

THE EMERGENCE OF BRAZILIAN PORTUGUESE: EARLIER EVIDENCE FOR THE DEVELOPMENT OF A PARTIAL NULL SUBJECT GRAMMAR

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ABSTRACT

Brazilian Portuguese (henceforth, BP) is currently analyzed as a partial null subject language (NSL). This work shows the earliest attested changes in the properties of null subjects in the Goiás dialect of BP. We analyze original data from colonial period manuscripts written in Goiás, a state located in Brazil's center-west region, and provide empirical evidence of the loss of null subjects in BP grammars in historical data between the 18th and 19th century, preceding the period for which these changes have been reported regarding other dialects of BP. The analysis of our 18th and 19th century corpus shows an early significant rise in the realization of overt subjects. In addition, the loss of verb-subject (VS) free inversion, a property common to NSLs, drops from 57% in the 18th century to only 22.5% in the 19th century. On the other hand, a potential impoverishment of the verbal paradigm did not play a significant role in this early rise of overt subjects: only 15% of the clauses with a plural external argument in the 19th century data did not show overt agreement between the verb and the external argument, and all of them occur strictly with unaccusative or existential verbs. We take this as evidence that the loss of null subjects in BP was primarily linked to the loss of free VS-inversion, and not to the loss of clausal agreement. We propose that D-feature in T (an EPP-feature) was valued by V-movement to T in the 18th century, yielding a consistent NSL. We argue that the loss of the requirement of the D-feature in T(tense) was a primary trigger for the partial loss of null subjects and parallel loss of free inversion from the 18th to the 19th century in Goiás BP, giving then rise to a partial NSL (without a D-feature in T).

KEYWORDS: Brazilian Portuguese (BP); null subjects; verbal agreement; verb raising; free inversion.

¹ * We thank Marlyse Baptista and Rozana Naves for their interest and feedback regarding this project. We are also grateful for support from the CAPES Foundation, Brazil, which granted Humberto Borges a visiting graduate student fellowship for PhD studies ('bolsa sanduiche' grant 007549/2015-06) to the University of Michigan.

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1. INTRODUCTION

In the last three decades, there has been somewhat extensive research on the changes in the syntax of null subjects in BP in comparison to European Portuguese (EP), a consistent NSL (e.g. Roberts and Kato 1993, Kato and Negrão 2000, and articles therein). Duarte (2000), building on Duarte's earlier work (Duarte 1993), for instance, shows that most pronominal subject positions (74%) in her 1992 corpus of Brazilian plays were filled with overt pronouns. Her corpus is composed of 1100 clauses written between 1842 and 1992. Based on this corpus, she argues that the requirement for overt (pronominal) subjects, distinguishing BP from European Portuguese (hereafter, EP), did not begin until the 20th century. She suggests that BP is in a process of change from a NSL to a non-NSL, such as English and French, especially due to the restructuring of the BP pronominal paradigm and the impoverishment of the BP verbal paradigm, and shows a significant increase in the number of overt subjects in BP in the context of pronominal resumption between 1937 and 1992.

Period	1845	1882	1918	1937	1955	1975	1992
Percentage	20%	23%	25%	46%	50%	67%	74%

Table 1: Overt pronominal subjects in PB. Source: Duarte (2000).

Duarte (2000) claims that the restructuring of the BP verbal paradigm from six (paradigm 1) to four forms (paradigm 2), and subsequently to three forms (paradigm 3) was initiated by the insertion of the pronoun *você* 'you' (2nd person singular) into the BP pronominal system and its subsequent merge in terms of meaning/reference restriction with the pronoun *tu* 'you'. A similar pattern is observed for the second plural person: the pronoun *vós* 'you' disappeared and was replaced by the pronoun *vocês* 'you'. The table below illustrates Duarte's observations.

Person/Number	Pronouns	Paradigm 1	Paradigm 2	Paradigm 3
1 st singular	Eu 'I'	am o	am o	am o
2 nd singular	Tu 'you'	am a s	-	-
		am a	am a	am a
3 rd singular	Você 'you' Ela/ele 'she/he'	am a	am a	am a
		am a mos	am a mos	-
1 st plural	Nós 'we' A gente 'we'	-	am a	am a
		am á is	-	-
2 nd plural	Vós 'you' Vocês 'you'	am a m	am a m	am a m
		am a m	am a m	am a m
3 rd plural	Elas/eles 'they'	am a m	am a m	am a m

Table 2: Pronominal and inflectional paradigms in BP. Source: Duarte (2000: 19).

1.1 Hypothesis and research questions

We analyze earlier original data from colonial period manuscripts (diaries) written in Goiás and show evidence of the loss of null subjects in 18th-19th-century BP grammar without dependence on the impoverishment of the verbal paradigm, contrary to Duarte's (2000) findings. Therefore, based on these empirical observations, we argue that manuscripts written in the 19th century in Goiás constitute the earliest attested evidence of the development of BP as a partial NSL and that there was not a sufficient impoverishment of the verbal paradigm to play a significant role in this early loss of null subjects. Our research questions are motivated by the same empirical observations.

a) *Which syntactic mechanisms were involved in the distribution of overt and null subjects in the earliest grammars of BP in Goiás?*

b) *What was the role of clausal agreement in the emergence of the earliest grammars of BP in Goiás?*

1.2 Organization of this paper

The paper is organized as follows. Section 2 is devoted to a brief theoretical background on the syntax of partial null subject grammars and correlating properties. Section 3 presents the sources and data sample used in this study, and provides a description of the methodology of data collection and coding. Section 4 shows the overall distribution of null and overt subjects in the research corpus and explores the hypothesis that the EPP-feature would have been satisfied by V-movement to T in 18th century BP, but not in 19th century BP. Section 5 offers a brief conclusion and some comments of a more general character.

2. PARTIAL NULL SUBJECTS: A BRIEF THEORETICAL BACKGROUND

According to Chomsky (1981) and Rizzi (1982), there are some properties commonly associated with NSLs: a referential null subject in finite clauses, free inversion in simple clauses, rich verbal morphology, which generally distinguishes person and number; and null resumptives pronoun in embedded clauses; and an apparent violation of the [*that*-trace] filter. Given the morphological richness of several NSLs, Holmberg (2010: 88) observes that Rizzi (1982: 143) would have distinguished two NSL parameters (1b):

- (1) a. INFL can be specified [+ pronoun]
b. INFL, which is [+pronoun] can be referential

While (1a) distinguishes between non-NSLs and NSLs, (1b) distinguishes between NSLs that allow all kinds of null subjects (referential and nonreferential) and those that only allow non-referential subjects. Holmberg (2010) argues that Rizzi's approach does not account for recent assumptions of checking theory (Chomsky 2000): since the ϕ -features displayed in verbal morphology, are uninterpretable, they cannot have their content identified before being valued. Holmberg (2010) advocates a revision of (1b), arguing that it is not referentiality, but definiteness that must be crucially taken to distinguish some types of NSLs. Therefore, Holmberg (2010) proposes a distinction between NSLs that license definite null subjects, as in (2), and those that do not.

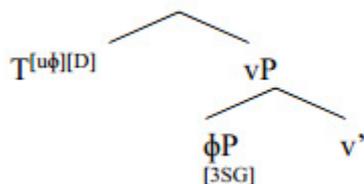
- (2) Verrà. (Italian)
come-FUT-3SG
'He will come.'

Holmberg (2010: 94) makes two crucial assumptions in his NSL framework:

- (3) a. Pronouns are either DPs, with the structure $[_{DP} D [\phi_P \phi [_{NP} N]]]$, or ϕ Ps;
 b. Null pronouns are ϕ Ps.

According to Holmberg (2010), languages that allow defined null subjects, as in (2) above, are characterized primarily by having a D-feature in the functional head T(ense); when T probes a null pronoun ϕ P, and values its ϕ -features, the result is a definite pronoun, as illustrated in (4) (cf. Holmberg 2010: 95).

(4) *Probe-goal relation between T and a ϕ P in a consistent NSL*



On the other hand, the probe-goal relation between T and a null pronoun ϕ P in a language without a D-feature in T does not supply a definiteness value, and the result is a null subject pronoun with impersonal/generic reading (e.g. (5b) below). BP (5a) has only impersonal interpretation, unlike EP (5a), which has both impersonal and passive interpretations. In EP, impersonal subjects in third-person singular are marked overtly.

- (5) a. É assim que se faz o doce. (BP/EP)
 is thus that *se* makes the sweet
 ‘This is how one makes the dessert.’
 b. É assim que __ faz o doce. (BP/*EP)
 is thus that __ makes the sweet
 ‘This is how one makes the dessert.’

As a result, Holmberg (2010: 94) classifies languages that allow definite null subjects as consistent NSLs, and languages that manifest null impersonal subjects as partial NSLs.

- (6) a. *Consistent NSLs:*
 Null definite subject pronouns (null ‘he/she’);
 No null indefinite pronoun (no null ‘one’).
E.g. Italian, Spanish, European Portuguese.
- b. *Partial NSLs:*
 Null definite pronouns only if locally c-commanded by an antecedent;
 Null indefinite [impersonal] subject pronouns.
E.g. Finnish, Brazilian Portuguese.

In addition, for Holmberg, the D-feature in T is not required in partial NSLs; when a null pronoun enters into an Agree relation with Infl/Tense in partial NSLs, it can be interpreted as impersonal, as in (5b). However, it has also been argued that BP impersonal null subjects in third-person singular, as in (5b) and (7c), result from the impoverishment of the BP verbal paradigm and the loss of the *SE* pronoun in passive and impersonal *SE*-constructions, as in (7a) and (7b), respectively, in the 20th century (cf. Galves 1987; Nunes 1990; Martins and Nunes 2016; and many others).²

- (7) a. Vendem-se casas. (*colloquial BP/EP)
 Sell-PRS.3PL=SE house-PL
 ‘Houses are being sold.’
 b. Vende-se casa. (colloquial BP/EP)
 Sell-PRS.3SG=SE house-SG
 ‘Someone sells a house.’ (BP/EP)
 c. Vende casa. (colloquial BP/*EP)
 Sell-PRS.3SG house-SG
 ‘Someone sells a house.’

In addition, according to Holmberg (2010), null definite pronouns in partial NSLs, e.g. Finnish, cannot be licensed unless they are locally c-commanded by an antecedent (8a), unlike consistent NSLs, e.g. Italian (8b).

- (8) a. Juha₁ ei ole sanonut mitään, mutta Pauli₂ sanoo että *Ø₁ haluaa ostaa uuden auto
 (Finnish)
 ‘Juha₁ hasn’t said anything, but Pauli₂ says that (he)₁ wants to buy a new car.’
 b. Gianni₁ non ha detto niente, ma Paolo₂ ha detto che Ø₁ vuole comprare una macchina
 nuova. (Italian)
 ‘Gianni₁ hasn’t said anything, but Paolo₂ said that (he)_{1/2} wants to buy a new car.’

As we discussed above, the characterization of consistent NSLs, such as Italian and EP, traditionally considers the role of the verbal paradigm of a given language to interpret null subjects. Roberts (2010) argues that the deletion of a pronoun in a NSL is only possible if it is possible to identify its features in the functional head T. By stipulation, any language that has a non-interpretable D-feature in T and five or six morphemes to recover the pronominal content allows consistently null subjects. Adopting Holmberg’s theory (2010) that consistent NSLs have a D-feature in T, Roberts (2010: 82) proposes the following postulate regarding a null DP subject and the valuing of T’s D-feature in these languages.

² In Portuguese and other romance languages (e.g. Spanish, Italian), *passive SE-constructions* show agreement between the transitive verb and the internal argument DP. In this sense, (7b) in EP also has a passive interpretation.

(9) If a category α has D[def], then all α 's ϕ -features are specified.

In this sense, he shows that verbal impoverishment removes certain ϕ -features from a head, which could be responsible for some constraints in the licensing of null subjects, as it was argued by Duarte (2000) regarding the loss of null subjects in BP.

3. DATA COLLECTION AND CODING

This section contains information on the sources used for this study of null subjects in the history of the Goiás dialect of BP. Located in the gold-mining region of colonial Brazil, Goiás was founded in 1748 and passed through several territorial and geographical reconfigurations, including more recently the separation of Tocantins State.



Figure 1. Map of state of Goiás in red.³

3.1 Sources and sample

This study is based on the analysis of 2500 clauses from the oldest available corpus of diaries/journals written in Goiás, Brazil during the colonial period.

Manuscripts:	Period:	Clauses:
1. Diário de viagem do Barão de Mossamedes	1772-1773	1250
‘The travel journal of Baron of Mossamedes’		
2. Memorial de lembrança de Anna Joaquina da Silva Marques	1882-1883	1250
‘Personal journal of Anna Joaquina da Silva Marques’		

Table 3: Analyzed corpus.

The manuscript ‘The travel journal of the Baron of Mossamedes’ is filed in the General Library of the University of Coimbra, in Coimbra, Portugal. It was written by two men, one of which was Portuguese and the other one is of unknown origin. It contains daily notes taken during the trip of Baron of Mossamedes to Goiás in the late 18th century. The manuscript ‘Personal journal of Anna Joaquina da

³ Image from https://commons.wikimedia.org/wiki/File:Brazil_State_Goiias.svg.

Silva Marques' is filed in the Instituto de Pesquisas e Estudos Históricos do Brasil Central, located in Goiânia, Goiás. It was written by a Brazilian woman born in Goiás in 1855. It contains daily notes on several personal and social events. This complete document was written from 1881 to 1930, and we will argue that it is the earliest evidence so far of BP as a partial null subject grammar.

3.2 Procedure for data collection and coding

The linguistic data was transcribed from images of the original manuscripts and then entered into an electronic corpus. Our analysis is specifically based on two constraints on the licensing of overt and null subjects: verbal agreement and free VS-inversion. The data was analyzed satisfying the following principles: (i) The unit of data analysis was the clausal core represented by a lexical verb; (ii) modal, auxiliary and aspectual verbs are considered a single analysis unit with the lexical verb; (iii) subordinate and coordinate clauses include two or more units of analysis. For reasons of space, additional criteria of data selection and classification cannot be discussed here.

4. RESULTS AND DISCUSSION

In this section, we show the overall distribution of null and overt subjects in our research corpus.

4.1 Overt and null subjects

The analysis of the 18th- and 19th-century journals shows a sharp rise of overt subjects from a mean of 22.48% to 64% in all subject positions (p -value < 0.01). Excluding impersonal clauses (constructions with non-argumental null subjects and weather verbs, which in Portuguese do not have an overt expletive pronoun), the percentage of null subjects decreased from 55.44% to 22.80% between the 18th and 19th century (p -value < 0.01). In the table below, the overall results are displayed.

	Overt subjects	Null subjects	SE-constructions	Impersonal clauses
18th century	22.48%	55.40%	19.36%	2.72%
	281(1250)	693(1250)	242(1250)	34(1250)
19th century	64%	22.80%	1.2%	12%
	800(1250)	285(1250)	15(1250)	150(1250)

Table 4: Overall distribution.

In (10)-(11) and (12)-(13), respectively, we show occurrences of overt and null subjects extracted from the corpus data.

(10) *Overt subjects in 18th-century Goiás BP:*

O Dr. Ouvidor sempre cheio de liberalidades, mandou a mulher do capitam Roque hum grande presente de Sayas, camisas, e caponas, e desta forma satisfés S. Exa. aquelles povos.

Dr. Ombudsman, always full of freedom, sent the woman of captain Roque a big gift of Skirts, shirts, and bonnets, and of-this way satisfied His Excellency those people.

'Dr. Ombudsman, always overstepping his bounds, sent to captain Roque's wife a big gift of

skirts, shirts, and bonnets. And this way, His Excellency satisfied those people’.

(11) *Overt subjects in 19th-century Goiás BP:*

Dia 21 Eu passei dia em caza de Mariq. detarde Eu fui com ella vizitar a mulher do Te. Pedro Ribo.
Day 21 I spent day in house of Mariquinha. Of-afternoon I went with her visit-INF the woman of-the lieutenant Pedro Ribeiro.

‘On November 21st I spent the day at Mariquinha’s house. That afternoon I went with her to visit lieutenant Pedro Ribeiro’s wife.’

(12) *Definite null subjects in 18th-century journal:*

No dia 18 marchou 7 legoas, pouzou na Taboca. No dia 19 marchou 7 legoas e tomou quartel no Engenho de Mel. Dias

On the day 18 __ marched 7 leagues, __ slept on the Taboca. On-the day 19 __ marched 7 leagues and took quarter in-the Mill of Manoel Dias

‘On the 18th (he) marched 7 leagues, (he) slept on the Taboca. On the 19th (he) marched 7 leagues and billeted in Manoel Dias’ mill.’

(13) *Definite null subject in the 19th-century journal:*

a. Totó Ludovico veio passar o dia aqui. depois __ fomos em caza de Mariq. depois __ fomos no Matadouro.

Totó Ludovico came spend-INF the day here. after __ went-2PL in house of Mariq. after __ went-2PL in-the Matadouro

‘Totó Ludovico came to spend his day here. After that, (we) went to Mariquinhas’s house. Later, (we) went to Matadouro.’

b. Dia 23 __ passei dia em caza de Mariquinha. Dia 24 __ fui lá passar dia. De noite veio notícia que Augusto, escravo que foi de Antônio Manoel, matou o novo Senhor que comprou poucos meses.

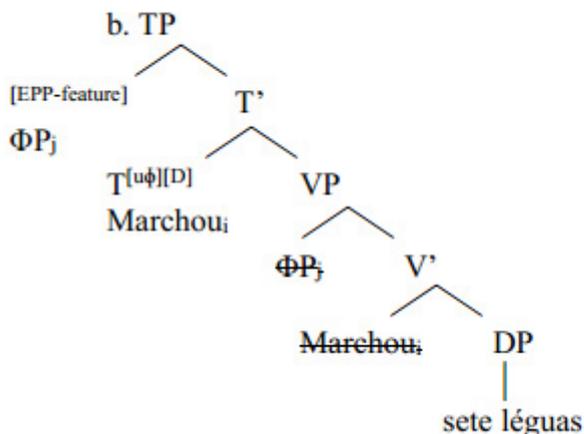
Day 23 __ spent-1SG day in house of Mariquinha. Day 24 __ went-1SG there to-spend day. At night came new that Augusto, slave who was of Antonio Manoel, killed-3SG the new Lord that bought-3SG few months

‘On the 23th (I) spent the day in Mariquinha’s house. On the 24th (I) went there again to spend the day. At night, came the news that Augusto, a slave who belonged to Antonio Manoel, killed his new owner who had bought (him) a few months (before).’

Based on the diachronic results on overt and null subjects, we argue that BP lost the D-feature in T between the 18th to 19th century. The loss of the D-feature in T was responsible for the sharp increase of overt subjects between the two periods. Without a referential feature to supply a definiteness value in the probe-goal relation between T and a null pronoun ϕ P subject in BP, referential subjects in declarative clauses must be overt in non-topic positions, especially in the third person. As in (13), null subjects in first person are licensed in 19th-century Goiás BP as null topics (13a-b) or with a co-referential antecedent (13b). We conclude that the pronouns that remained null in 19th-century Goiás BP are the ones that are linked to a topic or that are licensed by a syntactic antecedent (consistent with current partial NSL status of BP).

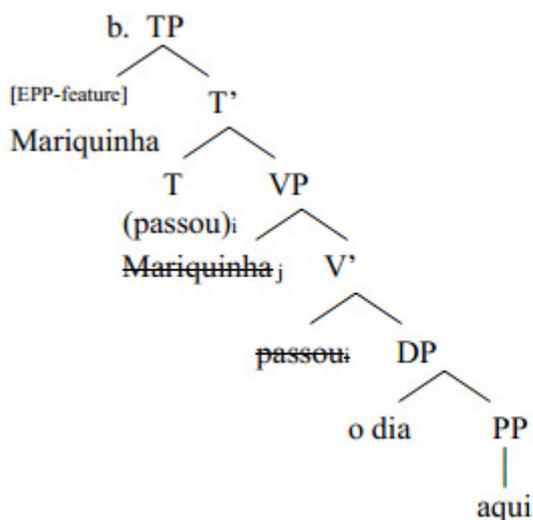
In the proposal we have adopted, the EPP-feature in spec TP was satisfied by the movement from V to T in the eighteenth-century BP grammar, a movement that we argue was also responsible for valuing the unspecified ϕ -features of T, as illustrated in (14) below. In this sense, overt subjects in the eighteenth-century BP grammar should occupy a topic position.

- (14) a. Marchou sete léguas (18th-century Goiás BP)
 Marched-3SG seven leagues
 ‘He marched seven leagues.’



With the loss of D in T in the nineteenth-century BP grammar (which we link to the loss of V to T), the inflectional head began to value its ϕ -features (person and number) without valuing any feature of definiteness capable of satisfying the EPP-feature in spec TP. Thus, the nineteenth-century BP grammar required the subject’s movement to spec TP to satisfy the D-feature (EPP-feature), especially in the third person, as in (15). Null subjects, however, could still be licensed in 19th c. BP grammar as null topics in the first person, or by a referential antecedent that locally c-commands it, as in (13a-b) above.

- (15) a. Mariquinha passou o dia aqui (19th-century Goiás BP)
 Mariquinha spent-3SG the day here
 ‘Mariquinha spent the day here’.



4.2 Verb-subject free inversion

The frequency of verb-subject free inversion dropped from 56.58% in the 18th century to 22.5% in the 19th century (p -value < 0.01). Consequently, the SV order frequency increased from 43.42% in the 18th century to 77.50% in the 19th century (p -value < 0.01). In the Table 5, the results are displayed. In (16) and (17), respectively, we show occurrences of free inversion in 18th-century Goiás BP and restricted SV order in 19th-century Goiás BP.

	SV order	VS order
18th century	43.42%	56.58%
	122/281	159/281
19th century	77.50%	22.5%
	620/800	180/800

Table 5: Free VS-inversion distribution.

- (16) *Free inversion in 18th-century Goiás BP:*

Marcha sua Excellencia Do Julgado de Trahiras para o de Sam Felis. Sahio sua Excelencia do Arrayal de Thahiras no dia trinta de Junho pellas sete horas da manhaã.

Marches his Excellency from-the District of Thahiras to the of Sam Felis. Left his Excellency the District of Thahiras on day thirty of June at seven o'clock in the morning

‘His Excellency marches from Traíras to São Félix. His Excellency left Traíras on June 30 at seven o'clock in the morning.’

(17) *Restricted SV order in 19th-century Goiás BP:*

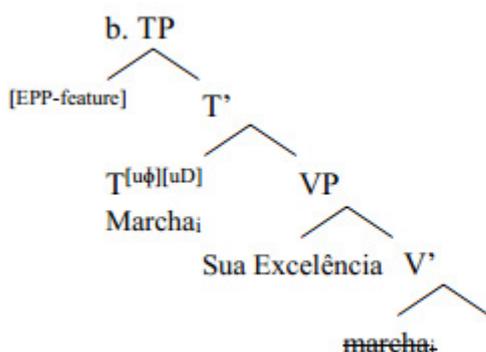
Dia 17 denoite Eu Nhola e Lili fomos no Palácio. Dia 18 Eu e Lili fomos a Cambaúba. Dia 19 eu passei dia em caza de Mariqa. Dia 20 de Abril de 1883 Sexta-feira eu e Lili fomos beijar Senhor dos Passos.

Day 17 tonight I Nhola and Lili went to-the Palace. Day 18 I and Lili went to Cambaúba. Day 19 I spent day in house of Mariqa. Day 20 of April of 1883 Friday I and Lili went to kiss Lord of the Steps.

‘On 17th tonight, Nhola, Lili and I went to the Palace. On 18th Lili and I went to Cambaúba. On 19th I spend the day in Mary’s house. On Friday, April 20, 1883, Lili and I went to kiss the Lord of the Steps.’

Our explanation of free inversion in the 18th-century BP grammar is that the EPP-feature can be satisfied by the V-movement to T in that grammar. Thus, there was no requirement for overt DP subjects to occupy the position of spec TP, so that the DP remained in its base position, enabling constructions with VS order, as represented in the structure in (18) below. However, the occurrences of sentences with verb-subject order in the 18th-century data is restricted to unaccusative and existential verbs. These results are in line with Berlinck’s (2000) analysis that the VS order in current BP occurs especially with unaccusative and existential verbs (see also Pilati, Naves & Salles 2017 and references therein).

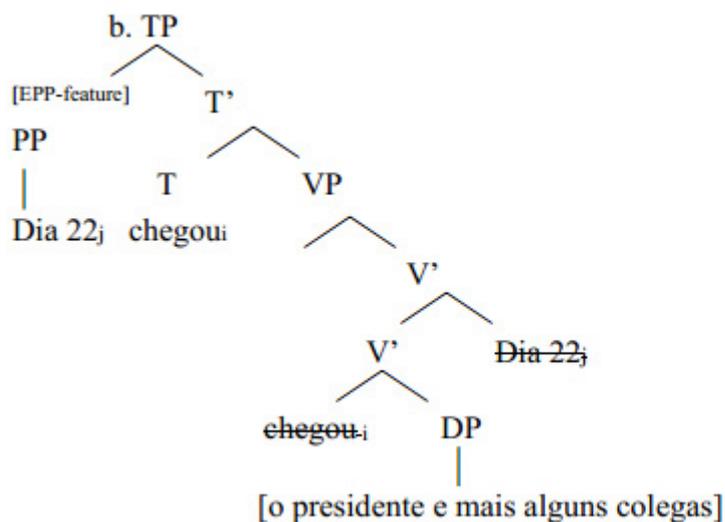
- (18) a. Marcha Sua Excelência. (18th-century Goiás BP)
Marches Your Excellence
‘Your Excellence marches’.



One problem with our analysis is explaining how the EPP-feature was satisfied in constructions with VS order in the 19th century data. Considering the proposals of Pilati, Naves & Salles (2017) and Teixeira (2015) that sentences with unaccusative verbs in VS order in PB can be cases of locative inversion in which a locative or temporal deictic element satisfies the EPP-feature of T, we assume

that this case of inversion is a way of satisfying the EPP-feature only when the internal DP argument of unaccusative verbs does not move to spec TP, as in illustrated in (19).

- (19) a. Dia 22 chegou o presidente e mais alguns colegas (19th-century Goiás BP)
 Day 22 arrived the president and more some colleagues
 ‘On the 22nd the president and some (of his) colleagues arrived’.



4.3 The potential impoverishment of the verbal paradigm

No lack of verb-subject agreement was found in the 18th century data. Similarly, the 19th century data suggests that impoverishment of the verbal paradigm did not play a significant role in the early rise of overt subjects, undermining the possibility that the loss of verbal inflection was the primary trigger for the loss of null subjects in this dialect: only 15% (54/380) of the clauses with a plural overt subject in the 19th data did not show overt agreement between the verb and an overt subject.⁴ Crucially, all these cases of agreement mismatches involve unaccusative (20d) or existential/locative verbs (20a-c) in the third person. Most of them are VS clauses:

- (20) *Non-agreement between the verb and subject in 19th-century Goiás BP:*
- a. Dia 13 de tarde esteve aqui Dr. Azeredo e o Joaqm. F.
 Day 13 of afternoon was-3SG here Dr. Azeredo and the Joaquim Ferreira.
 ‘On February 13th in the afternoon, Dr. Azeredo and Joaquim Ferreira were here.’
- b. Dia 14 esteve aqui o Luiz de Castro e Lulu Pitaluga, denoite
 Day 14 was-3SG here the Luiz de Castro and Lulu Pitaluga, of-night
 ‘On February 14th in the evening, Luiz de Castro e Lulu Pitaluga were here.’
- c. Lulu e o Cavalcante veio aqui.
 Lulu and Cavalcante came.3SG here.
 ‘Lulu and Cavalcante came here.’

⁴ Given the subsequent more widespread (albeit not complete) loss of overt verbal agreement across dialects of BP, especially in the 20th century, it could have contributed to other changes in the grammar of Goiás BP as well.

- d. Veio aqui Lulu e o Cavalcante.
 Came.3SG here Lulu and the Cavalcante.
 ‘Lulu and Cavalcante came here.’

Given the syntactic-semantic properties of unaccusative and existential verbs, a possible explanation for the absence of agreement in cases of SV order with these verbs in the 19th-century grammar would be that the valuation of ϕ -features in T is no longer obligatory with these verbs, so the only requirement in structures with unaccusative and existential verbs is that a DP satisfies the EPP-feature in spec TP (when this does not happen, a locative element does it, as proposed above). This reinforces our hypothesis that the crucial trigger in the rise of partial null subjects in BP grammar, at least in the Goiás dialect, was the loss of the D-feature in T. This finding also relates to Roberts’ (2010) argument for the role of the D-feature in the specification of ϕ -features in consistent NSLs.

- (21) If a category α has D[def], then all α ’s ϕ -features are specified.

Roberts (2010) argues that verbal impoverishment removes certain ϕ -features from a head, which could be responsible for some constraints in the licensing of null subjects. However, considering Roberts’ proposal in (21) that the morphological richness of a given NSL is dependent on the presence of a D-feature in that language, we can infer that the current loss of verbal morphology in the BP grammar (especially if it became more prominent primarily by the 20th century), as observed by Duarte (2000), could in fact be the outcome of the historical loss of the D-feature in T in the BP grammar, rather than a primary trigger for it.

4.4 SE-constructions

The 18th-century data shows a productive use of *SE*-constructions (19.36%), primarily with passive *SE*-construction as in (22), while the 19th-century data lacks *SE*-constructions with passive interpretation entirely, and shows very few uses of impersonal *SE*-constructions (only 1.2%).⁵ The 19th impersonal constructions include only a few uses of impersonal *SE*-constructions (23a) and impersonal null subject constructions in 3rd-person singular (without *SE*, (23b)).

- (23) *Passive SE-construction in 18th-century Goiás BP:*
 Pellas Arvores da vezinhança do Povo, se ouviam continuadas vozes dos meninos
 Viva sua Excellencia
 Through trees of-the neighborhood of-the people, SE heard-3PL continued voices of-the boys
 Live your Excellence
 ‘Through the trees of the village’s neighborhood, one heard the steady voices of the boys:
 Long live Your Excellence.’

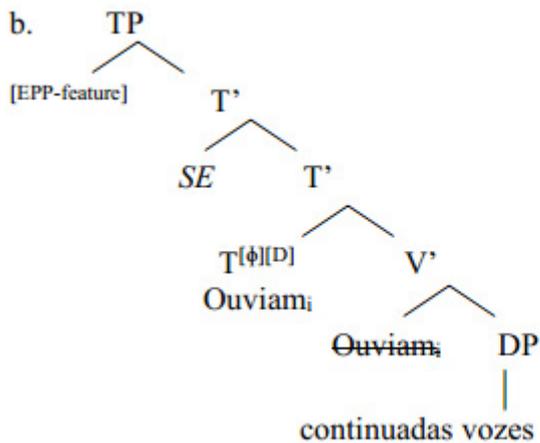
⁵ Although we have used a sample of 1250 sentences from the 19th-century manuscript in the current study, there is no evidence of passive *se* constructions in the entire manuscript, which was written by the author over the course of 50 years.

- (24) *Impersonal SE (24a) and impersonal null subject (24b) in 19th-century Goiás BP:*
- a. Dia 18 Maria Altina fa. do Snr. Luiz Jardim morreu. Dia 19 enterrou-se.
 Day 18 Maria Altina daughter of-the Mr. Luiz Jardim died. Day 19 buried-3SG-SE
 ‘On the 18th, Maria Altina, daughter of Ms. Luiz Jardim, died. On the 19th they buried her.’
- b. Dia 17 Faleceu ó Cadête Candido Gonsaga, e __ enterrou dia 18
 Day 17 died the cadet Candido Gonsaga, and buried-3SG day 18
 ‘On January 17th, the cadet Candido Gonsaga died, and on the 18th he was buried.’

Contrary to several studies of *SE*-constructions in BP (cf. Galves 1987; Nunes 1990; Martins & Nunes 2016; among others), we found that the 19th century data from Goiás lacked *SE*-constructions with passive interpretation (showing a change from the 18th century data), and this was linked to an overall impoverishment of the BP verbal paradigm (which in our data is restricted to unaccusative or existential verbs). Building upon insights from Holmberg (2010), we propose instead that the loss of the D-feature in T in the BP grammar is also involved in the loss of passive *SE*-constructions, the decrease of impersonal *SE*-constructions, and the rise of an innovative kind of construction in BP in comparison with EP, namely impersonal null subject constructions in 3rd-person singular, as in (24b), which are apparently restricted to partial NSLs (see Holmberg 2010). According to Holmberg (2010), in partial NSLs the probe-goal relation between T and a null pronoun ϕ P does not provide a definiteness value to the subject, and the result of this operation can be an indeterminate null pronoun in the third person singular in the subject position.

In the case of *SE*-constructions with both passive and impersonal interpretation in the eighteenth-century BP grammar, we suggest that the D-feature in T is valued by the internal DP argument, so that the derivation does not generate an indeterminate null pronoun in spec TP (which is not allowed in a consistent null subject grammar). In addition, V must to move to T, valuing the ϕ -features in T and satisfying the EPP-feature of spec TP, as illustrated in (25) (the DP internal argument of impersonal and passive *SE*-constructions must also Agree in ϕ -features with T, as supposed by their match in overt agreement). The *SE* pronoun arguably establishes a medio-passive interpretation for the *SE*-constructions (with or without verbal agreement).

- (25) *Medio-passive constructions (passive-SE) in the 18th century BP grammar:*
- a. Se ouviam continuadas vozes dos meninos ‘Viva sua Excelência’.
 SE heard-3PL continued voicesof-the boys Live your Excellence
 ‘The steady voices of the boys were heard: Long live Your Excellence.’



5. MAIN FINDINGS AND CONCLUSION

Given the research questions in this paper, there are three considerations to be made regarding the loss of null subjects in Goiás BP. First, we argue that the loss of null subjects in the Goiás dialect of BP is crucially linked to the loss of the D-feature in its grammar in the 19th century. Therefore, the sharp increase of overt subjects in our 19th century data can be explained by the requirement of a syntactic element in TP to satisfy the EPP-feature of T in languages without a D-feature in T. If a language does not have a D-feature in T (as in partial-NSLs and non-NSLs), the EPP-feature will be checked in Spec, TP by a lexical DP (or by another maximal projection that can satisfy this requirement). Second, the D-feature in T (its EPP-feature) was satisfied by V-movement to T in the 18th-century BP, a consistent NSL (possibly like other consistent NSLs)⁶, but not in 19th-century Goiás BP, already a partial NSL (without a D-feature in T). The loss of free verb-subject inversion between the 18th and 19th-century would have led to the loss of D in T in the 19th-century Goiás BP; as a consequence, the inflectional head T began to value its ϕ -features (person and number) without valuing any feature of definiteness capable of satisfying the EPP-feature in specifier of TP. Given the lack of a D-feature in T in partial NSLs, null subjects in 19th-century Goiás BP either needed to be licensed by a co-referent antecedent (to obtain a referential reading) or otherwise they triggered an indefinite interpretation. In this respect, the 19th century data lack *SE*-constructions with medio-passive interpretation and plural verbal agreement entirely, and already show use of impersonal null-subject constructions in 3rd-person singular, without verbal agreement and without the *SE* pronoun. However, the partial null subject grammar of 19th-century Goiás BP arose independently of verbal agreement impoverishment (see sections 4.3 and 4.4): in general, constructions with transitive verbs in the 19th century did not show cases of agreement mismatches. Altogether, these results provide new empirical evidence for the emergence of a BP dialect as a partial NSL as early as the second half of the 19th century.

⁶ However, V-to-T movement cannot be restricted to NSLs. Non-NSLs, such as French, require (inflected) verb raising to T. French, however, does not have ϕ Ps (null pronouns; see (3)).

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