

Predicate Inversion and Agreement Alternations in Brazilian Portuguese*

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Introduction

Subject-verb agreement is usually obligatory in Brazilian Portuguese (BP) (1). However, there are constructions which allow for two grammatical possibilities for verb agreement (2):

- (1) As meninas foram/*foi a causa da briga.
the girls were/was the cause of-the fight
'The girls were the cause of the fight.'
- (2) A causa da briga foi/foram as meninas.
the cause of-the fight was/were the girls
'The cause of the fight was/were the girls.'

Today's talk: Two related questions raised by the agreement behavior illustrated in (1) and (2):

- (i) What differentiates sentences like (1) from sentences like (2), and;
- (ii) How can the optionality in (2) (and other cases to be seen soon) be represented?

I will propose the following answers to these questions:

- (i) What differentiates cases where there is only one possibility of verb agreement (1) and those where there are two (2) is that the latter group, but not the former, involves predicate inversion of the type proposed by Moro (1993, 1997). (Section 1)
- (ii) Assuming a Spec-Head theory of agreement (see Koopman, 2005), agreement optionality in BP is proposed to follow from the possibility of different elements ending up in Spec-TP in predicate-inversion structures:
 - either a 3rd person singular *pro* similar to French 'il';
 - a *pro* predicate similar to English 'there', or;
 - an overt predicate DP. (Section 2.1)Canonical structures in BP offer no such possibility due to the nature of BP *pro*-drop. (Section 2.2)

1. Answer to question (i): Predicate inversion

1.1 Moro (1993, 1997) and Predicate inversion

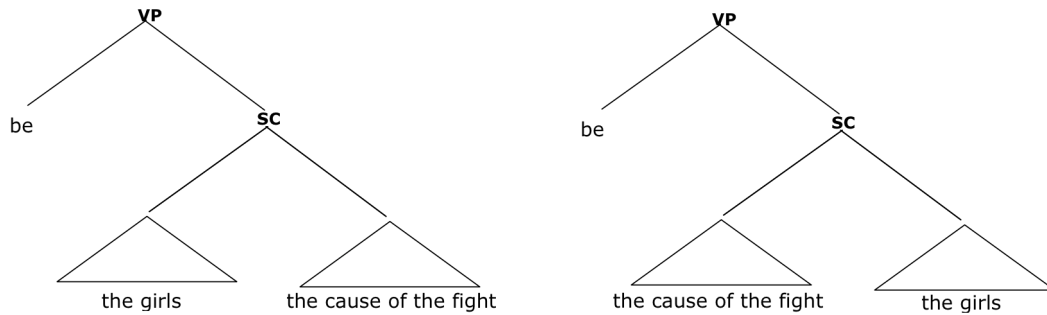
The alternation above is special to copulars (and other cases to be seen soon):

- (3) A causa da briga revelou/*revelaram as personalidades das meninas.
the cause of-the fight revealed-sg/pl the personalities of-the girls
'The cause of the fight revealed the girl's personalities.'
- (4) As personalidades das meninas revelaram/*revelou a causa da briga.
the personalities of-the girls revealed-pl/sg the cause of-the fight
'The girls' personalities revealed the cause of the fight.'

Yet, just as in (3) and (4), copular sentences as (1) and (2) have been standardly assumed to be different at the point of merging:

* I would like to thank Hilda Koopman, Dominique Sportiche, Mark Baker and the audience at a presentation at the University of Queensland Linguistics Seminar for listening or commenting on the research that is partially presented in this talk. All mistakes are mine.

- (5) The girls were the cause of the fight. (6) The cause of the fight was the girls.



According to the standard analysis:

- The subject of the small clause is what raises to the clausal subject.
 - (5) and (6) are syntactically parallel.
- Thus they are predicted to behave pretty much in the same way [for our purposes: **including agreement!**]

But, Moro points out this is not the case. One example is post-verbal DP extraction:

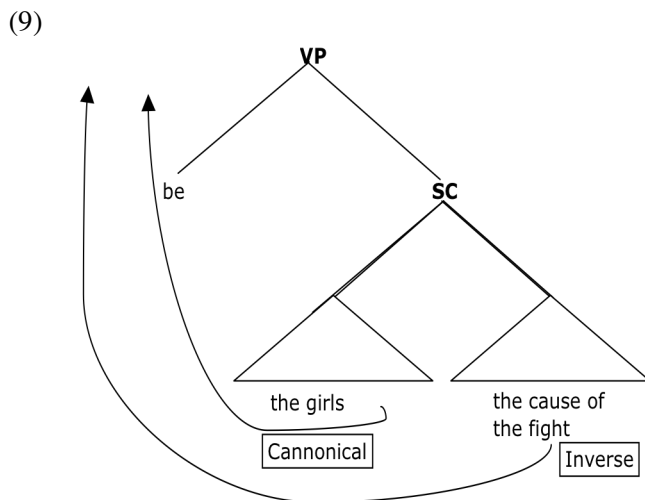
- (7) a. – Which fight was the picture of the girls the cause of t?
 b. – [The picture of the girls] was [the cause of YESTERDAY's fight].
- (8) a. – *Which girls were the cause of the fight pictures of t?
 b. – [The cause of the fight] was [the picture of the GILMORE girls].

Based on this and other asymmetries in English and Italian, Moro (1993, 1997) proposes that the standard analysis is incorrect (i.e., (5) and (6) cannot be the correct representations for sentences of this type).

→ The BP asymmetry in (1) and (2) provides new data of in support of Moro's argument: if (1) and (2) had a parallel structure, as standardly assumed, no systematic agreement difference would be expected.

Moro's proposal:

- Both (5) and (6) are derived from the same merge structure (represented in (9))
- The two different sentences arise depending on whether 'the girls' (a *canonical copular*) or 'the cause of the fight' (an *inverse copula* as in (6)) raises to spec TP:



- Asymmetries are accounted for by the fact that the movement of the DP which ends up as the subject of the main clause has different sources.¹

¹ There are different possibilities for the internal structure of small clauses (e.g. see Moro (2000), Den Dikken (to appear)). 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. I will postpone the choice of a particular proposal for further research.

An example: ²

Here is how Moro's approach explains the asymmetry in (7) and (8):

- It is independently observed that extraction from subject position yields ungrammaticality:

- (10) A picture of the suspect revealed the perpetrator of the crime.
(11) Which crime did a picture of the suspect reveal the perpetrator of?
(12) *Which suspect did a picture of t reveal the perpetrator of the crime?

- (13) A picture of the suspect revealed the solution of/to the puzzle.
(14) What did a picture of the suspect reveal a solution of/to t?
(15) *What did a picture of t reveal the solution of/to the puzzle?

- Adopting the structures proposed by Moro, the reason why (8) is bad and (7) is fine is because the former involves subject extraction, while the latter doesn't.
-

→ Interestingly, it is exactly the copular sentences proposed to be inversed which turn out to show the agreement optionality in BP.

→ **Answer to question (i)** (what differentiates the cases where agreement optionality occurs from those where it doesn't?): Predicate inversion.

1.2 Other cases of Agreement optionality: unaccusatives and existentials

Agreement optionality can also be found in sentences involving existentials and unaccusatives:

- (16) *Tinha/m uns meninos no parque.*
have-imp-3-sg/pl one-pl boys in-the park
'There were some boys in the park.'

- (17) *Chegou/Chegaram umas cartas.*
arrive-pst-3-sg/pl one-pl letters
'There arrived some letters.'

But not in all unaccusative and existential sentences:

- (18) *Uns meninos estavam/*estava no parque.*
One-pl boys were/was in-the park
'Some boys were in the park.'

- (19) *Umas cartas chegaram/*chegou.*
Some letters arrive-pst-pl/sg
'Some letters arrived.'

Again, this turns out to be consistent with the Predicate Inversion approach:

- Moro proposes that copular, existential, unaccusative should be analyzed in a uniform way, despite the fact that they may appear to be different empirical domains.³
- What they have in common: the **ability** for predicate inversion.

² Stuff between dotted lines, footnotes and appendix for you to consider at your leisure. Feel free to ask about it though!

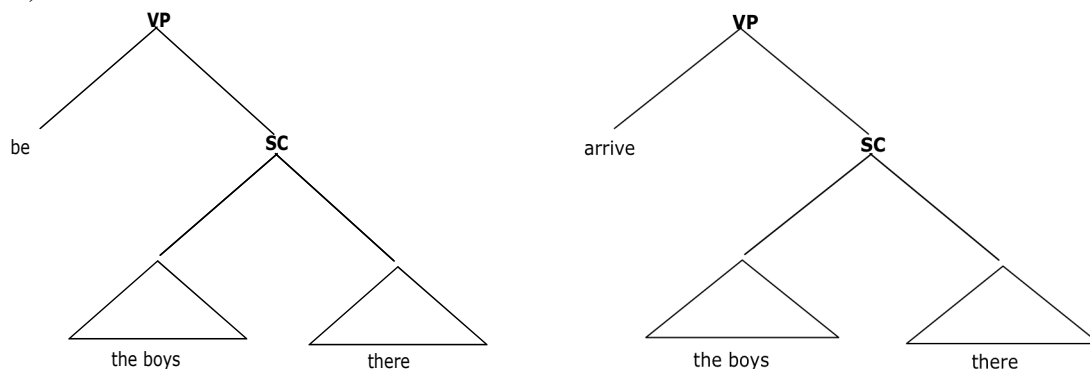
³ Raising constructions are a fourth group proposed to involve predicate inversion by Moro (1993, 1997), yet they do not show agreement optionality in BP:

- (i) *Parece/*m que as meninas saem muito.*
seem-sg/pl that the girls leave-pres-3-pl much
'It seems that the girls go out a lot.'

However, according to Moro's proposal, in the predicate inverted raising construction (where there is no raising) the subject of the SC is a full CP, not a DP like in the other cases. Assuming that the CP has no phi-features, the only possibility of agreement under the analysis to be proposed here, would be for default agreement (possibly a 3 singular expletive inserted at spec-TP). Thus the lack of optionality of raising constructions is not a problem for my analysis, even if they involve predicate inversion as Moro proposes.

- Only those which Moro proposes to be cases of predicate inversion (i.e., where the ability is actually instantiated) show agreement optionality (just like in copulars).⁴

(20)



Interim Summary:

→ Moro groups copular, existential and unaccusative sentences due to their ability to undergo predicate inversion.

→ Thus, the answer to question (i): the cases which Moro proposes to be instantiations of this ability of predicate inversion (based on evidence of a different sort) are those that turn out to have agreement optionality.

→ The BP data here provides additional independent support for Moro's (1993, 1997) idea that these constructions can be plausibly seen as a class.

2. Answer to (ii): How Predicate Inversion leads to agreement alternation

2.1. Possible predicates

Consider first VS unaccusatives and existentials. Both lack an overt pre-verbal subject. Compare this with examples from two non pro-drop languages (English and French):

(21) There are/*is cats some cats in the garden.

(22) Il y a/*ont des chats dans le jardin.

→ A natural proposal would be to assume that there are two predicative pros in BP:

- *Pro-il*:
 - Triggers 3rd person singular agreement, as French 'il'.
- *Pro-there*:
 - Copies features from the subject of the small clause during predication. Thus, verb agreement matches those of the post-verbal subject of SC. Similar to English 'there'.

So unaccusative and existential verb agreement in predicate inversion depends on which pro serves as a predicate.

However, copular sentences appear to have overt pre-verbal subjects, yet they show agreement optionality.

- The solution is to adopt the idea that copular sentences [can] in fact have a pro as a subject. (Moro (1997), Cardinelli (2004)).
- Again the BP facts seem to support Moro (1997), who proposes that in Italian, what appears to be the overt subject of the clause in Italian is actually a pro, with an overt DP adjoined to TP:⁵

(23) [_{TP} la causa della rivolta [_{TP} pro_i essere [_{SC} le foto del muro t_i]]]

⁴ The Case of the one overt DP may be checked through either a mechanism of inherent or default case (Belletti (1988), Kato (2000a: 119-122) or a verbal head selecting the small clause (Nunes (1995), Viotti (2000), Rodriguez-Monedo (2005)).

⁵ Another possibility is to implement a similar idea by adopting 'cartographic' proposals, such as having pro in an AgrS position and the DP in SubjP as proposed in Cardinelli (2004).

- Adopting the same structure proposed by Moro allows us to have a similar account for unaccusatives, existential and copular agreement.

Notice that there is some plausibility to proposing the possibility of adjunction structures like those in (21) in BP. Costa and Galves (2002) discuss sentences like (24), which is quite natural in BP:

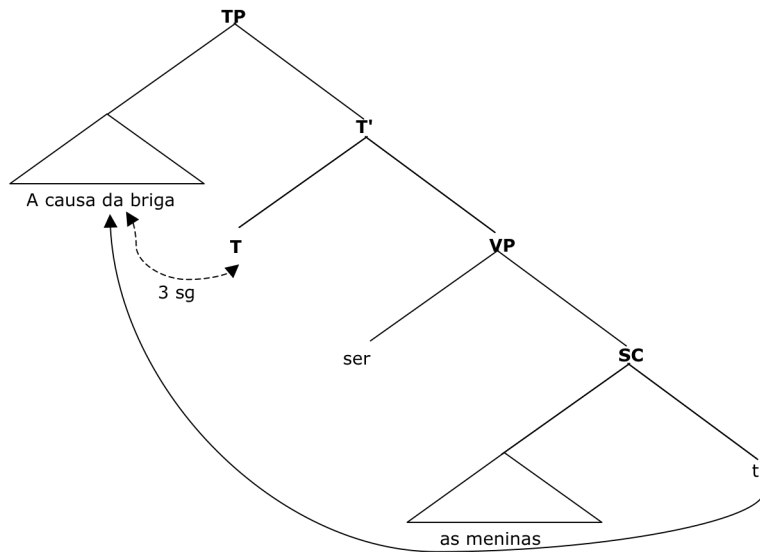
- (24) O Pedro, ele telefonou.
the Peter he called
 'Peter called.'

Assuming the possibility of a structure similar to (21) in BP, the following is proposed:

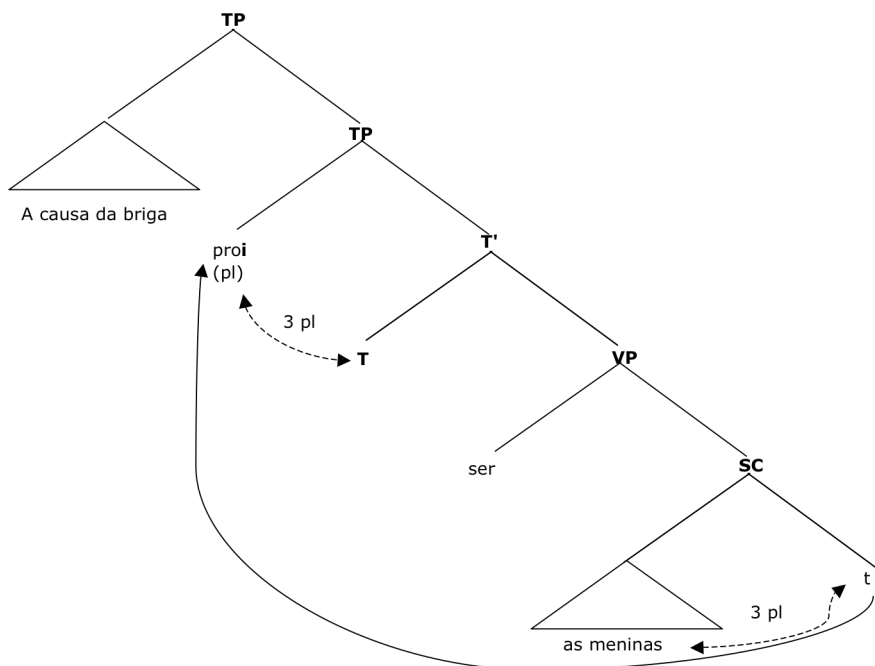
→ In predicate-inversion copular structures, agreement alternation arises from two possibilities:

- The predicate is a full DP (like English) (25).
- The Predicate is pro-there (with a full DP being adjoined to TP) (like Italian) (26).

(25)



(26)



2.2 Some concerns:

2.2.1. Limitation to predicate inversion

The possibility of structures such as (26) may raise the possibility of having a similar structure for canonical structures (replacing the subject of SC with a pro and having another overt DP adjoined to them).

If a parallel structure were possible for cases other than predicate inversion, shouldn't it be possible to have verbs apparently 'disagreeing' with their apparent subjects in similar ways?

Interestingly, something like this may be possible in some dialects of Spanish (see Rodriguez-Monedo (1995) for a number of references):

- (27) Los estudiantes asistimos a la clase regularmente.
the students attended-1-pl to the class regularly
'We, the students, attended the class regularly'

However, (27) is not possible in BP. I propose that an adjunction configuration like that in (26) is only possible in cases of predicate inversion because of the limited nature of pro-drop in BP. As discussed, there is some pro-drop in BP (cf. English):

- (28) Tinha/m uns carros no estacionamento.
have-pst-sg/pl one-pl cars in-the parking-lot
'There were some cars in the parking lot.' (cf. *Were some cars in-the parking-lot.)
- (29) Veio/vieram muitas pessoas na festa.
came-sg/pl many people in-the party
'There came many people to the party.' (cf. *came many people to the party.)
- (30) Choveu muito ontem de noite.
rained much yesterday of night.
'It rained a lot last night.' (cf. *rained a lot last night).

However, it is not always possible (cf. Italian):

- (31) ?*(Ele) dorme. (BP)
he sleeps
'He sleeps.'
- (32) Dorme. (Italian)
Sleeps
'He sleeps'

→ Pro-drop in BP is limited: there are no referential pros.⁶ There are only expletive or predicative pros.

This can account as to why the agreement alternation is possible in inverted but not canonical sentences:

→ The same structure would not be possible for the canonical counterpart of these sentences, as there would be no corresponding pro able to stand for a referential (or non-predicative/non-expletive) DP.

2.2.2. The impossibility of pro-il for copulars

Differently from unaccusatives and pro-il or default agreement is not possible:

- (33) As causas de todas as brigas foram/*foi as meninas.
The cause of all the fights were/was the girls
'The causes of all the fights were the girls.'

⁶ For discussion on the characterization of Brazilian pro-drop as non-referential, see Duarte (1995, 2000), Figueredo Silva (1996), and Kato (2000b).

Why might this be? (some speculations as suggestions for further investigation)

- Pro-il may be ruled out due to its inability to license co-indexation with an adjoined DP.
- Alternatively, it might also be related to some problem involving case assignment (copular being defective in its case assignment compared to other cases (see Viotti, 2000) and pro-il not being able to form some mechanism of transmission through feature sharing with the subject of SC (c.f. Chomsky, 1986).
- pro-il might really be something different, such as a trigger of ‘default agreement’, (possibly merged in Spec-TP, as opposed to re-merged/moved there), which may be related to either of the two previous points.⁷

Summary of the answer to question (ii) (how is agreement optionality syntactically represented)

Agreement optionality in BP follows from the possibility of having different elements in Spec-TP in non-canonical cases:

→ In unaccusatives and existentials, either a pro predicate can undergo predicate inversion (leading to apparent agreement with the post-verbal subject) or there can be default (pro-il) agreement.

→ In copular cases, the raised predicate may either be the pro predicate (again, leading to apparent agreement with the subject of SC) or an overt predicate DP (leading to ordinary Spec-head agreement with the predicate of SC).

Quick Crosslinguistic comparison with BP (by ‘crosslinguist’, I mean BP, English and Italian ☺):

Italian (pro-drop):

- BP has pro-il, Italian doesn’t.
- Italian predicate is always pro-there, (no full DP predicate as in BP).
→ Italian verb agreement always matches the subject of SC.

English (non-pro-drop):

- No pros: adjunction structure in (26) is not possible.
- English has ‘there’:
→ Associate agreement with there.
→ Agreement with overt-DP in spec-TP elsewhere.

3. Summary

→ Agreement alternations in BP show evidence for a class which coincides with a class independently proposed by Moro.

→ Agreement optionality occurs in cases of predicate inversion (answer to (i)).

→ This is because there are different elements which may be predicates raising to Spec-TP (pro-there, pro-il or an overt DP), which are not available in canonical cases or non-predicational structures. (answer to (ii) above).

→ This is not possible in canonical cases because there are only expletive and predicative pros in BP.

APPENDIX

A possible alternative implementation?

I will briefly point out that I have also toyed with an alternative analysis, still based on Moro’s (1997) main views of predicate inversion but implemented using Baker’s (2005) theory of agreement. Baker’s system is inspired by Chomsky Agree, with some modifications which allows agreement to go either upwards or

⁷ This does not seem to affect my proposal, except that I have to use slightly different terminology. For example, as structures with pro-il would not necessarily involve predicate inversion (certainly not to spec-TP), I would not be able to say that optionality occurs only in cases of predicate inversion. Instead, I could say that it occurs in ‘non-canonical’ cases (covering predicate inversion as well as cases in which nothing moves out from SC to spec-TP, but still excluding canonical structures).

downwards. This, together with the basic representation of predicate inversion discussed in section 1, and proposing a single 3rd singular pro (no ‘pro-there’ necessary) seems to be able account for the BP data. A sketch of the analysis can be found at a handout at <http://www.linguistics.ucla.edu/people/grads/lima/UQSeminar.pdf>.

The analysis seemed to work well for the Brazilian and Italian data, but it appears to me that it could possibly lead to problems of overgeneralization in other languages (for example, unlike the approach taken here, it does not follow from the lack of pro-drop in English that it should behave differently from BP in copular contexts). It may be that the differences follow other properties of English, but it is not clear to me what these properties are at this stage.

As well as considering the potential problem with English, the plausibility of such an alternative approach will depend on how Baker’s theory turns out to be supported empirically in different domains and how it fares compared to other theories of agreement such as Spec-Head (e.g. Koopman, 2005) or Agree (e.g. Chomsky, 2000, 2001) (which at first glance appear to be more restrictive).

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