs *B* and *A'* are derived, respectively, from *B'* and *A*.

Likewise, a chiasma (BCC'B') and a parallel figure (ABA'B') overlap in (13b). The parallel structure involves antonymy with AA' (*vieux / jeune* 'old / young'), and register-switching synonymy with B / B' (*graillement* 'munch' / *mangeantes* 'eating'), where B' is the nonce word. The chiasma implies a semantic contrast between *graillement* (B) and *pètent* 'fart' (C'), a derivational connection (C / C': *pétantes / pétent* 'farting_A / fart_v') and a rhyme with *pétantes* (C) and *mangeantes* (B'), *pétantes* meaning here 'on the dot':

- (13) a. le Liban s'est moyen-orientisé (par le conflit), il aurait été mieux que ...
 A B C
 [Lebanon has Middle-East-ized itself (through the conflict), it would have been better if...
 ... le Moyen Orient se libanise (par la paix).
 B' A' C'
 ...the Middle East had Lebanon-ized (through peace).]
- b. les vieux graillement à 19h pétantes. Les jeunes pétent à 19h mangeantes.
 A B C A' C' B'
 [The old munch at farting 7 o'clock [= 7 o'clock on the dot]. The young fart at 7 o'clock eating.]

To sum up, rhetorical figures are suitable triggers for nonce-formations. Moreover, all these creations consist of denominal verbs either converted or suffixed with *-iser* or *-ionner* and adjectives suffixed by *-ien* or *-ant*, which are all productive word-formation patterns. However, we must bear in mind that these results may be methodologically biased due to the principles of data collection. To our knowledge (also according to Dubremetz 2013), there is no way to automatically extract chiasmas and parallels from very large corpora, which would be the right method in order to allow a meaningful statistical assessment of the preferred word-formation rules used to coin new words for this stylistic purpose.

2.2.2 Outbursts

Tanguy (2012: 104) defines suffixal outbursts as sequences containing a series of suffixed terms. However, the notion can be extended to any series containing prefixed and compound lexemes, as well as lexemes formed by a process of what Jespersen (1928) called "secretion" (see also Fradin 2000). The detection threshold is here established at three.

Outbursts facilitate the emergence of nonce-formations. In our corpus, they often involve deverbal nouns. Other morphological types may nonetheless be involved. When they contain nonce-formations, outbursts often begin with one or

more well-established complex lexemes, which serve as baits or primers and with which the nonce formations rhyme, as in (14) where *discussion* in (14a), *matheuse* ‘maths brain_{FEM}’ in (14b), *papotage* ‘chattering’ and *copinage* ‘boy- / girlfriending’ in (14c), *elegance* ‘elegance’ and *prestance* ‘poise’ in (14d) are (very) common French nouns. *Workaholic* in (14e) is perhaps less frequent in French (approximately 250 occurrences are found on the French Web), but writers consider it common. Sometimes, the first term of the outburst is a nonce-formation: in (15a), only *coloriser* ‘colorize’ belongs to the French institutionalized lexicon (in fact, it belongs to movie terminology, which increases the comic effect produced by the series). More rarely in our dataset, the outburst consists exclusively of nonce-formations, as in (16) where the baits do not belong to the same morphological series as the nonce-formations, but to their morphological family:⁷

- (14) a. Je vague aux petites occupations du matin: *discussion* avec Filip, **douchation, maquillage, habillage, coiffation**.
[I go about my everyday activities: discussion with Philip, shower-ation, makeup-ation, dress-ation, hair-style-ation.]
- b. Scientifique, littéraire et manuelle à la fois! *Matheuse*, **physiqueuse, informateuse**, écrit des (mauvais) poèmes, **philosopheuse et perleuse**.
[A scientist, a woman of letters and good with her hands all at once! Maths brain_{FEM}, physics-er_{FEM}, computer science-er_{FEM}, writer of (bad) poems, philosophy-er_{FEM} and pearl-er_{FEM}.]
- c. *Papotage, copinage, discutage, mangeage...et reposage*.
[Chatting, cronyism, discuss-age, eat-age...and rest-age.]
- d. Niveau *élégance, prestance, classance* et **distinctance**, je reste sur mes positions.
[In terms of elegance, poise, class-ancy and distinct-ancy, I maintain my stance.]
- e. Le “*workaholic*” est bien connu et l’on voit partout ses ravages! Et les **footingholics** et les **pétanqueholics**.
[The “workaholic” is well known, and his / her ravages can be seen everywhere! And jog-aholics and boules-aholics.]
- (15) a. Il faut **débouclétiser**, *coloriser* et **blanchitiser** et **batailliser** attention pas décoifferiser.
[It is necessary to de-curl-ize, colorize and whiten-ize and battle-ize, caution: do not de-hairstyle-ize.]
- b. Montée au col de la Temple (2h00 du refuge)...**Bouffade**, *balade* (encore!) et pas de **gerbade**.
[Climbed to the La Temple pass (2h from the hut)...Pig-out-ade, walk (again!) and no puke-ade.]

⁷ In examples (14) to (28), primers are given in italics and nonce formations in boldface.

(16) « Autour d'une *confiance*, d'une *ambition* et d'un *espoir* partagés »...C'est beau. Du coup, je me sens tellement **confianceuse**, **ambitionneuse** et **espoireuse**.

[“Around a common trust, ambition and hope”...how beautiful. As a result, I feel so trust-y, ambition-y and hope-y.]

Outbursts consist more frequently of lexemes belonging to a unique morphological series as in the previous examples. However, they may also consist of lexemes formed by concurrent patterns, such as suffixation in *-iser* and conversion in (17a), or suffixation in *-iser* and conversion again, and suffixation in *-ifier* in (17b):

(17) a. Quelques-uns d'entre vous se sont manifestés pour *chanter*, **guitarer**, **accordéoniser**, **batterir**, **flûter**.

[Some of you came forward to sing, guitar_v, accordion-ize, drum_v, flute_v.]

b. Bref, continuez de *sciencier*, *scienciser*, *scientifiser*!

[In short, continue to science_v, scienc-ize, scientif-ize!]

Unlike the above quotation marks or (meta-)discursive comments where the speaker / writer notifies that he / she does not know if the sequence is used or belongs to any institutionalized lexicon, outbursts form a rhetorical perspective of obstinate repetition (which recall parallelisms). Moreover, this playful use satisfies the requirements of rhyme. As already stated in Winter-Froemel (2016), who developed the concept of “ludic deformation”, where unexpectedness and deviation as a source of verbal humour are concerned, we see that comic effects are enhanced when the nonce-formation replaces a frequent lexeme which obviously belongs to his / her mental lexicon (see also the contributions by Braun, this volume; Moulin, this volume; Winter-Froemel, this volume). Compare (14a) repeated under (18a), and (18b), where each nonce-formation is replaced by its corresponding lexicalized lexeme. The more frequent the lexicalized lexeme, the greater the comic effect:

(18) a. Je vaque aux petites occupations du matin: discussion avec Filip, **douchation**, **maquillation**, **habillation**, **coiffation**.

b. Je vaque aux petites occupations du matin: discussion avec Filip, *douche*, *maquillage*, *habillage*, *coiffage*.

LFRs involved in outbursts can be highly productive, such as suffixation in *-age* in (14c) or *-iser* in (15a), and nonce-formations can be perfectly well-formed. Constraints, however, can sometimes be violated. Such is the case with French suffixation in *-ion*, which is productive only with bases in *-iser* or *-ifier* (cf. Dal et al. 2008): in such cases, what matters is the compliance with the pattern of the bait, more than its availability.

2.2.3 Affix swapping in *praesentia* and in *absentia*

A final recurring pattern in our corpus of playful nonce-formations consists in exchanging suffixes between two or more well-established complex lexemes. Examples below (19)–(28) show that this playful mechanism is reminiscent of chiasmata and parallelisms. And as with outbursts, moreover, lists play an important role.

Permutation is performed more frequently *in praesentia*, and the two lexemes involve concurrent LFR. For example, in (19), the two expected property nouns *finesse* ‘finesse’ and *légèreté* ‘lightness’ exchange their suffixes:

- (19) Ces filles qui apporteraient **fineté**, **subtillesse**, douceur et poésie.
[These girls who would bring fine-ity, subtle-ness, gentleness and poetry.]

Exchanges can also be done *in absentia*, as in (20) where another property noun *bêtisse* (vs. lexicalized *bêtise*⁸) results from the permutation of the expected suffix *-ise* with *-esse*:

- (20) Mdr, je suis d’une **bêtisse**...
[Lol, I am of such an idiot-ness...]

Exchanges *in praesentia* and *in absentia* can coexist. For example in (21), *-ion*, present in the expected noun *expansion*, is replaced by *-itude* in the first nonce-formation, but present in the second one, instead of the expected *-isme*:

- (21) L’**expansitude** contraste beaucoup avec l’**amateuration** de la première.
[Expans-itude contrasts a lot with the former’s amateur-ation.]

Such a domino permutation can also be observed in (22) (French lexicalized lexemes corresponding to nonce-formations in bold are: *démocratie* ‘democracy’, *syndicalisme* ‘unionism’, *corporation* ‘corporation’ and *copinage* ‘cronyism’):

- (22) Mélange de démocrature et de syndicalerie, de corporatage et de copinerie.
[Mix of democrat-ure and union-ery, corporat-age and crony-ery.]

⁸ *Bêtise* is a well-established noun in the French lexicon, both diachronically (its first attestation dates back to the 15th century) and in contemporary use (there are 2 million occurrences on the Web).

Of course, *démocrature* could also be analysed as a blend of *democracy* and *dictature*. But it is more likely for each nonce-formation in this series to follow the same model, that is suffix exchange.

Our dataset also contains some cases where permutation does not involve the exponent, but the stem, for example *ambitionneuse* (vs. the expected *ambitieuse* ‘ambitious_{FEM}’) in (23):

- (23) Plus **ambitionneuse**, comme le titre le laisse entendre.
[More ambition-ous_{FEM}, as suggested by the title.]

The speaker / writer can also substitute the lexicalized form with a synonymous nonce-formation, and graft the LFR involved in the first nonce-formation onto the base of the second one, which, in turn, gives rise to another nonce-formation. In (24), *interruptionner* is used instead of *interrompre* ‘interrupt_V’ (cf. Lignon and Namer 2010), and *travaillationnage*, which implies *travaillationner*, replaces the usual noun *travail* ‘work’. Several clues allow us to argue in favor of deliberate speaker switchings, and not simple acquisition or performance errors. One is the fact that substitutions involve high-frequency words – which, in all likelihood, belong to everyone’s mental lexicon (on this topic, see below § 3.1). The fact that two deviant forms are combined, as e.g. in (22) or (24), is also a strong indication of an intentional use:

- (24) Désolé de vous interruptionner pendant votre travaillationnage.
[Sorry to interruption_V you during your work-ionage.]

Previous substitutions can of course be combined with each other or with other patterns. For example, (25) cumulates suffixal and radical permutations in *impressionneuse* (vs. the expected *imprimante* ‘printer_N’) while *reconfigurationner* replaces the lexicalized French verb *reconfigurer*:

- (25) C’est un gros problème de reconfigurationner l’impressionneuse.
[This is a big problem, reconfiguration_V the print-ationer.]

As above in outbursts, the aim of the speaker / writer is not to impose his / her nonce-formations on anyone. On the contrary: the dissemination of these nonce-formations in general use would lead to the annihilation of any comic effect. The loss of this special pragmatic effect of deviant forms if items are diffused in the speech community does not occur only with nonce-formations: see for instance Onysko and Winter-Froemel (2011), which discusses a fundamentally different group of marked items: ‘unnecessary’ borrowed items.

As we showed previously in (18), this effect can be evaluated by replacing the nonce-formations with the corresponding lexicalized lexeme. For example, comparing (a) and (b) in (26) to (28):

- (26) a. L'**expansitude** contraste beaucoup avec l'**amateurisation** de la première.
 b. L'*expansion* contraste beaucoup avec l'*amateurisme* de la première.
 [Expansion contrasts a lot with the former's amateurism.]
- (27) a. Désolé de vous **interruptionner** pendant votre **travaillattonnage**.
 b. Désolé de vous *interrompre* pendant votre *travail*.
 [Sorry to interrupt you while you are working.]
- (28) a. C'est un gros problème de **reconfigurationner l'impressionneuse**.
 b. C'est un gros problème de *reconfigurer l'imprimante*.
 [This is a big problem, reconfiguring the printer.]

3 Discussion

3.1 A continuum in playful nonce-formations

Summarizing the above results, we obtain a continuum in types of playful nonce-formations identified by the use of clues, from the speaker / writer's perspective:

- At one extreme, we find cases where the speaker / writer bridges a lexical gap (or what he / she considers to be one in regard to his / her mental lexicon). In our dataset, this is the main function of nonce-formations labelled as such by means of quotation marks or discursive (meta-)comments. The aim of the speaker / writer is less to coin a playful word than to coin a word *tout court*. Most of the time, he / she uses an available process with a high productivity index (Baayen 1992), such as suffixations in *-age*, *-ité*, *-iser*, etc. (cf. Dal et al. 2008); the nonce-formation is semantically and formally transparent and satisfies most if not all linguistic constraints. As a consequence, the reader / hearer does not need context to understand it (for a similar conclusion, see Renouf and Bauer 2000). The nonce-formation, from the speaker / writer's point of view, can be either a really new word or a well-established lexical unit. However, what is important here is not the frequency of use, but the perception of novelty by the writer / speaker. Paradoxically, by using quotations marks or comments, his / her aim is not to draw the attention of the reader / hearer to his / her coinage, but rather to prevent any suspicion of using an inappropriate word. The particular relevance of this attitude for French relies on the fact that normativity has weighed heavily on the lexicon

content and its evolution since the creation of the Académie Française in 1635.

- At the other extreme of the continuum are affixal swaps *in prasentia* and *in absentia*, and radical substitutions. In this case, the nonce-formation is coined for a playful purpose. In affix swappings, the game consists in the distortion of the form of a well-established complex lexeme, more precisely the replacement of its suffix with a different one in order to surprise the reader / hearer and to force him / her to analyse the complex word. Following recent results in experiments on word comprehension (Baayen et al. 2017), one can assume that, above in (20) “Je suis d’une bêtresse”, the intended meaning of the expected, well-established French property noun word *bêtise*, first becomes available to the speaker / writer as a whole, whereas parts of the word are sensed, but only later. That is, the reader will also see a large part of *bête* (and the listener will hear /bɛt/ before the /iz/ comes in). In other words, *bêtise* is probably not composing the meaning of “stupid act” from the meaning of *bête* ‘beast’ and *-ise* suffixation, but the hearer / reader cannot help co-perceiving this meaning. This openness to parts, even in high-frequency opaque words, is well-captured by the Discriminative Perspective approach described in Baayen et al. (2017). According to the authors, this approach highlights the many layers of meaning that come with complex words that explain how language mechanisms work to produce poetry and playfulness.⁹ This is what explains that, in (20), the speaker / writer has access to the parts of the word *bêtise*, which enables the exponent *-ise* to be replaced with the yet unproductive property noun suffix *-esse*.¹⁰
- Chiasmas, parallel structures and outbursts are situated between the two poles of the continuum. In these cases, the aim of the speaker / writer is not to satisfy a denominative need, but to insert his / her coinage in a series, often (though not always) with comic effect. For example, by using *maquillation*, instead of the very common noun *maquillage* ‘makeup’, he / she aims at such a playful effect, but in cases such as *mangeage* ‘eat-age’ in (14c), he / she can also bridge what can be considered a lexical gap: the French lexicon has no process noun built on *manger* ‘eat’, and *mangeage* is often used in order to

⁹ We thank the anonymous reviewer for bringing these new developments in psycholinguistics to our knowledge, and leading us to discover the concept of discriminative perspective, a very promising device for the understanding of language playfulness.

¹⁰ Koehl (2012) shows that French suffixations in *-ise* and *-esse* are no longer productive in French except, for the former, with bases ending in *-ard* and, less frequently, in *-ant*.

bridge this gap.¹¹ Chiasmata, parallel structures and outbursts mostly resort to productive rules (such as suffixation in *-age*), but also to unproductive ones (such as suffixation in *-ion*, only available in contemporary French with bases in *-iser* and *-ifier*).

3.2 Nonce-formations and productivity

Nonce-formations, and among them especially playful coinages, have been the object of only little investigation by French morphologists. Despite the emergence of corpus-based studies in French in the past decade, co(n)text is rarely taken into consideration, and the generative distinction between competence and performance often remains active: nonce-formations are considered as being in the scope of performance, (socio-)pragmatics or stylistics, or as satisfying creative purposes. Therefore, they are not to be taken into account in morphological studies, which concentrate on collective and not on individual productions. However, nonce-formations address some interesting morphological issues, all in relation to productivity.

Since Schultink's (1961) seminal work, morphological productivity has been understood as the possibility for language users to unintentionally coin an in principle uncountable number of new morphologically complex words. Determining which processes are productive and which are not is thus a key issue in morphological research: "Morphological theory should account only for processes of word formation which are productive" (Baayen and Lieber 1991: 801–802).

Schultink's (1961) definition has been commented upon (cf., *inter alia*, Plag 1999; Evert and Lüdeling 2001; Dal 2003; Gaeta and Ricca 2003; Gaeta and Ricca 2015; Dal and Namer 2016b). The main points of criticism deal with unintentionality, newness and uncountability. We focus here on unintentionality and newness.

Eliminating intentional formations from observation means that the deliberate use of a given morphological process or pattern to coin new terms in a given domain says nothing about its availability. The same is true for nonce-formations studied in the present paper: in all cases, the speaker / writer is aware of his / her

11 On the Web, *mangeage* is often used with meta-discursive comments, even in outbursts. For example: « Je te dis un grand merci (...) pour ce très bel après midi de grande rigolade, papotage, mangeage (je sais pas si ça se dit ça hihihihhi) » [Many thanks to you (...) for the wonderful afternoon with lots of laughter, small talk, eat-age (I don't know if you can say that hahahaha)].

coinage. So, if we apply Schultink's (1961) definition strictly, nonce-formations are not to be taken into account, even when they involve productive rules. In fact, as seen above in section 3.1 and as also mentioned by Štekauer (2002: 97), nonce-formations often involve productive rules:

It is argued that from the inherent word-formation point of view nonce-formations are regular coinages generated by productive word-formation rules, and as such they are listed in the Lexicon as any other naming units.

More generally, if strictly applied, this criterion would amount to considering that, whenever speakers voluntarily coin a specific complex word appropriate in a given utterance context or in order to meet nomenclatural purposes, this new word could not illustrate the productivity of the morphological process it results from. Yet, on the contrary, intentionality says something about the speaker / writer's consciousness of the morphological system.

As regards the criterion of newness, the question arises as to what precisely should be considered a new formation: what is the reference of newness? If the reference is dictionaries or any institutionalized vocabulary, then we adopt a social perspective (that is, the lexicon as a sum of knowledge of an ideal speaker about what is or is not conventional); if the reference is the mental lexicon of users, then the perspective is more individual. For example, in our dataset, the use of quotation marks or (meta-)linguistic comments shows that, for the speaker / writer, even a well-established complex word such as *caoutchouteux* 'rubbery' in (2f) is a new formation, and that he / she productively uses suffixation in *-eux* in order to bridge what he / she considers a lexical gap. In such cases, the presence or absence of the complex word in any dictionary is irrelevant. We consider here that it is better for newness to be taken into account from the speaker / writer point of view than from any social perspective.

In quantitative approaches, in order to address the issue of productivity and to eliminate recourse to intuitive judgements, the major work is that of Baayen (1992) and the research initiated by its results. Apart from what he calls "realized productivity", which evaluates the presumable success of a morphological process or pattern in the past independently of its actual use, statistical measures of productivity are based on rare events. In productivity measures according to Baayen (1992), hapax legomena play an essential role. Expanding productivity P^* (also referred to as the hapax-conditioned degree of productivity) and potential productivity P are ratios calculated in a text corpus C . They take as a dividend the number n_i of hapax legomena (words formed by a given morphological process or pattern with a frequency 1 in C). The question here is whether nonce-formations, from the speaker / writer's perspective, have to be taken into account in

statistical measures. In practice, it is impossible. If, in a given corpus C, the speaker / writer coins *caoutchouteux*, one can suppose that his / her coinage does not correspond to any hapax legomena in C. However, for him / her, this complex word is a hapax. In other words, productivity measures are well suited for the estimation of productivity from a social or collective point of view, but they provide no indication as to individual productivity. The problem is that nothing enables us to predict whether the sum of all productive uses of morphological processes or patterns by individual speakers / writers will actually correspond to the productivity of these processes / patterns for the entire language community as well or even in a given corpus.

A last issue in relation to nonce-formations is the difference between productivity and creativity. This distinction is connected with the disputed opposition between intentionality and unintentionality in word-formation (among proponents of such a distinction, see Lyons 1977; van Marle 1985; Bauer 2001; Štekauer 2005, 2009; Fernández-Domínguez 2010; Ronneberger-Sibold 2015). The term *creativity* is reserved for the case in which the (nonce) coined word obviously transgresses the morphological system, such as in poetry or playful creations. However, we have seen that even playful coinages, particularly in outbursts, use mainly productive processes.

4 Conclusion

Nonce-formations as individual productions are clearly within the scope of performance, (socio-)pragmatics or stylistics studies. Yet there is no reason to exclude them from morphological studies. On the contrary: even when they are inserted in playful schemata such as affixal or root substitutions, chiasmas, parallel structures or outbursts, they demonstrate that the speaker / writer is aware of the morphological system: perhaps paradoxically, the more playful the nonce-formations, the greater his / her awareness.

The series of findings emerging from our analysis of the examples presented in this paper, and discussed in § 3 lead us to draw two conclusions:

- Firstly, nonce-formation defines a micro-system within the overall morphological system: it has its own grammar, is driven by particular needs, and results in a particular set of wordforms, part of which is included in the general language lexical network, the rest of which is more or less specific to playful purposes. This grammar can be construed according to two aspects: that of the triggering speech and syntactic structures, in which nonce-formations are preferably found, and that of the choice of word-formation rules

selected by speakers / writers, and the way these processes are used. As far as specific structures are concerned, we have seen that they are insensitive to the classical descriptive and prescriptive principles: we have identified some of the patterns fostering their emergence (outbursts, chiasmas, parallels, suffix or stem swapping), and we have seen how speakers / writers can draw attention to their coinage.

- Secondly – and in a sense, this is a consequence of the first conclusion –, analysing nonce-formations requires a complete methodological reversal. It is clear that (1) expressing a meaningful message is not necessarily the speaker / writer's priority or, for that matter, his / her concern; (2) the well-formedness morpho-phonological constraints operating elsewhere are not relevant; and (3) it is less a matter of characterizing the formation patterns at the origin of the nonce-formations than of describing the forms themselves (even if we have noticed that the means used to coin these words are predominantly productive morphological processes). Quantitative issues are not the point either: as we have shown, nonce-formations exist only because their authors are convinced that they have invented these words, even those with a very frequent use. By contrast, our analysis was based on the identification and the use of tools fundamental to nonce-formation, but rarely summoned in morphology studies in general: (meta)discursive marking, recurring schemata, sequence inversions and syntactic patterns specific to certain stylistic devices.

By the use of nonce-formations, the speaker presents him- / herself as taking control of his / her language, even if sometimes in a paradoxical way: this is especially true when he / she feels the need to complete his / her production with a (meta)linguistic comment, inasmuch as the comment confirms his / her control of his / her language, while it also exempts him / her with respect to any external review ("I do not know if that's what you say"). However, he / she can accept to the fullest his / her inventions, without feeling the need to apologize to anyone, as does the author of the following statement, found online in December 2015 (<https://alabergerie.wordpress.com/2012/02/20/deux-amis>, accessed 12 September 2017):

[C]'est tout de même plus intéressant qu'une lepénerie ou une sarkouillonade même bien musquée aussi n'hésitons pas [...]

[This is much more interesting than a Le Pen-crap-ery or a Sarko-moron-ery, even a strong-smelling one, so let us not be hesitant.]

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