

Null Subjects in European and Brazilian Portuguese¹

PILAR BARBOSA
MARIA EUGÊNIA L. DUARTE
MARY A. KATO

Abstract

The goals of this paper are twofold: a) to provide a structural account of the effects of the informal ‘Avoid Pronoun Principle’, proposed in Chomsky (1981: 65) for the Null Subject Languages (NSLs), and b) to compare, in European and Brazilian Portuguese (EP and BP), the distribution of the third person pronouns in its full and null forms, to check whether in written corpora BP incorporates signs of the ongoing loss of the null subject, largely attested in its contemporary spoken language. The strong theoretical claim is that in the Romance non-NSLs the pre-verbal subject is sitting in Spec of IP, while in the Romance NSLs it is Clitic Left-Dislocated (or is extracted by A-bar movement if it belongs to a restricted set of non-referential quantified expressions). The paper provides quantitative evidence that BP is losing the properties associated with the Null Subject Parameter. In its qualitative analysis, it shows that the contrasts between EP and BP are easily accounted for if the two derivations are assumed and if the null subjects in the two varieties are considered to be of a different nature: a pronoun in EP and a pronominal anaphor in BP.

0. Introduction

This paper provides a structural account of the effects of the informal ‘Avoid Pronoun Principle’², proposed in Chomsky (1981: 65) for Null Subject Languages (NSLs). We argue that this principle can be eliminated in favor of

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² In fact, we can say that in BP the existing null subjects do not derive from a structural constraint, but can instead be interpreted as having a stylistic nature (cf. Kato, 1996) .

more general principles once the standard theory of the Null Subject Property is modified along the lines suggested in Barbosa (1995, 2000), Kato (1999), as well as Pollock (1997) and Alexiadou and Anagnostopoulou (1998). We compare the distribution of overt *vs.* null subject pronouns in European Portuguese (EP), a prototypical NSL (cf. Barbosa 1995, 2000), and Brazilian Portuguese (BP), a variety that has been shown to be losing the null subject property (cf. Duarte 1995, 2000; Kato 1999, 2000). Our comparative study brings together quantitative as well as qualitative analyses. First we present a quantitative study based on newspaper interviews in the two varieties; secondly, we examine a set of predictions made by the theory mentioned for the two varieties, concluding that these are largely confirmed, a fact that we take to provide additional support for the theory assumed.

The paper is organized as follows: section 1 contains the authors' claims and assumptions about the structure of the clause in EP and BP; section 2 contains the description and interpretation of the distribution of null and expressed subjects in the two varieties; section 3 tests the theory assumed with additional grammatical facts. The paper concludes with a brief discussion of some of the questions raised by the overall approach defended.

1. The subject position in European and Brazilian Portuguese

1.1. European Portuguese (EP) and the Null Subject Parameter

The Null Subject Languages (henceforth NSLs) of the Italian type have been shown to display the following cluster of properties³ (cf. Rizzi 1982, Jaeggli 1984, Burzio 1986, Kenstowicz 1987):

- (1) a. phonologically null subjects;
 b. SV, VS order alternations (so-called “free-inversion”);
 c. lack of *that*-trace effects: extraction is from post-verbal position (see also Campos 1997).

The following contrasts between English, a non-NSL, and EP illustrate these properties:

- | | | |
|-----|--|----------------|
| (2) | a. Telefonaram
‘They called.’
b. *Called. | EP |
| (3) | a. Telefonou o João.
b. *Called John.
c. O João telefonou.
‘John called.’ | EP
EP
EP |

³ Another property is clitic climbing (cf. Kayne 1989), which will not be discussed here, but see Duarte *et al.* (this volume) and Galves *et al.* (this volume).

- (4) a. *Which student did you say that bought a computer?
 b. Que aluno disseste que comprou um computador? EP

The lack of *that*-trace effects exhibited in (4b) generalizes to all of the Romance NSLs. Rizzi (1982) and Jaeggli (1984) pursue an account of this contrast based on the claim that the subject in the NSLs is extracted not from the pre-verbal position but rather from the post-verbal position. In fact, Jaeggli (1984), Burzio (1986) and Campos (1997) show that it is not simply the case that the subject *may* be directly extracted from post-verbal position in order to evade the *that*-trace effect; rather, subject extraction *never* proceeds from pre-verbal position in a NSL⁴.

Another property that distinguishes the NSLs from the non-NSLs is that pronouns are not generally used to co-refer with a matrix subject. Thus, the most natural reading for (5a) is the one in which someone other than John bought a computer. When the anaphoric reading is the one intended, the null subject is used. In English, however, pronouns are not so constrained (cf. (6)):

- (5) a. O João disse que ele comprou um computador.
 b. O João disse que comprou um computador.

- (6) John_i said that he_{i/k} bought a computer.

These facts have been attributed to the Avoid Pronoun Principle (cf. Chomsky 1981: 65), which was originally formulated as an informal, non-structural principle. Two independent studies on Portuguese have attempted to provide a structural basis for the effects of the Avoid Pronoun Principle as it applies to Null Subject Languages. One is on European Portuguese (cf. Barbosa 1995, 2000) and the other on the contrast between European and Brazilian Portuguese (cf. Kato 1999). Setting the details of each analysis aside, both authors have argued, on independent grounds, that “rich” agreement in the NSLs is invariably pronominal in the sense that, in addition to a full set of *phi*-features, it has a nominal feature. Since Agr is [+N], it is

⁴ Burzio (1986: 165) notes that subjects in Italian are *never* extracted from pre-verbal position (see also Campos 1997 for arguments from Spanish). Consider the following Italian sentences:

- (i) a. *(Ne_i) sono cadute [tre —_i]
 NE are fallen three
 b. Tre (*ne) sono cadute.
 ‘Three of them have fallen.’
 (ii) [Quante —_i] *(ne_i) sono cadute?
 how many NE are fallen
 ‘How many of them have fallen?’

(ib) shows that *ne*-cliticization is not compatible with a pre-verbal subject in Italian. The fact that only the post-verbal form (ia) has a *Wh*-moved counterpart shows that the subject *can't be* extracted from pre-verbal position.

capable of checking the EPP⁵ feature in T/I, via V+Agr to T raising⁶. Thus, a sentence such as (2b), repeated here as (7a) is analyzed as in (7b), where the agreement affix checks the EPP and “identifies” an empty category in Spec-VP (in the representation below, *t* is the trace of the verb):

- (7) a. Telefonaram. EP
 b. [_{IP} [_{Infl} telefonar-**am** *i*] [_{VP} *ec*_i *t*]]

For Barbosa, the *ec* in [Spec-VP] in (7b) is *pro* locally bound to the agreement affix. For Kato, it is the trace of the agreement affix itself, which initially merges as the external argument of the verb, like a clitic. Here we won't dwell on this issue. For ease of exposition, we will refer to the empty category associated with rich AGR as *ec*, but the reader should keep in mind that, for all intended purposes, this category corresponds to a pronominal argument.

Since the agreement affix in EP is capable of checking the EPP in T, movement of the subject to Spec-IP is superfluous, thus being ruled out by economy considerations. Hence, lexical subject arguments remain *in situ* in which case the resulting configuration is a post-verbal subject construction (note that V raises to T in Romance (Belletti 1990); in the representation below, *t* is the trace of the raised verb):

- (8) a. Telefonou a Maria EP
 called the Maria
 b. [[_{Infl} telefonou *i*] [_{VP} *t*_i a Maria]]

Under this analysis, SV(O) constructions are derived by means of independently attested mechanisms of argument fronting, namely CLLD (or A-bar movement in the case of bare QPs or focalized subjects (see Barbosa 1995, 2000)). Thus, an example such as (9a) in EP will have the representation in (9b), where the apparent subject is a base-generated topic doubled by the *ec* in Spec-VP construed with agreement affix:

- (9) a. A Maria telefonou.
 b. [[A Maria_i] [_{IP} telefon-**ou**_i *ec*_i]]

(9) corresponds to a standard CLLD construction, where the base-generated DP is licensed by “rules of predication” in the sense of Chomsky (1977). IP contains an ‘open’ position satisfied by the entity referred to by the dislocated DP (see Iatridou 1991 and Raposo 1997, among others, for the suggestion that CLLD constructions are licensed by predication). Under this

⁵ The EPP, or the Extended Projection Principle, requires that the D/N feature of T be checked in overt syntax.

⁶ Under current terms (Chomsky 1999) this amounts to saying that the features of the agreement affix are [+interpretable].

approach, properties (1b) and (1c) of the cluster of features associated with the Null Subject property are side effects of the same phenomenon. Since the real A-position for subjects is the post-verbal position, *Wh*-movement is expected to take place from this position and no other; as for the SV/VS alternation, it results from the CLLD option, which is independently available⁷.

One of the major consequences of this proposal is that pre-verbal (non-focalized) subjects in the NSLs are topics⁸, i.e., are interpreted as topics (unless they belong to a restricted set of quantified expressions which are fronted to pre-verbal position by A-bar movement). In this perspective, the Avoid Pronoun Principle simply reduces to the preference for not introducing a pronoun as a topic unless it is required to signal topic switch or for emphasis/empathy (cf. De Oliveira 2000)⁹.

1.2. Brazilian Portuguese (BP) and the Null Subject Parameter

Duarte (1993, 1995) shows that spoken Brazilian Portuguese (henceforth BP) is gradually displaying an increase in the use of overt pronominal subjects, even with non-human antecedents. These appear in contexts where a null subject would show up in EP, namely when they are anaphorically related to a matrix subject.

- (10) a. E ele_i precisou ir ao banheiro. Quando ele_i viu o que
and he needed go to-the bathroom. When he saw what
que era o banheiro, ele_i ficou apavorado BP
that was the bathroom he was terrified
'And he had to go to the bathroom. When he saw what
the bathroom looked like he was terrified.'
- b. [A casa]_i virou um filme quando ela_i teve de ir abaixo. BP
the house turned-into a movie when it had to go down
'The house became a movie when it was demolished.'

⁷ By property (1c) we mean 'the fact that subjects are extracted from post-verbal position' and not the *that*-trace effect by itself. As we shall see, BP doesn't have the *that*-trace effect and yet it is gradually losing post-verbal subjects. We assume that other factors can determine the lack of the *that*-trace effect in a language. Extraction from post-verbal position is but one of them.

⁸ Maybe a more general denomination would be *Thema*, as it is not restricted to referential terms.

⁹ In effect, it has been often noted (Brito & Duarte 1983, Britto 1994, Âmbar 1988, Calabrese 1990, Saccon 1993, Pinto 1994, Samek-Ludovici 1994, Belletti & Shlonsky 1995) that pre-verbal subjects in the NSLs tend to be topics whereas post-verbal subjects are *foci*. Under this analysis, the focalized reading of the post-verbal subject follows from the fact that it occupies the *in situ* position, thus falling under the nuclear scope in semantic representation (see below).

Figure 1. OVERT PRONOMINAL SUBJECTS THROUGH SEVEN PERIODS

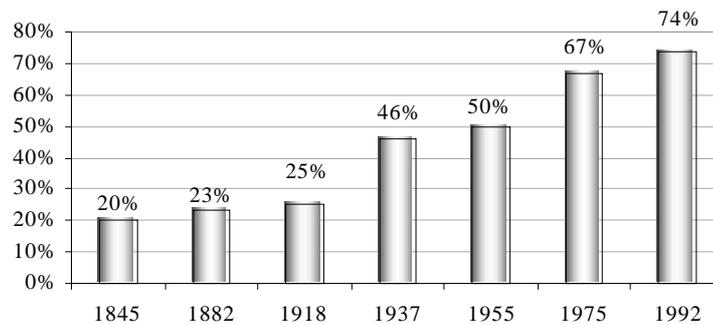


Figure 1 (adapted from Duarte 1993: 112) shows that the rate of overt pronominal subjects in the first half of the 19th century is 20%; by the end of the century this rate has increased to 74%¹⁰.

This tendency to fill the subject position with pronouns is accompanied by the emergence in speech of subject LD constructions with doubling by an overt pronoun, as illustrated below:

- (11) a. [A Clarinha]_i ela_i cozinha que é uma maravilha. BP
the Clarinha she cooks that is a wonder
‘Clarinha, she cooks wonderfully.’
- b. Então [o Instituto de Física]_i ele_i manda os piores professores...
then the Institute of Physics it sends the worst teachers
[Os melhores]_i eles_i dão aula no curso de matemática. BP
the best they give class in-the course of mathematics
‘Then the Institute of Physics it sends the worst professors...
The best, they teach in mathematics.’
- c. Eu, eu sinto demais isso. BP
I I feel too-much that
‘Me, I feel that too much.’

¹⁰ The *corpus* analyzed came from popular plays. Duarte (1995) and Duarte (2003) confirm the results obtained for the more recent plays, written in 1992, by examining oral contemporary data produced by college-educated and middle-level educated adult speakers, born in Rio de Janeiro, confirming an ongoing process of change. All the analyses presented here exclude coordinated structures with co-referential subjects, since a null subject in such structures is not an exclusive property of NSLs.

only be possible in EP as afterthoughts or when the speaker is hesitating, with a very heavy break between the first DP and the pronoun. In fact, Duarte (1995) points out that, in a study by Duranti & Ochs (1979), not a single example of such a structure was found in a sample of spoken Italian.

On the other hand, it is well known that one of the characteristics of spoken French is the occurrence of Left Dislocated (LD) subjects (doubled by a subject clitic). Duarte (1995) mentions a study by Barnes (1986), based on a *corpus* of colloquial French, which concludes the following¹⁴:

- among the dislocation constructions found in the *corpus*, the most frequent of all is Subject LD: 81% of the dislocated structures found;
- it is not the case that this construction only applies to DPs that are “given” or “old” information; it may be used to introduce new referents and it doesn’t require contrastive focus (cf. 15 below);
- the structure is not associated with a special intonational contour and a pause may or may not occur between the dislocated DP and the rest of the clause;
- it may occur in embedded clauses (cf. 16a,b);
- the dislocated element may be a pronoun (cf. 16c):

(15) On était obligé, [le mec]_i il_i m’a poussée!
 one was forced, the guy he me has pushed
 ‘We had to, the guy he pushed me.’ [Barnes, ex. (15), *op.cit.*: 217]

(16) a. Tu sais, les énormes bottes [comme [Jean-Marc] il_i a].
 ‘You know the enormous boots like Jean Marc he has.’
 [Barnes, ex. (17a), *op.cit.*: 220]

b. J’ avais un philosophe, un type [dont [la matière principale]
 I had a philosopher, a guy whose the subject major
 c_i’est la philosophie].
 it is the philosophy
 ‘I had a philosopher, a guy whose major subject it was
 philosophy.’ [Barnes, ex. (17b), *op. cit.*: 220]

c. Moi je trouve que [la cuisine]_i c_i’est l’endroit le plus important
 me I think that the kitchen it is the place the most important
 d’une maison.
 of a house
 ‘Me I think the kitchen it is the most important place in a house.’
 [Barnes, ex. (8), *op.cit.*: 213]

Regarding BP, Duarte’s (1995, 1998) studies of oral data show that there has been an increase in the frequency and scope of this construction, particularly in the speech of the younger generations. Subject pronouns may co-refer with syntactically adjacent NPs (cf. 17a-b) and pronouns (cf. 11c and

¹⁴ The translations into English are from the author of the original text.

12) with no focal interpretation, with or without an intervening pause. Like in French, such constructions may also occur in embedded sentences (17a-b):

- (17) a. ...é porque existe uma filosofia [que [o preço]_i ele_i tem
is because there-is a philosophy that the price it has
uma paridade]
a parity
'It's because there is a general belief that the price it has a parity.'
- b. Então [se [esse sistema de proteção]_i ele_i existe] pode ter sido...
so if that system of protection it exists] it-could have been
'So, if that system of protection it exists, it could have been...'

In addition, dislocated DPs are not restricted to definite reference: they can also be indefinite (18a-c) or arbitrary (19):

- (18) a. Eu acho que [um trabalho]_i ele_i teria que começar por aí.
I think that a job it would-have-to start from there.
'I think that a job it would have to start from there.'
- b. [Um homem comum]_i ele_i tem um conforto compatível com a
a man common he has a comfort compatible with the
dignidade de uma pessoa humana, entendeu?
dignity of a person human, understood?
'An average man he has a comfort that is compatible with the
dignity of a human being, understood?'
- c. Eu acho que [qualquer professor]_i ele_i deve falar claro e
objetivamente.
I think that any professor he should talk clearly and objectively
'I think that any professor he should talk clearly and objectively.'
- (19) **Você**, no Canadá, **você** pode ser o que você quiser.
You in-the Canada, you can be whatever you want.
'In Canada, you can be whatever you want.'

At this point, it is worth noting that this kind of subject dislocation started to emerge in French at the same time that the language became a non-NSL (Roberts, 1993). Using Roberts's data, Kato (1999) shows that Old French (OF) started like BP, doubling the subject with quasi-homophonous strong and weak pronouns when it lost the null subject, replacing the strong ones with dative forms only in Modern French (MF):

- (20) a. Jou, Agr[+ pronominal] {OF}
b. Jou, je Agr[- pronominal] {between OF and MF}
c. Moi, je Agr[- pronominal] ... {MF}

What happened in French and in BP seems to confirm our hypothesis that pronominal Agr and weak subject pronouns are morphological “doublets” in the sense of Kroch (1994). Now we see why the appearance of double subject constructions in modern BP is accompanied by the increasing tendency to fill pronominal subject positions as described in the previous section, which is related to the impoverishment of the inflectional paradigm in BP verbs. In other words, the emergence of “double subject” constructions is associated with a change in BP’s negative setting for the Null Subject Parameter. This fact by itself is not surprising, independently of the theory of the Null Subject Parameter that is adopted. If the language is losing the ability to have null subjects, it is not surprising that it should use an overt pronominal to double a dislocated subject. The real question that these facts raise for the theory is why this kind of construction is unattested in a NSL.

According to the standard analysis of Rizzi (1986) or any variation thereof (see in particular Costa 1998, Costa & Duarte 2002) that posits that pre-verbal subjects in the NSLs move to Spec-IP, the absence of subject doubling can only be explained by appealing to the informal principle Avoid Pronoun suggested in Chomsky (1981). In this respect, the theory of the Null Subject Parameter presented in section 1.1. and 1.2. fares better since it gives a principled explanation for the facts under discussion. Under this theory, what differentiates a non-NSL from a NSL is the way the EPP is checked: in a NSL, the EPP is checked by [+N] Agr, so subjects do not A-move to Spec-IP. (21a) is analyzed as in (21b):

- (21) a. A Clarinha cozinha que é uma maravilha.
 the Clarinha cooks that is a wonder
 ‘Clarinha cooks wonderfully.’
 b. [A Clarinha]_i [_{IP} cozinha_V [_{ec_i} t_V que é uma maravilha]] EP

In (21b), the DP *A Clarinha* is a LD topic construed with the empty category in spec of VP, which is the real subject argument. Since, in this perspective, pre-verbal (non-focused) subjects are themselves left dislocated, the only way to derive a sentence such as (22) below, in a NSL, is by having **two** base-generated topics, one of them a pronoun, as shown below:

- (22) a. A Clarinha, ela cozinha que é uma maravilha.
 ‘Clarinha, she cooks wonderfully.’
 b. [A Clarinha] [ela]_i [_{IP} cozinha _{ec_i} t_V que ...] EP

From a strictly structural point of view, (22b) is not predicted to be ungrammatical – we know that there can be more than one topic per sentence (see Raposo 1997, Rizzi 1997); it is simply redundant. And in fact, this observation captures the right native speaker intuitions: in EP, this kind of construction is perceived as redundant, and uttered only when the speaker is hesitating, requiring a rather heavy pause between the first DP and the pronoun. Thus, in this view, the Avoid Pronoun Principle simply reduces to

the preference for not introducing a pronoun as a dislocated topic unless it is required to signal topic switch or for emphasis/empathy (De Oliveira 2000).

On the other hand, in a non-NSL the EPP is assumed to be checked by overt movement of the subject to Spec-IP. Therefore, the representation of (21a) in BP is as in (23a), and that of (22a) as in (23b):

- (23) a. [_{IP} [A Clarinha]_i cozinha_V [_{VP} *t*_i *t*_V que é uma maravilha]] BP
b. [A Clarinha] [_{IP} *ela*_i cozinha [_{VP} *t*_i *t*_V que]] BP

In (23b) the pronoun *ela* is sitting in Spec-IP, so this structure is a regular subject LD construction (not a double topic construction such as EP (22)). This is why “double subject” constructions such as these are more common in BP than in EP. Thus, this hypothesis explains not only the high frequency of subject pronouns, but also the productive use of “double subjects”¹⁵, found in Duarte’s studies (1995, 1998) of BP, apparently violating the ‘Avoid Pronoun Principle’¹⁶.

2. Our comparative analysis

As the data consist of written material, the main expectation was to find a) a less advanced stage of change in BP than what Duarte has found for spoken language, and b) fewer differences between the two varieties of Portuguese. Nevertheless, our hypothesis is that aspects of I-language of both contemporary Portuguese and Brazilian speakers can still be revealed in our quantitative analysis of their E-language.

2.1. The rate of null subjects according to person

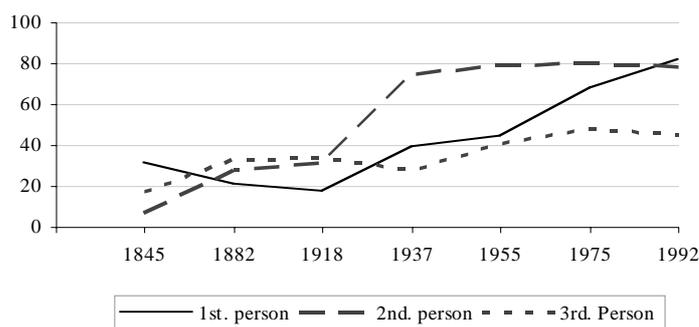
Duarte (1993) shows that the decrease of null subjects in BP affected the first and second persons more than the third, contrary to expectation, since the third person singular, as well as the second singular, is morphologically unmarked. As shown in Figure 2 below (adapted from Duarte 1993: 117), the rates of overt first and second person pronouns reach 82% and 78%, respectively, in the more recent play examined, whereas the rate for third person reaches 45%. This distinct behavior of the third person null subject led some Brazilian linguists to consider it a different type of empty category. Thus, for Figueiredo Silva (1996), Negrão & Müller (1996) and Modesto (2000) it is a variable, and for Ferreira (2000) and Rodrigues (2004) it is a

¹⁵ According to Britto (2000), while in Classic Portuguese SVO is the expression of a categorical predication and VSO/VOS are the expression ofthetic sentences, in BP the former is the expression ofthetic sentences while the latter is expressed as TopicSVO

¹⁶ Brazilian linguists show, moreover, that ‘free’ inversion is also being lost in BP and becoming restricted to unaccusatives (see Andrade Berlinck 2000; Figueiredo Silva 2000; Kato & Tarallo 2003, Kato 2000).

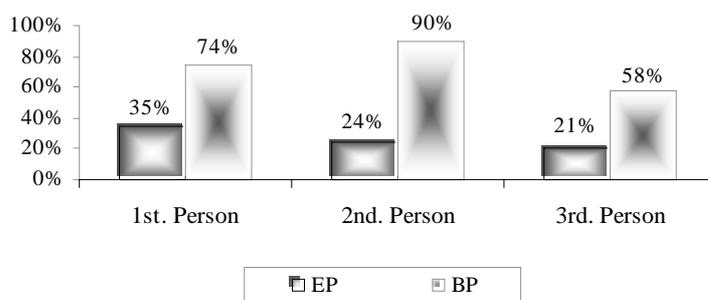
trace of A-movement. We will discuss these proposals against the *pronominal* analysis in the final discussion of this paper.

Figure 2. OVERT SUBJECTS ACCORDING TO GRAMMATICAL PERSON (%)



A comparison between spoken EP and BP confirms the stronger “resistance” of the third person, but at the same time reveals opposite behaviors regarding the expression of subjects in the two varieties, as shown in Figure 3 (adapted from Duarte 2000: 25, 2004: 147).

Figure 3. OVERT SUBJECTS IN SPOKEN "EP" AND "BP"



Note that the differences among the three grammatical persons in EP are not as great as in BP, but in both varieties, the third person is the one that presents the lowest number of filled occurrences. The differences between spoken EP and BP are more striking in the second person. This might be connected with one major difference in verbal agreement between EP and BP, namely the replacement in standard BP of the second person pronominal form

tu ('you'), 2nd singular, which is morphologically marked, with the former address form *você* (you), which combines with third person verbal agreement¹⁷. EP, on the other hand, uses both forms, preferably with the pronoun unexpressed, choosing one or the other according to social restrictions.

2.2. The results of the present analysis

Our study, based on a written *corpus* consisting of newspaper interviews¹⁸, focuses on the third person, which was found in Duarte's studies of BP to still license a substantive rate of null subjects in spoken language.

The rate of overt and null third person subjects in each variety was found to be the following:

Variety	Null subjects	Overt subjects	Total
EP	126 (78%)	36 (22%)	162 (100%)
BP	63 (44%)	79 (56%)	142 (100%)

Table 1. Occurrences of null and overt subjects in EP and PB

It is worth noting that, in written texts, the number of occurrences of overt pronominal subjects in BP is greater than in EP (56% vs 22%); this rate is very close to the one obtained for the third person in the contemporary popular plays studied by Duarte (1993, 1995): 55% (cf. figure 2) and spontaneous speech: 58% (cf. figure 3).

Now let us consider the contexts where significant differences can be found between BP and EP.

One major condition that contributes to the difference between null and overt pronouns is animacy. In this regard, the results are striking. When the referent is [-animate], EP shows, in the sample analyzed, 97% of null subjects. The rate of 3% of overt [-animate] subjects corresponds, in fact, to a single occurrence, illustrated in (24a). In other words, overt subject pronouns in EP are almost invariably [+animate]. Considering that [-animate] entities are rarely chosen as topics in human discourse, this result fits in well with Barbosa and Kato's theory that expressed subjects in EP, and other NSLs, are external to IP, and are frequently interpreted as topics. The result also fits well with BP, where, according to Kato (1999), Spec of IP can have weak pronouns, which can be either [+animate] or [-animate]. In fact, 43% of the [-animate] subjects in the sample analyzed for BP are overt as shown in (24b).

¹⁷ Most regions of the country that keep the pronoun *tu*, combine it, in spontaneous speech, with the same unmarked third person verb form used with *você* (*tu/você fala* – you speak)

¹⁸ The interviews appeared in magazines enclosed in Sunday editions of newspapers from Lisbon (*O Público*) and Rio de Janeiro (*Revista Domingo*) in 1999 and 2000.

- (24) a. A história da vida de um indivíduo é determinante na forma
 the story-of-the life of an individual is decisive in-the way
 como se reage a[o traumatismo]_i. **Ele_i** pode causar a retracção,
 how one reacts to-the traumatism. it can cause the retraction
 a inibição... EP
 the inhibition...
 ‘The story of the life of an individual determines the way one
 reacts do traumatism. It can cause retraction, inhibition...’
- b. A minha contribuição foi colocar o samba_i no lugar que
 the my contribution was to-place the samba at-the place that
ele_i está hoje. BP
 it is today
 ‘My contribution was to restore the prestige of samba.’

Another relevant factor to distinguish the distribution of null and expressed pronouns in EP and BP is the position of the antecedent. We considered four structural conditions¹⁹:

- Pattern I: the antecedent of the null subject is the subject of the matrix clause;
 Pattern II: the antecedent is the subject of the previous adjacent sentence;
 Pattern III: the antecedent is the subject of a previous, non-adjacent sentence.
 Pattern IV: the antecedent is in the previous adjacent sentence, but is functionally distinct from the null subject;

The results for these patterns can be seen in Table 2:

Pattern	EP	BP
I	1/40 (3%)	5/23 (22%)
II	6/55 (11%)	20/48 (42%)
III	8/28 (29%)	21/28 (75%)
IV	8/24 (33%)	13/23 (57%)

Table 2. Overt subjects according to structural context

The percentage difference shown in table 2 is expected under Kato’s (1999) theory: EP favors null subjects in every structural context. BP, on the other hand, prefers an overt weak pronoun in [Spec-IP], not only in the most unfavorable contexts for co-reference but also in structures with expected referents, which is not the behavior of a NSL (cf. Calabrese 1986). Let’s

¹⁹ The analysis of structural patterns excluded sentences where the null subject was not an option:

- (i) É se eu tivesse [um filho]_i, e ele_i não conseguisse entrar numa universidade de
 and if I had a son and he not could enter in-a university of
 cá, também o mandava para a Espanha. (EP)
 here, also (I) him sent to the Spain.
 ‘And if I had a son and he couldn’t enter a university here, I would send him to Spain too.’

examine the results for each pattern. The examples for each variety show a null subject in (a) and an overt subject in (b).

Regarding Pattern I, the difference between the two varieties is striking: while EP shows only 3% of overt pronouns, corresponding to one occurrence (25b), BP shows 22%²⁰. In EP the null subject, assumed to be the Agreement inflection, will be represented in the examples as a verbal \emptyset -affix, while for BP the null subject will be represented as a pre-verbal \emptyset -category

- (25) a. Ela_i costumava sentar-se em cima da cama com seu *tricot*,
 she used (to) sit-refl on the bed with her knitting
 enquanto dava- \emptyset _i lições a um de nós. EP
 while (she) gave classes to one of us.
 ‘She used to sit on the table with her knitting while
 she taught one of us.’
- b. [O centro português de fotografia]_i; só apoia determinados
 the center portuguese of photography only supports certain
lobbies ou figuras que **eles**_i consideram importantes²¹. EP
 lobbies or people that they consider important
 ‘The Portuguese photography centre only gives support to lobbies
 or to individuals they consider to be important.’
- (26) a. Mas as pessoas querem continuar como \emptyset _i estão a
 but the people want to-continue as (they) are at
 qualquer preço. BP
 any price
 ‘But the people want to go on they way they are at any price.’
- b. Eu sinto que onde quer que **eles**_i estejam **eles**_i estão me dando
 I feel that wherever they are they are me giving
 muita força para continuar o trabalho em que **eles**_i tanto
 much strength to continue the work in which they so much
 acreditavam. BP
 believed
 ‘I feel that wherever they are they are giving me a lot of
 strength to continue the work they believed so much...’

As for Pattern II, in which the antecedent of the null subject is mentioned in a preceding sentence, thus being easily accessible as a discourse referent, the difference is even more remarkable. In this kind of environment, EP only shows 11% of overt subject pronouns whereas BP reaches 42%.

- (27) a. E [o prazer da escrita]_i foi-se embora. Está- \emptyset _i a voltar agora

²⁰ The null subject is represented in the examples as a pronominal affix, following Kato’s proposal, which eliminates *pro* as a descriptive category.

²¹ Note that the only overt pronoun found in the sample for Pattern I interpreted as the group of people that constitute the center.

- and the pleasure of writing went away. is to come back
 agora, lentamente. EP
 now slowly
 ‘And the pleasure of writing vanished. Now it is coming
 back slowly.’
- b. (...) *deviam-Ø_i transmitir-nos outros conhecimentos...*
 (the teachers) should transmit-us other knowledge..., EP
 No fundo eles_i funcionam um pouco como nossos pais.
 in fact they function a little like our parents
 ‘(teachers) should transmit knowledge to us... In fact
 they are somehow like parents to us.’
- (28) a. [O homem]_i finge que é um certo tipo de homem para escrever.
 the man pretends that is a certain type of man to write.
 Ou seja, Ø_i trai o homem. BP
 or he betrays the man
 ‘A man pretends to be a certain type of man in order to write.
 In other words, he betrays himself.’
- b. [O Dudu]_i é o devagar. **Ele**_i não bebe, não fuma, mas tem
 the Dudu is the slow. he not drinks, not smokes, but has
 outras virtudes. BP
 other virtues
 ‘Dudu is the good guy. He doesn’t drink, doesn’t smoke,
 but has other virtues.’

As we can see in (28a), BP still allows a null subject in an independent clause²². However, it requires the antecedent to be in an adjacent sentence. In EP, by contrast, there may be intervening sentences between the antecedent and the null subject (Pattern III). In this context, the rate of overt pronouns in EP is 29% against 75% in BP. The following examples, where the intervening sentences are underlined, illustrate the EP facts.

- (29) a. As coisas não têm corrido tão bem como [as Nações Unidas]_i
 the things not have run so well as the nations united
 queriam, quando na sua Carta resolveram-Ø_i preparar
 wanted when in-the their letter (they) decided prepare
 os povos para a autodeterminação e a independência. (...).
 the people for the selfdetermination and the independence (...)
A violência não pode ser dinamizadora da mudança. Mas muito
 the violence not can be propeller of-the change. but very
 rapidamente concluíram-Ø_i que todas as condições
 quickly (they) concluded that all the conditions
 estavam reunidas. EP

²² This type of data cannot be accounted for in theories that consider the empty category a variable or a trace, since these would require c-command conditions.

were gathered

‘Things are not going as well as the United Nations expected, when, in their Letter, they decided to prepare people for auto-determination and independence. Violence cannot be the propeller of change. But very quickly they concluded that all the conditions were gathered.’

- b. [Uma paciente]_i disse-me que o que a salvou foi o facto de duas a patient told me that what her saved was the fact of two amigas terem ficado sempre com ela. Ela_i tinha o tal sentimento friends having stayed always with her. she had that feeling de não existência, de transparência, de invisibilidade (...) EP of non existence, of transparency, of invisibility ‘A patient told me that what saved her was the support of two friends. She had that feeling of non existence, of transparency, of invisibility (...)’

- (30) a. Quando [as pessoas do Sul]_i descobriram o Brasil, as when the people of-the south discovered the Brazil, culturas se uniram. Conseqüentemente, hoje já não sou the cultures self-united. therefore, today (I) already not am mais uma criatura tão regional. ∅ Passaram_i a compreender more a creature so regional. (they) passed to understand melhor a cultura do Nordeste. BP better the culture of-the northeast ‘When southern people discovered Brazil, cultures mingled. Therefore, I’m no longer so regional. They began to understand northeastern culture better.’

- b. [As pessoas]_i estavam numa convivência desumana lá. A padaria the people were in a living inhuman there. the bakery já está funcionando, eles_i vão produzir o próprio pão. BP already is working, they go+agr produce the own bread ‘The people there lived under inhuman conditions. The bakery has already opened. They will produce their own bread.’

The function of the antecedent is another relevant factor (Pattern IV). When the antecedent is a subject, the rate of overt pronouns in EP is 33%; BP shows a rate of 57%. In other words, when there is no parallel function, the rate of null pronouns in EP is 67% and in BP 43%.

- (31) a. Fui vê-lo_i ao Aljube quando esteve-∅_i na tortura (I) went to-see him at-the Aljube when (he) was in-the torture do sono. E depois fechado naquelas celas onde as pessoas of-the sleep and then closed in those cells where the people mal cabiam e não se podiam ter de pé. EP barely fit and not self could have on foot

‘I went to see him at the Aljube when he was in the torture of sleep. And then, closed in those cells, where people barely fit and could not stand.’

- b. Mas estive muito tempo em jejum no que respeita a [essas but (I) was much time in fast in-that which respects to those personalidades]_i, porque elas_i estavam presas a contratos de personalities because they were attached to contracts of estação.
season. EP
‘But I avoided those personalities for a long time because they were engaged in other contracts.’

- (32) a. Gosto imensamente do trabalho d[o Chico]_i, Ø_j considero- (I) like+agr immensely of-the work of-the Chico, (I) consider- [o]_i um compositor com alma feminina. Ø_i consegue dizer coisas him a composer with soul female. (he) can+agr say things que somente a nossa alma feminina entende. BP
that only the our soul female understands.
‘I like Chico’s work immensely, I consider him a man with a female soul. He can say things that only a female soul can understand.’

- b. Já conversei com [alguns atores]_i e eles_i sempre se mostraram I already talked with some authors and they always self showed interessados, acessíveis. BP
interested, accessible
‘I have already talked to some authors and they were always interested and accessible.’

As we can see, the occurrence of overt pronouns in EP fits what is expected from a NSL: the overt pronoun is avoided unless the identification of a null subject is impaired. That explains why EP reaches an average of 30% in the most unfavorable patterns for a null subject. BP, on the other hand, shows 22% in the most favorable pattern (I) and 42% in pattern II. Pattern III reaches 75%, and IV, 57%, which means that lack of adjacency between the subject and its antecedent is the strongest context to favor the implementation of an overt pronoun in BP

2.3 Generalizations

Though *corpus* analysis involves E-language, our comparative analysis leads to the following structural and/or functional conditions that determine the distribution of overt and null subjects in EP and BP:

- a) Overt subject pronouns are almost always [+animate] in EP, while in BP they can be equally [+animate] or [-animate], which we attribute to the different positions of the subject in the two varieties;

b) Comparing Pattern I with the others, it becomes clear that the c-command relation between the antecedent and the null subject is the most favorable context for null subjects in both varieties, almost categorically disfavoring overt pronouns in EP, the exceptional cases having to do with emphatic strong ones, external to IP. Functionally, this is a context in which the topic of the main clause is maintained in the embedded clause;

c) The real variation domain of null and expressed subjects in both varieties is where no c-command relation obtains. Variation seems to be correlated with a functional factor, namely topic maintenance *vs.* topic shift (cf. De Oliveira 2000). When the antecedent of the null subject is in an adjacent clause and is a subject, we have a clear case of topic maintenance, and this is the second context where speakers of both varieties favor the null variant even though BP's rates for overt subjects are much more expressive (11% for EP and 42% for BP). When the null subject's antecedent is not in an adjacent clause or is in an adjacent clause but in a different function, there is topic shift. In either case the rates of overt subjects rise in both varieties: EP shows an average of 30% of overt subjects; BP varies from 57% if the antecedent has a different function to 75% if it is not in an adjacent clause.

The restrictions in the cases where no c-command relation is found are very similar to those found with subject ellipsis in an across-the-board relation: a) subjects in non-adjacent clauses and b) the antecedent of the null subject is not a subject:

- (33) a. *Quando o Pedro_i chegou, [o bar estava fechando],
 mas Ø_i disse oi para todo mundo. BP
 'When Peter arrived, the bar was closing, but he said hi to everyone.'
- b. *A Maria_i chegou com o Pedro_j, mas Ø_i disse
 que Ø_i não estava com fome. BP
 'Maria arrived with Peter, but he said that he was not hungry.'

3. Testing the theory

3.1. Introduction

Under the standard theory, a sentence such as (34a) in EP can have two different underlying structures: it could involve subject raising to pre-verbal position, as shown in (34b), or, as in (34c), it could be an instance of LD with doubling by a null pronoun (throughout, we use the notation *ec* to refer to the pronominal null subject licensed by the rich agreement features).

- (34) a. A Clarinha cozinha que é uma maravilha.
 the Clarinha cooks that is a marvel
 'Clarinha cooks wonderfully.'

- b. [_{IP} A Clarinha [_{I'} cozinha [_{VP} *t_i* que é uma maravilha]
- c. [A Clarinha]_i [_{IP} cozinha- \emptyset]_i [_{VP} *ec_i* que é uma maravilha]

This is so, because nothing in the grammar prevents (34c) from being generated. In fact, in a non-NSL such as French or BP both configurations are attested with the difference that the Left dislocated counterpart has an overt weak pronoun instead of the pronominal affix:

- (35) a. A Clarinha cozinha que é uma maravilha. BP
 the Clarinha cooks that is a marvel
 ‘Clarinha cooks wonderfully.’
 b. A Clarinha ela cozinha que é uma maravilha.
 ‘Clarinha, she cooks wonderfully.’
- (36) a. Pierre aime la musique.
 ‘Pierre loves music.’
 b. Pierre il aime la musique.
 ‘Pierre, he loves music.’

The analysis defended here, by contrast, posits that (34b) is not an alternative in EP due to the properties of Agr (see above), so the question that arises is whether there is independent evidence bearing on the issue of whether (34b) is or is not an option in EP. This question is not as straightforward as it might seem at first sight. In effect, the two structures at stake (34b,c) are not easily distinguishable on the surface, particularly when Duarte’s (1995, 1998) observations are taken into account: subject dislocation constructions in BP and colloquial French do not require marked intonation, may occur in embedded clauses and inside relative clauses (cf. (16a,b)) and are compatible with indefinite DPs. Thus, these tests cannot be used to detect subject LD (see Costa and Duarte 2002 for an argumentation against the LD analysis precisely along these lines).

There is, however, one classic test that has been used to decide between the two structures. It is well known that non-referential expressions are incompatible with LD. (37-38) contain French examples and (39a-b) illustrate the same point in BP:

- (37) a. *Quelqu’un il vient.
 someone he comes
 b. Quelqu’un vient.
 someone comes
 ‘Someone is coming.’
- (38) a. *Personne il n’a rien dit.
 no-one he not has nothing said
 b. Personne n’a rien dit.
 no-one not has nothing said
 ‘No one said anything.’

- (39) a. *Ninguém ele disse isso.
no one he said that
b. Ninguém disse isso.
'Nobody said that.'

Of the two configurations at stake, subject LD or subject in Spec-IP, only the former is sensitive to the referential properties of the DP (cf. (37a), (38a)). Now, it is precisely on the basis of this test that Barbosa (1996, 2000) motivates her proposal for EP. The basic relevant contrasts are the following:

- (40) a. Ninguém o viu.
b. *Ninguém viu-o.
'No one saw him.'

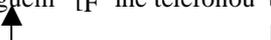
- (41) a. Quem o viu?
who him saw
'Who saw him?'
b. *Quem viu-o?

- (42) a. A Maria viu-o.
the Maria saw-him
b. *A Maria o viu.
'Maria saw him.'

It is well known that the position of pronominal clitics in EP varies according to context. When the subject is a non-referring QP or a *wh*-expression, proclisis is the only option (cf. 40-41). In all the other cases, enclisis is the pattern found (cf. 42).

Barbosa (1996, 2000) examines the different patterns of clitic placement in this variety and concludes that the set of expressions that triggers proclisis coincides with the set of expressions that are incompatible with LD. The fact that clitic placement is sensitive to the referential properties of the "subject" indicates that, in EP, pre-verbal subjects do not occupy the canonical position. If they did, no sensitivity to the referential properties of the subject should be expected (note that, in French or English, negative QP subjects occupy the same position as regular DPs). This is the reason why Barbosa (1996, 2000) defends that pre-verbal subjects in EP have only one of two options: they are either LDed (in which case the clitic follows the verb), or they are fronted to pre-verbal position by A-bar movement, in which case proclisis is obligatory (the reader is referred to the papers cited for details). Thus, (43a) below has the structure shown in (43b) and (44a) has the structure in (44b):

- (43) *Enclisis: LDed subject*
a. A Maria telefonou-lhe.
b. [[A Maria_i] [CP/IP telefonou-lhe *ec*_i]]

- (44) *Proclisis: A-bar extraction*
 a. Ninguém lhe telefonou.
 b. [FP Ninguém [F' lhe telefonou t]]
- 

In sum, clitic placement in EP appears to indicate that a sentence such as (42a) is not ambiguously analyzed as involving subject LD or overt subject raising to Spec-IP. In the sub-sections that follow, we will examine a set of predictions made by this analysis for the Null Subject Romance languages, on the one hand, and English/French, on the other. In the process, we will compare these predictions with those of the *standard analysis*, according to which pre-verbal subjects A-move to Spec-IP. In addition, we will check colloquial BP data against the same set of phenomena. The section is organized as follows: first we will analyze clausal projections that lack subject agreement and yet take an overt subject cross-linguistically, namely Gerund Absolute clauses; then we will examine the behavior of indefinite subjects in pre-verbal position; subsequently we will move on to emphatic pronouns and next we focus on the restrictions on the interpretation of subject pronouns as bound variables. The section ends with a discussion of relative clause extraposition from the preverbal subject position.

3.2. *Clausal projections that lack subject agreement*

In this section we will consider gerund absolute clauses of the kind illustrated below for EP:

- (45) Chegando a Maria, vamos embora.
 showing-up the Maria, we leave
 ‘As soon as Mary shows up, we leave.’

Absolute clauses offer an excellent test case for the subject LD analysis for two reasons. In the first place, the gerund and the participial forms lack *phi*-features; so, a referential *ec* is not immediately identified and hence not readily available. Now, since, in principle, subject LD relies on doubling by a referential null subject, it should not be easily available in these contexts. In addition to this, another factor conspires to prevent LD from occurring here, namely the difficulty of left adjunction to absolute clauses in general. The following examples illustrate this with adverb adjunction:

- (46) Vindo a Maria amanhã, podemos fazer as compras antes do
 coming the Maria tomorrow (we) can do the shopping before of-the
 fim-de-semana.
 weekend
 ‘If Mary comes tomorrow, we can do the shopping before the
 weekend.’

- (47) ??Amanhã vindo a Maria, podemos fazer as compras antes do
tomorrow coming the Maria (we) can do the shopping before of-the
fim-de-semana.
weekend

In view of this, the prediction of the LD analysis for these cases is that a preverbal subject should not be easily attested in these environments, and this is exactly what happens. In fact, there is a systematic contrast between the NSLs and the non-NSLs in these contexts. In both cases, an overt subject is licensed even though the verbal forms lack agreement morphology, but the position of the subject with respect to the verb varies: non NSLs are subject initial and NSLs are V/Aux initial:

- (48) English: S-Aux/V
Your brother *having called*, we left.
- (49) French: S-Aux/V
Ton frère *ayant téléphoné*, je suis parti.
- (50) Spanish: V-S
Habiendo resuelto **el juez** absolver al acusado el juicio concluyó
having decided the judge to acquit the accused the trial concluded
sin incidentes. [Hernanz 1991: 89]
without incidents
'The judge having decided to acquit the accused, the trial came to an
end without further incidents.'
- (51) Italian: Aux/V-S
Avendo **tuo fratello** telefonato, io sono rimasto a casa.
[Rizzi 1982: 128]
having your brother called I am stayed at home
'Your brother having called, I decided to stay at home.'
- (52) EP: V - S
Aparecendo a Maria, vamos embora
Showing up the Maria, we leave.
'As soon as Maria shows up, we leave.'

Recall from the introduction that, according to Barbosa (1995, 2002) and Kato (1999) the real A-position for subjects in NSLs is to the right of the inflected verb, so the prediction is that, whenever LD is not readily available, subjects should surface to the right of the inflected verb, if they can occur at all. In the case of the non-NSLs, the EPP is checked by overt movement of the subject, yielding the order Subject-Gerund. Of course, this is contingent upon deficient Agr being capable of checking the EPP (in NSLs). One piece of

evidence can be given in favor of this claim, namely the possibility of (53) below, with a weather verb:

- (53) Tendo nevado, fomos embora.
having snowed, we-left
'As it snowed, we left.'

The standard analysis, on the other hand, makes none of these predictions and relies on Aux/V-to-Comp (Rizzi 1982) to account for the word order facts in NSLs. However, the question remains of why the Null Subject Parameter should correlate with (overt) Aux-to-Comp. So far, we have seen no principled account for why this should be so (but see Belletti 1990).

That there is a relation between the Null Subject Property and these word order facts is further confirmed by the occurrence of examples such as (54) below in Old French:

- (54) Ayant ce bon homme fait tout son possible... [Roberts 1994]
having this good man done everything his possible
'This good man having done everything possible.'

Having established that the order Subject-Gerund in an absolute clause is associated with a negative setting for the Null Subject Parameter, we turn to BP. Interestingly, this order is emerging in the modern language, as evidenced by the following examples (cf. Britto, 1994)²³:

- (55) a. Você saindo do Brasil, a gente sente uma falta muito grande
you leaving from-the Brazil, we feel an absence very big
dessa parte de verdura.
of-this part of greens
'When you leave Brazil, you miss the variety of greens a lot.'
- b. O Pedro chegando, nós saímos.
the Peter arriving we leave
'As soon as Peter arrives, we leave.'

3.3 *Indefinites in pre-verbal position*

In EP indefinite expressions such as the one illustrated in (56) trigger enclisis:

- (56) Um homem comum engana-se frequentemente.
a man common mistakes-self frequently
'The average man often makes mistakes.'

In Barbosa's (1996, 2000) analysis, enclisis corresponds to subject LD, so (56) is analyzed as follows:

²³ Britto (1994) shows that, though the subject of the gerundive clause can be non-co-referential as in (54b), the occurrences with co-reference are much more productive.

(57) [um homem comum]_i; [IP engana-se *ec*_i]

As seen above, indefinites may appear in double subject constructions in BP, which suggests that they can be dislocated; thus, (57) is not problematic. The relevant examples are repeated below:

- (58) a. Eu acho que [um trabalho]_i ele_i teria que começar por aí.
I think that a work it would-have to start from there
'I think that a work would have to start from there.'
- b. [Um homem comum]_i ele_i tem um conforto compatível com a
a man common he has a comfort compatible with the dignidade
de uma pessoa humana, entendeu?
dignity of a person human, understood?
'The average man has a comfort that is compatible with the dignity
of a human being, understood?'
- c. Eu acho que [qualquer professor]_i ele_i deve falar claro e
I think that any teacher he should talk clearly and
objetivamente.
objectively
'I think that any teacher should talk clearly and objectively.'

The configuration suggested for (56) makes the following prediction: these indefinite subjects that trigger enclisis in EP should have wide scope with respect to a scope bearing element inside the clause. This is so because they are *base-generated* in a peripheral position (rather than moved). The relationship that is established between them and the clause is one of predication, so the expectation is that their scope should be frozen. Now consider the following English example:

(59) Look! A flower is growing in every pot!

This example shows that, in English, indefinite subjects may have narrow scope with respect to a scope bearing element inside the clause. The only reasonable interpretation of (59) is the one according to which, for each pot, there is a flower growing in it, that is, the narrow scope reading. In the EP counterpart to (59), however, the narrow scope reading is unavailable:

- (60) #Olha! Uma flor está a crescer em todos os vasos!
[*distributive reading]
look! a flower is at grow in all the pots
'Look! A flower is growing in every pot!'

(60) is very awkward, given that it tends to be interpreted under the non-distributive reading, which is absurd: the same flower can not grow in each pot. Thus, there is a clear contrast between English and Portuguese in this respect, so these facts are in line with the prediction made by the LD analysis.

Note, in addition, that, as also predicted by this theory, the narrow scope reading is possible when the indefinite is in post-verbal position²⁴:

- (61) Olha! Está a crescer uma flor em todos os vasos!
[distributive reading OK]
look! is at grow a flower in all the pots
'Look! A flower is growing in every pot!'

Similar observations hold in intensional contexts. Consider the following examples:

- (62) a. #Um computador foi-me prometido, mas nunca recebi nenhum.
a computer was-to-me promised but never got none
'A computer was promised to me but I never got one.'
b. Foi-me prometido um computador, mas nunca recebi nenhum.
was-to-me promised a computer but never got none

(62b), with a post-verbal subject, is fine. (62a), however is odd. We maintain that this is due to the fact that the indefinite falls outside the scope of the intensional verb. Since there is no other available reading for the indefinite

²⁴ João Andrade Peres (p.c.) points out that there are cases where a pre-verbal indefinite may be interpreted under the scope of a QP inside the clause:

- (i) a. Entre a uma e as cinco da manhã, uma brigada da GNR esteve a
between the one and the five in-the morning a brigade from-the GNR was to
vigiar todas as saídas da auto-estrada.
watch all the exits of-the highway
'Between one a.m. and five a.m. a GNR brigade controlled every exit in the
highway.'
b. Desde a meia-noite de ontem, um agente do SEF controla a bagagem de
since the midnight of yesterday an agent from-the SEF controls the luggage of
todos os passageiros.
all the passengers
'Since yesterday midnight a SEF agent controls every passenger's luggage.'

In (ia,b) it is possible to get the distributed reading. It is not clear to us why there is a difference between (57) in text, where the narrow scope reading is clearly disfavored, and these examples. In any event, all speakers agree that, in general, the wide scope reading is the most salient or default reading. We leave a more careful examination of examples such as (i) for future work.

There is one particular context where narrow scope is not difficult to get, namely generic sentences:

- (ii) a. Um polícia controla o trânsito em todos os cruzamentos.
'A policeman controls the traffic in every crossroad.'
b. À chegada ao aeroporto, um funcionário controla a bagagem de todos os
passageiros suspeitos.
'Upon arrival at the airport, a staff member controls the luggage of every
suspect passenger.'

We assume that an account in terms of a Generic Operator with sentential scope unselectively binding any variable within its scope (see, among others Carlson 1989) will take care of the narrow scope effect found in (iia,b).

besides the intensional one, the result is odd. Note that, whenever the indefinite can have a specific interpretation, the oddity disappears. This is what happens in (63), where ‘um’ is a partitive; hence, specific²⁵:

- (63) *Havia três computadores no escritório. Um foi-me prometido, mas acabei por nunca o receber.*
 ‘There were three computers in the office. One was promised to me, but I never got it.’

(63) is fine because the indefinite can be interpreted outside the scope of the intensional predicate. Now compare (62a) with its French counterpart:

- (64) *Un ordinateur m’a été promis, mais je n’en ai reçu aucun.*

According to our French informants, the pre-verbal indefinite in (64) may be interpreted intensionally. Thus, there is a contrast between French and EP regarding the available interpretations for pre-verbal indefinite subjects. These contrasts between French/English and EP are left unaccounted for under the standard theory, given that it posits that the pre-verbal subject A-moves to Spec-IP in EP as well as in French and English.

Finally, we discuss BP. According to the theory developed here, BP is predicted to be starting to behave just like French or English, with the subject A-moving to pre-verbal position. In effect, this prediction is borne out, given that (65a,b) are possible:

- (65) a. *Uma flor está crescendo em todos os vasos.* BP
 ‘A flower is growing in every pot.’
- b. *Um computador me foi prometido mas até agora não recebi nenhum.* BP
 none
 ‘A computer was promised to me but I didn’t get one until now.’

²⁰ When the sentence contains a modal, the non-specific indefinite may appear in pre-verbal position:

- (i) *Um computador seria muito útil aqui, mas nunca me deram nenhum.*
 a computer would be very useful here, but never me they-give none
 ‘A computer would be very useful here, but I never got one.’

We suggest that the conditional in EP contains a hidden modal with sentential scope. As in the case of Generic sentences, where the Gen Operator may have scope over the entire sentence, the variable introduced by the indefinite in (i) may be bound by the modal.

3.4. “Emphatic” Pronouns

Under the theory just sketched the real argument position for subjects in NSLs is to the right of the raised verb. Thus, a sentence such as (66a) below is analyzed as in (66b), where the subject pronoun occupies the *in situ* position (see Ordóñez 1997 and Costa 1998 for arguments that the subject occupies the *in situ* position in VSO sentences in Spanish and Portuguese):

- (66) a. Hoje lavam eles a louça.
today do they the dishes
b. [_{IP} lavam_i [_{VP} eles t_i a louça]]

It is well known that post-verbal subject pronouns in NSLs tend to be focused. In fact, (66a) means ‘Today it is them who will do the dishes’. Here we will not go into the complex matter of the distribution and interpretation of post-verbal subjects, given that there is a great deal of variation among the NSLs in this respect. For the present purposes, it suffices to observe that the focalized nature of the post-verbal subject can be captured under this analysis by the fact that they are “trapped” inside the VP. Diesing (1990) argued that constituents inside the VP fall under the Nuclear Scope in semantic representation. By hypothesis, the focalized interpretation of the post-verbal pronoun is due to their being mapped into the Nuclear Scope.

The subject pronoun can also occur after the object. In this case, however, it must bear prosodic stress:

- (67) Hoje lavam_k [_{VP} [a louça]_j [_{VP} ELES t_k t_j]].
today wash the dishes they

In line with Ordóñez (1997) and Costa (1998), we assume that the subject in (67) is inside the VP and that the object has moved out of the VP. The obligatoriness of prosodic stress is due to the fact that the pronoun is the most embedded element in the structure thus being assigned nuclear stress in PF.

Now, if indeed pre-verbal subjects are dislocated, nothing in principle should prevent them from being doubled by a post-verbal pronoun. In other words, the prediction that this theory makes is that the real cases of dislocation with doubling by an **overt** subject pronoun in a NSL should be doubling by a post-verbal pronoun. And in fact, such examples do exist, as shown below:

- (68) A Teresa escreveu **ela** o poema, ninguém a ajudou. EP
the Teresa wrote she the poem nobody her helped
‘Teresa wrote the poem herself, nobody helped her.’

In such examples, the pronoun retains the focused interpretation it normally has and this is why the reading obtained is emphatic. The EP example (68) displays VSO order, but VOS is also possible as in Italian, Catalan and Occitan (see Sola 1992 for an overview). In this case, the pronoun

must be stressed as is typically the case with subject pronouns in VOS order (cf. 67):

- (69) *EP*:
a. A Teresa escreveu o poema ELA, ninguém a ajudou.
the Teresa wrote she the poem nobody her helped
'Teresa wrote the poem herself, nobody helped her.'

Spanish

- b. Pedro abriu la puerta EL.
Peter opened the door HE
'Peter opened the door himself.' [Sanchez 1993]

Under the standard theory, these emphatic pronouns have been taken to be non-argument anaphors adjoined to VP (Piera 1987) or, alternatively, the "spell-out" of the trace of the moved subject (Burzio 1986). However, in non-NSLs such as English or French, emphatic pronouns are unattested:

- (70) a. *John wrote the letter HE
b. John wrote the letter himself.

- (71) a. *Jean l'a fait LUI.
Jean it has done him
b. Jean l'a fait lui-même.
Jean it-has done HIM-SELF
'Jean did it himself.'

Only complex SELF anaphors are allowed in that position in English or French. This difference between English/French and Spanish/EP could perhaps be dismissed as simply a matter of lexical choice: anaphoric emphatic pronouns are adjuncts, and whereas English/French chooses a complex SELF anaphor in these cases, EP/Spanish use a pronominal element. However, assuming that this is indeed the case, no difference in the distribution of English 'himself' (or French *elle/lui-même*) and the emphatic pronouns should be expected. Yet, there are striking differences between these two kinds of element.

In the first place, if emphatic pronouns are adjuncts, we should expect them to attach to any DP in the sentence, as happens with the English anaphor. However, this is not the case: emphatic pronouns cannot be attached to post-verbal subjects (cf. 72a) nor can they be associated with objects (cf. 72b); in this case, the complex SELF anaphor must be used (cf. 73):

- (72) a. *Apareceu a presidente ELA.
appeared the president SHE
b. *Falei com a presidente ELA
I-talked to the president SHE
(73) a. Apareceu a presidente ela própria.
appeared the president HERSELF
'The president herself showed up.'

- b. Falei com a presidente ela própria.
 I-talked to the president HERSELF
 'I talked to the president herself.'

(72a,b) are evidence that pronouns cannot occur as DP adjuncts. Moreover, (73a,b) show that EP does have a lexical counterpart to English *himself*, namely the complex SELF anaphor *ele/a-próprio/a*.

Another property that distinguishes emphatic pronouns from complex SELF anaphors is that the former, though not the latter, are subject oriented. Thus, the emphatic pronoun in (74a) can only be anaphorically related with the subject; this restriction does not apply to the complex anaphor in EP (74b) or English (75):

- (74) a. [A criança]_i foi felicitada pel[a professora]_k ELA_{i/*k}
 the child was congratulated by the teacher SHE
 b. [A criança]_i foi felicitada pel[a professora]_k ela própria_{i/k}
 the child was congratulated by the teacher herself
- (75) The girl was congratulated by [the teacher]_i herself_i

Thus, we conclude that emphatic pronouns are not adjunct anaphors. They are rather a particular type of anaphoric pronoun that is lacking in English/French, but present in the Romance NSLs. The existence of subject oriented emphatic pronouns in the NSLs follows naturally from the observation that nothing prevents a dislocated notional subject from being linked by co-reference with a post-verbal pronominal subject, as schematized in (76):

- (76) DP_i [IP V Pron_i ...]

In (76) the subject DP is dislocated and "doubled" by the post-verbal pronominal subject.

Under the standard analysis, it is not at all clear how emphatic pronouns should be handled. The hypothesis that they are adjuncts runs into the problems noted above, namely their subject orientation and the fact that they are not otherwise attested as DP modifiers. The hypothesis that they are the "spell-out" of a trace is mute as to why there should be a correlation between subject-oriented emphatic pronouns and the Null Subject Property. Note, however, that, since the standard analysis would claim that every SVO structure in a NSL is ambiguous between A-movement and dislocation, it could potentially handle emphatic pronouns in NSLs in the same way we did. This move would have one cost, though: that of extending the dislocation analysis of pre-verbal subjects to a much broader range of cases. In other words, the standard analysis would have to acknowledge that subject dislocation is not a 'marked' process (see Costa 2001). None of the examples mentioned require a perceived intonational break between the subject and the

rest of the sentence. So all of the arguments for the need for assuming A-movement to pre-verbal position would be neutralized.

As predicted, Brazilian Portuguese patterns with English/French and not with EP. Thus, the following example, which is good in EP, is not accepted by BP native speakers:

- (77) *A Teresa escreveu ela o poema.
the Teresa wrote she the poem

Kato & Raposo (1996) show that, with the loss of VS order, BP has subject focus *in situ* (cf 78a) or a reduced cleft (cf 78b)²⁶:

- (78) a. A Teresa, ELA escreveu o poema.
the Teresa, SHE that wrote the poem
b. A Teresa, ELA que escreveu o poema.
the Teresa, SHE that wrote the poem

3.5 Restrictions on the interpretation of pronouns as bound variables

As is well known, pre-verbal overt pronouns in the NSLs strongly resist a bound variable interpretation. As noted in Montalbetti (1986), (79) in Spanish cannot be understood as in (80a) which represents the bound variable interpretation of *ellos*, but only as in (80b), which represents the co-referential reading.

- (79) Muchos estudiantes piensan que ellos son inteligentes.
many students think that they are intelligent
- (80) a. (Many x: x a student) x thinks x is intelligent
b. (Many x: x a student) x thinks that they are intelligent.

Interestingly, there is an asymmetry between pre and post-verbal subject pronouns, as noted in Sola (1992)²⁷. Sola observes that whereas in (81) *ells* can only be interpreted as linked to *tots els estudiants* in the group reading, (82) is not so restricted, being ambiguous between the group and the distributive interpretation:

²⁶ BP can also have, like English and French, the SELF type of focus or the adverbial *sozinha*

- (i) A Teresa escreveu o poema ela mesma; ninguém ajudou
the Teresa wrote the poem herself no-one helped
(ii) A Teresa escreveu o poema sozinha; ninguém ajudou.
the Teresa wrote the poem alone no-one helped

²⁷ Sola credits Rosselló (1986) for this observation.

(81) *Catalan*:
Tots els jugadors_i es pensen que ells_i guanyaran.
all the students think that they will win

(82) *Catalan*:
Tots els jugadors_i están convençuts que guanyaran ells_i
all the players are persuaded that will-win they

To illustrate a similar point in EP, (83a) is not acceptable with the pronoun bound by *nenhum aluno*, 'no student'. (83b), however, with a post-verbal pronominal subject, is fine ²⁸.

(83) EP:
a. *Nenhum aluno_i disse que ele_i falaria com ela.
no student said that he would-talk with her
'No student said that he would talk to her.'
b. Nenhum aluno_i disse que falaria ele_i com ela.
no student said that would-talk he with her
'No student said that he would to talk to her.'

Assuming that A-binding applies only to arguments (see Higginbotham 1980), these facts follow from our proposal. According to the analysis proposed here, pre-verbal non focused overt subjects are in reality not arguments at all, so they are irrelevant for binding relations; consequently, they can't be A bound to the subject variable in the higher clause:

(84) [_{CP} [Nenhum aluno]_i disse [_{VP} *t*_i que [_{IP} ele [_{IP} falaria *ec*]]]]

The only way to interpret the adjoined pronoun is by co-reference. When the antecedent is a non-referring expression, co-reference is impossible, and the result is only very marginally interpretable. In the case of (79) and (81), co-reference is available, yielding the group reading. The post-verbal pronoun in (82) and (83b) is a real argument, so it can be bound by the higher variable, yielding the bound variable interpretation in both cases.

In EP, pronouns modified by a focus particle such as *só* 'only' trigger proclisis as shown below:

(85) a. Só ele me deu o livro.
only he me gave the book
b. *Só ele deu-me o livro.

(86) a. Ele deu-me o livro.
he gave me the book
b. *Ele me deu o livro.

²⁸ As was already observed, definite post-verbal subjects are generally focused in NSLs. Thus, (83b) should be glossed as:

(i) No student said that he would be the one to talk to her.

Recall from section (3.1) that the non-referential expressions that trigger proclisis are not Left-Dislocated but rather fronted by A-bar movement. Thus, it is predicted that pre-verbal pronouns modified by a focus particle should be capable of being construed as bound variables: even though they are in an A'-position in the syntax, they are linked to an A-position via movement, as schematized below:

(87) $[_{CP}$ Nenhum aluno_i disse $[_{VP}$ t_i que [[só ele]_i [falaria $[_{VP}$ t_i]]]]

In fact, this is indeed the case, as illustrated in (88):

(88) Nenhum aluno disse que só ele falaria com ela.
 No student said that only he would-talk with her
 [No x: x a student] x said that only x would talk to her.

Within the standard analysis of pre-verbal subjects as A-subjects, it is not at all clear how to handle these facts. Montalbetti (1986) proposed the following generalization:

(89) a. An overt pronoun cannot be linked to [t].
 b. (89a) applies only if the alternative overt/empty obtains.

Although (89a) applies to pre-verbal pronouns, it doesn't hold for post-verbal pronouns or focused pre-verbal pronouns, as we have seen. Moreover, it is also not very clear why (89a) should depend on the overt/empty alternation when this alternation is not defined in terms of a real structural distinction. The LD hypothesis recognizes this statement but assigns different structural representations to the overt/empty alternation while deriving the restrictions on variable binding interpretation from an independently proposed restriction: that A-binding applies only to arguments.

As far as colloquial BP is concerned, the prediction is that it should pattern with English in allowing the bound variable reading of the preverbal pronoun. And in effect this prediction is born out according to the intuitions of Brazilian speakers.²⁹

(90) a. [Ninguém no Brasil]_i acha que ele_i é prejudicado pelo Governo.
 no-one in Brazil thinks that he is harmed by the government
 'No-one in Brazil thinks that he is harmed by the Government.'
 b. [Nenhuma criança]_i acha que ela_i é burra.
 no child thinks that she is stupid
 'No child thinks that s/he is stupid.'

²⁹ Negrão & Müller (1996) claimed that there is a specialization of functions in BP: the null subject for bound pronouns and overt pronouns for referential subjects. The data show, however, that third person null subjects can be referential in this variety. Ferreira (2000) shows, on the other hand, that the bound pronoun is null only when it is in a clause adjacent to the clause containing the quantified antecedent, a fact that he uses to support his thesis that null subjects in BP are traces.

- c. [Algum professor]_i vai achar que ele_i é o responsável.
 some teacher will-think that he is the responsible
 Some teacher will think that he is the responsible one.

3.6 Relative clause extraposition

Our last argument concerns another asymmetry between English/French and the Romance NSLs, namely the impossibility of relative clause extraposition from an indefinite subject in pre-verbal position (Barbosa 1994). Consider the following contrasts:

- (91) A man arrived that wants to talk to you.
 (92) Un homme est arrivé qui veut te parler. [French]
 (93) *Um homen apareceu que deseja falar contigo. [EP]
 (94) *Un hombre apareció que dice que quiere hablar contigo. [Spanish]
 (95) *Un home va venir que volia parlar amb tu. [Catalan]
 (96) *Un uomo è arrivato che vuole parlarti. [Italian]

Relative clause extraposition is fine in English and French but impossible in the Romance NSLs. These facts are a real problem for the standard theory. If the structural position and status of the pre-verbal DPs in the two sets of languages are the same, why should there be such a contrast? Under the LD analysis these facts follow quite naturally, given that there are significant structural differences in the constructions at stake: in (91-92) the subject occupies the Spec-IP position; in (93-96) the DP is left-dislocated.

Now if indeed BP is gradually patterning like English/French, the prediction is that it should allow relative clause extraposition. In fact, the following examples are accepted as fine by speakers of this variety:

- (97) Um homem tá aí fora, que quer falar com você.
 a man is outside that wants speak with you
 'A man is outside that wants to talk to you.'
- (98) Um menino apareceu aqui outro dia, que queria limpar o quintal.
 a boy appeared here other day that wanted to clean the yard
 'A boy appeared here the other day that wanted to clean the yard'
- (99) Uma carta chegou dos Estados Unidos, que avisava do envio
 a letter arrived from the US that informed of the postage
 dos livros.
 of-the books
 'A letter arrived from the US that informed about the books postage.'

4. Final Discussion

In section 1 and 3, we provided empirical evidence that BP is losing the properties associated with the Null Subject Parameter. The data also showed

that the contrasts between EP and (colloquial) BP SV(O) constructions are easily accounted for if it is assumed that, although these two varieties of Portuguese share an apparently identical sentence pattern, namely SV(X), the derivation/representation of such a pattern is quite distinct. While SV(X) in BP conforms to what we have been calling the *standard analysis*, with the subject raising to Spec of IP, SV(X) in EP conforms to an LD structure, with the apparent subject external to IP. It was also argued that the *LD analysis* can be generalized to SV(X) sentences of the Romance NSLs, while the *standard analysis* represents the derivation of SV(X) sentences of non NSLs like English and French. The quantitative analysis in section 2 also corroborated the analysis that EP overt pronouns in pre-verbal position are strong pronouns whereas in BP they are not.

In Section 2 we examined how the two varieties distribute the null and the expressed subject pronouns in the written language, and the results show that, in both varieties, the null subject is favored under the condition of topic maintenance, while the overt variant is favored when there is topic shift. The *corpus* reveals that BP can have variation between overt and null subject pronouns, just like EP, a fact that poses a problem for the neat typological distinction we have been assuming.

The fact that null subjects are still possible in BP has deserved two lines of explanation from Brazilian linguists: a) they are due to the change still in progress and the co-existence of two grammars (Duarte, 1993, 1995), and b) the null subject in BP is not a pronominal, but b1) a variable bound by a topic (Modesto 2000); b2) the trace of A-movement (Ferreira 2000, Rodrigues 2004); or b3) an anaphor or a variable, depending on context (Figueiredo Silva 2000).

The fact that EP and BP exhibit the four structural Patterns quantitatively in the same order seems to corroborate Duarte's diachronic hypothesis of competition of grammars (Kroch 1994). Kato (1999) supported her analysis arguing that since change affects morphology, and morphology can be irregular, it can be the case that while first and second person agreements have lost their pronominal character, the third person still retains it. In order to explain why the null subject appears mainly in two contexts – as an indefinite subject or a “controlled” one – she proposes that the third person pronominal agreement can be doubled by a PRO, in the same way that free weak pronouns are doubled by strong pronouns³⁰.

- (98) a. [PRO]_i conserta-∅_i sapato
 repairs shoe
 'Shoes are repaired.'
- b. João_i disse que [PRO]_i conserta-∅_i sapato

³⁰ But Kato has to give up the assumption that morphological doublets are not allowed in one single grammar. In her system the third person sometimes does project Spec of IP and sometimes does not, allowing a doublet: the pronominal affix and the weak free pronoun.

open by Reinhart and Reuland's (1993) typology of anaphoric expressions, where the property R (referential independence) splits pronominals in two types: pronouns (+R) and pronominal anaphors (-R). In Reinhart and Reuland's framework, the reflexivizing function is distinct from referential dependency, so there are two kinds of anaphors: SELF anaphors and SE anaphors. Of interest to us here are the SE anaphors. Because they lack *phi*-features, some operation is needed for them to function as arguments; for this reason, they must raise to Agr at LF where they inherit the *phi*-features of the subject. Since the only requirement placed on SE-anaphors is that they must find an antecedent, nothing prevents them from doing so logophorically. In languages which allow their logophoric use, SE anaphors need not be bound in any specific syntactic domain. Logophors are licensed by discourse factors such as focus, perspective and center of consciousness or communication.

Barbosa (2004) proposes to deal with the PB null subject precisely along these lines. By hypothesis, there are two kinds of null subjects in finite clauses: +R (pronominal) and -R (pronominal anaphor). The former is instantiated in prototypical NSLs such as EP or Italian; the latter is instantiated in BP (and probably in the NSLs that lack agreement, such as Chinese and Japanese). Thus, in BP the null subject looks for a c-commanding antecedent; however, whenever it doesn't find one in the syntax, it can do so logophorically. Adopting ideas developed in Landau (2000) for PRO, one could say that AGREE is the mechanism responsible for supplying the null subject with *phi*-features (see Landau 2000 for details) and that the logophoric use of the null subject would surface just in case such a mechanism is not available. Crucially, this analysis would still maintain that Agr in BP is not [+N] regardless of person. This point is important given that it is the basis for the motivation of overt raising to Spec-IP of lexical subjects in this variety. By hypothesis, the -R null subject raises to Spec-IP, much as has been recently argued by Holmberg (2005) for subject drop in Finnish.

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