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PAPER

A PHONOLOGICAL APPROACH TO SELECTION OF NON-ETYMOLOGICAL /l/ IN *DIRLO*-LIKE WORDS

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French slang's suffixation process to produce colloquial words can produce non-etymological consonants at the morphological boundary: *directeur* → *dir**l**o*. Although many morphological hypotheses have been proposed to explain this phenomenon, we argue that its formation is purely phonological. Focusing on the /l/ selection, we suggest that syllabification is blended with element's propagation over the morphological boundary, expecting a certain segment realisation. /l/ is then preferred over /t/ in our case because of a mooring situation: linking an |U| element to the properties of /l/ in the speakers' grammar due to the diachronic monophthong-ising process of rounded vowels with Vl endings via high frequency use of lexical and grammatical items containing this opposition like *à le* → *au*.

Keywords: French slang morphology, Element Theory, Consonant epenthesis, derivative morphology, diachrony in synchrony

INTRODUCTION

This paper follows the presentation at the RFP international conference of phonology and focuses on the /l/ consonant epenthesis in French slang derivatives like *directeur* → *dir**l**o* that appears at the morphological boundary. The data which it is based on is a list of more than 280 words of colloquial French, standard French and Argot. The list is available in Annex 1. Despite the problem having been treated in morphophonology by Plénat (1991, 1999, 2008, 2015), Roché (2003, 2007, 2015) on multiple occasions for regular derivations, we assume that these epenthesis are not morphological in nature, rather a pure realisation of phonological properties propagation into an open site, making it possible to include words such as *papier* → *paplard* as regular. We base our analysis on the epenthesis definition of Prince & Smolensky (1993, 2004's edition) in that they speculate on Itô's (1989) ONSET principle, making the suffix's onset realised with a consonantal segment. We postulate that Elements of neighbouring segments (either vowel or consonant) propagate to the empty skeletal position, realising a segment matching the aforementioned formula. We therefore place ourselves in Element Theory framework presented by Backley (2011), Ulfsbjorninn (2021) and Prince (2022), with auto-segmental representations. After considering the different approaches existing in the literature (section 1), we will explain data selection and theoretical framework (section 2). Finally, we will suggest the possibility of a phonological |U| trace in French /l/ left over from French diachrony[1], preferably choosing /l/ over /t/ where velar and uvular segments coexist (section 3).

1. DEFINITIONS AND PREVIOUS WORKS

We aim in this section to present the definition of *Argot*, (French slang) and the processes used to create new words. We will then explore how diachronic and synchronic approaches have treated the phenomenon of consonant epenthesis, bringing out aspects regarding its phonological and morphological properties.

1 Following the 16th century process of monophthong-ising any diph-/triph-thongs containing a rounded vowel.

1.1. FRENCH SLANG MORPHOLOGY

Current French is actually stratified in many layers, pertaining to the level of intimacy speakers share. To the same saussurean signified, French ‘levels’ offer a variety of signifiers.

(1) 'prostitute’

a. very polite / upper class French: *travailleuse du sexe* 'sex worker'
b. polite, restrained French: *fille de joie* 'girl of joy'
c. standard French: *prostituée* 'prostitute'
d. familiar French: *marie-couche-toi-là* 'mary-lay-down-there'
e. vulgar French: *pute* 'whore'

Of course, each level has many synonyms as French abhors repeating the same word in the same speech (upper class would have *péripatéticienne*, familiar French would have *catin*, vulgar French would have *salope*). Derivation offers diversity in the intention or depreciation such as suffix *-asse* which can increase the negativity of a bad word (*putasse* would be much worse then *pute*).

Over all these layers of meaning and the diversity they offer for signifiers, *Argot* adds another dimension, and a productive layer, in which words are formed, and sometimes percolate to the upper layers, ending up in standard French (such as the word *dingue* ‘crazy’, or *soutif* ‘bra’).

Slang and language games like to encrypt phonation so that only trained (initiated) speakers can understand it. The reason is simple, in the past slangs were developed by criminals as a way to speak freely in the presence of non-criminals without being understood. Goudailler (2002) explains that compared to pre-1980 slangs, modern suburb slangs favor the need for an Identity Funtion to the crypting of words followed by the playful encrypting function, whereas the inverse was true before. The French Slang *argot* was uncovered during the 16th century in the trial of the *coquillards*, a rebel group of the previous Hundred Years’ War who were committing crimes and robberies. *Argot* first designated the community of these thugs, in the denomination "*le royaume d’Argot*" (the A*rgot* King-

dom), then progressively the language they used. From the 17th century onward, French-*Argot* dictionaries came to be, from a few 50 words to many hundreds in the 19th century. With the industrial revolution rural exodus (during the 19th century), great many people from across the country gathered in Paris, where their dialects blended. As *argot* favoured French-based vocabulary to encrypt new shapes, this reservoir of new lexical items developed the *cryptolect* greatly. The dynamics of lexical change followed these steps: need for a new encrypted shape → transformation of an existing lexical unit (in any French dialect or loans) to a shape *Argot*'s speakers can understand → use amongst the general population → assimilation by the general population → need for a new encrypted shape… This circle process, had in time given rise to a whole lot of similar transformations over the same stems, as we see in (2):

(2) *Briquet* [bʀikɛ] 'lighter'
bricmon [bʀikmɔ̃], *bricton* [bʀiktɔ̃], *bricmolle* [bʀikmɔl], *brictouse* [bʀiktuz]

Argot's lexical items can be regrouped into categories depending on the transformation they underwent, summarised in (3):

(3) Argot lexical families

a. Verlan
   i. *chanmé* [ʃɑ̃me] 'really neat' ← *méchant* [meʃɑ̃] 'naughty'
   ii. *meuf* [mœf] 'woman,chick' ← *femme* [fam] 'woman'
   iii. *keubla* [kəbla] 'black person' ← *black* [blak] 'black coloured'[2]

b. Largonji
   i. *en loucedé* [ɑ̃.lusde] 'on the sly' ← *en douce* [ɑ̃.dus] 'on the sly'
   ii. *louchébem* [luʃebɛm] 'butcher' ← *boucher* [buʃe] 'butcher'
   iii. *loufdingue* [lufdɛ̃g] 'zany, wacko' ← *fou* [fu] 'crazy'

c. Javanais

2 *Black* refers to the French loan word to the US English black, mostly used to describe a black person in colloquial to local French (93th department near Paris).

i. *ravouge* [ravuʒ] ‘red’ ← *rouge* [ruʒ] ‘red’
ii. *bavon* [bavɔ̃] ‘nice’ ← *bon* [bɔ̃] ‘nice’
iii. *gravos* [gʀavos] ‘obese’ ← *grosse* [gʀos] ‘obese$_F$’

d. Catachresis
i. *abricot* [abʀiko] ‘vagina’ ← *abricot* [abʀiko] ‘apricot’
ii. *pépin* [pepɛ̃] ‘umbrella, snag’ ← *pépin* [pepɛ̃] ‘pip’
iii. *gamelle* [gamɛl] ‘cropper’ ← *gamelle* [gamɛl] ‘lunchbox’

e. Derivation
i. *barbouse* [baʀbuz] ‘beard’ ← *barbe* [baʀb] ‘beard’
ii. *conoble* [kɔnɔbl] ‘to know’ ← *connaître* [konɛtχ] ‘to know’
iii. *pébroque* [pebʀɔk] ‘umbrella’ ← *pépin* [pepɛ̃] ‘umbrella’

f. Loans
i. *esgourde*$_F$ [esguʀd] ‘ear’ ← *esgourne* ←*skouarn* (Bret.) [skwarn] ‘ear’
ii. *djèj*$_M$ [dʒɛʒ] ‘effeminate comrade’ ← □□□□ (Ar.) [dʒɐʒ] ‘chicken’
iii. *schnouff* [ʃnuf] ‘tabaco’ ← *Schnupftabak* (Germ.) [ʃnupftabak] ‘heroin’

The *verlan* family reverses the syllable order (Bach 2017), the *largonji* family replaces the first consonant by /l/, displacing it at the end, sometimes adding a "free" suffix (Plénat 1985), the *javanais* family inserts /av/ or /va/ when convenient (Plénat 1991a and 1991b), the catachresis family changes signified for an existing signifier, derivation family can use all sorts of bases and includes them in a variety of morphological and phonological processes, finally the loans borrow and adapt words from other languages or dialects, usually due to a close contact (mostly during wars or colonisation).

Verlan could derive from what Schwob & Guieysse 1889 call an ‘artifical doublet’, and sometimes qualified as anagram. They give the example of word *tabart* [tabar] ‘coat’ in Villon (1461) as being the coded form of *batart* [batar] *‘bastard’, server* [sɛrve] the anagram of *verser* [vɛrse] (in *verser des larmes* ‘shed tears’).

In time, some "free" endings became more salient than their base, and making series with that ending became a fashion, miscuts were frequent, combined with a fast paced adaptation to acquisition process from the common speakers, analogy became the norm, sometimes even creating words from these "free" suffixes as shown in (4).

(4) a. *poiscaille* ← *poisson* 'fish', *affranchecaille* ← *affranchis* 'clever'
b. *sourdingue* ← *sourd* 'deaf', *valdingue*← *valise* 'suitcase' [3]

The story of *dingue* 'crazy'[4] comes from these assimilations by lambda speakers. Originally, *fou* [fu] 'crazy' was suffixed with *-âtre* in 1883 (Esnault 1965), *-ingue* [ɛ̃g] not long after, *-iga* in 1899, *-io* in Nantes in 1915… but the fashion established by *-ingue* grew higher than any other. Other words became suffixed with it, especially ones proving an obstruent to the onset of the suffix syllable (such as *lourde* [luʀd], *sourde* [suʀd]) to the point where miscuts happened, creating the *-dingue* [dɛ̃g]/ *-tingue* [tɛ̃g]/ *-zingue* [zɛ̃g] series. *Follingue* [fɔlɛ̃g] then got reformed into *foldingue* [fɔldɛ̃g], then *largonji* came in to play and *louftingue* [luftɛ̃g][5] got created, not far later came loufdingue [lufdɛ̃g].[6] If in *foldingue*, the stem (°*fol-*) was still transparent enough for the lambda speakers to access it, though in *loufdingue,* the *dingue* part was probably more salient because of the fashion, and kept the meaning instead. Truncation did its job and French ended up with *dingue* 'crazy'.

One might enquire about the miscut phenomenon, and ponder the question: what if *angelot* [ɑ̃ʒəlo] 'little angel''s *-lo* could have resulted from a similar process? The answer is quite simply no, as the -d- in *-dingue* is non etymological, whereas the -l- of *-lo* is.[7]

3 *Valdingue* has to catachresis: one is the noun form of *valdinguer* [valdɛ̃ge] 'fall over' the other is a form of *valise* [valiz] 'suitcase'. Esnault (1965, p.628) gives an existing expression *envoyer à vallon* 'fall over' in 1883 in the *Meuse* department, then the shape *envoyer à valdingue* in 1894. According to cnrtl, *valser* [valse] 'fall hard on the floor' is attested in 1949.
4 From our own research, with the help of Gallica, ATILF through the CNRTL website and von Wartburg's FEW.
5 Le Frou-Frou, 22 déc. 1912, p.8 'C'est Rapin le louftingue qui donne un réveillon'.
6 Le "petit écho" en campagne, 23 sept. 1917, p.2 'ce Totor est complètement loufdingue'.
7 Form Latin *angel̲us, ī, from Ancient Greek ἄγγελ̲ος.*

Lexical encryption used morphological and phonological processes to deform words. Either adding something (affixation), taking something off (truncation), reduplicating a segment (reduplication), shortening long poly-morphemic words into one (acronyms), just changing the syntactic category (conversion) or more encrypting games as seen earlier in (3):

(5) WORD TRANSFORMATION PROCESSES USED IN *ARGOT*

	OPERATION	FULL WORD		TRUNCATION
a.	Truncation	télévision [televizjɔ̃]	→	télé [tele]
b.	Affixation	fête	→	fêtard
		grand	→	agrandir
		fasciste	→	antifasciste
c.	Conversion	orange[N.fem]	→	orange[Aj]
d.	Acronyms	bibiothèque universitaire	→	BU [be.y]
e.	Hypocoristics	Patricia [patχisja]	→	patoche [patɔʃ]
f.	Verlan	méchant [meʃɑ̃] (naughty)	→	chanmé [ʃɑ̃me] ‘so cool’
g.	Largonji	toqué [toke] (crazy)	→	locdu [lɔkdy]
h.	complex suffixation	curé [kyʀe] ‘priest’	→	cureton [kyʁtɔ̃]
i.	Javanais	moto [moto] ‘motorbike’	→	mavotavo [mavotavo]

Argot prefers the more complex operations, or using the suffixation process with denoted "*argot*" suffixes such as *-ard, -ingue* or *-oche*. Blending operations is also possible, for example *bouc* [buk] ‘billy goat’ gives *lavouc bavem* [lavuk.bavɛm](larjonji * javanais + “free” suffixation).

Probably for historical reasons, modern French has a tendency of favouring /o/ at words’ end or at morphological boundary:

(6) “Ainsi, au lieu de dire comme la plupart des auteurs que nous avons lus, que c'est à la place du -o que la troncation se fait préférentiellement, devrait-on dire que, pour un nombre non négligeable de mots, elle se fait justement parce que ceux-ci en comportent un.”.[8] (Dister 1998:56)

This preference make the use of different morphological and phonological processes in order to get to it, such as truncation (*bibliographie* 'references' → *biblio*, *abdominaux* 'abdominal muscles'→ *abdos*), *verlan* (*clochard* 'hobo'→ *charclo*), suffixation (*pote* 'pal' → *poto*) or sometimes many on the same item (*bourgeois bohème* 'fashionable middle-class lefty' → *bobo*). Loan words from any language ending in /o/ is also greatly appreciated, such is the long list of Roman languages' words (i.e. *ghetto*, *cappuccino*, *lasso, Porto...*).

Suffixed argot words derive from irreducible stems, whether mono-, bi- or tri-syllabic, selecting the stem used in the feminine form or long stem if the masculine/short one doesn't end with a coda.

These suffixations can intensify or slightly change the meaning of the base, see in (7):

(7) a. a. *con*$_M$ [kõ] / *conne*$_F$ [kɔn] 'moron' → *connard*$_M$ [konaʀ] 'dumbass'
b. b. *salaud*$_M$ [salo] / *salope*$_F$ [salɔp] 'bastard'→ *salopard*$_M$ [salopaʀ] 'scumbag'
c. c. *binocle*$_M$ [binɔkl] 'pince-nez' → *binoclard*$_M$ [binoklaʀ] 'glasses wearer'

Words that seem reducible to a shorter 'stem' usually follow a two-step process, as shown in (7), each step producing an independent lexeme, hence the meaning is not altered:

(8) a. *télévision* → *télé télé* → *téloche* 'television → TV'
b. *pédéraste* → *pédé pédé* → *pédale* 'fagot → fag'
c. *derrière* → *derr. derr.* → *derche* 'bottocks → butt'

Words in (9) are the ones we're interested in here, produced in one step, but involving a truncation to a stem version of the word, then suffixed but inserting what seems to be a consonant epenthesis:

(9) a. *directeur* → °*dir+o* → *dirlo* 'headmaster'

8 Thus, instead of saying it like most of the authors we have read, that truncation is preferably made at -o's place, should we say that, for a non-negligeable quantity of words, it is done precisely because they [the words] have one [an -o]. (Translated by the author)

b. *travesti* → °*trav*+*o* → *travlo* ‘transvestite’

c. *fromage* → °*from*+*on* → *fromton* ‘cheese’

The question we ask ourselves is why some words can allow the creation of new lexemes by simple truncation, while others need a Non Etymological Consonant (henceforth NEC) to be valid. We suspect the stem reduction has to do with priming (see section 2.4), as clearly °*dir*- triggers *directeur*, °*trav*- triggers *travesti* and so on. However, we have not tested that hypothesis with a full-on study and leave it for further studies. Here we focus on two aspects of the NEC appearance process:

- how the consonants are selected
- in what context do they appear

We make the assumption that NECs are a product of pure phonological expectancy due to a blend of morphological boundary’s nearby segments’ Elements on an expected onset cluster. Selection ought to depend only from nearby segments’ Elements and not for any antihiatic or aesthetic reasons. If any *argot*-ic meaning is then inputted on the resulting word, it ought to come from the suffix and not from the NEC, which has no morphological status.

1.2. DIACHRONIC APPROACHES

In Esnault (1965), the only few mentions of this phenomenon are referred to as « free suffixation ». Roché (2003, p.94) quotes Plénat (1999, 262) for a possible explanation to the *-ton* form of the *-on* suffix, as the contracted form of *-eton*, since /ə/ deletion started occurring very early in French and is still an ongoing phenomenon. He goes further, explaining a possible origin of -k- in *poissecaille* [pwaskaj] (←*poisson* [pwasɔ̃]): the *-et-* interfix evolved as *-ek-* due to *-aille* favouring velar onsets, then following the same rule as for *-eton*, /ə/ deletion made it *-k-*.

1.3. SYNCHRONIC APPROACHES

Plénat and Roché have explained phenomena that include the NEC in different ways: Plénat mostly focussed on the effects of the dissimilation constraint, half-way between

morphology and phonology, Roché focussed more on the interfix definition in morphology. Furthermore, Pagliano gave a really detailed analysis on epenthetic consonants in French phonology. We'll cover all three approaches in the following sections.

1.3.1. Plénat's work on French morphology

Plénat's work on French morphophonological phenomena is fundamental. We explore here his explanation on consonant epenthesis and then on the dissimilation constraint he developed.

In Plénat 1999, he explores *argot*ic suffixes -*ingue* [ẽg] and -*if* [if] following his study of - Vche [Vʃ]endings and their apparent suffixal allomorphy. In that study, he showed that suffix -*oche* alternates with forms -b*oche/-doche* in words like *valoche/valdoche* or *Italoche/Italboche*, and supposes that constraints banning fricatives in front of Vche suffixes are too weak, hence another repair is created.

Introducing hypothesis of Prince and Smolensky (1993/2004) upon consonant epenthesis and that of McCarthy and Prince (1995), he tends to follow the latter, justifying the fight between DEP, FILL and ISO constraints of O.T.

Following Itô (1989) ONSET principle (syllables start preferably with an onset), he justifies the presence of a consonant at the skeletal position of the onset in the suffix syllable. He then explores the distribution of the consonants in the base stem and those of the suffix and finds an alternation between coronals and labials.

Finally, he speculates on the phonological participation of surrounding segments at the morphological boundary:

(10) "Il n'est en particulier pas totalement exclu que la voyelle joue un rôle le dans cette selection. Mais il parait plus probable que c'est la consonne finale du suffixe qui impose le choix."[9] (Plénat 1999:124)

He proposes that what triggers the epenthetic insertion must be a lexical constraint, and that selection can also be influenced by the speakers dialects.

9 It is especially not entirely excluded for the vowel to play a role in this selection. Even if it seems much more probable that it is the suffix final consonant that plays a role in the choice. (translated by the author)

Plénat (2015) shows that t and s insertion in front of *-ité* and *-itude* are not equal, and explains that phonologically, *s-ité* is maximised where *t-ité* is voided because of respect to the dissimilatory constraint, but *t-itude* is maximised where *s-itude* is rare because of the mental lexicon of the speakers containing many of words ending in *-titude* (*aptitude, béatitude, certitude, exactitude, promptitude*, *etc.*). Miscuts reanalyses the final t of the stem as the onset of the suffix, creating a « gang effect » later referred as *the series constraint*:[10]

(11) "[I]t seems likely that the choice of this consonant is determined by dissimilatory constraints, but lexical constraints sometimes work against this tendency" (Plénat 2015:949)

Finally, for postponed suffixation such as in *patate* [patat] 'potato'→ *patatinette* [patatinɛt] 'small potato', or *goutte* [gut] 'drop'→ *gouttelette* [gutlɛt] 'small drop', Plénat reads:

(12) "[T]he consonant of the inserted segmental string is as different as possible from the consonants separated by this chain […]. [I]nserted segment is always sonorant". (Plénat 2015:952)

This matches greatly with the concept of Roché's interfix, which we are now focussing on.

In derivational morphology, suffixes select the base they need to produce a new word. French has about a hundred suffixes, many operating the same semantic function:

(13) a. *demander* [dəmɑ̃de] 'to ask' → *demandeur* [dəmɑ̃dœr] 'buyer'
b. *béton* [betɔ̃] 'concrete' → *bétonnière* [betonjɛʀ] 'cement mixer truck'
c. *comédie* [komedi] 'drama' → *comédien* [komedjɛ̃] 'comedian'

When the segments of the stem resemble too much the suffix's, a different suffix is used instead to produce the needed word. This respects the dissimilation constraint, which is set to

10 To which Roché 2007:50 explains that the « gang effect » is stronger than the dissimilation avoidance.

avoid too close a similarity between stem and suffix segments, which causes "awkwardness" by a "cacophonous repetition".[11]

(14) a. *camion* [kamjɔ̃] 'truck' + ier → *camionneur* [kamjonœʀ] 'truck driver'
b. *patate* [patat] 'potato' + ette → *patatinette* [patatinɛt] 'little potato'

Another possibility to avoid proximity is detachment by insertion. (14b) above belongs to this category: suffix -*ette* [ɛt] cannot abide being suffixed to *patate* [patat] because of the repetition of coronals, hence -*in* [in] is inserted.

Dissimilation can be countered phonologically by alteration operations, consonant epenthesis or morphological operations. The phonological alterations include the followings:

(15) a. loss of velar property, leaving unmarked segment as default
i. progressively: *bakayoko* + *es[qu]e* → *bakayokes[t]e*
[bakajoko]n 'footbal player' → [bakajokɛst]adj
ii. regressively: *gloubi-boul[g]a* + esque → *gloubi-boul[d]esque*
[glubibulga]n 'gobbledygook' → [glubibuldɛsk]adj

b. base final vowel deletion
i. *rhinocéros* + *iste* → *rhinocériste*, **rhinocérosiste*
[ʀinoseʀɔs] 'rhino' → [ʀinoseʀist] 'rhino caretaker'

c. haplologies between base last syllable and suffix' first
i. *prop[ic]e* + *[iss]ime* →*propissime*, **propicissime*
[pχopis]adj 'propituous' → [pχopisim]adj-super

d. truncation of base end
i. *cosmonaute* + *ette* →*cosmonette*, **cosmonautette*
[kɔsmonot]m 'cosmonaut' → [kɔsmonɛt]f

1.3.2. Roché's Interfix vs Consonant epenthesis

Roché (2015) differentiates pre-suffixal interfix, infix and consonant epenthesis.

11 Plénat, M. (2015).

Interfixes and epenthesis share an avoidance of meaning, however, they differ in that they add a syllable to the stem to make them in adequacy with the prosodic constraint[12], where epenthetic clusters appear for the only purpose of antihiatic rules, whatever the number of syllable in the stem.

(16) a. *beurre* [bœʀ] 'butter' + *ier* → *beurrier* [bøʀje] 'butter dish'
b. *coque* [kɔk] 'shell' + *ier* → *coquetier* [kɔktje] 'egg cup'
c. *noix* [nwa] 'walnut' + *ette* → *noisette* [nwazɛt] 'hazelnut' + *ier* → *noisetier* [nwaz(ə)tje] 'hazel tree'

In the example above, the same suffix is applied to the three words, creating the meaning 'what holds X'. Except in case of b, it would seem that the operation works as in c, with a non-existent middle word °*coquette*$_{F}$. This is a property Roché exhibits: interfixes resemble suffixes, creating a simile double suffixation, except that the « first » suffixation doesn't add any meaning.

Infixes on the other hand, do add meaning. Infixes as opposed to interfix, insert themselves inside the stem of a word, where interfix are inserted at morphological boundary. See the example below:

(17) a. *trompette* [tχɔ̃pɛt] 'trumpet'→ *trompinette* [tχɔ̃pinɛt] 'little trumpet'
b. *poisson* [pwasɔ̃] 'fish' → *poissilllon* [pwasijɔ̃] 'small sized fish, fish progeny'

Roché explains that -*in*- and -*ill*(*e*)- are in fact suffixes (that can be found in *trompette* → *trompettine* for the same meaning, and *faux* →*faucille*), but inserted into the base, « before » what could be miscut as a suffix -*ette* and -*on*. They do add their belittling property, so they have to be differentiated from interfixes.

He then explains that suffix allomorphy would be too inefficient (totalling up to 450 possibilities in French), and stem allomorphy cannot justify non-etymological consonants. On an article over suffix -*on*, he gave the following explanation concerning *argot*ic suffix form -*ton*:

12 Each interfix will be provided with a bisyllabic stem ending with a coda.

(18) "La variante -ton des dérivés argotiques et populaires, quant à elle, n'est qu'un avatar des finales en -eton, qu'elles résultent d'une base en -et ou de l'insertion d'un interfixe (cf. supra). Comme en témoignent les graphies charton et valton pour charreton et valeton, l'amuissement du /ə/, dans cette position, est très ancien et il n'y a pas de solution de continuité entre ces dérivés et les modernes picton (sur piquette), from(e)ton, paveton, fiston, etc. […] L'idée émise par la phonologie d'une deuxième syllabe « dégénérée », ces mots étant analysés CV.C.CV et non CVC.CV, rejoint exactement cette évolution historique et explique pourquoi, en dépit des apparences, ces mots satisfont la contrainte prosodique de dissyllabicité de la base."[13] (Roché 2003:104-105)

In some cases, interfixes can act as an adapter to join a normally incompatible suffix and base:

(19) "More convincing is the idea that an interfix could adapt a base for a derivation in which the base normally does not enter. Portolés (1999: 5056) gives the example of the Spanish suffixation with *-ón*, which usually selects feminine nominal bases: interfixation enables it to select masculine or adjectival ones (e.g., Sp. *grande* 'tall' → *grandullón*, -ona 'tall person')." (Roché 2015:561)

On a lexical point of view, interfixes are the expression of a need for a word to be suffixed a certain way, but its stem configuration causes problems. Analogy can participate in creating suffix allomorphy (*-ure* becoming a possible *-ture*, then *-ature*, and so forth). As we've shown before, the series constraint (aka gang effect) is very strong in French, and tricks have to be found to make it happen. Antihiatic effect generates consonant epenthesis, stem shortness generates interfix, possibly selected via analogy of other words with similar end-

13 "The *-ton* variant of argotic and colloquial derived words, is but an avatar of the *-eton* finals, resulting either from an *-et* ending stem or from an interfix insertion (cf. supra). As proved by graphical forms *charton* and *valton* for *charetton* and *valeton*, /ə/ deletion, in that position, is very old and there is no continuity solution possible between these words and *picton* (based on *piquette*), *from(e)ton*, *paveton*, *fiston*, etc. […] Phonology's idea of a second « degenerated » syllable, words being then analysed CV.C.CV and not CVC.CV goes exactly in the same direction as for the historical evolution, explaining why, despite appearances, these words satisfy the prosodic constraint of base disyllabicity". (translated by the author)

ings. In some cases, Latinate inflexed word of a lexeme acts as an interfixed base for a suffix:

(20) *fable*[14]

a. + *ier* → *fablier* [fablije] 'story teller'

b. + *iste* → *fabuliste* [fabylist] 'fabulist'

c. + *ette* → *fabulette* [fabylɛt] 'little fable'

d. + *ette* → *fablinette* [fablinɛt] 'tiny fable'

1.3.3. Pagliano

In her PhD thesis, Pagliano focusses on consonantal epenthesis at word boundary, between stem and suffix. However, throughout the definition and data selection process, she excludes most of what we focus on in this paper, for the reason that it has been deemed "*argotique*" (slang-ish) by other people, either base, suffix or whole compounds. She even justifies it as such:

(21) "Sur les vingt-neuf termes [...] seuls deux sont maintenus dans le corpus: vicelard et faflard, pour lesquels le suffixe argotique -lard n'est pas explicitement relevé dans les dictionnaires argotiques alors que le suffixe -ard existe bel et bien."[15] (Pagliano 2003:418)

At first, her definition of epenthesis seems inclusive, since it offers the possibility that inserted element can be smaller than a phoneme:

(22) "Un segment épenthétique est un élément (phonème, trait, ton, accent, ligne d'association, etc.) non étymologique, non sous-jacent et non prédictible par le contexte."[16] (Pagliano 2003:418)

14 Example (13) from Roché (2015).

15 "Over the 29 terms […] only two are selected in the corpus: *vicelard* and *faflard* for which the argotic -*lard* suffix **has not been explicitly stated** in dictionaries where -*ard* is". (translated by the author)

16 "An epenthetic segment is an element (phoneme, trait, ton, accent, association line, etc.) that is non-etymological, non-underlying and non-predictable by context". (translated by the author)

Non-etymological status is what literature on the subject marks as their common trait for epenthesis. Non-underlying status concerns her phonological and morphological framework with surface representation and underlying form of words, she hence strips off consonants appearing in liaison and feminine. Non-predictable is meant for epenthesis that can be calculated from nearby segments (what she calls avatar epenthesis as opposed to *ex nihilo* epenthesis), by assimilation or sharing of melodic position.

(23) a. *plier* /plie/ [plije] 'to fold'

b. i. *petit* /pəti/M, /pətit/F 'small, little'

ii. *un petit gland* [ɛ̃.pəti.glɑ̃] DETM smallM acorn 'a small acorn'

iii. *une petite voix* [yn.pətit.vwa] DETF smallF voice 'a little voice'

c. *chouchou* [ʃuʃu] 'blue-eyed boy', -er [e] 'suffix to make a regular verb'

(23a) describes a homorganic glide insertion, typically what she calls an avatar epenthesis. (23b) exhibits long stem coda in the feminine form, (23c) the regular French -t- insertion in regular verb making process.

After explaining Plénat (1999)'s explanations of suffix allomorphy vs consonant epenthesis where he clearly states that beyond *-ingue* and *-if* suffixes in the precise examples he gave, predictability doesn't work properly (cf. Plénat 1999, p. 119 note 19 & p. 122), hence making the suffix allomorphy weaker.

Let's look at her selection process regarding *cafmon* [kafmɔ̃] 'coffee'. Either *cafmon*'s /m/ is an onset to suffix *-on*'s allomorphy or it is an epenthesis. Not able to explain the /m/ epenthesis, she rules it out mentioning that *-mon* has been qualified a suffix by dictionaries.

However, the analysis on world languages concerning phoneme selection and contexts of appearance of such insertions is helpful: antihiatic repair are never the only condition to an epenthesis, however could be a necessary trigger, we can also find them in a C._.V context at morphological boundary, as she shows with *burlingue* [byʀlɛ̃g] 'desk' from *bureau* [byro] (p. 103):

(24) CUTTING OF /byʀlɛ̃g/ BY PAGLIANO

A	N	C	*As*	*Ns*	*Cs*
|	|	|	|	|	|
b	y	r	l	$\tilde{\varepsilon}$	*g*
			⇧		

A=*attaque* (Onset), s=suffix, C=coda,

She claims that -l- is inserted at -*ɛ̃g*'s onset skeletal position. A statement we agree on.

We quote her summarising argument, as it provides contexts for epenthesis:

(25) "En français, les deux endroits où l'épenthèse consonantique est susceptible de se produire sont la frontière entre deux mots et la frontière suffixale. Entre deux mots, la présence d'un hiatus est une condition déterminante, alors qu'il ne semble pas que ce soit le cas à la frontière suffixale: une consonne peut être présente en début de suffixe comme en fin de base."[17] (Pagliano 2003:107)

Following these analyses, we can assert that the phenomenon we present in this paper couldn't be considered as a segmental epenthesis as it doesn't pertain to insertion of elements, rather a propagation.

Nonetheless, the data extraction process explores the richness of the TLFi, a French online database gathering different dictionaries, glossaries, indexes, journals, thesis, etc. that offers the possibility to search by categorisation, or Regular Expression. As the categorisation option has been chosen, limiting the search to what people categorised, the list ends up with multiple terms for the same phenomenon (p. 372-374):

- *anal, t anal, d anal, s anal, …*
- *t de trans, d de trans, s de trans, …*
- *t de liaison, d de liaison, s de liaison, …*
- *-t- anal, -d- anal, -s- anal, …*
- *-t-, -d-, -s-, …*
- *consonne de soutien,*

17 "In French, the two places where consonant epenthesis is susceptible to happen are at words boundaries and a suffixal boundary. Between two words, hiatus is a deciding condition, where it doesn't seem to be the case at in suffixal boundary: a consonant can be found either at suffix start or at base end". (translated by the author)

- *consonne de transition*
- *consonne épenthétique*
- *consonne parasite*
- *adventice*
- *consonne transitoire*
- *-t- de soutien, -d- de soutien, -s- de soutien, …*
- *consonne additionnelle*
- *consonne graphique*
- *consonne inorganique*

We find it saddening, that when words are discarded for their property, only the terminology exemplified above is invoked, without any further explanations concerning what the differences are or why that precise terminology explains this or that property, disallowing us to fully justify inclusion of word discarded in her list for lack of understanding those words potential formation.

1.4. SUMMARISING

In this section we've shown Plénat's favouring consonantal epenthesis over suffixal allomorphy, and the morphological DISSMILATION and SERIES constraints for French. Roché's interfix differentiation from epenthesis and infixes allows us to consider non-etymological consonants as epenthesis and not something else. And lastly Pagliano's analysis of French epenthesis appearance contextually states the need for hiatus but stressing that there must be another triggering agent. This agent could be the lexical constraint that Plénat is talking about, that we will tie up with the psycholinguistic priming effect.

2. DATA AND THEORETICAL BACKGROUND

In this section, we will present the data we gathered as well as their selection process. Following Aronoff & Fudeman (2023, 4th ed:12):

(26) "We take a no holds-barred approach to linguistics. We'll use any tool or method that will tell us how language works. This attitude stems in part from our scepticism about particular theories. People who are wedded to individual

> theories tend to believe in using tools that are rooted in that theory. Our tools are not theory-based in that way. If a tool does the job, we are happy to use it, whether it is a traditional linguistic tool (e.g., native speaker consultants, dictionaries, written grammars), an experimental tool (e.g., imaging technology), or a statistical tool." (Aronoff & Fudeman 2023, 4th ed:12)

And as such, we've decided to use, as did Pagliano for her PhD Thesis, or did Plénat and Roché for their studies, dictionaries, databases, list of words and spontaneous speakers' productions to establish a substantial list of words exhibiting the feature we seek. We will then expose our theoretical background and theories we will use for the analysis, namely Element Theory and priming.

2.1. PRESENTATION OF THE DATA

The original list of words we've accumulated over the years was composed of 10 items, including the very famous *dirlo* 'headmaster'*, curton* 'priest'*, fromton* 'cheese'*, champlard* 'mushroom'*, paplard* 'ID papers'*, bricton* 'lighter'*, travlo* 'transvestite'*, clodo* 'hobo'*, valtoche* 'luggage'*, pistoche* 'swimming pool'. Looking for an explanation for *dirlo* and *clodo* at first, we decided to use the most reliable source of information regarding late 19th – early 20th century Parisian *argot*, Gaston Esnault's work from 1965, which included not just a dictionary of *argot*'s words, but also many etymological and historical data about this lexicon. If other dictionaries of argot were interesting at first (such as Colin, Mével et Leclère 2019, Goudailler 2005, or Perret 1991), no more interesting data were found, and historical data were missing.

The Bob database, on languefrancaise.net, was quite helpful in the search options, allowing us to find words that weren't catalogued by Esnault. We found words that didn't belong to the *argot*'s registry in the official laws regarding countries and capitals' names in French.[18]

18 Arrêté du 4 novembre 1993 relatif à la terminologie des noms d'Etats et de capitales.

From research publications, we have included words from Pagliano 2003 (about 20) and a few from Plénat (1997, 1999 and 2015, about 60). However, as tempting as we found it at first to include these words in our list, we stayed sceptical at their origins. Plénat himself explains he used dictionaries (Bruant 1910, de Colin 1992) but also literature such as San Antonio, without considering that self creations might not fully match the speaker**s'** rules, rather just the creator's. That is the main reason we choose not to include Perret (1991), as it is filled with self creations unattested anywhere else. From Plénat, we also were surprised how timing in the word's creation wasn't taken into account. Following on the 1999 paper note 36 (p. 114) explaining that *C+ingue* complex suffix cannot be preceded by /s/, he gives the words *crassingue* [kχasɛ̃g] and *cradingue* [kχadɛ̃g], both being direct derivatives of *crasseux* [kχasø] 'mucky'. If we look at Enault's entries for both words, we find that *crasseux* could have given *crassingue* by simple suffixation during the late 19th century, however *cradingue* did not come directly from its supposed source. In fact, we can retrace the following steps: *crasseux → cracra (1916) → cradot (1935) → cradoque (1938) → cradingue (1942)*

The step of childish reduplication got rid of the base stem /s/, which was then replaced by series in *-dot* [do], leaving place for any other d- series. On a parallel timeline, we get plenty of other derivatives of *crasseux* with the -s-:

- 1925: crassouille [kχasuj], crassouillard [kχasujaʀ]
- 1926: crasspèque [kχaspɛk]
- 1932: crasspaille [kχaspaj]
- 1935: crasspète [kχaspɛt], crasspipe [kχaspip], crassignol [kχasiɲɔl]

This compels us to take into account steps of derivations and fashion of series across decades, that might vary on local preferences and dialects.

We make a difference between plain slang suffixation such as *binocle → binoclard*, and suffixed truncation derivation such as *fromage → fromton*. Some words such as *cinéma → cinoche* actually happen in two steps with the intermediate one becoming a free lexicalised word: *cinéma → ciné, ciné → cinoche*. *cinéma, ciné* and *cinoche* all are lexicalised items

available to the speaker's choice. This case has been named re-suffixed truncations, and does not produce NECs. Finally, some cases such as *clochard* → *clodo* have been clipped off the list, as their apparent similarity is due to analogy and not phonology.[19]

2.1.1. Data selection

In Esnault's work, we aimed at words that presented a suffix ending, with a consonant that seems to belong to neither a shorter version of the stem nor the suffix's allomorphs. In the following examples (27, 28 and 29), we will exemplify how the selection process took place and why.

(27) a. *filocher* [filoʃe] 'prepare a deal' ← *filer* [file] 'to trail, track, follow'
b. *marida* [maʁida] 'to mary' ← *marida* [marida] 'to mary' in Oc Fr.
c. *parigot* [paʁigo] 'parisian' ← *Paris* [paʁi] 'Paris'
d. *loistré* [lwastχe] 'three' ← *trois* [tχwa] 'three'
e. *locdu* [lɔkdy] 'wacko' ← *toqué* [toke] 'nutty'

None of the above were selected, here's why:

(27a) got from *filer* 'to trail' to *filer* 'study carefully', leading to 'prepare a deal/case'. With *-er* ending being just the inflected form of FILER, we can assume a FIL- stem (that we can find in *filature* [filatyʁ] 'tailing', *fileur* [filœʁ] 'agent of a tailing job'), suffixed by the *-och* [ɔʃ] series, and inflected into infinitive. *filoche* [filɔʃ] 'tailing' is the *argot*'s word of standard French *filature*.

(27b)is just an Oc dialect version of 'to mary' *marier* [maʁje], with but one inflected form. Example from Barbe bleue, Yves Deniaud, 1965:

"*La bibiche a voulait pas s'maridaavec sézig.*"
la bibiʃ a vulɛ pa smaʁida avɛk sezig
'the gal didn't want to get married with him'

19 *Clodo* comes from the reinterpretation that *clodoche* and *clochard* are two lexicalised form of the same meaning. In fact, *clodoche* is the surname of *Clodomir*, a 19th century dancer who late in his life became homeless. "*Vivre à la chloche*" (live under the bell) meaning being homeless, *clodoche* became associated to *cloche* and then *clochard*. *Clodo* (probably the early hypocoristic form of *clodoche*) got henceforth affiliated with the meaning of hobo, and miscut as *clo* + NEC+*o* from *clochard*, which is not the case.

(27c) is the classic word for Parisians, that can be heard in the turn of phrase "Parisiens tête de chien, parigos tête de veau" to say that Parisians are arrogant, literally 'Parisien, dog's head, Parigot, calf's head". Belongs to the *-go* [go] series such as *gigo* [ʒigo] 'yes'.

(27d), (27e) belong to the *largonji* family of morphophonological encrypting processes. (26d) comes from the graphical form of three:

trois → °-ois+tr → °l-oistr → *loistré*

[tχʷa(s)] → °[wastχ] → °[lʷastχ] → [lʷastχe]

We can note that *-tr-* [tχ] is moved as one entity.

(27e) is a more complex form of *largonji*, with infixes and partial reduplication:

toqué → °l-oque-t→ *loque-du-toque*→ *loque-du* → *locdu*

[toke]→ °[l-ɔk-t] → [lɔkdytɔk] → [lɔkdy]

(28) a. *burkinabé* [byrkinabe] 'Burkinabé' ← *Burkina Fasso* [byʀkinafaso]

b. *valdingue* [valdɛ̃g] 'luggage' ← *valise* [valiz]

c. *verdouze* [vɛʀduz] 'green' ← *vert* [vɛʀ]

d. *vioque* [vjɔk] 'parent' ← *vieux* [vjø] 'elder'

e. *lionceau* [ljõso] 'lion cub' ←*lion* [ljõ] 'lion'

Not all of the above were selected, here's why:

(28a) is a demonym based on *Burkina Fasso*, two words in French, the first was selected but the classical *-ais*/*-ois* suffix was not applied, instead we end up with what looks like a *-é* suffix with something else.

(28b) belongs to the *-dingue* series, a very prolific one with both adjectives and nouns alike. The word for luggage has many variations, with *valdingue*, *valtoche*, *valoche.* Today, *valdingue* means 'a tumble', with a verbal form *valdinguer* 'take a tumble'. A possible explanation for this meaning would be a blend in the reduced stem *val-* with the *valser* verb meaning 'dance a waltz' and then 'take a tumble'.

(28c) was a complex case, as the seemingly NEC turns out to be a voiced version of the long theme *verte* [vɛʀt]'s coda, resulting in one of the few /d/ NECs. The word has been ruled out for potential etymological status of the consonant.

(28d) bears some similarities with 15c, but on the vowel, as the classical *-oc*/*-oque* [ɔk] series' rhyme fused with the nucleus of the stem: one could propose vjø+ɔk→vjɔk. Even though the case is interesting, there are no NEC.

(28e) looks normal, with its *-eau* [o] ending for animal progeny, such as *éléphant* [elefɑ̃]→ *éléphanteau* [elefɑ̃to], *chien* [ʃjɛ̃] 'dog' →*chiot* [ʃjo] 'puppy', *baleine* [balɛn] 'whale' →*baleineau* [balɛno] 'whale calf', yet neither male nor female lion have any /s/ in their stem or root. Even if a Latin **leonicellus* could have been the source of the word itself (as a result it hadn't been created in French), no such occurrence were found.

(29) a. *Alsaceboche* [alzasbɔʃ] 'Alsace' ← *Alsace* [alzas] 'Alsace'
b. *Ménilmuche* [menilmyʃ] '*Ménilmontant*' ← Ménilmontant [menilmɔ̃tɑ̃]
c. *Nancebroque* [nɑ̃sbʀɔk] 'Nancy' ← *Nancy* [nɑ̃si]
d. *camplouse* [kɑ̃pluz] 'countryside'← *campagne* [kɑ̃paɲ] 'countryside'
e. *Toulmuche* [tulmyʃ] 'Toulon' ← *Toulon* [tulɔ̃]

All of the above have been selected, here's why:

(29a) belongs to a *-boche* [bɔʃ] series, maybe following a degrading *alboche* [albɔʃ] 'German' creation during the second world war.

(29b) refers to the *Ménilmontant* district of *Paris*, near *Belleville*. The *-muche* [myʃ] series produced (29e) based on the city of *Toulon* (southern France), but also *contremuche* [kɔ̃tχəmyʃ] 'smuggling' based on *contrebande* [kɔ̃tχəbɑ̃d], or *fademuche* [fadmyʃ] 'dull, insipid' based on *fade* [fad].

(29c) refers to the eastern France city of *Nancy* and belongs the *-broque* series. As the French suffixes are onset free and *-oc/-oque* [ɔk] is present in other series, we propose that the NEC is a two-segment one [bʀ], possibly branching (see below in 3.1.3).

(29d) probably belongs to the [+cor]uz series with words such a (29c) *verdouse* [vɛʁ-duz] 'green', but also *maltouse* [maltuz] 'briefcase', *brictouse* [bʀiktuz] 'lighter', *valtouse* [valtuz] 'luggage'. Its NEC could have switched to /l/ because of the presence of /p/ giving it a |U| element added to the similarity (in a play-word fashion) with the word *pelouse* [pᵊluz] 'lawn'.

2.2. ELEMENT THEORY APPLIED TO FRENCH

Element Theory (Backley 2011) is based on the principle that segments are composed of the same set of basic element. First developed for vowels, the three elements were |A|,|I| and |U|each elements expresses an intrinsic property of vowels at the ends of the vocalic trapezoid: aperture, height and roundedness. Later, theory tried to tie up acoustic phonetics and phonology by extracting acoustic properties and having the elements represent them. Backley (2021) defined them as follows:

"Vowel" elements called **resonant**:

- |A|: high F1 converges with F2
- |I|: high F2 converges with F3
- |U|: concentration of low-frequency energy via formant lowering

Consonants were given the following 3 basic elements, called **laryngeal**:

- |ʔ|: occlusion
- |H|: periodic noise energy
- |L|: aperiodic noise energy, nasal murmur

If for vowels, the concept of elements formula seems intuitive, it becomes trickier for consonants. Glides are in essence consonantal realisations of vowels in fortis skeletal positions, and have a vowel formula.

Backley (2011) used spectrograms to match elements and consonants properties, such as formants, periodicity of energy, and frequency height.

(30) BACKLEY'S LINK BETWEEN ACOUSTICS AND PHONOLOGY

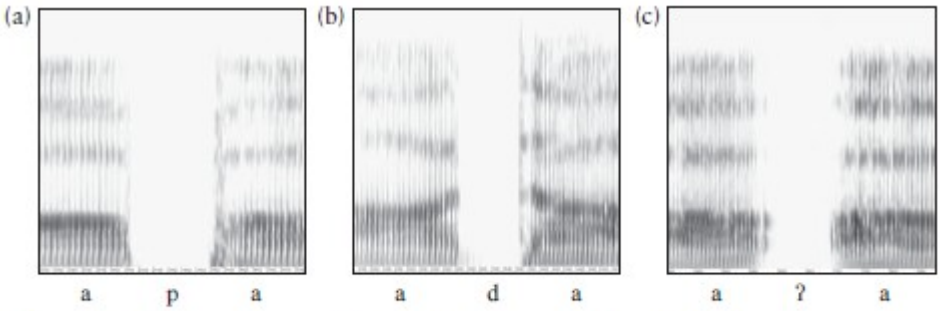


Figure 4.1 *Energy pattern of* |ʔ|. *(a) Spectrogram of* [apa]; *(b) Spectrogram of* [ada]; *(c) Spectrogram of* [aʔa]

Here we can see the attempt to abstract the |ʔ| element from acoustic phonetics:

(31) "On a spectrogram, this reduction in energy appears as an empty vertical slice. Speakers cause a reduction in acoustic energy by momentarily interrupting the airflow – that is, by making a complete closure somewhere in the oral cavity or at the glottis. In Figures 4.1(a–c) there is a drop in energy during the hold phase of the stop sounds [p d ʔ]. Although the |ʔ| element is characterised by an absence (or near absence) of speech signal activity, it carries positive linguistic information because it functions as a cue to the identification of stops." (Backley 2011:115)

Segment realisation is then a combination of none (central vowels) to three of these elements into a 'formula'. When composing formulas for vowels, the notion of headedness came to be so as to highlight the importance of one element and avoid replication of the same element. Difference between /e/ and /ɛ/, or /o/ and /ɔ/ was made by making headed either |A|, |I| or |U| (represented with an underlined element): /e/=|I̲A| vs /ɛ/=|A̲I|, /o/=|U̲A| vs /ɔ/=|A̲U|.

Following, we give a self-made list of French segments and their corresponding elements' formula after Backley (2021) and Prince (2022):

(32) FRENCH PHONOLOGICAL SEGMENTS IN ELEMENT THEORY

|U|	|UI|	|A|	|I|	|U|	|A|	
w	ɥ	.	j	.	.	|●|
p	.	t	c	k	.	|● ʔ |
b	.	d	.	g	.	|● L ʔ |
m	.	n	ɲ	.	.	|● L (ʔ)|
f	.	s	ʃ	.	χ	|● H |
v	.	z	ʒ	.	ʁ	|● L H |
.	.	l	.	.	ʀ	|● A ʔ |

Reads this way: /p/= |U ʔ|, /ɲ/=|I L(ʔ)|, /l/=|AA ʔ|

We follow Ulfsbjornin (2020) analysis on labial and velar segments sharing the |U|element, labials having it headed, velars not.

The strength of Element Theory stands in the adaptative nature of the formulas to the languages phonological system. The same formula might realise differently in English or in French. For instance, coronals in Korean and English have |I| resonant element where the French ones have |A| (see Backley 2011, 71-77).

2.3. FRENCH SYLLABIFICATION

French phonological word is the sentence. Two principle apply systematically in French: the Sonority Sequencing Principle (Lowenstamm 1981; Selkirk 1984; Clements 1990) maximises the sonority of segments closer to the nucleus and reduces the furthest ones (in our case, we could formulate its consequence as: “preventing a syllable to have a branching onset when preceded by coda-free one”) and the Onset Maximization Principle (Kahn 1976) preventing a consonant-final syllable followed by a vowel-initial one. Let’s take a look at few short sentences:

(33) a. *Va niquer ta mère* (insult) [va.ni.ke.ta.mɛʀ] ‘Go fuck your mother’
b. *Hier, j’ai mangé une pomme.* [i.jɛʀ.ʒɛ.mɑ̃.ʒe.yn.pɔm] ‘Yestarday, I ate an apple’[20]
c. *Hier, j’ai mangé un abricot.* [i.jɛʀ.ʒɛ.mɑ̃.ʒe.ɛ̃.na.bʀi.ko] ‘Yestarday, I ate an apricot’
d. *La belle femme aime ce tableau.* [la.bɛl.fa.mɛm.sø.ta.blo] ‘The beautiful woman likes this painting’
e. *Le bel homme aime cette belle femme.* [lø.bɛ.lɔ.mɛm.sɛt.bɛl.fam] ‘The beautiful man likes this beautiful woman.

As we can see, the only place we can have an onset-free cluster is either at the start of the sentence, or after a coda-free word boundary (*mangé.une, mangé.un*). We can see that French masculine form *beau* [bo] uses the grammatical word *bel* [bɛl] to give its coda to the onset-free word *homme* [ɔm]. At the end, we can see that CVC clusters are favoured.

Most suffixed words respect the prosodic constraint, and give the onset-free suffix a bisyllabic stem ending with a coda, so that the syllabification gives a CV(C) cluster at the end.

(34) a. cloche [klɔʃ] ‘bell’→ clochard [klo.ʃaʀ] ‘hobo’
b. dingue [dɛ̃g] ‘crazy’→ dingo [dɛ̃.go] ‘crazy’
c. mes [me] ‘to me.plural’→ mézig [me.zig] ‘(to) me’

It is clear that these miscuts are meant to happen given the need for an onset, and further still when suffixes are onset-free. The case of *mézig* is a classic: based on the plural form of the lexeme MOI ‘me/I/to me’: *mes* [me(z)], the liaison happened with the *-i* suffix, creating the -zig series. Hence we have *mézig*, *tézig*, *sézig* (singular and pluar), *nozig*, *vozig*, for all the pronouns. However in the case of FROMTON or DIRLO, the epenthesis cannot be linked to any liaison’s miscut phenomenon. As to illustrate, let’s have a look at example (2) again:

20 *Hier* ‘yesterday’ can have synaeresis [jɛʀ] or diaeresis [i.jɛʀ].

(35) *Briquet* [bʀikɛ] 'lighter'
bricmon [bʀikmɔ̃], *bricton* [bʀiktɔ̃], *bricmolle* [bʀikmɔl], *brictouse* [bʀiktuz]

Example (32) shows that on one base, argot has created many variations. It would be futile to deny the series existing here, where *-ton* is well used (*curé/cureton*, *fromage/fromton*), *-mon* a bit less, *-touse* quite prolific too (*party/partouse*, galette/galtouse). The question however is not whether these words belong to a series, rather how did the consonant leading to the miscut appear and how it was selected if not -t- or -n- ?

2.4. PRIMING

Priming effect is a psychological phenomenon that has been shown to play an essential role in lexical items' saliency*:*

(36) "A[...] factor that influences the accessibility of information in memory is priming. The activation of stored knowledge through experiences in the immediate context can make prime-relevant information more accessible in memory. A second factor that influences the accessibility of information in memory is the frequency with which a construct has been primed (Bargh and Pietromonaco, 1982; Srull and Wyer, 1979). [Constructs] that have been frequently activated in past experience are more available in memory than those that have been less frequently primed. Such frequency of activation, if it occurs on a regular and continuing basis, can result in certain constructs becoming chronically accessible, such that no external priming in the immediate context is necessary to make them highly accessible (Higgins et al., 1982)." (*Sage handbook of social psychology)*

These effects play a role either on vision tasks or hearing tasks. Words with similar beginnings trigger each other (Zhang *et. al*. 2022) sometimes leading to mistakes. This, in the perspective of encrypting languages and codes is essential, to lead non-initiated speakers in triggering many possibilities to muddy the waters. The article cited above works on

pǔtōnghuà Chinese (called "mandarin")[21] with Chinese-English bilinguals and English speakers on Chinese disyllable words. So far with English studies, it has been shown that the first syllable triggers priming. With *pǔtōnghuà* Chinese being mostly composed of disyllable lexical units, we understand this could indicate that priming to operate on much larger structures, so long as they can trigger multiple lexical constructs.

2.5. SUMMARISING

In this section we've detailed the data selection, favouring words exhibiting a suffix preceded by two consonants: one of the truncated base stem, the following one being created or inserted seemingly randomly, putting aside any potential etymology residue "hidden" in the lexeme's possible inflexed forms or derivational stem, or any of the *largonji*, *verlan* and loans we've mentioned in section 1. We've then presented the concept of elements' formula for segments, stressing out that both consonants and vowel share similar basic elements. French syllabification process creates a potential fertile soil for miscuts to happen at morphological boundary, which in turn can mislead non-initiated speakers into priming the wrong word.

3: ANALYSIS

In this section, we will see in detail how to answer to the questions left by the words in the list, and try to show that the appearance of the consonant is a purely phonological phenomenon, resulting from propagation of segments' elements to an empty onset slot. Following the selection of /l/ over /t/ due to the presence in the onset's formula of |U| element, caused by proximity with velar consonants and rounded vowels, we will postulate that /l/ in French can accept two formulas, due to the persistence of a diachronic fact: Vl turned into rounded vowels over time, through the step of a velar /l/ [ɬ].

3.1. DATA ANALYSIS

Here we propose to analyse the main statistics revealed by the list before further and more detailed analyses of specific words and phenomena.

21 普通话, literally "general speech", namely the standard variety spoken and written over the media.

3.1.1. Syllables

Counting the syllables of the base, the truncation (truncated transitional form) and the resulting word we end up with 3 entities forming a syllable ID (SID). The count of the syllable size gives the following SIDs across the list:

(37) SYLLABLE IDS: BASE-TRUNCATION-FINAL WORD

SID	112	113	123	212	213	222	223	224	312	313	323	324	334	412	413	423	424
Qty	44	1	1	135	14	1	31	1	12	1	26	3	2	4	1	3	1
%	15.7%	0.4%	0.4%	48.0%	5.0%	0.4%	11.0%	0.4%	4.3%	0.4%	9.3%	1.1%	0.7%	1.4%	0.4%	1.1%	0.4%

chaplard belongs to the 212 family, [ʃapo]$^{\sigma\sigma}$ → °[ʃap]$^{\sigma}$ → [ʃaplaʀ]$^{\sigma\sigma}$

As we can see, even though conservation of size seems to be prevalent, we still end up with 34.5% of words having 1 or more syllable in the final state than in the base state.

3.1.2. Segmental composition

NECs are composed of 68.2% of coronals and 18.7% of labials. /t/ represents more than 27%, followed by /l/ at 21%. Annex 2 focuses on NECs distribution in words having a truncated form ending with a coda, reducing the list to 227 items instead of 285. Words like *zyeuter*$_{V}$ [zjøte] 'to look at' were not counted into this table.

We found 103 different endings distributed among 24 NECs, making up to 56 suffixes, with /o/, /ɔ̃/, /aj/, /yʃ/ and /e/ totalling up to 85.4%.

/l/-NEC sub-list contains 60 words, with a majority of [ʀ] in the preceding segment.

(38) PRE-NEC SEGMENTS IN /L/-NEC SUB-LIST

Pre-NEC	a	b	ɛ	f	k	m	o	ɔ	p	ʀ	s	t	v	z
Qty	4	3	1	4	1	2	7	1	8	19	6	1	2	1
%	6.7	5.0	1.7	6.7	1.7	3.3	11.7	1.7	13.3	31.7	10.0	1.7	3.3	1.7

3.1.3. Two-segment epenthesis

As mentioned in (27c), 5.3% of our list has a two-segment epenthesis, namely [bʀ], [bl], [dʀ], [st] and [tχ].

(39) a. *astibloche* [astoblɔʃ] 'maggot' ← *asticot* [astiko]

b. *albroque* [albʀɔk] 'match stick' ← *allumette* [alymɛt]

c.	*Nancebroque*	[nɑ̃sbʀɔk]	'Nancy'	← *Nancy*	[nɑ̃si]
d.	*nasebroque*	[nazbʀɔk]	'moron'	← *nase*	[naz]
e.	*galdruche*	[galdʀyʃ]	'cash'	← *galette*	[galɛt]
f.	*coinsto*	[kwɛ̃sto]	'not far'	← *coin*	[kwɛ̃]
g.	*valtreuse*	[valtχøz]	'luggage'	← *valise*	[valiz]
h.	*cochonceté*	[koʃɔ̃ste]	'dirtiness'	← *cochon*	[koʃɔ̃]
I.	*méchanceté*	[meʃɑ̃ste]	'malice'	← *méchant*	[meʃɑ̃]
j.	*faucusseté*	[fokyste]	'hypocrisy'	← *faux-cul*	[foky]
k.	*pébroque*	[pebʀɔk]	'umbrella'	← *pépin*	[pepɛ̃]
l.	*kébroque*	[kebʀɔk]	'kepi hat'	← *képi*	[kepi]

Example (34) shows all the words with a two-segment epenthesis where the NEC took place. Special case can be the one of (34k), where the coda of the stem is fused with the NEC through a voicing haplology process, which can be re-analysed as an /ʀ/ NEC with assimilation of voicing |L| element on the /p/ coda (also happens with *kébroque* [kebʀɔk] 'kepi' ← *képi* [kepi]). All of them belong to series of suffixes that exist with other words in and outside the list, legitimising the existence of the two-segment epenthesis as being expected at the same place as other epentheses. Suffixes are /ɔʃ/ (*rigolboche* [ʀigɔlbɔʃ], *caftoche* [kaftɔʃ] 'coffee machine', *cantoche* [kɑ̃tɔʃ] 'dining hall'), /ɔk/ (*proploque* [prɔplɔk] 'landlord', *chinetoque* [ʃintɔk] 'a Chinese person', *cradoque* [kradɔk] 'grubby'), /yʃ/ (*camarluche* [kamɛʀlyʃ] 'comrade', *fademuche* [fadmyʃ] 'dull', *dabuche* [dabyʃ] 'mum'), /o/ (*soldo* [sɔldo] 'Solex moped', *espago* [ɛspago] 'a Spanish person', *proprio* [pχopχijo] 'landlord') and /øz/ (*chichiteuse* [ʃiʃitøz] 'pain in the neck (FEM)', *camioneuse* [kamjonøz] 'female truck driver, masculine woman', *valseuses* [valsøz] 'bollocks').

It is clear that these epentheses are realised at a single skeletal position, which is the onset of the suffix's (first) syllable.

Whether they act as one segment or as a contour segment is not really what matters to our analysis here, and should be further discussed elsewhere.

3.2. TRUNCATION AND PRIMING

Lets take a word like *dirlo*. Based on *directeur* [diʀɛktœʀ] 'headmaster' from *diriger* 'to direct, to lead', is derived from °*direct+eur,* to respect the prosodical constraint. DIRIGER, DIRECT, DIRECTEUR all belong to the same derivational family, and their Greatest Common Stem is *dir-*. Derivation of *dirlo* allows us to postulate whether:

1. dir is selected as the Greatest Common Stem
2. *dir* [diʀ] is selected as the smallest most complete triggering entity

Hypothesis number one would be related to a lexical component, possibly priming, orthographically and phonetically.

Hypothesis number two would not need the speaker's internal lexicon to be enquired. Furthermore, it doesn't explain why AMÉRICAIN gives a smallest stem *amer-* and not *am-* (in making *amerlo*).

Our hypothesis blends the two, selecting a Greatest Priming Unit (GPU) with a minimal phonological form, yet realised to the fullest extend of its possibilities. These conditions are needed for the following reasons:

- priming of the stem must occur whatever the derivative is, for the common meaning to be conveyed
- the minimal phonological unit is the syllable, going below that entity would not be able to trigger meaning
- the syllable being fully realised means that it provides a coda for potential onset-free suffixes

BRIQUET 'lighter'→ *bric-* [bʀik] could easily trigger BRIQUE 'brick', if not preceded by *un/mon* or any grammeme expressing masculine gender.[22] Speakers can identify masc.+ [bʀik] as the smallest possible unit of sound triggering the meaning of 'lighter'. DIRECTEUR gets [dir], TRAVESTI gets [tʀav], FROMAGE gets [fʀom] and AMÉRICAIN gets [amɛʀ].

22 Also called grammatical word, in essence any word that has no reference in the real world and is purely a grammar unit.

Across the list, it would seem that onset free base are mostly truncated to dissyllables when original word contains 2 syllables or more, with the second being fully realised (ONC). Only exceptions are *aileron* [ɛlʀɔ̃] 'fin', which has a monosyllabic base word, and derivative of *allemand* [almɑ̃] 'German'.

In (35a), we have words of different length. Truncation has to take out at least one syllable, so for σσ words, we end up with σ, σσσ we end up with σσ and more than three we also en up with σσ. (35b) shows us that the GPU of *américain* is °*amer*, since it's also used in compounded derivation. Why don't we end up with **amérlindien* though?

(40) a. i. *allemand* → °*al* + *boche* [bɔʃ] → *alboche*
ii. *espadrilles* → °*espa* + o → *espago*
iii. *Ougadougou* → °*ouga* + *ais* [ɛ] → *ougalais*
b. i. *américain* → °*amer* + *o* → *amerlo*
ii. *américain* + *indien* → *amérindien* 'native American'
c. *apéritif* → °*aper* + *o* → *apéro*
d. *prolétaire* → *prolo*

Simply because it is actually a loan word from English and could look like a derivative with a haplology °*amér-o-indien* → *amér-indien*: "Empr. à l'anglo-amér. amerindian « id. » attesté comme adj. Dep. 1897-98".[23]

Why couldn't *APÉRO* 'happy hour' be like *AMERLO* then? Once again, our own research through the Gallica website teaches us that the status of *APÉRO*'s o is actually not the same as *AMERLO*'s o. *APÉRITIF* was an adjective (ending in *-if* form) since 1453[24], with the meaning 'whet your appetite', which then became 'to be taken before lunch' during the 18th century. Drinking strong alcohols before lunch was not a custom, except perhaps in the south,

23 "Borrowed from american English, amerindian, attested as an adjective. Dep. 1897-98". (translated by the author), cnrtl.fr/etymologie/amérindien
24 In *Livre des simples médecines*, Matthieu Platearius, 1453.

with beverages like *Pastis*.[25] In 1885, the "*bulletin des lois de la République*" publishes the following line (p. 353): "brevet 168.148 du 8 avril 1885: Nouvelle boisson dite apéro-digestif".

Hence *APÉRO*'s o̲ has the same status as in *Franc**o**-chinois* [frɑ̃k**o**ʃinwa] 'French-Chinese': it's the Latin neoclassical linking -o̲-. With French favouring for the segment, the *apér**o**digestif* has then been truncated to *apéro*, and reanalysis of the family *APÉRITIF/APÉRO* relinked the second one directly on the first. The transformation line for (35c) should be: *apéritif* → *apér+o+digestif* → apéro~~*digestif*~~. However, the created GPU still respects the same rules as for *AMÉRICAIN*.

Structurally, [a.me.ʀi.kɛ̃] is cut in 4 syllables, but [di.rɛk.tœ], and [kɥi.zi.ɲe] count only 3. Would it be possible that GPU equals the most complex left over after taking 2 syllables of a word ?

Plenty of examples contradict this hypothesis. Words such as *Alforville* →*Aflforlo, espagnol* → *espago, Asticot* → *astibloche, rigolo* → *rigolbard*, all give a 1-syllable reduction for their GPU, which would indicate that choice it not made purely phonologically.

Finally, why don't we end up with **proldo* or **prolboche* for (35d)? First, let's consider that *prolétaire* [pχoletɛʀ] 'proletarian' 's GPU equals to ʔ[pχo]. In the case of a derivation in -o, we would get a strong need from the Dissimilation constraint to make a segment appear so as to avoid both hiatus (*[pχo.o]) or haplology (*[pχo]). As we will show just after in 3.3, E.T. formulas of the segments around the expected consonant would go as such:

- [p] = |U̲ʔ|
- [χ] = |A̲H|
- [o] = |U̲A|

With the onset position asking for a non-glide, we would assume either |ʔ| or |H| element to already be present in the formula of the epenthesis. With neighbouring |U̲| and |A̲| making a strong presence around it, they would spread to the possible empty spots, resulting in the two following formulas |U̲AH| and |U̲Aʔ|. |U̲AH| would match a non-existent fricative in French phonological system, where |U̲Aʔ| could match a velarised liquid.

25 "Pastis (UK: /ˈpæstɪs/, US: /pæˈsti:s/, French: [pastis]; Occitan: pastís [pasˈtis]) is an anise-flavoured spirit and apéritif traditionally from France". Wikipedia.

However, GPU asks for a fully realised syllable, with a coda, hence getting [pχo] out of [pχoletɛʀ] would violate that principle. A [pχol] GPU seems much more adequate. As shown just now, segments surrounding the empty onset are only composed of |U| and |A| resonant elements, making once again a strong case for a velarised liquid to be inserted. Even of that were the case, haplology could have happened as French does not support geminates: pχol+ɬo → pχolo. Furthermore, we did not find any -ol-NEC-o words in the list, except for *Soldo*, which even though based on *Solex*, really needed an NEC since [solo] (not a GPU) would in itself trigger another word entirely (*i.e.*'solo'). Finally, [pχol+o] can easily lead to a miscut, making the first syllable [pχo] trigger the priming of *professional* truncated word *pro*, as we strongly think this is the goal of coding languages.

3.3. NECS TO BE EXPECTED

With the truncated base and the suffix, why are NECs appearing ? A simple answer would be to protect the semantic of the truncated base. However, literature is silent on this aspect. Even Lapointe (2001)'s proposition with the Korean *-wa/-kwa* suffix distribution doesn't really specify a will to "protect" any semantic base or smallest unit.[26]

The goal of any encrypting language game is to mislead non-initiated speakers. On that goal only, playing with priming effect can be enough. We postulate that the goal of the NECs are to guarantee that the GPU has the smallest phonological form, so that GPUs of different words would collide for the non-argot speaker:

(41) "Our findings are consistent with Beyersmann et al. (2015), who reported that participants with an overall higher proficiency in spelling and vocabulary showed more priming in the nonaffixed pseudoword condition than participants with comparatively lower proficiency scores" (Beyersmann et. al. 2016:225)

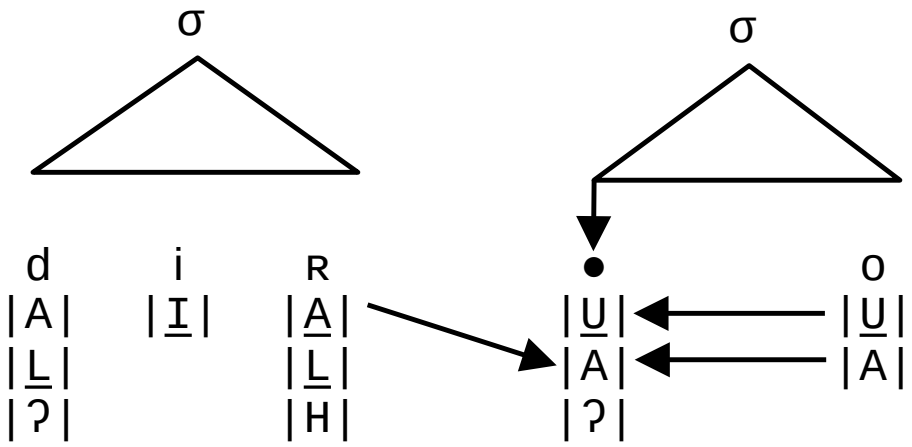
26 Klein (2002), describes Lapointe (2001:273)'s proposal is to add pre-OT morphological listings, assigning [+cons] to *-kwa* and [-cons] to *-wa* in order to "bleeds the inputs available to GEN", hence is not allowing its full power.

We understand that new or non-recognised lexical units are more easily primed (and understood) by experienced speakers. Hence, encrypting words with a smallest GPU would lower the non-argot speaker's priming frequency on those words, hence making it more difficult to understand.

Yet, under the influence of the prosodic constraint, they offer a coda for the suffix to attach to: a fertile ground for miscuts. Creation of an NEC feels necessary. But how does segment selection happen ? To our opinion, it's very simple: propagation of resonant elements and syllable structure create an expected pattern or formula, to which only the fittest blend matches.

Let's look at *dirlo*, *travlo*, *paplard* and *pistoche* to better see the appearance of NECs:

(42) WHY /l/ IS TO BE EXPECTED FOR /dɪʀlo/



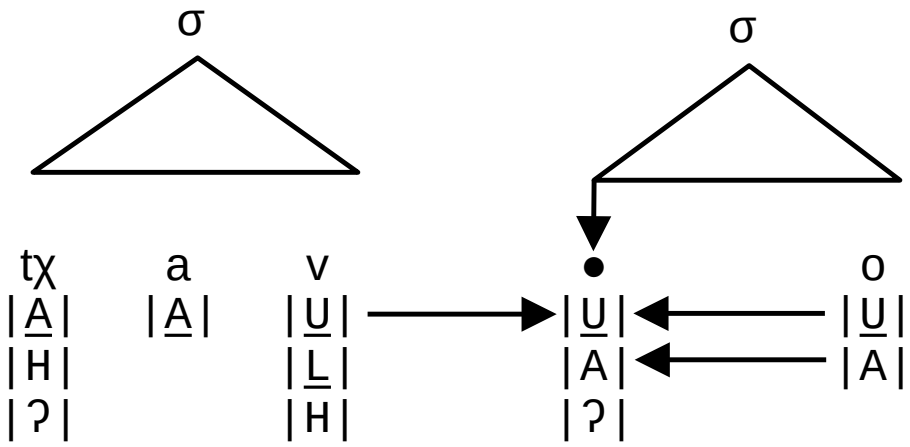
As we can see, the second syllable needs an onset, providing a |ʔ| element. Element |U| of /o/ propagates to the empty slot, and elements |A| of /o/ and /ʀ/ propagate to complete the picture. The onset needs to match the formula |UAʔ|, /l/ is hence expected. We therefore give the hypothesis of a 3-slot formula, since it is the maximum sized formula for French consonants.

It is not clear whether only elements from segments in direct contact to the NEC propagate or if they all do and selection of the fittest possible resulting segment comes out as valid, but we would assume for now that only resonant elements (vocal elements) propagate, creating candidates that are then firstly evaluated by phonological constraints, then by morphological ones such as Series or Dissimilation.

For visual clarity, we chose to only represent the propagation of the suffix rhyme and coda and of the stem's coda.

If |I| had propagated instead of |U|, [ɬ] might have been expected. However, this segment doesn't exist in the language any more. 19 words over the 60 presenting an epenthetic /l/ follow this figure, namely 32% of the /l/ NEC words.

(43) WHY /l/ IS TO BE EXPECTED FOR /tχavlo/



With only |A| and |U| elements, whether propagation is limited to NEC's proximity or not, /l/ would have been the only solution.

Travlo poses however a problem, since as now, only 5 words present a [v] pre-NEC consonant, 2 of them giving rise to an [l], 3 to a [t]:

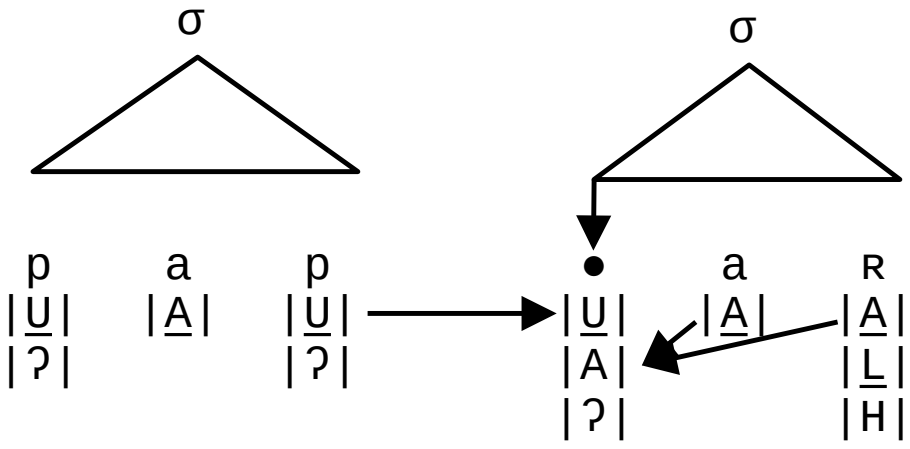
(44) ALL THE WORDS HAVING /v/ AT THE PRE-NEC SLOT

s	i	v	**l**	o
gʀ	i	v	**t**	õ
l	u	v	**t**	o
p	a	v	**t**	õ
tχ	a	v	**l**	o

With suffixes *-o* and *-õ*, there not enough context to justify *travlo* over °*travto*, except maybe for a dissimilation constraint. One could argue, that [luvto] is not an *argot* word, and could possibly derive from †*louvet* [luvɛ], the Old French word for 'wolf cub', leaving in *argot*, only [sivlo] and [tχavlo] both starting with a coronal, hence favouring the dissimilation with [l], leaving [gʀivtõ] and [pavtõ] with the default French epenthesis: [t]. However, we recognise that, given the size of the sample, any analysis could be valid. We choose to only include this figure to show another idea, that despite our earlier supposition, constraints might not be last in evaluation whether or not a candidate is valid. There could a be an "importance" factor, selecting a constraint first over the elements' propagation.

3.4. FORMULA SIZE

(45) WHY /l/ IS TO BE EXPECTED FOR [paplaʀ]



Once again, the only resonant elements are |U| and |A|. Only outcome of any propagation postulants could be liquids, either /l/ or /ʀ/:

|A̲A?|=/ʀ/, |AA?|=/l/ and |U̲A?|=/l/. The dissimilation constraint comes then into play to forbid */pap.ʀ-aʀ/, leaving /l/ the only choice left.

The quantity of slots in the formula would, however, greatly change the postulants. Does the size of the suffix and of the stem's segments play a role on the size of the expected formula? One hypothesis could be that the NEC's formula would be bound by the other segments' size. A one-slot formula only authorises glides in the French system, and we already postulated the presence of |?|, if alone would match no French consonant. A two-slot formula could give |U̲?|=/p/, |A?|=/t/ or |U?|=/k/. °*paptaʀ* or °*papkaʀ* could be potential candidates, there could even be a haplology with the p-p candidate **pappaʀ* → °*papaʀ*. None of these seems to be selected. Looking at the productions, it seems that -aʀ doens't permit for a [p] NEC. On the other side of the phenomenon, stem's GPU's coda [p] only supports [l], [s], [z] and [ʀ], all of which either need a |H| element in a two-slot formula ([s] is the only segment with that Element in its formula) or a three-slot formula.[27]

Within the list, it may be saddening to notice that formula size in the segments of the stem or the suffix do not restrict NEC's formula size. However, as show below, it would seem that stem's codas (left column, in light grey) prefer an NEC (top row, in white) with the same formula size, and the suffix (right column, in dark grey) prefers an NEC having 1 to 2 more slot than its vowel.

(46) FORMULA SIZE FOR NEC, STEM'S CODA AND SUFFIX NUCLEUS

	2		**3**		
1	7	53	9	52	**1**
2	71	38	61	55	**2**
3	42	29	76	40	**3**

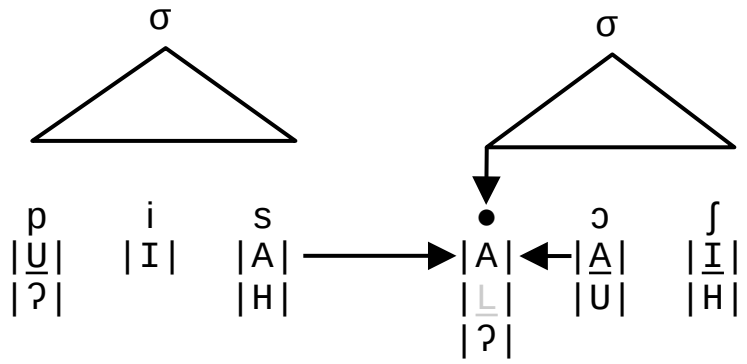
There are no 1-slot NECs, and 4-slots only represent branching elements at this point, very few and negligible.

27 The only word having the latter consonant is *pébroque* [pebʀɔk]. The rhotic could belong to a branching NEC, with a haplology happening between the stem's [p] and the NEC's [b-]. [l] represents 57% of the NECs after [p], [z] is only used with the *-zingue* series, [s] was only used during the late 1920's with words like *bocçon* [bɔksɔ̃] 'mess, shamble' (later spelled *boxon*), *tickçon* [tiksɔ̃] 'ticket', *paqçin* [paksɛ̃] / *pacsif* [paksif] (later spelled *paxif*) 'parcel', etc. *Pébroque* dates from 1907.

3.5. INPUT BLEEDING

Pistoche will now exemplify the process of the selection of propagating elements.

(47) WHY /t/ IS TO BE EXPECTED FOR [pistɔʃ]



We can see that the suffix has elements |A| and |U| from the nucleus, |I| could also transmit from the coda. On the opposite side, we have |A|, |I| and |U| that could theoretically all propagate to the empty onset. Why only |A| is found then? Using Lapointe (2001, 273)'s idea (in Klein (2003)):

(48) "(29)
+/kwa/ /[+cons]_____
+/wa/ /[-cons]_____
According to Lapointe (2001), morpholexical restrictions such as (29) function to bleed the inputs available to GEN." (Lapointe 2001:273)

We might offer this supposition: Series constraint or Dissimilation constraint can bleed the input possibilities, so that selected output is restricted to fewer candidates.

Here, suffix *-ɔʃ* imposes a restriction on the NEC, with three possible choices being [t], [b] (bl) or [l]. Furthermore, stem's coda would also bleed the possible candidates by forcing a certain type of element in the formula. *-ɔʃ* in context of a fricative coda from the stem, offers only [b] and [t]. [b] needs an element |L| to realise, however there are none available if it could propagate. We decided to show it greyed out in the formula, to express that there is nothing else available for its replacement. That's why ɔ's |U| element cannot

propagate, hence [t] is the only choice available. The other derivative for swimming pool is *pisbé*, suffice is to say that this time, |A| was blocked out in favour of |U| with |L| present, it created the formula for /b/=|UL?|.

3.6. WHY |UA?| GIVES [l]?

But how can |UA?| be the elements formula of /l/, if modern French /l/ is purely coronal ?

It is a well documented fact that in European languages, liquids and especially /l/, tend to velarise (get a "dark" colouration) near rounded vowels or coda positions (Müller 2011 for Occitan, Sen 2015 for Latin, Rodrigues *et. al.* 2019 for European Portuguese). Indeed in the past, from late Latin already, /l/ had many flavours: dental [l], palatal [ʎ], velar [ɬ] and possibly fricative [ɬ]. The velar flavour was as in English 'dark l' coloured with |U| element.[28]

Circa the 9th and 12th centuries, most pre-C /l/ shifted to [ɬ] then to [ʊ]. In the 13th century, it merged with preceding vowels creating many diph-triph-thongues, that were monophthong-ised during the 16th century into /u/, /o/, /y/ and /ø/. However, the monophthong-ation process did not fully occur on high frequency words, leaving until today alternatives in the lexicon between detached (or separated) form and fully fused form:

(49) a. *à la maison* [**a.la**.mezɔ̃]
at DET.F.SG house[SG]
'at the house' / 'at home'

b. *au magasin* [**o**.magasɛ̃]
at.DET.M.SG shop[SG]
'at the shop'

c. *de la farine* [**də.la**.faʀin]
of DET.F.SG flour[SG]
'(some) flour'

d. *du café* [**dy.**kafe]

28 "§389 – The velarised l-sound combines with its articulation a lift of the back of the tongue which resembles the point of articulation of the vowel u and gives it the resonance of that vowel, vocalisation to ʊ is therefore readily intelligible.[…]". M.K.Pope (1934), p155.

of.DET.M.SG coffee[SG]

'(some) coffee'

e. *un journ**al*** [ɛ̃.ʒuʀn**a<u>l</u>**], *des joun**aux*** [de.ʒuʀn**o**]

ART.M.SG newspaper[SG], ART.PL newspaper[PL]

As we can observe, feminine forms keep the preposition and determiner separated [a.la]/[də.la]. However with the masculine form, fusion occurs and the °[a.lə] becomes [o] (°[a.ʎə] → °[a.łə] → °[a.ɬ] → °[aʊ] → [o]), °[də.lə] becomes [dy]. *Journaux* came from [ʒuʀnal].SG → °[ʒuʀnals].PL → °[ʒuʀnałs].PL → °[ʒuʀnaʊs].PL → °[ʒuʀno].PL. We suppose that persistence of such alternation in the daily speech keeps in the mental grammar of the speakers the link between /l/ and its |U| element of the past. We decided to call this phenomenon a mooring.[29] The mooring is not an intrinsic property of the segment it's attached to, rather an added property that plays a role in phonological operations when dealing with a problem such as the Dissimilation Constraint violation.

The moored element can be either headed or non headed depending on the realisations. /l/ in French hence has the following configuration:

|<u>U</u>| - - - |__A?| matching either |UA?| or |AA?|.

CONCLUSION

French morphology is still very diverse, and argot is still evolving with new ways of encrypting the phonological form of its lexical items. These encrypting processes blend together with the history of words and their sequential re-interpretations to gather words according to the Series Constraint, effecting greater difficulty in the elucidation of their formation. If words such as *cuisto*, *travlo* and *frigo* seem to share an intrinsic property, diachronous knowledge and perceptive on re-interpretation had proven to be efficient to prove it is not the case. *Cuisto* is the modern spelling of *cuissetot*, a word invented during World Word I by the soldiers at the front to describe the young cooks, based on *cuis*[*inier*]+*e-tot*. *Travlo* is a real NEC result, based on *trav*[*esti*]+*o*, *frigo* a truncation based on *frigo*[*rifique*], a converted adjective into noun. We've hypothesised that to our opinion, *argot*-like

29 "The act or an instance of making fast an aircraft or a vessel, as by a cable or anchor », and for the French version *"phénomène d'ancrage"*.

language games and cryptolects aim at reducing non-initiated speaker's priming frequency to confuse them. For that purpose, the reduction of words to a Greatest Priming Unit having both the smallest shape possible in it most realised possibilities guaranties both the greatest common denominator to all its derivatives and analogies with other words for speaker whom did not internalise the NEC creation process (unable to understand that the NEC does neither belong to the stem nor to the suffix).

The NEC generated words are few indeed, but were so far mostly extracted from argot-based dictionaries and lists. A more exhaustive search would have to be conducted on a larger corpus, perhaps showing its presence in more than encrypted French (in demonyms like *Congo* → *congolais*, *Ougadougou* → *ougalais*, or derived progeny nouns like *lion/lionne* → *lionceau*, *loup/louve* → *louveteau*), perhaps even outside of French's scope.

After considering the morphological and morphophonological approaches of Plénat, Roché and Pagliano, we offer here a pure phonological explanation to the presence of these non etymological consonants at morphological boundary: the blend between expectation of an onset at syllable start, phonological traits of the surrounding segments, and selective input bleeding generate an expected segment, that is then realised according to the language's definitions of segments' properties (in Element Theory).

In order to explain why /l/ is selected over /t/, we offer the concept of mooring, a link between the speakers internal grammar rules deduced from lexical figment of past phonological changes. The daily use of alternates between monophtong-ised forms *au* [o] and its uncompressed *à la* [ala], *du* [dy] vs *de la* [dəla] and so on keeps active in the speakers' mind the link between the phonological processes that turned /Vl/ into rounded monophthongs, linking a |U| Element to the properties of /l/, even if modern French /l/ is no longer dark.

DISCUSSION

Phonological mooring may happen in more cases than we would care to admit, would evidence of its existence and realisation be more readily available. Attempting to point to a mooring for every difficult word, and thusly their creation and origin, would not satisfy Ockam's Razor, but would merely give a handy scapegoat to justify incomplete analyses.

One might consider it is the case in this paper, however I would suggest to have a look at word formation such as *dirlo* in second language speakers, and try to see if there is a correlation with acquisition of *au*$_{\text{Masc}}$/*à la*$_{\text{Fem}}$, *du*$_{\text{Masc}}$/*de la*$_{\text{Fem}}$ and irregular plurals such as *cheval*$_{\text{SING}}$/*chevaux*$_{\text{PL}}$, *nouvelle*$_{\text{F}}$/*nouveau*$_{\text{M}}$, or even verbal stems like stem1 in [-val] give stem3 in [-vo], etc.[30] Further studies could include checking priming effect on purely phonological forms of these words, and to be compared with nonwords (logatomes). We didn't find any research upon this subject so far.

Regarding 3.3. example *pap(e)lard*, it has been brought to our attention that there could be relation with Spanish *papel,* to show a pre-existing liquid in the root, hence breaking the NEC status. Crossing the data in FEW (p.582-587, 589-595) and Pope (1934, §400), we understand that Latin *papīlus* (Typha ratifolia) was re-scripted *papyrus* when blended with the Greek use of the Egyptian papyrus, giving Old French *papier* †[papir], Middle French †[papjɛr], changing into [papje] during the 15$^{\text{th}}$ century. The °[papəl] form of the root gave a derivative †*papelier* [papəljɛr] 'paper maker' in the 14$^{\text{th}}$ century, but its use got lost.

At the same time, Latin root *pappare* †[pap:are] 'to eat', gave the Old French *paper* †[papɛr] 'to eat' (colloquial and children speech), *papeter* †[papətɛr] 'to chat', with a derivative *papelart* †[papəlart] 'false devout' in the 14$^{\text{th}}$ century, and a *papelard* †[papəlaʀ] 'flatterer' in the 17$^{\text{th}}$.

Our hypothesis is that, both GPUs in °[papəl]- blended in the 14$^{\text{th}}$ century, resulting in the possibility to use the derivatives of one with the other's meaning.

Argot not creating new lexical items but rather coding the already existing ones is probably really fond of these sort of processes, and the *papelard* [papəlaʀ] †'flaterrer' was redirected to the meaning of paper when in need.

Nonetheless, that 'flatterer' 's /l/ was already an NEC, since, the word for 'speaking' lost the /r/ before the 13$^{\text{th}}$ century (*pape* †[papə] was already synonymous of 'stew' in Old French, from which FEW says the *paper* verb was then been created, with the *-er* suffix.).

30 Cf. Bonami & Boyé (2003).

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Annex 1: word list by NEC

Mots		Base		Tronc	Épen	Suff
Ortho	**IPA**	**Ortho**	**IPA**	**IPA**	**IPA**	**IPA**
aileron	ɛlrɔ̃	aile	ɛl	ɛl	ʀ	ɔ̃
alboche	albɔʃ	allemand	almɑ̃	al	b	ɔʃ
albois	albwa	allemand	almɑ̃	al	b	wa
albroque	albʀɔk	allumette	alymɛt	al	br	ɔk
alforlo	alfɔʀlo	alfort-ville	alfɔrvil	alfɔr	l	o
Alsaceboche	alzasbɔʃ	Alsacien	alzasjɛ̃	alzas	b	ɔʃ
alzingue	alzɛ̃g	alpague	alpag	al	z	ɛ̃g
amerlo	amɛʀlo	americain	amerikɛ̃	amɛr	l	o
astibloche	astiblɔʃ	asticot	astiko	asti	bl	ɔʃ
auverpin	ovɛʀpɛ̃	auvergnat	ovɛʀɲa	ovɛʀ	p	ɛ̃
balancetiquer	balɑ̃stike	balancer	balɑ̃se	balɑ̃s	t	ike
baltringue	baltχɛ̃g	balance	balɑ̃s	bal	t	ɛ̃g
banguissais	bɑ̃gisɛ	bangui	bɑ̃gi	bɑ̃gi	s	ɛ
banquezingue	bɑ̃kzɛ̃g	banquier	bɑ̃kje	bɑ̃k	z	ɛ̃g
bazarder	bazaʀde	bazar	bazar	bazar	d	e
beaujolpif	boʒɔlpif	beaujolais	boʒolɛ	boʒɔl	p	if
beignzif	bɛɲzif	baigneur	bɛɲœʀ	bɛɲ	z	if
bequetance	bɛktɑ̃s	béquée	beke	bɛk	t	ɑ̃s
bercaille	bɛʀkaj	bergère	bɛrʒɛr	bɛr	k	aj
biscaille	biskaj	Bicêtre	bisɛtr	bis	k	aj

biscotonneux	biskotonø	biscoto	biskoto	biskoto	n	ø
bissalien	bisaljɛ̃	bissao	bisao	bisa	l	jɛ̃
blanchecaille	blɑ̃ʃkaj	blanchisserie	blɑ̃ʃisri	blɑ̃ʃ	k	aj
bocçon	bɔksɔ̃	bocard	bokar	bɔk	s	ɔ̃
bocheton	bɔʃtɔ̃	boche	bɔʃ	bɔʃ	t	ɔ̃
boslard	boslaʀ	bossco	bɔsko	bɔs	l	ar
boston	bɔstɔ̃	bossco	bɔsko	bɔs	t	ɔ̃
bouscaille	buskaj	boue	bu	bu	k	aj
brelander	bʀəlɑ̃de	brelan	bʀəlɑ̃	bʀəlɑ̃	d	e
bricheton	bʀiʃtɔ̃	briche	briʃ	briʃ	t	ɔ̃
bricmolle	bʀikməl	briquet	brikɛ	brik	m	ɔl
bricmon	bʀikmɔ̃	briquet	brikɛ	brik	m	ɔ̃
bricton	bʀiktɔ̃	briquet	brikɛ	brik	t	ɔ̃
brictouse	bʀiktuz	briquet	brikɛ	brik	t	uz
buffaldingue	byfaldɛ̃g	buffalo	byfalo	byfal	d	ɛ̃g
buffcaille	byfkaj	buffet	byfɛ	byf	k	aj
buffedingue	bufdɛ̃g	buffet	byfɛ	byf	d	ɛ̃g
burlin	byʀlɛ̃	bureau	byro	byr	l	ɛ̃
burlingot	byʀlɛ̃go	bureau	byro	byr	l	o
burloche	byʀlɔʃ	bureau	byʀo	byʀ	l	ɔʃ
buveton	byvtɔ̃	buvard	byvar	kabin	t	ɔ̃
cabin’zingue	kabinzɛ̃g	cabinet	kabinɛ	kabin	z	ɛ̃g
cabzingue	kabzɛ̃g	cabinet	kabinɛ	kab	z	ɛ̃g

cafemar	kafmaʀ	café	kafé	kaf	m	ar
cafemon	kafmɔ̃	café	kafe	kaf	m	ɔ̃
cafeton	kaftɔ̃	café	kafe	kaf	t	ɔʃ
cafter	kafte	cafard	kafaʀ	kaf	t	aʀ
cageton	kaʒtɔ̃	cage	kaʒ	kaʒ	t	ɔ̃
cahoutchoutier	kautʃutje	cahoutchouc	kautʃu	kautʃu	t	je
calbard	kalbaʀ	caleçon	kalsɔ̃	kal	b	aʀ
calbombe	kalbɔ̃b	caleil	kalɛj	kal	b	ɔ̃b
calbutte	kalbyt	caleçon	kalsɔ̃	kal	b	yt
camarluche	kamaʀlyʃ	camarade	kamarad	kamar	l	yʃ
camelotier	kamlɔtje	came	kam	kam	l	otje
camerluche	camɛʀlyʃ	caméra	kamera	kamɛr	l	yʃ
camplouse	kɑ̃pluz	campagne	kɑ̃paɲ	kɑ̃p	l	uz
campluche	kɑ̃plyʃ	campagne	kɑ̃paɲ	kɑ̃p	l	yʃ
camtar	kamtaʀ	camion	kamjɔ̃	kam	t	aʀ
canzart	kanzaʀ	canut	kany	kan	z	ar
caperlot	kapœʀlo	caporal	kapœral	kapœr	l	o
carrlingue	kaʀlɛ̃g	carreau	karo	kar	l	ɛ̃g
carrloche	kaʀlɔʃ	carreau	karo	kar	l	ɔʃ
carrluche	kaʀlyʃ	carreau	kaʀo	kaʀ	l	yʃ
cavalcade	kavalkad	cavaler	kavale	kaval	k	ad
champlard	ʃɑ̃plaʀ	champignons	ʃɑ̃pinjɔ̃	ʃɑ̃p	l	ar
chancetiquer	ʃɑ̃stike	chanceler	ʃɑsle	ʃɑ̃s	t	ike

chaplard	ʃaplaʀ	chapeau	ʃapo	ʃap	l	ar
chassbi	ʃasbi	chasseur	ʃasœr	ʃas	b	i
chèqueton	ʃɛktɔ̃	chèque	ʃɛk	ʃɛk	t	ɔ̃
chichiteuse	ʃiʃitøz	chichi	ʃiʃi	ʃiʃi	t	øz
chiftir	ʃiftiʀ	chiffon	ʃifɔ̃	ʃif	t	iʀ
chim'caille	ʃimkaj	chimie	ʃimi	ʃim	k	aj
chinetoc	ʃintɔk	chinois	ʃinwa	ʃin	t	ɔk
civlot	sivlo	civil	sivil	siv	l	o
clocheton	klɔʃtɔ̃	clochard	kloʃar	kloʃ	t	ɔ̃
clodo	klodo	clochard	kloʃar	klo	d	o
cochonceté	koʃɔ̃ste	cochon	koʃɔ̃	koʃɔ̃	st	e
coinstot	kwɛ̃sto	coin	kwɛ̃	kwɛ̃	st	o
colback	kɔlbak	col	kɔl	kɔl	b	ak
colbar	kɔlbaʀ	col	kɔl	kɔl	b	aʀ
compçon	kɔ̃psɔ̃	complet	kɔ̃plɛ	kɔ̃p	s	ɔ̃
conc'marge	kɔ̃smaʀʒ	concièrge	kɔ̃ʃsjɛrʒ	kɔ̃s	m	arʒ
conc'pige	kɔ̃spiʒ	concièrge	kɔ̃sjɛrʒ	kɔ̃s	p	iʒ
conceté	kɔ̃ste	con	kɔ̃	kɔ̃	st	e
congolais	kɔ̃golɛ	congo	kɔ̃go	kɔ̃go	l	ɛ
contremuche	kɔ̃tχmyʃ	contrebande	kɔ̃trəbɑ̃d	kɔ̃tr	m	yʃ
coquebin	kɔkbɛ̃	coq	kɔk	kɔk	b	ɛ̃
corniflot	kɔʀniflo	cornouille	kɔrnuj	kɔrnif	l	o
crampser	kʀɑ̃pse	cramper	krɑ̃pe	krɑ̃p	s	e

craquelin	kʀaklɛ̃	craque	krak	krak	l	ɛ̃
crasspèque	kχaspɛk	crasseux	kχasø	kχas	p	ɛk
crasspète	kχaspɛt	crasseux	kχasø	kχas	p	ɛt
crasspouille	kχaspuj	crasseux	kχasø	kχas	p	uj
crobard	kχobaʀ	croquis	kχoki	kχo	b	aʀ
croisstoche	kχwastɔʃ	croissant	kχwasɑ̃	kχwas	t	ɔʃ
cuistance	kɥistɑ̃s	cuisine	kɥizin	kɥiz	t	ɑ̃s
cuisto	kɥisto	cuisiner	kɥizine	kɥiz	t	o
culbutte	kylbyt	culotte	kylɔt	kyl	b	yt
cureton	kyʀtɔ̃	curé	kyre	kyr	t	ɔ̃
daccanais	dakanɛ	dacca	daka	daka	n	ɛ
dargif	daʀʒif	darrière	daʀjɛʀ	daʀ	ʒ	if
débectance	debɛktɑ̃s	débecter	debɛkte	debɛk	t	ɑ̃s
débectant	debɛktɑ̃	débecter	debɛkte	debɛk	t	ɑ̃
débecter	debɛkte	becter	bɛkte	debɛk	t	e
débectoire	debɛktwaʀ	débecter	debɛkte	debɛk	t	war
dégueulbif	degœlbif	dégueulasse	degølas	degœl	b	if
dégueulboche	degœlbɔʃ	dégueulasse	degølas	degœl	b	ɔʃ
diégolais	djegolɛ	diégo	djego	djego	l	ɛ
dirlingue	diʀlɛ̃g	directeur	diʀɛktœr	dir	l	ɛ̃g
dirlo	diʀlo	directeur	diʀɛktœr	dir	l	o
ébourlinguer	ebuʀlɛ̃ge	ébouriffer	ebuʀife	ebuʀ	l	ɛ̃ge
égolâtre	egolatχ	égo	ego	ego	l	atχ

épincetage	epɛ̃staʒ	pince	pɛ̃s	epɛ̃s	t	aʒ
espago	ɛspago	espadrilles	ɛspadrij	ɛspa	g	o
fademuche	fadmyʃ	fade	fad	fad	m	yʃ
faflard	faflaʀ	faffe	faf	faf	l	aʀ
falmuche	falmyʃ	fade	fad	fal	m	yʃ
fastiche	fastiʃ	facile	fasil	fas	t	iʃ
fastoche	fastɔʃ	facile	fasil	fas	t	ɔʃ
faucusseté	fokyste	Faux-cul	foky	focy	st	e
ficecaille	fiskaij	ficelle	fisɛl	fis	k	aj
fiston	fistɔ̃	fils	fis	fis	t	ɔ̃
flacdale	flakdal	flaquer	flake	flak	d	al
fourlinguer	fuʀlɛ̃ge	fourrer	fuʀe	fuʀ	l	ɛ̃ge
frisbi	fʀizbi	frisquet	friskɛ	fris	b	i
fromgom	fʀɔmgɔm	fromage	fromaʒ	frɔm	g	ɔm
fromji	fʀɔmʒi	fromage	fromaʒ	frɔm	ʒ	i
fromton	fʀɔmtɔ̃	fromage	fromaʒ	frɔm	t	ɔ̃
fromtot	fʀɔmto	fromage	fromaʒ	frɔm	t	o
fumerons	fymʀɔ̃	fumantes	fymɑ̃t	fym	r	ɔ̃
galdouche	galduʃ	galette	galɛt	gal	d	uʃ
galdruche	galdʀyʃ	galette	galɛt	gal	dr	yʃ
galtouille	galtuj	galette	galɛt	gal	t	uj
galtouse	galtuz	galette	galɛt	gal	t	uz
gigolpince	ʒigɔlpɛ̃s	gigolo	ʒigolo	gigɔl	p	ɛ̃s

gigoter	ʒigote	?		ʒigo	t	e
gilmont	ʒilmɔ̃	gilet	ʒilɛ	ʒil	m	ɔ̃
gilton	ʒiltɔ̃	gilet	ʒilɛ	ʒil	t	ɔ̃
gosseline	gɔslin	gosse	gɔs	gɔs	l	in
gosslin	gɔslɛ̃	gosse	gɔs	gɔs	l	ɛ̃
gosslo	gɔslo	gosse	gɔs	gɔs	l	o
gouspin	guspɛ̃	gousse	gus	gus	p	in
graylois	gʁɛlwa	Gray	gʁɛ	gʁɛ	l	wa
grifton	gʀiftɔ̃	grive	griv	griv	t	ɔ̃
grizbi	gʀizbi	grise	griz	griz	b	i
gueuleton	gœltɔ̃	gueule	gœl	gœl	t	ɔ̃
guichemar	giʃmaʀ	guichetier	giʃtje	giʃ	t	je
herpelu	heʀply	herpe	ɛrp	ɛrp	l	y
hugolâtre	ygolatχ	hugo	ygo	ygo	l	atr
hugolesque	ygolɛsk	hugo	ygo	ygo	l	ɛsk
hugolien	ygoliɛ̃	hugo	ygo	ygo	l	jɛ̃
hugotesque	ygotɛsk	hugo	ygo	ygo	t	ɛsk
hugotique	ygotik	hugo	ygo	ygo	t	ik
hugotisme	ygotizm	hugo	ygo	ygo	t	izm
idolâtre	idolatχ	idole	idɔl	idɔ	l	atχ
italboche	italbɔʃ	italien	italjɛ̃	ital	b	ɔʃ
italgo	italgo	italien	italjɛ̃	ital	g	o
jacter	ʒakte	jacques	ʒak	ʒak	t	e

jalmince	jalmẽs	jaloux	ʒalu	ʒal	m	ẽs
jarnaffe	jaʀnaf	jarretière	ʒartjɛr	ʒar	n	af
jaspiner	ʒaspine	jaser	ʒaze	ʒaz	p	ine
jospin	ʒɔspɛ̃	joseph	ʒozɛf	ʒoz	p	in
kaélois	kaelwa	kuala lumpur	kwalalumpur	kwa	l	wa
lionceau	ljɔ̃so	lion	ljɔ̃	ljɔ̃	s	o
logeteau	lɔʒto	logis	loʒi	loʒ	t	o
louftingue	luftɛ̃g	louf	luf	luf	t	ɛ̃g
louftoche	luftɔʃ	louf	luf	luf	t	ɔʃ
louveteau	luvto	louve	luv	luv	t	o
maltouze	maltuz	malette	malɛt	mal	t	uz
malzingue	malzɛ̃g	maltais	maltɛ	mal	z	ɛ̃g
mastoc	mastɔk	massif	masif	mas	t	ɔk
mastoche	mastɔʃ	massif	masif	mas	t	ɔʃ
mastuche	mastyʃ	massif	masif	mas	t	yʃ
méchanceté	meʃɑ̃ste	méchant	meʃɑ̃	meʃɑ̃	st	e
mecton	mɛktɔ̃	mec	mɛk	mɛk	t	ɔ̃
ménilmuche	menilmyʃ	ménilmontant	menilmɔ̃tɑ̃	menil	m	yʃ
millezarts	mijzaʀ	millerand	mijrɑ̃	mij	r	ɑ̃
mirquiner	miʀkine	mirauder	mirode	mir	k	ine
misloque	mislɔk	misère	mizɛr	miz	l	ɔk
mistoufle	mistufl	misère	mizɛr	miz	t	ufl
mistringue	mistχɛ̃g	miston	mistɔ̃	mist	r	ɛ̃g

moblot	moblo	mobile	mobil	mob	l	o
morbaque	mɔʀbak	morpions	mɔrpjɔ̃	mɔr	b	ak
morlingue	mɔʀlɛ̃g	mornifle	mɔrnifl	mɔr	l	ɛ̃g
morutier	moʀytje	morue	mory	mory	t	je
mouftingue	muftɛ̃g	mouflet	muflɛ	muf	t	ɛ̃g
moulbif	mulbif	moulin	mulɛ̃	mul	b	if
moussecaille	muskaj	mousse	mus	mus	k	aj
mulbaque	mylbak	mullet	mylɛ	myl	b	ak
nanc'broque	nɑ̃sbʀɔk	nancy	nɑ̃si	nɑ̃s	br	ɔk
nassovien	nasovjɛ̃	nassau	naso	nas	ɔv	jɛ̃
nazbroque	nazbʀɔk	naze	naz	naz	br	ɔk
nibard	nibaʀ	nichon	niʃɔ̃	ni	b	aʀ
noircif	nwaʀsif	noir	nwaʀ	nwaʀ	s	if
oslovien	ɔslovjɛ̃	oslo	ɔslo	ɔslo	v	jɛ̃
ottavien	otavjɛ̃	ottawa	otawa	ota	v	jɛ̃
ougalais	ugalɛ	ougadougou	ugadugu	uga	l	ɛ
pacénien	pasenjɛ̃	la paz	lapas	pas	en	jɛ̃
pafzingue	pafzɛ̃g	paf	paf	paf	z	ɛ̃g
pantalzar	pɑ̃talzaʀ	pantalon	pɑ̃talɔ̃	pɑ̃tal	z	ar
papezingue	papzɛ̃g	papier	papje	pap	z	ɛ̃g
paplard	paplaʀ	papiers	papje	pap	l	ar
paqcin	paksɛ̃	paquet	pakɛ	pak	s	ɛ̃
paveton	pavtɔ̃	pavé	pave	pav	t	ɔ̃

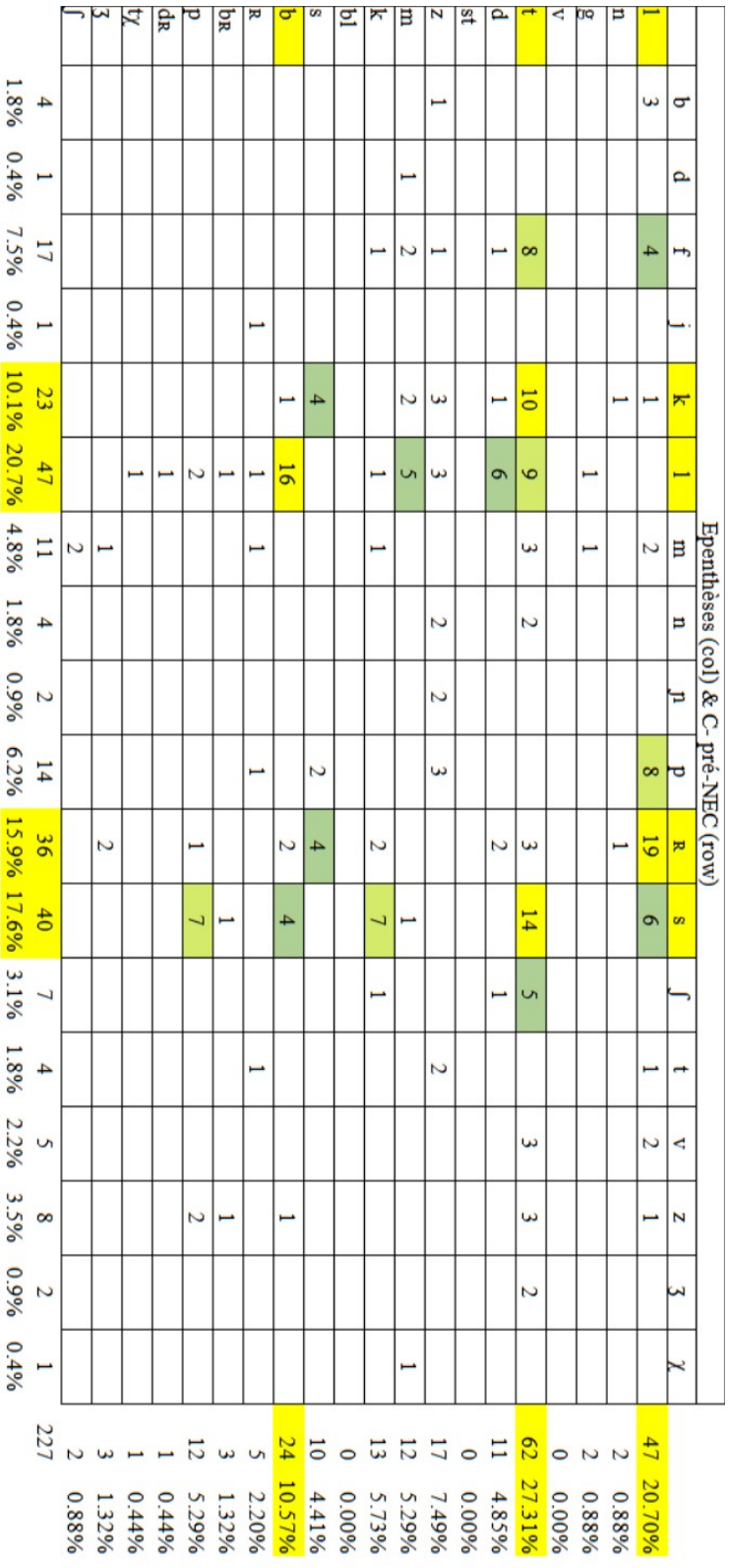
paxif	paksif	paquet	pakɛ	pak	s	if
peaucerie	posʀi	peau	po	po	s	əʁi
peaucier	posje	peau	po	po	s	je
pébroque	pebʀɔk	pépin	pepɛ̃	pep	r	ɔk
pecno	pɛk(ə)no	péquin	pekɛ̃	pɛk	n	o
pedzouille	pɛdzuj	pezouls	pezu	pet	z	uj
perniflard	pɛʀniflaʀ	pernod	pɛrno	pɛrnif	l	ar
petzingue	pɛtzɛ̃g	pétoire	petwaʀ	pɛt	z	ɛ̃g
pianoter	pjanote	piano	pjano	pjano	t	e
pisbé	pisbe	piscine	pisin	pis	b	e
piscaille	piskaj	piscine	pisin	pis	k	aj
pistoche	pistɔʃ	piscine	pisin	pis	t	ɔʃ
plaftard	plaftaʀ	plafond	plafɔ̃	plaf	t	aʀ
plumechif	plymʃif	plume	plym	plym	ʃ	if
plumzingue	plymzɛ̃g	plumard	plymaʀ	ply	m	aʀ
pognzif	pɔɲzif	pognon	poɲɔ̃	pɔɲ	z	if
poireauter	pwaʀote	poireau	pwaro	pwaro	t	e
poiscaille	pwaskaj	poisson	pwasɔ̃	pwas	k	aj
pom’luche	pɔmlyʃ	pommade	pomad	pɔm	l	yʃ
pompezingue	pɔ̃pzɛ̃g	pompier	pɔ̃pje	pom	z	ɛ̃g
poultock	pultɔk	poulet	pulɛ	pul	t	ɔk
pourcif	puʀsif	pourboire	puʀbwaʀ	pur	s	if
pourliche	puʀliʃ	pourboire	purbwar	pur	l	iʃ

pourluche	puʀlyʃ	pourboire	purbwar	pur	l	yʃ
poursoif	puʀswaf	pourboire	purbwar	pur	s	waf
problème	pʀoblɛm	propriétaire	proprijetɛr	prop	l	ɛm
problo	pʀoblo	propriétaire	proprijetɛr	prɔb	l	o
probloque	pʀoblɔk	propriétaire	proprijetɛr	prop	l	ɔk
probzig	pʀɔbzig	propriétaire	proprijetɛr	prop	z	ig
Prusco	pχysko	Prussien	pχysjɛ̃	pχys	k	o
queutard	køtaʀ	queue	kø	kø	t	ar
quiténien	kiténjɛ̃	quito	kito	kit	en	jɛ̃
rachdingue	ʀaʃdɛ̃g	rachitique	ʀaʃitik	ʀaʃ	d	ɛ̃g
radioteur	ʀadjotœʀ	radio	radjo	radjo	t	œr
ramastiquer	ʀamastike	ramasser	ramase	ramas	t	ike
rastif	ʀastif	ration	rasjɔ̃	ras	t	if
ratliuche	ʀatljyʃ	ratichon	ratiʃɔ̃	rat	l	jyʃ
reftingue	ʀɛftɛ̃g	réfectoire	refɛktwar	rɛf	t	ɛ̃g
ribouldinguer	ʀibuldɛ̃ge	ribouler	ribule	ribul	d	ɛ̃ge
rigolbard	ʀigɔlbaʀ	rigolo	rigolo	rigol	b	ar
rigolboche	ʀigɔlbɔʃ	rigolo	rigolo	rigɔl	b	ɔʃ
roumchi	ʀumʃi	roumer	rume	rum	ʃ	i
rouspéter	ʀuspete	rousser	ruse	rus	p	ete
rublin	ʀyblɛ̃	ruban	rybɑ̃	ryb	l	ɛ̃
ruski	ʀuski	russe	rys	rys	k	i
sauciflard	sosiflaʀ	saucisson	sosisɔ̃	sosif	l	ar

se murdinguer	myʀdɛ̃ge	se mûrir	myʀiʀ	myʀ	d	ɛ̃g
siroter	siʀote	sirop	siro	siro	t	e
sofalesque	sofalɛsk	sofa	sofa	sofa	l	ɛsk
soldo	sɔldo	solex	solɛks	sɔl	d	o
souriceau	suʀiso	souris	suri	suri	s	o
sûrebine	syʀbin	sûreté	syrte	syr	b	ɛ̃
sûretaille	syʀtaj	sûreté	syrte	syr	t	aj
sûretanche	syʀtɑ̃ʃ	sûreté	syrte	syr	t	ɑ̃ʃ
tabatière	tabatjɛʀ	tabac	taba	taba	t	jɛr
taczingue	takzɛ̃g	tacot	tako	tak	z	ɛ̃g
talbin	talbɛ̃	taleau	talo	tal	b	ɛ̃
tapoter	tapote	taper	tape	tap	ot	e
taxiter	taksite	taxi	taksi	taksi	t	e
tickson	tiksɔ̃	ticket	tikɛ	tik	s	ɔ̃
tirlingue	tiʀlɛ̃g	tiroir	tiʀwaʀ	tiʀ	l	ɛ̃g
togolais	togolɛ	togo	togo	togo	l	ɛ
torsif	tɔʀsif	tordant	tɔʀdɑ̃	tɔʀ	s	if
toulmuche	tulmyʃ	toulon	tulɔ̃	tul	m	yʃ
tracepiner	tχaspine	tracer	trase	tras	p	ine
traczir	tχakziʀ	trac	tχak	tχak	z	iʀ
travlo	tχavlo	travesti	travɛsti	trav	l	o
trognzif	tχɔɲzif	trognon	tχɔɲɔ̃	tχɔɲ	z	if
vachetoche	vaʃtɔʃ	vache	vaʃ	vaʃ	t	ɔʃ

valdingue	valdɛ̃g	valise	valiz	val	d	ɛ̃g
valdinguer	valdɛ̃ge	valser	valse	val	d	ɛ̃g
valtoche	valtɔʃ	valise	valiz	val	t	ɔʃ
valtouse	valtuz	valise	valiz	val	t	uz
valtreuse	valtχøz	valise	valiz	val	tr	øz
vergif	vɛʀʒif	verni	vɛʀni	vɛʀ	ʒ	if
vicelard	vislaʀ	vicieux	visjø	vis	l	ar
vicelingue	vislɛ̃g	vicieux	visjø	vis	l	ɛ̃g
zigoto	zigoto	?		zigo	t	o
zyeuter	zjøte	zyeux	zjø	zjø	t	e

Annex 2: Epenthesis and pre-NECs consonants



Epenthèses (col) & C- pré-NEC (row)	b	d	f	j	k	l	m	n	ɲ	p	ʁ	s	ʃ	t	v	z	ʒ	χ		
l	3		4		1		2			8	19	6		1	2	1			47	20.70%
n					1						1								2	0.88%
g						1	1												2	0.88%
v																			0	0.00%
t			8		10	9	3	2			3	14	5		3	3	2		62	27.31%
d			1		1	6					2		1						11	4.85%
st																			0	0.00%
z	1		1		3	3		2	2	3				2					17	7.49%
m		1	2		2	5						1						1	12	5.29%
k			1			1	1				2	7	1						13	5.73%
bl																			0	0.00%
s					4					2	4								10	4.41%
b					1	16					2	4				1			24	10.57%
ʁ				1		1	1			1				1					5	2.20%
bʁ						1						1				1			3	1.32%
p						2					1	7				2			12	5.29%
dʁ						1													1	0.44%
tʃ						1													1	0.44%
ʒ							1				2								3	1.32%
ʃ							2												2	0.88%
	4	1	17	1	23	47	11	4	2	14	36	40	7	4	5	8	2	1	227	
	1.8%	0.4%	7.5%	0.4%	10.1%	20.7%	4.8%	1.8%	0.9%	6.2%	15.9%	17.6%	3.1%	1.8%	2.2%	3.5%	0.9%	0.4%		