

Analyticization in Brazilian Portuguese inflection and derivation¹

*Analiticização na flexão e derivação do
português brasileiro*

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ABSTRACT

This paper discusses the tendency of analyticization in Brazilian Portuguese (BP) using the following datasets with synthetic-analytic alternation: a) verbal forms with simple future meaning; b) verbal forms with pluperfect meaning; c) parasyntetic verbs; d) directional verbs. By integrating these phenomena, we not only confirm the tendency of analyticization in BP, argued for in recent papers about loss of inflection in this language, but show that it affects derivational elements as well. Based on Huang's (2015) analysis for Mandarin, we show that the analytic counterparts of the alternations examined can all be analyzed as a general preference for short, local movements in BP. As a result, the various syntactic changes BP goes through can also be seen through a typological perspective.

Keywords: *Analyticization, Morphology, Parasyntetic verbs.*

RESUMO

Este artigo discute a tendência de analiticização do português brasileiro (PB) a partir dos seguintes dados que expressam uma alternância analítica-sintética: a) formas de futuro simples; b) pretérito mais que perfeito; c) verbos parassintéticos; d) verbos direcionais. Ao integrar dados de flexão e derivação, não só confirmamos a tendência de analiticização do PB, defendida em trabalhos recentes sobre a perda de flexão nessa língua, como também mostramos que ela afeta elementos derivacionais. Com base na descrição de Huang (2015) sobre a sintaxe do mandarim, mostramos que

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as alternâncias sintético-analíticas examinadas podem ser todas analisadas como preferência de movimentos curtos e locais. Dessa forma, as inúmeras mudanças sintáticas pelas quais o PB está passando podem ser também vistas sob um prisma tipológico.

Palavras-chave: *analiticização, morfologia, verbos parassintéticos.*

1. Introduction and theoretical background⁴

In this paper, we deal with alternations between synthetic and analytic verbal forms in four different datasets - forms of the future tense, exemplified in (1a), forms of the pluperfect past tense inflection, exemplified in (1b), morphologically complex verbs, such as parasynthetic verbs, in (1c), and directional/prepositional verbs, in (1d). We argue that these apparently unrelated phenomena demonstrate an ongoing analyticity in Brazilian Portuguese (BP) that can be accounted for in a unified analysis.

- (1) a. com-e-rá vs. vai comer
 eat-TV-FUT-3sg go-3sg eat-INF
- b. comera vs. tinha comido
 eat-TV-PLUP-3sg have.IMP.PAST-3sg eat-PART
- c. entristecer vs. ficar triste
 PREF-sad-TV-SUFFIX-INF get-INF sad

⁴ Abbreviations used in this paper: AUX = auxiliar; FUT= future; INF=infinitive; PART= participle; PLUP = pluperfect; PRES= present; NTV= nominal theme vowel; TV= theme vowel

d. sair vs. sair para fora
get.out vs. get.out to outside

In (1a), we observe two concurrent forms of expressing the future tense. It can either be expressed by a morpheme attached to the verb, or by an auxiliary. (1b) exemplifies the same for pluperfect forms, which alternate in the same fashion. This alternation for inflection in BP has been well-described for quite some time now (see LONGO & CAMPOS, 2002; CYRINO, 2013; REINTGES & CYRINO, 2016, 2018). The novelty of this paper is to integrate derivational affixes into these phenomena, discussing how the alternation in (1c) and (1d) can also be interpreted as analyticization in BP.

We argue that the alternations in (1a) - (1d) are manifestations of a broader phenomenon. Assuming Huang (2015), analytic languages privilege short movements, especially inside the phase where the root is. Long movements to other phases are a signature of inflectional, agglutinative and polysynthetic languages. Against this backdrop, we will argue in the following sections that this tendency of analyticization in BP impacts inflectional and derivational forms alike because both are formed in the syntactic component.

From a typological point of view, average analytical languages present few inflections and derivational affixes. To express aspect, mood and tense information, adverbs and auxiliary verbs are used as well as several periphrastic constructions. Although there is a number of criteria in the literature to classify languages as (more) synthetic or analytical (see HASPELMATH; MICHAELIS, 2017, and references therein), there are few formal diagnoses for this, as well as for mapping a considerable degree of analyticization in a language that cannot be standardly classified as analytical, such as BP.

Before we make a more thorough discussion of this data in (1), let us first show how BP behaves from a general point of view in terms of the analytic-synthetic division. BP can be considered an inflectional language since it expresses grammatical information, such as number, person, tense and gender with affixes, as shown in (2).

- (2) a. casa-s
house-PL 'houses'
b. com-o
eat-PRES.1sg 'I eat'
c. cant-a-va⁵

⁵ 'Cantava' can be either used for 1sg, 2sg or 3sg. In the dialects that do not make a distinction between singular and plural verbal forms, 'cantava' can be even used to refer to all pronominal persons.

Assuming that there is a neutralization of person features in the presence of certain tense and mood combinations (see CAMARA JR., 2019 [1970]), these homophonous forms correspond to different combinations of morphemes, each one with a different specification in its person features. In (2c), we discuss the form that potentially has a zero morpheme with 1sg specification.

sing-TV-IMP.PAST-1sg 'I used to sing' or 'I was singing'
 d. *menin-a*
 girl-NTV 'girl'

Besides that, BP has derivational affixes, with various semantic specifications, such as agentivity, in (3a) and (3b), negation in (3c) and (3d), and aspect in (3e) and (3f).⁶

- | | | | |
|--------|----------------|-----------------------|--------------|
| (3) a. | pintor | pint-SUFFIX | 'painter' |
| | b. pianista | pian(o)-SUFFIX | 'pianist' |
| | c. ilegal | PREFIX - legal | 'illegal' |
| | d. desleal | PREFIX-leal | 'unloyal' |
| | e. caramelizar | caramel(o)-SUFFIX | 'caramelize' |
| | f. enfraquecer | PREFIX-frac(o)-SUFFIX | 'weaken' |

However, it is well-known that BP goes through a process of linguistic change, which impoverishes its verbal and nominal inflections (see DUARTE, 1995; SCHERRE, 1988 and many others). While it is widely recognized that this language gradually aligns itself with non-pro-drop languages, the possibility of alternation between a word with inflectional or derivational affixes, on one hand, and a structure with auxiliary verbs, on the other, also points to a similarity with analytical languages, as exemplified in (1). Interestingly, this tendency towards analyticity is captured when we contrast BP and Mandarin Chinese. Mandarin Chinese is a highly analytical language, with virtually no inflection or derivation.

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Huang (2015) proposes an approach to analyticity in which synthetic and analytic alternating forms correspond to different syntactic derivations. Modern Chinese has the following set of typological properties that, together, shows that this language has a high degree of analyticity: light verb constructions, pseudo-noun incorporation, compounds and phrasal accomplishments, verbal atelicity and absence of verbal coercion.

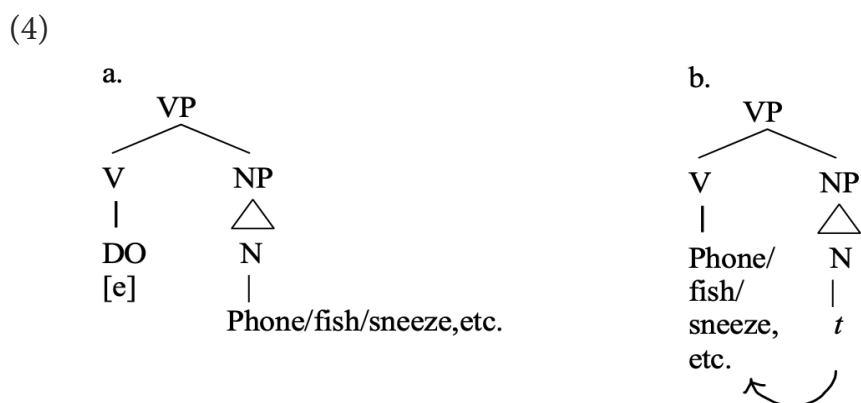
Huang observes that the more synthetic a language is, the more affixal elements it has at its disposal. These affixal elements will trigger movements of the element they select, possibly due to an EPP feature. The general lack of movement in highly analytic languages is partly related to the loss of these deficient affixal elements. Without them, there is no trigger for movement and the dependencies can be established via Agree.

In sum, the heads that contain affixes in complex synthetic forms demand that their features are not only agreed with but also that movement takes place. By contrast, their correspondent analytical derivations with light

⁶ We avoid glossing derivational suffixes because of their nuanced meaning. When their semantics cannot be captured in the English translation, we express their meaning in paraphrases. Examples of verbs (3e) and (3f) are given in their infinitive forms.

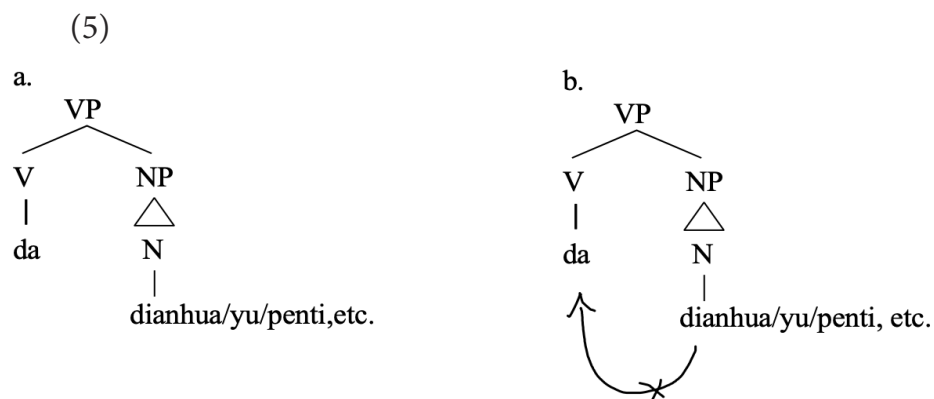
verbs agree with the licensing heads, but the lexical and functional elements stay put in their base position.

As an illustration of this idea, let us consider the derivation of unergative verbs in English and Chinese. Huang assumes that even morphologically simplex activity verbs like *phone*, *fish* and *sneeze* contain a light verb represented by DO, phonetically empty in English, and are formed by noun incorporation (see HALE; KEYSER, 2002). Observe structures (4a) and (4b) below, for English.



(HUANG, 2015:11)

On the other hand, corresponding Modern Chinese verbs present a similar underlying structure with an overt light verb, realized as *da* (hit), which blocks noun incorporation, as represented by (5a) and (5b), where the nouns *dianhua*, *yu* and *pentí* mean *telephone*, *fish* and *sneeze*, respectively. This light verb is an independent morphological piece and does not trigger noun incorporation. Its compatibility with the noun it merges with is checked via agree, not movement.



(HUANG, 2015:11)

At this point, it is important to clarify how these different derivations of unergative verbs exemplify the differences between an analytical language like Chinese and synthetic languages like English.

Movement under noun incorporation thus gives rise to some degree of syntheticity in English, whereas non-movement (or covert movement) results in full analyticity for Chinese. The comparison between the formation of unergatives in English and Modern Chinese illustrates that the latter language would be ‘special’ in lexicalizing several functional projections (both within the word and along the clausal spine), whereas languages like English and, to a greater extent, Romance languages move elements to these functional projections.

To sum up, in this proposal, systematic lack of movement in a language is a hallmark of analyticity, and languages in which the movement is impossible or very constrained will be characterized as languages with lexical analyticity. As we shall see in the next sections, the synthetic-analytic alternations in BP can all be analyzed in terms of loss of movement. In the analytic counterpart, auxiliaries are common because they block movement. These auxiliaries alternate with affixes, which would feed the movement. In general, BP does not seem as analytic as Mandarin Chinese, but we will take the latter language as a basis for observing how analyticity is spreading in BP.⁷

This paper is organized as follows: in section 2, we summarize the findings of previous research about synthetic to analytic drift in inflection for future and pluperfect tenses. Section 3 discusses analyticity in derivation for parasyntetic and directional verbs. Using Huang’s approach as a backdrop, we show that the alternations in BP can be taken as evidence that long movements have been dispreferred, turning this language into more analytic when compared to Latin, for instance. Finally, section 4 concludes the paper and is followed by the references.

2. Inflection

We start our discussion with analytic-synthetic alternations of typical inflectional material. Our presentation of this alternation is heavily based on Araújo-Adriano (2020), Cyrino (2013) and Reintges & Cyrino (2018), which

⁷ A question about this proposal raised by one of the reviewers is: how could syntax be sensitive to affix defectiveness and constrain the movement from noun to V in (5) in a realizational approach to grammar, where the exponents of functional heads are inserted postsyntactically? Regardless of what we assume about lexical insertion, our analysis remains the same since affixal forms/functional heads not only agree but attract elements to their projections still in syntax, as in (4). In this fashion, defectiveness is not only a phonological, but a formal property. Note that the noun in (4) would not be recategorized (and interpreted) as a verb if it did not move to V during the syntactic derivation. Therefore, we cannot analyze the differences between English and Chinese in terms of a phonological preference if we have evidence that some affixal elements trigger movement in syntax. This is particularly clear when there is a change in the word class during the syntactic derivation. If we assume the movement only occurs postsyntactically, we could not account for why nouns derived from verbs like *construção* (construction) display nominal properties, such as licensing of determiners, throughout syntactic derivation.

consider the syntactic differences between the synthetic and analytic forms. This synthetic-analytic alternation is easily observed when we consider the inflectional category of tense, as shown in (1a-1b), repeated below as (6a-6b).

- | | | | | |
|--------|-----------------|-----|-------------------|----------|
| (6) a. | com-e-rá | vs. | vai | comer |
| | eat-TV-FUT-3sg | | go-3sg | eat-INF |
| b. | comera | vs. | tinha | comido |
| | eat-TV-PLUP-3sg | | have.IMP.PAST-3sg | eat-PART |

Comparing the analytic and synthetic forms, we observe that the information about tense, aspect, person, etc, only appears in the auxiliary in the analytic form. The main verb only has nominal features - infinitive or participle - in this case (see REINTGES & CYRINO, 2018). This contrast is responsible for several syntactic differences between the synthetic and the analytic form. The synthetic forms under discussion (*comerá*, *comera*) are formed by movement of the lexical root to T, with possible landing positions between v and T. By contrast, the lexical verb does not move up to T in the analytic form since the auxiliary encodes tense and aspectual features. Given that each auxiliary selects for different nominal forms - in (4a), *ir* (go) selects for an infinitive element; in (4b), *ter* (have) selects for a participle -, an agree takes place between the auxiliary and the element it selects. Since the auxiliary is not an affixal element, the lexical root in an analytic counterpart will always be lower in the structure than its synthetic counterpart. This is an important characteristic of the alternations in (6a) and (6b) that extends to other alternations that will be discussed in section 3. Although movement of the lexical root to T is constrained, Araújo-Adriano (2020), Cyrino (2013) and Reintges and Cyrino (2018) observe that the lexical verb can move to some specific projections below T.⁸ Consider the analytic form *tinha comido*, for instance. The participle *comido* is verbal; it does not have gender features. At least two categorizations of the root *com-* took place for it to be formed. The root was firstly categorized by little v and then moved to a higher projection at which it was adjoined to participle features. Small movements are then still available in analytic forms. Section 3 will show that the same holds in analytic forms of parasynthetic verbs.

Interestingly, small movements are also available in Mandarin Chinese. The examples in (7) and (8) illustrate the position of the verb with respect to an adverb. (7) shows that the verb moves across a low adjunct, inside the vP to adjoin to an aspectual particle, while (8) demonstrates that the Mandarin verb cannot move across an adjunct outside vP, like *changchang* (often).

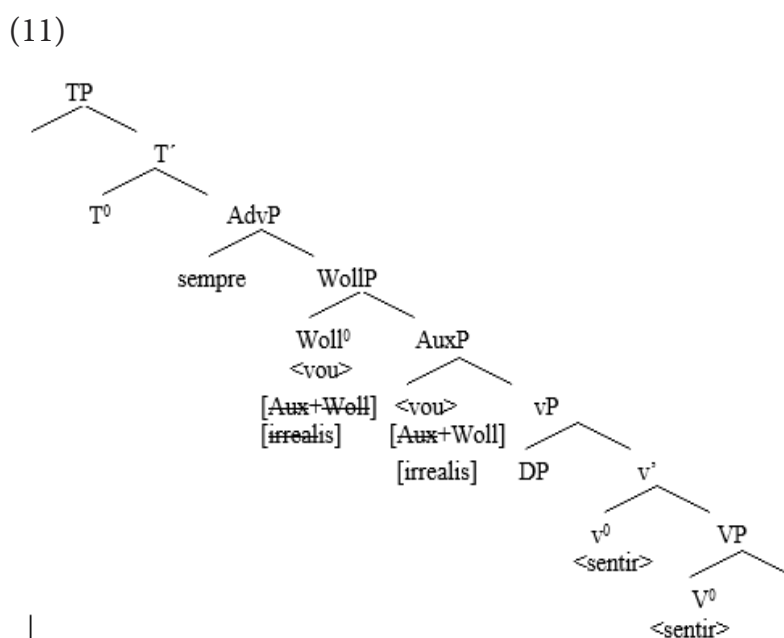
⁸ We cannot do justice here to the vast literature on verb movement in BP. Galves (1993) and Figueiredo Silva (1996) are influential works on V movement in BP and inspired the account reported in the main text. For a recent and detailed discussion on this topic, see Tescari Neto (2013).

- b. #Espera que eu espirr-a-re-i.
 wait that I sneeze-TV-FUT-1sg
 ‘Wait a second. I am about to sneeze.’

Contrasting with the situation in prospective future, an irrealis reading of the future is still compatible with a synthetic form of the verb, in a formal context. In this way, (10a) and (10b) are equivalent in meaning.

- (10) a. Ele vai estud-a-r na zona sul.
 he will study-TV-INF in-the.FEM zone south
 b. Ele estud-a-rá na zona sul.
 he study-TH-FUT.3sg in-the.FEM zone south
 ‘He will study in south-city zone.’

This difference between prospective and irrealis future suggests that these readings are licensed by different projections. The irrealis reading, exemplified in (10), is formed through the movement of the auxiliary *ir* (go) to WollP (WURMBRAND, 2017), according to Araújo-Adriano (2020). This category is immediately below TP and encodes information about the likelihood of an event. The fact that the irrealis reading is obtained below TP can be shown when its position with respect to adverbs is considered (see ARAÚJO-ADRIANO, 2020; REINTGES; CYRINO, 2018, and the works cited there for a detailed discussion). The prospective reading, exemplified in (9), is lower than the irrealis reading. It encodes the reading that an event is about to happen, i.e. an aspectual distinction. Observe the structure in (11), adapted from Araújo-Adriano (2020:14), illustrating the movement from the AuxP position to WollP.



This representation shows how different positions generate the two available readings. If the auxiliary enters the derivation with an irrealis feature to be checked, it will move from AuxP, the projection where it was first merged, to WollP. If the auxiliary does not carry this feature, it will stay in AuxP, generating the prospective reading. This shows, once more, the possibility of short movements in analytic constructions. Even in cases where BP has lost long movements from V to T, it kept small, local movements.

As for the lexical verb, (11) further shows that the infinitive verb can also move from V to v, where it attributes a theta role for the external argument.¹⁰

3. Derivation

In this section, we analyze derivational analytic and synthetic pairs in parasynthetic verbs, such as *enlouquecer* (to become crazy) and *ficar louco* (to become crazy), and in directional verbs, such as *extrair* (extract) and *extrair para fora* (extract to outwards).

3.1. Parasynthetic verbs

Before we show the commonalities between the analytic counterparts of parasynthetic verbs and the inflectional data, we shall discuss the reasons why this alternation is more constrained than the one involving the expression of futurity, discussed in section 2. Not all (apparently) parasynthetic verbs have an analytic counterpart. Firstly, some verbs may be apparently complex, but only from a diachronic point of view. Bassani (2013) argues that we can split parasynthetic verbs into four categories, as shown in Table 1:

¹⁰ An anonymous reviewer asks whether the movement from v to V is really necessary. In this part of the text, we report Araújo-Adriano's analysis, in which this movement is stipulated, although we agree that the functional category v by itself can attribute case to the internal argument and theta-role to the external argument.

Table 1 – Summary of verb types (Adapted from Bassani (2013))

Class	Transparent	Compositional	Type	Examples
1	-	-	Simple for historical reasons (lexicalized)	<i>afetar</i> (affect), <i>esquecer</i> (forget), <i>inundar</i> (overflow)
2	-	+	Analyzable complex verbs	<i>atrair</i> (attract), <i>incluir</i> (include), <i>exibir</i> (exhibit)
3	+	+	Productive complex verbs	<i>acalmar</i> (calm down), <i>empilhar</i> (pile), <i>esfaquear</i> (stab)
4	+	-	Idiosyncratic formations	<i>encavalalar</i> (make one action after the other), <i>esborrachar</i> (collide)

Class 1 verbs were originally prefixed (original prefixes in bold: **a-fet-a-r**, **es-quec-e-r**, **in-und-a-r**), but nowadays are formed by a root and a theme vowel (*afet-a-r*, *esquec-e-r*, *inund-a-r*). Hence, class 1 verbs cannot participate in the analytic-synthetic alternation since *a-*, *es-* and *in-* are not interpreted as prefixes that could alternate with an aspectual verb roughly conveying the same meaning. The verbs in class 2 could be currently analyzed as formed by a prefix and a bound stem. This becomes particularly clear when the base is maintained and the prefixes are commuted (*a-trair*, *re-trair*, *ex-trair*). However, verbs in this class never occur without a prefix; therefore, they cannot have an analytical counterpart. Even though they do not participate in an analytic-synthetic alternation, some Class 2 verbs are part of a phenomenon also seen in analytic languages, which will be analyzed later in this section.

The third class contrasts with both Class 1 and Class 2 in the sense that its members do not exhibit any rate of lexicalization of the prefix. This class has as its members verbs with a root that is available to enter varied processes of word formation, with or without prefixes. Consider the verb *acalmar* (calm down), exemplified above. The root *calm-* can be used to form *calmo*, *calmante*, *calmamente*, (that do not have a prefix) and *acalmado* (calm, soothing, calmly, calmed down, respectively).

Class 4 illustrates combinations between affixes and roots that do not form compositional verbs. Considering the morphemes that form the verb *encavalalar* (en-caval-a-r), we would expect that its meaning would be something like ‘to turn into a horse’, ‘to act like a horse’ or something akin to gain characteristics of a horse. This verb actually means that some actions are done successively; one after the other. Due to their non-compositional meaning, verbs in this class cannot participate in the analytic-synthetic alternation that interests us here.

Given that only class 3 allows for compositional paraphrasing, we will examine some examples of this class in the remainder of this paper. Bassani (2013) observes that most of the verbs in this class encode a change of state. This is particularly important for us since change of state can be expressed by an analytic form with the auxiliary *ficar* (to become) in BP. The verb *acalmar* (calm down) can be paraphrased by *ficar calmo* (calm down) and is used to describe events in which a given entity goes through a change from an agitated/nervous state to a calm(er) one. The result component becomes clear in the use of an adjectival passive, composed by the aspectual auxiliary *ficar*, somewhat equivalent to *become*, and an adjective that shares the same root with the parasyntetic verb. (12a-c) are some examples:

- (12) a. En-fraqu-e-ce-r ~ *ficar fraco*
 PREF-weak-TV-SUFFIX-INF ~ to become weak
 b. Es-fri-a-r ~ *ficar frio*
 PREF-cold-TV-INF ~ to become cold
 c. A-maci-ar ~ *ficar macio*
 PREF-soft-TV-INF ~ to become soft

Some parasyntetic verbs can be paraphrased by an analytic form composed by *ficar* (to become) and a participial form of the verb, as demonstrated from (13a-c). This is due to a morphologic contrast: while the roots of the verbs in (12) form adjectives, the roots in (13) can only form nouns, apart from verbs. Nouns prototypically do not denote states, so the paraphrases in (13a) - (13c) are made with a participial form derived from the verb.

- (13) a. a-lag-a-r ~ *ficar a-lag-a-do*
 PREF-lake-TV-INF ~ to get PREF-lake-TV-PRT
 ‘to become flooded’
 b. a-terror-iz-a-r ~ *ficar aterrorizado*
 PREF-horror-SUF-TV-INF ~ to get PREF-horror-TV-SUF-PRT
 ‘to become terrified’
 c. en-vergonh-a-r ~ *ficar envergonhado*
 PREF-shame-TV-INF ~ to get PREF-shame-TV-PRT
 ‘to become ashamed’

Besides the different forms the analytic counterpart of a parasyntetic verb can have, it is important to discuss whether derivational counterparts are semantically equivalent or equally productive. If they are not, the alternation between synthetic and analytic forms will be even more constrained. Taking

these matters into account, Mancini (2018) studied the preference of the speakers with respect to the use of 4 parasyntetic verbs and their analytic counterparts with the suffix *-ecer*, as shown below:

(14)

- | | | | |
|--------------------------|-----|--------|------------------------|
| a. e-magr-ec-e-r | vs. | ficar | magro (to lose weight) |
| PREF-thin-SUFFIX-TV-INF | vs. | become | thin |
| b. en-louq-ec-e-r | vs. | ficar | louco (to go mad) |
| PREF-crazy-SUFFIX-TV-INF | vs. | become | crazy |
| c. en-riq-ec-e-r | vs. | ficar | rico (to enrich) |
| PREF-rich-SUFFIX-TV-INF | vs. | become | rich |
| d. en-velh-ec-e-r | vs. | ficar | velho (to get old) |
| PREF-old-SUFFIX-TV-INF | vs. | become | old |

In order to identify if these synthetic and analytical counterparts have the same meaning and if there is a preference for the synthetic or analytic form when they are considered equivalent, Equivalence and Preference Tests were applied through Google Forms to 218 native speakers, with ages ranging from 17 to 45 years old. Most of them are from the southeast region of Brazil and hold a bachelor's degree. (15) to (17) illustrate some of the questions in the form:

I. Interchangeability between synthetic and analytic forms:

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(15) Do you consider the following sentences coherent or incoherent?

a. João ganhou 1 milhão na loteria e **enriqueceu**, mas não **ficou rico**.

João won 1 million in the lottery and **PREF-rich-TV-SUFFIX-PN.PST**, but he did not **become rich**.

b. João ganhou 1 milhão na loteria e **ficou rico**, mas não **enriqueceu**.

João won 1 million in the lottery and **became rich**, but he did not **PREF-rich-TV-SUFFIX-PN.PST**.

(16) Are the following sentences equivalent?

a. Se ela ficar sem comer, vai **emagrecer**.

If she goes without eating, she will **PREF-thin-TV-SUFFIX-INF**

b. Se ela ficar sem comer, vai **ficar magra**.

If she goes without eating, she will **become thin**.

II. Preference tests

(17) Which of the following sentences you use more often?

a. Se eu me atrasar, você vai **enlouquecer**.

If I get late, you will **PREF-mad-TV-SUFFIX-INF**.

b. Se eu me atrasar, você vai **ficar louco**.

If I get late, you will **become mad**.

c. Depende do contexto.

It depends on the context.

The results are not homogenous to all verbs. Sentences in which *emagrecer* (to lose weight) and *envelhecer* (to get old), and their analytic counterparts were examined, were classified as non-equivalent for 65% of informants. When asked by their preference, 86% affirm to prefer the synthetic form over the analytic one for these verbs. The alternation between the two forms in this case seems to be related to a change in meaning.

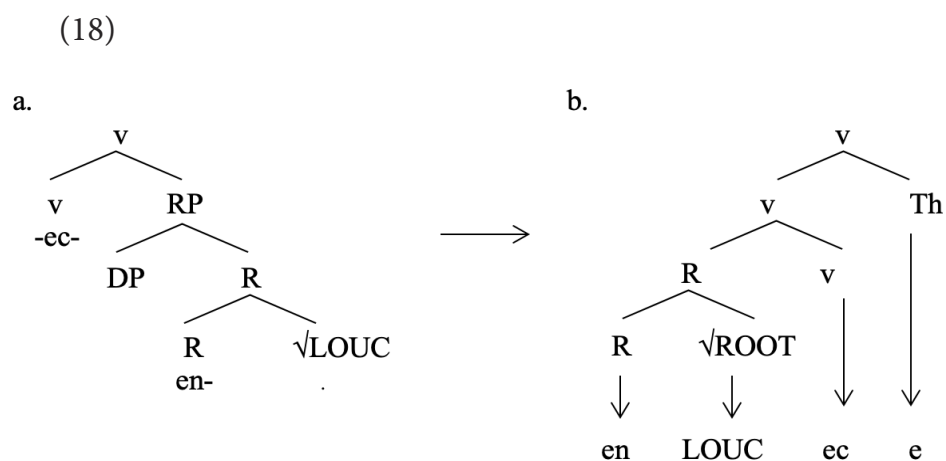
On the other hand, synthetic verbs *enriquecer* (to get rich) and *enlouquecer* (to go mad) as well as their analytic counterparts *ficar rico* and *ficar louco* were classified as semantically equivalent for 83% of the informants. When asked by their preference, 60% declared to prefer the analytic form. In a case like this, where the meaning of analytic and synthetic forms is taken to be the same by most speakers, we can see a tendency of preference for analytic forms.

Although Mancini has not discussed these results in depth, she suggests that they can be due to a semantic distinction between *emagrecer* and *envelhecer* on the one hand and *enriquecer* and *enlouquecer* on the other. More precisely, she argues that the distinction between focus on the process or on the result are important notions here. Analytic forms are preferred when the verb focuses on the result of the action. The periphrases *ficar rico* (become rich) and *ficar louco* (become mad), for instance, are preferred over their synthetic counterparts when the speaker intends to say that a person reached a state of richness or insanity. Such periphrases are dispreferred if the

person the speaker is talking about is already rich and got a little bit richer or is already judged as crazy.¹¹

Although the results for these verbs only show a tendency of preference of analytic forms and this hypothesis should be statistically confirmed, this tendency becomes an important indication of increase in analyticity in this language when coupled with the analytic expression of inflection in BP, which is categorical.

To conclude our discussion about parasynthetic verbs, we represent the linearization of the synthetic form in (18) and the analytical form in (19) for the pair *enloquecer* vs. *ficar louco* (to become mad) in the following simplified structures, taking as basis the representations suggested in Bassani (2019).



In (18) the lower syntactic structure associated with a complex prefix verb necessarily consists of four elements: the root, the functional head R (a relational head that contains the prefix in change of state verbs and relates the root meaning to the DP internal argument), *v* and *Th* (the Theme Vowel

11 In a similar fashion, an anonymous reviewer has pointed out that degree verbs like *esfriar* (to become cold) allow for different interpretations in their synthetic forms, where the result of the event can be a complete change, as made evident in sentence (i) below, or can be interpreted as a partial change, as made evident in sentence (ii).

- i. O chá esfriou e está totalmente frio. (The tea became cold, and it is completely cold).
- ii. O chá esfriou, mas não está completamente frio. (The tea became cold, but it is not completely cold).

In a correspondent analytic form, the only interpretation available for the reviewer is one of a complete change, as can be seen from the oddity of (iii).

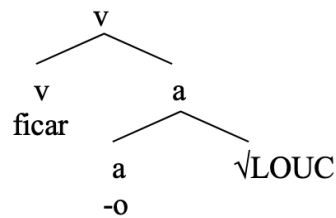
- iii. # O chá ficou frio, mas não está completamente frio. (The tea became cold, and it is not completely cold).

This observation is in line with the results of Mancini's (2018) tests which show that analytic forms are preferred when the verb focuses on the result of the action.

head)¹². These structures may be later enriched in the derivation with *Voice* and inflectional heads. The first structure represents a complex head which proceeds to linearization/ morphological reorganization after the syntax output, as represented in (18b). The head R is specified to precede the root, taking place superficially as a prefix and *Th* is inserted after syntax. As we can see, in the synthetic form below *v*, short movements or linearization operations must be performed in order to correct the defectiveness of the Root and of the affix which have to attach to *v*.

Differently, in (19) when deriving the analytical form *ficar louco* (become crazy), there is no relational head and the root is categorized as an adjective, moving to *a* instead of *v*. The *v* head is filled with the light verb *ficar*.

(19)



3.2. Directional verbs

The last set of data to be discussed are called directional verbs. A subset of directional verbs includes morphologically complex verbs formed by directional prefixes and bound roots. These verbs originally encode directionality meanings in the prefix as shown in (20) below. These directional verbs are residual in BP. According to the classification proposed by Bassani (2013) and presented in Table 1 above, these verbs belong to class 2¹³. Another subset includes simplex verbs where directionality is directly encoded by the root meaning, as shown in (21). What unites these two directional sets of verbs is the fact that their directionality can be expressed with a PP, as highlighted in bold in the examples.

- (20) a. Extrair **p(a)ra fora**
 to extract **to out** (lit.)
 b. Atrair **p(a)ra perto**
 to attract **to close** (lit.)
 c. Entrar **p(a)ra dentro**

12 An alternative structure would contain a projection before R (a deadjectival form). As this is not going to change the relevant discussion in this case, we assume a bound root structure.

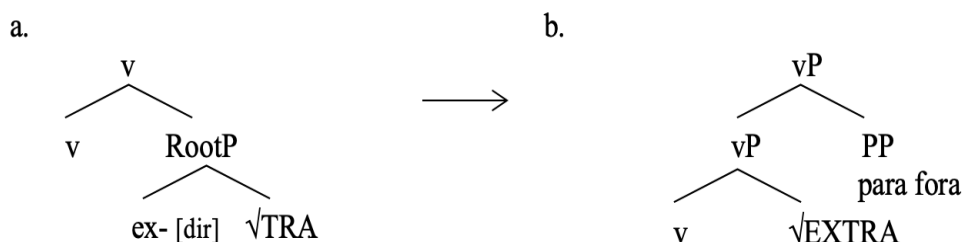
13 Diachronically, these verbs generally were Latin verbs prefixed by morphemes that indicated spatial relationships, especially direction.

to enter **to inside** (lit.)

- (21) a. Subir **p(a)ra cima**
 to move up **to up** (lit.)
 b. Descer **p(a)ra baixo**
 to go down **to down** (lit.)
 c. Tirar **p(a)ra fora**
 to take out **to out** (lit.)

We consider that when these verbs appear with these PPs, they are analytic forms. Bassani (2013) points out that the possibility of redundancy of the directional information in and outside of the verb is evidence of a process of change where verbs in (20) can go from complex to simplex forms, as they are subject to a process of loss of structure. The structural change in these cases would be the fusion of the two heads: the prefix and the root. In other words, *ex-tra-i-r* has been progressively reanalyzed as *extra-i-r* by speakers of BP. When *ex* is reanalyzed as part of a root, its directional meaning is lost. The structures in (22) below represent the analytic and synthetic forms for *extrair*. (22a) shows the structure of this verb when analyzed as a bipartite structure below *v*, with directional features in the prefix head. (22b) exemplifies its reanalyzed form in which a PP encodes the directionality of the movement. We are not going to discuss details of the representation of the directional element in (22a). Suffice it to say that *ex-* is a subword level affix which specifies the directionality of the movement lexicalized by the root if the verb is considered as a complex structure. Because of that, we represented *ex-* in the root projection in (22a).

(22)



Huang (2015) comments on the directionality expressed by a PP or a directional particle when comparing English, Mandarin Chinese and Italian, as Table 2 shows. English behaves as BP in allowing - and sometimes preferring - a particle to express the directionality of the action. Chinese in turn requires that the particle is used; the counterparts without the particles (**ru*, **chu*) are ungrammatical. Italian represents the opposite pole, in which

directionality is preferably encoded by the verb. Therefore, verbs expressing directionality by means of PP are odd in this language.

Table 2 – Directional verbs in English, Modern Chinese and Italian, adapted from Huang (2015, p.6)

English	Modern Chinese	Italian
enter, come in	jin lai ‘come in,’ *ru’	entrare, ??venire dentro
exit, go out	chu-qu ‘go out,’ *chu	uscire, ??andare fuori

Although the loss of movement in this case is subtle compared to other cases analyzed in this article, the preference for expressing grammatical information in another word rather than merging lexical and functional morphemes in the same word is also at work in this case, as in all others above. In parallel with Mancini’s (2018) initial investigation about the productivity of synthetic and analytical alternation in parasynthetic verbs, it would be important for future works to research to what extent directional verbs allow or even demand the expression of directionality in a satellite form adjunct to the verb in BP and what factors (dis)favor its occurrence in different dialects. This investigation, which is not in the scope of this work, would document the extent of this lexical/structural change in the language, which seems to favor the analytical strategy.

5. Concluding remarks

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In this paper we have discussed marks of analyticization in BP from the following datasets with a synthetic-analytic alternation: a) verbal forms with simple future meaning; b) verbal forms with pluperfect meaning; c) parasynthetic verbs; d) directional verbs.

From a theoretical perspective, we have proposed that short movements in BP are connected to the subspecification of affixal elements in this language. In the realm of inflection, the subspecification of affixes in BP is well-known. We have shown that it also impacts derivational affixes (prefixes and suffixes), giving rise to a wider set of analytical constructions in this language. Although Mandarin Chinese is indeed more analytical than BP, we saw some similarities suggesting that the range of phenomena discussed here for BP are interconnected. In all the cases, subspecification of affixal forms lead to their disappearance or reanalysis. As a consequence, such affixal forms cannot attract roots and words anymore, which stay put or make very short movements. The affixal forms are replaced by light verbs, which convey roughly the same meaning. The light/auxiliary verbs enter a checking relation with the root/word, but do not require movement of the element they select for convergence.

In search for an explanation to language change in a typological perspective, Haspelmath and Michaelis (2017) affirm that the analyticization process can differentiate inflectional languages within major language families (as in the case of Latin, a more synthetic, versus Romance languages, more analytic) and within a major family (as in the case of French being more analytic than Spanish). For them, the explanation for these analytic developments relies on contact-induced grammatical change. As is well-known, several languages were spoken in the Brazilian territory, which, according to some authors, had a great impact on the characteristics of the language we speak today (MATTOS E SILVA, 2004; LUCCHESI, 2009, and many others). We leave the discussion of an impact of language contact on the ongoing process of analyticity in BP for future work.

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