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Chapter 9

A diagnostic for backward object control in Brazilian Portuguese

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This paper discusses the relation between two apparently independent syntactic phenomena, backward object control (BOC) and the inflected infinitive in Brazilian Portuguese. Specifically, I argue that the inflected infinitive can be regarded as a diagnostic for backward object control patterns since the default nominative case percolation from the matrix T to the embedded T requires local checking by an overt DP in the absence of a preposition. The overt realization of the lower copy in backward control is enabled by the loss of the [+person] feature. According to Cyrino (2010), the absence of the [+person] feature both in the finite and the non-finite domain enables nominative subjects in the Spec of the inflected infinitive T, just like in finite clauses. Moreover, backward object control verbs like *mandar/fazer* are similar to double object verbs (as in John gave Mary a book), since, like other causative verbs, they have three arguments: the causer, the cause and the caused event (cf. Zubizarreta 1985; Alsina 1992; Ippolito 2000).

1 Introduction

This paper examines two apparently independent phenomena – *obligatory object control* and *the inflected infinitive* – in Brazilian Portuguese and the potential relation between them.

(1) Forward Control

Maria convenceu eles de [limpar(-em) a casa].
Maria convinced they.ACC of clean-3PL the house



- (2) a. Forward Control
 Maria mandou-os / eles [limpar-(*em) a casa].
 Maria ordered them.ACC / they.ACC clean-INF.3PL the house
- b. Backward Control
 Maria mandou [eles limpar-em a casa].
 Maria ordered they.NOM clean-INF.3PL the house

The interrelation between the inflected infinitive and the realization of the object copy in obligatory control is highlighted on the basis of the distinction between (1) and (2). Specifically, I argue that the inflected infinitive is triggered in Brazilian Portuguese either by a case-marking preposition as in (1) or by backward object control as in (2b), whereby there is a local case-checking through the realization of the lower copy in the embedded clause. Nevertheless, the availability of backward object control in Brazilian Portuguese is still debated and, therefore, one of the main aims of this paper is to bring novel arguments for the reality of backward object control in Brazilian Portuguese. Specifically, I argue that one of the diagnostics for backward object control is the realization of the inflected infinitive (third person plural) in the embedded clause.

This paper is structured as follows: §2 provides a short overview of the backward control patterns across languages. §3 focuses on backward object control in Brazilian Portuguese, presenting semantic and syntactic arguments that attest to the availability of backward object control with verbs such as *mandar/fazer* in this language. In §4 I present the syntax of the inflected infinitive and its relation to backward object control. §5 summarizes the main assumptions of the paper and raises a couple of questions regarding the availability of backward control across languages.

2 Backward control

In order to simplify the Government and Binding Theory (GB), Chomsky & Lasnik (1993) developed what would become known as the Minimalist Program (MP). However, Chomsky's intention was not to develop a new theory, but to develop a new way of investigating that is simpler and more flexible.

The Minimalist Program provides a radical departure from some essential assumptions, such as the lack of a distinction between D(eep)- and S(urface)-Structure. In addition, syntactic movement is restricted not in terms of the modules of Government and Binding Theory, but by principles of economy.

Within the Minimalist framework, Hornstein (1999; 2001) inaugurates a new view of control, known as the movement theory of control (MTC). He proposes

that control is an instance of movement, and thus that control is similar to raising. Replacing PRO with an A-trace allows for the PRO/control module of GB to be eliminated.

For Hornstein (1999), the difference between raising and control is that while in the former an embedded element moves directly from a lexical domain to the subject position of a finite clause, in the latter an element moves from a lexical domain to the matrix subject position after remerging in the embedded clause (Boeckx & Hornstein 2006). The following examples illustrate the structural difference between raising and control:

- (3) [TP Mary [VP seemed [to [VP <Mary> like John]]]]
 (4) [TP Mary [VP <Mary> tried [to [VP <Mary> like John]]]]

If this is correct, then movement to thematic positions is possible. This assumption is necessary, since in control structures the element that moves receive two theta-roles, contrary to raising constructions, in which the moved element bears only one theta-role (Hornstein 1999).

The MTC has many advantages over the PRO-based GB approach to control. The MTC can account for the contradictions that PRO creates, eliminating aspects such as the PRO Theorem and null Case (see Hornstein 2001).

One of the most important advantages of the MTC is the possibility of accounting for backward control (BC). Since Principle C of the binding theory would not allow BC constructions, the MTC is the only theory that can explain this linguistic phenomenon.

BC was first observed in the 1980s, but theories at this point were still not able to explain it. BC is characterized by the existence of a controlled null element in a higher position in the structure than its antecedent (Farrell 1995; Rodrigues 2004; Boeckx & Hornstein 2006).

- (5) BP
 Maria mandou Δ_1 [eles₁ se comportarem.]
 Mary ordered they.1SG.NOM self behave.INF.3PL
 'Mary ordered them to behave themselves.'

The most plausible analysis of BC was put forward by Polinsky & Potsdam (2002), who investigated the phenomenon in Tsez. Subsequently, BC was investigated in other languages such as Malagasy, Brazilian Portuguese (BP), Korean and Japanese. Potsdam (2009) shows that in Malagasy the object in obligatory control structures can be expressed either in the matrix clause as in (6a), where

the object is case-marked with accusative by the matrix verb, or in the embedded clause as in (6b), where the lower copy is pronounced as nominative. The former represents forward object control, as the object of the matrix verb is overtly realized in (6a), while the latter represents backward object control, since it is the subject of the embedded clause that is overtly pronounced in (6b).

(6) Malagasy (Potsdam 2009: 755)

- a. nampahatsiahivan' i Soa ahy_i [hohidiana Δ_i ny varavaran-dakozy].
 remind Soa me lock the door-kitchen
- b. nampahatsiahivan' i Soa Δ_i [hohidiana ko_i ny varavaran-dakozy].
 remind Soa lock I the door-kitchen
 'Soa reminded me to lock the kitchen door.'

The classic works on control have shown that control occurs in non-finite clauses. Nevertheless, some recent studies assume that finite control is possible in some languages, such as Korean (Yang 1985; Borer 1989), Spanish (Suñer 1988), Greek (Terzi 1992; Modesto 2000a; 2000b; Alexiadou et al. 2010; 2011), Japanese (Uchibori 2000) and BP (Farrell 1995; Rodrigues 2004; Boeckx & Hornstein 2006).

A controversial matter concerning control in BP, however, involves the assumption that agreement with topics across a finite CP is licensed in this language (Martins & Nunes 2005), although it is a well-known fact that CPs act as phases (see Chomsky 2000). This crucial question about the Phase Impenetrability Condition in the MTC is one of the main topics to be discussed in this paper. Moreover, the novel contribution of this paper is that it correlates the reality of backward control in BP with another well-known syntactic phenomenon in BP – the inflected infinitive subcategorized by the control verbs *mandar* and *fazer*.

3 *Mandar/fazer* in Brazilian Portuguese

This section examines the controversial topic of whether backward object control (BOC) is available in Brazilian Portuguese and what we can learn from the relation between (backward) object control verbs and the inflected infinitive.

In Brazilian Portuguese, we see the following variation: standard object control verbs such as *forçar* 'obligate' and *proibir* 'prohibit' allow only *forward object control* (FOC) and 'causative' object control verbs such as *mandar* 'order', *fazer* 'make' and *deixar* 'allow' allow both *forward* (FOC) and *backward object control* (BOC).

As the subject/object distinction has been lost for third person full pronouns in Brazilian Portuguese, the distinction between forward and backward object control can only be directly observed for the first person. (cf. Farrell 1995; Boeckx & Hornstein 2004; 2006):

- (7) a. FOC
 Maria **me** proibiu [de limpar a casa].
 Maria me.ACC prohibited from clean the house
- b. *BOC
 Maria proibiu [eu de limpar a casa].
 Maria prohibited I.NOM from clean the house
 ‘Maria prohibited me from cleaning the house.’
- (8) a. FOC
 Maria **me** mandou [limpar a casa].
 Maria me.ACC made clean the house
 ‘Maria made/had me clean the house.’
- b. BOC
 Maria mandou [eu limpar a casa].
 Maria made I.NOM clean the house
 ‘Maria made me clean the house.’

However, if we consider other languages we can see that causative verbs can be ambiguous between raising and control. The *loísta* variant of Spanish disambiguates the dual status of the analytic causative verb *hacer* through the use of the clitics *lo/la* and *le*. Specifically, the causative verb occurring with the accusative *lo/la* (which triggers an animacy restriction both on the object and the subject of *hacer*) marks the control reading of the analytic causative:

- (9) a. La recesión **le** ha hecho perder el trabajo a **María**.
 the recession CL.DAT has made lose the job to Mary
 ‘Recession has made Mary lose her job.’
- b. *La recesión **la** ha hecho perder el trabajo a **María**.
 the recession CL.ACC has made lose the job to Mary
 ‘Recession has made Mary lose her job.’

On the basis of this, Torrego (2010) proposes two different analyses for *leísta*¹ and *loísta* causatives: *raising* occurs with the causative *hacer* when the subject is

¹We use the term *leísta* to differentiate the use of dative *le* clitics from the accusative *lo* clitics in *loísta* Spanish.

not agentive and the causative verb *hacer* does not subcategorize a causee. The sole argument of the causative *hacer* is the caused event. Almost all Romance languages allow the raising construction with the causative verb *hacer* when the caused event is realized as an embedded CP. The following constructions are clear cases of non-restructuring raising on a par with the verb *pare* ‘seem’ (the embedded clause is introduced by the complementizer *ca*, which is the marker of a CP layer in Romanian; cf. Alboiu 2007):

- (10) a. Romanian
 Uraganul a făcut ca mulți oameni să-și piardă
 hurricane.the has made that many people SUBJ.CL.their lose
 casele.
 houses
 ‘The hurricane made many people lose their houses.’
 b. Brazilian Portuguese
 A vaga de frio fez nevar nas terras altas.
 the wave of cold weather made snow in.the highlands
 ‘The wave of cold weather made it snow in the highlands.’

In line with López (2001), I argue that, similarly to *mandar/fazer* in Brazilian Portuguese, the *loísta* causative *hacer* assigns an (+affected) theta-role to its causee. Control *loísta* *hacer* causative verbs have three arguments: the *causer*, the *causee* and the *caused event* (cf. Zubizarreta 1985; Alsina 1992; Ippolito 2000).

Below, I show that, like *loísta* *hacer*, the causative *mandar* and *fazer* do not represent cases of the ECM/raising construction (cf. Farrell 1995), but real cases of backward object control when they subcategorize a DP.

3.1 Semantic arguments for Backward Object Control

First, unlike in the case of the ECM/raising construction, the passivization of the complement of *fazer* and *mandar* does affect the interpretation of the entire construction.²

²According to Jairo Nunes (p.c.), the alleged difference in meaning between (i) and (ii) seems to be no different from what we find in their subjunctive counterparts:

- (i) Eu mandei que / fiz com que o médico examinasse a minha filha.
 I ordered that / made with that the doctor examine the my daughter
 (ii) Eu mandei que / fiz com que a minha filha fosse examinada pelo
 I ordered that / made with that the my daughter was examined by.the
 médico.
 doctor

- (11) $a = b$ (Farrell 1995: 119)

- a. I wanted [the doctor to examine my daughter].
- b. I wanted [the daughter to be examined by the doctor].

- (12) $a \neq b$

- a. Eu mandei/fiz o médico examinar a minha filha.
I ordered/made the doctor examine the my daughter
- b. Eu mandei/fiz a minha filha ser examinada pelo médico.
I ordered/made the my daughter be examined by.the doctor

As Farrell (1995) argues, the causee is affected by the action denoted by the verbs *fazer* and *mandar* and, therefore, unlike in (9), the active and passive sentences are not synonymous.

Second, these two verbs impose selectional restrictions on the overt cause. This element cannot be a clause or an expletive.

- (13) * [O maracujá tem algum componente que faz [_{IP} tomar
the passion.fruit has.3SG some component that makes to.take
muito suco dele dar sono]].
a.lot.of juice his gives.3SG drowsiness
'Passion fruit has something in it that makes the one drinking a lot of
the juice drowsy.' (Farrell 1995: 119)
- (14) * Aquilo faria ser óbvio que eu sou forte.
that would.make.3SG to.be.INF obvious that I am.1SG strong.
'That would make it be obvious that I am strong.' (Farrell 1995: 120)

Crucially, in Romanian, a language that permits only subjunctives, there is a clear distinction between (iii) and (iv).

- (iii) L-am trimis / făcut pe Ion să mearga la doctor.
him.ACC-have sent / made PE John SBJV go to.the doctor
- (iv) Am trimit / făcut să mearga Ion la doctor.
have sent / made SBJV go John to.the doctor

The verbs *a trimite/a face* in (iii) can be interpreted as 'convince/obligate/force' whereby John is the syntactic argument of these verbs, while the same homophonous verbs in (iv) are mere causative verbs that do not subcategorize a direct object. We argue that *mandar* and *fazer* behave similarly, allowing both types of readings and, hence, two different syntactic structures: as mere causative verbs in subjunctive clauses and as object control verbs like *trimit* 'send' in (iii). Wurmbrand (2001) also claims that in German causative verbs are ambiguous between raising and control (see Wurmbrand (2001) for more details).

Third, like standard object control verbs that require a syntactic object, the verb *mandar* in Brazilian Portuguese can occur only with animate objects:³

- (15) *Eu mandei a pedra cair.
I ordered the stone fall

3.2 Syntactic arguments for Backward Object Control

In addition to Farrell's semantic arguments, I put forth several syntactic arguments that confirm the existence of backward object control in Brazilian Portuguese.

3.2.1 No restructuring

Like in the cases of subject control, backward object control with *mandar*, *fazer* and *deixar* do not represent cases of restructuring and, hence, are not monocausal structures (for more details see Cyrino 2010):

Two separate negations are possible:

- (16) a. Maria não mandou eles limpar(em) a casa.
Maria not ordered they clean.INF the house
'Maria didn't order them to clean the house.'
b. Maria mandou eles não limpar(em) a casa.
Maria ordered they not clean.INF the house
'Maria ordered them not to clean the house.'
c. Maria não mandou eles não limpar(em) a casa.
Maria not ordered they not clean.INF the house
'Maria didn't order them not to clean the house.'

³Marcelo Ferreira (p.c.) argues that (14) might sound odd for pragmatic reasons. Sentences like (i), which clearly involves a null expletive in the embedded subject, sound perfect:

- (i) O arquiteto mandou ter uma janela em cada quarto.
the architect ordered have a window in each room

The example Ferreira gives in (i) is similar to examples with the homophonous causative verb *trimite* or 'made' in Romanian, which is syntactically distinct from the object control *trimite/face*:

- (ii) Arhitectul a trimis să se aducă o fereastră în fiecare cameră.
the.architect sent SBJV REFL bring a window in each room
'The architect sent to be brought a window in each room.'

Two separate event modifiers are also possible:

- (17) a. Maria mandou quatro vezes eles enxaguar a camisa.
 Maria ordered four times they rinse the shirt
 ‘There were four times that Maria ordered them to rinse the shirt.’
 (four orderings)
- b. Maria mandou eles enxaguar a camisa quatro vezes.
 Maria ordered they rinse the shirt four times
 Also: ‘Maria ordered them to rinse the shirt four times.’ (four rinsings)

3.2.2 The 1st person singular nominative pronoun

The first person singular nominative subject pronoun *eu* (which is still distinct from the accusative) cannot be used in object position, either in monoclausal sentences (16a) or with standard object control verbs such as *forçar* ‘obligate’ and *proibir* ‘prohibit’ (16b), but it is grammatical with *mandar* and *fazer* (16c).

- (18) a. Ela me viu/ viu *eu.
 she me.ACC saw/saw I.NOM
 ‘She saw me.’
- b. *A professora proibiu eu de apagar o quadro.
 the teacher prohibited I.NOM of erase the board
 ‘The teacher prohibited me from erasing the board.’
- c. A professora mandou/ fez eu apagar o quadro.
 the teacher made/had I.NOM erase the board
 ‘The teacher had me erase the board.’ (Farrell 1995: 121)

3.2.3 No transparency effects

Like many other scholars, Cinque (2004) argues that a diagnostic for restructuring verbs is that they show transparency effects (clitic-climbing/object-raising). Transparency effects can be obtained with restructuring causative verbs in Italian but not in Brazilian Portuguese:

- (19) a. Italian
 Maria la fa riparare a Giovanni.
 Mary it.ACC made repair to Giovanni
 ‘Mary made Giovanni repair it.’

- b. * Brazilian Portuguese
 Maria me mandou o João beijar.
 Maria me.ACC ordered the John kiss.INF
 ‘Maria ordered John to kiss me.’s

3.2.4 No *Faire-Par* type of causatives

Analytic causatives come in two different guises (cf. Kayne 1975; Huber 1980; Burzio 1986; Enzinger 2010; Campanini & Pitteroff 2012): the embedded subject may be either realized as an argumental DP (*Faire-Infinitive*) or as part of an optional adjunct PP (*Faire-Par*):

(20) Italian

- a. Gianni ha fatto riparare la macchina a Mario.
 Gianni has made repair.INF the car to Mario
 ‘Gianni made Mario repair the car.’
 b. Gianni ha fatto riparare la macchina (da Mario).
 Gianni has made repair the car (by Mario)
 ‘Gianni got the car repaired (by Mario).’ (Campanini & Pitteroff 2012)

Unlike in Italian restructuring constructions, the embedded subject cannot be realized as part of an optional adjunct PP in Brazilian Portuguese with *mandar/fazer*, providing strong evidence that these causative verbs need to subcategorize an internal argument realized as a covert copy in the backward control pattern.

- (21) * O João mandou limpar a casa por Maria.
 John order clean.INF the house by Mary
 ‘John got the house cleaned by Mary.’

3.2.5 The loss of [person] features

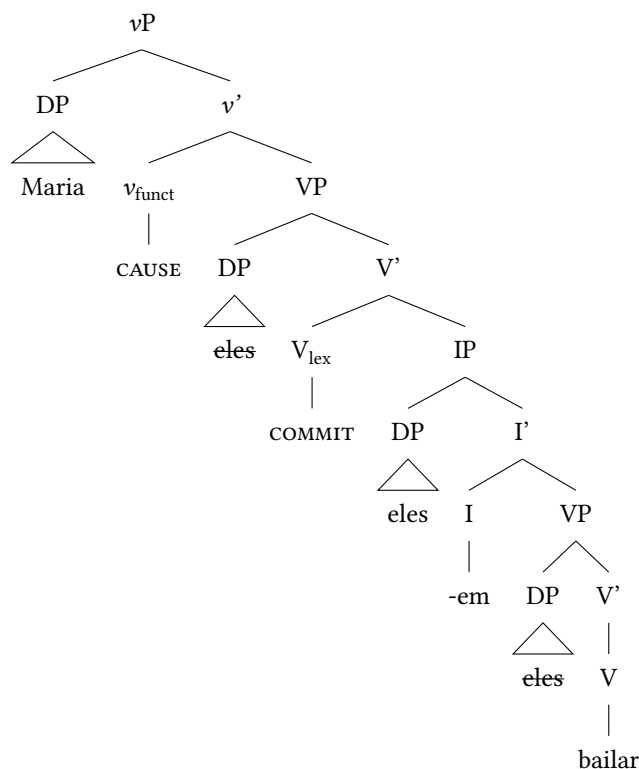
Nunes (2008), Ferreira (2009) and Rodrigues (2004) propose that finite T in Brazilian Portuguese now has only [number]. In the same vein, Cyrino (2010) argues that the same has happened to inflected infinitives and uninflected infinitives in Brazilian Portuguese. The sole morphological marking in inflected infinitives is found in the 3rd person plural. Therefore, Cyrino (2010) claims that Brazilian Portuguese allows nominative subjects in an embedded non-finite domain. This amounts to saying that the embedded domain is not a complete phase, but rather it is similar to embedded subjunctive clauses in Balkan languages like Romanian and Greek, whose defectively inflected verb can also assign nominative case. This

might go hand in hand with with primary data from the Bahdini dialect of Kurmanji Kurdish cited by Manzini et al. (2017), who show that nominative case corresponds to the bare nominal base, and hence is a default case.

3.3 The syntax of *mandar/fazer* causative verb types

This section aims at discussing the syntactic structure of causative verbs of the *mandar/fazer* type in Romance in order to show how they interact with the syntax of the inflected infinitive. Hence, I focus on three syntactic phenomena specific to Brazilian Portuguese: i. the argument structure of *mandar/fazer* verb types, ii. the syntax of the embedded (inflected) infinitive and iii. the case assignment properties of the (inflected) infinitive in object control. With respect to ii., this paper argues that *mandar/fazer* as control verbs have three arguments: the causer, the cause and the caused event (cf. Zubizarreta 1985, Alsina 1992 and Ippolito 2000). On the basis of the semantic and syntactic tests provided in the above mentioned section, I argue that *mandar/fazer* are object control verbs and have the following structure:

- (22) *mandar* 'order' and similar verbs [_____ NP TP]
 $\theta_{\text{AGENT}} \theta_{\text{THEME}} \theta_{\text{caused event}}$



The structure with *mandar/fazer* in (20) is, therefore, similar to Double Object Constructions in the spirit of Larson (1988). Specifically, Larson (1988) assumes that object control predicates are VP shell structures in which a subject control predicate is embedded under an object predicate.

Crucially, unlike light verbs such as *fare* in Romance and *make* in English (see Guasti 1996; Folli & Harley 2007; Pytkäinen 2002; 2008), *mandar/fazer* in control constructions (18) are not restructuring verbs; rather they are lexical verbs embedded by a functional v_{CAUSE} that need to subcategorize a real internal argument.⁴ The next section discusses the syntax of the embedded infinitive that influences the Spell-Out of the embedded subject or the matrix object of backward object control verbs.

4 The inflected infinitive

Regarding the syntax of the inflected infinitive in Brazilian Portuguese, this paper makes two claims: first, it regards the distribution of the inflected infinitive as a diagnostic for the fact that the shared argument is truly embedded. More explicitly, it argues that backward object control with *mandar* and *fazer* is signalled

⁴However, there is a potential counterargument to this proposal: Farrell (1995) argues that in Brazilian Portuguese, *mandar* and *fazer* have an ECM syntax and an object control semantics since, unlike standard object control verbs, they cannot be passivized:

- (i) *O nenê foi feito dormir.
the baby was made sleep.
- (ii) Os alunos foram forçados a estudar mais.
the students were forced to study more

On the basis of these examples, Farrell (1995) and Hornstein (2003) argue that the causee does not occupy a matrix object position. As Landau (2004) points out, if the causee is an embedded ECM subject, matrix passivization should be able to absorb the accusative and allow raising to the matrix subject position. Thus, examples such as (i) are blocked by the different syntax of causatives, since passivization of causatives is illicit in several languages (see Landau 2004; Hornstein et al. 2008). Specifically, Hornstein et al. (2008) argue for English and European Portuguese that the asymmetry between active and passive forms of causative verbs is triggered by the fact that the infinitival complement must be *bare* when selected by *the active form* but *prepositional* when selected by *the passive form*, as the past participle morpheme intervenes between the finite and the inflected T, blocking agreement between the two heads (Hornstein et al. 2008: 220). This also seems to be valid for Brazilian Portuguese. Accordingly, since *mandar* and *fazer* are not prepositional verbs, unlike other object control verbs, they disallow passivization. Hence, the passivization test does not constitute a counterargument to a control analysis of *mandar* and *fazer*.

by the presence of the inflected infinitive when the shared argument is third person plural. Second, in line with Raposo (1987), Nunes (1995) and Pires (2007), it considers inflected infinitive clauses as nominal Case-bearing projections. In order to support the former assumption, I build on the contrast between subject control verbs such as *conseguir* ‘manage’ in (21a) that do not select a preposition and verbs like *aprender* ‘learn’ that do select one (21b). The two classes of control verbs differ in that the inflected infinitive is illicit with the former (21a) but not with the latter (21b) (see also Modesto 2010).

(23) Subject Control

- a. Os meninos conseguiram vender-*em a casa.
the boys manage.3PL sell.INF(-3PL) the house
‘The boys managed to sell the house.’
- b. Eles aprenderam a não falar(-em) alto à mesa.
they learned to not talk-(3PL) loud at.the table
‘They learned not to talk loudly at the table.’

On the basis of (21), I assume that the BOC verbs *mandar* and *fazer* in (21b) behave similarly to subject control verbs like *conseguir* ‘manage’ in (21a), as they do not select prepositions and disallow the inflected infinitive. By contrast, the forward object control verbs *convencer de* ‘convince of’ in (23b) are similar to subject control verbs such as *aprender a* ‘learn to’ in (23a): both of them select prepositions, and optionally permit the inflected infinitive.

(24) a. Subject Control

Os meninos conseguiram vender-*em a casa.
the boys manage.3PL sell.INF(-3PL) the house
‘The boys managed to sell the house.’

b. Forward Object Control

Maria mandou eles [limpar-*em a casa].
Maria ordered they.NOM clean-3PL the house
‘Maria ordered them to clean the house.’

c. Backward Object Control

Maria mandou [eles limpar-em a casa].
Maria ordered they.NOM clean-3PL the house
‘Maria ordered them to clean the house.’

- (25) a. Subject Control
Eles aprenderam a não falar(-em) alto à mesa.
they learned to not talk(-3PL) loud at.the table
‘They learned not to talk loudly at the table.’
- b. Object Control
Maria convenceu eles de [limpar(-em) a casa].
Maria convinced they.NOM of clean-3PL the house
‘Mary convinced them to clean the house.’

More explicitly, I argue that if control verbs do not subcategorize prepositional embedded clauses and the controller is realized in the matrix clause, the inflected infinitive is illicit, as shown in (22a, b). The interplay between the realization of backward object control with *mandar/fazer* and that of the inflected infinitive is not morphologically visible on the basis of the pronominal paradigm in spoken Brazilian Portuguese, since the nominative-accusative distinction has been lost for all pronouns with the exception of the 1st person singular form and, crucially, first person singular pronouns do not trigger overt morphological agreement in infinitives.

Table 1: The pronominal paradigm of colloquial Brazilian Portuguese

Number	Person	Subject	Object
Singular	1st	<i>eu</i>	<i>me</i>
	2nd	você/tu	você/te
	3rd	ele, ela	ele, ela
Plural	1st	nós	nos
	2nd	vocês	vocês
	3rd	eles, elas	eles, elas

Nevertheless, this hypothesis is supported by the written register of Brazilian Portuguese that has a parallel grammar which still preserves the morphological nominative-accusative distinction in pronouns.

- (26) a. Written register
Maria mandou-os [limpar-*em a casa].
Maria ordered-them.ACC clean-(*-3PL) the house

- b. Spoken/written register
 Maria mandou [eles limpar-em a casa].
 Maria ordered they.NOM clean-3PL the house
- c. Os meninos conseguiram vender-*em a casa.
 the boys manage.3PL sell(-3PL) the house

Analogically, in European Portuguese inflected infinitives are not allowed when their subjects are Case-marked by the matrix verb (cf. Hornstein et al. 2008):

- (27) European Portuguese
 A Maria viu-te sair/*saíres.
 the Maria saw-CL.2SG.ACC leave.INF/leave.2SG
 ‘Mary saw you leaving.’

In the above examples from different registers and grammars, one can clearly observe that when the object controller of *mandar/fazer* is realized in the accusative in the matrix clause, the inflected infinitive is completely illicit. Thus, the diagnostic provided by the inflected infinitive for backward object control is supported by two important arguments, namely the distinction between prepositional and non-prepositional subject control verbs in (21) and evidence provided by the written register and European Portuguese (24 & 25).

Other interesting pieces of evidence for a backward control analysis of analytic causatives in Brazilian Portuguese are provided by the distribution of the anaphoric pronoun *ele*, which can co-occur with the raised subject and raised object of forward control verbs, but never in the causative constructions. The reason for this is that the causee/object of the causative verb is truly embedded and the entire construction is a backward control structure, since both control and causative verbs in Brazilian Portuguese have the same control semantics imposing commitment on the direct object:

- (28) a. Os meninos_i querem ELES_i limpar a casa.
 the children want they clean the house
 ‘The children want themselves to clean the house.’
- b. A Maria convenceu os meninos a ELES limparem a casa.
 Mary convinced the children they clean-3PL the house
 ‘Mary convinced the children to clean the house themselves.’
- c. * A Maria mandou os meninos ELES limparem a casa.
 Mary ordered the children they clean the house
 ‘Mary ordered the children to clean the house themselves.’

The examples above clearly show that both the raising verb *querem* ‘want’ in (26a) and the forward object control verb *convenceu* ‘convinced’ in (26b) accept an anaphoric pronoun coindexed with the raised subject, because in both cases the subject of the embedded domain has raised to the matrix clause either as a subject or as an object. This is not the case with the causative verb *mandar* in Brazilian Portuguese (26c) because the embedded subject position is already occupied by the causee, which is backwardly controlled by an empty copy in the matrix clause.

Crucially, the inflected infinitive is licit only with the forward object control verb *convencer* ‘convince’ and the analytic causative verb *mandar* – a fact which also leads to the conclusion that, in contrast to *querer* ‘want’, the analytic causative verb is a control verb rather than a raising verb. In the following section we will have a closer look at inflected infinitives in Brazilian Portuguese and see that they can function as diagnostics for backward control constructions.

4.1 Towards an analysis of inflected infinitives

In line with Raposo (1987) I argue that inflected infinitives are ‘nominal’ projections, being associated with case and phi-features but not with Tense (see Stowell 1982):

- (29) a. * Maria manda eles terem limpado a casa ontem
 Maria orders they have.INF.3PL cleaned the house yesterday
 ‘Maria orders them to have cleaned the house yesterday.’
 b. * Maria mandou eles limparem a casa amanhã.
 Maria orders they clean.3PL the house tomorrow
 ‘Maria makes them clean the house tomorrow.’

Thus, structural case (nominative/accusative) is related to phi-features (cf. George & Kornfilt 1981; Sitaridou 2006) rather than to tense⁵ (see also Pires 2007). In Brazilian Portuguese, the nominative case is linked to [+number]. The overt subject-verb agreement in the inflected infinitive of Brazilian Portuguese is linked to both to the case properties and to [+number] features of T (cf. Nunes & Eduardo 1998). In more specific terms, the case of the inflected infinitive is assigned either by a preposition that subcategorizes the entire embedded clause

⁵Hence, I argue that the embedded (inflected) infinitives are tense-deficient IPs/TPs, consisting of a TP missing the CP layer; the source of ‘defective’ T is attributed by Chomsky (2008) to the lack of feature inheritance from C. Alboiu (2007) and Alexiadou et al. (2010) provide the same analysis for subjunctive clauses of subject control verbs in Romanian and Greek.

and assigns inherent case to the head of the infinitival TP (Hornstein et al. 2008) or by the matrix verb as in the Double Object Constructions⁶: *I gave her a book* (see Larson 1991 for more details). Hence, in line with Raposo (1987), I claim that there is a percolation of default nominative case from the matrix verb to the embedded T that is specified with [+number] features. The default case must be locally checked by an overt DP. This is the case of backward object control with *mandar* and *fazer*. In the case of forward control with *mandar/fazer*, the [+number] feature is not realized in the embedded T (the morphological marking for number is also missing) so the default case cannot be assigned and the controller DP must raise to the matrix clause and realize the structural case of the matrix verb.

Explicitly, I argue that when a preposition is lacking, the inflected infinitive can be realized if the embedded T is specified with [+number] that triggers case assignment by the matrix verb and local case checking by an overt embedded subject in Spec TP (see Raposo 1987). The embedded subject bears default structural case and locally agrees with the head of the embedded infinitival TP. In this paper, I adopt the approach to case assignment proposed by McFadden & Sundaresan (2011), according to which the nominative serves as a default case for those arguments not assigned other marked cases.

- (30) a. Maria mandou [eles limpar-em a casa].
 Maria ordered they.NOM clean-3PL the house
 b. Maria mandou eles [limpar a casa].
 Maria ordered they.ACC clean-INF the house
 ‘Mary ordered them to clean the house.’

⁶Brazilian Portuguese, however, has lost Double Object Constructions (DOC). For languages that allow clitic doubling (CD) of objects, various scholars have argued that constructions that contain clitic-doubled indirect objects are DOCs and not prepositional constructions (see Demonte 1995; Blears 1999; Anagnostopoulou 2003; among others). As Brazilian Portuguese has lost its clitics, it does not make use of the DOC.

- (i) Brazilian Portuguese
 Maria deu um livro para ele.
 Maria gave a book to he
 (ii) European Portuguese
 Maria deu-lhe um beijo a ele.
 Mara gave-him a kiss to him

Double object constructions are marginally available with *mandar/fazer* subcategorizing infinitives because unlike other control verbs, these verbs are not prepositional, hence allowing the structure: DP VP DP IP.

The example (28) shows that backward object control and the inflected infinitive are allowed only if there is morphological case matching⁷ between the overt and the covert controller, that is if the morphological case form of the subject is the same as that of the object in forward object control.⁸ Crucially, this is linked to the fact that morphological accusative case forms are disappearing in the colloquial language and being replaced by the corresponding nominative case forms.

(31) (Farrell 1990: 328)

Eu o conheci / conheci ele / conheci Ø numa festa.
I him.ACC met met he.DEFAULT met Ø in.a party

In the presence of the preposition that assigns inherent case to the inflected infinitive, the structural case of matrix verbs must be obligatorily realized by an accusative object realized in the matrix clause. Therefore, standard object control verbs that subcategorize prepositions allow only forward control patterns. They correspond to Prepositional Constructions (PC) in Larson's (1988) terms: *I gave a book to Mary*.

⁷A further comparison between Brazilian Portuguese, which allows backward object control, and Romanian, which does not, seems to suggest that the occurrence of backward object control patterns and of the inflected infinitive is linked to the morphological case marking of the object. While in Romanian, the case of the direct object is obligatorily marked by the preposition *pe*, in Brazilian Portuguese, both the object and the subject use the nominative case form:

- (i) * Maria I-a obligat *pe el să zâmbească.
Maria CL.ACC-has obligated PE him.ACC SBJV smile.3SG

Case-matching between the overt and covert argument DP in backward control patterns in Brazilian Portuguese has been independently observed for Free Relative Clauses in Romanian (see Alexiadou et al. 2010). Essentially, in the case of Free Relative Clauses in Romanian, the less marked case (Nominative) cannot play the role of the Accusative: in (ii) *pe* requires Acc and 'arrive' requires Nom; if *pe* is deleted, the pure Nom form *cine* cannot override the Acc required by 'have prized':

- (ii) (Alexiadou et al. 2010)
Au premiat *(pe) [cine a ajuns primul].
have prize.given PE.ACC who.NOM has arrived first

⁸We might wonder, however, how to explain the optionality between realizing the higher copy in the matrix clause and the lower copy in the inflected infinitive; that is, the distinction between forward control and backward control. Arguably, this optionality can be explained by principles of chain reduction (cf. Nunes 2004) according to which a copy of a given chain with the fewest features must be pronounced. Building on Nunes, Potsdam argues that the optionality in control arises when two copies in a chain have the same number of unchecked features, since one case value can be overridden by another case.

All in all, this paper claims that backward control and the inflected infinitive⁹ overlap when the embedded T is phi specified with [+number] and is assigned default case by the matrix verb in the absence of a preposition. Moreover, the default case of T must be locally checked by an overt DP. The embedded T allows nominative subjects because, like finite T, infinitival T has lost its [+person] feature (see Cyrino 2010).

5 Concluding remarks

In this paper, I argued that the inflected infinitive can be regarded as a diagnostic for the backward object control pattern (when the controller is not the first person singular), since the percolation of default nominative case from the matrix T to the embedded T requires local checking by an overt DP in the absence of a preposition. Several crucial questions still remain to be answered: why is backward object control available only relatively rarely across languages? Why do languages apparently show complementary distribution between backward subject control and backward object control? In line with Alexiadou et al. (2010), I argue that languages such as Greek, Romanian and Spanish that allow backward subject control show different parametric properties from those allowing backward object control. Specifically, Alexiadou et al. (2010) show that backward subject control is linked to some essential properties such as the availability of subject *pro*, VSO order with internal subjects (cf. Alexiadou 2001) and EPP checking via V movement (Alexiadou & Anagnostopoulou 1998 among others). In contrast to backward subject control, I argue that BOC is available in Brazilian Portuguese due to various parametric triggers such as:

1. strict SVO order,
2. the gradual loss of the morphological nominative/accusative distinction (with the exception of first person) and
3. the loss of the [+person] feature in finite, inflected infinitive and non-finite Ts
4. (indirectly) the availability of null objects.

⁹The optional realization of the inflected infinitive with standard object control verbs is not linked to the Case of T, as this is assigned by the preposition, but is due to the optional realization of number on T: [+number] & [+inherent Case] triggers inflected infinitive while [-number] & [+inherent Case] triggers uninflected infinitive.

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