On the diachronic reanalysis of null subjects and null objects in Brazilian Portuguese: Triggers and Consequences

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This paper discusses some acquisition issues involved in the syntactic changes that affected the distribution and interpretation of null subjects and null objects in Brazilian Portuguese (BP). Based on work by Ferreira (2000) and Nunes (2008a), I argue that the emergence of finite control in BP was triggered by the weakening of its verbal agreement paradigm associated with the fact that some infinitival forms are ambiguous in being associated with a complete or an incomplete set of \( \phi \)-features. As for null objects, I discuss some consequences of Nunes’s (1993) proposal that the appearance of pronominal null objects in BP was ultimately a by-product of the change in the directionality of phonological cliticization in the language.

**Keywords:** Brazilian Portuguese; null subjects; finite control; hyper-raising; null objects; clitics

1. Introduction

Diachronic changes involving empty categories are always interesting for they may shed light on the nature of the triggering experience for language acquisition. This is even more so when the changes result in the expansion or restriction of their use. It is arguably the case that syntactic empty categories are not themselves particularly salient in the linguistic environment due to their phonological emptiness. Thus, diachronic changes expanding or restricting the use of a given empty category can in principle reveal the relevant licensing conditions that guide children in identifying its syntactic type.

In this paper, I discuss two such changes (one of each kind) that took place in (Colloquial) Brazilian Portuguese (henceforth BP). One of them
yielded restrictions on the distribution and interpretation of null subjects, whereas the other ended up expanding the distribution of null objects. Based on the syntactic consequences of these changes in contemporary BP, I put forward a plausible acquisition scenario for each of them under which other independent changes in the triggering experience led children to reanalyze the empty categories in question.

The paper is organized as follows. In section 2, I review arguments that show that referential null subjects in BP behave like A-traces and propose that the diachronic reanalysis affecting null subjects in BP was triggered by the weakening of the verbal agreement paradigm coupled with a marked property of Portuguese, namely, the existence of inflected infinitivals. In section 3, I discuss some consequences of Nunes’s (1993) proposal that the emergence of pronominal null objects in BP was a by-product of a change in the directionality of phonological cliticization in the language. Section 4 concludes the paper.

2. On the reanalysis of null subjects in BP

2.1 Referential null subjects in BP as A-traces

It has been a point of consensus in the literature that referential null subjects in BP are considerably different from referential null subjects of typical pro-drop languages. One of the most salient differences regards their frequency. Sociolinguistic studies have consistently found that null subjects in BP are much less frequent than their overt pronominal counterparts (see e.g. Duarte 1995) and diachronic studies have documented that the decrease in frequency is quite steady, as illustrated in Figure 1 with null subjects in theater plays documented by Duarte (1993).
The differences go much beyond frequency, though. As illustrated in (1) below, the surviving null subjects in contemporary BP have a much more restricted distribution and interpretation than what is found in canonical pro-drop languages.$^2$

\begin{enumerate}
\item a. *Ø comprou um carro novo.  
\hspace{1cm} bought a car new  
\hspace{1cm} ‘She/he bought a new car.’

\item b. *O pai [da Maria], acha [que Ø está grávida]  
\hspace{1cm} the father of-the Maria thinks [that is pregnant-FEM]  
\hspace{1cm} ‘Maria’s father thinks she is pregnant.’

\item c. *Elai disse [que ele acha [que Ø está grávida]]  
\hspace{1cm} she said that he thinks that is pregnant-FEM  
\hspace{1cm} ‘Shei said that he thinks shei is pregnant.’

\item d. Só o João acha que Ø vai ganhar a corrida.  
\hspace{1cm} only the João thinks that goes win the race.  
\hspace{1cm} ‘Only João is an x such that x thinks that x will win the race.’  
\hspace{1cm} NOT: ‘Only João is an x such that x thinks that he, João, will win the race.’

\item e. O João está achando que Ø vai ganhar a corrida e  
\hspace{1cm} the João is thinking that goes win the race and  
\hspace{1cm} o Pedro também está.  
\hspace{1cm} the Pedro too is
‘João thinks that he’s going to win the race and Pedro does, too (think that he, Pedro, is going to win the race).’
NOT: ‘João thinks that he’s going to win the race and Pedro does, too (think that he, João, is going to win the race).’

The paradigm above shows that a null subject in BP must have an antecedent (cf. (1a)) which must be in a c-commanding (cf. (1b)) and local (cf. (1c)) configuration; that it requires a bound-reading when anteceded by an only-DP (cf. (1d)); and that it only supports sloppy readings under ellipsis (cf. (1e)).

The behavior of null subjects in BP illustrated in (1) mimics that of obligatorily controlled PRO, suggesting that these two types of empty categories should receive a uniform treatment. Assuming Hornstein’s (2001) theory of control, which allows movement to θ-positions, Ferreira (2000, 2004, 2009) and Rodrigues (2002, 2004) indeed argue that the null subject in BP, like controlled PRO, is a trace of A-movement. The immediate question that this analysis of null subjects in BP in terms of “finite control” raises is how the embedded subject can undergo A-movement from a finite clause.

Here I will assume the gist of Ferreira’s (2000, 2004, 2009) proposal, with some refinements proposed in Nunes (2008a). Assuming Chomsky’s (2000) Agree-based system, Ferreira proposes that with the weakening of verbal agreement morphology in BP (see e.g. Duarte 1995), its finite Ts came to be optionally specified with a complete or an incomplete set of φ-features. When associated with a complete φ-set, T values the Case of its subject, freezing it for purposes of A-movement; on the other hand, when T is associated with an incomplete φ-set, it cannot value the Case of its subject, which is then free to undergo further A-movement and eventually have its Case-feature valued. According to this proposal, the sentence in (2a), for instance, is derived along the lines of the simplified representation in (2b).
On the diachronic reanalysis of null arguments in BP

(2) a. Ele disse que comprou um carro.
he said that bought a car
‘He said that he bought a car.’

b. \([TP \text{ ele}_i [T^\text{e}-complete \ [VP \text{ disse} \ [CP \text{ que} \ [TP \text{ ti} [T^\text{e}-incomplete}
\[VP \text{ ti} [VP \text{ comprou um carro}]]]]]]]]]

In (2b), the embedded T is associated with an incomplete \(\phi\)-set. Thus, its subject remains Caseless in its Spec and may undergo A-movement to the matrix clause. On its way to the matrix [Spec,TP], the embedded subject lands in the matrix [Spec,vP] and is assigned the external \(\theta\)-role of the matrix light verb, accounting for the control properties of this type of construction in BP (cf. (1)). Given that the matrix T in (2b) is \(\phi\)-complete, it checks the Case of the moved subject, allowing the derivation to converge.

Ferreira’s proposal raises the issue of why the same agreement morphemes can be consistently ambiguous between a complete and an incomplete \(\phi\)-set. Take the verbal form *disse* ‘said.3SG’, for instance. As mentioned above, in (2b) it must be associated with a \(\phi\)-complete T; otherwise the moved subject would not have checked/valued its Case. Conversely, in a sentence such as (3a), *disse* must be associated with an incomplete \(\phi\)-set, as shown in (3b); otherwise the subject would be Case-marked in the embedded clause and would not be allowed to undergo further A-movement.

(3) a. Ele acha que disse que comprou um carro.
he thinks that said that bought a car
‘He thinks that he said that he bought a car.’

b. \([TP \text{ ele}_i [T^\text{e}-complete \ [VP \text{ acha} \ [CP \text{ que} \ [TP \text{ ti} [T^\text{e}-incomplete}
\[VP \text{ ti} [VP \text{ disse} \ [CP \text{ que} \ [TP \text{ ti} [T^\text{e}-incomplete \ [VP \text{ ti} [VP \text{ comprou um carro}]]]]]]]]]]]]]
Based on the fact that the paradigm of verbal agreement morphology in BP given in Table 1 below only distinctively encodes person and number in the inflection for first person singular, Nunes (2008a) has reinterpreted the ambiguity proposed by Ferreira in terms of how the person and number features of T are combined in the course of the computation. More specifically, Nunes proposes that finite Ts in BP may enter the numeration specified for number and person or for number only. When T is only specified for number, well-formedness conditions in the morphological component trigger the addition of the feature person in accordance to the redundancy rule sketched in (4).

Table 1: Verbal agreement paradigm in (Colloquial) Brazilian Portuguese

cantar 'to sing': indicative present

|        | cantar | P:1,N:SG
|--------|--------|-----------
| eu (I) | canto  | P:default; N:default (= 3SG)
| você (you,SG) | canta |                  |
| ele (he) |        |                  |
| ela (she) |        |                  |
| a gente (we) | cantam | P:default; N:PL (= 3PL)
| vocês (you,PL) |        |                  |
| eles (they,MASC) |        |                  |
| elas (they,FEM) |        |                  |

(4) When T is only specified for number (N):
   (i) Add [P:1], if N is valued as SG;
   (ii) otherwise, add [P:default].

According to this approach, the ambiguity of the T head associated with disse in (2b) and (3b) reflects the two possibilities for a person feature to be associated with a number feature in BP finite clauses. In (2b), these features come associated from the numeration, which makes T a Case-assigner. By contrast, in (3b) the corresponding T comes from the numeration specified with just a number feature. In the syntactic component, it will
then behave like the defective T of raising infinitivals, for instance, allowing its subject to undergo A-movement to the embedding clause. In the morphological component, a default person feature is then added to the number feature of T in accordance with (4ii) and the verb surfaces in the third person singular form *disse*.

2.2 Acquisition issues

Assuming that the analysis described in section 2.1 is on the right track, one has to address two related acquisition issues. First, if BP can no longer license a referential *pro* in the subject position, why were children led to reanalyze null subjects as traces of A-movement instead of simply acquiring a grammar without null subjects? After all, finite control into indicative clauses is a rare phenomenon from a crosslinguistic perspective. The second issue raised by the finite control analysis is why the weakening of verbal agreement played such a big role in children’s reanalysis of null subjects in BP but not in languages like French or English, for instance, which also underwent a simplification of their verbal agreement paradigm, but did not come to allow finite control.

Here I will explore a suggestion made in Nunes (2008a), according to which the marked path followed by children acquiring BP was determined by the acquisition of another marked property, namely, the existence of inflected infinitives in the language. Like in European Portuguese – *EP* – (see e.g. Raposo 1987), infinitives in BP may be inflected or uninflected, as illustrated in (5).

(5) Eles saíram depois de jantar/jantarem cedo.

\[
\text{they left after of dine.INF/dine.INF.3PL early}
\]

‘They left after having dinner early.’
Importantly, for all Portuguese verbs, the inflected realization of some forms is the same as the uninflected form. Take the verb *cantar* ‘to sing’, for example, and compare its uninflected form (*cantar*) with the paradigm of inflected forms in Tables 2 and 3.6

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Inflected infinitives in EP</th>
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<tbody>
<tr>
<td>1SG (<em>eu</em>)</td>
<td><em>cantar</em></td>
</tr>
<tr>
<td>2SG (<em>tu</em>)</td>
<td><em>cantares</em></td>
</tr>
<tr>
<td>2SG (<em>você</em>)</td>
<td><em>cantar</em></td>
</tr>
<tr>
<td>3SG (<em>ele</em>)</td>
<td><em>cantar</em></td>
</tr>
<tr>
<td>1PL (<em>nós</em>)</td>
<td><em>cantarmos</em></td>
</tr>
<tr>
<td>1PL (<em>a gente</em>)</td>
<td><em>cantar</em></td>
</tr>
<tr>
<td>2PL (<em>vós</em>)</td>
<td><em>cantardes</em></td>
</tr>
<tr>
<td>2PL (<em>você</em>)</td>
<td><em>cantarem</em></td>
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<tr>
<td>3PL (<em>eles</em>)</td>
<td><em>cantarem</em></td>
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<thead>
<tr>
<th>Table 3</th>
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<tr>
<td>1SG (<em>eu</em>)</td>
<td><em>cantar</em></td>
</tr>
<tr>
<td>2SG (<em>você</em>)</td>
<td><em>cantar</em></td>
</tr>
<tr>
<td>3SG (<em>ele</em>)</td>
<td><em>cantar</em></td>
</tr>
<tr>
<td>1PL (<em>a gente</em>)</td>
<td><em>cantar</em></td>
</tr>
<tr>
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</tr>
<tr>
<td>3PL (<em>eles</em>)</td>
<td><em>cantarem</em></td>
</tr>
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Given that both dialects have forms that are ambiguous in being inflected or uninflected infinitivals, successful acquisition of infinitives in both dialects requires that learners must independently postulate that (certain) infinitival forms, say *cantar* in Tables 2 and 3, are ambiguous between being $\phi$-complete (the inflected ones) and $\phi$-incomplete (the uninflected ones). For learners of EP, this does not have further consequences, given the richness of its infinitival agreement paradigm, which has four unambiguous forms – *cantares*, *cantarmos*, *cantardes*, and *cantarem* in Table 2. By contrast, the agreement paradigm in BP in Table 3 is considerably meager, with only one unambiguous form – *cantarem* (see note 6). And even this form is not transparent, as it can be analyzed as involving only a plural feature (the suffix *-m*). In other words, given the BP paradigm in Table 3, the surface form of the only overtly inflected form is still ambiguous: it may be associated with a plural feature and a $\emptyset$-morpheme encoding person or it may be associated with just a number feature.7
Observe that both alternatives represent marked options. In the first case, the postulation of Ø-morpheme encoding person is a marked option for infinitives in general; in the second case, the lack of a feature person in a verbal form specified for number is also marked. Importantly, there seems to be no independent reason for children acquiring the BP paradigm in Table 3 to have preferred one alternative over the other. Thus, once the paradigm of inflected infinitivals in BP got drastically simplified as in Table 3, it opened the possibility that a verbal form specified with only a number feature in the syntactic component could be “fixed” in the morphological component by receiving a person feature.

Nunes (2008a) proposes that once the finite agreement paradigm also became massively ambiguous, as seen in Table 1, children generalized the conclusion that was independently reached in the domain of infinitivals. In other words, children came to postulate that Ts in BP are ambiguous with respect to being φ-complete, regardless of whether they are infinitival or finite. More specifically, both infinitival and finite Ts in BP can be specified in the syntactic component with both number and person or just a number feature. In the latter case, the morphological component then adds a person feature in accordance with the redundancy rules in (4).

To sum up, the emergence of finite control in BP need not be seen as the emergence of another marked property in the system, but the generalization of an existing one: the fact that some Ts – more specifically the infinitival ones – are ambiguous between being associated with a complete or an incomplete set of φ-features. Thus, agreement weakening in the finite domain led to a reanalysis of T in BP but not in languages like French or English, for example, because only in BP have children independently acquired the marked property that an infinitival T may be ambiguous in being φ-complete or φ-incomplete.
2.3 Some consequences

The uniformization of the feature specification associated with T, allowing both infinitival and finite Ts to be \( \phi \)-complete or \( \phi \)-incomplete, opened the way for the emergence of hyper-raising (in the sense of Ura 1994) in BP. As argued by Ferreira (2000), if a finite clause with a \( \phi \)-incomplete T is embedded under a raising predicate, the embedded subject can move to the matrix subject position and have its Case licensed in this position, as illustrated in (6).

(6) a. Eles parecem que t\(_i\) compraram um carro novo.
they seem-3PL that bought-3PL a car new
‘They seem to have bought a new car.’

b. Eles acabaram que t\(_i\) perderam o ônibus.
they finished-3PL that missed-3PL the bus
‘It turned out that they missed the bus.’

There is some idiolectal variation with respect to the acceptability of hyper-raising constructions among BP speakers. In particular, some speakers allow them with some raising verbs but not with others or allow them with third, but not with first person agreement. Nunes (2008a) shows that this variation is in fact expected. He shows that for independent reasons having to do with minimality, the embedded subject of an impersonal construction can only move to the matrix subject position if the embedded clause itself cannot move to this position, which is what happens when the impersonal predicate assigns inherent Case to the embedded clause. However, since inherent Case is an idiosyncratic property, speakers may disagree with respect to which specific verbs assign inherent Case, allowing for hyper-raising. As for the fine-grained distinctions regarding agreement, Nunes suggests that some speakers may have in their grammar a morphological
redundancy rule more restrictive than the one in (4). That said, the important point is that all speakers who allow constructions such as (6) disallow constructions such as (7a) below (see Nunes 2008a), while permitting constructions such as (7b) (see Martins and Nunes 2005). (7a) shows that the matrix and the embedded subject cannot be separated by an island, indicating that we have an instance of movement. In turn, (7b) involves movement of an idiom chunk, showing that we are dealing with A- and not A’-movement. In sum, sentences such as (6) indeed involve A-movement of the embedded subject, which is possible if the embedded T is $\phi$-incomplete.

\[(7) \begin{align*}
    \text{a. } & \text{*Alguém parece que o livro que ti leu não era bom} \\
    \hspace{1cm} & \text{someone seems that the book that read not was good} \\
    \hspace{1cm} & \text{‘It seems that the book that someone read was not good.’} \\
    \text{b. } & \text{[A vaca] parece que ti foi pro brejo.} \\
    \hspace{1cm} & \text{the cow seems that went to-the swamp} \\
    \hspace{1cm} & \text{Idiomatic reading: ‘It seems that things went bad.’}
\end{align*}\]

Now, if the reanalysis of null subjects in BP was a by-product of the uniformization of the feature specification for finite and infinitival Ts, as proposed in section 2.2, we should expect hyper-raising to be also possible out of inflected infinitivals. Nunes (2008a) shows that this prediction indeed holds true. Consider the sentences in (8) and (9), for instance.

\[(8) \begin{align*}
    \text{a. } & \text{É difícil desses professores elogiarem os alunos.} \\
    \hspace{1cm} & \text{is difficult of-these teachers praise.INF.3PL the students} \\
    \hspace{1cm} & \text{‘These teachers rarely praise the students.’} \\
    \text{b. } & \text{[Esses professores] são difíceis de elogiarem os alunos.} \\
    \hspace{1cm} & \text{these teachers are difficult of praise.3PL the students} \\
    \hspace{1cm} & \text{‘These teachers rarely praise the students.’}
\end{align*}\]
In (8a) and (9a) we have an impersonal construction with the inflected infinitive licensing the embedded subject. In other words, like in EP, the inflected T in these constructions is φ-complete and values the Case of the embedded subject. By contrast, in (8b) and (9b), the infinitival T arguably has only a number feature and its subject must move to the matrix clause to have its Case-feature valued. As we should expect in instances of A-movement, the moved DP triggers overt agreement with the matrix verb (cf. (8b)) and may be even an idiom chunk (cf. (9b)).

Although this should be determined on more solid grounds, a cursory consultation with BP speakers reveals that even speakers who only marginally allow for hyper-raising out of finite clauses, as in (6), have no problems in allowing hyper-raising out of inflected infinitivals in sentences such as (8b) or (9b). If correct, this generalization seems to follow from the proposal in section 2.2, according to which the reanalysis of infinitival Ts in BP constituted part of the triggering experience for, and therefore preceded, the reanalysis of finite Ts. Given that hyper-raising is independently subject to lexical idiosyncrasies associated with inherent Case, it is not surprising that impersonal predicates that select inflected infinitivals became analyzed in a more uniform fashion across speakers before the same happened with impersonal predicates that select finite clauses. In fact, as observed by Galves (1987), a distinctive property of BP is that tough-constructions such as (10) are systematically ambiguous in that the matrix subject may be interpreted as the embedded object or the embedded subject. Crucially, as seen in (8b), the embedded context in (10) is that of an inflected infinitival; hence, the
subject reading of (10) involves hyper-raising from an inflected infinitival whose agreement morphology is phonetically null.

(10) O João é difícil de elogiar.
the João is difficult of praise.INF
*Tough*-interpretation: ‘It is hard to praise João.’
Hyper-raising interpretation: ‘João rarely praises someone.’

2.4 Summary

The lack of licensing for referential pros in subject positions in BP did not completely exclude null subjects in finite clauses. Instead of simply changing from a pro-drop to a non-pro-drop language, BP took another path and came to incorporate finite control into its grammar, allowing A-traces for null subjects. I have proposed that this change arose as a by-product of the acquisition of two independent properties of BP: a massively ambiguous paradigm of verbal agreement and the existence of inflected infinitivals. Under this view, the emergence of a marked property in BP – finite control – is seen as a generalization of the marked specifications associated with the acquisition of inflected infinitivals with a drastically reduced verbal morphology.

3. The emergence of pronominal null objects in BP

Let us now turn to null objects in BP. The first thing to observe is that BP has lost its third person accusative (henceforth, 3PACC) clitics o (MASC.SG), os (MASC.PL), a (FEM.SG), and as (FEM.PL). The use of these forms in contemporary BP is associated with schooling, formal style, and written language. This change had two immediate consequences. First,
BP came to allow the weak pronouns *ele* (MASC.SG), *eles* (MASC.PL), *ela* (FEM.SG), and *elas* (FEM.PL) in object position, as illustrated in (11) below, something that is not possible in EP. Second, there was an extension of the environments where null objects are allowed in BP when compared to EP. As argued by Raposo (1986), null objects in EP are syntactic variables (i.e. traces left by null operator movement) and therefore cannot appear within a syntactic island. By contrast, null objects display no sensitivity to islands, as illustrated in (12), where the null object appears inside a relative clause. This has led researchers to analyze null objects in BP as *pros* (see e.g. Galves 1989, Kato 1993, and Cyrino 1993, 1997).

(11) Eu vi *ele*.

I saw him

‘I saw him.’

(12) Esse livro, todo aluno que leu *ec* mudou de vida.

this book every student that read change of life

‘As for this book, every student who read it changed his life.’

Below I review Nunes’s (1993) proposal that the loss of 3PACC clitics in BP was triggered by the change in the directionality of phonological cliticization in the language and discuss some consequences of these changes.

3.1 Directionality of cliticization and the licensing of 3PACC clitics

3PACC clitics in Portuguese evolved from Latin demonstrative pronouns *illum/illam/illud*. As opposed to what happened in other Romance languages, in which the /l/ of the Latin demonstrative was preserved (e.g. French *le*, Spanish *lo*), Portuguese 3PACC clitics *o* (MASC.SG), *os* (MASC.PL), *a* (FEM.SG), and *as* (FEM.PL) apparently lost the onset of their syllable. However, that these syllables may indeed have an underlying onset is shown
by the fact that (in EP) they surface as lo, los, la, and las after a verb ending in /r/ or /s/ and as no, nos, na, and nas after a verb ending in a nasal diphthong, as illustrated in (13).

(13) European Portuguese:
   a. ver + o → vê-lo (‘to.see him/it’)
   b. fizemos + o → fizemo-lo (‘we.did it’)
   c. compraram + o → compraram-no (‘they.bought it’)

Based on this sensitivity to the preceding environment, Nunes (1993) proposed that the onset of the syllable of 3PACC clitics needs to be licensed and this is achieved via phonological cliticization to the preceding word. In Modern EP, this is not a problem. As Carvalho (1989) shows, clitics in Modern EP are always phonologically enclitic, regardless of whether or not the preceding word is a verb, as illustrated in (14) below. In other words, in EP a process of leftward phonological cliticization applies to the output of the syntactic rule of clitic placement.

(14) a. [Quem me] vê?
   who me sees
   ‘Who is seeing me?’
   b. [Não te] vi.
   not you I.saw
   ‘I didn’t see you.’

Although we have to be very cautious about postulating a certain directionality of phonological cliticization for a dead language and have to cope with all the biases written documents may have, it seems reasonable to take the directionality of phonological cliticization in Old Portuguese to be leftwards, as well. The main evidence for this is that the specific rules that
allow 3PACC clitics to be realized as lo(s), la(s), no(s), and na(s) in Modern EP (cf. (13)) could also be triggered by words other than verbs, as illustrated in (15) (from Williams 1938; see also Mattos e Silva 1989).

(15) a. Deu-lo sabe poi-la vi \((Deus + o; pois + a)\)
   God it knows for it I saw

   b. bem-no \((bem + o)\)
      well him/it

As opposed to what happens in Modern EP and Old Portuguese, phonological cliticization in BP is clearly rightwards (see e.g. Pagotto 1993). As shown by the contrasts in (16) and (17) below, a clitic may appear in first position in BP, as opposed to EP, and if a parenthetical material breaks the sequence auxiliary-clitic-verb, the clitic will lean to the main verb on its right in BP, but to the auxiliary on its left in EP.

(16) Me diz uma coisa! \((BP: \text{OK}; \text{EP}: \ast)\)
   me say one thing
   ‘Tell me something!’

(17) a. \(BP\): Ele tinha, segundo ela, te dado um livro.
   he had according.to her you given a book

   b. \(EP\): Ele tinha-te, segundo ela, dado um livro.
      he had-you according.to her given a book
      ‘He had, according to her, given you a book.’

If both Old Portuguese and Modern EP exhibit leftward phonological cliticization (despite their differences regarding syntactic clitic placement), it seems reasonable to take rightward phonological cliticization to be an innovation within the Brazilian dialect. If fact, Cyrino’s (1990) study on the variation between enclisis and proclisis in imperatives in BP shows that the
percentage of enclisis found in theater plays drops from 100% in the first half of the 18\textsuperscript{th} century to 0% in the second half of the 20\textsuperscript{th} century, with the first instances of proclisis being documented in the second half of the 19\textsuperscript{th} century (with a percentage of 14%). The question then is how the onset of the syllable of 3PACC clitics could be licensed in the new system with rightward phonological cliticization.

Nunes (1993) proposes that once a generation of children acquired rightward phonological cliticization, there could be no way for the onset of the syllable of 3PACC clitics to be licensed and children then simply failed to acquire these clitics. As mentioned above, this paved the way for two new constructions to replace the old construction with the clitic, one with a weak pronoun and another one with a null pronominal object, as illustrated in (18).

\begin{align*}
(18) \quad & a. \quad \text{Eu entreguei } \underline{\text{ele}} \quad \text{pra} \quad \text{Maria.} \\
& \quad \text{I delivered it to the Maria} \\
& b. \quad \text{Eu entreguei } \underline{\text{pro}} \quad \text{pra} \quad \text{Maria} \\
& \quad \text{I delivered to the Maria} \\
& \quad \text{‘I delivered it to Maria.’}
\end{align*}

(18a) is ungrammatical in Modern EP and sociolinguistically stigmatized in formal registers of BP. On the other hand, the sentence in (18b) is grammatical in Modern EP, but has a different structure. As mentioned above, null objects in EP are variables bound by a null operator and, therefore, exhibit island effects (see Raposo 1986). However, in BP null objects are pronominal and, therefore, are not sensitive to islands (cf. (12)). Thus, the expansion of the contexts where null objects were allowed in BP (see e.g. Cyrino 1997 for discussion) was ultimately a by-product of children’s failure to acquire 3PACC clitics once rightward phonological cliticization was already acquired.
3.2 Further consequences

As seen in section 3.1, the change in the directionality of phonological cliticization led to the loss of 3PACC clitics in the grammar of BP. Their use in Modern BP is associated with schooling and formal registers. Corrêa (1991), for instance, shows that 3PACC clitics have a very low frequency in the speech of college students (11.2%) and do not appear at all in the speech of illiterate speakers. As for written language, their frequency reaches a peak of 85.7% in the writings of college students. However, it is worth observing that they start appearing only in the writings of 3rd and 4th grade students and by this time children are already 9-10 years old. Given these facts, it seems safe to assume that these clitics are not part of the core grammar of BP, being close in nature to knowledge of a second language attained through schooling.

With this picture in mind, below I discuss three issues: (i) the different properties of 3PACC clitics with respect to the other clitics in written language and formal registers; (ii) the impact of the changes discussed in section 3.1 on frozen expressions involving 3PACC clitics; and (iii) a further expansion of null object constructions in BP.

3.2.1 3PACC clitics and clitic placement

So far, we have seen that 3PACC clitics are not part of the core grammar of BP, but are, instead, acquired via schooling. Interestingly, as we will see below, the properties associated with these clitics are different from the ones associated with other clitics in BP, and also different from what one finds in EP.

As opposed to other clitics, 3PACC clitics cannot appear in clause-initial position in formal registers of BP, as illustrated in (19).
(19)  a.  Te chamo amanhã.
    you I.call tomorrow
    ‘I’ll call you tomorrow.’

   b.  *A chamo amanhã.
    her I.call tomorrow
    ‘I’ll call her tomorrow.’

The contrast between (19a) and (19b) can be accounted for if the acquisition of 3PACC clitics via schooling also involves the information that these clitics need to have the onset of their syllables licensed. Consistent with this hypothesis is the fact the most frequent realization of 3PACC clitics in formal registers in BP involves the allomorphs -lo(s)/-la(s) enclitic to an infinitival, as illustrated in (20) below.\(^{11}\) Thus, it does not seem unreasonable that the robust use of these allomorphs in written language may lead learners to assume that the underlying forms have special licensing requirements which cannot be fulfilled in clause-initial position.

(20)  Eu vou comprar-lo.
    I go buy-it
    ‘I’m going to buy it.’

Also unsurprising is the fact that the formal registers of BP completely lost forms where 3PACC clitics appear fused with a dative clitic, as illustrated in (21) with EP.

(21)  EP:  O João deu-mo.  \((mo = me + o)\)
    the João gave-me.it
    ‘João gave it to me.’
Formal registers of BP may instead split the clitics, as illustrated in (22) below, a possibility that is not found in EP (or Colloquial BP). In (22), the 3PACC clitic has its onset overtly licensed in its enclitic position and the first person clitic falls under the canonical rule of syntactic and phonological proclisis to the main verb.\textsuperscript{12}

\begin{enumerate}
\item [22] Você pode \textbf{me} enviá-lo amanhã.
\begin{itemize}
\item [you may me send-it tomorrow.]
\end{itemize}
\begin{itemize}
\item ['You may send it to me tomorrow.]
\end{itemize}
\end{enumerate}

Finally, formal registers of BP exhibit obligatory clitic climbing if the main verb is not infinitival, as shown in (23a) below. Interestingly, this is not possible for the other clitics, as illustrated in (23b), where the first and second person clitics are proclitics both syntactically and phonologically.

\begin{enumerate}
\item [23] a. Eu \textbf{o} tinha visto.
\begin{itemize}
\item [I him had seen]
\end{itemize}
\begin{itemize}
\item ['I had seen him.]
\end{itemize}
\item [23] b. Ele tinha \textbf{me/te} visto.
\begin{itemize}
\item [he had me/you seen]
\end{itemize}
\begin{itemize}
\item ['He had seen me/you.]
\end{itemize}
\end{enumerate}

(23a) is very revealing from an acquisition point of view. Prescriptive grammars of BP spend a lot of time hammering on two points, which are regular items of language exams: (i) that 3PACC clitics should be used instead of weak pronouns and (ii) that enclisis is more “elegant/correct” than proclisis. However, no prescriptive grammar of BP calls attention to the contrast in clitic placement seen in (23a) vs. (23b). It should be noted that (23a) is also ungrammatical in EP, arguably the model for BP prescriptive grammars. So, here we have a poverty-of-stimulus argument for the acquisi-
tion of 3PACC clitics through schooling. The combination of (i) and (ii) obviously does not lead to the pattern in (23a).

What seems to be happening here is that the position occupied by a clitic in a sequence [auxiliary [clitic-main verb]] counts as an initial position from a phonological point of view and, therefore, 3PACC clitics cannot be licensed there. Climbing then makes it possible for them to be licensed, as they can be independently licensed in formal registers of BP when following a subject and preceding a main verb, as illustrated in (24).^{13}

\[(24) \text{Eu o vi ontem.} \]
\[
\text{I him saw yesterday}
\]
\[
\text{‘I saw him yesterday.’}
\]

To sum up, the different distribution of 3PACC clitics in formal registers of BP when compared to the other clitics is to be attributed to an independent phonological licensing requirement of 3PACC clitics and their different acquisition profiles. As opposed to the other clitics, which are the product of a regular process of language acquisition, 3PACC clitics are acquired via formal education.

3.2.2 Reanalysis of “frozen” expressions

The changes affecting the “frozen” swear expression in (25) below in BP provide an interesting illustration of the consequences of the interplay among the change in the directionality of cliticization, the loss of 3PACC clitics, and the reanalysis of null objects mentioned above (see Nunes 2007).

\[(25) \text{Vai pra puta que o pariu!} \]
\[
\text{go to.the bitch that you gave-birth}
\]
\[
\text{‘SOB!’ (lit.: ‘Go to the bitch that gave birth to you!’)}
\]
The clitic o in (25) has third person singular masculine features from a morphological and syntactic point of view, but semantically it behaves as a second person singular, corresponding to você ‘you.SG’. That said, (25) looks quite peculiar as an expression of Modern BP. First, it contains a 3PACC clitic and in no way can be associated with formal registers, as it is a swear expression. And second, it does not fall under the standard pattern of rightward phonological cliticization in Modern BP, for the clitic is phonologically parsed with the preceding complementizer ([kiw]), rather than the following verb.

However, a close inspection reveals that (25) indeed falls under our expectations. The clitic in (25) has apparently been reanalyzed as an opaque idiom chunk that only contributes to forming a rhyme ([kiw] [pariw]) within the swear expression. Thus, (25) can be used in BP even if the addressee is female. In fact, if the clitic in (25) is inflected for gender to encode agreement with a female addressee, as in (26) below, an instance of register clash arises, as expected. Moreover, the clitic in (25) can also be simply dropped, as shown in (27).

\[
(26) \#Vai pra puta que a pariu!
\]

\[
\text{go to.the bitch that \text{you.FEM} gave-birth}
\]

\[
\text{‘SOB!’ (lit.: ‘Go to the bitch that gave birth to you!’)}
\]

\[
(27) Vai pra puta que pariu!
\]

\[
\text{go to.the bitch that gave-birth}
\]

\[
\text{‘SOB!’ (lit.: ‘Go to the bitch that gave birth!’)}
\]

It is worth noting that modulo a difference in the preposition used (a instead of \text{pra}), EP admits (25) and (26), but not (27). Recall that null objects in EP are syntactic variables and cannot occur within islands. Given that (27) involves a relative clause, a null object should then be excluded in EP and it is, indeed.
One could think that the acceptability of (27) in BP is to be accounted for in terms of a null pronominal in the object position – possibility that became available with the disappearance of 3PACC clitics. However, this account would be inconsistent with the fact that null objects in BP (and in other languages) cannot bear first and second person readings; they must be interpreted as third person. Thus, (27) presents us with a near-contradiction: the null object inside the relative clause must be interpreted as referring to a third person but the intended meaning of the expression excludes this interpretation.

Nunes (2007) proposes that once the only part of the expression that received a non-idiomatic interpretation – the clitic – was lost, the embedded verb in (27) was reanalyzed as an intransitive verb. Evidence for this later reanalysis is that BP also came to allow the interjection in (28), which is clearly derived from (27) but, as an interjection, requires no addressee.

(28) Puta que pariu!
    bitch that gave-birth
    ‘Damn!’

To sum up, the fact that BP changed its directionality of cliticization forced a reinterpretation of the clitic of the swear expression in (25). It was either ignored for purposes of interpretation or simply dropped, yielding (27). Given UG restrictions on the interpretation on null pronominal objects, (27) could not be parsed under the intended meaning and a new reanalysis of the embedded verb as intransitive was finally implemented.

3.2.3 Null objects and “P-chopping” constructions

Let us finally consider P-chopping constructions in BP. In his seminal work on relative clauses in BP, Tarallo (1983) observed a diachronic correlation between the loss of 3PACC clitics and the increase in the frequency of
null objects, on the one hand, and the consolidation of P-chopping relative clauses such as (29) below in the grammar, on the other. In (29), the preposition *com* ‘with’ is absent despite being selected by verb *conversar* ‘talk’, as illustrated by the analogous relative clauses in (30) with pied-piping and an overt resumptive pronoun.

(29) a. pessoa que eu conversei ontem
   the person that I talked yesterday
   ‘the person I talked to yesterday’

(30) a. a pessoa com quem eu conversei ontem
   the person with who I talked yesterday
   b. a pessoa que eu conversei com ela ontem
   the person that I talked with her yesterday
   ‘the person I talked to yesterday’

Tarallo proposed that P-chopping relative clauses in BP involve a null resumptive in the complement position of the relevant preposition, which is then deleted in the phonological component because BP does not allow for preposition stranding (see (31) below). As an alternative, Ferreira (2000) proposed that the null pronoun in null object constructions in BP is defective in not having a Case-feature. That being so, *pro* could occupy the object position of a verb such as *conversar* in (29), as represented in (32), even if this is not a Case position.

(31) \[CP O\i \[... V [PP de pro] ...]\]

(32) \[CP O\i \[... [V pro] ...]\]

Kato and Nunes (2009) show that these proposals fail to capture the lexical conditioning of P-chopping constructions in BP. The verbs *gostar* ‘like’ and *rir* ‘laugh’, for instance, both select for the preposition *de* ‘of’ in
BP, but only *gostar* licenses a P-chopping construction, as shown in (33) and (34).

(33) a. O João gosta *(d)a Maria.
    the João likes of the Maria
    ‘João likes Maria.’
    b. O João riu *(d)a Maria.
    the João laughed of the Maria
    ‘João laughed at Maria.’

(34) a. a menina que o João gosta
    the girl that the João likes
    ‘the girl that João likes’
    b. *a menina que o João riu
    the girl that the João laughed
    ‘the girl that João laughed at’

Kato and Nunes (2009) argue that the prepositions that can be deleted in P-chopping constructions are actually realizations of inherent Case (see Chomsky 1986). From this perspective, the fact that preposition dropping is lexically determined is expected as inherent Case is tied to lexical/thematic selection. In the case of (33) and (34), we are led to conclude that *de* is realization of inherent case when associated with *gostar*, but not with *rir*. As shown in Nunes (2008b), evidence in favor of this conclusion is provided by the fact that *gostar* licenses an inherently Case marked reflexive clitic, but *rir* does not, as shown in (35).

(35) a. Eles *se* gostam muito.
    they REFL like much
    ‘They like each other a lot.’
b. *Eles se riram bastante.
   they REFLEX laughed much
   ‘They laughed a lot at each other.’

Now, if insertion of prepositions for purposes of inherent Case realization is subject to Last Resort, the preposition will surface just in case the object is overt; when it is null, there is no need for it to show up.\(^{14}\) This proposal captures in a more natural way both the correlation observed by Tarallo (1983) and the Case issue brought up by Ferreira (2000). Failure to acquire 3PACC clitics gave rise to the emergence of pronominal null objects. Like any other referential expression, a pronominal null object can occupy a position which is assigned inherent Case. However, differently from overt expressions, null pronominals do not require that the inherent Case they bear be overtly manifested, for they themselves are phonetically empty. Last Resort considerations then prevent “preposition insertion” and P-chopping constructions such as (29) or (34a) are generated as convergent expressions in BP.

To sum up, the emergence of P-chopping constructions in BP should also be analyzed as a by-product of the loss of 3PACC clitics and the reanalysis of null objects in the language.

4. Concluding remarks

Changes leading to emergence or obsolescence of some constructions may cast some light on the nature of the triggering experience for language acquisition. This paper has discussed some acquisition issues involved in the changes that affected null subjects and null objects in BP.

With respect to null subjects, I argued that the weakening of the verbal agreement paradigm in BP coupled with the fact that Portuguese admits
inflected infinitivals caused both infinitival and finite Ts to be analyzed as being optionally $\phi$-complete. In other words, T in contemporary BP may enter the syntactic computation with both number and person features or with number only. In the latter case, a person feature will then be assigned to T in the morphological component. Importantly, if T is not associated with a complete set of $\phi$-features in the syntactic component, its subject can undergo further A-movement, yielding finite control and hyper-raising constructions. In what concerns this apparently marked acquisition path chosen by BP learners, I argued that they simply extended to finite domains a possibility that was independently required in infinitivals.

As for null objects in BP, I explored Nunes’s (1993) proposal that a change in the directionality of phonological cliticization in BP prevented children from acquiring 3PACC clitics, because the onset of their syllables could no longer be licensed within the new system with rightward phonological cliticization. Lack of acquisition of 3PACC clitics then paved the way for the emergence of weak pronouns in object position, as well as the expansion of null object constructions. In contemporary BP, 3PACC clitics are learned via formal education but distinguish themselves from the clitics that are acquired via “ordinary” language acquisition in having an exceptional pattern of distribution.

References


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*The results reported here are part of research projects supported by CNPq (262262/2008-3) and FAPESP (2006/00965-2). A preliminary version of this paper was presented during the Workshop on Grammatical Development in Honor of Jürgen M. Meisel (Universität Hamburg, 12-14/3/09). I would like to thank the audience and two anonymous reviewers for comments and suggestions and Carol Petersen for editorial help. Special thanks to the organizers of the workshop for the invitation to participate in this memorable event! Um grande abraço pra você, Jürgen!*

1 The qualification *referential* here is meant to exclude null expletives and null “arbitrary” third person subjects, which are still allowed in BP. Given that I will not discuss these subjects here, from now on I will drop the qualification.


3 Here I am abstracting away from instances of topic deletion in the sense of Ross (1982) (see Ferreira 2000, Modesto 2000, and Rodrigues 2004 for relevant discussion).

4 For references and relevant discussion, see Boeckx, Hornstein, and Nunes (2010).
For relevant discussion and alternative approaches, see Ferreira (2000), Rodrigues (2004), and Martins and Nunes (2009).

In fact, each of these tables can be made simpler, depending on the dialects considered. The second person plural pronoun vós and the corresponding agreement inflection (cf. cantardes in Table 2) are actually productive only in Northern dialects of continental EP. In turn, BP dialects that lack third person plural inflection in finite domains – cf. cantam in Table 1 – also lack this inflection in infinitival domains – cf. cantarem in Table 3 (see Pires 2006 for discussion). The important point for our discussion is that even under this simplifications, the verbal agreement paradigm for infinitives in EP is considerably richer than in BP.

See Hornstein, Martins, and Nunes (2008), who propose that this infinitival form may also be interpreted as ambiguous in some nonstandard dialects of EP.

Hyper-raising as a whole seems to be a very recent phenomenon of BP grammar. Henriques (2008) attests the first cases in theater plays of the first half of the 20th century.


In fact, given that regular verbs have the same form when in the infinitival or in the subjunctive future form, it is not uncommon to find instances of hypercorrection with enclisis of 3PACC clitics to a subjunctive future form, as illustrated in (i).

(i) Se você comprá-lo, vai se arrepender.
‘If you buy it, you’re going to regret it.’

This type of hypercorrection may also affect irregular verbs that have been undergoing a process of regularization. The verb ver ‘see’, for instance, is irregular and should in principle take the form vir in the subjunctive future form. However, it has been taking the infinitival form instead, as shown in (iia) below. Accordingly, once the “infinitival” form is employed, 3PACC clitics are licensed as enclitics, as exemplified in (iib).

(ii) a. Se você ver o João, ...
‘If you see João, …’

b. Se você vê-lo, ...
‘If you see him, …’

The hypercorrection involving clitic duplication in (i) below, which was documented by Corrêa (1991) in the writings of 5th/6th grade kids, also has a similar pattern of proclisis and enclisis to the same verb.

(i) para o identificá-lo
‘in order to identify it’

(i) is very illuminating in showing the conflicting systems children are faced with. In a sense, (i) attempts to reconcile the internalized rightward phonological cliticization (o identificar) with the licensing of the clitic onset (identificá-lo), learned at school. As we should expect, no similar case of duplication is found with other clitics.

Like other clitics in BP, the 3PACC clitic o cannot be enclitic to the finite verb in (24). This suggests some L1 influence of the rule of syntactic placement in BP. In fact, enclitic instances of 3PACC in formal registers of BP are essentially limited to the exceptional forms
-lo(s)/-la(s), which are also more restricted than their EP siblings in that they can only be associated with infinitives (Recall that in EP these forms also surface after verbal forms ending in /s/; cf. (13b)). This LI influence also accounts for the ungrammaticality of (21) if we assume that the dative clitic could provide an onset for the 3PACC clitic.

Another example of this last resort nature of preposition insertion as inherent Case realization is illustrated by Serbo-Croatian with examples like (i) (adapted from Bošković 2006:525). (ia) shows that when the instrument Case morphology can be realized by the NP, insertion of the preposition sa ‘with’ is prevented. By contrast, given that “higher numerals” like pet ‘five’ in Serbo-Croatian do not decline, the realization of inherent instrumental Case in (ib) is only possible if the preposition is inserted (see Bošković 2006, Hornstein, Martins and Nunes 2008, and Nunes 2008b, for further examples and discussion).

(i)  

(a) On je ovladao (*sa) zemljom.

he is conquered with country.INSTR.SG

‘He conquered that country.’

(b) On je ovladao *(sa) pet zemalja.

he is conquered with five countries.GEN.PL

‘He conquered five countries.’