

WORD FORMATION, PROCESSING AND LEXICAL ACCESS: BLENDS AND COMPOUNDS IN EUROPEAN AND BRAZILIAN PORTUGUESE

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Introduction

Compounding and *blending* are close word formation processes, insofar that they both recruit at least two lexemes. In the literature, we find authors that claim that they are identical (cf. Sandmann 1991: 76) and authors that claim that they are different processes (cf. Gonçalves 2006). The latter also frequently claim that blending is a case of non-concatenative morphology (cf. Piñeros (2000), Gonçalves (2003a, 2003b)).

Our research is motivated by the existence of these controversial and contradictory analyses. Our preliminary claim is that compounds and blends are different word structures: blends are neither root compounds, because their underlying structure is syntactic and their constituents are not roots, nor word compounds because their constituents are clips of words, not words, and therefore they cannot be inflected or modified. In order to validate this hypothesis and add to the theoretical discussion, we intend to test the processing of European and Brazilian Portuguese compounds and blends, by Portuguese and Brazilian native speakers.

Compounding

We will consider 2 types of compounds (cf. Villalva & Gonçalves 2016):

- **Root compounds** are morphological structures, formed by (at least) 2 roots and a connecting linking vowel. Two subclasses will be considered:
 - subordinate root compounds that are head final:
cf. $[[hidr]_{root A} [o_{LV} [terapi]_{root B}]_{compound root} a$ ‘hydrotherapy’
 - coordinate root compounds that are headless:
cf. $[[afr]_{root A} [o_{LV} [português]_{root B}]_{compound root}$ ‘afro-Portuguese’
- **Word compounds** are hybrid structures: the base is a syntactic structure and the output is a compound word. Three subclasses will be considered:
 - adjunction structures that are head initial:
cf. $[[bomba]_N [relógio]_N]_{compound N}$ ‘time bomb’
 - coordinate structures that are headless:
cf. $[[trabalhador]_N [estudante]_N]_{compound N}$ ‘student worker’
 - reanalysis structures that are exocentric:
cf. $[[[quebra]_V [nozes]_N]_S]_{compound N}$ ‘nut cracker’



Blending

Blends are peculiar words: though 2 lexemes are involved, the form of each one may coincide with a word, but it may also be the output of a random process of initial or final truncation. We will consider 3 kinds of blends that split into 3 subclasses, according to the nature of the constituents (clip-word (CW); word-clip (WC); clip-clip (CC)):

- head initial subordinate blends:

CW: *caligrafeia* < caligra(fia)+feia

WC: *anãofabeto* < anão +analfabeto

CC: *manifestoches* < manifes(tantes) +(fan)toches

- head final subordinate blends:

CW: *agradádiva* < agra(dável)+dádiva

WC: *tristemunho* < triste+(teste)munho

CC: *pilantropia* < pilan(tra)+ (filan)tropia

- headless coordinate blends:

• adjectives

CW: *analfabuto* < *analfa(beto)+bruto*

WC: *gayúcho* < gay + (ga)úcho

CC: *fabulástico* < *fabul(oso)+(fant)ástico*

• nouns

CW: *sussexo* < su(cesso)+sexo

WC: *chafé* < *chá+café*

CC: *namorido* < namo(rado)+(ma)rido

• verbs

CW: *tradizer* < tra(duzir) + dizer

WC: *roubartilhar* < roubar+(par)tilhar

CC: *bebemorar* < *beber+comemorar*

Research Program

- offline lexical acknowledgement test, in order to access if and how these words are successfully decoded by the informants;
- lexical decision task that will be used as a base line for mean reaction time values;
- *priming* + lexical decision test that will help us to understand the role of each constituent.

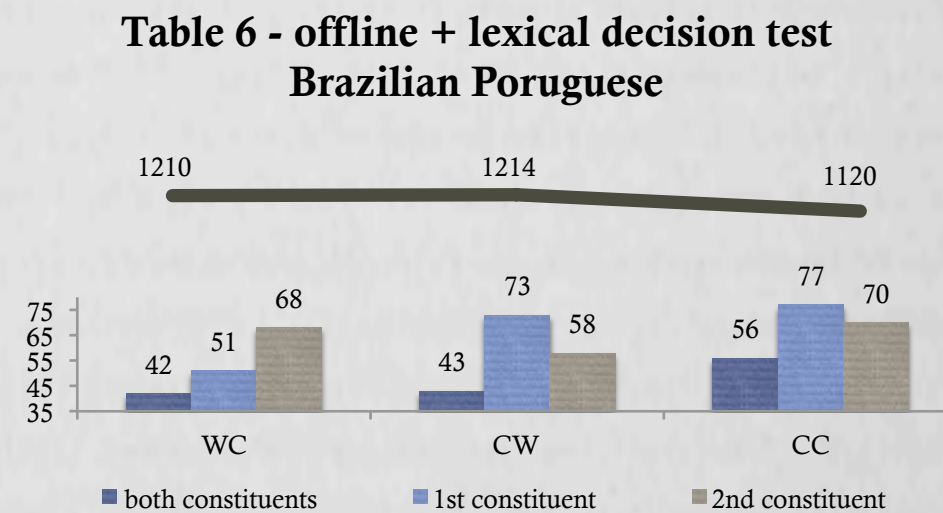
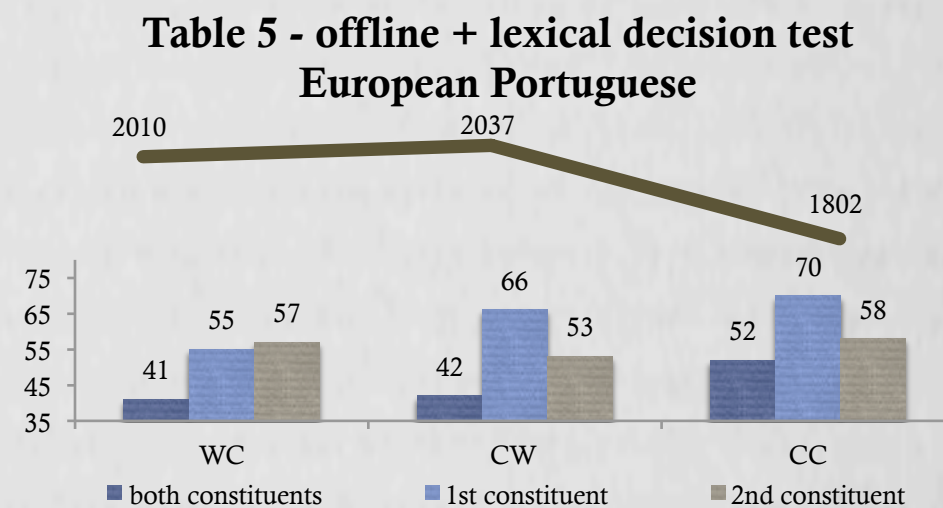
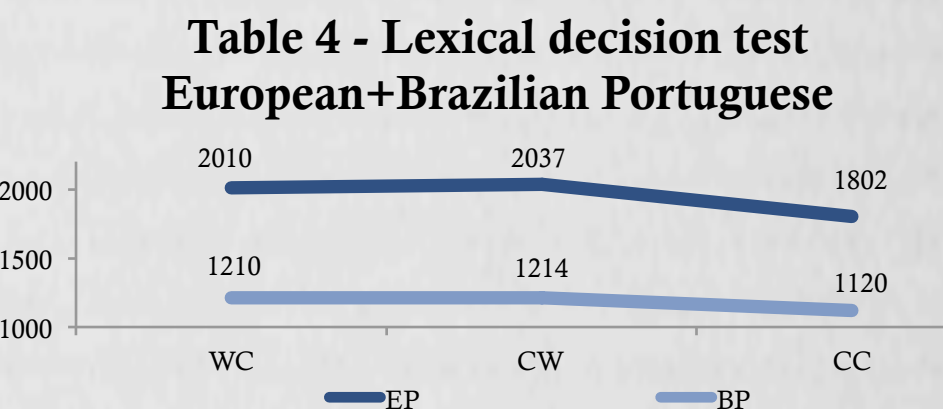
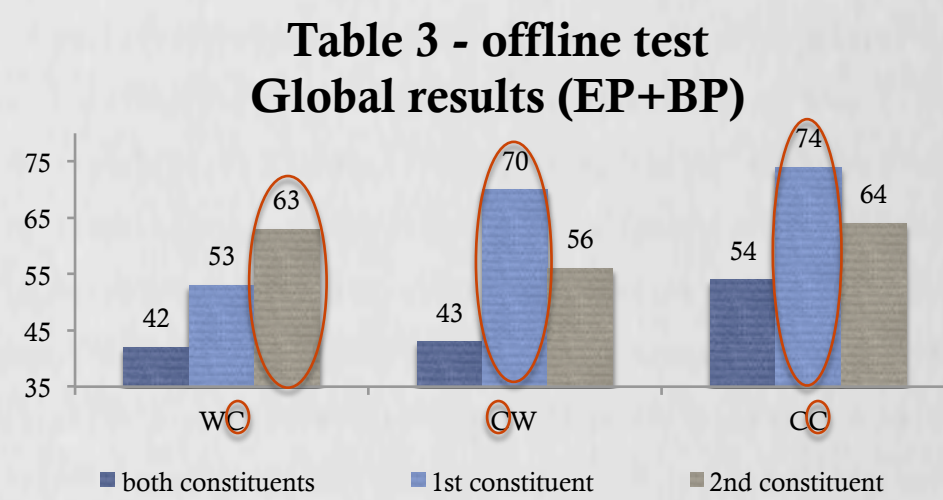
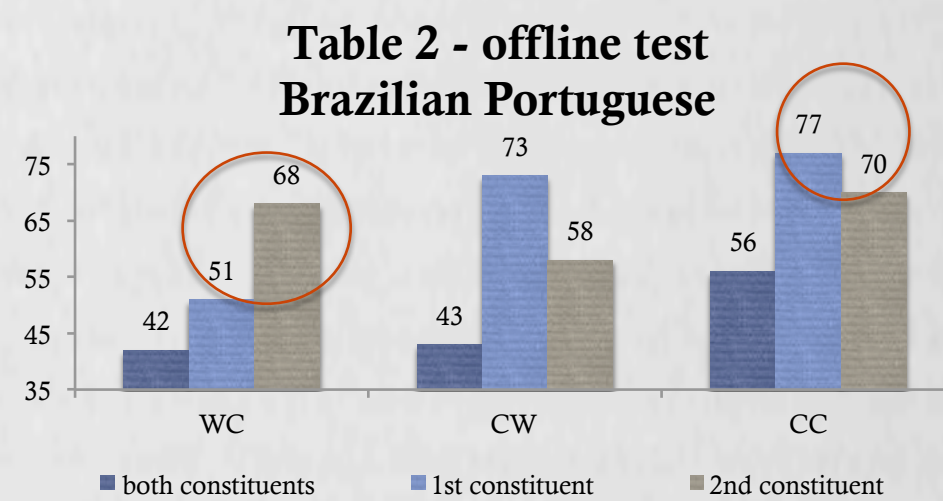
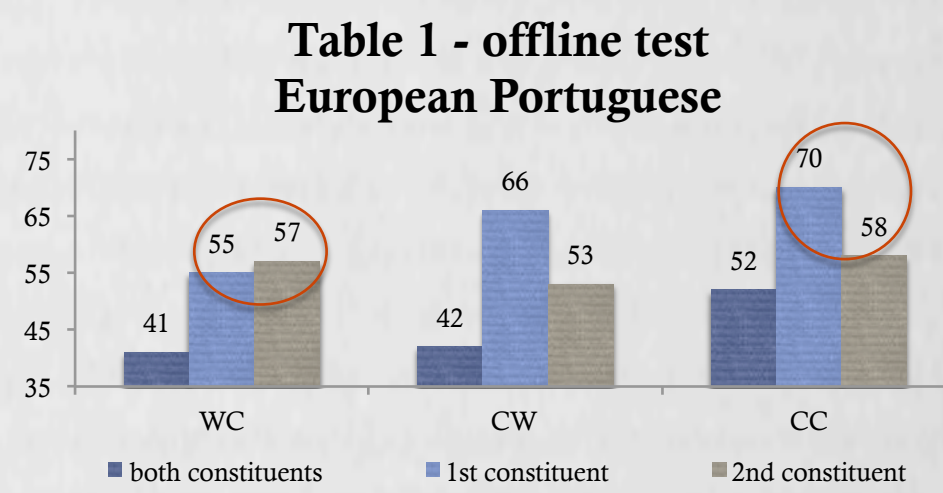
In this poster, we present some preliminary results of the offline test with Portuguese and Brazilian subjects and the preliminary results of the lexical decision test with Portuguese informants only. So far, only blends were tested.

Preliminary results – offline test

So far, we have only tested a list of 32 blends with 39 EP and 77 BP native speakers (young adults). The test was performed online, using Googleforms.

The purpose of this test is mainly related to the semantics of these words. Truncation yields forms that may be related to different lexemes. For instance, *gestonta* is originally a blend of *gestante* ‘pregnant woman’ and *tonta* ‘silly’, but the clip *gest* may also be related to *gestora* ‘manager’. Therefore, we asked our subjects to state the meaning of each blend. Tables 1-3 show the average percentage of the right answers that were obtained with EP subjects (Table 1), BP subjects (Table 2) and the global results. Against all our expectations, the global results in Table 3 show that the semantic identification of clips is more successful than the semantic identification of full word constituents. Language-specific results in tables 1 and 2 indicate that the identification of clips (over words) is easier for Brazilian Portuguese subjects.

These results also show that the decoding of the blends is consistently higher when both constituents are clips.



Preliminary results – lexical decision test

Table 4 shows that EP and BP results are strikingly systematically different. In both cases, blends that contain no words have lower mean reading time values. CW and WC blends display similar values. The contrast between WC and CC blends is statistically meaningful (p=0,016 PE and p= 0,018 PB), and the same occurs between CW and CC blends (p= 0,003 PE and p= 0,007 PB).

A comparison between these results and the mrt found in other experiments for simple words and derivatives shows that EP and BP behave differently. For EP, mrt for blends is considerably higher than for simple words (almost the double). Pinto (2017) presents 978ms for a simple word like *caneta* ‘pen’, and 889ms for lexicalized derivatives, such as *solteiro* ‘single’. **Lexicalized blends (e.g. *portunhol* < *português* ‘Portuguese’ + *espanhol* ‘Spanish’) yield very different results, closer to derivatives (cf. Pinto 2017).** For BP, mrt for blends seems to be close to the mrt of derivatives (1240ms, according to Ferrari Neto & Dias 2014). These findings need to be reassessed in better experimental conditions.

As for blends, the contrast between EP and BP is probably linked to the fact that blends are more frequent in BP than in EP. Lower frequency of blends in EP, on the other hand, must be related to a basic phonetic condition (unstressed vowel raising) that does not occur in BP.

Interestingly, the results of the lexical decision test are consistent with the results of the offline test: CC blends are easier to decode semantically and they are easier to process. The existence a superposition of one of the bases and the blend (cf. WC: *tristemunho* < *triste* ‘sad’ + *testemunho* ‘testimony’; CW: *emprestado* < *emprestado* ‘borrowed’ + *dado* ‘given’) impairs the processing.

Future prospects

Priming+lexical decision tests have already been run for EP, and they will soon be run for BP. These tests pair each of the constituent words as primes, and the blends as targets (e.g. *namorado* ‘boyfriend’ → *namorido* ‘boyfriend husband’; *marido* ‘husband’ → *namorido* ‘boyfriend husband’). Hopefully, the results of these tests will help to confirm the hypothesis that words inside blends are a word processing liability.

In a near future, we will also run a parallel set of experiments with compounds, in order to find out if the status of clips (versus roots, for instance), as truncated lexical units is psycholinguistically relevant or not.

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