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## **1. INTRODUCTION**

This thesis will examine the presence of two verb agreement patterns in Brazilian Portuguese (BP) (obligatory agreement and variant agreement).<sup>1</sup>

As it occurs in a great number of languages, tensed verbs obligatorily agree with pre-verbal subjects in BP:<sup>2</sup>

- (1) *As meninas chutara-m/\*chutou a bola.*  
the girls kicked-pl/ kicked.sg the ball  
'The girls kicked the ball.'
- (2) *As meninas chegara-m/\*chegou.*  
the girls arrived-pl/ arrived.sg  
'The girls arrived.'
- (3) *As meninas foram/\*foi o problema.*  
the girls were/was the problem.  
'The girls were the problem.'

However, when the subject is post-verbal and in certain copular sentences (e.g., the counterpart of (3) where *as meninas* comes after *be*), there are two possibilities for verb agreement:

- (4) *Chegou/chegara-m as meninas.*  
arrived.sg/arrived-pl the girls  
'The girls arrived.'

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<sup>1</sup>The scope of this paper will be limited to subject verb agreement with regular verbs and nominal predicative construction *DP be DP*: I will not address DP internal agreement or other forms of agreement here.

<sup>2</sup>The data in this study was collected mainly from speakers from Brasilia (central region of Brazil) and Bahia (Northeast). I am a speaker of the former dialect (having grown up in Brasilia), though most of my extended family speakers of the latter dialect. Although there are dialectal differences between these dialects in other respects of the grammar, all speakers consulted agreed with the patterns described in the main text. There are also dialects of BP which do not follow the pattern described on the main text (see section 5.1.2 for an example). In this thesis, I will account for the grammars which generate the patterns reported in the main text.

- (5) *O problema foi/foram as meninas.*  
the problem was/were the girls  
'The problem was/were the girls.'

The two patterns of agreement illustrated in (1)-(5) raise some interesting issues. First, the fact that the copular sentence in (5) patterns with cases of post-verbal subjects may provide additional support to the view that the post-verbal DP (*as meninas*) in such cases is indeed a subject (as argued in Moro (1993, 1997) and Heycock (1991), but contrary to Carnie's (1995)).

Second, there is the fact that the variant agreement pattern seems to be restricted to cases of post-verbal subjects (with the apparent exception, just noted, of copular sentences like (5), which will be argued to involve post-verbal subjects in section 3). From an empirical point of view, BP facts add to the body of data that suggests a cross-linguistic tendency for weaker or impoverished agreement with post-verbal subjects (e.g. see, Manzini and Savoia (2002) for different dialects of Italian; Fehri (1993) for standard Arabic, Samek-Lodovici (2003) for a cross-linguistic survey). From a theoretical perspective, this calls for an analysis which can account for the different effects of pre-verbal and post-verbal subjects on verb agreement.

Third, the nature of the second pattern (variant agreement) is also interesting in and of itself. Some previous studies have considered cases similar to (4) and (5), but where the two options seen in BP variant agreement are separately attested in different languages (e.g. English versus Italian in Moro (1993, 1997) and two

dialects of Spanish in Rodriguez-Moneda (2005)). In BP, both options in the variant agreement cases are grammatical within the same dialect. Thus, BP raises the additional analytical requirement that the variant pattern be generated within the same grammar.

Thus, there seem to be some interesting aspects to understanding BP verb agreement. This thesis will propose an analysis of the two agreement patterns in BP, accounting for their properties and distribution.

This will be organized as follows: section 2 will provide additional data on both patterns of agreement in BP. Section 3 develops the idea that the variant agreement pattern occurs when the subject of the predication is post-verbal, establishing that as a generalization (based on Moro's (1993, 1997) proposal that sentences like to (4) and (5) are the result of predicate inversion). Section 4 proposes that variant agreement arises from the possibility of having different elements in spec-TP: either a predicative null expletive (similar to English *there*), a clausal null expletive (similar to French *il* and English *it*) or a predicate DP. Section 5 will briefly discuss some potential alternative analyses, followed by section 6, which summarizes the proposal.

## **2. DATA**

This section provides additional examples of the two agreement patterns in BP, showing that the variant pattern occurs with VS unaccusatives (2.1), existential sentences (2.2) and some copular sentences (2.3).

### ***2.1. Unaccusative verbs***

This section provides additional examples showing that VS unaccusatives follow the alternate agreement pattern, while SV unaccusatives and unergative verbs follow the obligatory pattern. The discussion will include some tests establishing that verbs in the first group are indeed unaccusative.

Section 1 showed examples indicating that unaccusative verbs follow the variant pattern when the subject is post-verbal and the obligatory pattern when the subject is pre-verbal. Here are some additional examples:

- (6) *Chegou/ Chegara-m umas cartas em casa hoje.*  
arrived.sg/ Arrived-pl some letters at home today  
'There arrived some letters at home today.'
- (7) *Morreu/Morrera-m muitas pessoas na primeira guerra mundial.*  
died.sg/died-pl many people in-the first war world.  
'Many people people died in the First World War.'
- (8) *Despareceu-m/desapareceu muitos navios no Triangulo das Bermudas.*  
Disappeared-pl/disappeared.sg many ships in-the Triangle of-the Bermuda  
  
'Many ships disappeared in the Bermuda Triangle.'

- (9) *Umas cartas chegara-m/\*chegou.*  
 some letters arrived-pl/ arrived.sg  
 ‘Some letters arrived.’
- (10) *Muitas pessoas morrera-m/\*morreu.*  
 the people die-pl/ died.sg  
 ‘The people died.’
- (11) *Muitas navios desaparecera-m/\*desapareceu no Triangulo*  
 Many ships disappeared-pl/ disappear.sg in-the Triangle  
*das Bermudas.*  
 of-the Bermuda.  
 ‘Many ships have disappeared in the Bermuda Triangle.’

The variant pattern seems to be restricted to VS unaccusatives. Unergative verbs obligatorily agree with the subject, even if they are post-verbal:

- (12) *Trabalha-m/\* trabalha muito os professores.*  
 work-pl/ work.sg much the teachers  
 ‘THE TEACHERS work a lot.’
- (13) *Dancara-m/\* dancou os meninos.*  
 danced-pl/ danced.sg the boys.  
 ‘THE BOYS danced’

The following paragraphs will briefly discuss three diagnoses for unaccusativity confirming that the verbs that follow the variant pattern are indeed unaccusative.

The first diagnosis is based on the assumption in the BP literature that only unaccusative verbs allow for (unmarked) VS order (e.g., Kato (2000a,b), Viotti (2000) and Pilati (2002)). This is also explicitly argued for in Silva (2001, ch. 3)).

Consistent with the idea that the verbs in (6)-(8) are unaccusative, VS order is completely natural and can be unmarked in these cases. Thus, (14) (as well as (6)-(8)) is a natural answer to the question ‘what happened?’:

- (14) a. - *O que acounteceu?*  
The what happened?  
‘What happened?’
- b. - *Chegou/ chegar-am os professores.*  
Arrived.sg/arrived-pl the teachers  
‘The teacher arrived.’
- c. - *Os professores chegaram/\*chegou.*  
The teachers arrived-pl/ arrived.sg  
‘The teachers arrived.’

Contrast that with (15), (as well as (12)-(13)) which is impossible in unmarked contexts (requiring obligatory contrastive focus on the subject (16)): <sup>3</sup>

- (15) a. - *O que acounteceu?*  
The what happened?  
‘What happened?’
  - b. - *#Trabalharam os professores.*  
Worked-pl the teachers  
‘THE TEACHERS worked.’
  - c. - *Os professores trabalharam.*  
The teachers worked.  
‘The teachers worked.’
- (16) a. - *Os alunos trabalharam na conferencia.*  
The students worked in-the conference  
‘The students worked at the conference.’

---

<sup>3</sup> Silva (2001) marks sentences VS sentences with unergative verbs as ungrammatical. I agree with her judgments for non contrastive environments. However, other speakers and I (from Brasilia, Rio de Janeiro and Florianopolis) find the sentence grammatical if and only if the subject is contrastively focused.

b. – *Que nada! Trabalharam os professores.*

What nothing worked the teachers

‘No way! The TEACHERS worked.

The second diagnosis of unaccusativity is the Past Participle as an Adjective test (PPA).<sup>4</sup> Adjectival Participles can modify the object, but not the subject of transitive verbs.

- (17) *A bruxa enfeiticou a princesa.*  
the witch enchanted the princess  
‘The witch enchanted the princess.’

- (18) *A princesa enfeiticada dormiu profundamente.*  
the princess enchanted slept deeply  
‘The enchanted princess slept deeply.’

- (19) *\*A bruxa enfeiticada odeia a princesa.*  
the witch enchanted hates the princess  
‘The witch hates the enchanted princess.’  
(Silva 2001, p. 85, based on Gonzales 1988)

The subject of unaccusatives behaves as the object of intransitives, allowing for PPA modification, whereas the subject of unergatives behaves as the subject of transitives and cannot be modified by an adjectival participle (as it would be expected from Burzio’s (1986) analysis of unaccusatives). The test confirms that the verbs in (6)-(8), but not (12) and (13), are unaccusative:

- (20) *As joias desaparecidas sao de grande valor.*  
the jewels disappeared are of great value  
‘The disappeared jewels are of great value’. (Silva 2001, p. 86)

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<sup>4</sup> This test was originally used by Gonzales (1988) for Spanish and adapted to BP by Silva (2001)

- (21) *As cartas chegadas vao ser guardadas.*  
 the letters arrived will be kept.  
 ‘The letters that arrive will be kept.’
- (22) *Os leoes mortos foram empalhados.*  
 the lions dead were stuffed.  
 ‘The dead lions were stuffed.’
- (23) *\*O rapaz dancado foi descansar.*  
 the boy danced went rest-inf  
 ‘The boy who danced went to rest.’ (Silva 2001, p. 87)
- (24) *\*O menino trabalhado pode dormir num hotel.*  
 the boy worked can sleep in-a hotel.  
 ‘The boy who worked can sleep in the hotel.’

The last diagnosis is the use of participial absolute constructions, which are possible with a transitive verb followed by its object, but not by its subject:

- (25) *Lida a carta, o poeta se suicidou.*  
 read-part the letter, the poet self suicide  
 ‘Having read the letter, the poet suicided.’
- (26) *\*Lido o poeta, ele se suicidou.*  
 read-part the poet, he self suicide  
 ‘Having read, the poet committed suicide.’ (Silva 2001, pp. 87-88)

Again, subjects of unaccusative verbs are similar to objects in being possible followers of the verb. Subjects of unergative verbs are similar to the subject of transitives, being ungrammatical in these constructions. The test corroborates the two previous results:

- (27) *Mortos os soldados inimigos, a batalha foi considerada vencida.*  
 dead the soldiers enemies, the battle was considered won  
 ‘The enemy soldiers having died, the battle was considered victorious.’ (Silva 2001, p. 88)

- (28) *Chegada a autorizacao, o senhor podera entrar.*  
arrived the authorization, the-sir can-fur enter  
‘The authorization having arrived, you will be able to enter, sir.’
- (29) *Vindo o motorista, nos podemos viajar.*  
arrived the driver, we can travel  
‘The driver having arrived, we can travel.’
- (30) *Desaparecidas as joias, a Maria estava pobre de novo.*  
disappeared the jewels, the Mary was poor of-new  
‘The jewels having disappeared, Mary was poor again’
- (31) \**Trabalhados os professores, a escola permaneceu aberta.*  
worked the teachers, the school remained open  
‘The teachers having worked, the school remained open.’  
(Silva 2001, p. 88)
- (32) \**Dancadas as bailarinas, a plateia bateu palmas.*  
danced the balarinas, the crowd beat palms.  
‘The ballerinas having danced, the crowd clapped.’

Thus, the three diagnoses discussed here indicate that the verbs which follow the variant agreement pattern are in fact unaccusative. The next section introduces another environment where there is variant agreement.

## 2.2 Existential Construction

Existential sentences are formed by the verb *ter* ('have') followed by a post-verbal pivot or associate (*uns meninos* ('some boys') in (33)) and often a PP coda. The verb in these constructions follows the optional agreement pattern:

- (33) *Tinha/ Tinha-m uns meninos no parque.*  
have.sg/have-pl one-pl boy in-the park  
‘There were some boys in the park.’

Existentials can also be expressed with the verb *haver* (a non-possessive auxiliary verb similar to the auxiliary used for existentials in other Romance languages like Spanish). *Haver* is very rarely used as an existential verb in spoken Brazilian Portuguese (Viotti (2000)).<sup>5</sup> However, if it were to be used, the judgments I obtain indicate that it behaves as *ter* with respect to agreement:

- (34) *Havia/ havia-m uns meninos no parque.*  
 have.sg/have-pl one-pl boy in-the park  
 ‘There were some boys in the park.’

Word order may also be relevant for optional agreement in this case.

Consider the following sentence:

- (35) *Uns meninos estavam/\* estava no parque.*  
 some boys were/ was in-the park  
 ‘Some boys were in the park’

Example (35) is equivalent to the sentences often considered to be copular counterparts of existentials (see Stowell (1981), Moro (1993, 1997), Zamparelli (1995), Avelar (2004)).<sup>6</sup> If (35) is indeed the copular counterpart of (34), then word order is relevant in determining the agreement pattern, similarly to what was seen for unaccusatives.

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<sup>5</sup> I find the use of *haver* unnatural either as an existential verb or as an auxiliary. Prescriptive grammar requires third person singular agreement in these constructions. Interestingly, most of the speakers I asked remember learning the prescriptive rule at school, but forget whether the rule requires third person singular agreement or agreement with the associate. For a history of change from using *haver* to *ter* as an existential verb see Avelar and Callou (2003).

<sup>6</sup> There will be a brief discussion of the correspondence between (33) and (35) in section 4. For a proposal which relates *ter* in existential constructions to the copular *estar* (as well as the individual level copular *ser*), see Avelar (2004).

### **2.3 Copular Sentences**

The third environment where the variant agreement pattern occurs is certain copular sentences:

- (36) *O perigo nessa estrada e/ sao os bandidos.*  
the danger in-this road is/ are the bandits  
'The danger in this road are the bandits.'
- (37) *O importante pra ela e/ sao as boas maneiras.*  
the important for her is/are the good manners.  
'The important thing for her are good manners.'
- (38) *A causa da briga foi/ foram as fotos das meninas.*  
the cause of-the fight was/ were the pictures of-the girls  
'The cause of the fight was/were the girls.'

As seen in section 1, the variant agreement pattern is restricted to a particular word order (for example, where *as meninas* in (38) is post verbal).

Changing the order leads to obligatory agreement:

- (39) *Os bandidos sao/ \*e o perigo nessa estrada.*  
the bandits are/ is the danger in-this road.  
'The bandits are the danger in this road.'
- (40) *As boas maneiras sao/ \*e o importante pra ela.*  
the good manners are/ is the important for her.  
'Good manners are important for her.'
- (41) *As fotos das meninas foram/ \*foi a causa da briga.*  
the pictures of-the girls were/ was the cause of-the fight  
'The girls were the cause of the fight.'

As it was the case with unaccusatives, the choice of verb is essential in determining the agreement pattern. Variant agreement does not arise every time *as*

*fotos das meninas* is post-verbal and *a causa da briga* is pre-verbal. Differently from the verb *be*, ordinary transitive verbs, such as *revelar* ‘reveal’, lead to the obligatory agreement pattern, regardless of word order (cf. (38) and (41) to (42) and (43)):<sup>7</sup>

- (42) *A causa da briga revelou/ \*revelara-m as fotos das*  
the cause of-the fight revealed.sg/ revealed-pl the pictures of-the

*meninas.*  
girls

‘The cause of the fight revealed the pictures of the girls.’

- (43) *As fotos das meninas revelara-m/ \*revelou a causa da*  
the pictures of-the girls revealed-pl/ revealed.sg the cause of-the

*briga.*  
fight

‘The pictures of the girls revealed the cause of the fight.’

This section has shown that the distribution of the agreement pattern is determined by both word order and verb type. The variant pattern arises in three

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<sup>7</sup> This example is based on examples in English and Italian in Moro (1993, 1997). *Revelar* was chosen simply for ease of comparison between a transitive verb and *be*, as it happens to naturally allow either DP above as the subject or object (illustrating the point that word order alone is not solely determining agreement). *Revelar* seems to be an ‘ordinary’ transitive verb, as described in the text, in that it seems to behave like other transitive verbs, for example in its ability to be passivized:

- (i) *A causa da briga foi revelada pelas fotos das meninas.*  
the cause of-the fight was revealed by-the pictures of-the girls  
‘The cause of the fight was revealed by the pictures of the girls.’

- (ii) *As fotos das meninas foram reveladas pela causa da briga.*  
the pictures of-the girls were revealed by-the cause of-the fight  
‘The pictures of the girls revealed the cause of the fight.’

cases: existential sentences, VS unaccusatives and copular sentences in which the DPs appear in a particular order (namely where *as fotos das meninas* in (38) is post-verbal).

### **3. POST VERBAL SUBJECTS AND VARIANT AGREEMENT**

This section will group the three environments where variant agreement occurs as a class, by adopting Moro's (1993, 1997) view that all three cases (including those with copulars) involve subjects that remain post-verbal.

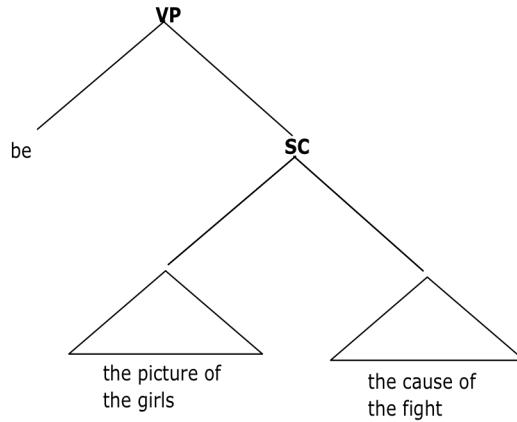
If only existential and unaccusative sentences were considered, we could establish straightforwardly that variant agreement is restricted to sentences with unmarked post-verbal subjects. However, the copular cases of variant agreement would seem to pose a problem to this generalization, as they appear to have a pre-verbal subject (e.g. (41), repeated as (44)):

- (44) *a causa da briga foram/foi as fotos das meninas.*  
the cause of-the fight were/was the pictures of-the girls  
'The pictures of the girls were the cause of the fight.'

However, I will address these cases by adopting Moro's (1993, 1997) proposal that the subject of predication in (41) is in fact post-verbal DP, which will allow us to maintain the post-verbal generalization. The main points of Moro's proposal are briefly summarized below.

Moro adopts the idea that copular verbs take a small clause complement (Stowell (1981, 1983)) adopting a structure roughly as in (45):<sup>8</sup>

- (45) The picture of the girls was the cause of the fight.

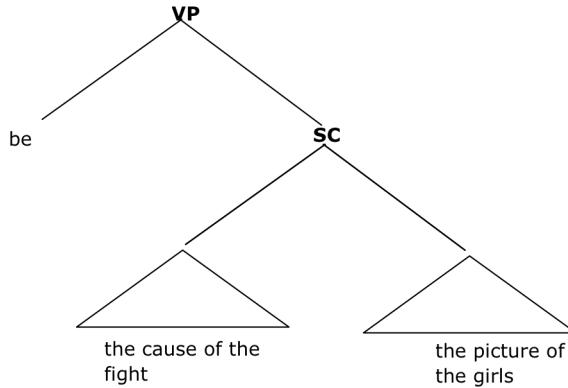


He argues against the possibility that the two possible orders of the DPs in copular sentences are due to two possible merge orders in the small clause (illustrated in (45) and (46)) (with the subject of the small clause always raising to spec-TP).

- (46) The cause of the fight was the picture of the girls.

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<sup>8</sup> There are different possibilities for the internal structure of small clauses (e.g. see Moro (2000), Den Dikken (2006)). For our purposes, the adopted structure will be required to distinguish the status of the two elements of the small-clause such that the DP on the left of the diagram above be systematically represented as the subject of predication and the DP on the right systematically the predicate.



Instead, he proposes that the structure in (45) can give rise to two possible word orders, depending on whether the subject or the predicate of the small clause raises to spec-TP. If the subject raises, the result is what he calls the ‘canonical’ copular sentence (47). If the predicate DP raises (a case of predicate inversion) the result is an ‘inverse’ copular sentence (48):

- (47) The girls were [sc t the cause of the fight]
- (48) The cause of the fight was [sc the girls t ]

Moro provides a number of arguments for his proposal, based on asymmetries between canonical and inverted copular sentences with respect to phenomena such as *lo* and *ne* cliticization and movement. For example, Moro notes that sub-extraction is possible from the post-verbal DPs in canonical sentences (49), but not from the post-verbal DP in inverted copula sentences (50):

- (49) Which fight were pictures of the girls the cause of t?
- (50) \*Which girls were the cause of the fight pictures of t?

Moro rightly points out that if canonical and inverted copulars were both derived by raising of the subject of a small clause to spec-TP (as in (45) and (46)),

they would have parallel structures and no such differences would be expected. However, in his approach, sub-extraction from the post-verbal DP in inverted copulars, is extraction from a subject, which is independently known to lead to ungrammaticality (Huang (1982), Chomsky (1986)). Thus, the ungrammaticality of (50) can be related to the ungrammaticality of (52)<sup>9</sup>:

- (51) What did a picture of the suspect reveal a solution of/to t?
- (52) \*What did a picture of t reveal the solution of/to the puzzle?

Although some of the tests used by Moro are not applicable in BP (e.g., there is no overt predicate cliticization (*lo*) or *ne* cliticization in BP), the sub-extraction test reproduces Moro's results:

- (53) a. *de que briga voce acha que a foto das meninas foi [a of what fight you think that the photo of-the girls was the*

*causa t]?*  
cause.

‘Of what fight do you think that the foto of the girls was the cause?’

- b.\* *[de que meninas] voce acha que a causa da briga foi [a [of what girls] you think that the cause of-the fight was*

*foto t]?*  
[the photo]

‘Of what girls do you think that the cause of the fight was?’

---

<sup>9</sup> These examples support the view that the subject extraction condition holds of the base (external merge) position, argued by Chomsky (2006).

The copular sentences independently proposed to be inverted by Moro (with the subject of the small clause remaining post-verbal) seem to be exactly those that lead to variant agreement in BP. Thus, Moro's proposal provides a way to unify copulars with the other two cases (unaccusatives and existential), establishing the generalization that variant agreement occurs in post-verbal subject environments. In turn, the BP data provides a new example of an asymmetry between what Moro calls canonical and inverted copular sentences, additional to the examples in English and Italian that he discusses.

#### **4. ANALYSIS**

This section proposes an analysis to account for the distribution of the two agreement patterns, established in section 3. Taking Moro's (1993, 1997) as a point of departure, the analysis will ultimately propose that morphological verb agreement is a reflection of spec-head agreement between the verb in T and the element in spec-TP in both agreement patterns. The different options seen in variant agreement will be attributed to different elements being able to occupy spec-TP in structures with post-verbal subjects: a predicative pro-there, a clausal pro-il or a predicate DP. Section 4.1 will introduce some initial assumptions and section 4.2 will implement the analysis.

## ***4.1. Initial assumptions***

### ***4.1.1. Spec-Head Agreement***

I assume a Spec-head theory of agreement, where agreement always occurs in a spec-head configuration, as formulated in Koopman (2006):<sup>10</sup>

- (54) If Y agrees with XP, XP and Y are or have been in a Spec head relation in the course of the derivation

### ***4.1.2 Moro (1993, 1997)***

I will adopt the structures for existentials, unaccusatives and copulars in Moro's (1993, 1997), with slight adaptations. Moro proposes that existentials and unaccusatives are like copular verbs in that they take small clause complements, suggesting the following structure for the three constructions (prior to movement):

- (55) a. Unaccusative: [<sub>VP</sub> arrive [<sub>SC</sub> [a girl] there]]  
b. Existential: [<sub>VP</sub> be [<sub>SC</sub> [a girl] there]]  
c. Copular: [<sub>VP</sub> be [<sub>SC</sub> [a girl] [the problem]]]

Either the subject (56) or the predicate (57) of the small clause may raise in each case:

- (56) a. A girl arrived.  
b. A girl is there.  
c. A girl is the problem.  
(57) a. There arrived a girl.  
b. There is a girl.  
c. The problem is a girl.

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<sup>10</sup> See Koopman (2006) and references therein for support for this approach.

In order to capture the BP facts, I adopt a slightly more detailed decomposition of the verbal part of the clause, assuming current ideas (inspired by Larson (1988), Kratzer (1996) and Hale and Keyser (1993)) that the verb can be decomposed into at least a V and a *v* head.

- (58) a. [<sub>VP</sub> *v* [<sub>VP</sub> V [<sub>SC</sub> [*as meninas* [pro-there] ]
- (59) b. [<sub>VP</sub> *v* [<sub>VP</sub> V [<sub>SC</sub> [*as meninas* [*o problema*] ]

#### *4.1.3. Pro-drop in BP*

The nature of pro-drop in BP is relevant for the analysis, as it will be based on the assumption that there are two null expletives in BP.

BP no longer has pro-drop of referential subjects. For example, but it still has pro-drop of expletive pronouns (see Duarte (1995, 2000), Figueredo-Silva (1996), and Kato (2000b)).

- (60) ?\*(Ele) dorme muito.  
he sleeps much  
'He sleeps a lot.'
- (61) Chove muito aqui.  
rains much here  
'It rains a lot here.'

Consider the English translations of the following VS unaccusative and existential sentences in which the alternation is possible. The lack of subject in all

cases is translated with the English expletive *there*. Note that in standard English, the verb agrees with the associate in constructions involving this expletive:<sup>11</sup>

- (62) There are/\*is some cats in the garden.

This contrasts with the French existentials, where agreement is always third person singular:<sup>12</sup>

- (63) *Il y a/ \*ont des chats dans le jardin.*  
it there has/ have of cats in the garden  
'There are cats in the garden.'

In BP, either third person singular agreement or agreement with the associate subject is possible. I propose that BP has both an expletive like French *il* (pro-il) and an expletive like English *there* (pro-there).

Pro-there will be assumed to originate inside the small clause (e.g., see Hazout (2004))<sup>13</sup>, as a predicate (as in Moro (1993, 1997)) which copies the phi-features of its argument while in the small clause through agreement (as suggested in Koopman's (2006)).

Pro-il on the other hand will be assumed to be a clausal pronoun which can pronominalizes the small clause. The idea that an expletive pronoun can pronominalize a clause is present in Rosenbaum's (1967) discussion of

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<sup>11</sup> This seems to be true mainly in formal standard English. The use of *there's* for both plural and singular is very common in spoken English. See Schutze (2003) for some discussion.

<sup>12</sup> Smith Island English behaves similarly to French:

- (i) I don't know how many it is/\*are there now. (Parrott, 2001)

<sup>13</sup> Though, Hazout, differently from Moro and the analysis in this thesis, takes the expletive to be a possible subject of the small clause.

extraposition. In his approach, *it* in (65) pronominalizes the extraposed clausal subject *that John is intelligent*:

- (64) That John is intelligent is obvious.
- (65) It is obvious that John is intelligent.

In a similar way to English clausal *it*, pro-il will be assumed to be a clausal pronoun, though standing for the small clause.<sup>14</sup>

This will be implemented by adopting Kayne's (2002) proposal that pronominalization originates from a merger relationship between the pronoun and the element that pronoun stands for. Kayne derives what is usually expressed via co-indexation between a pronoun and an antecedent by having a structure in which a pronoun is first merged together with its antecedent. Thus *he* would be co-indexed with *John* by being first merged with it in a structure such as:

- (66) thinks [John he] is smart -> John thinks [he t] is smart.  
(Kayne (2002))

We can apply Kayne's proposal to structures containing a clausal *it*, by assuming that *it* is merged as the sister of a clause in those cases (with subsequent movement of *it* to spec-TP in the higher clause). This is illustrated in the following examples:<sup>15</sup>

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<sup>14</sup> If one adopts Sportiche's (1995) view that small clauses are CPs, pro-il and *it* are in fact very similar in that both pronominalize CPs.

<sup>15</sup> Undesired raising of *it* to spec-TP in other cases of clausal complements may be ruled out by the different properties of each predicate, as in more traditional accounts of the expletive *it*. For example (i) is ruled out by the fact that *believe* subcategorizes for a subject (which usually checks case by raising to spec-TP).

- (67) is obvious [it [<sub>CP</sub> that John is intelligent]] -> It is obvious that John is intelligent.
- (68) seems [it [<sub>CP</sub> that Mary likes apples]] -> It seems [t [that Mary likes apples.]

Although different in detail, this implementation is very reminiscent of Rosenbaum's (1967) approach to the derivation of extraposition, as well as Moro's proposal for raising sentences.<sup>16</sup>

Pronominalization of the small clause by pro-it will be achieved in a similar manner. For example, pro-it would pronominalize the small clause complement of an unaccusative verb roughly as follows:<sup>17</sup>

- (69) [<sub>VP</sub> arrive [ pro-it [<sub>SC</sub> [a girl] there]]]

Now that some of the general assumptions of the proposal have been presented, we can proceed to see how the analysis will account for the patterns of agreement in BP.

(i) \*it believes [t [that Mary likes apple]].

<sup>16</sup> Though Rosenbaum proposed that the pronoun and the clause originated in subject position in the first case, with extraposition of the clause to the right. Thus, (i) would be a closer representation of Rosenbaum's analysis (65):

(i) it that John is intelligent is obvious -> it t is obvious that John is intelligent.

Moro's (1997) analysis of raising constructions also differs from (68) in a similar way. He proposes that *it* is a predicate expletive taking a clause as an argument, thus proposing the following merge order:

(ii) [[CP that Mary likes apples] it]

I will adopt the order inspired by Kayne (2002) in the text for simplicity of presentation. However, slightly changing my proposal to adopt Moro's merger order should not be too problematic if necessary, given the possibility of predicate inversion of *it*, allowing for it to reach spec-TP in Moro's approach.

<sup>17</sup> Note that it does not follow that SCs necessarily have be pronominalized.

## 4.2 Analysis

### 4.2.1. Existentials and Unaccusatives

We begin by focusing on the two cases where there is only one DP in the SC: unaccusatives and existentials. Consider first a structure without SC pronominalization. The pro-there predicate agrees with the subject in the SC (as it occurs in all cases considered here). The subject of SC (*as meninas*) moves to spec-vP in order to check accusative case (70). Pro-there moves through the vP edge to spec-TP, triggering agreement (70).<sup>18</sup> This results in VS ordering and verb agreement with the post verbal subject.

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<sup>18</sup> I am probably simplifying the derivation. There may be, for example, some low predicate inversion of the predicate over the subject (see also footnote 21 on the same possibility for copular sentences).

- (i) [pro-there<sub>i</sub> [[*as meninas*] t<sub>i</sub>]]]

Koopman (2003) proposes low predicate inversion in Maasai. The fact that BP has much poorer morphology than Maasai and that the predicate is a silent expletive in this structure makes it difficult to determine the finer structure of the small clause and the vP, thus I will keep my discussion to the simplified derivation in this paper.

Given the simplified structure proposed above, there may be a problem with minimality, namely, pro-there is extracted over the subject of the small clause. This is a problem that may be common to other proposals involving predicate inversion. Moro (2000) addresses the problem by proposing that small clauses have flat symmetrical structure (the predicate merges directly to the subject).

Here is a tentative speculation for a possible mechanical solution for this problem. Suppose there is low predicate inversion of the type suggested in (i). Assume that Pred is a functional projection heading the small clause and that *as meninas* sits on its first specifier position. Furthermore, pro-there can move to a second specifier position in predicate inversion (parallel to the usual structure proposed for vP after object movement for case checking). Adopting a version of equidistance (see Chomsky (1993)), we would say that pro-there and *as meninas* are now equidistant as they are both specifiers of the same head, thus movement of either DP would incur a minimality violation. I leave this important question open here.

- (70) a. [SC [*as meninas*] pro-there<sub>pl</sub>]]  
      b. [VP [*as meninas*]<sub>i</sub> arrive<sub>j</sub> [VP t<sub>j</sub> [SC t<sub>i</sub> pro-there]]]  
      c. [TP [pro-there]<sub>k</sub> arrive<sub>j</sub> [VP t<sub>k</sub> [*as meninas*]<sub>i</sub> t<sub>j</sub> [VP t<sub>j</sub> [SC t<sub>i</sub> t<sub>k</sub>]]]

Alternatively, the predicate may stay low in the structure, with the subject raising to spec-TP, yielding SV ordering (I assume that the silent expletive does not require case):

- (71) a. [SC [*as meninas*] pro-there<sub>pl</sub>]]  
      b. [VP [*as meninas*]<sub>i</sub> arrive<sub>j</sub> [VP t<sub>j</sub> [SC t<sub>i</sub> [pro-there]]]  
      c. [TP [*as meninas*]<sub>k</sub> arrive<sub>j</sub> [VP t<sub>k</sub> [VP t<sub>j</sub> [SC t<sub>k</sub> [pro-there]]]]]

Note that there is an apparent difference in the behavior of unaccusatives versus existentials regarding this second possibility (subject raising) in BP. In the case of English, the derivations given in (70) and (71) represent both existentials and unaccusatives. This is consistent with Stowell's (1981, 1983) analysis, where raising of the expletive gives rise to existential sentences (72), whereas raising the subject of SC gives rise to copular constructions with a locative predicate (73).<sup>19</sup>

- (72) There is a cat on the mat.  
     (73) A cat is on the mat.

In the case of BP, the existence of this alternation is not as transparent:

- (74) *Tinha/ tinha-m duas meninas na festa.*  
      had.sg/had-pl two girls at-the party  
      'There were two girls at the party.'

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<sup>19</sup> Moro (1993, 1997) and Zamparelli (1995) adopt Stowell's analysis and suggest mechanisms to derive the different interpretation of the expletive (interpreted as a location only in the copular case).

- (75) \**Duas meninas tinha/ tinha-m na festa.*  
 two girls had.sg/had-pl at-the party.  
 ‘Two girls were at the party.’

As a solution to address this, I adopt Avelar’s (2004) proposal that the existential *ter* and the stage level copular *estar* (‘be’) are the spell out of the same verbal root. Based on a distributed morphology framework (Halle and Marantz (1993)), he proposes the idea that the verbal root is spelled out as *estar* when the verb attaches to a T containing a D feature (which attracts a DP to its specifier) ( $v-T_D$ ), and it is spelled out *ter* when it lacks that D feature( $v-T$ ). From this perspective the alternation in (72) and (73) also exists in BP and is spelled out as follows:

- (76) *Tinha/ tinha-m duas meninas na festa.*  
 had.sg/had-pl two girls in-the party.  
 ‘There were two girls at the party.’
- (77) *Duas meninas estam/ \*esta na festa.*  
 two girls are/ is(stage-level) in-the party.  
 ‘Two girls were at the party.’

Thus, existentials allow for the same possibilities as unaccusatives: either the expletive or the subject of the small clause may raise to spec-TP:

- (78)  $[_{TP} [pro\text{-there}]_k \ are(V\text{-v}\text{-}T)_j [_{VP} t_k [duas\ meninas]; t_j [_{VP} t_j [[_{SC} t_i t_k] [_{PP} at\ the\ party]]]]^{20}$
- (79)  $[_{TP} [duas\ meninas]_k \ are(V\text{-v}\text{-}T_D)_j [_{VP} t_k [_{VP} t_j [[_{SC} t_k [pro\text{-there}]] [_{PP} at\ the\ party]]]]$

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<sup>20</sup> This representation is most likely a very simplified representation (adjoining the PP to SC, following Moro (1993, 1997)), given some recent proposals about the structure of PP in Koopman (1997) and Kayne (2004). However, it seems to suffice for the point discussed above.

Both of these options lead to the verb matching morphological agreement with the subject (though in one case this is actually agreement with the expletive pro-there). I propose that third person singular agreement arises from SC pronominalization. When clauses are pronominalized, the clausal pronoun (which is third person singular, as is English *it*) can raise up to spec-TP, triggering third person singular agreement. Just as in the other case of VS ordering, the case of *as meninas* can be checked vP internally.

- (80) a. [pro-it [<sub>SC</sub> [as *meninas*] pro-there<sub>pl</sub>]] ]
- b. [<sub>vP</sub> pro-it<sub>k</sub> [as *meninas*]<sub>i</sub> arrive<sub>j</sub> [<sub>VP</sub> t<sub>j</sub> t<sub>k</sub> [<sub>SC</sub> t<sub>i</sub> [pro-there]]]
- c. [<sub>TP</sub> pro-it<sub>k</sub> arrive<sub>j</sub> [<sub>VP</sub> t<sub>k</sub> [as *meninas*]<sub>i</sub> [<sub>VP</sub> t<sub>j</sub> t<sub>k</sub> [<sub>SC</sub> t<sub>i</sub> [pro-there]]]]]

This section described the account for the agreement of unaccusatives and existentials. Subject agreement in VS order, is derived by raising or a predicate expletive (pro-there). Third person agreement is obtained through raising of a clausal expletive (pro-il, a pronominalization of the small clause) to spec-TP. In SV order, the subject of the small clause raises to spec TP, triggering subject agreement directly. The next section will apply the analysis to copular sentences.

#### 4.2.2. *Copular sentences*

One salient difference between unaccusatives and existentials versus predicational copular sentences is that the latter involves two overt DPs. This will turn out to be relevant in copular agreement. Despite this difference, copular sentences, existentials and unaccusatives will be accounted for by a unified analysis in which

either the subject or the predicate of the small clause may raise to spec-TP in the three cases.

I will consider first a couple of more transparent cases, beginning with the canonical order (S-be-Pred). In this case, the subject DP raises to spec-TP, triggering subject agreement (81), while the predicate DP can remain vP internal (check its case in spec vP).<sup>21</sup> This is equivalent to SV unaccusatives:

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<sup>21</sup> As discussed in footnote 18, this may be simplified in that there is probably more movement occurring in the fine structure lower in the clause. Potential evidence for this comes from quantifier float in copular cases, where the predicate is DP (the expletive cannot be quantified, thus it is not possible to construct similar examples with unaccusatives). Following Sportiche's (1988) suggestion that stranded quantifiers indicate previous movement sites of the quantified DP: (i) shows that the predicate *o problema* moves to the left of the subject *as meninas* on its way to spec-TP:

- (i) *O problema foi todo as meninas.*  
The problem was all the girls  
'The problem was all the girls.'

This might potentially be due to initial movement to spec-vP (though in the current approach that might be problematic, as I will propose movement of the post verbal DP to spev-vP for case checking). However, it seems that the subject does move from its original position past the subject at some point in the derivation, even in cases of predicate inversion. I propose we treat this as subsequent movement of the object to spec-vP:

- (ii) *O problema foi as meninas todas.*  
The problem was the girls all  
'The problem was all the girls.'

On the same note, I can treat the following examples by positing that the quantifier *todas* is stranded in the small clause subject position after *as meninas* has raised to spec-vP for case (unfortunately judgments become very difficult to make when two quantifiers are floated, thus I will consider one quantifier at a time).

- (iii) *O problema foi as meninas todas.*  
The problem was the girls all-pl  
'The problem was all the girls.'
- (iv) *As meninas foram o problema todo.*  
The girls were the problem all  
'The girls were all the problem.'

- (81) a. [SC [as meninas] [ o problema] ]  
       b. [VP [o problema]<sub>i</sub> be<sub>j</sub> [VP t<sub>j</sub> [SC [as meninas] t<sub>i</sub> ]]  
       c. [TP [as meninas]<sub>k</sub> foram<sub>j</sub> [VP t<sub>k</sub> [o problema]<sub>i</sub> [VP t<sub>j</sub> [SC t<sub>k</sub> t<sub>i</sub> ]]

Alternatively, the subject may stay within the VP, while the predicate DP raises to spec-TP, triggering predicate agreement. This is parallel to those VS cases where pro-there raises to spec-TP:

- (82) a. [SC [as meninas] [ [o problema]<sub>k</sub> ] ]  
       b. [VP [as meninas]<sub>i</sub> be<sub>j</sub> [VP t<sub>j</sub> [SC t<sub>i</sub> [o problema]<sub>k</sub> ]]  
       c. [TP [o problema]<sub>k</sub> foi<sub>j</sub> [VP t<sub>k</sub> [as meninas]<sub>i</sub> t<sub>j</sub> [VP t<sub>j</sub> [SC t<sub>i</sub> t<sub>k</sub> ]]]

This addresses two of the cases seen with existentials and unaccusatives. We are missing the case where verb agreement on unaccusatives and existentials is third person singular after raising of the pro-il expletive to spec-TP. This does not seem to be possible in the case of copular sentences:

- (83) \*foi as meninas o problema.<sup>22</sup>  
       was the girls the problem.  
       ‘the girls where the problem’ (lit: \*it was the girls the problem.)

Given that I am proposing a single analysis for the three constructions, this needs to be explained. I propose that this can be done by assuming that one and only one DP can be licensed for case inside the VP. There have been a number of proposals for the availability of case marking in a verb-internal position in existentials and unaccusatives, accounting for checking of post-verbal subjects (e.g.,

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<sup>22</sup> This sentence is possible in marked contexts, where there is contrastive focus on *as meninas*. This is not the same distribution as the other cases of inverted copulars discussed in this paper. For a discussion of contrastive focus and VS order in other verbs, see section 2.1.

see Belletti (1988) for French and Finish and Nunes (1995), Viotti (2000) and Alvelar (2004) for BP).<sup>23</sup> Assuming that just one of the DPs can check case from *v* (as it occurs with unaccusatives and existentials), the other DP in copular cases must raise out of vP to spec-TP. If pro-it raised to spec-TP instead, one of the DPs would not check case, deriving the ungrammaticality in (83).

Thus, I have accounted for copular agreement for all three possibilities available in unaccusative and existential environments. As in unaccusatives and existentials, the predicate or the subject may raise to spec-TP. The possibility of leaving both the subject and the predicate low (available with unaccusatives and existentials) is excluded in copular environments because it would prevent one of the DPs present in these constructions to check case.

However, there is still a case of copular sentences which has not been explained: cases of predicate inversion with subject verb agreement. I will follow Moro's proposal for Italian, proposing that the subject in these constructions is really pro-there, even though a full DP higher than pro-there is interpreted as being the predicate. Moro proposes that the first overt DP in predicate inversion cases in

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<sup>23</sup> Although the studies cited above have a in common the proposal for case low case checking of the DP, the details differ. Some propose checking via inherent or default case (Belletti (1988), Kato (2000a: 119-122). Others are closer to the implementation adopted here, by assuming that case checking is by a verbal head selecting the small clause (Nunes (1995), Viotti (2000), Rodriguez-Moneda (2005)). See also Sportiche (1995), who links the ability of unaccusatives to license case to the post-verbal subject at a low position to movement of the unaccusative to a *be* verbal head sitting above the VP that introduces the unaccusative.

Italian is adjoined to IP, as in the following structure:<sup>24</sup>

- (84) [<sub>TP</sub> *la causa della rivolta* [<sub>TP</sub> *pro<sub>i</sub> sono* [<sub>SC</sub> *le foto del muro t<sub>i</sub>*]]]  
the cause of-the riot be the pictures of-the wall.  
'The cause of the fight are the pictures of the wall.'

I propose that a similar structure is possible on Brazilian Portuguese and that the structure is an example of a so called 'hanging topic' construction, which is abundant in BP (see Kato (1999), Galves (2000) and Costa and Galves (2002)).

Hanging topics are shown in the examples below:<sup>25</sup>

- (85) *O Pedro, ele telefonou.*  
the Peter he called  
'Peter called.'
- (86) *Essa competência, ela é de natureza mental.*  
this competence, it is of nature mental  
'This competence is mental in nature.'

Costa and Galves argue that hanging topics are due to the possibility of projecting two subject positions at the same time in BP: spec-TP (where *ele* sits in (85)) and another position immediately higher (where *o Pedro* is).<sup>26</sup>

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<sup>24</sup> Another possibility is to adopt Cardinelli's (2004) proposal of decomposition of the subject position. Cadinalletti argues that *pro* is in an AgrS position (triggering agreement) and the DP is in SubjP in these structures.

<sup>25</sup> I follow the literature in placing a comma between the hung topic (*o Pedro*) and the pronoun (*ele*), however, there does not seem to me a break in intonation between the two (although I have not measured this at this stage). This is unlike topicalization (of an object for example), where I perceive an intonation break.

<sup>26</sup> Costa and Galves (2002) argue against the view that hanging topics are the result of ordinary left-dislocation, indicated, for example, by the fact hanging topics are very natural and that they can be embedded:

- (i) *Eu acho que o povo brasileiro, ele tem uma grave doença.*

I propose that in BP predicate inverted sentences with subject agreement, the Pred-DP is adjoined to pro-there, forming a hanging topic construction. In this case, predication occurs between a full DP and pro-there within the small clause, (just as in unaccusatives and existential environments):

- (87) a. [SC [as meninas] pro-there<sub>pl</sub>]]
- b. [VP [as meninas]<sub>i</sub> be<sub>j</sub> [VP t<sub>j</sub> [SC t<sub>i</sub> pro-there]]]
- c. [TP [o problema] [pro-there]<sub>k</sub> sao<sub>j</sub> [VP t<sub>k</sub> [as meninas]<sub>i</sub> t<sub>j</sub> [VP t<sub>j</sub> [SC t<sub>i</sub> t<sub>k</sub>]]]]

Thus, predicate inverted copulars in BP can be of two types. Either the predicate DP is an ordinary raised predicate at spec-TP (leading to verb agreement with the predicate DP) or the predicate DP is a hanging topic, hanging off a pro-there predicate at spec-TP (leading to verb agreement with the predicate).

The proposal of hanging topics might lead to the question as to why these structures fail to generate apparent agreement mismatches in canonical sentences as well. Recall that only predicate inversion copulars, but not those in canonical order, lead to variant agreement:

I think that the people Brazilian, he has a serious illness  
 ‘I think that the Brazilian people have a serious disease.’ (Duarte 1995 )

- (ii) *Um pais que o presidente, ele nao obedece mais as leis não pode ser respeitado pelos outros* (Kato, 1993 cited in Costa and Galves (2002))  
 A country that the president he not obey more the laws not can be respected by-the others.

‘A country whose president does not obey the law cannot be respected by others.’

- (iii) *A Maria disse que o Pedro, ele telefonou.*  
 The Mary said that the Perdo he telephones.  
 ‘Mary said that Pedro called.’

- (88) *As meninas foram/ \*foi o problema.*  
 The girls were/ was the problem.  
 ‘The girls were the problem.’

The answer follows from the nature of the pro-forms involved in each case.

Note that hanging topics are indeed possible with canonical sentences too:

- (89) *As meninas, elas foram o problema.*  
 The girls they were the problem  
 ‘The girls were the problem.’

The difference in canonical cases is that the topic hangs off the pronoun *elas*, not pro-there. This follows naturally from our initial assumption that pro-there is a predicative expletive, standing for a predicate. Thus, pro-there is just not an appropriate pronoun to stand for the subject of the small clause. *Elas*, on the other hand, can pronominalize a non-predicate DP. *As meninas* then hangs off a pronoun that can appropriately function as the subject of the small clause and raise to spec-TP in canonical order.<sup>27</sup> Only pro-there (but not referential pronouns) obtains its features from agreement with the subject in the small clause, thus only hanging

<sup>27</sup> The same reasoning prevents us from positing that SV unaccusatives are ambiguous between having *as meninas* in spec-TP or hung of pro-there in (i) (even though the agreement facts would not be problematic for this account if that were the case):

- (i) *As meninas chegara-m.*  
 The girls arrived-pl  
 ‘The girls arrived.’

*As meninas*, being a subject, should not be able to hang off pro-there. Given absence of referential pro-drop in BP, the hanging topic structure corresponding to (i) is as in (ii):

- (ii) *As meninas, elas chegara-m*  
 the girls they arrived-pl  
 ‘The girls arrived.’

topics in inverse copulars lead to apparent agreement mismatches.

From this discussion it seems that hanging topics are free to occur in a number of environments in BP, provided the somewhat reasonable requirement that the subject in spec-TP is the appropriate type of pro-form for the function it serves in the clause. Notice that hanging topics seem to be interpreted as serving the same function as the pronouns they hang from. Thus, *o problema* in (87) is interpreted as being the predicate of the small clause and *as meninas* in (89) is interpreted as the subject of the small clause. These points will be relevant in addressing a last possibility that is unattested in copular sentences.

The possibility of hanging topics brings back one potential problem (which was addressed for cases not involving hanging topics). Recall that I ruled out structures where both the subject and the predicate of the small clause stay low in copular environments (with pro-it raising to subject position), by appealing to the impossibility of two DPs getting case vP internally. This accounted for (90):

- (90) *Todos os problemas foram/ \*foi as meninas.*  
All the problems were/ was the girls  
'All the problems were the girls.'

With the possibility of introducing DPs as hanging topics, one may propose to derive the third singular agreement pattern in (90) as follows. The small clause complementing *be* would contain only one DP and pro-there, as it was proposed for other hanging topic copulars. As one DP can be licensed for case vP internally, there should be no problem licensing the one DP (e.g. *as meninas*) and raising a

clausal expletive pro-it to spec-TP (as it was proposed for VS unaccusatives with third singular verb agreement). This would then be followed by hanging of *todos os problemas* to pro-il. It would then be incorrectly predicted that (90) should allow for third singular agreement.

I propose that it is the last step, topic hanging itself, which rules out the undesired agreement in (90). As noted above, hanging topics are interpreted as having the same function in the clause as the subject in spec-TP. However, note that we are assuming that pro-il is a clausal expletive. The sentence is not possible because it would have a predicate hanging off a clausal pro-form (rather than a predicate pro-form). By the same token, a DP intended to be the subject cannot be hung of pro-il, but it can hang of the appropriate referential pronoun:

- (91) *As meninas foram/\*foi todos os problemas.*  
 The girls were/ was all the problems  
 ‘The girls were all the problem.’

- (92) *As meninas, elas foram todos os problemas.*  
 The girls, they were all the problems  
 ‘The girls were all the problems.’

Thus, raising a clausal expletive and leaving both the subject and the subject of the small clause vP internally is also ruled out for hanging topic copulars.<sup>28</sup>

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<sup>28</sup> The same reasoning also rules out the possibility of a hanging topic leading to agreement mismatches such as (i) in unaccusatives:

- (i) *As meninas chegou.*  
 The girls arrived.sg  
 ‘The girls arrived.’

This concludes the account of agreement in copular sentences. Variant agreement for inverted copulars was accounted for by positing two possible structures: either a predicate DP raises to spec-T or a predicate expletive pro-there raises to spec-TP, and a DP is hung of pro-there (and thus interpreted as the predicate). The hanging topic construction is not limited to predicate inversion. In fact it is very prevalent in transitive and unergative transitive verbs in BP (as BP has no referential pro-drop, these are more transparently done with overt pronouns).

#### ***4.3. Summary of the analysis***

This section proposed a unified analysis for agreement in copulars, unaccusatives and existentials, which also accounted for the differences in these constructions. Variant agreement was proposed to follow from the possibility of different elements raising to spec-TP in post-verbal subject environments: pro-there (followed by a hanging topic in copular environments), pro-il or a predicative DP.

This was restricted to copulars, unaccusatives and existentials, as desired. Sentences with transitive verbs (with DP complements) and unergatives contain no small clause predication. Hence, neither pro-il (which pronominalizes the small clause), nor pro-there (which originate inside small clauses) are available. In these cases, the only elements available to raise to spec TP are overt DPs.<sup>29</sup>

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See also footnote 27.

<sup>29</sup> The point still follows if the DP raising to spec-TP is a referential pronoun, allowing for attachment of a hanging topic.

## **5. COMMENTS ON SOME ALTERNATIVE ANALYSES:**

This section briefly considers alternatives to the analysis proposed in this paper. Section 5.1 suggests against two possible alternative analyses and section 5.2 comments on the possibility of addressing BP agreement under Chomsky's (2000, 2001) Agree.

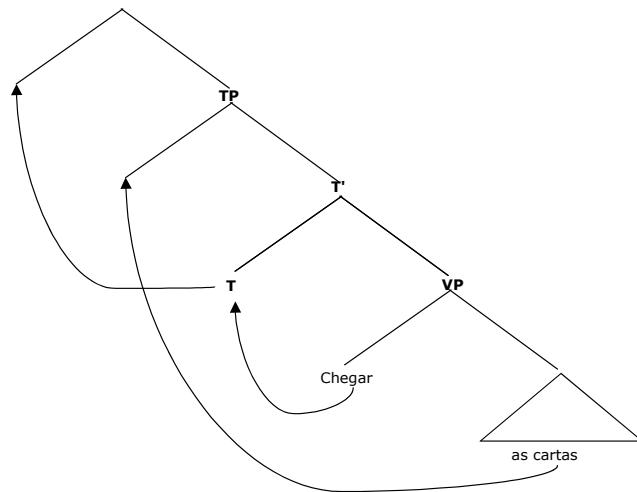
### ***5.1. Some conceivable, but unlikely Alternatives***

This section briefly suggests against two different possibilities that could conceivably be proposed as basis of an analysis of BP agreement: always correlating verb agreement with movement of the subject past spec-TP (section 5.1.1.) and attributing variant agreement to diglossia (5.1.2).

#### ***5.1.1. Correlating verb agreement with high subjects***

A possible alternative analysis for the alternations discussed here would be to say that the two possibilities seen in variant agreement are due to movement versus no-movement of the post verbal subject. For example, VS unaccusatives with post-verbal subject agreement could be derived by proposing that the subject moves up to a position where it enters into a spec-head configuration with the verb (accounting for agreement). This would then be followed by verb movement (accounting for VS):

- (93) *Chegara-m as cartas.*  
arrived-pl the letters  
‘The letters arrived.’



The counterpart of the sentence with third person singular agreement would then occur when there was no raising of the lower DP past the verb (so that they would never be in a spec-head configuration, accounting for the lack of agreement). Third person agreement could then be a reflection of some sort of default agreement or expletive insertion mechanism:<sup>30</sup>

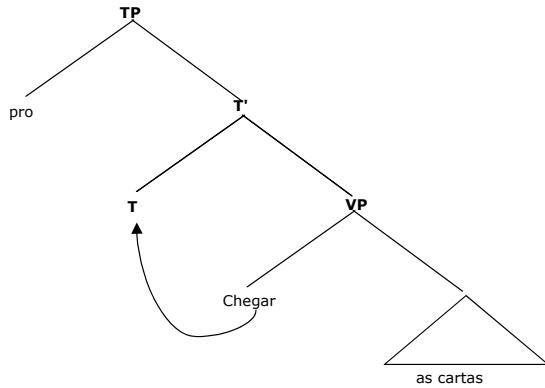
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<sup>30</sup> This would be a simplification. Assuming Sportiche (1988), quantifier float suggests some movement of the postverbal subject:

- (i) *Chegou as cartas todas.*  
Arrived.sg the letters all  
‘The letters all arrived.’

However, the relevant point for this analysis would be to see whether the post-verbal stays low enough such that it does not trigger agreement.

- (94) *Chegou as cartas.*  
arrived.sg the letters  
‘The letters arrived.’



A full analysis along these lines would have to work out the details of verb raising above T, as well as the process of default agreement (which increases the number of possible mechanisms of agreement in the grammar). However, the problem which indicates that this analysis is probably not on the right track is that it assumes that the subject (and possibly, but not necessarily, the verb) occupy different positions in the cases in which there is agreement with the post-verbal subject and cases with third person singular agreement. However I have not found any empirical evidence that would support this. Consider for example the placement of adverbs with unaccusatives. Compare the two versions of VS unaccusatives and the non-inverted case (where there is only one possibility of agreement):

- (95) a. (\*rapido) *chegou (rapido) as cartas (?rapido).*  
quick arrived.sg quick the letters quick

- b. (\*rapido) chegara-m (rapido) as cartas (?rapido).  
     quick arrived-pl quick the letters quick  
 c. (\*rapido) as cartas (\*rapido) chegara-m (rapido).  
     quick the letters quick arrived-pl quick  
     ‘The letters arrived quick.’

(96) a. (\*de novo) chegou (de novo) as cartas (de novo).  
     again arrived.sg again the letters again  
 b. (\*de novo) chegara-m (de novo) as cartas (de novo).  
     again arrived-pl again the letters again  
 c. (\*de novo) as cartas (?de novo) chegara-m (de novo).  
     again the letters again arrived-pl again  
     ‘The letters arrived again.’

(97) a. (??rapidamente) chegou (?rapidamente) as cartas (rapidamente).  
     quickly arrived.sg quickly the letters quickly  
 b. (?rapidamente) chegara-m (?rapidamente) as cartas  
     quickly arrived-pl quickly the letters  
     (rapidamente).  
     quickly.  
 c. (??rapidamente) as cartas (rapidamente) chegara-m  
     quickly the letters quickly arrived-pl  
     (rapidamente).  
     quickly  
     ‘The letters arrived quickly.’

(98) a. (Ja) chegou (?ja) as cartas (??ja).  
     already arrived.sg already the letters already  
 b. (Ja) chegara-m (?ja) as cartas (??ja).  
     already arrived-pl already the letters  
 c. (\*Ja) as cartas (Ja) chegara-m (?ja).  
     already the letters already arrived-pl already

‘The letters already arrived.’

These examples seem to indicate that while the position of the subject and the verb differs in SV versus VS unaccusatives (as expected from the different word orders), the two VS variants seem to pattern together. That is, the cases in which agreement is with a post-verbal DP do not seem to noticeably differ in terms of the height of the subject. Thus, it seems this may not be a plausible account for the BP alternation.

### *5.1.2. Diglossia as an explanation for variant agreement*

There are prevalent dialects of BP that have lost (or are in the process of losing) number agreement on the verb altogether. In these dialects, the following sentence is grammatical:

- (99) A-s carta chegou.  
The-pl letter.sg arrived.sg  
‘The letters arrived.’

This might raise the possibility for a proposal that attributes the two agreements in variant agreement to the availability of two dialects to speakers who accept it: the no-agreement dialect and an agreement dialect. However, this does not seem to be a possible analysis for three reasons.

First, I tried to control for the availability of the no-agreement dialect, using only data from speakers who find (99) bad or highly questionable.

Second, note that the dialect which is the focus of this thesis and the no-agreement dialect have different DP agreement: in the latter, only determiners, but not nouns, inflect for number (Costa and Figueredo (2006)) (note that the noun ‘carta’ (letter) is not marked for plural in (99)). Thus, according to the two speakers of this dialect which I consulted, (100) is much worse than (99):<sup>31</sup>

- (100) *A-s cartas chegou.* (?\*no-agreement dialect, \*dialect discussed in this thesis)  
 The-pl letter-pl arrived.sg  
 ‘The letters arrived.’

Third, the distribution of optionality is restricted in the dialect examined in this paper, but singular agreement is not restricted to these environments in the no-agreement dialect. For example, no agreement also occurs with ordinary transitive verbs and canonical copular sentences:

- (101) *A-s menina chutou a bola.*  
 The-pl girl kicked.sg the ball  
 ‘The girls kicked the ball.’
- (102) *A-s menina chegou.*  
 The-pl girl arrived.sg.  
 ‘The girls arrived.’
- (103) *A-s menina foi o problema.*  
 The-pl girl was the problem.  
 ‘The girls were the problem.’

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<sup>31</sup> The two speakers that I consulted were from São Paulo, SP.

If the possibility of singular agreement in variant agreement were to be attributed to a switch by speakers to the no-agreement dialect, the variant agreement pattern would not be expected to be restricted as described in section 3.

Thus, the variant agreement pattern should not be attributed to diglossia.

### 5.2. Agree

This section will provide a brief preliminary comment on some issues related to accounting for the BP data discussed here assuming Chomsky's (2000, 2001) theory of agreement.

Chomsky (2000, 2001) proposes that agreement is the result of the operation *Agree*, which establishes a relation of agreement between an active probe (e.g. T) and an active goal (e.g. the subject DP), checking uninterpretable features of the probe or the goal. The probe agrees with the closest active matching goal that it commands, with no requirement for a spec-head configuration. Raising of the subject to spec-TP is driven by requirements other than agreement, such as the EPP. Another way to satisfy the EPP is expletive insertion. In Chomsky's approach, the expletive in existential constructions is inserted directly in spec-TP (not raised from a lower position).<sup>32</sup>

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<sup>32</sup> This description of Chomsky's approach is a summary of some of the main ideas which omits a lot of the details in the implementation. As well as the main ideas described in the text, the following constraints are proposed in Chomsky's account of existentials:

- (i)  $\alpha$  must have a complete set of  $\phi$ -features to delete uninterpretable features of the paired matching element  $\beta$ .

As agreement is not due to spec-head configurations and spec-TP in VS unaccusatives would be filled by expletive insertion under this framework, the two possibilities in variant agreement require an explanation other than the possibility of two expletives in spec-TP. It would seem that T could either probe the post-verbal subject, deriving subject-agreement just as proposed by Chomsky for English cases, or something would prevent the accessibility of the subject by the T-probe. For example one might posit that VS unaccusatives come in two flavours: one including a phase boundary between T and the post-verbal subject and another more bare structure where there is no such phase boundary (it would then have to be assumed that Agree is subject to Phase impenetrability). In the latter case, there would have

- (ii) A potential goal  $\beta$  between  $\alpha$  and another goal  $\gamma$  ( $\alpha > \beta > \gamma$ ) acts as an intervener preventing agreement between  $\alpha$  and  $\gamma$ . This is true even if the features of  $\beta$  have been checked by another goal (rendering inactive) (Chomsky 2000, pp. 122-123).
- (iii) Only the heads of an A-chain are interveners. (Chomsky, 2001: 16)
- (iv) Maximize Matching Effects. (Chomsky, 2001: 15) (i.e., check as many features as possible in one matching event (my paraphrase))

Chomsky also assumes that the expletive there has an unitrepretable person feature. This accounts for (v), for example, as follows.

- (v)
    - a. [C [T be likely [Expl to-arrive a man]]]
    - b. There is likely to be a man.
    - c. \*a man is expected there to arrive
- (adapted from Chomsky, 2001: 16 and 19)

The expletive is inserted in the infinitival clause. It agrees T in the main clause and raises to spec, T (deleting the EPP-Feature of T and the Person feature of Expl (iv)). However, the phi-set of T remains intact because Expl is not  $\phi$ -complete (i). Agree then holds between the probe T and the remote goal *a man* (deleting the  $\phi$ -set of T and the Case feature of *a man*). The trace (copy) of Expl is not an intervener for Agree between T and *a man* because it is not the head of a chain (iii). Even though the expletive in (v.c.) is not the head of a chain (thus not an intervener), (v.c.) is prevented by (iv), which requires the EPP to be checked at the same time as agreement between T and the expletive occurs.

to be some additional mechanism of default agreement, explaining both the fact that the verb surfaces with third person singular agreement and the fact that the derivation does not crash due to unvalued features in T.

Such an account would have to resolve a number of complications. For example, the availability of both a bare structure and a more articulate structure (containing a Phase boundary between T and v) only for unaccusatives and existentials would call for an explanation. Another factor to be explained would be the availability of default agreement as a possible rescue only with unaccusatives and existentials:

- (104)a. *Chegou as meninas*.  
b. [expl T-arrive(DEFAULT:3sg) [...the girls]]

- (105)a. *Trabalhou as meninas*.  
b. [expl T-arrive(DEFAULT:3sg) [...the girls]]

The account for copular cases would probably be different in nature, as *be* would differ from unaccusatives and existentials in this framework, in that only the latter would have a small clause complement.

The Subject-copular-predicate order could be ordinarily addressed: T would probe the subject (the closest matching goal), triggering subject agreement. The EPP would be satisfied by raising of the subject to Spec-TP. The fact that the same DP that Agrees with T raises to spec-TP is consistent with the requirement, proposed in Chomsky (2001: 15) that as many features as possible should be checked when matching occurs ('maximize matching effects').

The predicate-be-subject order with predicate agreement would require some process to make the predicate DP the goal closest to T, as for example low predicate inversion.<sup>33</sup> Assuming this process, agreement could be explained similarly to the first case: T agrees with its closest matching goal, which in this case would happen to be the predicate DP. Consistent with ‘maximize matching effects’, the predicate would also raise to spec-TP, checking the EPP feature in T.

The more problematic case would be the predicate-be-subject order with subject agreement. Here, T would agree with the subject, indicating that it is the closest c-commanded matching goal. It seems difficult to explain why a different DP would raise to check the EPP just in this case.

This section briefly discussed a generic overview of possible ways to make sense of BP data under an Agree approach. The discussion showed that Agree approach by itself would leave a number of properties found in the BP data unexplained. Thus, as it was the case under the spec-head analysis proposed in this thesis, further assumptions (which hopefully turn out to be based on deeper understanding of the structure of the constructions involved) would need to be made in order to account for BP agreement under Agree.

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<sup>33</sup> Whatever process would be proposed to account for low inversion, it would have to be assumed that it does not check all the features of the predicate (rendering it inactive).

## **6. SUMMARY**

This thesis introduced two BP patterns of verb agreement in BP (obligatory agreement and variant agreement).

Adopting Moro's (1993, 1997) analysis of copular sentences, I established that the variant pattern is restricted to cases of post-verbal subjects. As a consequence of this finding, the BP pattern discussed here provides new data which serves as additional support for the proposals in Moro (1993, 1997)).

I then proposed an analysis where the two-agreement pattern arises from the possibility of having different elements in spec-TP: either a predicative null expletive (similar to English *there*), a clausal null expletive (similar to English *it*) or a predicate DP. In the case of unaccusatives and existentials, the two agreement patterns were proposed to be due to the possibility of raising either the predicate expletive or a clausal pronoun to spec-TP. Obligatory agreement occurs in pre-verbal subject environments, where the verb agrees with the subject when it raises to spec-TP.

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