

# Minimalist Essays on Brazilian Portuguese Syntax

*Edited by*  
Jairo Nunes

John Benjamins Publishing Company

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### **Volume 142**

Minimalist Essays on Brazilian Portuguese Syntax.

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# Minimalist Essays on Brazilian Portuguese Syntax

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# Introduction





## Brazilian Portuguese under minimalist lenses

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### 1. Introduction\*

The last two decades of the 20th century witnessed two fundamental shifts in the generative enterprise. The first shift took place in the 80s with the formulation of the Principles and Parameters Theory (see e.g. Chomsky, 1981, 1986b, and Chomsky & Lasnik, 1993), which made it possible to deal with Plato's problem in the domain of language in a tractable manner. By providing analyses with a considerable degree of explanatory adequacy, the Principles and Parameters Theory gave rise to an exponential growth in the identification of syntactic universals and in the description of specific languages. The richness of the empirical material uncovered in the 80s coupled with the sophisticated theoretical apparatus developed in the Government and Binding (*GB*) model (see e.g. Chomsky, 1981) quickly fueled the other shift that got crystallized in the beginning of the 90s: the Minimalist Program (see e.g. Chomsky 1995, 2000, 2001, 2004). Aiming at going beyond explanatory adequacy, the Minimalist Program broadened the domain of linguistic research as it sets itself to investigate *why* the language faculty has the properties it has, and not others. Although recent, the Minimalist Program has achieved considerable success in downsizing the technical apparatus developed within *GB*, while keeping or enlarging the empirical coverage previously attained.

Generative studies on Brazilian Portuguese syntax have been closely following the two shifts mentioned above. The *GB* model yielded a great number of important works on the specificities of Brazilian Portuguese when compared to other languages and, in particular, to European Portuguese (see e.g. Duarte, 1995; Figueiredo Silva, 1996; Cyrino, 1997; Galves, 2001; and the collection of papers in Roberts & Kato, 1993 and Kato & Negrão, 2000). More recently, some of these specificities have been reanalyzed in light of the Minimalist Program, raising interesting questions about

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the theoretical apparatus under development (see e.g. Kato, 1999; Ferreira, 2000, 2004; Bastos, 2001; Ximenes, 2002, 2004; Augusto, 2003; Floripi, 2003; Zocca, 2003; Nunes & Zocca, 2005; Rodrigues, 2004; Avelar, 2004, 2006; Ximenes & Nunes, 2004, Martins & Nunes, 2005, forthcoming; and Nunes, 2008, forthcoming).

This volume congregates recent minimalist analyses on some of the major syntactic properties of Brazilian Portuguese. The proposals are by and large mutually supportive, which provides both a more integrated view of the grammar of Brazilian Portuguese and a cohesive testing ground for some theoretical tools currently being explored in the Minimalist Program.

The volume is divided into two parts. Part I is devoted to movement and empty category issues and Part II to issues related to the syntax-morphology interface. The next sections provide a brief tour through the volume, highlighting the specific minimalist ingredients the analyses proposed are couched on.

## 2. Movement and empty category issues

### 2.1 Movement to thematic positions: Null subjects and null possessors

It has been a point of consensus among scholars working on Brazilian Portuguese that it should not be analyzed as a typical *pro*-drop language, as its null subjects are severely restricted in distribution and interpretation.<sup>1</sup> A very tough challenge has been to formally capture the description that Brazilian Portuguese is a partial null subject language.

Ferreira (this volume, Chap. 2) shows that referential null subjects in Brazilian Portuguese display the general properties ascribed to obligatorily controlled PRO and, assuming Hornstein's (2001) analysis of obligatory control as resulting from movement to  $\theta$ -positions, argues that null subjects in Brazilian Portuguese are traces of A-movement (see also Rodrigues 2004). Under this view, a sentence such as (1a) is to be derived along the lines of (1b), where the subject moves from the embedded [Spec, TP] to the matrix [Spec,vP], where it is assigned the external  $\theta$ -role of the matrix predicate, before reaching its final landing site in the matrix [Spec,TP].

- (1) a. [[o João]<sub>i</sub> disse que *ec*<sub>i/\*k</sub> comprou um carro]  
       *the João said that bought a car*  
       'João said that he bought a car.'
- b. [<sub>TP</sub> [o João]<sub>i</sub> T [<sub>vP</sub> t<sub>i</sub> disse [<sub>CP</sub> que [<sub>TP</sub> t<sub>i</sub> T [<sub>vP</sub> t<sub>i</sub> comprou um carro]]]]]

1. For relevant discussion, see e.g. Duarte (1995), Figueiredo Silva (1996), Kato (1999), Negrão (1999), Ferreira (2000, 2004), Modesto (2000), Galves (2001), Rodrigues (2002, 2004), Barbosa, Duarte & Kato (2005), and the collection of papers in Kato & Negrão (2000).

The analysis sketched in (1b) becomes viable within minimalism thanks to some departures from GB. First, with the abandonment of D-Structure, merger and movement operations are interspersed, which amounts to saying that  $\theta$ -relations are not established at a given starting point, but in the course of the derivation. Furthermore, given that  $\theta$ -roles are assigned under merger and that merger is necessarily involved in movement, there arises the possibility that movement can license  $\theta$ -assignment. This is arguably what happens when the embedded subject in (1b) moves to the matrix [Spec,vP]. Once the null subject in (1b) is analyzed as an A-trace, we now have a natural explanation as to why it displays all the properties associated with A-movement.

One question that arises is why this derivation is not possible in languages such as English, for instance. Ferreira proposes that with the weakening of the verbal agreement morphology in Brazilian Portuguese (see e.g. Duarte, 1995), finite Ts became ambiguous as to having a complete or an incomplete set of  $\phi$ -features.<sup>2</sup> If the  $\phi$ -complete version of T is selected, it assigns nominative to the subject, freezing it for purposes of A-movement. If the  $\phi$ -incomplete version is selected instead, the subject of its clause remains Caseless and can undergo further A-movement. From this perspective, the derivation in (1b) involves a  $\phi$ -incomplete T in the embedded clause and a  $\phi$ -complete T in the matrix.

A nice empirical consequence of Ferreira's proposal is that it predicts that A-movement out of finite embedded clauses in Brazilian Portuguese need not target a  $\theta$ -position. An embedded subject may move directly to the matrix [Spec,TP] if there is no intervening  $\theta$ -position. Hyper-raising constructions such as (2) show that this prediction is indeed correct.<sup>3</sup>

- (2) Os meninos parecem que fizeram a tarefa.  
*the boys seem.3PL that did.3PL the homework*  
 'The boys seem to have done their homework.'

Movement to  $\theta$ -positions is also a key ingredient in Floripi & Nunes's (this volume, Chap. 3) analysis of null possessor constructions in Brazilian Portuguese. Floripi & Nunes show that in absence of syntactic islands separating a null possessor from its antecedent, as is the case in (3) below, null possessors behave like obligatorily controlled PRO and can also be analyzed as traces of A-movement to a

2. Reinterpreting Ferreira's (this volume) proposal, Nunes (2008) argues that the feature person in Brazilian Portuguese may be a dissociated feature. Accordingly, a finite T may enter the derivation with both number and person or only number. In the latter scenario, T behaves as defective for purposes of Case assignment in the syntactic component and later receives a person feature in the morphological component via morphological redundancy rules.

3. For relevant discussion, see Duarte (2003, 2004), Martins & Nunes (2005) and Nunes (2008).

$\theta$ -position (see also Rodrigues, 2004). However, if islands intervene, as in (4), null possessors display properties associated with pronouns.

- (3) [[a Maria]<sub>k</sub> disse que [o João]<sub>i</sub> conversou com o pai *ec*<sub>i/\*k</sub>]  
*the Maria said that the João talked with the father*  
 ‘Maria said that João talked with his father.’
- (4) [[a Maria]<sub>k</sub> acha que [o João]<sub>i</sub> disse que [[o amigo *ec*<sub>i/k</sub>]  
*the Maria thinks that the João said that the friend*  
*vai viajar]]*  
*goes travel*  
 ‘Maria thinks that João said that his/her friend is going to travel’

The puzzle that these sentences pose is that if one postulates that null possessors in Brazilian Portuguese can be *pro* in order to account for (4), the anaphoric behavior of the null possessor in (3) is left unaccounted for. Floripi & Nunes propose that a solution for this puzzle can be found if one assumes with Hornstein (2001, 2007) that movement is derivationally more economical than pronominalization. Thus, null possessors will always exhibit an anaphoric behavior if they are in a position from which a licit A-movement operation can be launched and *pro* will be employed only as a last resort strategy.

This solution raises the question of why the last resort usage of *pro* is not available in null subject constructions in Brazilian Portuguese. Floripi & Nunes propose that the answer is related to the licensing of *pro* in terms of Case. In null possessor constructions, *pro* can be licensed by receiving inherent Case from the selecting noun, whereas in null subject constructions the putative *pro* in an embedded subject position would remain Caseless, as T does not assign inherent Case. As we will see below, licensing of *pro* via inherent Case will be a determining factor in Kato & Nunes’s (this volume, Chap. 5) account of apparent preposition deletion in relative clauses in Brazilian Portuguese.

## 2.2 Extraction out of factive complements

An interesting feature of Brazilian Portuguese is that it has different patterns of extraction out of factive complements. In addition to the more familiar cases of argument/adjunct asymmetries typical of weak islands, Augusto (this volume, Chap. 4) shows that some factive constructions actually allow extraction of both arguments and adjuncts, as illustrated in (5).

- (5) a. Quem<sub>i</sub> o Pedro lamentou ter encontrado *t<sub>i</sub>* na festa?  
*who the Pedro regretted have-INF met at-the party*  
 ‘Who did Pedro deplore having met at the party?’

- b. Como<sub>i</sub> o aluno lamentou ter respondido a pergunta  $t_i$ ?  
*how the student regretted have-INF answered the question*  
 ‘How did the student regret having answered the question?’

Augusto proposes that the presuppositional character associated with factive complements is due to selectional restrictions. Factive predicates select for a [+specific] complement, which in turn may require a TopP projection above CP. The head Top imposes restrictions on the type of element that may pass through its Spec, which is ultimately responsible for the argument/adjunct asymmetry found in the standard cases. Augusto argues that the selectional requirements of the factive predicate may also be licensed if the embedded clause has its tense properties anchored in the matrix clause, as is the case with uninflected infinitives and some subjunctive clauses. In such circumstances, considerations regarding economy of representations (see Bošković, 1997) block resorting to TopP and extraction of both arguments and adjuncts is allowed (cf. (5)).

### 2.3 Relative clauses and null objects

Tarallo (1983) has observed that besides familiar pied-piping and resumptive relative clauses such as (6a) and (6b) below, Brazilian Portuguese also has a chopping version, as illustrated in (6c), where the preposition subcategorized by the verb is not phonetically realized. Kato (1993) shows that the pattern seen in (6) is also found in left dislocation structures in Brazilian Portuguese and proposes that resumptive and chopping relative clauses like (6b) and (6c) are derived from structures where *que* is a relative pronoun base-generated in a left dislocated position.

- (6) a. a pessoa com quem eu conversei  
*the person with who I talked*  
 b. a pessoa que eu conversei com ela  
*the person that I talked with her*  
 c. a pessoa que eu conversei  
*the person that I talked*  
 ‘the person I talked to’

Kato & Nunes (this volume, Chap. 5) revamp Kato’s (1993) proposal, reinterpreting it in terms of Kayne’s (1994) analysis of relative clauses. Noticing that chopping relatives are to a great extent lexically conditioned, Kato & Nunes argue that the predicates that license chopping relatives assign inherent Case and that the empty category found in chopping relative clauses such as (6c) is *pro*. By correlating the possibility of chopping relatives with the availability of inherent Case, the authors account for why *pro* is Case-licensed in some chopping relatives but not others,

which mirrors the contrast between resumptive null subjects and resumptive null possessors mentioned in Section 2.1. The authors further argue that the prepositions that can be dropped in chopping relatives are actually realizations of inherent Case and that insertion of prepositions to realize inherent Case is subject to Last Resort. If the relative pronoun is generated in object position, insertion of the relevant preposition is triggered as the relative pronoun has phonetic content. By contrast, if the relative pronoun is base-generated in a left dislocated position in association with *pro* in object position, insertion of the preposition is blocked as *pro* does not have phonetic content.

Phonological evidence for Kato & Nunes's proposal that chopping relative clauses involve *pro* is provided by Nunes & Santos (this volume, Chap. 6). Santos (2002, 2003) has argued that stress shift in Brazilian Portuguese can occur across an intervening trace but not across an intervening *pro*, as illustrated in (7) below. Nunes & Santos show that pied-piping and chopping relatives replicate the contrast in (7) as far as stress shift is concerned, as illustrated in (8).

- (7) a. [[esse casaco]<sub>i</sub> [o João disse [ *t<sub>i</sub>* que ele vesTIU *t<sub>i</sub>* HOje]]] →  
 [[esse casaco]<sub>i</sub> [o João disse [ *t<sub>i</sub>* que ele VESTiu *t<sub>i</sub>* HOje]]]  
*this coat the João said that he dressed today*  
 'This coat, João said that he put on today.'
- b. [[esse casaco]<sub>i</sub> [o João ficou elegante [depois que ele  
 #[[esse casaco]<sub>i</sub> [o João ficou elegante [depois que ele  
*this coat the J. became elegant after that he*  
*vesTIU *pro<sub>i</sub>* HOje]]] →*  
*VESTiu *pro<sub>i</sub>* HOje]]]*  
*dressed today*  
 'This coat, João became elegant after he put it on today.'
- (8) a. [[a sala]<sub>i</sub> [[em que]<sub>k</sub> [eu fiQUEI *t<sub>k</sub>* ONtem]]] →  
 [[a sala]<sub>i</sub> [[em que]<sub>k</sub> [eu FIquei *t<sub>k</sub>* ONtem]]]  
*the room in which I stayed yesterday*
- b. [[a sala]<sub>i</sub> [que]<sub>i</sub> [eu fiQUEI *pro<sub>i</sub>* ONtem]]] →  
 #[[a sala]<sub>i</sub> [que]<sub>i</sub> [eu FIquei *pro<sub>i</sub>* ONtem]]]  
*the room which I stayed yesterday*  
 'the room in which I stayed yesterday'

Nunes & Santos also show that parasitic gaps in Brazilian Portuguese behave like traces in being ignored by stress shift, which provides evidence for analyses that take parasitic gaps to be traces (see e.g. Chomsky, 1986a and Nunes, 2001), rather than *pros* (see e.g. Cinque, 1990). This empirical fact is of significance as it reveals that derivations of parasitic gaps in terms of movement are allowed even in a

language like Brazilian Portuguese, which makes a widespread use of null objects. This in turn suggests that pronominalization is a general last resort strategy that is employed when movement is precluded, as proposed by Hornstein (2001, 2007). From an abstract point of view, this result thus corroborates Floripi & Nunes's (this volume, Chap. 3) analysis of null possessors in Brazilian Portuguese in terms of competition between movement and resumption (see Section 2.1).

### 3. Issues on the syntax-morphology interface

#### 3.1 Possession and existential constructions

Exploring the similarities between possessive, existential, and copular constructions documented in several languages (see e.g. Freeze, 1992 and Kayne, 1993), Avelar (this volume, Chap. 7) argues that a set of facts involving the restricted interpretation of null possessors in possessive constructions in Brazilian Portuguese can be explained if the possessive/existential verb *ter* 'have' is morphologically derived from the combination of the features associated with the copula *estar* 'be' and the features associated with the comitative preposition *com* 'with'. As we can see in (9), for instance, the null possessor must be bound by the matrix subject if *ter* 'have' or *estar com* 'be with' is involved, but not another verb, as illustrated with *ver* 'see'.

- (9) a. [[o Pedro]<sub>i</sub> tem documentos da Maria n[a carteira *ec*<sub>*i*/<sub>*r*</sub><sub>*j*</sub>]]  
*the Pedro has documents of-the Maria in-the wallet*  
 'Pedro has Maria's documents in his wallet.'</sub>
- b. [[o Pedro]<sub>i</sub> está com documentos da Maria n[a carteira *ec*<sub>*i*/<sub>*r*</sub><sub>*j*</sub>]]  
*the Pedro is with documents of-the Maria in-the wallet*  
 'Maria's documents are in Pedro's wallet.'</sub>
- c. [[o Pedro]<sub>i</sub> viu documentos da Maria n[a carteira *ec*<sub>*i*/<sub>*j*</sub>]]  
*the Pedro saw documents of-the Maria in-the wallet*  
 'Pedro saw Maria's documents in his/her wallet.'</sub>

Avelar also proposes that the emergence of *ter* as an existential verb in Brazilian Portuguese is related to the loss of referential null subjects and the availability of defective finite Ts in the language (see Ferreira, this volume, Chap. 2).

#### 3.2 Duplication of verbs and prepositions

In her discussion of topicalization of verbal projections in Brazilian Portuguese, Bastos-Gee (this volume, Chap. 8) argues that it can be classified into three types,



as illustrated in (10), based on the type of verbal constituent that is targeted and on whether it is derived by movement or is base-generated.

- (10) a. Type 1 (movement of  $v^0$ ):  
 Temperar, o cozinheiro temperou o peixe (não a carne).  
*season-INF the cook seasoned the fish (not the meat)*  
 ‘As for seasoning something, the cook seasoned the fish (not the meat).’
- b. Type 2 (movement of  $vP$ ):  
 Temperar aquele peixe, o cozinheiro temperou (mas...)  
*season-INF that fish the cook seasoned (but...)*  
 ‘As for seasoning that fish, the cook seasoned it (but...)’
- c. Type 3 (base-generation of  $vP$ ):  
 Temperar peixe, eu conheço um cozinheiro que só tempera  
*season-INF fish I know a cook that only seasons*  
 com ervas.  
*with herbs*  
 ‘As for seasoning fish, I know a cook that only seasons them with herbs.’

In addition to providing a semantic and pragmatic characterization of the three types, Bastos-Gee also discusses why the constructions derived by movement surface with two copies of the verb phonetically realized, each with a different inflection (an infinitival and a finite form). Her starting point is Chomsky’s (1995) copy theory of movement and Nunes’s (1999, 2004) account of phonetic realization of multiple copies in terms of linearization and morphological fusion. She proposes that the infinitival morpheme is a morphological reflex of the agreement relation between  $v^0$  and the head Top and that fusion between  $v^0$  and the infinitival morpheme renders  $v^0$  invisible to Kayne’s (1994) LCA, yielding a PF output with two instances of  $v^0$ .

Another type of duplication in Brazilian Portuguese discussed in this volume is investigated by Nunes & Ximenes (Chap. 9). The authors examine inflected infinitival constructions whose coordinated subjects appear to involve PP-coordination instead of DP-coordination, as illustrated in (11).

- (11) Eu fiquei contente **pela** Maria e **pelo** João ganharem o prêmio.  
*I was happy by-the Maria and by-the João win-INF-3PL the prize*  
 ‘I was happy because João and Maria won the prize.’

Extending Hornstein & Nunes’s (2002) proposal that the Parallelism Requirement may trigger the operation Copy in the syntactic component, Nunes & Ximenes argue that sentences like (11) do indeed involve DP-coordination in the embedded clause, as expected. However, morphological merger between a CP-internal

preposition and the determiner of the first conjunct of the infinitival subject triggers the copying of this preposition and its merger with the determiner of the second conjunct – an instance of sideward movement (in the sense of Nunes (2001, 2004)) in the morphological component. After fusion between the prepositions and their associated determiners, the sentence then surfaces with what superficially looks like PP-coordination in the embedded subject position.

### 3.3 Feature valuation and ellipsis

Based on constructions such as the ones illustrated in (12) with English and (13) with Brazilian Portuguese, Nunes & Zocca (Chap. 10) argue (contra Lasnik (1999)) that lack of morphological identity in VP ellipsis is unrelated to the availability of verb movement to T, for Brazilian Portuguese patterns with English with respect to tense mismatches in ellipsis constructions, in spite of having V-to-I movement.

- (12) John slept and Mary will ~~sleep~~ too
- (13) A Maria estudou muito, mas o João não vai ~~estudar~~  
*the Maria studied much but the João not goes study-INF*  
 ‘Maria studied a lot, but João won’t.’

Nunes & Zocca show that lack of identity in ellipsis constructions can be accounted for if inflectional morphology is to be hosted by functional categories and valued under agreement, as in Chomsky’s (2001) system, and if ellipsis resolution is computed before the valued affixes are attached to the relevant lexical heads.

## 4. Conclusion

The chapters summarized above cover a variety of topics, some of which quite peculiar to Brazilian Portuguese. Each chapter explores a key minimalist tool and it is fair to say that the analyses proposed always enhance the empirical coverage achieved within GB. To the extent that these analyses are on the right track, they provide independent evidence for movement to  $\theta$ -positions (see the chapters by Ferreira, Floripi & Nunes, and Avelar), economy of representations (see the chapters by Augusto and Kato & Nunes), economy of derivations (see the chapters by Floripi and Nunes, Nunes & Santos, and Nunes & Ximenes), the copy theory of movement (see the chapter by Bastos-Gee), and the role of feature valuation in the computation (see the chapters by Ferreira and Nunes & Zocca).

## References

- Augusto, M.R.A. (2003). Padrões de Extração em Estruturas Factivas. Ph.D. dissertation, Universidade Estadual de Campinas.
- Avelar, J. (2004). Dinâmicas Morfossintáticas com *Ter*, *Ser* e *Estar* em Português Brasileiro. Master's thesis, Universidade Estadual de Campinas.
- Avelar, J. (2006). Adjuntos Adnominais Preposicionados no Português Brasileiro. Ph.D. dissertation, Universidade Estadual de Campinas.
- Barbosa, P., Duarte M.E. & Kato, M. (2005) Null subjects in European and Brazilian Portuguese. *Journal of Portuguese Linguistics* 4:11–52.
- Bastos, A.C. (2001). *Fazer, eu faço!* Topicalização de Constituintes Verbais em Português Brasileiro. Master's thesis, Universidade Estadual de Campinas
- Bošković, Ž. (1997). *The Syntax of Nonfinite Complementation: An Economy Approach*. The MIT Press, Cambridge, MA.
- Chomsky, N. (1981). *Lectures on Government and Binding*. Foris, Dordrecht.
- Chomsky, N. (1986a). *Barriers*. The MIT Press, Cambridge, MA.
- Chomsky, N. (1986b). *Knowledge of Language: Its Nature, Origin, and Use*. Praeger, New York.
- Chomsky, N. (1995). *The Minimalist Program*. The MIT Press, Cambridge, MA.
- Chomsky, N. (2000). Minimalist Inquiries: The Framework. In *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik* (R. Martin, D. Michaels & J. Uriagereka, eds.), pp. 81–155. The MIT Press, Cambridge, MA.
- Chomsky, N. (2001). Derivation by Phase. In *Ken Hale: A life in language*. (M. Kenstowicz, ed.), pp. 1–52. The MIT Press, Cambridge, MA.
- Chomsky, N. (2004). Beyond Explanatory Adequacy. In *Structures and Beyond*, (A. Belletti, ed.), pp. 104–131. Oxford University Press, Oxford.
- Chomsky, N. & H. Lasnik (1993). The Theory of Principles and Parameters. In *Syntax: An International Handbook of Contemporary Research* (J. Jacobs, A. von Stechow, W. Sternefeld & T. Vennemann), pp. 506–569. Walter de Gruyter, Berlin.
- Cinque, G. (1990). *Types of A-bar Dependencies*. The MIT Press, Cambridge, MA.
- Cyrino, S. (1997). *O Objeto Nulo no Português do Brasil: Um Estudo Sintático-Diacrônico*. Editora UEL, Londrina.
- Duarte, M.E. (1995). A Perda do Princípio “Evite Pronome” no Português Brasileiro. Ph.D. dissertation, Universidade Estadual de Campinas.
- Duarte, M.E. (2003). Sujeitos Expletivos no Português Brasileiro: As Construções de Alçamento. Ms., Universidade Federal do Rio de Janeiro.
- Duarte, M. E. (2004). On the Embedding of a Syntactic Change. *Language Variation in Europe, Papers from ICLaVE 2*, pp. 145–155. Uppsala: Universitetstryckeriet.
- Ferreira, M. (2000). Argumentos Nulos em Português Brasileiro. Master's thesis, Universidade Estadual de Campinas.
- Ferreira, M. (2004). Hyperraising and Null Subjects in Brazilian Portuguese. *MIT Working Papers in Linguistics* 47: 57–85.
- Figueiredo Silva, M.C. (1996). *A Posição Sujeito no Português Brasileiro: Frases Finitas e Infinitivas*. Editora da UNICAMP, Campinas.
- Floripi, S. (2003). Argumentos Nulos dentro de DPs em Português Brasileiro. Master's thesis, Universidade Estadual de Campinas.
- Freeze, R. (1992). Existential and other Locatives. *Language*, 68, 553–595.

- Galves, C. (2001). *Ensaio sobre as Gramáticas do Português*. Editora da UNICAMP, Campinas.
- Hornstein, N. (2001). *Move! A Minimalist Theory of Construal*. Blackwell, Oxford.
- Hornstein, N. (2007). Pronouns in a Minimalist Setting. In: *The Copy Theory of Movement* (N. Corver & J. Nunes, eds.), pp. 351–385. John Benjamins, Amsterdam.
- Hornstein, N. & J. Nunes (2002). On Asymmetries between Parasitic Gaps and Across-the-Board Constructions. *Syntax* 5:26–54.
- Kato, M.A. (1993). Recontando a História das Relativas. In: *Português Brasileiro: Uma Viagem Diacrônica* (I. Roberts & M. A. Kato, eds.), pp. 223–261. Editora da UNICAMP, Campinas.
- Kato, M.A. (1999). Strong Pronouns, Weak Pronominals, and the Null Subject Parameter. *PRO-BUS* 11:1–37.
- Kato, M.A. & E. Negrão (eds.) (2000). *Brazilian Portuguese and the Null Subject Parameter*. Iberoamericana & Vervuert, Madrid & Frankfurt am Main.
- Kayne, R. (1993). Toward a Modular Theory of Auxiliary Selection. *Studia Linguistica*, 47, 3–31.
- Kayne, R. (1994). *The Antisymmetry of Syntax*. The MIT Press, Cambridge, MA.
- Lasnik, H. (1999). Verbal Morphology: *Syntactic Structures* Meets the Minimalist Program. In: *Minimalist Analysis* (H. Lasnik), pp. 97–119. Blackwell, Malden, MA.
- Martins, A.M. & J. Nunes (2005). Raising Issues in Brazilian and European Portuguese. *Journal of Portuguese Linguistics* 4.2:53–77.
- Martins, A.M. & Nunes, J. (forthcoming) Apparent Hyper-raising in Brazilian Portuguese: Agreement with Topics across a finite CP. In *The Complementiser Phase: Subjects and wh-dependencies* (E.P. Panagiotidis, ed.). Oxford University Press, Oxford.
- Modesto, M. (2000). On the Identification of Null Arguments. Ph.D. dissertation, University of Southern California.
- Negrão, E. (1999). O Português Brasileiro: Uma Língua Voltada para o Discurso. “Tese de livre-docência”, Universidade de São Paulo.
- Nunes, J. (1999). Linearization of Chains and Phonetic Realization of Chain Links. In *Working Minimalism* (S.D. Epstein & N. Hornstein), pp. 217–249. The MIT Press, Cambridge, MA.
- Nunes, J. (2001). Sideward Movement. *Linguistic Inquiry* 31:303–344.
- Nunes, J. (2004). *Linearization of Chains and Sideward Movement*. The MIT Press, Cambridge, MA.
- Nunes, J. (2008). Inherent Case as a Licensing Condition for A-movement: The Case of Hyper-raising Constructions in Brazilian Portuguese. *Journal of Portuguese Linguistics*.
- Nunes, J. (forthcoming). Dummy Prepositions and the Licensing of Null Subjects in Brazilian Portuguese. In E. Aboh *et al.* (eds.): *Proceedings of Going Romance 2007*. John Benjamins, Amsterdam.
- Nunes, J. & C. Zocca (2005). Morphological Identity in Ellipsis. *Leiden Papers in Linguistics* 2:29–42. (<http://www.ulcl.leidenuniv.nl/index.php3?m=&c=109>)
- Roberts, I. & M.A. Kato (eds.) (1993). *Português Brasileiro: Uma Viagem Diacrônica*. Editora da UNICAMP, Campinas.
- Rodrigues, C. (2002). Morphology and Null Subjects in Brazilian Portuguese. In: *Syntactic Effects of Morphological Changes* (D. Lightfoot, ed.), pp. 160–178. Oxford University Press, Oxford.
- Rodrigues, C. (2004). Impoverished Morphology and A-Movement out of Case Domains. Ph.D. dissertation, University of Maryland.
- Santos, R. S. (2002). Categorias Sintáticas Vazias e Retração de Acento em Português Brasileiro. *D.E.L.T.A.*, 67–86.
- Santos, R. S. (2003). Traces, *pro* and Stress Retraction in Brazilian Portuguese. *Journal of Portuguese Linguistics* 2:101–113.

- Tarallo, F. (1983). *Relativization Strategies in Brazilian Portuguese*. Ph.D. dissertation, University of Pennsylvania.
- Ximenes, C. (2002). *Contração de Preposição em Estruturas Coordenadas*. Master's thesis, Universidade Estadual de Campinas.
- Ximenes, C. (2004). Preposition Contraction in Coordinated Structures in Brazilian Portuguese. *MIT Working Papers in Linguistics* 47:179–194.
- Ximenes, C. & J. Nunes (2004). Contraction and Duplication of Prepositions in Coordinated Structures in Brazilian Portuguese. In *WCCFL 23: Proceedings of the 23rd West Coast Conference on Formal Linguistics* (V. Chand, A. Kelleher, A. J. Rodriguez & B. Schmeiser, eds.), pp. 815–828. Cascadilla Press, Somerville.
- Zocca, C. (2003). *O Que Não Está Lá? Um Estudo Sobre Morfologia Flexional em Elipses*. Master's thesis, Universidade Estadual de Campinas.

PART 1

## **Movement and empty category issues**



## Null subjects and finite control in Brazilian Portuguese

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The paper discusses the restricted distribution and interpretation of “referential” null subjects in Brazilian Portuguese (BP). It shows that referential null subjects in BP behave like obligatorily controlled PRO and argues, following Hornstein (1999, 2001), that they should be analyzed as traces (deleted copies) of A-movement. The proposal is that with the weakening of the verbal inflection in BP, finite Ts became ambiguous in bearing a complete or an incomplete set of  $\phi$ -features. When the incomplete version is selected in an embedded clause, T is not able to value the Case of the DP in its Spec, which then remains active and may undergo further A-movement. If the movement lands in a  $\theta$ -position, we obtain a finite control construction; if the landing site is not a  $\theta$ -position, we obtain a hyper-raising construction, instead.

### 1. Introduction\*

This paper discusses structures containing null arguments in the subject position of finite clauses in Brazilian Portuguese (BP). As I show below, BP has undergone significant diachronic changes that strongly restricted the possibility of null subjects in finite clauses, thereby becoming different from both classical *pro*-drop languages, like Italian and Spanish, and categorically non *pro*-drop ones, like English and French. My goal is to account for several peculiarities concerning the distribution and interpretation of null subjects in BP. My analysis is couched within the parsimonious guidelines of the Minimalist Program (Chomsky 1995, 2000).

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As a first approximation, we can say that BP allows expletive and indefinite null subjects, but not referential null subjects, as shown in (1).<sup>1</sup>

- (1) a. Está chovendo.  
       *is raining*  
       ‘It is raining.’
- b. Mataram o presidente.  
       *killed-3PL the president*  
       ‘Someone killed the president.’
- c. \*Comprou um carro novo.  
       *bought a new car*  
       ‘S/he bought a new car.’

However, (1c) becomes acceptable if it is embedded in a clause containing an antecedent for its subject:

- (2) João<sub>i</sub> disse [que *ec<sub>i</sub>* comprou um carro novo]  
       *John<sub>i</sub> said that bought a new car*  
       ‘John said that he bought a new car.’

I argue that instances of referential null subjects found in BP are neither empty pronouns nor empty variables bound by null operators, but rather traces, resulting from raising from the specifier position of a finite T to a higher clause (hyperraising, in Ura’s 1994 terminology). I will try to make this idea explicit and show that, once we adopt it, we can derive the peculiarities of BP null subjects.<sup>2</sup>

The paper is organized as follows: in Section 2, I present the constraints related to the licensing of null subjects in BP. In Section 3, I present my analysis, pointing to the specific aspect of BP grammar that I consider the source of the behavior of null subjects in this language. In Section 4, I show in detail how the properties listed in Section 2 can be derived. Section 5 is a brief conclusion.

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1. This paper will deal only with cases of referential null subjects. I will have nothing to say about structures like (1a) and (1b), which contain instances of expletive and indefinite null subjects. See Rodrigues (2004) for relevant discussion.

2. Rodrigues (2004) has also independently developed a minimalist analysis based on the idea that BP null subjects are residues of A-movement and discusses many of the facts I will discuss here. Although our works share several common features, technical details differ considerably. See footnote 18 below for more on this point.

## 2. The data

The following subsections are devoted to describing the constraints on the distribution of null subjects in BP. I start by discussing some relevant facts about BP verbal morphology.

### 2.1 The Impoverishment of subject-verb agreement

The verbal paradigm of modern BP has undergone a considerable simplification in relation to the verbal paradigm of earlier stages of the language, as shown in (3):<sup>3</sup>

- (3) a. falo      falas      fala      falamos   falais      falam      (*Old BP*)  
 b. falo      fala      fala      fala      falam      falam      (*BP*)  
       *talk-1SG talk-2SG talk-3SG talk-1PL talk-2PL talk-3PL*

(3a) shows that a paradigm displaying six different forms changed into a new one containing only three.<sup>4</sup> Interestingly, BP grammar has also drastically reduced the positions where a null subject can be used. Putting aside expletives and indefinite subjects (see Footnote 1), the instances of null subjects currently found in BP sentences are restricted to embedded clauses, as in (4b-c). Null subjects in matrix clauses seem to have disappeared along with the richness of verbal agreement, as attested by the ungrammaticality of (4a):<sup>5</sup>

- (4) a. \*Comprou um carro.  
       *bought a car*  
       ‘He bought a car’.

3. See Duarte (1995) for a detailed statistical study of this process. See Galves (1991, 1993) and Kato (1999) for suggestions of how this impoverishment may have affected the clause structure of BP sentences.

4. This is true for most dialects.

5. I am disregarding here the fact that “null topic constructions” in the sense of Huang (1984) are possible in BP, as in the following dialog:

- (i) A: E o João?  
       *and the John*  
       ‘What about John?’  
       B: Saiu com a Maria.  
       *left with the Mary*  
       ‘He went out with Mary’.

As for deictic and anaphoric null subjects, they are not possible, even in contexts where languages like Italian or Spanish would allow them. See Rodrigues (2004) for relevant discussion.

- b. Ele<sub>i</sub> disse [que ec<sub>i</sub> comprou um carro]  
*he said that bought a car*  
 ‘He said he bought a car.’
- c. Você<sub>i</sub> disse [que ec<sub>i</sub> comprou um carro]  
*you said that bought a car*  
 ‘You said you bought a car.’

## 2.2 The position of the antecedent

To be inside an embedded clause is a necessary condition to legitimate a null subject in BP. However, as shown in (5), it is not a sufficient condition.

- (5) a. \*João disse [que a Maria acha [que ec é esperto]]  
*John said that the Mary thinks that is smart-masc*  
 ‘John said that Mary thinks he is smart.’
- b. \*A mãe do João acha [que ec é esperto]  
*the mother of John thinks that is smart-masc*  
 ‘John’s mother thinks he is smart.’
- c. \*João disse [que a Maria acha [que ec são espertos]]  
*John said that the Mary thinks that are smart-PL*  
 ‘John said that Mary thinks that they are smart.’

The following example contrasts with (5a-c):<sup>6</sup>

- (6) João<sub>i</sub> acha [que ec<sub>i</sub> é esperto]  
*John thinks that is smart-masc*  
 ‘John thinks that he is smart.’

The contrast between (6) and (5a) shows that the null subject must have an antecedent in an immediately higher clause. (5b) shows that the null subject must be c-commanded by this antecedent and (5c) shows the impossibility of a split antecedent. Based on these examples, we may state the following generalization:

- (7) Referential null subjects in BP must be c-commanded by an antecedent located in the immediately higher clause.

6. Similar data were presented in Moreira da Silva (1983) and latter discussed in Figueiredo Silva (1996). Similar facts also obtain in Hebrew (Borer 1989). In Hebrew, however, the presence of an overt complementizer in the embedded clause is incompatible with a null subject in the same clause, unless the complementizer cliticizes to the verb. This is definitely not the case in BP. Figueiredo Silva tries to extend to BP the idea of an anaphoric AGR proposed to Hebrew by Borer, but the differences observed between BP and Hebrew force her to excessively enrich BP clause structure. My analysis will try to account for these facts in a considerably simpler manner.

### 2.3 The avoid pronoun principle

In null subject languages, such as Italian and Spanish, the alternation null subject/overt subject is not completely free. There are contexts in which one of the forms is preferred or even required. To capture this asymmetry, several principles have been proposed to regulate this alternation. Perhaps the most familiar one is the Avoid Pronoun Principle (Chomsky 1981), which establishes the following:

(8) *Avoid Pronoun*

Whenever an alternation null pronoun/overt pronoun is possible, the null pronoun is preferred (or required).

Thus, in languages like Spanish or Italian, the overt pronoun will be used in a sentence corresponding to (9) only if it receives stress, indicating emphasis or contrast, a function obviously incompatible with the null pronoun.

(9) João<sub>i</sub> disse que ele<sub>i</sub> comprou um carro novo.

*John said that he bought a car new*

‘John<sub>i</sub> said that he<sub>i</sub> bought a new car.’

However, BP allows (9) in neutral situations, giving us the impression that principle (8) does not apply (Duarte 1995). To the extent that this description is correct, we should look for an explanation for this state of affairs.

### 2.4 Montalbetti’s effects

Another principle that regulates the alternations between null pronoun/lexical pronoun is the Overt Pronoun Constraint, proposed by Montalbetti (1984):<sup>7</sup>

(10) *Overt Pronoun Constraint*

An overt pronoun cannot be locally bound by a variable, if a null pronoun is possible in the same position.

The relevant data exemplifying how this principle applies are illustrated by the Spanish sentences below:

(11) a. \*[Todo chico]<sub>i</sub> t<sub>i</sub> dijo que Maria piensa que él<sub>i</sub> es inteligente.

*every boy said that Mary thinks that he is intelligent*

‘Every boy said that Mary thinks that he is intelligent’.

7. (10) is in fact an adaptation of the Montalbetti’s original proposal (which was stated within Linking Theory) in terms of Binding Theory. See Lasnik & Uriagereka (1988) for a succinct but very clear discussion about Montalbetti’s proposal and the possibility of adapting it in terms of Binding Theory.

- b. [Todo chico]<sub>i</sub> t<sub>i</sub> dijo que Maria piensa que *pro*<sub>i</sub> es inteligente.  
*every boy said that Mary thinks that he is intelligent*  
 ‘Every boy said that Mary thinks that he is intelligent’.
- (12) a. [Todo chico]<sub>i</sub> t<sub>i</sub> dijo que *pro*<sub>i</sub> piensa que *él*<sub>i</sub> es inteligente.  
*every boy said that thinks that he is intelligent*  
 ‘Every boy said that Mary thinks that he is intelligent’.
- b. [Todo chico]<sub>i</sub> t<sub>i</sub> dijo que *pro*<sub>i</sub> piensa que *pro*<sub>i</sub> es inteligente  
*every boy said that thinks that is intelligent*  
 ‘Every boy said that Mary thinks that he is intelligent’.

The closest binder for the pronoun *él* in (11a) is *t<sub>i</sub>*, a variable left by movement of the quantificational phrase *todo chico* at LF. According to (10), (11a) is ill-formed because the overt pronoun could be replaced by a null pronoun, as shown in (11b). (12a) admits an overt pronoun because it is not locally bound by a variable, but by the null pronoun of the intermediate clause. Therefore, the principle is inapplicable and both (12a) and (12b) are grammatical.

Consider now similar cases in BP:

- (13) a. [Nenhum menino]<sub>i</sub> t<sub>i</sub> disse que a Maria acha que *ele*<sub>i</sub> é  
*no boy said that the Mary thinks that he is*  
*inteligente.*  
*intelligent*  
 ‘No boy said that Mary thinks that he is intelligent’.
- b. \*[Nenhum menino]<sub>i</sub> t<sub>i</sub> disse que a Maria acha que *ec*<sub>i</sub> é  
*no boy said that the Mary thinks that is*  
*inteligente.*  
*intelligent*  
 ‘No boy said that Mary thinks that he is intelligent’.

Comparing (13a-b) with (11a-b), we can see that judgments in BP and Spanish are just the opposite: (13a), which corresponds to (11a), is good although the overt pronoun is locally bound by a variable, and (13b), which corresponds to (11b), is unacceptable despite the fact that it employs a null subject in the corresponding position. Once again, BP data seem to disregard a principle empirically supported by similar data from other null subject languages, a fact that demands explanation.

## 2.5 Only DPs and VP-ellipsis

BP null subjects give rise to two other interpretive restrictions, which are worth noting.<sup>8</sup> The first one has to do with different readings obtained using overt and null categories in examples like (14).

- (14) a. Só o João acha que ele vai ganhar a corrida.  
*only the John thinks that he will win the race*  
 ‘Only John thinks that he will win the race.’
- b. Só o João acha que vai ganhar a corrida.  
*only the John thinks that will win the race*  
 ‘Only John thinks that he will win the race.’

(14a) is ambiguous. Under one reading, it means that *João* is the only person who believes in *João*’s victory, and it would be false in a situation in which other people also believe that *João* will win the race. Under the other reading, it means that *João* is the only person who believes in his/her own victory, and it would be false in a situation in which another person is also self-confident. It is also important to note that only (14a) admits a reading in which the subject of the embedded clause is related to an entity presented in the discourse situation, like *Peter*, for example; As for (14b), it is not ambiguous and can only mean that *João* is the only person who believes in his/her own victory.

The second context to be presented here also reveals an asymmetry between overt and null subjects, this time in VP-ellipsis structures:

- (15) a. João<sub>i</sub> acha que ele<sub>i</sub> vai ganhar a corrida e Maria também.  
*John thinks that he will win the race and Mary too*  
 ‘John<sub>i</sub> thinks that he<sub>i</sub> will win the race and Mary too.’
- b. João acha que vai ganhar a corrida e a Maria também.  
*John thinks that will win the race and the Mary too*  
 ‘John<sub>i</sub> thinks that he<sub>i</sub> will win the race and Mary too.’

(15a) is ambiguous, admitting the strict and sloppy readings paraphrased in (16a-b), respectively. By contrast, (15b) is unambiguous, admitting just the sloppy reading.

- (16) a. John<sub>i</sub> thinks that he<sub>i</sub> will win the race and Mary thinks that he<sub>i</sub> will the race.
- b. John<sub>i</sub> thinks that he<sub>i</sub> will win the race and Mary<sub>j</sub> thinks that she<sub>j</sub> will win the race.

8. As far as I know, these facts were first noted by Moreira da Silva (1983) and Chao (1983). For recent discussions, see Negrão & Viotti (2000) and Modesto (2000).

## 2.6 Hyperraising

A distinctive property of BP is that it allows raising from the subject position of a finite clause to the subject position of an immediately higher clause (hyperraising in Ura's 1994 terminology):

- (17) João parece que comprou um carro novo.  
*John seems that bought a car new*  
 'John seems to have bought a new car.'

Under standard analysis, *João* in (17) could not have been directly inserted in the matrix clause, since it would violate the  $\theta$ -Criterion. One could argue that *João* is a topic, related to the subject position of the embedded clause, and followed by a null expletive in the subject position of the matrix clause. This, however, does not seem to be correct. We can replace *João* by a weak pronominal form (18a) or a bare quantifier (18b), and the sentences are still well formed. Since these elements cannot be topicalized, as shown in (19a-b), we are left with the conclusion that hyperraising is possible in BP.<sup>9,10</sup>

- (18) a. Cê parece que está doente.  
*you<sub>weak</sub> seem that is sick*  
 'You seem to be sick.'
- b. Alguém parece que está doente.  
*someone seem that is sick*  
 'Someone seems to be sick.'
- (19) a. \*Cê, João me disse que vai ser aprovada.  
*you<sub>weak</sub> John me told that will be approved-fem*  
 'You, John told me that you will be approved.'
- b. \*Alguém, João me disse que seria aprovado.  
*Someone John me told that would-be approved-masc*

9. For similar arguments based on idiomatic expressions, see Martins & Nunes (2005).

10. Some speakers detect some degradation in examples not involving singular third person. For other speakers (a group in which I include myself), however, this degradation does not exist and examples like (i) below are perfect:

- (i) Eles pareciam que estavam doentes.  
*they seemed that were sick*  
 'They seemed to be sick.'

Even with singular first person, it is possible to obtain well-formed examples, once we find an appropriate context. For example, in a situation of perplexity, (ii) sounds perfect to me:

- (ii) Mas eu não tô parecendo que tô doente, tô?  
*but I not am seeming that am sick am*  
 'But I don't seem to be sick, do I?'

## 2.7 Null subjects and islands

Another restriction concerning the use of null subjects in BP has to do with the impossibility of their occurrence inside certain islands, as attested by the examples below, where an empty subject, but not its antecedent, appears inside a relative clause:

- (20) a. ??João<sub>i</sub> não gostou dos livros que [ *ec<sub>i</sub>* leu na escola]  
*John not liked of-the books that read in-the school*  
 'John didn't like the books that he read in the school.'
- b. ??João<sub>i</sub> disse que [as meninas [que *ec<sub>i</sub>* encontrou]] eram  
*John said that the girls that met were*  
*foreigners*  
 'John said that the girls he met were foreigners.'

Examples like the ones above suggest that null subjects are disallowed inside a strong island if their antecedents are outside the island. However, in adjunct clauses (which are also strong islands) null subjects are allowed, as can be seen in (21).

- (21) João<sub>i</sub> visitou a Maria [quando *ec<sub>i</sub>* saiu do trabalho]  
*John visited the Mary when left from-the work*  
 'John visited Mary when he left his job.'

In this case, a null subject is possible and must be coreferent to the matrix subject.

Let us now consider the case of weak *wh*-islands. Such cases reveal an interesting contrast: if the *wh*-phrase is an adjunct, then the null subject is allowed in the embedded clause, as shown by the examples in (22). On the other hand, if the *wh*-phrase comes from an argument position, then the use of a null subject makes the sentences degraded, as shown in (23).<sup>11,12</sup>

- (22) a. João<sub>i</sub> não sabe [quando *ec<sub>i</sub>* leu esse livro]  
*John not knows when read this book*  
 'John<sub>i</sub> doesn't know when he read this book.'
- b. João<sub>i</sub> não sabe [onde *ec<sub>i</sub>* comprou esse livro]  
*John not knows where bought this book*  
 'John<sub>i</sub> doesn't know where he bought this book.'

11. The contrasts may be subtle in some cases, but they systematically point to the same direction: it is possible to find a speaker who labels the sentences in (22) as good, and those in (23) as bad, but there are no speakers who consider the sentences in (23) better than those in (22) (Thanks to Jairo Nunes for helping me clarify this point).

12. Examples with a dislocated PP (= 23b) tend to be better than examples with a DP (= 23a). I will come back to this asymmetry in Section 4.6 below.



- c. João<sub>i</sub> não sabe [ por que *ec*<sub>i</sub> leu esse livro]  
*John not knows why read this book*  
 ‘John doesn’t know why he bought this book.’
- d. João<sub>i</sub> não sabe [ como *ec*<sub>i</sub> perdeu esse livro]  
*John not knows how lost this book*  
 ‘John doesn’t know how he lost this book.’
- (23) a. ??João<sub>i</sub> não sabe [ que livro *ec*<sub>i</sub> leu na semana passada]  
*John not knows which book read in-the week last*  
 ‘John doesn’t know which book he read last week.’
- b. ?João<sub>i</sub> não sabe [ pra quem *ec*<sub>i</sub> emprestou o livro]  
*John not knows to whom lent the book*  
 ‘John doesn’t know to whom he lent this book.’

A similar contrast can be noted when a topicalized element appears at the left periphery of the embedded clause. Again, non-arguments allow null subjects but arguments do not:

- (24) João<sub>i</sub> disse [ que amanhã *ec*<sub>i</sub> vai viajar pra Europa]  
*John said that tomorrow will travel to Europe*  
 ‘John said that tomorrow he will travel to Europe.’
- (25) \*João<sub>i</sub> disse [ que esse livros *ec*<sub>i</sub> leu na semana passada]  
*John said that these books read in-the week last*  
 ‘John said that these books he read last week.’

Finally, another island where it is possible to find null subjects in BP is the Complex-NP island, as in (26) below.<sup>13</sup>

- (26) O presidente<sub>i</sub> negou [ os rumores de que *ec*<sub>i</sub> recebeu dinheiro de  
*the president denied the rumors of that received money from*  
*empresários*  
*executives*  
 ‘The president denied the rumors that he got money from businessmen.’

I will return to all the above examples in Section 4, where I try to derive their properties using the analysis I develop in Section 3.

13. The possibility of null subjects inside complex-NP was noted by Modesto (2000). Example (26) was borrowed from his work.

### 3. The analysis

Since Chomsky (1982), it has been assumed that the empty category occupying the subject position of finite clauses in several languages correspond to an empty pronoun (*pro*). The fact that not all languages of the world manifest the existence of *pro* has immediately raised the question about what the basis of such partition is. The idea of postulating a binary parameter ( $\pm$  pro-drop) specifically created to account for this distinction did not seem attractive, since it considered the existence of null subjects an isolated phenomenon, predicting the possibility of coexistence of null subjects and any other set of properties in the same grammar. The problem is that the study of null subject languages has detected a cluster of properties that approximate those languages from each other and at the same time differentiate them from other languages (absence of *that*-trace effects and subject-verb inversion, for example). It would be interesting to associate these properties to a single, more abstract parameter, from which all of them (or at least a substantial part of them) would follow.<sup>14</sup>

The standard assumption is that *pro* must be identified by means of a verbal morphology rich enough to recover the formal features of *pro*'s referent.<sup>15</sup> In GB, the concept of rich morphology was encoded in the functional head AGR, and languages could have a rich or a poor AGR. The cluster of properties associated to the pro-drop languages could then be derived from properties of AGR (rich but not poor AGR licenses *pro*; rich but not poor AGR can be a proper governor, and so on.)

A good source of data to verify the validity of this approach comes from diachronic studies. For example, we expect to find languages that have undergone an impoverishment in their verbal agreement morphology to also exhibit reduction in its ability to license null subjects.<sup>16</sup> This is just what happened with BP. As

14. For arguments favoring a unified analysis of these properties, see Rizzi (1982); Brandi & Cordini (1989) and Kenstowicz (1989). Kato (1999) presents an attempt to deduce the possibility of free inversion from the possibility of null subjects.

15. For different stages of this idea, see Taraldsen (1978), Chomsky (1981, 1982), and Rizzi (1986) among others.

16. The possibility of null subjects, however, is not necessarily linked to the inflectional richness of the language (see Jaeggli & Safir 1989 for a discussion). Chinese, for example, allows for null subjects but does not manifest any agreement mark in its verbal forms (see Huang 1989). Also interesting is the case of Icelandic evolution. According to Sigurðsson (1993), the inflectional paradigm of Modern Icelandic is not poor/richer in comparison with Old Icelandic. However, the contexts in which null subjects are tolerated have altered during the period between these stages of the language. These facts indicate the existence of other forms of legitimating of null subjects other than richness of AGR. But in the case of BP, it must be stressed that the diachronic facts point to a strong correlation between inflectional richness and legitimating of null subjects (see Duarte 1995).

pointed out in Section 2.1, modern BP has undergone a considerable simplification in its verbal paradigm if compared to earlier stages of the language (see Duarte 1995 for the details). Six different verbal forms have given place to only three, and the distinction between second person and third person forms has disappeared. Interestingly, BP has also drastically reduced the contexts in which a null subject is possible. In this regard, BP evolution seems to be partially different from what is attested in French. French has also undergone an impoverishment in its agreement system, but has completely lost the possibility of having a null subject in finite clauses (cf. Adams 1987, and Roberts 1993 for different views on the history of French). Bringing *pro* to the scene, one could argue that French has lost its resources to legitimate this empty category, behaving just like the theory predicts, but that BP seems to have a kind of anaphoric *pro*.

In this section, I would like to suggest a different interpretation for the changes observed in BP. The idea is that, as far as the legitimation of referential *pro* is concerned, the history of BP and French are similar in that both languages have lost the possibility of using *pro* due to an impoverishment of their agreement systems. However, these languages have divergently evolved in another aspect, to which I shall return soon.

As for the theoretical background concerning agreement, I follow Chomsky (2000) and assume that the functional head T(ense) has a set of  $\phi$ -features that can enter into a checking relation with the set of  $\phi$ -features of a DP, and that the result of this relation is the deletion of the Case feature of the latter (T heads themselves have no Case feature). However, only a complete set of  $\phi$ -features is capable of eliminating the Case feature of a DP, making this DP inactive to the computational system, as far as A-movement is concerned.

A second assumption that will play a central role in my analysis concerns the nature of thematic relations and their role in the course of a derivation. Chomsky (1995, 2000) claims that thematic roles are not formal features and that their assignment does not involve any checking procedure. Inspired by work on “scrambling” in Japanese by Bošković & Takahashi (1998) and work on obligatory control in English by Hornstein (1999, 2001), I will instead assume that  $\theta$ -roles are formal features and that movement into thematic positions is in conformity with the Last Resort Condition, which limits applications of Move to cases involving feature checking. Hornstein (1999, 2001), for example, proposes for a sentence like (27a) a derivation involving movement of the subject out of the embedded clause, as represented in (27b).

- (27) a. John tried to win.  
 b.  $[_{TP} \text{John}_i \text{ T } [_{vp} t_i \text{ tried } [_{CP} [_{TP} t_i \text{ to } [_{vp} t_i \text{ win}]]]]]]$

In this derivation, the subject *John* enters into two thematic relations: one in its base position within the embedded  $vP$ , and another one with the matrix  $v$ . It is this second relation that triggers movement of *John* to the specifier position of matrix  $v$ . As I will show in greater detail below, my analysis of the derivation of sentences containing null subjects in embedded finite clauses in BP bears a close resemblance to the analysis Hornstein (1999, 2001) proposes for control structures in English.

Back to BP, the interpretation I propose for the facts we have observed is that finite T in this language has not only lost its capacity to legitimate *pro*, but also had its set of  $\varphi$ -features reanalyzed as an incomplete set. Having been reanalyzed this way, finite T began to behave like nonfinite T, that is, it attracts an element to its Spec, but is unable to eliminate the Case feature of the moved element. The same did not happen in French, where finite T, though unable to legitimate *pro*, is still analyzed as complete set of  $\varphi$ -features.

With this in mind, consider the derivation of a sentence like (28).

- (28) João disse que comprou um carro.  
*John said that bought a car*  
 ‘John said that he bought a car’.

I begin with the stage in which the embedded  $vP$  has already been formed by successive applications of Merge. At this point, *João* occupies the specifier position of  $v$ , where it enters into a thematic relation, receiving a  $\theta$ -role:

- (29) [ $vP$  João comprou um carro]  
*John bought a car*

Next, T merges with  $vP$ . T has an EPP feature and an incomplete set of  $\varphi$ -features, both illegible. *João* has an illegible Case feature and is attracted to T, leaving a copy in its original position. The set of  $\varphi$ -features of T and *João* establish a checking relation and the  $\varphi$ -features of the former are eliminated. Since the set of  $\varphi$ -features of T is incomplete, the Case feature of *João* is not eliminated and it is still active to the computational system:

- (30) [ $TP$  João T $_{\varphi\text{-inc}}$  [ $vP$  João comprou um carro]]  
*John John bought a car*

The derivation goes on and, after successive applications of Merge, the structure headed by the light verb of the matrix clause is formed:

- (31) [ $vP$  disse [ $CP$  que [ $TP$  João T $_{\varphi\text{-inc}}$  [ $vP$  João comprou um carro]]]]  
*said that John John bought a car*

Now we have reached a crucial point of the derivation. The matrix light verb has a thematic feature that needs to be checked. *João* is an argument capable of

performing this role. It then raises to Spec of  $\nu$ , forming (32) below. Note that this operation is possible because a) *João* has a Case feature unchecked and is therefore active; b) a thematic relation is involved, respecting the Last Resort Condition; c) there is no violation of the Minimal Link Condition, that is, there is no intervening element which could also enter into a thematic relation with  $\nu$ , and (d) by assumption, there is no other element in the numeration that could also enter into a thematic relation with  $\nu$ .

- (32) [ $_{\nu P}$  João disse [ $_{CP}$  que [ $_{TP}$  João  $T_{\varphi\text{-inc}}$  [ $_{\nu P}$  João comprou um carro ]]]]  
*John said that John John bought a car*

Next, matrix T, which has a complete set of  $\varphi$ -features, is merged with  $\nu P$  and, in virtue of having an EPP feature, attracts *João* to its Spec. The  $\varphi$ -features of T are eliminated and (33) is formed.

- (33) [ $_{TP}$  João  $T_{\varphi\text{-comp}}$  [ $_{\nu P}$  João disse [ $_{CP}$  que [ $_{TP}$  João  $T_{\varphi\text{-inc}}$  [ $_{\nu P}$  João VP]]]]]]]  
*John John said that John John*

Then, the rest of the matrix clause (CP) is formed and, after deletion of copies and linearization of the structure in the phonological component (see Nunes 1999, 2004), we finally have a sequence like (28).

Our proposal then is that the derivation of a sentence like (28) in BP does not differ in its essence from the derivation Hornstein (1999, 2001) proposes for control structures involving infinitival embedded clause, which also exist in BP:

- (34) João tentou comprar um carro.  
*John tried buy-INF a car*  
 ‘John tried to buy a car.’

According to the proposal presented here, both finite and nonfinite T in BP may have an incomplete set of  $\varphi$ -features, being unable to render the element raised to its Spec inactive. Then, in both cases, the subject of the embedded clause can be raised to the matrix clause where it receives a second  $\theta$ -role. However, consider the following contrast:

- (35) a. A Maria disse que o João comprou um carro.  
*the Mary said that the John bought a car*  
 ‘Mary said that John bought a new car.’  
 b. \*A Maria tentou o João comprar um carro.  
*the Mary tried the John buy a car*

This contrast reveals two points. First, infinitival T of control structures is always  $\varphi$ -incomplete. This is crucial in explaining why sentences such as (35b) are

ungrammatical: there is no way of eliminating the Case feature of the embedded subject. Second, having an incomplete set of  $\varphi$ -features should be an option, but not a requirement, for finite T. Otherwise, in sentences such as (35a), the subject of the embedded clause would never have its Case feature eliminated, since both finite and nonfinite T would be unable to perform this task, causing the corresponding derivations to crash.<sup>17</sup> The upshot is that BP should have both  $\varphi$ -complete and  $\varphi$ -incomplete finite Ts.

With respect to this optionality, my suggestion is the following: Universal Grammar presumably assigns to finite T the property of bearing a complete set of  $\varphi$ -features, or to use another jargon, the property of assigning nominative Case. This is the unmarked option, and a child acquiring his or her language does not need positive evidence to learn it. I propose that what happened with BP is that it gained an extra option, namely, the reanalysis of finite T as an incomplete set of  $\varphi$ -features, or, in the other jargon, the optionality of assigning nominative Case by T.

With this in mind, let us reconsider the derivation of (28), repeated here for convenience as (36).

- (36) João disse que comprou um carro.  
*John said that bought a car*  
 ‘John said that he bought a car.’

If the numeration underlying this derivation contains two instances of finite T with an incomplete set of  $\varphi$ -features (henceforth I will call it just *incomplete T*), then the derivation will not converge, since the Case feature of *João* will not be eliminated. If two instances of complete T are chosen, the derivation will not converge again, this time due to the impossibility of raising *João* to the matrix clause, since it will be frozen in the Spec of embedded T and the formal features of the matrix T, as well as the  $\theta$ -features of the matrix *v*, will not be eliminated, causing the derivation to crash. The only option leading to convergence is a numeration containing one instance of a complete finite T and one instance of an incomplete finite T. If the complete finite T is inserted in the embedded clause, we will not obtain any progress: once again, the matrix T will not have its illegible features eliminated, because *John* will be frozen in the embedded clause. On the other hand, if the incomplete T is inserted in the embedded clause, it will allow raising of the embedded subject to the matrix clause. The subject will first move to Spec of *v*, checking the  $\theta$ -feature of *v*. Then, a checking relation will be established between its  $\varphi$ -features and the  $\varphi$ -features of matrix (complete) T. As a result, all illegible features are eliminated.

17. I am assuming with Hornstein (1999, 2001) that nonfinite T, even in the case of obligatory control structures, does not check (null) Case.

With respect to cases like (35a), convergence is obtained if we select a numeration with two instances of complete finite T. In this case, *João* and *Maria* will have their Case features eliminated along with the illegible features of matrix and embedded clauses respectively, and no hyperraising will be triggered.<sup>18</sup>

#### 4. Explaining the data

We saw in the last section that argumental null subjects appearing in BP embedded clauses correspond to a copy left by an element that had moved to a higher clause. We also saw that BP grammar does not license an argumental *pro* and that a sentence like (36) can only have a structure like (37).<sup>19</sup>

18. Rodrigues (2004) also proposes an analysis for sentences like (36) based on movement into a thematic position. However, her explanation for why the subject of a finite clause may still be active for the computational system after agreeing with T differs from mine and is based on the following general assumptions: first, entering into an agreement relation with a functional head does not suffice for checking the Case feature of a DP. Instead, to have its Case feature deleted, a DP should move and enter into a Spec-Head configuration with the relevant head (T in our case). Second, there is overt V-to-T movement in BP and this is enough to check the EPP-feature of T. Thus, what characterizes BP in her view is not the fact that finite Ts can be either  $\phi$ -complete or  $\phi$ -incomplete, as I am proposing here, but rather the fact that a subject DP may stay in its base position within  $\nu$ P with its Case feature unchecked. Of course, this will lead to convergence only if later on in the derivation the subject DP moves out of its theta domain and enters a Spec-Head relation with a higher functional head. In the case of (36), the subject moves first to Spec of FP, (a left-peripheral projection hosted between TP and CP and whose specifier is the spell-out position of BP preverbal subjects, according to Rodrigues). At this point, the subject will move from within the embedded clause to the specifier of matrix  $\nu$ , and then to the specifier of matrix F, where its Case feature gets deleted:

- (i) Derivation of the embedded clause:

[<sub>CP</sub> que [<sub>FP</sub> João<sub>[Case]</sub> F [<sub>TP</sub> T+v+ comprou [ <sub>$\nu$ P</sub> t<sub>João</sub> t <sub>$\nu$ +comprou</sub> um carro ]]]]]  
*that João bought a car*

- (ii) Derivation of the matrix clause:

[<sub>FP</sub> João<sub>[Case]</sub> F [<sub>TP</sub> T+v+ disse [ <sub>$\nu$ P</sub> t<sub>João</sub> t <sub>$\nu$ +disse</sub> [<sub>CP</sub> que [<sub>FP</sub> t<sub>João</sub> F [<sub>TP</sub> ... comprou um carro ... ]]]]]]]  
*John said that that bought a car*

A methodological drawback of this analysis is that it requires that the checking/deletion of certain features only occur under Spec-Head configurations. This is unnecessary in my implementation, which follows more closely the minimalist design of Chomsky (1995, 2000). On the empirical side both analyses seem to make the same predictions, due to the fact that they both rely on cross-clausal movement to account for the distribution of null subjects in BP.

19. For the sake of readability, I will represent copies as indexed traces.

- (37) [<sub>TP</sub> João T<sub>φ-comp</sub> [<sub>VP</sub> t<sub>i</sub> disse [<sub>CP</sub> que [<sub>TP</sub> t<sub>i</sub> T<sub>φ-inc</sub> [<sub>VP</sub> t<sub>i</sub> comprou um  
*John said that bought a*  
 carro ]]]]]  
*car*

Let us now reconsider the sentences presented in Section 2 and show how the proposals made in Section 3 can explain the peculiar behavior revealed by those data.

#### 4.1 The position of the antecedent

Let us begin with (38), which has led to the generalization in (7), repeated here in (39).

- (38) a. \*João disse [ que a Maria acha [ que *ec* é esperto]]  
*John said that the Mary thinks that is smart-masc*  
 ‘John said that Mary thinks he is smart’.
- b. \*A mãe do João acha [ que *ec* é esperto]  
*the mother of John thinks that is smart-masc*  
 ‘John’s mother thinks he is smart’.
- c. \*João disse [ que a Maria acha [ que *ec* são espertos]]  
*John said that the Mary thinks that are smart-PL*  
 ‘John said that Mary thinks that they are smart’.
- d. \*Compro um carro.  
*bought a car*

- (39) Referential null subjects in BP must be c-commanded by an antecedent located in the immediately higher clause.

In (38a), the masculine form of the adjective indicates that the subject of the most embedded clause should be *João*, the only DP in the sentence that has this feature. Then, the only derivation that does not crash due to feature mismatch is the one in which *João* is (hyper)raised from Spec of T of the most embedded clause to the matrix Spec of *v*, raising next to the matrix Spec of T. We already know that raising operations like this one are possible only if the finite T of the clause from which the element raises is an incomplete T. Assume this to be the case. Then (38a) has the structure in (40).

- (40) [<sub>TP</sub> João<sub>i</sub> T<sub>φ-comp</sub> [<sub>VP</sub> t<sub>i</sub> disse [ que Maria acha [<sub>CP</sub> que [<sub>TP</sub> t<sub>i</sub> T<sub>φ-inc</sub>  
*John said that Mary thinks that*  
 esperto]]]]]  
*smart-masc*



The problem with this structure is that it results from an illegal derivation. Raising *João* from Spec of the most embedded T to Spec of matrix *v* violates the Minimal Link Condition, since *Maria* was closer to matrix *v* than *João* was.<sup>20</sup> That is why (38a) is ill formed. Note that if we change the masculine form of *esperto* to the feminine form *esperta*, the sentence becomes good. But this is not surprising. We now have a licit derivation, resulting from (41b), where *Maria* is inserted in the most embedded clause.

- (41) a. João disse que Maria acha que é esperta.  
*John said that Mary thinks that is smart-fem*  
 'John said that Mary thinks that she is smart.'
- b.  $[_{TP} J_i T_{\varphi\text{-comp}} [_{vP} t_i \text{ disse que } [_{TP} M_j T_{\varphi\text{-comp}} \text{ acha que } [_{TP} t_j T_{\varphi\text{-inc}} \text{ esperta}]]]]]$   
*John said that Mary thinks that smart-fem*

Now, consider (38b). Here too, the masculine form of the adjective indicates that the subject of the embedded clause must be specified as masculine. *João* is the only candidate. Assume that finite T in the embedded clause is an incomplete T and that Move has been applied, resulting in the structure below:

- (42)  $[_{TP} [A \text{ mãe do João}_i] T_{\varphi\text{-inc}} \text{ acha } [_{CP} \text{ que } [_{TP} t_i T_{\varphi\text{-inc}} \text{ é bonito}]]]]]$   
*the mother of John thinks that is handsome*

However, this structure is also the product of an illegal derivation. The copy of *João* in Spec of embedded T is not c-commanded by the copy in the matrix clause. In other words, this is an instance of movement that violates the C-command Condition.<sup>21</sup>

(38c) indicates the impossibility of a split antecedent for the null subject. In the face of the hypothesis defended here, this has an obvious explanation: two elements could not have been moved from the same position. So, the subject of the embedded clause in (38c) cannot be *João* and *Maria*, since we would be forced to admit that both elements have been moved from the Spec of the embedded T and this is not possible. But this is the only option that could save the derivation from crashing due to feature mismatch. Therefore, (38c) is ill formed.

Finally, (38d) also receives a straightforward explanation. The absence of a DP that could check the verb's external  $\theta$ -role and eliminate the illegible features of T makes unavailable the construction of a convergent derivation that would result in (38d). The possibility of a DP inserted in Spec of *v*, raised to Spec of T and then deleted in the phonological component is simply out of question since this would

20. Following Chomsky (2000), I assume that a checked feature, although inert to the computational system, induces intervention effects.

21. But see Section 4.6 below for further discussion.

violate the Principle of Recoverability of Deletion, whatever the ultimate deduction of this principle may be.

We have then succeeded in deriving the generalization that referential null subjects in BP must be locally c-commanded by their antecedents. We have just seen that this follows from the fact that null subjects in this language are copies resulting from movement, and that this operation is constrained by the Minimal Link Condition, the C-Command Condition, and the Last Resort Condition. It is these restrictions that are actually responsible for the validity of (39).

A potential counterexample to the obligatoriness of a local antecedent to null subjects in BP is (43).<sup>22</sup>

- (43) Paulo convenceu Pedro [ que ec tinha que ir embora ]  
*Paul convinced Peter that had that go away*  
 ‘Paul convinced Peter that he had to leave.’

In (43), the embedded null subject must have *Paulo* as its antecedent. According to what we have seen, this should not be possible, since the matrix object seems to intervene between the null subject and the matrix subject. However, this configuration obtains only to the extent that the matrix object c-commands the embedded clause. This would be the case if the embedded clause is the complement of the matrix verb and the direct object occupies its specifier.

However, as noted by Rodrigues (2004), there are reasons to suspect that the embedded clause in (43) is not a complement, but an adjunct. Her argument is based on the impossibility of extracting adjuncts from such an embedded clause:

- (44) ??Quando<sub>i</sub> você convenceu a Maria [que tinha consertado o  
*when you convinced the Mary that had fixed the*  
*carro t<sub>i</sub>]?  
 car  
 ‘When did you convince Mary that you had fixed the car?’*

Now contrast (44) and (45).

- (45) Quando<sub>i</sub> você disse [ que tinha consertado o carro t<sub>i</sub>]?  
*when you said that had fixed the car*  
 ‘When did you say that you had fixed the car?’

The impossibility of (44) with the relevant interpretation led Rodrigues to assume that the embedded clause in this example is an adjunct to the matrix VP, hence a barrier for extraction. As for (45), the verb *dizer* actually takes a complement, giving rise to the contrast observed above. If the embedded clause in (44) is really a

22. Examples of this sort are discussed in Modesto (2000).

VP-adjunct, then the matrix object does not c-command the embedded subject, and does not block raising to the matrix subject position.<sup>23,24</sup> Then, (43) is not a counterexample to my analysis. Additional evidence that the matrix direct object does not c-command the embedded subject in examples like (44) is (46).

- (46) João convenceu Maria<sub>i</sub> [ de que [ a idiota]<sub>i</sub> deveria assaltar um banco]  
*John convinced Mary of that the idiot should rob a bank*  
 ‘John convinced Mary of that the idiot should rob a bank.’

In (46), the embedded subject is an epithet. Since this element can take the matrix object as its antecedent, the latter does not c-command the former; otherwise the sentence should be ill formed, due to a Principle C violation.

#### 4.2 The avoid pronoun principle

Another feature of BP pointed out in Section 2 concerns the alternation between null and overt subjects. Consider the pair of sentences below, both well formed in BP:

- (47) a. João disse que comprou um carro.  
*John said that bought a car*  
 ‘John said that he bought a car.’

23. Extraction of a subject out of an adjunct in cases like (43) will be discussed below.

24. Modesto (2000) points out contrasts such as (i)-(ii) below as a further argument against movement-based analyses of BP null subjects:

- (i) Paulo convenceu Pedro [ que *ec* tinha que ir embora]  
*Paul convinced Peter that had that go away*  
 ‘Paul convinced Peter that he had to leave.’  
 (ii) Pedro, Paulo convenceu [ que *ec* tinha que ir embora]  
*Peter Paul convinced that had that go away*  
 ‘Peter, Paul convinced that he had to leave.’

In (i), the antecedent of the empty category *ec* can only be *Paulo*, whereas in (ii) it can be either *Paulo* or *Pedro*. Modesto sees the contrast above as showing that BP null subjects require some form of A-bar licensing (topicalization in (ii)) and claims that movement-based analyses of the sort I am advocating here are not well-equipped to deal with it. However, as Rodrigues (2004: 217ff) points out, following a suggestion by Norbert Hornstein, analyzing the embedded clauses in (i)-(ii) as adjuncts makes the constructions look very similar to the so-called parasitic gap constructions:

- (iii) \*John filed this paper without reading *ec*.  
 (iv) This paper, John filed without reading *ec*.

See Rodrigues (2004) for an analysis of the contrast between (i) and (ii) along the lines of Hornstein (2001) in a way that is fully compatible with movement-based analyses.

- b. João<sub>i</sub> disse que ele<sub>i</sub> comprou um carro.  
*John said that he bought a car*  
 ‘John said that he bought a car.’

In null subject languages such as Italian or Spanish, the use of an overt subject in sentences corresponding to (47b) implies emphasis or contrast, whereas sentences corresponding to (47a) are associated with a neutral reading.

Curiously, it appears that Chomsky’s Avoid Pronoun Principle does not apply in BP, since both (47a) and (47b) are appropriate to convey the neutral reading. In particular, (47b) does not imply any kind of emphasis or contrast. However, we are forced to conclude that the principle does not apply in BP only if we admit that a null pronoun occupies the subject position of finite clauses in this language.

Moreover, the postulation of a principle that only applies in some languages but not in others, or the possibility that some languages “loses” a certain principle seems rather unnatural, not to say contradictory, in the face of the very definition of what a principle is. It would be much more interesting to approach the question from another angle and conclude that the apparent violation of a certain principle in some language is linked to the fact that the characteristics of that language are such that the structural description necessary for the application of the principle is never attained. This line of reasoning is perfectly compatible with the analysis of null subjects in BP developed in this paper. The proposal made here that there are no instances of subject *pro* in BP renders applications of the Avoid Pronoun Principle vacuous and leaves us with the illusion that it does not apply. So, (47b) is perfect in BP not because BP lost the principle in question but because sentence (48) below has the structure (49b) and not (49a).

- (48) João disse que comprou um carro.  
*John said that bought a car*  
 ‘John said that he bought a car.’
- (49) a. [ João disse que [ *pro* comprou um carro ] ]  
 b. [ João<sub>i</sub> disse que [ t<sub>i</sub> comprou um carro ] ]

In this respect, BP does not differ from a language like English, in which the equivalent of (50) is possible because *pro* is not legitimated and the Avoid Pronoun Principle applies, but vacuously.

- (50) João disse que ele comprou um carro.  
*John said that he bought a car*  
 ‘John said that he bought a car.’

The difference between English and BP with respect to sentences like (48) is that the strategy of hyperraising is not available in English, since its finite T always has a complete set of  $\varphi$ -features.

#### 4.3 Montalbetti's principle

Let us now explain the anomalous behavior of BP with respect to Montalbetti's Overt Pronoun Constraint (Montalbetti 1984). The relevant data is presented below:

- (51) a. [ Nenhum menino]<sub>i</sub> t<sub>i</sub> disse que a Maria acha que ele<sub>i</sub> é  
*no boy said that the Mary thinks that he is*  
*inteligente.*  
*intelligent*  
 'No boy said that Mary thinks that he is intelligent.'
- b. \*[ Nenhum menino]<sub>i</sub> t<sub>i</sub> disse que a Maria acha que ec<sub>i</sub> é  
*no boy said that the Mary thinks that is*  
*inteligente.*  
*intelligent*  
 'No boy said that Mary thinks that he is intelligent.'

Differently from what happens in Spanish (see Section 2.4), sentences such as (51a) are well formed in BP. The pronoun *ele<sub>i</sub>* is locally bound by the variable in the matrix clause, an apparent violation of the Overt Pronoun Constraint. But this is true only if there is a possibility of using a null pronoun in the same position. According to my analysis, this is not possible, because argumental subject *pros* are never licensed in BP. Turning to (51b), we note that BP diverges from Spanish again. The ungrammaticality of this sentence shows that the empty category in the subject position of the most embedded clause cannot be locally bound by the variable in the subject position of matrix clause. My analysis correctly predicts this impossibility, since the only derivation in conformity with the desired interpretation is the one during which the quantificational phrase is inserted in the most embedded clause and then raised to the matrix clause. However, this movement violates the Minimal Link Condition, because *Maria* in the intermediate clause intervenes between the elements involved in the movement operation.

It is interesting to note that the ungrammaticality of (51b) runs against a proposal by Negrão & Müller (1996) that BP still allows for subject *pro* when this category functions as a bound variable. (51b) above and (52b) below show that even functioning as a bound variable, an empty category in subject position still obeys the generalization (53). As expected, (52a) is well formed.

- (52) a. [ A mãe de [nenhum menino]<sub>i</sub>] acha que ele<sub>i</sub> é burro  
*the mother of no boy thinks that he is stupid*  
 ‘No boy’s mother thinks he is stupid’.
- b. \*[ A mãe de [nenhum menino]<sub>i</sub>] acha que é burro  
*the mother of no boy thinks that is stupid*  
 ‘No boy’s mother thinks he is stupid’.

(53) Null subjects in BP must be c-commanded by an antecedent located in the immediately higher clause.

(53) was the starting point for my proposal that the null subjects of embedded clauses in BP are copies left by a moved element. So, it is not necessary to admit a special *pro* in the cases where it has a quantificational antecedent, since it would force us to adopt a stipulation similar to (53), in order to account for the ill-formedness of (51b) and (52b), which contrasts with the wellformedness of (54).

- (54) [ Nenhum menino]<sub>i</sub> acha que [ ec<sub>i</sub> é burro ]  
*no boy thinks that is stupid*  
 ‘No boy thinks he is stupid’.

If my analysis is right, such a stipulation is unnecessary. As opposed to (51b) and (52b), (54) is well formed because it is possible to move an element from the position indicated by *ec<sub>i</sub>* to the position actually occupied by the quantifier phrase in the sentences.

Summing up, we can conclude that the apparent violation of certain principles in BP that regulate the alternation between null and overt pronouns is indeed apparent. The existence of those principles is supported by data from other languages and BP examples do not authorize the conclusion that they are lost or non-existent in this language. Once one assumes that there is no referential subject *pro* in BP, which I argued for here, the structural descriptions of those principles are never satisfied (as far as subject positions are concerned) and the principles apply vacuously.

#### 4.4 VP-ellipsis and *only DPs*

Another issue related to asymmetries between null and overt subjects in BP that we saw in Section 2 has to do with interpretive restrictions involving cases of VP-ellipsis and clauses with subjects of the form [*only DP*]. I begin by reconsidering VP-ellipsis:

- (55) a. João<sub>i</sub> acha que ele<sub>i</sub> vai ganhar a corrida e Maria também.  
*John thinks that he will win the race and Mary too*  
 ‘John<sub>i</sub> thinks that he<sub>i</sub> will win the race and Mary too’.

- b. João acha que vai ganhar a corrida e Maria também.  
*John thinks that will win the race and Mary too*  
 ‘John<sub>i</sub> thinks that *ec<sub>i</sub>* will win the race and Mary too.’

What is interesting to note is that while (55a) is ambiguous, admitting both strict and sloppy readings, (55b) admits only the sloppy reading. I will assume here an analysis for ellipsis along the lines of Fiengo & May (1994), which involves a copy of the elided constituent. I will also admit that dependencies created by movement (annotated by  $\beta$ -indices in Fiengo and May’s analysis) must be preserved during the process of copying. Then, the asymmetry above can be explained once we admit that (55b) is derived by movement, exactly what my analysis does: the null subject of the embedded clause is a copy that has the subject of the matrix clause as its antecedent. This will lead us to the conclusion that (55b) should be read as (56).

- (56) John thinks that he/John will win and Mary thinks that she/Mary will win.

Using lambda notation, what I am assuming is that dependencies created by movement correspond to predicates of the form  $\lambda x. x \dots x$ , so that (55b) could be represented as follows:

- (57) (John) [ $\lambda x. x$  thinks that  $x$  will win] and (Mary) [ $\lambda x. x$  thinks that  $x$  will win]

In the case of (55a), there is no movement relating the subject positions of the embedded and matrix clauses. The subject of the embedded clause is an overt pronoun with the matrix clause as its antecedent. In this case, according to Fiengo & May (1994), the ambiguity emerges from the fact that coreference here may be purely accidental (use of  $\alpha$  indices, according to the authors) or might have been created by a kind of dependency similar to that observed in (55b), where the pronoun must have an antecedent in its own sentence (use of  $\beta$  indices). We thus obtain the sloppy and strict readings respectively.

Let us now return to the cases involving [*only DP*] subjects:

- (58) a. Só João acha que ele vai ganhar a corrida.  
*only John thinks that he will win the race*  
 ‘Only John thinks he will win the race.’  
 b. Só João acha que vai ganhar a corrida.  
*only John thinks that will win the race*  
 ‘Only John thinks that he will win the race.’

(58a) is ambiguous and means either that the only person that believes in *João*’s victory is *João*, or that the only person that believes in his/her own victory is *João*. On the other hand, (58b) means can only mean that the only person that believes in his/her own victory is *João*. Again, the explanation for this contrast may be

anchored in the fact that only in (58b) the subjects of matrix and embedded clauses are related to each other by movement. In this case, (58a) can be associated with either one of the representations in (59), while (58b) is always associated with the predicate (59b). In both cases, in order for the sentences to be true, the respective predicates must apply only to *João*.

- (59) a.  $[\lambda x. x \text{ thinks that John will win the race}]$   
 b.  $[\lambda x. x \text{ thinks that } x \text{ will win the race}]$

Given the asymmetry between the derivations of sentences (55a-b) and the derivations of sentences (58a-b), an explanation along the lines of Fiengo and May becomes possible.

#### 4.5 Hyperraising

I reexamine now the well-formedness of BP sentences like (60) below. Similar cases were discussed by Ura (1994) for other languages as involving hyperraising. Given the analysis presented here for (61), these cases appear as no surprise.

- (60) João parece que comprou um carro.  
*John seems that bought a car*  
 ‘John seems to have bought a car’.
- (61) João disse que comprou um carro.  
*John said that bought a car*  
 ‘John said that he bought a car’.

The derivation of (60) is identical to that of (61), except for the fact that (60) involves no movement into thematic positions, since the verb *parecer* ‘to seem’ does not attribute a thematic role to its subject. Like the derivation of (61), which we have already discussed in detail, the derivation of (60) converges only if the finite T in the embedded clause is incomplete and the finite T in the matrix clause is complete. Both derivations are sketched below:

- (62)  $[_{TP} \text{ João } T_{\varphi\text{-comp}} \text{ parece } [_{CP} \text{ que } [_{TP} t_i T_{\varphi\text{-inc}} [_{VP} t_i \text{ comprou um carro } ]]]]]$   
*John seems that bought a car*
- (63)  $[_{TP} \text{ João } T_{\varphi\text{-comp}} [_{VP} t_i \text{ disse } [_{CP} \text{ que } [_{TP} t_i T_{\varphi\text{-inc}} [_{VP} t_i \text{ comprou um carro } ]]]]]]$   
*John said that bought a car*

The choice of a complete finite T for the embedded clause is possible only if a null expletive is inserted in the subject position of the matrix clause, yielding (64).



- (64) Parece que João comprou um carro.  
*seems that John bought a car*  
 ‘It seems that John bought a car.’

The well-formedness of (60) indicates that the option of hyperraising is in fact available in PB.<sup>25, 26</sup>

#### 4.6 Null subjects and islands

If all the results above are on the right track, that is, if the restrictions on the distribution and interpretation of null subjects in BP follow from restrictions imposed on movement operations performed by the computational system, then we predict that these subjects could not appear in configurations where the system blocks the application of these operations. A situation that immediately comes to mind is the

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25. Ura (1994), after surveying many languages in which hyperraising is attested, states the following generalization: *If a language allows hyperraising, then it also allows “null subject”*.

For Ura, among the sentences below, only (ib) is derived via hyperraising. (ia) involves *pro*:

- (i) a. João disse que comprou um carro.  
*John said that bought a car*  
 ‘John said that he bought a car.’  
 b. João parece que comprou um carro.  
*John seems that bought a car*  
 ‘It seems that John bought a car.’

In my analysis, however, both cases involve hyperraising and the coexistence of these sentences is not surprising. Recall that I am assuming that for a language to allow hyperraising, it is necessary that finite Ts may contain an incomplete set of  $\phi$ -features. The possibility of a finite T with this characteristic is sufficient to license the derivation of a sentence like (ib). For hyperraising to be possible in cases like (ia), we must assume that the language admits movement into thematic positions. But this is not a parameter, subject to variation across languages. On the contrary, I am assuming that movement into thematic positions is possible because  $\theta$ -roles are formal features, which makes this kind of movement compatible with the Last Resort Condition. So, if the only relevant difference between the derivations of (ia) and (ib) is an instance of movement into thematic positions, we are led to the conclusion that if a language allows (ib), it also allows (ia), since the permission to move to a thematic position comes for free from Universal Grammar.

This conclusion is very close to Ura’s generalization. In fact, the analysis presented here predicts that if a language allows hyperraising (what, for Ura, means licensing of sentences like (ib)), then it also allows “null subject” with the characteristics of BP null subjects. Unfortunately, Ura does not discuss the languages presented in his work in enough detail so that the predictions could be adequately tested. I leave this testing for further research.

26. Rodrigues (2004: 119) tries to dismiss the analysis presented here on the grounds that it cannot be tested. As the attentive reader will have noticed, it is clear that evidence pointing to a divorce between null subjects of the type attested in BP and the availability of hyperraising would be enough to falsify or at least serve as preliminary counter-evidence to the theory I am proposing here.

case of configurations in which null subjects are separated from their antecedents by some kind of barrier, in the sense of Chomsky (1986). In these cases, we expect the relevant sentences to be ungrammatical. This prediction seems to be borne out. As shown in Section 2.7, null subjects inside certain strong islands are not allowed in BP. The relevant examples are repeated in (65), where null subjects, but not their antecedents, are found inside relative clauses:

- (65) a. ??João<sub>i</sub> não gostou dos livros que [*ec<sub>i</sub>* leu na escola]  
*John not liked of-the books that read in-the school*  
 ‘John didn’t like the books that he read in the school’.
- b. ??João<sub>i</sub> disse que [ as meninas [ que *ec<sub>i</sub>* encontrou ] ] eram  
*John said that the girls that met were*  
*estrangeiras*  
*foreigners*  
 ‘John said that the girls he met were foreigners’.

Once the analysis advocated here is assumed, the explanation for the ill-formedness of (65a-b) is immediate: whatever causes the boundaries of relative clauses to be barriers for movement, this will also be responsible for the impossibility of having null subjects inside them in BP.

Turning now to null subjects inside complex-NP, consider (66) (from Modesto 2000).

- (66) O presidente<sub>i</sub> negou [ os rumores de que *ec<sub>i</sub>* recebeu dinheiro de  
*the president denied the rumors of that received money from*  
*empresários*]  
*executives*  
 ‘The president denied the rumors that he got money from executives’.

The fact that (66) is acceptable in BP leads to the conclusion that it is possible to extract a subject in configurations of this sort. Indeed, extraction of a wh-phrase in similar conditions does not produce an unacceptable sentence:<sup>27</sup>

- (67) Que ministro a imprensa negou o boato de que recebeu dinheiro  
*which minister the media denied the rumor of that received money*  
*ilegal]*?  
*illegal*  
 ‘Which minister did the media deny the rumor that he received illegal money?’

27. The possibility of null subjects inside complex-NPs was noted by Modesto (2000). Example (66) was borrowed from his work.

(67) seems to be only slightly worse than (66). Note also that if the complex-NP occupies the subject position of an embedded clause, a degradation arises:

- (68) ??João disse [ que [ o boato de que viajou pra Europa ] era falso].  
*John said that the rumor of that traveled to Europe was false*  
 ‘John said that the rumor that he traveled to Europe was false.’

(68) is a case of extraction from a left branch and the observed degradation is expected. Therefore, the contrast between (66) and (68) and the parallelism between (66) and (67) suggest that an analysis along the lines developed here is on the right track.<sup>28</sup>

The analysis also gives an explanation for the contrasts related to null subjects within weak islands:

- (69) a. João<sub>i</sub> não sabe [ quando *ec*<sub>i</sub> leu esse livro]  
*John not knows when read this book*  
 ‘John<sub>i</sub> doesn’t know when he read this book.’
- b. João<sub>i</sub> não sabe [ onde *ec*<sub>i</sub> comprou esse livro]  
*John not knows where bought this book*  
 ‘John<sub>i</sub> doesn’t know where he bought this book.’
- c. João<sub>i</sub> não sabe [ por que *ec*<sub>i</sub> leu esse livro]  
*John not knows why read this book*  
 ‘John doesn’t know why he bought this book.’
- d. João<sub>i</sub> não sabe [ como *ec*<sub>i</sub> perdeu esse livro]  
*John not knows how lost this book*  
 ‘John doesn’t know how he lost this book.’
- (70) a. ??João<sub>i</sub> não sabe [que livro *ec*<sub>i</sub> leu na semana passada]  
*John not knows which book read in-the week last*  
 ‘John doesn’t know which book he read last week.’
- b. ?João<sub>i</sub> não sabe [ pra quem *ec*<sub>i</sub> emprestou o livro]  
*John not knows to whom lent the book*  
 ‘John doesn’t know to whom he lent this book.’

In the course of the derivations of all these sentences, there is a step corresponding to the movement of *João* from Spec of embedded T to Spec of matrix *v*, where this element receives its second  $\theta$ -role. In all these cases, the moved element crosses a *wh*-phrase located in the left periphery of the embedded clause. It is fair to ask whether this phrase induces minimality effects or not. Note, however, that this kind of effect is to be observed only when the intervening element has the relevant features to check the features of the attracting head. Inspecting the examples above, we

28. But I admit that contrasts are not so sharp as one might expect.

can note that the attracting head is  $v$ , against which a thematic feature will be checked. In the sentences in (69), the intervening element is an adverb, unable to participate in a thematic relation. It is natural then to suppose that this kind of element does not have the relevant features required to check a thematic feature. If so, these elements do not block the movement of a more distant element (in the cases at hand, the phrase *João*). This is why the sentences in (69) are well formed.

In the case of the sentences in (70), the situation is different: the intervening element comes from an argument position, showing that it can clearly take part in a thematic relation. Then, movement of *João* to the matrix clause is blocked, resulting in the ill-formedness of the examples in (70).<sup>29</sup>

#### 4.7 Null subjects in adjuncts

Finally, I will turn to the discussion of null subjects inside adjuncts. Consider (71) below:

- (71) João cameu um sanduíche quando foi à feira.  
*John ate a sandwich when went to-the market*  
 ‘John ate a sandwich when he went to the market.’

In order for examples like this to fall under the analysis developed in this paper, we must admit that (71) is obtained by means of a derivation involving movements like the ones sketched below (irrelevant details omitted):

- (72) [<sub>TP</sub> João<sub>i</sub> T [<sub>vP</sub> [<sub>vP</sub> t<sub>i</sub> cameu um sanduíche] [<sub>Adj</sub> quando t<sub>i</sub> foi à  
*John ate a sandwich when went to-the*  
 feira]]  
 market

In (72), although the copy of *João* in the subject position of the matrix clause c-commands the other copies, these copies are not in c-command relation with each other (assuming that CP adjoins to  $vP$ ). This makes impossible an analysis based on the successive movement from the inside of the adjunct to the specifier of the matrix light verb, and finally to the Spec of the matrix T, since we are admitting that movement operations are constrained by the C-command Condition.<sup>30</sup>

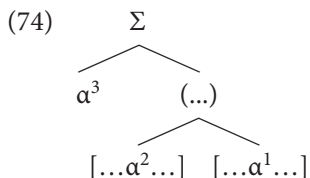
29. When the intervening element is a PP, the example seems to be better in comparison with cases with a DP ((70a) vs. (70b)). This could be explained if we admit that the relevant argument is not PP, but the DP inside it. Since the DP inside PP would not c-command the embedded subject, this subject could be raised without violating the Minimal Linking Condition.

30. Furthermore, this movement would involve extraction from an adjunct island.

Indeed, I made crucial use of this condition to explain the ill-formedness of sentences like (73), in which we find copies that do not c-command each other.

- (73) \*A mãe do João<sub>i</sub> acha que ec<sub>i</sub> é esperto.  
*the mother of John thinks that is smart*  
 'John's mother thinks that he is smart.'

A line of reasoning which seems promising is based on the copy theory of movement advocated by Nunes (1995, 2001, 2004), which admits some instances of sideward movement. For Nunes, movement is not an operation of the computational system, but rather the result of the interaction of the following operations: Copy, Merge, Form Chain, and Chain Reduction (operation responsible for the deletion of copies in the phonological component). Nunes assumes that the presence of more than one copy in the phonological component does not allow the linearization of the structure containing them, canceling the derivation. Since the process of deletion of copies is only permitted in the interior of a chain (via Chain Reduction) and formation of chains requires c-command, we expect that the system does not tolerate instances of sideward movement. This is true, Nunes argues, except in the cases where a configuration like (74) obtains.



In (74), there was an instance of sideward movement from the position marked as  $\alpha^1$  to the position marked as  $\alpha^2$  followed by movement to a position (marked as  $\alpha^3$ ) that c-commands  $\alpha^1$  and  $\alpha^2$ . So, it is possible to form two chains, both being headed by the same element. Next, Chain Reduction applies twice, eliminating the copies in the tail of these chains, and the structure can be linearized (see Nunes 1995, 1999 for details).

Back to our examples, note that in (71), but not in (73), a configuration like (74) obtains. This would be the reason for the observed contrast: although both sentences were formed by a derivation with "sideward movement", only (71) resulted in a configuration that permits the linearization of the corresponding structure.<sup>31</sup>

31. This is the analysis that Hornstein (2001) assumes for obligatory control in adjuncts.

Another contrast that would receive an adequate treatment, once we assume the proposal developed in this paper and the theory argued for by Nunes, is the following:

- (75) a. \**João conheceu Maria depois que ficou rica.*  
*John knew Mary after that became rich-fem*  
 'John met Mary for the first time after she became rich.'
- b. *João conheceu Maria depois que ela ficou rica.*  
*John knew Mary after that she became rich-fem*  
 'John met Mary for the first time after she became rich.'

(75a) is derived using the sideward movement of *Maria* from the subject position of the adjunct clause to the subject position of the matrix clause. Differently of what happened with (71), this derivation does not lead to a configuration like (74), blocking the linearization of the structure in the phonological component. Examples with an overt pronoun are of course free from this kind of problem. Hence, the well-formedness of (75b).

If this analysis for null subjects in adjuncts is on the right track, it is possible to conclude that all instances of referential null subjects observed in BP are copies created in the course of a derivation, which are subsequently deleted in the phonological component.

## 5. Conclusion

In this paper, I proposed an analysis for referential null subject constructions in BP, in which I claim that the empty category occupying the subject position of certain clauses in BP are traces (deleted copies) left by the (hyper)raising of the phrase that originally filled this position. I pursued an implementation coherent with the parsimonious theoretical requirements imposed by the Minimalist Program, making crucial use of two hypotheses: a) finite T in modern BP can be instantiated by an incomplete set of  $\phi$ -features, and b) thematic roles are formal features, which legitimates movement into  $\theta$ -positions. To the extent that this analysis is able to derive the various peculiarities of BP null subjects, it provides further evidence for the idea that thematic roles should be considered formal features by the computational system, as advocated by Bošković (1994), Bošković & Takahashi (1998), Lasnik (1995), and Hornstein (1999, 2001), among others.

## References

- Adams, Marianne. 1987. From Old French to the Theory of *pro-drop*. *Natural Language and Linguistic Theory* 8: 1–32.
- Borer, Hagit. 1989. Anaphoric Agr. In *The null subject parameter*, eds. Osvaldo Jaeggli & Ken Safir, 69–110. Kluwer, Dordrecht.
- Bošković, Željko. 1994. D-Structure,  $\theta$ -Criterion, and movement into  $\theta$ -positions. *Linguistic Analysis* 24: 247–286.
- Bošković, Željko & Daiko Takahashi. 1998. Scrambling and last resort. *Linguistic Inquiry* 29: 347–366.
- Brandi, Luciana & Patrizia Cordini. 1989. Two Italian dialects and the null subject parameter. In *The null subject parameter*, eds. Osvaldo Jaeggli & Ken Safir, 111–142. Kluwer, Dordrecht.
- Chao, W. 1983. The interpretation of null subjects: Brazilian Portuguese. *Cahiers Linguistiques d'Ottawa* 11: 69–74.
- Chomsky, Noam. 1981. *Lectures on government and binding*. Foris, Dordrecht.
- Chomsky, Noam. 1982. Some concepts and consequences of the theory of government and binding. The MIT Press, Cambridge, MA.
- Chomsky, Noam. 1986. *Barriers*. The MIT Press, Cambridge, MA.
- Chomsky, Noam. 1995. *The minimalist Program*. The MIT Press, Cambridge, MA.
- Chomsky, Noam. 2000. Minimalist inquiries: the framework. In *Step by Step: Essays on Minimalist Syntax in Honour of Howard Lasnik*, eds. Roger Martin, David Michaels, and Juan Uriagereka, 89–155. The MIT Press, Cambridge, MA.
- Duarte, Maria Eugenia. 1995. *A perda do princípio "Evite Pronome" no português brasileiro*. Ph.D Dissertation, Universidade Estadual de Campinas.
- Ferreira, Marcelo. 2000. Argumentos Nulos em Português Brasileiro. Master Thesis. Universidade Estadual de Campinas.
- Ferreira, Marcelo. 2004. Hyperraising and Null Subjects in Brazilian Portuguese. In *MIT Working Papers in Linguistics* 47: 57–85.
- Fiengo, Robert & Robert May. 1994. *Indices and identity*. The MIT Press, Cambridge, MA.
- Figueiredo Silva, M. C. 1996. A posição sujeito no português brasileiro: frases finitas e infinitivas. Campinas, Editora da Unicamp.
- Galves, Charlotte. 1991. V-movement, levels of representation and the structure of S. *Letras de Hoje*, 96: 35–58.
- Galves, Charlotte. 1993. O enfraquecimento da concordância no português brasileiro. In *Português brasileiro: uma viagem diacrônica*, orgs. Ian Roberts and Mary Kato, 387–408. Editora da Unicamp, Campinas.
- Hornstein, Norbert. 1999. Movement and control. *Linguistic Inquiry*, 30: 69–96.
- Hornstein, Norbert. 2001. *Move! A minimalist theory of construal*. Oxford: Blackwell.
- Huang, C.-T. James. 1984. On the distribution and reference of empty pronouns. *Linguistic Inquiry* 15: 531–574.
- Huang, C.-T. James. 1989. *Pro drop in Chinese: a generalized control theory*, In *The null subject parameter*, eds. Osvaldo Jaeggli & Ken Safir, 185–214. Kluwer, Dordrecht.
- Jaeggli, Osvaldo, & Ken Safir, eds. 1989. *The null subject parameter*. Kluwer, Dordrecht.
- Kato, Mary. 1999. Strong pronouns, weak pronominals and the null subject parameter. *PROBUS* 11: 1–37.

- Kenstowicz, Michael. 1989. The null subject parameter in modern Arabic dialects. In *The null subject parameter*, eds. Osvaldo Jaeggli & Ken Safir, 263–275. Kluwer, Dordrecht.
- Lasnik, Howard. 1995. A note on pseudogapping. IN *MIT working papers in linguistics 27: Papers on minimalist syntax*, 143–163. MITWPL, Department of Linguistics and Philosophy, MIT, Cambridge, MA.
- Lasnik, Howard, & Juan Uriagereka. 1988. *A course in GB syntax*. The MIT Press, Cambridge, MA.
- Martins, Ana Maria & Jairo Nunes 2005. Raising Issues in Brazilian and European Portuguese. *Journal of Portuguese Linguistics* 4.2:53–77.
- Modesto, Marcello. 2000. On the Identification of Null Arguments. Ph.D. Dissertation, University of Southern California.
- Montalbetti, Mario. 1984. *After binding*. Ph.D Dissertation, MIT, Cambridge, MA.
- Moreira da Silva, Samuel. 1983. Études sur la symétrie et l'assymétrie sujet/objet dans le portugais du Brésil. Ph.D Dissertation, University of Paris VIII.
- Negrão, Esmeralda & Ana Müller. 1996. As mudanças no sistema pronominal brasileiro: substituição ou especialização de formas. *D.E.L.T.A.* 12: 125–152.
- Negrão, Esmeralda & Evani Viotti. 2000. Brazilian Portuguese as a discourse-oriented language. In *Brazilian Portuguese and the null subject parameter*, orgs. Mary Kato and Esmeralda Negrão.
- Nunes, Jairo. 1995. The copy theory of movement and linearization of chains in the Minimalist Program, Ph.D Dissertation, University of Maryland, College Park, MD.
- Nunes, Jairo. 1999. Linearization of chains and phonetic realization of chain links. In *Working minimalism*, ed. Samuel D. Epstein and Norbert Hornstein. The MIT Press, Cambridge, MA.
- Nunes, Jairo. 2004. Linearization of Chains and Sideward Movement. The MIT Press, Cambridge, MA.
- Rizzi, Luigi. 1982. *Issues in Italian syntax*. Foris, Dordrecht.
- Rizzi, Luigi. 1986. Null objects in Italian and the theory of *pro*. *Linguistic Inquiry* 17: 501–557.
- Roberts, Ian. 1993. *Verbs and Diachronic Syntax*. Foris, Dordrecht.
- Rodrigues, Cilene. 2004. Impoverished Morphology and Movement out of Case Domains. Ph.D. Dissertation, University of Maryland, College Park, MD.
- Sigurðsson, Halldór. 1993. Argument-drop in Old Icelandic. *Lingua* 89: 247–280.
- Taraldsen, Knut. 1978. On nominative island constraint, vacuous application, and the *that*-trace filter. In *Recent transformational studies in european languages*, ed. Samuel Keyser. The MIT Press, Cambridge, MA.
- Ura, Hiroyuki. 1994. Varieties of raising and the feature-based bare phrase structure theory. In *MIT Occasional Papers in Linguistics*, 7, Department of Linguistics and Philosophy, MIT.





## Movement and resumption in null possessor constructions in Brazilian Portuguese

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In this paper we examine null possessor constructions in Brazilian Portuguese, which display an anaphoric behavior in some contexts but a pronominal behavior in others. We show that in absence of islands separating a null possessor from its antecedent, null possessors display properties of obligatory control and, following Hornstein (2001), we analyze these instances of null possessors as traces of movement to  $\theta$ -positions. Assuming with Hornstein (2001, 2007) that movement is derivationally more economical than pronominalization, we then argue that null possessors exhibit a pronominal behavior only when they sit in a position from which a licit A-movement operation cannot be launched.

### 1. Introduction\*

Scholars have long observed that (Colloquial) Brazilian Portuguese has by and large lost its third person possessive pronoun *seu* and its plural and feminine counterparts, replacing them with a periphrastic form using a preposition, as illustrated in (1) (see e.g. Silva, 1984; Perini, 1985; Cerqueira, 1993; Menuzzi, 1996; and Negrão & Müller, 1996).

- (1) a. \*[[o João]<sub>i</sub> conversou com o seu<sub>i</sub> pai]  
       *the João talked with the his father*
- b. [[o João]<sub>i</sub> conversou com o pai dele<sub>i</sub>]  
       *the João talked with the father of-him*  
       ‘João talked with his father.’

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The unacceptability of (1a) is also standardly associated with other rearrangements in the pronominal system of Brazilian Portuguese. In most dialects, the pronoun *você* (you.SG), which triggers third person agreement, came to replace *tu* (you.SG), which triggers second person agreement. Accordingly, the possessive pronoun *seu*, which could take *você* as an antecedent, was reanalyzed as second person, replacing *teu* in most dialects. Thus, the sentence in (1a) is indeed acceptable in Brazilian Portuguese, but only under the reading ‘João talked to *your* father’.

In this paper we focus our attention to constructions such as (2), which have received little attention in the literature on Brazilian Portuguese.<sup>1</sup> As opposed to (1), (2) arguably involves an empty category (*ec*) as the possessor.<sup>2</sup>

- (2) [[o João]<sub>i</sub> conversou com o pai *ec*<sub>i</sub>]  
       *the João talked with the father*  
       ‘João talked with his father.’

The paper is organized as follows. In Section 2 we review Floripi’s (2003) and Rodrigues’s (2004) arguments in favor of a movement approach to null possessor constructions in Brazilian Portuguese, based on Hornstein’s (2001) movement analysis of obligatory control.<sup>3</sup> In Section 3, we consider another set of data discussed in Floripi (2003) and Floripi & Nunes (2004), which appears to pose problems to the movement analysis presented in Section 2. Following Hornstein (2001, 2007), we then argue in Section 4 that when a movement operation cannot be launched from the possessor position, resumption via a null pronoun is licensed

1. Exceptions include the studies by Floripi (2003), Floripi & Nunes (2004), and Rodrigues (2004), who associate the emergence of constructions like (2) in (Colloquial) Brazilian Portuguese (with the properties mentioned in Section 2 below) to the weakening of its nominal agreement system. As illustrated in (i), (Colloquial) Brazilian Portuguese allows nonagreeing constructions such as (ib) along with the standard agreeing version in (ia) (see e.g. Scherre & Naro, 1993 for relevant discussion).

- (i) a. os livros amarelos  
       *the-PL book-PL yellow-PL*  
       b. os livro amarelo  
       *the-PL book yellow*  
       ‘the yellow books’

2. To ensure that the DPs under consideration have a null possessor, we will only discuss relational nouns, which arguably have a  $\theta$ -role to assign to their possessor.

3. Floripi (2003) and Rodrigues (2004) have independently argued for a movement approach to null possessors in Brazilian Portuguese based on Hornstein’s (2001) list of diagnostics for obligatory control. So, details of implementation aside, the types of data to be discussed in Section 2 are found in both studies.

and this is what accounts for the pronominal behavior of the null possessor in these particular constructions. Finally, Section 5 concludes the paper.

## 2. Null possessors as traces

At first sight, the differences between (1b) and (2) are just a matter of phonetic realization. In other words, (2) should simply involve a null pronoun. However, when the interpretation of these sentences is taken into consideration, we find that this simple story is not correct. Take (3), for example.

- (3) a. [[o João]<sub>i</sub> conversou com o pai **dele**<sub>i/k</sub>]  
*the João talked with the father of-him*  
 ‘João talked with his father.’
- b. [[o João]<sub>i</sub> conversou com o pai **ec**<sub>i/\*k</sub>]  
*the João talked with the father*  
 ‘João talked with his father.’

(3a) is not interpreted as “marked” when compared to (3b). Under (some version of) Chomsky’s (1981) Avoid Pronoun principle, this then suggests that the empty category in (3b) is not a null pronoun. Moreover, although the pronoun in (3a) can take an antecedent in the sentence or in the discourse, the empty category in (3b) has an anaphoric-like behavior in that it must find its antecedent within its sentence and not in the discourse.

Further evidence for the anaphoric behavior of the empty category in (3b) is illustrated in (4) and (5).

- (4) [[a Marcela]<sub>i</sub> disse que [o André]<sub>k</sub> ligou para o amigo **ec**<sub>k/\*i</sub>]  
*the Marcela said that the André called to the friend*  
 ‘Marcela<sub>i</sub> said that André<sub>k</sub> called his<sub>k/\*i</sub> friend’
- (5) [[o amigo [d[o João]<sub>i</sub>]]<sub>k</sub> telefonou para a mãe **ec**<sub>k/\*i</sub>]  
*the friend of-the João called to the mother*  
 ‘[João<sub>i</sub>’s friend]<sub>k</sub> called his<sub>k/\*i</sub> mother’

(4) shows that the sentence-internal antecedent required by the null possessor must be local and (5), that the null possessor must be c-commanded by such an antecedent.

However, in one point null possessors differ from overt anaphors. As is well known, anaphors within *picture*-NPs optionally allow for reconstruction, as shown in (6) below, where *himself* can take either the matrix or the embedded subject as its antecedent (see e.g. Chomsky 1993). Despite being within a DP, null possessors

contrast with the anaphors found in *picture*-NPs in requiring obligatory reconstruction, as exemplified in (7), where the null possessor must be interpreted as the embedded subject. And again, we find a contrast with pronouns, which allow either the matrix or the embedded subject reading, as illustrated in (8).

- (6) John<sub>i</sub> wonders which picture of himself<sub>i/k</sub> Bill<sub>k</sub> saw
- (7) [[o João]<sub>i</sub> perguntou que amigo *ec*<sub>k/\*i</sub> [o Pedro]<sub>k</sub> vai visitar]  
*the João asked which friend the Pedro goes visit*  
 ‘João<sub>i</sub> asked which friend of his<sub>k</sub> Pedro<sub>k</sub> is going to visit’
- (8) [[o João]<sub>i</sub> perguntou que amigo dele<sub>k/i/m</sub> [o Pedro]<sub>k</sub> vai visitar]  
*the João asked which friend of-him the Pedro goes visit*  
 ‘João<sub>i</sub> asked which friend of his<sub>k/i/m</sub> Pedro<sub>k</sub> is going to visit’

Facts such as (3)-(5) have led Floripi (2003), Floripi & Nunes (2004), and Rodrigues (2004) to analyze null possessor constructions in Brazilian Portuguese along the lines of Hornstein’s (2001) analysis of obligatory control.<sup>4</sup> According to Hornstein, a standard obligatory control structure such as (9a) is to be analyzed as in (9b), where the Caseless embedded subject moves to the matrix [Spec, vP], where it receives the external  $\theta$ -role, before reaching the matrix subject position and having its Case-checked (see also Boeckx, Hornstein & Nunes, forthcoming for further discussion).

- (9) a. John tried to leave.  
 b. [<sub>TP</sub> John<sub>i</sub> [<sub>vP</sub> *t*<sub>i</sub> v [<sub>vP</sub> tried [<sub>TP</sub> *t*<sub>i</sub> to leave]]]]

Floripi (2003) and Rodrigues (2004) observe that if null possessors in constructions like (3b) are traces of movement to a thematic position, as represented in (10) below, we have a straightforward account of their anaphoric behavior. Being traces, null possessors must have a local c-commanding antecedent (cf. (3b)-(5)). Also, if null possessors are traces, they are not subject to Chomsky’s (1981) Avoid Pronoun principle, which explains why null and overt possessors do not contrast in terms of markedness (cf. (3)).

- (10) [<sub>TP</sub> [o João]<sub>i</sub> [<sub>vP</sub> *t*<sub>i</sub> v [<sub>vP</sub> conversou com [o pai *t*<sub>i</sub>]]]]  
*the João talked with the father*  
 ‘João talked with his father.’

A trace analysis also accounts for the difference between null possessors and overt anaphors in *picture*-NPs. In a strictly cyclic computation, the derivation of (7), for instance, involves the steps depicted in (11) below, where the embedded subject

4. See also Ferreira (2000, this volume) and Augusto (2003, this volume) for further discussion on movement to  $\theta$ -positions in Brazilian Portuguese.

moves from the possessor position leaving a trace behind (cf. (11a)). Further movement of the object DP to [Spec, CP] in (11b) does not alter the fact that the null possessor is a trace of *o Pedro* and, therefore, cannot acquire another interpretation (say, as co-referential with the matrix subject) in the course of the derivation (cf. (11c)).

- (11) a.  $[_{TP} [o \text{ Pedro}]_k \text{ vai } [_{VP} t_k \text{ v } [_{VP} \text{ visitar } [que \text{ amigo } t_k]]]$   
*the Pedro goes visit which friend*
- b.  $[_{CP} [que \text{ amigo } t_k]_w [_{TP} [o \text{ Pedro}]_k \text{ vai } [_{VP} t_k \text{ v } [_{VP} \text{ visitar } t_w]]]$   
*which friend the Pedro goes visit*
- c.  $[_{TP} [o \text{ João}]_i \text{ perguntou } [_{CP} [que \text{ amigo } t_k]_w [_{TP} [o \text{ Pedro}]_k \text{ vai } [_{VP} t_k \text{ v } [_{VP} \text{ visitar } t_w]]]]]$   
*the João asked which friend the Pedro goes visit*  
 ‘João<sub>i</sub> asked which friend of his<sub>k</sub> Pedro<sub>k</sub> is going to visit’

In other words, the contrast between (6) and (7) replicates the contrast between (12a) and (13a) below, which Huang (1993) argues is due to the fact that in (13a), the moved *wh*-phrase contains a trace of the embedded subject locally binding *each other* and precluding binding by a more remote subject, as represented in (13b).

- (12) a.  $[they_i \text{ weren't sure which stories about } [each \text{ other}]_{i/k} [the \text{ kids}]_k \text{ read}]$
- b.  $[they_i \text{ weren't sure } [[\text{which stories about } [each \text{ other}]_{i/k}]_w [the \text{ kids}]_k \text{ read } t_w]]]$
- (13) a.  $[[[the \text{ teachers}]_i \text{ weren't sure how proud of } [each \text{ other}]_{k/*i} [the \text{ students}]_k \text{ were}]$
- b.  $[[[the \text{ teachers}]_i \text{ weren't sure } [[t_k \text{ how proud of } [each \text{ other}]_{k/*i}]_w [the \text{ students}]_k \text{ were } t_w]]]$

Three other pieces of data provide further evidence for the proposal that null possessors in Brazilian Portuguese are to be analyzed as obligatorily controlled PROs/A-traces. An obligatorily controlled PRO necessarily triggers a sloppy reading under ellipsis, a bound reading when its antecedent is an “*only*-DP”, and a *de se* interpretation in “unfortunate” contexts (see e.g. Hornstein, 2001 and Boeckx, Hornstein & Nunes, forthcoming), as respectively shown in (14).

- (14) a.  $[John_1 \text{ wants } [PRO_1 \text{ to win}]] \text{ and } [Bill \text{ does too}]$   
 (‘... and Bill wants himself to win’/\*‘... and Bill wants John to win’)

- b. [[only Churchill]<sub>1</sub> remembers [PRO<sub>1</sub> giving the BST speech]]  
 ('Only Churchill is such that he remembers himself giving the BST speech'  
 NOT 'Nobody else remembers that Churchill gave the BST speech')
- c. [[the unfortunate]<sub>1</sub> expects [PRO<sub>1</sub> to get a medal]]  
 (#although he doesn't expect himself to get a medal)

As discussed by Floripi (2003) and Rodrigues (2004), null possessors in Brazilian Portuguese also trigger obligatory sloppy reading under ellipsis (cf. (15a) below), require a bound interpretation with an *only*-DP as an antecedent (cf. (16a)), and can only be associated with a *de se* reading (cf. (17a)). Moreover, this behavior of null possessors systematically contrasts with the behavior of overt pronouns, as shown in the *b*-sentences of (15)-(17).

- (15) a. [[o João]<sub>1</sub> vai telefonar para a mãe *ec*,] e [ a Maria  
*the João goes call to the mother and the Maria*  
 também vai]]  
*also goes*  
 'João will call his mother and Mary will call *her* mother, too.' (sloppy reading only)
- b. [[o João]<sub>1</sub> vai telefonar para a mãe **dele**,] e [ a Maria  
*the João goes call to the mother of-him and the Maria*  
 também vai]]  
*also goes*  
 'João will call his mother and Mary will call **his/her** mother, too.'  
 (sloppy and strict readings available)
- (16) a. [[só o João] ligou para a mãe *ec*]  
*only the João called to the mother*  
 'Only João called his mother → Nobody else called his own mother'  
 NOT 'Nobody else called João's mother.'
- b. [[só o João] ligou para a mãe **dele**]  
*only the João called to the mother of-him*  
 'Only João called his mother → Nobody else called his own mother'  
 or 'Nobody else called João's mother.'

- (17) [*Non-de se* context: Reagan doesn't remember who he is or that the person under discussion is his brother]
- a. #[Reagan passou a admirar o irmão *ec*]  
*Reagan passed to admire the brother*  
 'Reagan came to admire his brother.' (*de se* reading only; infelicitous in this context)
- a. [Reagan passou a admirar o irmão *dele*]  
*Reagan passed to admire the brother of-him*  
 'Reagan came to admire his brother.' (*non-de se* reading available)

To summarize, the contrast between the *a*- and *b*-sentences of (15)-(17) points to the conclusion that the null possessors in these constructions are not null pronouns and that a movement analysis as developed by Hornstein (2001) to handle obligatory control captures the configuration properties of the antecedent, as well as the interpretive properties of the null possessor.<sup>5</sup> However, we will see in the next section that this cannot be the whole story.

### 3. Potential problems

Consider the contrast between the sentences in (18) and (19) below.

- (18) \*[o irmão *ec*] viajar]  
*the brother goes travel*  
 'His/her brother is going to travel'
- (19) [[o João]<sub>i</sub> disse que [[o irmão *ec*<sub>i/\*k</sub>] vai viajar]]  
*the João said that the brother goes travel*  
 'João said that his brother is going to travel.'

At first sight, the contrast between (18) and (19) is exactly what we should expect. If null possessors are traces, they must have an antecedent. Thus, (18) is ruled out<sup>6</sup> and the null possessor in (19) must be interpreted as *João*. However, upon close

5. See Floripi (2003) and Rodrigues (2004) for additional evidence and further discussion.

6. (18) is ill-formed even if an antecedent is provided in the discourse, as shown in (i).

(i) A: - [a Maria]<sub>i</sub> viajou ontem  
*the Maria travelled yesterday*  
 'Maria traveled yesterday.'

B: - O irmão ?\* (dela) também  
*the brother of-her too*  
 'Her brother, too.'



inspection, we are faced with a problem. If the null possessor of (19) is a trace, the matrix subject must have moved from within the embedded subject position, a standard (CED) island configuration. The contrast in (20), for instance, clearly shows that movement from such position is not allowed in Brazilian Portuguese.

- (20) a. [[o João]<sub>i</sub> acha que [[o irmão [ de quem]] vai viajar]]  
*the João thinks that the brother of who goes travel*  
 b. \*[[de quem]<sub>i</sub> [[o João]<sub>i</sub> acha que [[o irmão t<sub>i</sub>] vai viajar]]  
*of who the João thinks that the brother goes travel*  
 ‘Whose brother does João think is going to travel?’

However, when null possessors are involved, the number of apparent island violations can even increase without altering the acceptability of the sentence, as illustrated in (21), where the null possessor is embedded within the subject of the relative clause.

- (21) [[o João]<sub>i</sub> adorou o presente [que [uma amiga ec<sub>i</sub>] deu para a  
*the João adored the gift that a friend gave to the*  
 Maria]  
 Maria  
 ‘João loved the gift that a friend of his gave to Maria.’

An obvious approach to sentences such as (19) and (21) suggests itself, namely, that in these constructions the null possessor is a null resumptive pronoun rather than a trace and, as such, it is not subject to island effects. Although we will at the end adopt such an analysis, let us first point out three problems that it has to solve if it is to be seriously entertained.

First, if null possessors in Brazilian Portuguese can be null pronouns, one must explain why such null pronouns cannot be employed in the structures discussed in Section 2. Why, for instance, do the null possessors discussed so far require a local c-commanding antecedent and do not have the interpretation associated with an overt pronoun?

The second problem has to do with the general availability of the hypothesized null resumptive pronoun. Although Brazilian Portuguese does allow null resumptive pronouns in the object position (see e.g. Galves, 1989; Kato, 1993; Ferreira, 2000; Kato & Nunes, this volume; and Nunes & Santos, this volume), as shown in (22a) below, it does not admit null resumptives in the subject position, as shown in (22b) (see e.g. Figueiredo Silva, 1996; Ferreira, 2000, this volume; and Rodrigues, 2004). Thus, if the null possessors of (19) and (21) are resumptive *pros*, we

have to explain what they have in common with resumptive null objects, which sets them apart from resumptive null subjects.

- (22) a. [[esse livro]<sub>i</sub> [as pessoas [que leram *ec*]<sub>i</sub>] mudaram de vida]]  
*this book the people who read changed of life*  
 ‘This book, people who read it changed their lives.’
- b. \*[[esse médico]<sub>i</sub> [o paciente [que<sub>k</sub> *ec*]<sub>i</sub> atendeu *t<sub>k</sub>*]] saiu do  
*this doctor the patient that treated left of-the*  
*hospital hoje]]*  
*hospital today*  
 ‘This doctor, the patient that he treated left the hospital today.’

Finally, if null possessors in constructions such as (19) and (21) are null pronouns, we have to explain how they are Case-licensed, for an overt DP in the position of the empty category requires a dummy Case-marking preposition, as seen in (23).

- (23) [[o João]<sub>i</sub> conversou com o pai \*(d)ele<sub>i</sub>]  
*the João talked with the father of-him*  
 ‘João talked with his father.’

Let us then see how these problems can be circumvented.

#### 4. Null possessors as null pronouns

##### 4.1 Null resumptive possessors and derivational economy<sup>7</sup>

The old idea that (resumptive) pronouns are employed as a last resort saving strategy has been recently reinterpreted within the Minimalist Program in terms of derivational economy. Specifically relevant to our discussion is Hornstein’s (2001, 2007) (see also Aoun, Choueri & Hornstein, 2001) proposal that movement is less costly than pronominalization, as pronouns are not present in the numeration that feeds the derivation.

To illustrate the general intuition explored by Hornstein, consider the contrast in (24).

- (24) a. Harry<sub>i</sub> hates [PRO<sub>i</sub> kissing Mary]  
 b. \*Harry<sub>i</sub> hates [him<sub>i</sub> kissing Mary]

According to Hornstein, movement always preempts pronominalization if a convergent result obtains. Thus, if co-reference between the two subject positions in

7. This section is based on Floripi (2003) and Floripi & Nunes (2004).

(24) can be obtained via movement, as illustrated in (25) (under the movement analysis of obligatory control), resort to a pronoun in (24b) is blocked by economy considerations; hence, the obviation effect seen in (24b).

(25) [Harry<sub>1</sub> [<sub>vP</sub> t<sub>1</sub> [v [<sub>vP</sub> hates [t<sub>1</sub> kissing Mary]]]]]

Assuming that Hornstein's proposal is essentially correct, let us examine in detail the contrast between (26), where the null possessor cannot pick an antecedent outside its clause, and (27), where it can.

(26) [[a Marcela]<sub>i</sub> disse que [o André]<sub>k</sub> ligou para o amigo *ec*<sub>k/\*i</sub>]  
*the Marcela said that the André called to the friend*  
 'Marcela<sub>i</sub> said that André<sub>k</sub> called his<sub>k/\*i</sub> friend.'

(27) [[o João]<sub>i</sub> disse que [[o amigo *ec*<sub>i/\*k</sub>]<sub>i</sub> vai viajar]  
*the João said that the friend goes travel*  
 'João said that his friend is going to travel.'

If movement is the preferred option in terms of economy, one has to give a chance for movement to take place before considering the pronominalization alternative. Thus, the derivation of (26) should proceed along the lines of (28) below, where *amigo* first merges with the possessor DP, as shown in (28a), and later the vP structure in (28b) is assembled. When the derivational step in (28b) is reached, the possessor can move to [Spec, vP] to receive the external  $\theta$ -role (cf. (28c)), as it has not checked its Case yet (Recall that a DP cannot surface in the position depicted in (28a) unless a Case-marking preposition is inserted; cf. (23)). If movement is possible, it then rules out an alternative derivation where a null pronoun is inserted in the possessor position to be later coindexed with some other element. In other words, the null possessor in (26) is bound to be interpreted as the subject of its clause as it is actually a copy/trace of it.

- (28) a. [amigo DP]  
*friend*  
 b. [<sub>vP</sub> v [<sub>vP</sub> ligou para o [amigo DP]]]  
*called to the friend*  
 c. [<sub>vP</sub> DP<sub>i</sub> v [<sub>vP</sub> ligou para o [amigo t<sub>i</sub>]]]  
*called to the friend*

In turn, the derivation of (27) also starts with merger of *amigo* and the possessor DP, but the larger DP is then inserted in a specifier position and moved to another specifier position, as show in (29).

- (29) a. [amigo DP]  
           *friend*
- b. [o amigo DP]  
           *the friend*
- c. [<sub>VP</sub> [o amigo DP] [<sub>V'</sub> v [<sub>VP</sub> viajar]]]  
           *the friend*                    *travel*
- d. [<sub>TP</sub> [o amigo DP]<sub>i</sub> vai [<sub>VP</sub> t<sub>i</sub> [<sub>V'</sub> v [<sub>VP</sub> viajar]]]]  
           *the friend*            *goes*                    *travel*

Given that movement of the possessor DP from within the specifier should give rise to an island violation (a nonconvergent result), the system is then allowed to resort to pronominalization, which in turn permits that a null possessor can take an antecedent outside its clause.<sup>8</sup>

To sum up, postulating a null resumptive possessor does not lead to overgeneration, as pronominalization is crucially conditioned by economy considerations. Only when the kinds of movements discussed in Section 2 are blocked can pronominalization be employed.

#### 4.2 Null resumptive possessors and Case

Let us now tackle the issue of why an overt DP cannot appear in the position of a null resumptive possessor unless the dummy preposition *de* is inserted, as exemplified in (30).

- (30) a. [[o João]<sub>i</sub> disse que [[o amigo *pro*]<sub>i</sub> vai viajar]]  
           *the João said that the friend goes travel*
- b. [[o João]<sub>i</sub> disse que [[o amigo \*(d)ele]<sub>i</sub> vai viajar]]  
           *the João said that the friend of-him goes travel*  
           ‘João said that his friend is going to travel.’

Kato & Nunes (this volume) have argued that contrasts between *pro* and overt DPs similar to the one in (30) can be accounted for if the preposition is a marker of inherent Case (see Chomsky, 1986), which is only realized if the Case-marked element is overt. Assuming this to be the case in (30), we now have an answer for why

8. From this perspective, the unacceptability of (18) is due to the fact that no movement has taken place (as there is no antecedent for the null possessor).

a resumptive null *pro* can be licensed as the object of certain verbs (see Kato, 2008; and Kato & Nunes, this volume) and as a null possessor, but not as a regular subject (cf. (22b)). Like null objects in Brazilian Portuguese, null possessors can be licensed by inherent Case; in other words, the relational noun may assign an inherent Case to its possessor, which will be realized by the dummy preposition *de* if the possessor is overtly realized. Null subjects, on the other hand, are not as lucky. It has been convincingly argued in the literature on null subjects in Brazilian Portuguese that with the weakening of its verbal agreement, *pro* can no longer be licensed/identified by Infl (see e.g. Duarte, 1995; Figueiredo Silva, 1996; Kato, 1999; Ferreira, 2000, this volume; Galves, 2001; and Rodrigues, 2004 for discussion). Moreover, resumptive null subjects cannot be licensed by inherent Case either, for T is not an inherent Case-assigner (it is not a  $\theta$ -role assigner).

Let us now consider the data in (31) and (32).

- (31) a. *Ontem eu conversei com um primo.*  
*yesterday I talked with a cousin*  
 ‘Yesterday I talked to a cousin of mine.’
- b. *Você não ia contratar um primo?*  
*you not went hire a cousin*  
 ‘Weren’t you going to hire a cousin of yours?’
- c. *O João contratou um primo.*  
*the João hired a cousin*  
 ‘João hired a cousin of his.’
- (32) a. \**Ontem eu conversei com o primo.*  
*yesterday I talked with the cousin*  
 ‘Yesterday I talked to my cousin.’
- b. \**Você não ia contratar o primo?*  
*you not went hire the cousin*  
 ‘Weren’t you going to hire your cousin?’
- c. *O João contratou o primo.*  
*the João hired the cousin*  
 ‘João hired his cousin.’

(31) shows that a null possessor within an indefinite DP may take first, second, or third person antecedents.<sup>9</sup> In turn, (32) shows that when the null possessor is inside a definite DP, only a third person antecedent is allowed. Interestingly, the

9. Furthermore, the null possessor in (31a) and (32b) displays all the anaphoric properties discussed in Section 2.

contrast above is correlated to whether or not an overt possessor is allowed post-nominally, as illustrated in (33).

- (33) a. *um primo meu/seu/dele*  
*a cousin my/your/of-him*  
 ‘a cousin of mine/yours/his’
- b. *um \*meu/\*seu/\*dele primo*  
*a my /your/of-him cousin*  
 ‘a cousin of mine/yours/his’
- c. *o primo \*meu/\*seu/dele*  
*the cousin my/your/of-him*  
 ‘my/your/his cousin’
- d. *o meu/seu/\*dele primo*  
*the my/your/of-him cousin*  
 ‘my/your/his cousin’

The data in (32) and (33) can be accounted for if inherent genitive Case is optionally assigned to the postnominal position and structural genitive is assigned to the prenominal position when the definite article is involved. Thus, in the case of first and second persons, when the pronoun moves to the prenominal position and values its Case, it becomes frozen and cannot leave the DP; hence, the unacceptability of possessor raising constructions in (32a) and (32b). In the case of third persons, by contrast, they can only be licensed via inherent Case in the postnominal position (cf. (33c) *vs.* (33d)), because Brazilian Portuguese lost the 3rd person *seu*. Thus, if a third person pronoun does not get inherent Case, it must undergo possessor raising, regardless of whether the DP containing it is definite or indefinite (cf. (31c) and (32c)).

Finally, the unacceptability of (33c) with first and second persons can be accounted for if inherent Case is realized only as a last resort strategy, that is, when realization of structural Case is not available. If definite DPs can license structural Case for first and second persons (cf. (33d)), realization of inherent Case is blocked, ruling out the first and second persons in (33c). Thus, the contrast between (33c) and (33d) with respect to first and second persons in a sense replicates the paradigm in (34) (see Hornstein, Martins & Nunes, 2008 and Nunes, 2008 for relevant discussion), where the preposition *of* realizes inherent Case only if structural genitive (the possessive *'s*) is not available.

- (34) a. [the destruction of [the city]]  
 b. [[the city]'s destruction *t*]  
 c. \*[[the city]'s destruction of *t*]]

## 4.3 Some consequences

In Section 4.1 we have seen that when possessor movement cannot take place, resumption is allowed, explaining why a null possessor can take an antecedent outside its clause in these circumstances. This proposal also predicts that in the cases resumption is allowed as last resort, the locality and c-command requirements on the antecedent of the null possessor (see Section 2) should no longer matter. That this prediction is correct is shown in (35).

- (35) a. [[a Maria]<sub>k</sub> acha que [o João]<sub>i</sub> disse que [[o  
*the Maria thinks that the João said that the*  
 amigo *pro*<sub>i/k</sub>] vai viajar]]  
*friend goes travel*  
 ‘Maria thinks that João said that his/her friend is going to travel’
- b. [[o namorado d[a Maria]<sub>w</sub>]<sub>k</sub> saiu quando [um  
*the boyfriend of-the Maria left when a*  
 parente *pro*<sub>k/w</sub>] entrou]  
*relative entered*  
 ‘Maria’s boyfriend left when a relative of hers/his got in’

In (35a) the null possessor can take the nonlocal matrix subject as its antecedent and in (35b), it can be co-referential with the non c-commanding DP *a Maria*. Recall that such possibilities are excluded when movement of the possessor is possible, as shown in (4) and (5), repeated in (36).

- (36) a. [[a Marcela]<sub>i</sub> disse que [o André]<sub>k</sub> ligou para o  
*the Marcela said that the André called to the*  
 amigo *ec*<sub>k/\*i</sub>]  
*friend*  
 ‘Marcela<sub>i</sub> said that André<sub>k</sub> called his<sub>k/\*i</sub> friend.’
- b. [[o amigo [d[o João]<sub>i</sub>]]]<sub>k</sub> telefonou para a mãe *ec*<sub>k/\*i</sub>]  
*the friend of-the João called to the mother*  
 ‘[João’s friend]<sub>k</sub> called his<sub>k/\*i</sub> mother’

These welcome results lead to another prediction. As discussed in Section 2, the interpretive properties of configurations where possessor movement is possible in Brazilian Portuguese mirror the properties of obligatory control. Accordingly, we should expect that the interpretive properties of configurations where possessor movement is blocked should parallel the interpretive properties of non-obligatory

control, which Hornstein (2001) argues involves a last resort pronominalization strategy. Consider the sentences in (37), for instance.

- (37) a. John<sub>1</sub> thinks that Mary said that PRO<sub>1</sub> shaving himself is vital  
 b. John's<sub>1</sub> friends believe that PRO<sub>1</sub> keeping himself under control is vital if he is to succeed.  
 c. John<sub>1</sub> thinks that PRO<sub>1</sub> getting his resumé in order is crucial and Bill does, too.  
 d. Only Churchill remembers that PRO giving the BST speech was momentous.  
 e. [the unfortunate] believes that PRO getting a medal is unlikely.

(37a) shows that a non-obligatorily controlled PRO may have a nonlocal antecedent and (37b), that the antecedent need not command it. In other words, the lack of structural requirements on the antecedent for the null possessor in (35) parallels what we observe in the non-obligatory control constructions in (37a-b). As for interpretive properties, the sentences in (37c-e) are not restricted in interpretation: (37c) allows for both strict and sloppy readings, (37d) for both bound and co-referential readings, and (37e) for both *de se* and non-*de se* interpretations (see e.g. Hornstein, 2001 and Boeckx, Hornstein & Hornstein, forthcoming). The same looseness in interpretation is found in null possessor configurations such as (38)-(40) below, where movement of the possessor is blocked. That is, VP-ellipsis may yield sloppy and strict readings in (38); the null possessor in (39) can be interpreted either as being co-referential with *o João* or being bound by *só o João*; and a *de se* reading is not obligatory in (40).

- (38) [[a Maria]<sub>i</sub> vai recomendar a pessoa [que [um amigo *pro*]<sub>i</sub> *the Maria goes recommend the person that a friend* entrevistou] e [o João]<sub>k</sub> também vai. *interviewed and the João also goes*  
 'Maria is going to recommend the person that a friend of hers interviewed and João is also going to recommended a person that a friend of his/hers interviewed' (sloppy and strict readings available)
- (39) [[só o João] leu o livro [que [a mãe *pro*] indicou]]  
*only the João read the book that the mother recommended*  
 'Only João read the book that his mother recommended →  
 Nobody else read the book that his own mother recommended'  
 or 'Nobody else read the book that John's mother recommended'



- (40) [*Non-de se* context: Reagan doesn't remember who he is or that the person under discussion is his brother]  
 Reagan<sub>i</sub> se surpreendeu [quando [o irmão *pro*<sub>i</sub>] fez um discurso]  
*Reagan REFL surprised when the brother made a speech*  
 'Reagan got surprised when his brother made a speech.' (*non-de se* reading available)

The data above thus further corroborate the idea that the two types of null possessor constructions in Brazilian Portuguese should be assimilated to the distinction between obligatory and non-obligatory control. More specifically, it provides additional evidence for Hornstein's (2001, 2007) proposal that movement and pronominalization compete for economy purposes and that movement blocks pronominalization if both lead to a convergent result.

## 5. Conclusion

This paper has examined an apparent paradoxical situation in Brazilian Portuguese in which null possessors display anaphoric behavior in some cases and pronominal behavior in others. We have argued that a solution to this paradox can be found if movement is taken to be more economical than pronominalization, as proposed by Hornstein (2001, 2007). Thus, null possessors will display pronominal behavior only when they sit in a position from where movement cannot be launched.

To the extent that the approach explored here is on the right track, it not only offers an account of an intricate set of interpretive facts involving null possessors in Brazilian Portuguese, but also provides additional evidence for the proposal that movement to  $\theta$ -positions is licit (see Hornstein, 2001 and Boeckx, Hornstein & Nunes, forthcoming).

## References

- Aoun, J., L. Choueri & N. Hornstein. (2001). Resumption, Movement and Derivational Economy. *Linguistic Inquiry* 32, 371–403.
- Augusto, M. (2003). Padrões de Extração em Estruturas Factivas. Doctoral dissertation, Universidade Estadual de Campinas.
- Boeckx, C., N. Hornstein & J. Nunes (forthcoming). *Control as Movement*.
- Cerqueira, V. (1993) A Forma Genitiva *dele* e a Categoria de Concordância (AGR) no Português Brasileiro. In: *Português Brasileiro: Uma Viagem Diacrônica* (I. Roberts and M. A. Kato, eds.), pp. 129–161. Editora da UNICAMP, Campinas.

- Chomsky, N. (1981). *Lectures on Government and Binding*. Foris, Dordrecht.
- Chomsky, N. (1986). *Knowledge of Language: Its Nature, Origin, and Use*. Praeger, New York, NY.
- Chomsky, N. (1993). A Minimalist Program for Linguistic Theory. In: *The View from Building 20: Essays in Honor of Sylvain Bromberger* (K. Hale and S.J. Keyser, eds.), pp. 1–29. The MIT Press, Cambridge, MA.
- Duarte, M. E. (1995). A Perda do Princípio “Evite Pronome” no Português Brasileiro. Doctoral dissertation, Universidade Estadual de Campinas.
- Ferreira, M. (2000). Argumentos Nulos em Português Brasileiro. Master’s thesis, Universidade Estadual de Campinas.
- Figueiredo Silva, M. C. (1996). *A Posição Sujeito no Português Brasileiro: Frases Finitas e Infinitivas*. Editora da UNICAMP, Campinas.
- Floripi, S. (2003). Argumentos Nulos dentro de DPs em Português Brasileiro. Master’s thesis, Universidade Estadual de Campinas.
- Floripi, S. & J. Nunes (2004). Empty Categories within DPs in Brazilian Portuguese. Paper presented at the *Georgetown University Round Table: Comparative and Cross-Linguistic Research in Syntax, Semantics, and Computational Linguistics (GURT 2004)*. Georgetown University, 03/26–29/04
- Galves, C. (1989). O Objeto Nulo no Português Brasileiro: Percurso de uma Pesquisa. *Cadernos de Estudos Linguísticos*, 17, 65–90
- Galves, C. (2001). *Ensaio sobre as Gramáticas do Português*. Editora da UNICAMP, Campinas.
- Hornstein, N. (2001). *Move! A Minimalist Theory of Construal*. Blackwell, Malden, MA.
- Hornstein, N. (2007). Pronouns in a Minimalist Setting. In: *The Copy Theory of Movement* (N. Corver & J. Nunes, eds.), pp. 351–385. John Benjamins, Amsterdam.
- Hornstein, N., A.M. Martins, & J. Nunes (2008). Perception and Causative Structures in English and European Portuguese:  $\phi$ -feature Agreement and the Distribution of Bare and Prepositional Infinitives. *Syntax*, 11, 198–222.
- Huang, C.-T. J. (1993). Reconstruction and the Structure of VP: Some Theoretical Consequences. *Linguistic Inquiry*, 24, 103–138.
- Kato, M. A. (1993). The Distribution of Pronouns and Null Elements in Object Position in Brazilian Portuguese. In *Linguistic Perspectives on the Romance Languages* (W. Ashby, M.M.G. Perissinotto, and E. Raposo, eds.), pp. 225–235. John Benjamins, Amsterdam.
- Kato, M. A. (1999). Strong Pronominals, Weak Pronominals and the Null Subject Parameter. *Probus*, 11, 1–37.
- Kato, M. A. (2008). Optional Prepositions in Brazilian Portuguese. Poster presented at the 38th Linguistic Symposium on Romance Languages (LSRL), University of Illinois at Urbana-Champaign, 4–6/4/08.
- Menuzzi, S. (1996). 3rd Person Possessives in Brazilian Portuguese: On the Syntax-Discourse Relation. *University Centre for Computing Corpus Research on Language (UCREL)* 8, 191–210, Lancaster University.
- Negrão, E. & A. Müller. (1996) As Mudanças no Sistema Pronominal Brasileiro: Substituição ou Especialização de Formas. *D.E.L.T.A.*, 12, 125–152
- Nunes, J. (2008). Preposition Insertion in the Mapping from Spell-Out to PF. *Linguistics in Potsdam 28: Optimality Theory and Minimalism: Interface Theories*, 133–156.
- Nunes, R. & R.S. Santos (this volume). Stress Shift as a Diagnostics for Identifying Empty Categories in Brazilian Portuguese.
- Perini, M. (1985) O Surgimento do Sistema Possessivo do Português Coloquial: Uma Interpretação Funcional. *D.E.L.T.A.*, 1, 1–16.

- Rodrigues, C. (2004). Impoverished Morphology and A-Movement out of Case Domains. Doctoral dissertation, University of Maryland.
- Sherre, M. & A. Naro. (1993) Duas Dimensões do Paralelismo Formal na Concordância de Número no Português Popular do Brasil. *D.E.L.T.A.*, 9, 1–14.
- Silva, G. (1984) Variação no Sistema Possessivo de Terceira Pessoa. *Tempo Brasileiro*, 78/79, 54–72.

## Patterns of extraction out of factive islands in Brazilian Portuguese

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This paper discusses the patterns of extraction that different factive constructions allow in Brazilian Portuguese. In addition to the more familiar cases of weak or strong island effects, it is shown that some factive constructions in fact allow extraction of both arguments and adjuncts. I propose that the presuppositional character associated to factive complements is due to selectional restrictions; factive predicates select for a [+specific] complement, which in turn may require a TopP projection above CP in certain configurations. I show that the different patterns of acceptability with respect to extraction in BP follow from the different types of complement allowed and the presence or absence of TopP.

### 1. Introduction\*

This paper discusses different patterns of extraction from the complements of factive predicates in Brazilian Portuguese (henceforth, BP). Traditionally, factive islands have been classified as weak islands, i.e., they allow argument extraction, but not adjunct extraction (see Rizzi, 1990; Cinque, 1990; Melvold, 1991; and Hegarty, 1992; among others). Evidence of such behavior in BP is shown by the constructions in (1).

- (1) a. O que<sub>i</sub> o Pedro lamentou [que a Maria  
*the what the P. regret-PAST that the M.*  
 tenha comprado t<sub>i</sub> na viagem à China]?  
*have-SUBJ.PRES. bought-PART in-the trip to-the China*  
 ‘What did P. regret that M. has bought on her trip to China?’

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- b. \*Como<sub>i</sub>/Por que<sub>i</sub> o Pedro lamentou [que a Maria  
*how/why the P. regret-PAST that the M.*  
 tenha quebrado o vaso chinês t<sub>i</sub>?  
*have-SUBJ.PRES broken-PART the vase Chinese*  
 ‘How/Why did P. regret that M. has broken the Chinese vase?’

However, the literature on the subject has pointed out that in some languages factive constructions are strong islands. Modern Greek is the prototypical example (see Roussou, 1994 and Varlokosta, 1994, among others):

- (2) a. \*Pjon lípase pou sinandise o Yanis?  
*who regret-2.SG that met-3.SG John-NOM*  
 ‘Who do you regret that J. met?’  
 b. \*Pote lípase pou agorases to vivlio?  
*when regret-2.SG that bought-2.SG the book*  
 ‘When do you regret that you bought the book?’

Interestingly, BP has some factive constructions from which not only argument extraction, but also adjunct extraction is possible, as illustrated in (3) and (4).

- (3) a. O que<sub>i</sub> os alunos ignoraram que o professor tivesse  
*the what the students ignore-PAST that the Minister have-SUBJ.PAST*  
 pedido t<sub>i</sub>?  
*ask-PART*  
 ‘What did the students ignore that the teacher had asked?’  
 b. ?Como<sub>i</sub> os alunos ignoraram que o professor tivesse  
*how the students ignore-PAST that the teacher have-SUBJ.PAST*  
 pedido a auto-avaliação t<sub>i</sub>?  
*ask-PART the self-evaluation*  
 ‘How did the students ignore that the teacher asked their self-evaluation?’
- (4) a. Quem<sub>i</sub> o Pedro deplorou ter encontrado t<sub>i</sub> na festa?  
*who the P. deplore-PAST have-INF meet-PART at-the party*  
 ‘Who did P. deplore having met at the party?’  
 b. Como<sub>i</sub> o aluno lamentou ter respondido a  
*how the student regret-PAST have-INF answer-PART the*  
 pergunta t<sub>i</sub>?  
*question*  
 ‘How did the student regret having answered the question?’

In (3a) and (3b), the complement clauses display past imperfective subjunctive. We see that a distinction is established in comparison to (1a) and (1b), which display present subjunctive. Sentences (4a) and (4b) display non-inflected infinitives. BP also allows inflected infinitives in such context, in which case a clear contrast between the two kinds of infinitives arises, as shown in (5).

- (5) a. O que o Pedro deplorou os deputados terem  
*the what the P. deplore-PAST the deputies have-INF-P-3rd*  
 aprovado  $t_i$  na sessão secreta?  
*approve-PART in-the session private*  
 ‘What did P. deplore the deputies having approved in the private session?’
- b. \*Como o Pedro lamentou os mecânicos terem  
*how the P. regret-PRES the mechanics have-INF-P-3rd*  
 consertado o carro  $t_i$ ?  
*fix-PART the car*  
 ‘How did P. regret the mechanics having fixed the car?’

Needless to say, a strong island effect arises if sentential complements are preceded by *o fato* ‘the fact’ - a widely recognized aspect of factive constructions (see Kiparsky & Kiparsky, 1971; and Melvold, 1991; among others):

- (6) a. \*O que o Pedro lamentou o fato (de) que a  
*the what the P. regret-PAST-S-3rd the fact (of) that the*  
 Maria tenha comprado?  
*M. have-SUBJ-PRES-3rd buy-PART*  
 ‘What did P. regret the fact that M. has bought?’
- b. \*Como<sub>i</sub>/Por que<sub>i</sub> o Pedro lamentou o fato (de) que a Maria  
*how/why the P. regret-PAST the fact (of) that the M.*  
 tenha quebrado o vaso chinês  $t_i$ ?  
*have-SUBJ.PRES. broken-PART. the vase Chinese*  
 ‘How/Why did P. regret the fact that M. has broken the Chinese vase?’

Thus, BP shows that simply classifying factive islands as either weak or strong is undesirable. Although an argument/adjunct distinction is attested for some complements in factive constructions, past imperfective subjunctive and non-inflected infinitive complements allow extraction of both arguments and adjuncts. Moreover, complements preceded by *o fato* ‘the fact’ behave like strong islands.

In this paper, I assume that the presuppositional character (Kiparsky & Kiparsky, 1971) these constructions display originates from a selectional requirement: factive predicates select [+specific] complements. I argue that different patterns of

extraction arise as there are different syntactic structures that may satisfy this requirement. Such analysis points towards a lexicalist view of parameters in accordance to recent minimalist assumptions (Chomsky, 1999; 2001), according to which parameterization is due to the specific set of features selected by particular grammars and the way these features may be grouped into lexical items.

The paper is organized as follows: in Section 2, the general proposal is presented. I argue that a sentential TopP node is instantiated in factive complements, which is responsible for the argument/adjunct distinction. In Section 3, the strong island behaviour is considered. Section 4 deals with the absence of argument/adjunct distinction in BP infinitival and past subjunctive factive complements. In Section 5, additional predictions made by the analysis are discussed in relation to some other *wh*-constructions. Finally, Section 6 recaps the main proposal, concluding the paper.

## 2. Specificity

It is widely assumed that complements to factive predicates all share a common feature - their presuppositional character: “The speaker presupposes that the embedded clause expresses a true proposition, and makes some assertion about that proposition.” (Kyparsky & Kiparsky 1971: 348). Take the sentences in (7), for instance:

- (7) a. A população sabia que o ministro tinha  
*the population know-PAST that the Minister have-PAST*  
aprovado o aumento da gasolina.  
*approve-PART the rise of-the gas*  
‘The population knew that the Minister had approved the gas price rise’
- b. A população não sabia que o ministro tinha  
*the population not know-PAST that the Minister have-PAST*  
aprovado o aumento da gasolina.  
*approve-PART the rise of-the gas*  
‘The population didn’t know that the Minister had approved the gas price rise’

Both sentences bear the presupposition that the Minister had approved the gas price rise.

The following contrasts, with indefinite nominals, also point to this necessary presuppositional character of factive complements.

- (8) a. \*O Pedro lamentou uma briga.  
*the P. regret-PAST an argument*  
 ‘P. regretted an argument.’
- b. O Pedro lamentou uma briga que ele teve com seu chefe.  
*the P. regret-PAST an argument that he had with his boss*  
 ‘P. regretted an argument he had with his boss.’
- (9) a. \*O Pedro lamentou um fato.  
*the P. regret-PAST a fact*  
 ‘P. regretted a fact.’
- b. O Pedro lamentou um fato que ocorreu ontem.  
*the P. regret-PAST a fact that happen-PAST yesterday*  
 ‘P. regretted some fact that happened yesterday.’

Indefinite nominals are unacceptable (see (8a) and (9a)), unless they are modified by a relative clause (cf. (8b) and (9b)). According to Fodor & Sag (1982: 36): “any relative clause modifying an indefinite adds to its descriptive content and thus tends to favor a referential understanding”.

Thus, I assume that factive predicates bear a special selectional requirement: they require specific complements.<sup>1</sup> Following Enç (1991), I take specificity to be linked to the notion of presuppositionality or familiarity. Furthermore, I assume that there is an interconnection between specificity and topicality, as has often been observed (e.g. Cresti, 1995). More specifically, I assume that the specificity of a DP is encoded in syntax by means of a topic node (Ihsane & Puskás, 2001; Avelar,

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1. Obviously some additional restrictions are also relevant for the kind of complement a factive predicate allows. For example, as far as nominals are considered, deverbal nouns are generally allowed, but pure object-denoting nouns are not, as shown in (i):

- (i) Ele lamentou a chegada do médico / a perda dos documentos / \*o livro.  
*he regret-PAST the arrival of-the doctor / the loss of-the documents / the book.*  
 ‘He regretted the arrival of the doctor/the loss of the documents/the book.’

In relation to DP complements, it is also worth mentioning that extraction of the entire DP is fine, although extraction from within DP is not, as (ii) and (iii) show:

- (ii) O que ele lamentou?  
*the what he regret-PAST*  
 ‘What did he regret?’
- (iii) \*De que ele lamentou a perda?  
*of what he regret-PAST the loss*  
 ‘What did he regret the loss of?’



2004). Thus, a specific DP, be it definite or indefinite, will be taken to exhibit a TopP node on the top of it. As for sentential factive complements, I propose that the specificity selectional requirement translates into a *sentential* TopP node above CP, as illustrated in (10) below. The presence of a [+specific] feature, associated to the Top position, satisfies the selectional requirement of factive predicates and derives either presupposed existence in case of DP complements (cf. (11)), or truth in the case of complement clauses (cf. (12))<sup>2</sup>.

(10) [<sub>VP</sub> **factive predicate** [<sub>TopP</sub> **Top**<sub>[+specific]] [<sub>CP/DP</sub> [<sub>TP</sub> ...</sub>

(11) a. Ele lamentou<sub>[TopP</sub> Top [<sub>DP</sub> a chegada do médico]]  
*he regret-PAST the arrival of-the doctor*  
 ‘He regretted the doctor’s arrival.’

b. \*Ele lamentou [<sub>DP</sub> uma briga].  
*he regret-PAST a fight.*  
 ‘He regretted a fight.’

(12) Ele lamenta [<sub>TopP</sub> Top [<sub>CP</sub> que [<sub>TP</sub> o Pedro tenha partido]]]  
*he regret-PRES that the P. have-SUBJPRES leave-PART*  
 ‘He regrets that P. has left.’

The presence of TopP guarantees that the selectional requirement of the factive predicate is satisfied. TopP, being marked as [+specific], renders either a definite or an indefinite DP, as well as a CP as specific.<sup>3</sup> Furthermore, I argue that the presence of TopP derives the island effects commonly attributed to factive constructions. [Spec, TopP] is an escape hatch for extraction. I assume that a *wh*-element passes through it on the way up to the matrix [Spec, CP], its final landing site. That intermediate step, however, imposes some restrictions on the type of elements that may land there: only referential elements – which share topic properties – are allowed.<sup>4</sup> This derives the contrast shown in (1) (repeated below as (13)), i.e., adjuncts are excluded.

2. Ihsane & Puskás (2001) suggest that a specific determiner moves to TopP. The same could be assumed for the complementizer in factive sentences. I will, nevertheless, ignore it for purposes of presentation here.

3. See Augusto (2003) for a discussion of the connection among specificity, information structure, and topicality in terms of Zubizarreta’s (1998) assertion structure and contrastive topic (Molnár, 2001; Lee, 2003).

4. Referential *wh*-phrases are taken here in the sense of Âmbar (1988) and Âmbar & Veloso (1999), who propose that *wh*-phrases have a syntactically complex structure, either with a phonetically realized Noun or with an empty category [+/-r], a feature that restricts the domain of reference of a category. For *wh*-phrases of the type of *who*, *where*, *when*, the empty category will be positively marked [+r].

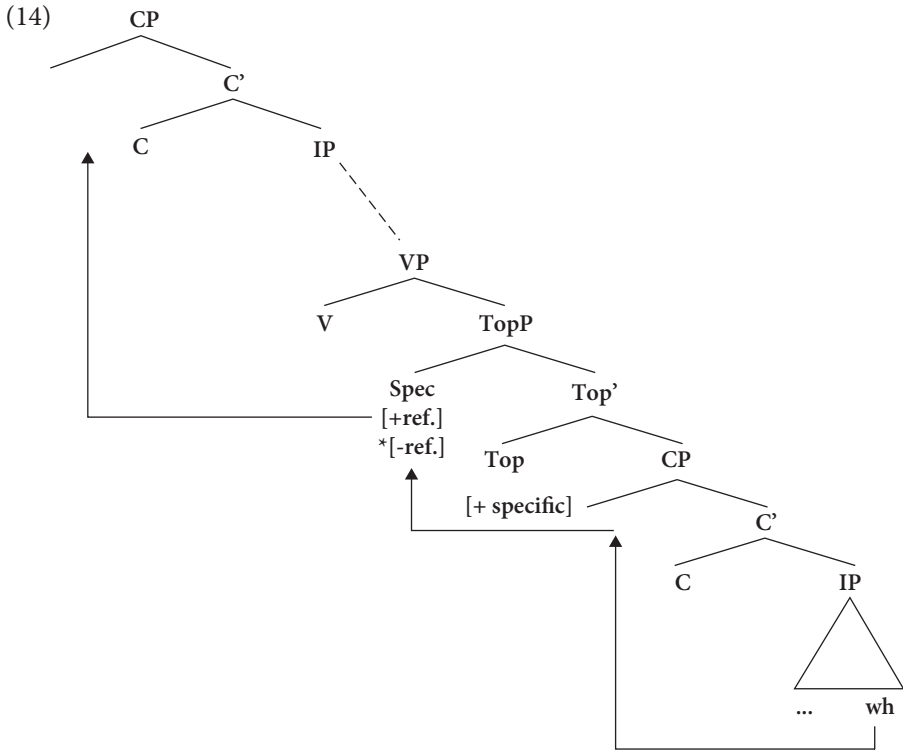
- (13) a. O que<sub>i</sub> o Pedro lamentou [que a Maria tenha  
*the what the P. regret-PAST that the M. have-SUBJ.PRES.*  
 comprado t<sub>i</sub> na viagem à China]?  
*bought-PART. in-the trip to-the China*  
 ‘What did P. regret that M. has bought on her trip to China?’
- b. \*Como<sub>i</sub>/Por que<sub>i</sub> o Pedro lamentou [que a Maria  
*how/why the P. regret-PAST that the M.*  
 tenha quebrado o vaso chinês t<sub>i</sub>]?  
*have-SUBJ.PRES broken-PART the vase Chinese*  
 ‘How/Why did P. regret that M. has broken the Chinese vase?’

In the sentences above, a *wh*-element is generated in the embedded clause, either as an argument (13a) or as an adjunct (13b). This *wh*-element in the complement clause moves cyclically, landing in [Spec, CP] of the intermediate clause. In order to reach [Spec, CP] of the matrix clause - its final landing site - it must move through [Spec, TopP], which only allows referential elements there, trapping adjuncts in the complement clause (a distinction between referential and non-referential adjuncts, in the sense of Aoun, Hornstein, Lightfoot & Weinberg (1987), is relevant; see also Footnote 4).

In sum, my proposal is in line with those that argue for an extra functional layer in factive complements (Kiparsky & Kiparsky, 1971). Given the extraction matters considered, it seems reasonable to assume that the head of such functional layer is responsible for the argument/adjunct asymmetry. TopP holds the necessary conditions for that.<sup>5</sup> Thus, the weak island behavior of factive constructions arises only when the factive predicate selects a TopP projection. Contrary to previous analyses, though, I assume that factive predicates may accept different structural kinds of complements. Thus, not all sentential complements to factive predicates constitute instances of TopP projections. There are some configurations which may qualify as factive complements despite their being deprived of a sentential TopP projection. In absence of a TopP projection, either a strong island or a transparent syntactic configuration (allowing both argument and adjunct extraction) arises.<sup>6</sup> We turn to these constructions in the next sections.

5. A further argument for relating this extra functional layer to a TopP node comes from Kallulli (2006), who investigates the prosodic structure of factive versus non-factive sentences across Albanian, English and German. The analysis reveals clear correlates of factivity in prosodic structure: a nuclear pitch accent on the matrix verb and a systematically deaccentuation of the factive embedded clauses are obtained. It is well-known that lack of phonetic prominence, or deaccentuation, across languages, is systematically related to “given” information.

6. Intermediate steps through an extra [Spec, vP] have not been represented for the sake of simplicity.



### 3. Strong islands

I have argued that the presence of a sentential TopP projection is responsible for deriving the argument/adjunct distinction. In BP factive complements, though, a strong island effect is attested whenever the sentential complements are preceded by *o fato* ‘the fact’, as shown in (6), repeated below as (15).

- (15) a. \*O que o Pedro lamentou o fato (de) que a  
*The what the P. regret-PAST-S-3rd the fact (of) that the*  
 Maria tenha comprado?  
*M. have-SUBJ-PRES-3rd buy-PART*  
 ‘What did P. regret the fact that M. has bought?’
- b. \*Como<sub>i</sub>/Por que<sub>i</sub> o Pedro ignorou o fato (de) que a Maria  
*How/Why the P. ignore-PAST the fact (of) that the M.*  
 tenha quebrado o vaso chinês t<sub>i</sub>?  
*have-SUBJ.PRES.broken-PART. the vase Chinese*  
 ‘How/Why did P. ignore the fact that M. has broken the Chinese vase?’

However, such constructions are not endowed with a sentential TopP projection, but just a nominal TopP projection, related to the presence of the definite DP *o fato* 'the fact'. That is enough to satisfy the [+specific] selectional requirement from factive predicates.

The embedded clause in (15) is not an argument of the noun, though (cf. Stowell 1981). The DP and the embedded clause stand in an identity relation as both refer to the same semantic object, that is, they stand in an appositive relation. Since there is an identity relation between *o fato* 'the fact' and the appositive, the presupposed reading is extended to it. Moreover, by being adjuncts rather than complements, the embedded clauses of (15) block extraction out of them.

In relation to this, I would also like to call attention to some aspects of the syntax of factivity in Modern Greek (henceforth MG), a language for which it is claimed that a strong island behavior is attested. MG displays five main complementizers: *oti/pos*, *pou*, *an*, and *na*. *An* introduces interrogative complements; *na* is a subjunctive marker; and *oti/pos* and *pou* correspond to plain complementizers – equivalent to *that* in English. *Oti/pos* are used in declarative complements, whereas *pou* introduces complements of factive, psychological and perception verbs and also relative clauses, clefts, and exclamative sentences. It has been noted that *pou* is the only complementizer that does not allow for nominalization. In addition, all the other complementizers except *pou* may be preceded by a definite determiner. This distinct characteristic of *pou* has been attributed to its bearing a [+ definite] feature, also responsible for its factivity nature (Christidis, 1986; Roussou, 1994; Varlokosta, 1994). It has also led researchers to argue that *oti* and *pou* do not occupy the same position in the CP domain:

- (16) [<sub>RelativeP</sub> **pou** [<sub>TopicP</sub> [<sub>FocusP</sub> [<sub>WhP/Sub.TypeP</sub> **oti** [<sub>TopicP</sub> [<sub>IP</sub> ]]]]]]] (Alexiadou, 1997)
- (17) [<sub>C</sub> **pu** [<sub>topic/Focus</sub> [<sub>COP</sub> **oti/an/na/as** [<sub>Neg</sub> **dhen/min** [<sub>CM</sub> **tha/**<sub>t(na/as)</sub> [<sub>I</sub> **cl+V..**]]]]]]] (Roussou, 2000)

Although the presence of *pou* endorses the factivity character of a complement, it may also be used with some non-factive verbs. In these cases, its presence also renders the complement true, probably due to its definite feature. However, some traditional factive predicates accept *oti* as a complementizer. In this case, Varlokosta (1994) reports differences on extraction matters:

“With ambiguous predicates such as *thimame* ‘remember’, *pou*-clauses block any extraction but *oti*-clauses result in an argument vs. adjunct asymmetry with respect to extraction, essentially patterning like Spanish or Italian factive complements.”

Wrapping up, factivity in MG may be a property of verbs as well as of a particular complementizer. If we take into account the analysis being proposed here, it seems

that an interesting connection between lexical requirements and extraction matters is achieved. By being endowed with a [+ definite] feature, *pou* is capable of satisfying the s-selection restriction of factive predicates in terms of [+specific] complements. However, once *pou* occupies a specifier position, as suggested by Alexiadou (1997) (see (16) above), no extraction from the complement clause is allowed. There is a point of direct interest to our discussion, though: an argument/adjunct asymmetry arises when *oti* is used in MG with factive predicates. We conjecture that the s-selection restriction of factive predicates in terms of [+ specific] complements cannot be satisfied by *oti*, contrary to what happens with *pou*. Thus, the factive construction with *oti* has to resort to the presence of a sentential TopP projection and this projection is exactly what renders the argument/adjunct asymmetry operative.

#### 4. The absence of a sentential TopP projection

We turn now to infinitival and subjunctive constructions in BP, which allow for both argument and adjunct extraction.

##### 4.1 Infinitives

Infinitival complements to factive predicates show distinct properties according to the type of infinitive used. Inflected infinitives display the traditional argument/adjunct distinction associated to “weak islands”; by contrast, non-inflected infinitives are much more porous to extraction, as illustrated by examples (4) and (5) repeated as (18) and (19).

- (18) a. Quem<sub>i</sub> o Pedro deplorou ter encontrado t<sub>i</sub> na festa?  
*who the P. deplore-PAST have-INF meet-PART at-the party*  
 ‘Who did P. deplore having met at the party?’
- b. Como<sub>i</sub> o aluno lamentou ter respondido a  
*how the student regret-PAST have-INF answer-PART the*  
*pergunta t<sub>i</sub>?*  
*question*  
 ‘How did the student deplore having answered the question?’

- (19) a. O que o Pedro deplorou os deputados terem  
*the what the P. deplore-PAST the deputies have-INF-P-3rd*  
 aprovado  $t_i$  na sessão secreta?  
*approve-PART in-the session private*  
 ‘What did P. deplore the deputies having approved in the private session?’
- b. \*Como o Pedro lamentou os mecânicos terem  
*how the P. regret-PRES the mechanics have-INF-P-3rd*  
 consertado o carro  $t_i$ ?  
*fix-PART the car*  
 ‘How did P. regret the mechanics having fixed the car?’

Speakers tend to judge extraction of adjuncts from non-inflected infinitives (18b) less degradable than from inflected ones (19b).

Pires (2001) analyzed infinitives in BP in terms of the control properties their subjects display, showing that only non-inflected infinitives impose obligatory control on their subjects. This contrast also holds of factive constructions, as illustrated below with two of the diagnostics for control – the need for a local c-commanding antecedent and sloppy reading under ellipsis:

- (20) a. [Os pais do Paulo] $_j$  $_k$  lamentam  $PRO_{*j/k}$  chegar tarde.  
*the parents of-the P. regret-PRES arrive-INF late.*  
 ‘[Paulo] $_j$ ’s parents] $_k$  regret to arrive late’
- b. [Os nossos] $_j$  pais] lamentam  $pro_j$  chegarmos tarde.  
*the our parents regret-PRES arrive-INF-P-1rd late.*  
 ‘Our parents regret our arriving late’
- (21) a. O Paulo $_j$  lamenta  $PRO_{j/*k}$  ter perdido e a Silvia  
*the P. regret-PRES have-INF lost and the S.*  
 também (= lamenta ter perdido).  
*too (= Silvia regrets to have lost)*  
 ‘Paulo $_j$  regrets  $PRO_{j/*k}$  to have lost and Silvia does too (= Silvia regrets to have lost)’
- b. O Paulo $_j$  lamenta  $pro_k$  termos perdido e a Silvia  
*the P. regret-PRES have-INF-P-1rd lost and the S.*  
 também (= lamenta nós termos perdido).  
*too (= Silvia regrets our losing)*  
 ‘Paulo regrets our losing and Silvia does too (= Silvia regrets our losing)’

Pires (2001) follows Hornstein's (1999) analysis of control as the result of DP movement, extending it to Portuguese non-inflected complements, which he argues, are defective TPs. Assuming that multiple thematic roles may be assigned to the same DP, a defective TP endowed with an EPP feature is able to attract a DP to its Spec, but is unable to delete the [-interpretable] Case feature of the attracted DP, allowing such element to raise to the matrix clause where it can have its Case feature checked/valued. That amounts to saying that defective TPs do not constitute an autonomous domain and that the DP subject is not trapped within a phase. Defective TPs are not selected by CPs, but rather by VPs. If Pires (2001) is correct and A'-movement is possible from within infinitival defective TPs, then A'-movement should also be. That is exactly what has been attested in BP (see (18)).

By contrast, inflected infinitival complements behave just like fully inflected factive complements, that is, the distinction between extraction of arguments and adjuncts holds (see (19)). Inflected infinitivals show overt person/number morphology, that is, inflected infinitive clauses carry a full set of phi-features. That means that such TPs must be dominated by a CP.<sup>7</sup> A pure CP is not allowed as a complement to a factive predicate. It is not able to fulfill the factive requirements for a [+specific] complement. Thus, I assume that inflected infinitives, when associated to factive predicates, are instantiations of a sentential TopP. As predicted by the analysis presented here, a distinction between arguments and adjuncts is expected, which is derived from the presence of a TopP node, since [Spec, TopP] plays the role of an escape hatch for argument extraction.

To sum up this section, infinitives come in two flavors in Portuguese: inflected infinitives, which are full CP clauses, and non-inflected ones, which are instances of defective TPs. As complements to factive verbs, the latter constitutes a more porous context for extraction (compare (22b) to (23b)).

- (22) a. O que<sub>i</sub> o menino lamentou ter emprestado t<sub>i</sub>  
*what the boy regret-PAST have-INF lend-PART*  
 ao amigo?  
 to-the friend  
 'What did the boy regret having lent to his friend?'  
 b. Como<sub>i</sub> o professor deplorou ter agido t<sub>i</sub>?  
*how the teacher deplore-PAST have-INF act-PART*  
 'How did the teacher regret having acted?'

7. See Raposo (1987) and Galves (2001). "Structures larger than TPs" are also assumed in Raposo & Uriagereka (1996, 2005) and Nunes & Raposo (2005).

- (23) a. Quem o professor lamentou os alunos terem  
*who the teacher regret-PAST the students have-INF-P-3rd*  
 escolhido  $t_i$  para representante de turma?  
*choose-PART For representative of class*  
 ‘Who did the teacher regret the students having chosen as class representative?’
- b. \*Como o pai deplorou os filhos terem  
*how the father deplore-PAST the sons have-INF-P-3rd*  
 agido no funeral  $t_i$ ?  
*behave-PART in-the funeral*  
 ‘How did the father regret his sons having behaved during the funeral?’

However, there is still an important point to be considered: if non-inflected infinitivals are defective TPs (following Pires (2001)), how can these constructions qualify as presupposed complements to factive predicates? This is the topic of the next section.

#### 4.2 Sequence of tense rule (SOT)

It has been frequently assumed that gerunds and infinitives have a nominal character (Raposo 1987, Milsark 1988). Kaiser (1999) argues that clausal gerunds are (re)categorized into a DP or NP in the syntax, by a process of (morpho)syntactic affixation. As for factive predicates, having a nominal as a complement seems to be of potential interest. However, I have pointed out in the preceding sections that having factive predicates select a nominal complement is not enough. A further requirement is imposed on complements to factive predicates: they must be [+specific] (cf. (8) repeated below as (24)).

- (24) a. \*O Pedro lamentou uma briga.  
*the P regret-PAST an argument*  
 ‘P. regretted an argument.’
- b. O Pedro lamentou uma briga que ele teve com seu chefe.  
*the P regret-PAST an argument that he had with his boss*  
 ‘P. regretted an argument he had with his boss.’

What would qualify a nominal infinitival clause as a licit specific complement to a factive predicate? I propose that undergoing the application of the Sequence of Tense (SOT) Rule brings specificity to an infinitival clause.

Hornstein (1990) points out that there is an obligatory context for the application of SOT: infinitivals. Infinitival clauses are generally embedded. They never stand as free matrix clauses and their temporal interpretation is always dependent



on the temporal interpretation of the matrix clause under which they are embedded. For Hornstein (1990: 146), “the key characteristic of infinitival clauses is the absence of an S point”,<sup>8</sup> indispensable for a non-SOT reading, since default interpretations are dependent on an S point being mapped onto the moment of speech. Thus, these embedded tenseless clauses must be submitted to SOT in order to be temporally evaluated relative to the matrix tense. This mechanism allows the event denoted by the infinitival clause to be temporally/deitically anchored. I propose that this is enough to turn the embedded clause [+specific].

If SOT is operative in infinitival complements, satisfying the [+specific] requirement from factive predicates, then no TopP projection will be necessary in such constructions.<sup>9</sup> The absence of a TopP projection explains why the distinction argument/adjunct is not present in factive constructions with non-inflected infinitival complements, as seen in the examples repeated below.

- (25) a. Quem<sub>i</sub> o Pedro deplorou ter encontrado t<sub>i</sub> na festa?  
*who the P. deplore-PAST have-INF meet-PART at-the party*  
 ‘Who did P. deplore having met at the party?’
- b. Como<sub>i</sub> o aluno lamentou ter respondido a  
*how the student regret-PAST have-INF answer-PART the*  
*pergunta t<sub>i</sub>?*  
*question*  
 ‘How did the student regret having answered the question?’

I show below that past imperfective subjunctives in BP constitute another syntactic context in which SOT plays the role of ascribing specificity to a complement clause, dispensing with the need of a TopP projection in factive constructions.

#### 4.3 Subjunctive complements to factive predicates

When embedded under a past tense predicate, present and past imperfective subjunctives in BP contrast with respect to extraction out of factive complements. The use of the subjunctive in the present exhibits an adjunct/argument distinction

8. Hornstein follows Reichenbach’s theory of tense, assuming three points: E (event time), S (moment of speech), and R (reference point).

9. Unnecessary functional projections are banned in the spirit of Bošković (1997).

behavior (see (26)). If the subjunctive embedded verb is in the past, extraction of adjuncts is ameliorated (see (27)).

- (26) a. O que<sub>i</sub> o Pedro lamentou que o ministro tenha  
*the what the P. regret-PAST that the Minister have-SUBJPRES*  
 anunciado t<sub>i</sub> tão atrapalhadamente?  
*announce-PART so confusingly*  
 ‘What did P. regret that the Minister has announced so confusingly?’
- b. \*Como<sub>i</sub> o Pedro lamentou que o ministro tenha  
*how the P. regret-PAST that the Minister have-SUBJPRES*  
 anunciado o aumento da gasolina t<sub>i</sub>?  
*announce-PART the rise of-the gas*  
 ‘How did P. regret that the Minister has announced the gas rise?’
- (27) a. O que<sub>i</sub> o Pedro lamentou que o ministro tivesse  
*the what the P. regret-PAST that the Minister have-SUBJPAST*  
 anunciado t<sub>i</sub> tão atrapalhadamente?  
*announce-PART so confusingly*  
 ‘What did P. regret that the Minister had announced so confusingly?’
- b. ?Como<sub>i</sub> o Pedro lamentou que o ministro tivesse  
*how the P. regret-PAST that the Minister have-SUBJPAST*  
 anunciado o aumento da gasolina t<sub>i</sub>?  
*announce-PART the rise of-the gas*  
 ‘How did P. regret that the Minister had announced the gas rise?’

Before addressing this issue, I would like to consider a similarity between infinitives and subjunctives: the possibility subjunctive shows of undergoing SOT. It has been generally assumed that subjunctives are [-TENSE] (eg. Picallo, 1984; Jakubowicz, 1984; and Kempchinsky, 1986). They share with infinitives the characteristic of not standing as free matrix clauses (with few exceptions). Interestingly, though, SOT rule is not obligatory for factive complements in BP, as illustrated by sentence (28).

- (28) Pedro lamentou que eu faça/fizesse isso.  
*P. regret-PAST that I do-SUBJPRES/PAST this.*  
 ‘P. regretted that I do/did that.’

Although the main verb in (28) is in the past, the subjunctive embedded verb may be in the present. Thus, past imperfective subjunctive embedded under a past factive predicate may be evaluated as having undergone SOT. I have proposed that undergoing SOT turns the embedded clause into a specific complement and the s-selectional requirement imposed by factive predicates is satisfied. Since these contexts obey the selectional requirement through the SOT rule, there is no need

for the presence of a category like TopP. The sentences in (30) (and (27) above) show that both argument and adjunct extraction is possible. The presence of TopP is what renders the argument/adjunct distinction operative, thus differentiating (29) (and (26) above), which did not undergo SOT, from (30) (or (27)).

- (29) a. Quem<sub>i</sub> o diretor lamentou que o produtor tenha  
*who the director regret-PAST that the producer have-SUBJPRES*  
 elogiado t<sub>i</sub> tão efusivamente?  
*praise-PART so highly*  
 ‘Who did the director regret that the producer has praised highly?’
- b. \*Como<sub>i</sub> o diretor lamentou que o produtor tenha  
*how the director regret-PAST that the producer have-SUBJPRES*  
 elogiado a atriz principal t<sub>i</sub>?  
*praise-PART the actress leading*  
 ‘How did the director regret that the producer has praised the leading actress?’
- (30) a. Quem<sub>i</sub> o diretor lamentou que o produtor tivesse  
*who the director regret-PAST that the producer have-SUBJPAST*  
 elogiado t<sub>i</sub> tão efusivamente?  
*praise-PART so highly*  
 ‘Who did the director regret that the producer had praised highly?’
- b. ?Como<sub>i</sub> o diretor lamentou que o produtor tivesse  
*how the director regret-PAST that the producer have-SUBJPAST*  
 elogiado a atriz principal t<sub>i</sub>?  
*praise-PART the actress leading*  
 ‘How did the director regret that the producer had praised the leading actress?’

In sum, if no TopP is present, no argument/adjunct asymmetries are expected.<sup>10</sup>

10. Although judgments are not so clear, there is a tendency to admit adjunct extraction from embedded subjunctive factive complements under present tense matrix verbs, which could undergo SOT:

- (i) ?Como<sub>i</sub> o diretor lamenta que o produtor tenha elogiado  
*how the director regret-PRES that the producer have-SUBJPRES praise-PART*  
 a atriz principal t<sub>i</sub>?  
*the actress leading*  
 ‘How does the director regret that the producer has praised the leading actress?’

## 5. Explaining some additional facts

In this section I discuss the type and function of *wh*-elements that may appear in factive constructions in BP.

### 5.1 Arguments and adjuncts

The argument/adjunct distinction has been considered the main feature that characterizes weak islands. However, some more fine-grained distinctions have been reported. Cinque (1990) refers to elements that can be extracted from weak island as *D(iscourse)-linked* elements, following Pesetsky (1987). Rizzi (2002) argues that such elements bear particular interpretative properties, as they are specific/pre-supposed. It has been pointed out that *wh*-elements extracted from weak islands receive only a referential reading (Frampton, 1991; Heycock, 1995; Rizzi, 2001). Such restriction is particularly detectable for elements such as *quanto N* 'how many' N. A clear distinction arises between *wh*-elements extracted from non-factive constructions (see answers in (32) for sentence (31)) and *wh*-elements extracted from factive complements (see answers (34) related to sentence (33)):

- (31) Quantos filmes o Pedro acha que a Maria viu  
*how many movies the P. think-PRES that the M. see-PAST*  
 nas férias?  
*on-the holidays*  
 'How many movies does P. think that M. saw during her holidays?'
- (32) a. Uns três.  
*a-PL three*  
 'Three or so.'
- b. Esses três: Lavoura Arcaica, Central do Brasil e Casa de Areia.  
*These three: Lavoura Arcaica, Central do Brasil, and Casa de Areia.*  
 'These three: Lavoura Arcaica, Central do Brasil, and Casa de Areia.'
- (33) Quantos filmes o Pedro lamenta que a Maria tenha  
*how many movies the P. regret-PRES that the M. have-SUBJ-PRES-3*  
 visto nas férias?  
*see-PART on-the holidays*  
 'How many movies does P. regret that M. has seen during her holidays?'
- (34) a. \*Uns três.  
*a-PL three*  
 'Three or so.'

- b. Esses três: Lavoura Arcaica, Central do Brasil e Casa de Areia.  
*These three: Lavoura Arcaica, Central do Brasil, and Casa de Areia.*  
 ‘These three: Lavoura Arcaica, Central do Brasil, and Casa de Areia.’

(31) is ambiguous. There are two possible answers, as (32) shows: a quantity answer and a referential answer. No specific movies are been considered under the answer in (32a). In turn, (33) is unambiguous. It does not support a pure quantity answer, as shown by the fact that (34b) requires that a prior presupposed set of movies have been considered. (34a) isn’t an appropriate answer to (33).

I take such restriction on interpretability as evidence for the presence of TopP in factive constructions. As it was mentioned, extraction proceeds via [Spec, TopP], which is an escape hatch for *wh*-movement. Nevertheless, only elements compatible to that position may land there, that is, only arguments but not adjuncts may use it as an intermediate step. Additionally, elements will be endowed with readings compatible to topic features, that is, only referential reading results possible in such extraction contexts. Restrictions on interpretation imposed on *wh*-elements are, thus, a direct reflex from their passing through [Spec, TopP].

There is another issue reported in literature that touches upon these matters: the distinction among adjuncts with respect to referentiality. Aoun, Hornstein, Lightfoot & Weinberg (1987), Cinque (1990), and Rizzi (1990) have pointed out that temporal and place adjuncts may be interpreted referentially. Actually, extractions of *onde* ‘where’ and *quando* ‘when’ are considered less degradable (see (35)) when compared to *como* ‘how’ and *por que* ‘why’ (see (36)) in factive contexts.

- (35) ?Onde<sub>i</sub>/quando<sub>i</sub> você lamenta [que a Maria tenha  
*where/when you regret-PAST that the M. have-SUBJ.PRES.*  
 quebrado o vaso chinês t<sub>i</sub>]?  
*broken-PART. the vase Chinese*  
 ‘Where/When do you regret that M. has broken the Chinese vase?’
- (36) \*Como<sub>i</sub>/por que<sub>i</sub> você lamenta [que a Maria tenha  
*how/why you regret-PAST that the M. have-SUBJ.PRES.*  
 quebrado o vaso chinês t<sub>i</sub>]?  
*broken-PART. the vase Chinese*  
 ‘How/Why do you regret that M. has broken the Chinese vase?’

This contrast may also be explained by the presence of a TopP projection. Referential adjuncts are acceptable candidates to land in [Spec, TopP] on their way up to the matrix [Spec, CP]. Contrastively, non-referential adjuncts of the type *como* ‘how’ and *por que* ‘why’ (as in (36)) as well as expressions such as *que diabos* ‘what the hell’ (see (37)), which are aggressively non-D-linked (Pesetsky 1987), are banned.

- (37) \*Que diabos<sub>i</sub> você lamenta que a Maria tenha  
*What the hell you regret-PAST that the M. have-SUBJ.PRES.*  
 comprado t<sub>i</sub> na viagem à China]?  
*buy-PART. on the trip to the China*  
 ‘What the hell do you regret that M. has bought on her trip to China?’

The proposal of TopP as an escape hatch for referential elements leads to the additional prediction that specific adjuncts would be allowed to undergo extraction. Judgments vary among speakers, but most of them report only a mild deviance for sentences like (38) below.

- (38) ?Com qual dessas ferramentas você lamenta que o Alexandre  
*with which of-these tools you regret-PRES that the A.*  
 tenha consertado o carro?  
*have-SUBJ-PRES-3 fix-PART the car*  
 ‘Which of these tools do you regret that A. has fixed the car with?’

## 5.2 Extraction of subjects

BP presents another characteristic that deserves attention in relation to factive constructions. Extraction of subjects is allowed, as illustrated in (39):

- (39) a. Quem você lamenta que tenha perdido  
*who you regret-PRES that have-SUBJ-PRES-S-3P lose-PART*  
 o ouro nas Olimpíadas?  
*the gold in the Olympic Games*  
 ‘Who do you regret that has lost the golden medal in the Olympic Games?’
- b. Que aluno o professor lamentou que tivesse  
*which student the teacher regret-PAST that have-SUBJ-PAST-S-3P*  
 perdido a aula?  
*miss-PART the class*  
 ‘Which student did the teacher regret had missed class?’

Extraction of subjects from factive complements is not allowed in European Portuguese or French (Zubizarreta, 1982; Adams, 1985; Rouveret, 1980). The distinct behavior of BP has been related to its allowing a left dislocated topic position in the matrix clause, from which *wh*-movement would proceed (Santos, 1996). Thus, the subject position would host a null pronoun.

However, the *pro*-drop character of BP has been challenged (Duarte, 1995; Kato, 1999). Ferreira (2000, 2004, this volume) has convincingly shown that null

subjects in BP are to be analysed as the result of hyperraising. Null subjects are almost exclusively found in embedded clauses and must have a c-commanding antecedent, in an immediately higher clause (see (40) below):

- (40) a. O Pedro<sub>i</sub> disse que ec<sub>i</sub> vai chegar atrasado  
*the P. say-PAST that ec will arrive late-MASC*  
 ‘P<sub>i</sub> said that he would arrive late’
- b. \*A mãe do Pedro disse que ec vai chegar atrasado  
*the mother of-the P. say-PAST that ec will arrive late-MASC*  
 ‘P.’s mother said that *ec* would arrive late’

Null subjects are not allowed in strong islands either:

- (41) ??O João<sub>i</sub> disse que [as meninas [ que ec<sub>i</sub> encontrou na rua]]  
*the J. say-PRES that [the girls [ that ec met on street ]]*  
*eram estrangeiras.*  
*be-PAST foreigners-FEM.PL.*  
 ‘J. said that the girls he met on street were foreigners.’

This follows from his proposal that null subjects in BP are traces left by movement of a phrase that ends up in the matrix clause (Ferreira follows Bošković (1994) and Hornstein (1999) and argues in favor of allowing movement to  $\theta$ -positions).

If no *pro* is allowed in embedded subject positions in BP, extraction of subjects in factive constructions should not involve a null pronoun coindexed with a *wh*-phrase related to a left dislocated topic position in the matrix clause. Rather, we should expect that extraction of subjects from factive clauses in BP should only be possible through movement from Spec of TP, possibly making use of the TopP node proposed here. Thus, a distinction arises between *wh*-extraction of subjects from embedded factive complements and from true strong islands, as illustrated by sentences (42) and (43) respectively.

- (42) Quem você lamentou que tenha perdido  
*who you regret-PAST that have-SUBJ-PRES-S-3P lose-PART*  
 o ouro nas Olimpíadas?  
*the gold in the Olympic Games*  
 ‘Who do you regret that has lost the golden medal in the Olympic Games?’
- (43) \*Quem<sub>i</sub> o João disse que [as meninas [ que t<sub>i</sub> encontrou  
*who the J. say-PRES that [the girls [ that t<sub>i</sub> met*  
 na rua]] eram estrangeiras?  
*on street ] be-PAST foreigners-FEM.PL.*  
 ‘Who did J. say that the girls that met on street were foreigners?’

## 6. Final remarks

This paper has focused on factive constructions and the relationship between the syntactic and semantic characteristics they present. The presuppositional reading that complements of factive predicates exhibit has been ascribed to an s-selectional requirement of these predicates in terms of a [+specific] complement. It has been argued that classifying factive complements as weak or strong islands is undesirable. We have presented constructions in BP in which weak, strong or no island effects emerge. Strong island behaviour is attested by complements introduced by *o fato* 'the fact'. I assume that the presence of this definite (specific) nominal phrase is enough to satisfy selectional requirements. The embedded sentence is an appositive, that is, an adjunct clause. Extractions out of adjuncts are banned independently. Weak island behaviour is attested when a TopP projection is required - for inflected infinitives and subjunctives not undergoing SOT (present subjunctives embedded under past tense). No island effects are attested with uninflected infinitival complements or SOT subjunctives. For such constructions, which undergo SOT, no TopP node is instantiated. In sum, these different behaviors arise as by-products of there being different possible structures for complements to factive predicates, each of which satisfying the s-selectional requirement of these predicates, though imposing different constraints on extraction matters.

Summing up, this paper points towards favoring a non-direct mapping between s-selection and c-selection. Island phenomena have received much attention in generative framework since Ross (1967) and subsequent work of Chomsky (1973, 1986), which have sought for a unified treatment for them. Recent work in minimalism (Nunes & Uriagereka, 2000; Stepanov, 2001) has called such an approach into question. The analysis put forward here for factive sentences points to the same direction of inquiry in so far as factive complements may give rise to different syntactic configurations which will determine different convergence routes.

## References

- Adams, M. (1985) Government of empty subjects in factive clausal complements. *Linguistic Inquiry* 16, 305–313.
- Alexiadou, A. (1997) *Adverb Placement: a case study in antisymmetric syntax*. John Benjamins, Amsterdam.
- Âmbar, M. (1988) *Para uma Sintaxe da Inversão Sujeito-Verbo em Português*, Doctoral Dissertation, Fac. Letras Univ. Lisboa, Lisboa.
- Âmbar, M. & R. Veloso (1999) On the nature of *wh*-phrases- *wh*-in-situ and word order: Evidence from Portuguese, French, Hungarian, and Tetum. In: *Selected papers from 'Going Romance'* 1999, (Y. D'hulst, J. Rooryck & J. Schrotten, eds.), pp. 1–38. John Benjamins, Amsterdam.



- Aoun, J.; N. Hornstein; D. Lightfoot & A. Weinberg (1987) Two types of locality, *Linguistic Inquiry*, 18, 537–77.
- Augusto, M.R.A. (2003) Padrões de extração em estruturas factivas. Ph.D. Dissertation, UNICAMP.
- Avelar, J. O. (2004) Dinâmicas morfossintáticas com *ter*, *ser* e *estar* em português brasileiro. Master Thesis. UNICAMP.
- Bošković, Ž. (1994) D-Structure, theta criterion, and movement into theta positions. *Linguistic Analysis*, 24, 247–286.
- Bošković, Ž. (1997) *The syntax of nonfinite complementation: An economy approach*. MIT Press., Cambridge, MA.
- Chomsky, N. (1973) Conditions on transformations. In A Festschrift for Morris Halle S. (R. Anderson & P. Kiparsky, eds.), pp. 232–286. Holt, Rinehart, & Winston, New York, NY.
- Chomsky, N. (1986) *Barriers*. The MIT Press, Cambridge, MA.
- Chomsky, N. (1999) Derivation by phase. *MIT Occasional Papers in Linguistics* 18.
- Chomsky, N. (2001) Beyond explanatory adequacy. *MIT Occasional Papers in Linguistics* 20.
- Christidis, A.P. (1986) The morpheme *pu* as a definite clause nominaliser. *Studies in Greek Linguistics*, 7, 135–48.
- Cinque, G. (1990) *Types of A' Dependencies*, The MIT Press, Cambridge, MA.
- Cresti, D. (1995) Indefinite Topics. Doctoral dissertation, MIT.
- Duarte, M.E. L. (1995) *A perda do princípio Evite Pronome no Português Brasileiro*. Ph.D. Dissertation, UNICAMP.
- Enç, M. (1991) The Semantics of Specificity. *Linguistic Inquiry*, 22, 01–25.
- Ferreira, M. (2000) Argumentos nulos em Português Brasileiro. Master Thesis. UNICAMP.
- Ferreira, M. (2004) Hyperraising and Null Subjects in Brazilian Portuguese. *MIT Working Papers in Linguistics*, 47. Cambridge, MA.
- Fodor, J.D. & I. Sag (1982) Referential and quantificational indefinites. *Linguistics and Philosophy*, 5, 355–398.
- Frampton, J. (1991) Relativized Minimality: a review, *The Linguistic Review*, 8, 1–46.
- Galves, C. (2001) Infinitivo flexionado e a legitimação de Agr. In: *Ensaio sobre as Gramáticas do Português*. pp. 181–194. Ed. da Unicamp, Campinas.
- Hegarty, M. (1992) Familiar complements and their complementizers: on some determinants of A'-locality, Ms. University of Pennsylvania.
- Heycock, C. (1995) Asymmetries in Reconstruction. *Linguistic Inquiry*, 26, 547–570.
- Hornstein, N. (1990) *As time goes by: tense and universal grammar*. MIT Press, Cambridge, MA.
- Hornstein, Norbert (1999) Movement and Control. *Linguistic Inquiry*, 30: 69–96.
- Ihsane, T. & G. Puskás (2001) Specific is not definite. *Generative Grammar in Geneva* 2, 39–54.
- Jakubowicz, C. (1984) Do binding principles apply to INFL? Paper presented at NELS 15, Providence, RI.
- Kaiser, L. (1999) The morphosyntax of clausal nominalization constructions. Ph.D. Dissertation. University of Yale.
- Kallulli, D. (2006) Triggering Factivity: Prosodic Evidence for Syntactic Structure. In: *Proceedings of the 25th West Coast Conference on Formal Linguistics*, (D. Baumer, D. Montero, & M. Scanlon, eds.) pp. 211–219. Cascadilla Proceedings Project, Somerville, MA.
- Kato, M.A. (1999) Strong and weak pronominals in the null subject parameter. *PROBUS*, 11, 1–37.
- Kempchinsky, P.M. (1986) Romance subjunctive clauses and logical form. Ph.D. Dissertation. University of California.

- Kiparsky, P. & C. Kiparsky (1971) Fact, In: *Semantics*. (D. Steinberg & L. Jakobovits, eds.), Cambridge University Press, Cambridge. [Reprinted from M. Bierwisch & K. Heidolph (eds. 1970), *Progress in Linguistics*, Mouton, The Hague].
- Lee, C. (2003) Contrastive Topic and/or Contrastive Focus. W. M *Japanese/Korean Linguistics*.
- Melvold, J. (1991) Factivity and Definiteness, in: L. Cheng & H. Termidash (eds.) *MIT Working Papers in Linguistics*, 15, 97–117.
- Milsark, G.L. (1988) Singl-ing. *Linguistic Inquiry* 19:4, 611–634.
- Molnár, V. (2001) Contrast from a contrastive perspective. In: *Proceedings of the ESSLLI 2001 Workshop on Information Structure, Discourse Structure and Discourse Semantics* (I. Kruiff-Korbayová & M. Steedman, eds.), 99–114. Helsinki University, Helsinki.
- Nunes, J. & J. Uriagereka (2000) Cyclicity and extraction domains. *Syntax*, 3, 20–43.
- Nunes, J. & E. Raposo (2005) Coerced inflected infinitives. Ms. Universidade de São Paulo and University of California at Santa Barbara.
- Pesetsky, D. (1987) Wh in situ: movement and unselective binding. In: *The representation of (in) definiteness*. (E. Reuland, A. ter Meulen, eds.), The MIT Press, Cambridge, MA.
- Picallo, M.C. (1984) The Infl node and the null subject parameter. *Linguistic Inquiry*, 15, 75–102.
- Pires, A. (2001) Obligatory Control PRO as NP movement in Portuguese. In: *Romance SYntax, Semantics and their L2 Acquisition: Selected Papers from 30th Linguistics Symposium on Romance languages*. (J. Campos & C. Wiltshire, eds.), John Benjamins, Amsterdam.
- Raposo, E. (1987) Case Theory and Infl-to-Comp: the inflected infinitive in European Portuguese, *Linguistic Inquiry*, 18:1, 85–110.
- Raposo, E. & J. Uriagereka (1996) Indefinite SE. *Natural Language and Linguistic Theory*, 14, 749–810.
- Raposo, E. & J. Uriagereka (2005) Clitic placement in Western Iberian: a minimalist view. In: *Handbook of comparative grammar*. (R. Kayne, & G. Cinque, (eds.), 639–697. Oxford University Press, Oxford.
- Rizzi, L. (1990) *Relativized Minimality*, The MIT Press, Cambridge, MA.
- Rizzi, L. (2001) Reconstruction, weak islands sensitivity, and agreement. In: C. Cecchetto, G. Chierchia & M. T. Guasti, eds., *Semantic Interfaces*, CSLI publications, Stanford University, Stanford, CA., 145–177.
- Rizzi, L. (2002) Locality and left periphery. In: *Structures and Beyond. The Cartography of Syntactic Structures*, (A. Belletti, ed.), Vol. 3, OUP.
- Ross, J. R. (1967) Constraints on Variables in Syntax, Ph.D. Dissertation. MIT.
- Roussou, A. (1994) The syntax of complementisers. Ph.D. Dissertation. University College London.
- Roussou, A. (2000) On the Left Periphery: Modal Particles and Complementisers. *Journal of Greek Linguistics*, 1, 65–94.
- Rouveret, A. (1980) Sur la notion de proposition finie: gouvernement et inversion. *Langages* 60, 61–88.
- Santos, J. (1996) *Ligação não-seletiva de subjuntivos: suas implicações na gramática*. Master Thesis, UNICAMP.
- Stepanov, A. (2001) The end of CED? In: *WCCFL 20 Proceedings*, (K. Megerdeomian, L.A. Bar-el, eds.), Cascadilla Press, Somerville, MA.
- Stowell, T. (1981) The origin of phrase structure. Ph.D. Dissertation. MIT.
- Varlokosta, S. (1994) Factive complements in Modern Greek. *University of Maryland Working Papers in Linguistics*, 2, 238–258.
- Zubizarreta, M. L. (1998) *Prosody, Focus, and Word Order*. The MIT Press, Cambridge, MA.

Zubizarreta, M. L. (1982) Theoretical implications of subject extraction in Portuguese. *The Linguistic Review* 2, 79–96.

## A uniform raising analysis for standard and nonstandard relative clauses in Brazilian Portuguese

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Based on Kayne's (1994) analysis of relative clauses, this paper proposes a uniform account of the three types of relative clauses found in Brazilian Portuguese: the standard version (with pied-piping), the resumptive version with an overt pronoun, and the PP-chopping version, where the relativized PP appears to be deleted. We argue that a DP headed by a relative determiner can be base-generated in a left dislocation position in Brazilian Portuguese and this is what yields lack of island effects and apparent PP-chopping relatives. Based on their lexical conditioning, we propose that PP-chopping relatives in fact involve a null pronominal (*pro*) in the object position licensed by inherent Case.

### 1. Introduction\*

Kayne (1994) has greatly energized the debate on the structure of relative clauses by developing an interesting approach to relative clauses in consonance with his Linear Correspondence Axiom (*LCA*), which considerably restricts the types of syntactic structures and the types of movement available in the grammar. Reviving Vergnaud's (1974) raising analysis, Kayne proposes that the relative clauses in (1) are to be derived along the lines of (2).<sup>1</sup>

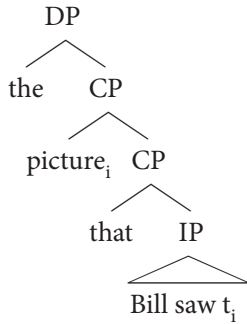
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\* The gist of the proposals discussed in this paper was first presented at the II Encontro do Círculo de Estudos Lingüísticos do Sul (Kato and Nunes 1997) and at the Eighth Colloquium on Generative Grammar (Kato & Nunes 1998). We are thankful to these audiences. Development of the current version has been supported by FAPESP (grant # 2006/00965-2).

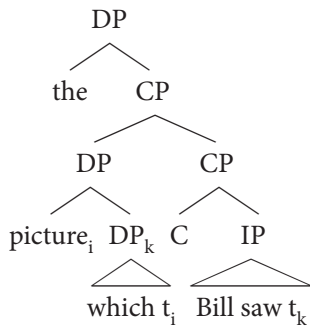
1. Here we will focus on the relevant movement operations and the adjunction configuration that Kayne (1994) proposes are involved in the derivation of relative clauses. We remain uncommitted to other aspects of his proposal that follow from the *LCA* such as the distinction between terminals and lexical items and the lack of distinction between specifiers and adjuncts. Thus, the structures that we will present will be a simplified version of his, encoding only the properties that

- (1) a. the picture that Bill saw
- b. the picture which Bill saw
- c. the hammer with which Bill broke it

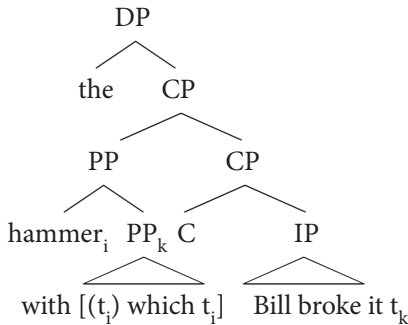
(2) a. *that*-relatives:



b. *wh*-relatives:



c. *wh*-relatives with pied-piping:



In (2a), the determiner selects a CP to which the relativized NP adjoins. In (2b), the relativized NP adjoins to the *wh*-phrase, which in turn adjoins to CP. Finally,

will be relevant to our discussion. Also, although the points we make may apply to appositive relative clauses as well, here we will limit the discussion to restrictive and free relative clauses.

in (2c), PP adjoins to CP and the relativized NP adjoins to PP “probably via Spec,*which*” (Kayne 1994: 89).

Although the general raising approach to relative clauses has received strong empirical support (see e.g. Vergnaud, 1974, 1985; Kayne, 1994; and Bianchi, 1999), the specific derivations in (2) encompass the following nonstandard assumptions (see Borsley, 1997; Kato & Nunes, 1997, 1998): (i) despite their similarities in meaning, (2a) involves an NP-gap, whereas (2b) involves a DP-gap; (ii) NPs may precede (i.e. move across) the determiner they are associated with even in languages with head-initial determiners (cf. (2b)/(2c)); and (iii) the external determiner can enter into syntactic relations with the relativized NP, despite the fact that they have not merged.

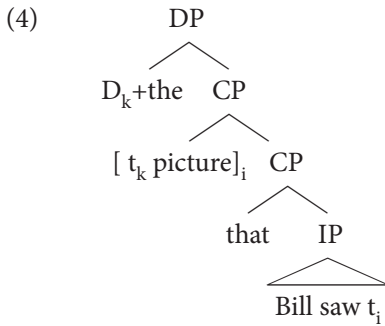
We will show in this paper that aside from (i), which can be easily remedied, these assumptions are not only sound, but make it possible to shed light on some recalcitrant data in Romance. This paper is organized as follows. In Sections 2 and 3, we discuss the assumptions above, based largely on relative clauses in Brazilian Portuguese. In Section 4, we propose a unified raising analysis along the lines of (2b) for the three types of restrictive relative clauses found in Brazilian Portuguese. Section 5 discusses some consequences of the proposal in the context of free relatives and finally, some concluding remarks are presented in Section 6.

## 2. NP raising and *que*-to-*qui* effects

The structure proposed for *that*-relatives tacitly assumes that the launching position of the movement depicted in (2a) is an NP gap, which is at odds with the unacceptability of sentences such as (3), where an NP occupies such position (see Borsley, 1997 and Kato and Nunes, 1997, 1998).

- (3) \*Bill saw picture.

Bianchi (1999, 2000) remedies this problem by proposing that *that*-type relatives actually involve movement of a DP headed by a null relative determiner. The relative DP must also satisfy a Relative Criterion by adjoining to a CP headed by a relative complementizer. From this position, the null relative determiner then incorporates into the external determiner, as illustrated in (4).

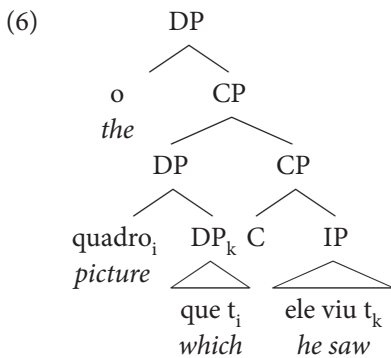


Bianchi shows that her proposal not only correctly excludes (3), but also provides an account of the complex paradigm involving relative complementizer deletion in English.

At first sight, “*that*-relatives” in Brazilian Portuguese such as the one illustrated in (5) should be subject to a similar analysis.<sup>2</sup>

- (5) o quadro que ele viu  
*the picture that he saw*  
 ‘the picture that he saw’

However, we would like to outline an alternative analysis to “*that*-relatives” in Brazilian Portuguese which shares with Bianchi’s proposal the idea that it is a DP that undergoes movement, but is more tuned to Kayne’s (1994) derivation of *wh*-relatives in (2b). More specifically, we propose that rather than a complementizer, *que* in (5) is actually a relative determiner. In other words, we propose that the derivation of a “*that*-relative clause” like (5) in Portuguese actually involves a structure along the lines of (6), with the relative CP headed by a null C.<sup>3</sup>



2. See Kenedy (2002) for such an analysis in Brazilian Portuguese.

3. Here we will abstract away from additional layers of structure between D and NP (see Bianchi 1999 for a specific proposal), which would make the movement of the NP depicted in (6) compatible with anti-locality restrictions (see Abels, 2003 and Grohmann, 2003 for relevant discussion).

Three different sets of facts provide suggestive evidence for this proposal. First, in addition to being homophonous with a declarative complementizer, as shown in (7a), *que* in Portuguese is also ambiguous with an interrogative *wh*-determiner, as illustrated in (7b).

- (7) a. Ele disse **que** ela saiu.  
*he said that she left*  
 'He said that she left.'
- b. **Que** quadro ele viu?  
*which picture he saw*  
 'Which picture did he see?'

If *que* in (5)/(6) is a relative *wh*-determiner, it is formally and functionally distinct from the interrogative *wh*-determiner in (7b) in obligatorily triggering movement of its complement NP. Or, in technical terms, the relative determiner *que* is endowed with a strong N-feature, as opposed to its interrogative cousin. This brings us to a second set of facts. Like all demonstratives in Portuguese, the demonstrative determiners *este* 'this.MASC.SG.' and *esta* 'this.FEM.SG.' (and their plural counterparts) precede their complement NP, as exemplified in (8).

- (8) a. Ele comprou **este livro**/\* **livro este**.  
*he bought this book book this*  
 'He bought this book.'
- b. \*Ele comprou **esta revista**/ \***revista esta**.  
*he bought this magazine magazine this*  
 'He bought this magazine.'

However, these demonstratives may also be used as relative pronouns of sorts in constructions such as (9a) and (10a) below, in which case they cannot precede their NP complement, as shown in (9b) and (10b). This shows that the correlation between being specified as a relative determiner and triggering overt movement of the complement NP is also found with other ambiguous determiners and is not an isolated property of *que*.

- (9) a. Ele sempre cita um livro, **livro este** que na verdade  
*he always cites a book, book this that in-the truth*  
 não existe  
*not exists*



- b. \*Ele sempre cita um livro, **este livro** que na verdade não  
*he always cites a book, this book that in-the truth not*  
 existe  
*exists*  
 ‘He always cites a book, which in fact does not exist.’
- (10) a. O meu time era o favorito, **posição esta** que atraía toda  
*the my team was the favorite, position this that attracted all*  
 a atenção.  
*the attention*
- b. \*O meu time era o favorito, **esta posição** que atraía toda  
*the my team was the favorite, this position that attracted all*  
 a atenção.  
*the attention*  
 ‘My team was the favorite and this position attracted all the attention.’

The last set of facts relates to the puzzling contrast in Romance between the interrogative pronoun associated with the feature [+human] and its relative counterpart. Take the Portuguese paradigm in (11) and (12), for instance.

- (11) a. **Quem** viu o professor?  
*who saw the teacher*  
 ‘Who saw the teacher?’
- b. **Quem** o professor viu?  
*who the teacher saw*  
 ‘Who did the teacher see?’
- c. **Com quem** o professor conversou?  
*with who the teacher spoke*  
 ‘Who did the teacher speak to?’
- (12) a. \*a pessoa **quem** viu o professor  
*the person who saw the teacher*  
 ‘the person who saw the teacher’
- b. \*a pessoa **quem** o professor viu  
*the person who the teacher saw*  
 ‘the person who the teacher saw’
- c. a pessoa **com quem** o professor conversou  
*the person with who the teacher spoke*  
 ‘the person who the teacher spoke to’

(11) shows that the interrogative pronoun *quem* can function as a subject (cf. (11a)), a direct object (cf. (11b)), or the complement of a preposition (cf. (11c)). By contrast, the homophonous relative pronoun *quem* in (12) can only function as the complement of a preposition (cf. (12c)), but not as a subject (cf. (12a)) or a direct object (cf. (12b)).<sup>4</sup> One could think that the relative *quem* is morphologically specified as oblique and, therefore, can only be licensed as the complement of a preposition. However, the fact that the homophonous interrogative *quem* is not so restricted casts some doubts on the plausibility of such an approach. Moreover, apart from the personal and possessive pronouns, no other pronouns inflect for Case in Portuguese.

Kayne's (1994) account of the puzzle illustrated in (12) has two steps. Taking English as a starting point, Kayne argues that a sentence such as (13a) is to be associated with the structure in (13b), where [*who man*] forms a constituent at some point during the derivation, or the structure in (13c) (following a suggestion by Giuliana Giusti), where *which* is spelled out as *who* under Spec-head agreement with a [+human] NP.<sup>5</sup> Crucially, in both cases the relativized NP adjoins to the *wh*-DP.

4. (i) below shows that this restriction is also observed with the so-called relative pronouns *qual* (*the.MASC.SG which.MASC.SG*), *os quais* (*the.MASC.PL which.MASC.PL*), *a qual* (*the.FEM.SG which.FEM.SG*), and *as quais* (*the.FEM.PL which.FEM.PL*), which differ from *quem* in being inflected for gender and number and being compatible with both [+human] and [-human] features. As far as we can see, the analysis we propose below for *quem* extends straightforwardly to these pronouns. For sake of space, we will however restrict our discussion to *quem*.

- (i) a. \*o livro/autor o qual era muito bom  
       *the book/author the which was very good*  
       'the book/author that was very good'
- b. \*o livro/autor o qual eu mencionei  
       *the book/author the which I mentioned*  
       'the book/author that I mentioned'
- c. o livro/autor sobre o qual eu falei  
       *the book/author about which I spoke*  
       'the book/author I spoke about'

5. This suggestion also applies, *mutatis mutandis*, to relative clauses introduced by *wh*-words corresponding to *where*, *when*, and *how*, as illustrated in (i) for Portuguese, which we will not discuss here.

- (i) a. a casa onde eu morava  
       *the house where I lived*  
       'the house where I used to live'
- b. na semana quando eu ia viajar  
       *in-the week when I went travel*  
       'in the week when I was going to travel'
- c. o modo como ele explicou o problema  
       *the way how he explained the problem*  
       'the way how he explained the problem'

- (13) a. the man who Bill saw  
 b. [the [<sub>CP</sub> [<sub>DP</sub> man<sub>i</sub> [<sub>DP</sub> who t<sub>i</sub>]]]<sub>k</sub> [<sub>CP</sub> C [<sub>IP</sub> Bill saw t<sub>k</sub>]]]]  
 c. [the [<sub>CP</sub> [<sub>DP</sub> man<sub>i</sub> [<sub>DP</sub> which t<sub>i</sub>]]]<sub>k</sub> [<sub>CP</sub> C [<sub>IP</sub> Bill saw t<sub>k</sub>]]]]

As for the contrasts in Italian and French shown in (14) and (15) below, Kayne proposes, following a suggestion by Valentina Bianchi, that the problem in (14) is that there are not enough positions to accommodate both the relative pronoun and the relativized NP (the “head” of the relative clause). Given that in Kayne’s system maximal projections allow only one Spec/adjunct, the moved NP in (13b), for instance, cannot adjoin to CP for the DP is already adjoined to it; hence, the moved NP must adjoin to the adjoined DP. According to Kayne, the difference between English (cf. (13a)), on the one hand, and Italian and French (cf. (14)), on the other, follows if English *who* licenses adjunction of its complement NP, but Italian *cui* and French *qui* don’t. That being so, sentences such as the ones in (15) are ruled in as the preposition provides an additional landing site for the relativized NP.

- (14) a. \**la persona cui Bill ha visto* (Italian)  
       *the person who Bill has seen*  
 b. \**la personne qui Bill a vue* (French)  
       *the person who Bill has seen*  
       ‘the person who Bill saw’
- (15) a. *la persona con cui Bill ha parlato* (Italian)  
       *the person with who Bill has spoken*  
 b. *la personne avec qui Bill a parlé* (French)  
       *the person with who Bill has spoken*  
       ‘the person Bill spoke to’

Although this proposal is able to capture the restriction illustrated in (12) and (14)-(15), there is no obvious account of why English should differ in this way from Italian, French, and Portuguese, as Kayne (1994: 90) himself acknowledges. Furthermore, as observed by Alexiadou, Law, Meinunger, & Wilder (2000), the reasoning only goes through if CP is not split. If CP is indeed split into different maximal projections (see Rizzi 1997), projections above the projection that hosts the adjoined *wh*-DP could in principle host the relativized NP.

We would like to suggest that a better account for the puzzle presented by (12) and (14)-(15) can be attained if “*that*-relatives” in these Romance languages are actually *which*-relatives, as proposed above. If so, the Portuguese paradigm in (12), for instance, follows if instead of dealing with a true relative pronoun, we are actually facing a phenomenon similar to *que*-to-*qui* conversion in French (see e.g. Kayne, 1976; Pesetsky, 1982; and Rizzi, 1990), as illustrated in (16).

- (16) a. *Quelle étudiante a Jean dit qui/\*que viendra?*  
*which student has Jean said who that will-come*  
 ‘Which student did Jean say will come?’
- b.  $[[\text{quelle étudiante}]_i \text{ a Jean dit } [{}_{\text{CP}} \text{t}_i [ \text{que } [{}_{\text{IP}} \text{t}_i \text{ viendra t}_i ]]]]$   
 $\downarrow$   
**qui**

Take the structure in (17a) below, for instance, where the relativized NP adjoins to the DP headed by the invariant relative determiner *que*, before adjoining to its final landing site, leaving a trace behind. As we should expect, (17a) may surface as (17b). However, notice that the configuration in (17a) bears a striking similarity with the standard *que*-to-*qui* configuration in (16b). In both cases we have a functional head surrounded by traces, associated with an idiosyncratic use of a *wh*-pronoun: *qui* in (16b) and *quem* in (12)/(17c). These similarities suggest that *quem* in (12c), repeated below in (17c), should also be analyzed along the lines of *qui* in (16b).

- (17) a.
- 
- b. *a pessoa com que o professor conversou*  
*the person with which the teacher spoke*  
 ‘the person who the teacher spoke to’
- c. *a pessoa com quem o professor conversou*  
*the person with who the teacher spoke*  
 ‘the person who the teacher spoke to’

Putting aside matters of technical implementation, our suggestion is that if the surface form *quem* in (17c) is to be subsumed under a *que*-to-*qui* effect, the contrast between the interrogative *quem* (cf. (11)) and the relative *quem* (cf. (12)) in Portu-

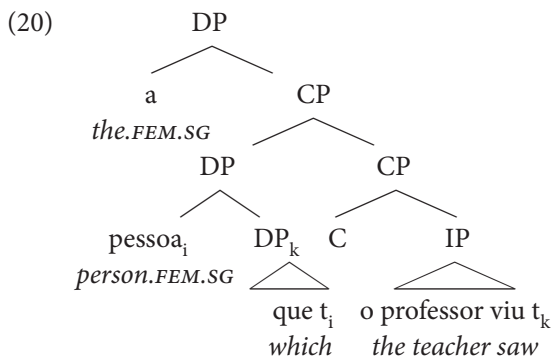
guese receives a straightforward account. Like the other interrogative pronouns, the interrogative *quem* is a basic lexical item and, therefore, can occur in any position it can be appropriately licensed. The relative *quem*, on the other hand, is a derived lexical item which is (optionally) obtained in the morphological component when it is surrounded by traces of a [+human] element ( $[t_{[+human]} \textit{que} t_{[+human]}]$ ), as is the case in (17a) (see fn. 3 and 4). As the structures associated with sentences such as (12a) and (12b), repeated below in (18a) and (19a), do not yield this configuration, as shown in (18b) and (19b), *quem* is accordingly blocked.

- (18) a. a pessoa **que** /\***quem** viu o professor?  
           *the person which who saw the teacher*  
           ‘the person who saw the teacher’
- b.  $[a [{}_{CP} [{}_{DP} \textit{pessoa}_i [{}_{DP} \textit{que} t_i]]_k [{}_{CP} C [{}_{IP} t_k \textit{viu o professor}]]]]$
- (19) a. a pessoa **que** /\***quem** o professor viu  
           *the person which who the teacher saw*  
           ‘the person who the teacher saw’
- b.  $[a [{}_{CP} [{}_{DP} \textit{pessoa}_i [{}_{DP} \textit{que} t_i]]_k [{}_{CP} C [{}_{IP} \textit{o professor viu} t_k]]]]$

To summarize, unsuspected *que*-to-*qui* effects lend considerable support to the approach pursued here. By analyzing apparent *that*-relatives in Brazilian Portuguese as *wh*-relatives, we are able to provide a unique derivation for relative clauses, subsuming surprising asymmetries such as the ones involving the so-called relative pronoun *quem* to other familiar syntax-phonology mismatches when traces are involved.

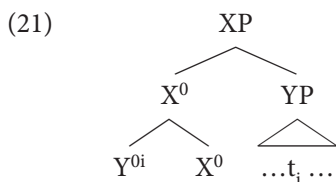
### 3. NP raising, adjunction, and ambiguous domains

Let us now turn our attention to the relation between the external determiner and the raised NP. Take the structure of (19a), for instance, given in (20).

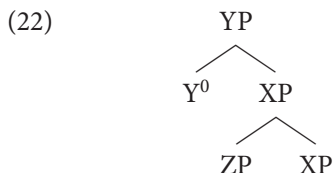


In (20), the external determiner *a* agrees in gender and number with the raised NP *pessoa*. In general, this agreement relation obtains between a determiner and its complement NP (see fn. 3). The question that then arises is how the same type of agreement can hold in the unorthodox configuration in (20), where the determiner has merged with the relative CP rather than raised NP.

This is in fact related to the general issue of why there should be adjunction configurations in the grammar. The question is even more pressing under Chomsky's (1995) bare phrase structure system, which distinguishes specifiers from adjuncts, but does not impose any limit on the number of specifiers a given head may take. Why should the language faculty allow the apparently more complicated adjunction structures in addition to straightforward "substitution" structures (pair-merge in addition to set-merge in Chomsky's 2000 terms)?<sup>6</sup> For head movement, the answer seems to be trivial: assuming that chain links must be in a c-command relation, head movement should only give rise to a well formed representation if the moved head did not end up dominated by a projection of the host so that it could c-command its trace, as illustrated in (21).



However, a syntactic justification for XP-adjunction, as illustrated in (22) below, is less obvious. What forces ZP in (22) to undergo pair-merge instead of set-merge? That is, why does the system resort to an adjunction configuration instead of a Spec-head configuration?



We would like to suggest that unambiguous cases of XP-adjunction such as (22) may constitute an optimal solution for the derivational step sketched in (23), where (i) Y, XP, and ZP are root syntactic objects; (ii) ZP must establish a syntactic relation  $\sigma_1$  with Y and a different syntactic relation  $\sigma_2$  with XP; and (iii) Y and XP enter into no syntactic relation with each other.

6. For relevant discussion see Hornstein & Nunes (2008), who propose that by not being labeled, adjunction structures are actually simpler than structures resulting from set-merge.

$$(23) \quad ZP_{\sigma_1, \sigma_2} \quad Y_{\sigma_1} \quad XP_{\sigma_2}$$

Assuming with Chomsky (2000) that every Merge operation must be licensed by Last Resort, if Y and ZP merge in (23) projecting YP, further merger between YP and XP is not licensed by Last Resort; similarly, if ZP merges with XP becoming the specifier of XP, subsequent merger of XP and Y is again prevented by Last Resort. In both scenarios, the derivations are canceled. Let us now consider how an adjunction configuration can solve the problem posed by (23), by computing the minimal domains that ZP in (22) belongs to, assuming Chomsky's (1993) definitions in (24) and (25):

$$(24) \quad \text{Domain of } \alpha \ (\delta(\alpha)):$$

The set of categories contained in  $\text{Max}(\alpha)$  that are distinct from and do not contain  $\alpha$ .

$$(25) \quad \text{Minimal Domain of } \alpha \ (\text{Min}(\delta(\alpha))):$$

The smallest subset K of  $\delta(\alpha)$  such that for any  $\gamma \in \delta(\alpha)$ , some  $\gamma \in K$  reflexively dominates  $\gamma$ .

In (22), ZP is contained in XP and the only element that reflexively dominates ZP within  $\delta(X)$  is ZP itself; hence, ZP falls within  $\text{Min}\delta(X)$ . Interestingly, ZP also falls within  $\text{Min}\delta(Y)$ , since ZP is contained in YP and is the only category in  $\delta(Y)$  that reflexively dominates ZP (crucially, XP contains but does not dominate ZP). Thus, if ZP adjoins to XP in (23), subsequent merger between Y and XP does satisfy Last Resort because ZP will end up being in the minimal domain of Y, allowing the syntactic relation  $\sigma_1$  to be established.

Going back to (20), the NP *pessoa* is only contained – not dominated – by the DP headed by *que* and the relative CP; hence, *pessoa* also falls within the minimal domain of the external determiner. To put it in different words, if head-complement relations require mutual c-command and c-command is defined in terms of dominance, as standardly assumed, there is no substantial difference between the configuration involving *a* and *pessoa* in (20) and the canonical DP configuration [<sub>DP a pessoa</sub>].<sup>7</sup> In both configurations, the determiner and the NP are in a mutual c-command relation, which allows them to establish the relevant syntactic relations.

Independent evidence for this approach to the relation between the external determiner and the raised NP can be found with another type of relative clauses, namely, free/headless relative clauses (see Kato & Nunes, 1997, 1998). As is well known, free relative clauses generally exhibit matching effects between the matrix and the embedded clause. In Portuguese, for instance, this matching is instantiated

7. Bianchi (1999: 59) reaches the same conclusion based on Manzini's (1994) notion of locality, adapted from Chomsky (1993).

by a sort of preposition sharing.<sup>8</sup> Take the paradigm in (26) below, for instance, which shows that the verbs *discordar* ‘disagree’ and *rir* ‘laugh’ select for the preposition *de* ‘of’, whereas the verbs *concordar* ‘agree’ and *competir* ‘compete’ select for the preposition *com* ‘with’. When one of these verbs takes a free relative clause as its complement, it must be the case that the selectional properties of the matrix and the embedded verb match, as shown in (27a) and (27b). In turn, (27c) and (27d) are ruled out because the preposition chosen satisfies the selectional requirements of one of these verbs, but not the other.

- (26) a. Eu discordar/ri        **de**le    /\***com** ele  
*I disagreed/laughed of-him with him*  
 ‘I disagreed with him.’/‘I laughed at him.’
- b. Eu concordar/ competir    **com** ele    /\***de**le  
*I agreed competed with him of-him*  
 ‘I agreed/competed with him.’
- (27) a. Ele só compete **com** quem ele concorda.  
*he only competes with who he agrees*  
 ‘He always competes with who he agrees with.’
- b. Ele sempre ri        **de** quem ele discorda  
*he always laughs of who he disagrees*  
 ‘He always at who he disagrees with.’
- c. Ele sempre concorda \***com** quem/\***de** quem ele ri  
*he always agrees with who of who he laughs*  
 ‘He always agrees with who he laughs at.’
- d. Ele sempre ri        \***de** quem/\***com** quem ele compete  
*he always laughs of who with who he competes*  
 ‘He always laughs at who he competes with.’

The interpretation of the adjunction structure in (22) proposed above accounts for these matching effects as follows: at some point in the derivation of (27a), for instance, CP (= XP in (22)) has been assembled and the verb *competir* (= Y in (22)) is selected from the numeration, as shown in (28) below. CP and *competir* cannot merge at this point because *competir* does not select for a CP. The strong *wh*-feature of C then triggers the copying of the PP *com quem* (= ZP in (22)), as shown in (29). Although Last Resort would license set-merger of PP with either *competir* or CP, no further set-merger would be licensed if one of these possibilities of merger were implemented, because *competir* and CP do not have features that would sanction such merger, as discussed with respect to the derivational step in (28).

8. For general discussion of free relatives in Brazilian Portuguese, see Medeiros Junior (2005).



The computational system may then adjoin PP to CP, allowing the strong *wh*-feature to be checked, and merge the resulting structure with *compete*, yielding the structure in (30).

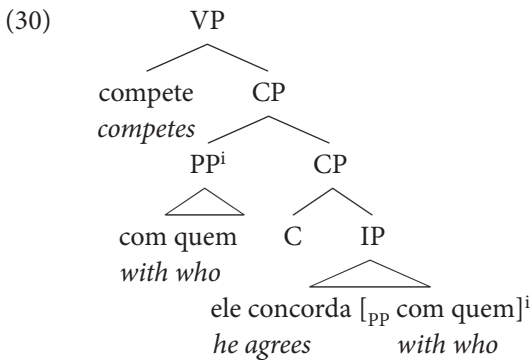
(28) a. XP = [<sub>CP</sub> C [ ele concorda [<sub>PP</sub> com quem]]]  
           *he agrees with who*

b. Y = *compete*  
       *competes*

(29) a. XP = [<sub>CP</sub> C [ ele concorda [<sub>PP</sub> com quem]<sup>i</sup>]]  
           *he agrees with who*

b. Y = *compete*  
       *competes*

c. ZP = [<sub>PP</sub> com quem]<sup>i</sup>  
       *with who*



As opposed to what happened in the derivational step in (28), merger of *compete* and CP in (30) now satisfies Last Resort because the moved PP falls within  $\text{Min}(\delta(\textit{compete}))$  and they can establish the relevant syntactic relation ( $\theta$ -relation).<sup>9</sup>

9. In (28)-(30), the pronoun *quem* is a regular lexical item that can undergo regular merger and is not a product of *que-to-quem* discussed in Section 2. Thus, we also find free relatives where *quem* can be a subject or an object, as illustrated in (i) below. As for the impossibility of these instances of *quem* in restrictive relatives in Portuguese (cf. (12a) and (12b)), we conjecture that free relative *quem* has a hidden polarity feature corresponding to English *-ever* which makes it semantically incompatible with environments that license restrictive relatives.

- (i) a. Quem chegar primeiro chama os outros.  
       *who arrives first calls the others*  
       ‘Whoever arrives first should call the others.’  
       b. Eu vou contratar quem você recomendar  
       *I go hire who you recommend*  
       ‘I’m going to hire whoever you recommend.’

To summarize, the adjunction structure employed in Kayne's (1994) analysis of relative clauses not only technically allows an external determiner and the raised NP to establish syntactic relations between them, but also receives independent support from structures which seem to involve shared constituents, as is the case of free relatives.

#### 4. A uniform account for the three types of restrictive relatives in Brazilian Portuguese

In his seminal work on relative clauses in Brazilian Portuguese, Tarallo (1983) postulated three types of relativization strategies, each of which with a different sociolinguistic status: the standard, the resumptive, and the chopping strategy, as respectively illustrated in (31).<sup>10</sup>

- (31) a. a pessoa com quem eu conversei  
           *the person with who I talked*  
       b. a pessoa que eu conversei com ela  
           *the person that I talked with her*  
       c. a pessoa que eu conversei  
           *the person that I talked*  
           ‘the person I talked to’

Standard relatives are introduced by a *wh*-constituent and have a trace in the position of the relativized constituent. According to Tarallo, the nonstandard versions involve the complementizer *que* and a resumptive pronoun, which may be overtly realized, as in (31b), or may be null, as in (31c). In the latter case, the preposition associated with the resumptive pronoun is assumed to be deleted in the phonological component, as Brazilian Portuguese in general does not allow for preposition stranding.<sup>11</sup>

10. Here we will abstract from the general preference for the overt pronoun when the “head” of the relative is animate and the null pronoun when the “head” is inanimate (see e.g. Tarallo, 1983; Duarte, 1986, Cyrino, 1997; and Ferreira, 2000).

11. These three different types of relative clauses are easily distinguishable when PPs are involved. When relativization involves a subject or a direct object position, as exemplified in (i), we find potential structural ambiguity between the standard strategy (with a trace) and the strategy with a null resumptive pronoun.

- (i) a. a pessoa que *ec* comprou o livro  
           *the person which bought the book*  
           ‘the person that bought the book’

Kato (1993a) observes that if the chopping strategy involves preposition deletion because prepositions cannot be left stranded in Brazilian Portuguese, the counterpart of a sentence such as (31a) given in (32) below would be incorrectly ruled in under a combination of the standard strategy with the chopping strategy sketched in (33). That is, the relative pronoun *quem* could undergo A'-movement and the stranded preposition could be deleted in the phonological component.

- (32) \*a  *pessoa quem eu conversei*  
 *the person who I talked*  
 'the person I talked to'
- (33) a.  *a pessoa [quem<sub>i</sub> eu conversei com t<sub>i</sub>]*  
 *the person who I talked with*  
 b.  *a pessoa [quem<sub>i</sub> eu conversei ~~com~~ t<sub>i</sub>]*

As an alternative to Tarallo's (1983) tripartite system, Kato (1993a) proposes a unique relativization strategy to derive the three types of restrictive relative clauses in Brazilian Portuguese. First, she shows that the nonstandard relatives actually

- 
- b.  *a pessoa que eu vi ec*  
 *the person which I saw*  
 'the person that I saw'

In the case of subjects, these possibilities can be distinguished with island configurations. Given that Brazilian Portuguese lacks resumptive null subjects (see e.g. Figueiredo Silva, 1996; Ferreira, 2000, this volume), as illustrated in (iia) below, we are led to the conclusion that (ia) can only be derived through the standard strategy in Tarallo's terms, i.e. via movement. In the case of objects, on the other hand, islands are of no help as Brazilian Portuguese allows base generated null objects, with no island sensitivity, as shown in (iib) (see e.g. Galves, 1984; Farrell, 1990; Kato, 1993b; Cyrino, 1997; and Ferreira, 2000). That is, environments such as (ib), where islands are not involved, are compatible with both a movement and a null resumptive analysis. However, two sorts of facts lead to the conclusion that (ib) is to be associated with the movement analysis, only. First, Nunes & Santos (this volume) show that stress shift, which in Brazilian Portuguese ignores traces but not *pro*, may apply in environments such as (ib); hence, (ib) can definitely be analyzed in terms of movement. Second, Grolla (2000) and Lessa de Oliveira (2008) show that children acquiring Brazilian Portuguese produce clauses such as (i) much earlier than clauses with resumptives (regardless of whether they are null or overt). If correct, this conclusion supports Hornstein's (2001, 2007) economy proposal according to which movement preempts resumption if both options lead to convergent derivations. For purposes of discussion, from now on we concentrate on the transparent cases of relative clauses involving PPs.

- (ii) a. \**[a pessoa]<sub>i</sub> que eu li o livro que ec<sub>i</sub> comprou*  
 *the person which I read the book which bought*  
 'the person who I read the book the he bought'
- b. *[o livro]<sub>i</sub> que eu entrevistei a pessoa que escreveu ec<sub>i</sub>*  
 *the book that I interviewed the person that wrote*  
 'the book that I interviewed the person who wrote it'

mimic what is independently found with left dislocation in Brazilian Portuguese. That is, a left dislocated element in Brazilian Portuguese may be resumed by either an overt pronoun, as shown in (34), or a null pronoun,<sup>12</sup> as shown in (35).<sup>13</sup>

- (34) a. [esse livro]<sub>i</sub>, ele<sub>i</sub> é muito bom  
*this book it is very good*  
 ‘This book is very good.’
- b. [esse livro]<sub>i</sub>, eu comprei ele<sub>i</sub> ontem  
*this book I bought it yesterday*  
 ‘This book, I bought yesterday.’
- c. [esse livro]<sub>i</sub>, eu estava precisando dele<sub>i</sub> ontem  
*this book I was needing of-it yesterday*  
 ‘This book I needed yesterday’
- (35) a. [esse livro]<sub>i</sub>, eu entrevistei a pessoa que escreveu *pro*<sub>i</sub>  
*this book I interviewed the person that wrote*  
 ‘This book, I interviewed the person who wrote it.’
- b. [esse livro]<sub>i</sub>, eu falei com um aluno que estava  
*this book I spoke with a student that was*  
 precisando *pro*<sub>i</sub> ontem  
*needing yesterday*  
 ‘This book, I spoke with a student that needed it yesterday.’

The fact that in (35a) and (35b) a relative clause island intervenes between *esse livro* and the empty category ensures that we are not dealing with movement of the material in the left dislocated position. That is, the empty category in (35) is a pronominal of sorts.

Notice that as opposed to what we see in (35b), if an overt DP occupies the object position of *precisar*, the preposition is obligatorily required, as shown in (36).

- (36) Um aluno estava precisando \*(d)esse livro ontem  
*a student was needing of-this book yesterday*  
 ‘A student needed this book yesterday.’

12. Kato (1993a) in fact analyzed the empty category in constructions such as (35b) as resulting from some sort of ellipsis, as PPs have no corresponding proforms. For reasons to be presented below, in this paper we reinterpret this empty category as a null pronoun and, accordingly, we will represent it as *pro* in the structures that follow. For phonological evidence that structures such as (35) do involve *pro*, see Nunes and Santos (this volume).

13. As we saw in fn. 11, Brazilian Portuguese does not have the null resumptive pronoun alternative for subjects. Thus, (35) only presents examples with the empty category in object position.

One could take (36) to indicate that the null resumptive pronoun in (35b) is somewhat defective in that it may occur in an environment where structural Case is not available. For instance, Ferreira (2000) proposes that the null pronoun in constructions such as (35) is defective in not having a Case-feature.<sup>14</sup> Although able to account for the contrast between (35b) and (36), this proposal fails to capture the lexical conditioning on the environment that allows such defective empty pronouns, as illustrated by the contrast between (35b) and (37b) below (see Kato, 2008). Although both *precisar* and *rir* select for the preposition *de* (cf. (36) and (37a)), only *precisar* licenses a null resumptive pronoun in a left dislocated structure (cf. (35b) vs. (37b)). Moreover, the contrast between (35b) and (37b) is replicated in analogous relative clauses, as illustrated in (38).

- (37) a. A Maria riu \*(d)o João  
*the Maria laughed of-the João*  
 ‘Maria laughed at João.’
- b. O João, a Maria riu \*(de)le  
*the João the Maria laughed of-him*  
 ‘João, Maria laughed at him.’
- (38) a. Este é o livro que eu estava precisando (de)le  
*this is the book that I was needing of-it*  
 ‘This is the book that I needed.’
- b. Esta é a pessoa que a Maria riu \*(dela)  
*this is the person that the Maria laughed of-her*  
 ‘This is the person Maria laughed at.’

We would like to suggest that the preposition *de* in (36) is actually a realization of inherent Case (see Chomsky, 1986).<sup>15</sup> Assuming that insertion of prepositions for purposes of inherent Case realization is subject to Last Resort, the preposition will surface just in case the object is overt; when it is null, there is no need for it to show up.<sup>16</sup> From this perspective, the fact that preposition dropping is lexically determined is expected as inherent Case is tied to lexical/thematic selection.

14. In order to prevent such defective null pronoun from being used as a resumptive subject – possibility that should be excluded in Brazilian Portuguese (see fn. 11) –, Ferreira (2000) proposes that without a Case feature, the null pronoun would be inactive for the computational system and would not be able to check the EPP.

15. On post-syntactic insertion of prepositions in Portuguese, see Raposo (1997).

16. Another example of this last resort nature of preposition insertion as inherent Case realization is illustrated by Serbo-Croatian with examples like (i) (adapted from Bošković 2006: 525). (ia) shows that when the instrument Case morphology can be realized by the NP, insertion of the preposition *sa* ‘with’ is prevented. By contrast, given that “higher numerals” like *pet* ‘five’ in

That being so, let us return to Kato's (1993a) analysis. Given the salient productivity of left dislocated constructions such as (34) and (35) in Brazilian Portuguese, Kato (1993a) proposes that *que* in relative clauses is always a relative pronoun and it may also be generated in the left dislocation position (where it receives default Case). According to her, the difference between the three types of relative clauses is not in terms of the grammatical resources employed, but rather the launching site of the movement of the relative pronoun *que*. If *que* is generated in an argument position, as exemplified in (39) below, it yields standard relatives after moving to Spec of CP. When prepositions are involved in this scenario, we accordingly find pied-piping (cf. (39c)) and island effects (cf. (39d)). In fact, given that PPs cannot be left dislocated, as exemplified in (40), relative clauses with pied-piping must involve movement and cannot co-occur with resumption, as illustrated in (41).

- (39) a. [[*aquela pessoa*]<sub>i</sub> [<sub>CP</sub> *que*<sub>i</sub> [<sub>IP</sub> *t*<sub>i</sub> *comprou o livro*]]]  
*that person which bought the book*  
 'that person who bought the book'
- b. [[*o livro*]<sub>i</sub> [<sub>CP</sub> *que*<sub>i</sub> [<sub>IP</sub> *aquela pessoa comprou t*<sub>i</sub>]]]  
*the book which that person bought*  
 'the book which that person bought'
- c. [[*o livro*]<sub>i</sub> [<sub>CP</sub> [<sub>PP</sub> *de que*]<sub>k</sub> [<sub>IP</sub> *você precisa t*<sub>i</sub>]]]  
*the book of which you need*  
 'the book you need'
- d. \*[[*o livro*]<sub>i</sub> [<sub>CP</sub> [<sub>PP</sub> *de que*]<sub>k</sub> [<sub>IP</sub> *você falou com um aluno que está precisando t*<sub>i</sub>]]]  
*the book of which you spoke with a student that was needing*  
 'the book that you spoke with a student who needs it'

---

Serbo-Croatian do not decline, the realization of inherent instrumental Case in (ib) is only possible if the preposition is inserted (see Bošković, 2006, and Hornstein, Martins & Nunes, 2008, and Nunes 2008, for further examples and discussion).

- (i) a. On je ovladao (\**sa*) zemljom.  
*he is conquered with country(INSTR.SG)*  
 'He conquered that country.'
- b. On je ovladao \*(*sa*) pet zemalja.  
*he is conquered with five countries(GEN.PL).*  
 'He conquered five countries.'

- (40) (\*com) [a minha amiga]<sub>i</sub>, você falou com ela<sub>i</sub> por telefone  
*with the my friend you spoke with her by telephone*  
 ‘That friend of mine, you spoke with her on the phone.’
- (41) \*Esta é [a minha amiga]<sub>i</sub> com que<sub>i</sub>/com quem<sub>i</sub> você falou com  
*this is the my friend with which/with who you spoke with*  
 ela<sub>i</sub> por telefone  
*her by telephone*  
 ‘that friend of mine who you spoke to on the phone.’

By contrast, if *que* is generated in the left dislocation position, we obtain non-standard relatives, with no island effects and no pied-piping. That is, given the general availability of left dislocation structures in Brazilian Portuguese, it allows nonstandard relative clauses like the ones exemplified in (42)-(44), with an overt pronoun, and (45)-(46), with a null pronoun.<sup>17</sup>

- (42) a. Eu tenho uma amiga que ela é muito engraçada.  
*I have a friend which she is very funny*  
 ‘I have a friend who is very funny.’
- b. Eu tenho [[uma amiga]<sub>i</sub> [<sub>CP</sub> que<sub>i</sub> [<sub>LD</sub> t<sub>i</sub> [<sub>IP</sub> ela<sub>i</sub> é muito engraçada]]]]
- (43) a. Este é o livro que o João sempre cita ele.  
*this is the book which the João always cites it*  
 ‘This is the book that João always cites.’
- b. Este é [[o livro]<sub>i</sub> [<sub>CP</sub> que<sub>i</sub> [<sub>LD</sub> t<sub>i</sub> [<sub>IP</sub> o João sempre cita ele<sub>i</sub>]]]]
- (44) a. Este é o livro que você vai precisar dele amanhã.  
*this is the book which you go need of-it tomorrow*  
 ‘This is the book that you’re going to need tomorrow.’
- b. Este é [[o livro]<sub>i</sub> [<sub>CP</sub> que<sub>i</sub> [<sub>LD</sub> t<sub>i</sub> [<sub>IP</sub> você vai precisar dele<sub>i</sub> amanhã]]]]

17. It is immaterial for the present discussion what kind of projection LD in the structures that follow really is. All that matters is that it is the position that hosts left dislocated material and is between IP and CP. We will also abstract away for some interfering factors such as definiteness restrictions in the derivations of sentences like (42a). For unclear reasons, relative clauses involving an overt resumptive in the subject position is generally acceptable if the “head” of the relative is indefinite; if the head is definite, the resumptive pronoun cannot be subjacent to the relative pronoun, as exemplified in (i).

(i) Este é o livro que \*(a Maria disse que) ele é muito bom.  
*this is the book that the Maria said that it is very good*  
 ‘This is the book that (Mary said) is very good.’

- (45) a. Este é o livro que eu entrevistei a pessoa que escreveu.  
*this is the book which I interviewed the person which wrote*  
 ‘This is the book that I interviewed the person who wrote it.’
- b. Este é [[o livro]<sub>i</sub> [<sub>CP</sub> que<sub>i</sub> [<sub>LD</sub> t<sub>i</sub> [<sub>IP</sub> eu entrevistei a pessoa que escreveu *pro*<sub>i</sub>]]]]
- (46) a. Este é o livro que você estava precisando  
*this is the book which you were needing*  
 ‘This is the book that you needed.’
- b. Este é [[o livro]<sub>i</sub> [<sub>CP</sub> que<sub>i</sub> [<sub>LD</sub> t<sub>i</sub> [<sub>IP</sub> você estava precisando *pro*<sub>i</sub>]]]]

As for the unacceptability of (32), repeated below in (47), Kato suggested that *quem* retained its specification as accusative from Old Romance and should therefore be excluded in sentences such as (47), for *conversar* does not license accusative Case.

- (47) \*a pessoa quem eu conversei  
*the person who I talked*  
 ‘the person I talked to’

This suggestion is not without problems, though. First, it fails to provide an account of why only the relative *quem* retained its accusative specification, whereas the homonymous interrogative *quem* is compatible with any type of Case, as seen in Section 2. Second, restrictive relative clauses are also excluded when there is accusative Case available for *quem*, as illustrated in (48).

- (48) \*o escritor quem eu entrevistei  
*the writer who I interviewed*  
 ‘the writer who I interviewed’

We can however maintain the essence of Kato’s (1993a) uniform analysis of relative clauses in Brazilian Portuguese and account for (48) if we reinterpret it in terms of the raising analysis we advocated in Sections 2 and 3. That is, we maintain that the so-called relative pronoun *quem* actually reflects a *que*-to-*qui* type of effect, which arises when the NP complement of the invariant relative determiner *que* moves from its adjoined position leaving two traces surrounding *que*. Thus, the structure in (49) below cannot surface as (48), as the configuration for *que*-to-*qui* to apply ( $[t_{[+human]} que t_{[+human]}]$ ) does not arise.

- (49) [<sub>DP</sub> o [<sub>CP</sub> [<sub>DP</sub> escritor<sub>i</sub> [<sub>DP</sub> **que** t<sub>i</sub>]]]<sub>k</sub> [<sub>CP</sub> C [<sub>IP</sub> eu entrevistei t<sub>k</sub>]]]  
*the writer which I interviewed*



More generally, we also maintain that restrictive relative clauses in Brazilian Portuguese are of the *which*-type in Kayne's (1994) system, with *que* being a relative determiner, rather than a complementizer. Now, borrowing Kato's idea, we will assume that a DP headed by the relative determiner can be generated in the left dislocated position. Under this view, the derivation of standard and nonstandard relative clauses is as respectively exemplified in (50)-(51):

(50) *Standard relatives* (cf. (39)):

- a. [aquela [<sub>CP</sub> [<sub>DP</sub> pessoa<sub>i</sub> [<sub>DP</sub> que t<sub>i</sub>]]]<sub>k</sub> [<sub>CP</sub> C [<sub>IP</sub> t<sub>k</sub> comprou o livro]]]]  
*that person which bought the book*  
 'that person who bought the book'
- b. [o [<sub>CP</sub> [<sub>DP</sub> livro<sub>i</sub> [<sub>DP</sub> que t<sub>i</sub>]]]<sub>k</sub> [<sub>CP</sub> C [<sub>IP</sub> aquela pessoa comprou t<sub>k</sub>]]]]  
*the book which that person bought*  
 'the book which that person bought'
- c. [o [<sub>CP</sub> [<sub>PP</sub> livro<sub>i</sub> [<sub>PP</sub> de [<sub>DP</sub> t<sub>i</sub> [<sub>DP</sub> que t<sub>i</sub>]]]]]<sub>k</sub> [<sub>CP</sub> C [<sub>IP</sub> você  
*the book of which you*  
 precisa t<sub>k</sub> ]]]]  
*need*  
 'the book you need'

(51) *Nonstandard relatives with overt resumptives* (cf. (42)-(44)):

- a. Eu tenho [uma [<sub>CP</sub> [<sub>DP</sub> amiga<sub>i</sub> [<sub>DP</sub> que t<sub>i</sub>]]]<sub>k</sub> [<sub>CP</sub> C [<sub>LD</sub> t<sub>k</sub> [<sub>IP</sub> ela<sub>i</sub> é  
*I have a friend which she is*  
 muito engraçada]]]]]  
*very funny*  
 'I have a friend who is very funny.'
- b. Este é [o [<sub>CP</sub> [<sub>DP</sub> livro<sub>i</sub> [<sub>DP</sub> que t<sub>i</sub>]]]<sub>k</sub> [<sub>CP</sub> C [<sub>LD</sub> t<sub>k</sub> [<sub>IP</sub> o João  
*this is the book which the João*  
 sempre cita ele<sub>k</sub>]]]]]  
*always cites it*  
 'This is the book that João always cites.'
- c. Este é [o [<sub>CP</sub> [<sub>DP</sub> livro<sub>i</sub> [<sub>DP</sub> que t<sub>i</sub>]]]<sub>k</sub> [<sub>CP</sub> C [<sub>LD</sub> t<sub>k</sub> [<sub>IP</sub> você vai precisar  
*this is the book which you go need*  
 dele<sub>k</sub> amanhã]]]]]  
*of-it tomorrow*  
 'This is the book that you're going to need tomorrow.'

- (52) *Nonstandard relatives with null resumptives* (cf. (45)-(46)):
- a. Este é [o [<sub>CP</sub> [<sub>DP</sub> livro<sub>i</sub> [<sub>DP</sub> que t<sub>i</sub>]]<sub>k</sub> [<sub>CP</sub> C [<sub>LD</sub> t<sub>k</sub> [<sub>IP</sub> eu entrevistei  
*this is the book which I interviewed*  
 a pessoa que escreveu pro<sub>k</sub>]]]]]  
*the person which wrote*  
 ‘This is the book that I interviewed the person who wrote it.’
- b. Este é [o [<sub>CP</sub> [<sub>DP</sub> livro<sub>i</sub> [<sub>DP</sub> que t<sub>i</sub>]]<sub>k</sub> [<sub>CP</sub> C [<sub>LD</sub> t<sub>k</sub> [<sub>IP</sub> você estava  
*this is the book which you were*  
 precisando pro<sub>k</sub>]]]]]  
*needing*  
 ‘This is the book that you needed’

It should be noted that being allowed to be generated in the left dislocation position is not an exceptional feature of the relative *que*-phrases in Brazilian Portuguese. As shown in (53) and (54), D-linked interrogative *wh*-phrases can also occupy this position and also be associated with an overt or a null resumptive pronoun (see Ferreira, 2000 for relevant discussion).

- (53) a. [que professor]<sub>i</sub>, todos os alunos disseram que ele<sub>i</sub> é ótimo?  
*which teacher all the students said that he is excellent*  
 ‘Which teacher did all the students say is excellent?’
- b. [que professor]<sub>i</sub>, todos os alunos adoram ele<sub>i</sub>?  
*which teacher all the students adore him*  
 ‘Which teacher do all the students love?’
- c. [que professor]<sub>i</sub>, todos os alunos queriam conversar com ele<sub>i</sub>?  
*which teacher all the students wanted talk with him*  
 ‘Which teacher did all the students want to talk to?’
- (54) a. [que livro]<sub>i</sub> tinha um freguês que queria comprar pro<sub>i</sub>?  
*which book has a customer which wanted buy*  
 ‘Which book was there a customer who wanted to buy it?’
- b. [que livro]<sub>i</sub> você está precisando pro<sub>i</sub>?  
*which book you are needing*  
 ‘Which book do you need?’

## 5. Back to free relatives in Brazilian Portuguese

One interesting consequence of the analysis proposed above involves free relatives in Brazilian Portuguese. Lessa de Oliveira (2008) observes that free relatives in BP can

be of the “chopping” variety, as illustrated by her examples in (55) below. Crucially, the embedded verbs of (55) both require a PP complement, as shown in (56).

- (55) a. Eu vou visitar quem<sub>i</sub> você simpatiza muito  
*I go visit who you sympathize much*  
 ‘I’m going to visit who you like a lot.’
- b. Eu encontrei o que você gosta  
*I found what you like*  
 ‘I found what you like.’
- (56) a. O João simpatiza \*(com) a Maria  
*the João sympathizes with the Maria*  
 ‘João likes Maria.’
- b. O João gosta \*(de) romances  
*the João likes of novels*  
 ‘João likes novels.’

Assuming a previous version of this paper, Lessa de Oliveira combines the analysis of free relatives presented in Section 3 with the analysis of “chopping” restrictive relatives presented in Section 4 and proposes that “chopping” free relatives such as (55) are to be derived along the lines of (57), with the relative pronoun adjoined to CP (see fn. 9) and *pro* occupying the embedded object position.

- (57) a. [eu vou visitar [<sub>CP</sub> quem<sub>i</sub> [<sub>CP</sub> você simpatiza muito *pro]]]  
*I go visit who you sympathizes much**
- b. [eu encontrei [<sub>CP</sub> o que<sub>i</sub> [<sub>CP</sub> você gosta *pro]]]  
*I found what you like**

Lessa de Oliveira’s approach to “chopping” free relatives makes an interesting prediction: there should be matrix-embedded asymmetries with respect to matching effects. Let us consider the data in (58)-(60), for example.

- (58) a. Ela não riu \*(d)o palhaço.  
*she not laughed of-the clown*  
 ‘She didn’t laugh at the clown.’
- b. Ela não gostou \*(d)o palhaço.  
*she not liked of-the clown*  
 ‘She didn’t like the clown.’
- (59) a. \*[aquele palhaço]<sub>p</sub>, ela não riu *pro*<sub>i</sub>  
*that clown she not laughed*  
 ‘That clown, she didn’t laugh at him.’

b. [aquele palhaço]<sub>i</sub>, ela não gostou *pro*<sub>i</sub>  
*that clown she not liked*  
 ‘That clown, she didn’t laugh at him.’

- (60) a. \*O João sempre critica quem ele ri  
*the João always criticizes who he laughs*  
 ‘João always criticizes whoever he laughs at.’  
 b. O João sempre critica quem ele gosta  
*the João always criticizes who he likes*  
 ‘João always criticizes whoever he likes.’

(58) shows that both the verbs *rir* ‘laugh’ and *gostar* ‘like’ select for a complement headed by the preposition *de*. In turn, (59) shows that only the verb *gostar* can be associated with a left dislocation structure with a null resumptive; accordingly, only *gostar* admits a free relative with a null resumptive (cf. (60a) vs. (60b)), as represented in (61).

(61) [o João sempre critica [<sub>CP</sub> quem<sub>i</sub> [<sub>CP</sub> ele gosta *pro*<sub>i</sub>]]]  
└─inherent Case─┘

Interestingly, if the matrix and the embedded verb are switched, as shown in (62), the preposition now becomes obligatory.

(62) O João sempre gosta \*(de) quem ele critica  
*the João always likes of who he criticizes*  
 ‘João always likes whoever he criticizes.’

Recall from Section 3 that the merger of a matrix verb and the relative CP in free relatives can satisfy Last Resort if the verb and the adjoined *wh*-element enter into a thematic relationship. Thus, in the case of (62) *gostar* must assign a  $\theta$ -role to *quem* in the structure represented in (63) below. Once the *wh*-element is assigned a  $\theta$ -role, the inherent Case associated with this  $\theta$ -role gets realized as *de*. (63) therefore contrasts with (61) in that the realization of inherent Case in the latter is prevented by Last Resort.

(63) [o João sempre [<sub>VP</sub> gosta [<sub>CP</sub> quem<sub>i</sub> [<sub>CP</sub> ele critica t<sub>i</sub>]]]  
└─inherent Case─┘  
↓  
*de*

To sum up, Lessa de Oliveira’s (2008) extension of our account of “chopping” restrictive relatives to free relatives provides further illustration of the role of inherent Case in licensing “chopping” relatives in BP.

## 6. Concluding remarks

In this paper we have argued that relative clauses in Brazilian Portuguese provide further evidence for Kayne's (1994) raising approach to relative clauses. By reinterpreting Kato's (1993a) analysis in terms of Kayne's (1994) proposal for the derivation of *wh*-relatives, we were able to maintain a uniform account for different types of relative clauses in Brazilian Portuguese, while at the same time correlating the features of the analysis to other independent properties of the language and circumventing the problems posed by the exceptional distribution of the so-called relative pronoun *quem*.

## References

- Abels, K. (2003). *Successive Cyclicity, Anti-locality, and Adposition Stranding*. Doctoral dissertation, University of Connecticut.
- Alexiadou, A., P. Law, A. Meinunger & C. Wilder (2000). Introduction. In *The Syntax of Relative Clauses* (A. Alexiadou, P. Law, A. Meinunger & C. Wilder, eds.), pp. 1–51. John Benjamins, Amsterdam.
- Bianchi, V. (1999). *Consequences of Antisymmetry: Headed Relative Clauses*. Mouton de Gruyter, Berlin.
- Bianchi, V. (2000). The Raising Analysis of Relative Clauses: A Reply to Borsley. *Linguistic Inquiry*, 31, 123–140.
- Borsley, R. (1997). Relative Clauses and the Theory of Phrase Structure. *Linguistic Inquiry*, 28, 629–647.
- Bošković, Ž. (2006). Case Checking *versus* Case Assignment and the Case of Adverbial NPs. *Linguistic Inquiry* 37:522–533.
- Chomsky, N. (1986). *Knowledge of Language: Its Nature, Origin, and Use*. Praeger, New York.
- Chomsky, N. (1993). A Minimalist Program for Linguistic Theory. In: *The View from Building 20: Essays in Honor of Sylvain Bromberger* (K. Hale & S. J. Keyser, eds.), pp. 1–29. The MIT Press, Cambridge, MA.
- Chomsky, N. (1995) *The Minimalist Program*. The MIT Press, Cambridge, MA.
- Chomsky, N. (2000). Minimalist Inquiries: The Framework. In: *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik* (R. Martin, D. Michaels & J. Uriagereka, eds.), pp. 81–155. The MIT Press, Cambridge, MA.
- Cyrino, S. (1997). *O Objeto Nulo no Português do Brasil: Um Estudo Sintático-Diacrônico*. Editora UEL, Londrina.
- Duarte, M. E. (1986). *Variação e Sintaxe: Clítico Acusativo, Pronome Lexical e Categoria Vazia no Português do Brasil*. Master's thesis, Pontifícia Universidade Católica de São Paulo.
- Farrell, P. (1990). Null Objects in Brazilian Portuguese. *Natural Language and Linguistic Theory*, 8, 325–346.
- Ferreira, M. (2000). *Argumentos Nulos em Português Brasileiro*. Master's thesis, Universidade Estadual de Campinas.

- Figueiredo Silva, M. C. (1996). *A Posição Sujeito no Português Brasileiro: Frases Finitas e Infinitivas*. Editora da UNICAMP, Campinas.
- Galves, C. (1984). Pronomes e Categorias Vazias no Português do Brasil. *Cadernos de Estudos Lingüísticos*, 7, 107–136.
- Grohmann, K. K. (2003). *Prolific Domains: On the Anti-Locality of Movement Dependencies*. John Benjamins, Amsterdam.
- Grolla, E. (2000). A Aquisição da Periferia Esquerda da Sentença em Português Brasileiro. Master's thesis, Universidade Estadual de Campinas.
- Hornstein, N. (2001). *Move! A minimalist theory of construal*. Blackwell, Malden.
- Hornstein, N. (2007). Pronouns in a Minimalist Setting. In: *The Copy Theory of Movement* (N. Corver & J. Nunes, eds.), pp. 351–385. John Benjamins, Amsterdam.
- Hornstein, N., A. M. Martins & J. Nunes (2008). Perception and Causative Structures in English and European Portuguese:  $\phi$ -feature Agreement and the Distribution of Bare and Prepositional Infinitives. *Syntax* 11:198–222.
- Hornstein, N. & J. Nunes (2008). Adjunction, Labeling, and Bare Phrase Structure. *Biolinguistics* 2:57–86.
- Kato, M. A. (1993a). Recontando a História das Relativas. In: *Português Brasileiro: Uma Viagem Diacrônica* (I. Roberts & M. A. Kato, eds.), pp. 223–261. Editora da UNICAMP, Campinas.
- Kato, M. A. (1993b). The Distribution of Pronouns and Null Elements in Object Position in Brazilian Portuguese. In *Linguistic Perspectives on the Romance Languages* (W. Ashby, M.M.G. Perissinotto & E. Raposo, eds.), pp. 225–235. John Benjamins, Amsterdam.
- Kato, M. A. (2008). Optional Prepositions in Brazilian Portuguese. Poster presented at the 38th Linguistic Symposium on Romance Languages (LSRL), University of Illinois at Urbana-Champaign, 4–6/4/08.
- Kato, M. A. & J. Nunes (1997). Orações Relativas, Adjunções e Restrições de Seleção. Paper presented at the II Encontro do Círculo de Estudos Lingüísticos do Sul (CELSUL). Universidade Federal de Santa Catarina, 10–11/4/97.
- Kato, M. A. & J. Nunes (1998). Two Sources for Relative Clause Formation in Brazilian Portuguese. Paper presented at the Eighth Colloquium on Generative Grammar. Universidade de Lisboa, 19–22/4/98.
- Kayne, R. (1976). French Relative *que*. In *Current Studies in Romance Linguistics* (F. Hensey & M. Luján, eds.), pp. 235–299. Georgetown University Press, Washington, D.C.
- Kayne, R. (1994). *The Antisymmetry of Syntax*. The MIT Press, Cambridge, MA.
- Kenedy, E. (2002). Aspectos Estruturais da Relativização em Português – Uma Análise Baseada no Modelo de *Raising*. Master's thesis, Universidade Federal do Rio de Janeiro.
- Lessa de Oliveira, A. (2008). As Sentenças Relativas em Português Brasileiro: Aspectos Sintáticos e Fatos de Aquisição. Doctoral dissertation, Universidade Estadual de Campinas.
- Manzini, M. R. (1994). Locality, Minimalism, and Parasitic Gaps. *Linguistic Inquiry*, 25, 481–508
- Medeiros Junior, P. (2005). Relativas Livres no Português. Master's thesis, Universidade de Brasília.
- Nunes, J. (2008). Preposition Insertion in the Mapping from Spell-Out to PF. *Linguistics in Potsdam*.
- Pesetsky, D. (1982). Paths and Categories. Doctoral dissertation, MIT.
- Rizzi, L. (1990). *Relativized Minimality*. The MIT Press, Cambridge, MA.
- Rizzi, L. (1997). The Fine Structure of the Left Periphery. In: *Elements of Grammar: Handbook of Generative Syntax* (L. Haegeman, ed.), pp. 281–337. Kluwer, Dordrecht.

- Raposo, E. (1997). Toward a Unification of Topic Constructions. Ms., University of California at Santa Barbara.
- Tarallo, F. (1983). Relativization Strategies in Brazilian Portuguese. Doctoral dissertation, University of Pennsylvania.
- Vergnaud, J.-R. (1974). French Relative Clauses. Doctoral dissertation, MIT.
- Vergnaud, J.-R. (1985). *Dépendences et Niveaux de Représentation en Syntaxe*. John Benjamins, Amsterdam.

## Stress shift as a diagnostics for identifying empty categories in Brazilian Portuguese

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In this paper we discuss several constructions with null objects in Brazilian Portuguese (*BP*), based on Santos's (2002, 2003) arguments that stress shift in BP is blocked by *pro*, but not by traces. In particular, we show that stress shift provides evidence for an analysis of PP-chopping relatives in terms of *pro* (Kato & Nunes, this volume) and that it can also distinguish true null objects from parasitic gaps in BP.

### 1. Introduction\*

The fact that Brazilian Portuguese allows null objects quite freely (see e.g. Galves, 1989; Farrell, 1990; Kato, 1993b; Cyrino, 1997; and Ferreira, 2000) ends up yielding structures that at first sight are very surprising. Parasitic gap constructions constitute a clear example. One of the standard properties of these constructions is that parasitic gaps can only be licensed by traces of  $A'$ -movement, but not by traces of  $A$ -movement (see e.g. Chomsky, 1982), as illustrated in (1) below in English. In Brazilian Portuguese, on the other hand, sentences comparable to (1a) and (1b) are both acceptable, as shown in (2) (see e.g. Galves, 1989; and Ferreira, 2000 for relevant discussion).

- (1) a. Which paper did you file without reading?  
b. \*The paper was filed without my reading first
- (2) a. Que artigo você arquivou sem ler?  
*which article you filed without read*  
'Which article did you file without reading?'

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- b. Este artigo foi arquivado sem eu ler.  
*this article was filed without I read*  
'This article was filed without my reading it.'

Unusual constructions involving empty categories are also found in the domain of relative clauses. Along with the standard relative clause with *wh*-movement and pied-piping shown in (3a) and the nonstandard version with no *wh*-movement and an overt resumptive pronoun shown in (3b), Brazilian Portuguese also allows "chopping" relative clauses like (3c), where the whole PP seems to have been deleted (see e.g. Tarallo, 1983; Kato, 1993a; and Kato & Nunes, this volume).

- (3) a. o professor com quem eu falei  
*the teacher with who I talked*  
b. o professor que eu falei com ele  
*the teacher that I talked with him*  
c. o professor que eu falei  
*the teacher that I talked*  
'the teacher who I talked to'

This paper discusses the nature of empty categories involved in constructions such as (2b) and (3c) based on the syntax-phonology interface. More specifically, we will use stress shift as a diagnostics to identify empty categories in relative clauses and parasitic gap constructions in Brazilian Portuguese, based on Santos's (2002, 2003) proposal that in Brazilian Portuguese *pro* blocks stress shift, but traces do not.

The paper is organized as follows. Section 2 reviews Santos's (2002, 2003) arguments for the proposal that *pro* and traces in Brazilian Portuguese have different behavior in the phonological component, as far as stress shift is concerned. Section 3 deals with parasitic gap and null object constructions in Brazilian Portuguese and discusses how they can be teased apart based on stress shift. Section 4 shows that stress shift can also be used as a diagnostic for identifying the empty category used in nonstandard relative clauses such as (3c). Section 5 speculates on why *pro* and traces should behave differently. Finally, Section 6 presents some concluding remarks.

## 2. Stress shift and empty categories in object position in Brazilian Portuguese

In Brazilian Portuguese, stress shift optionally applies within a phonological phrase  $\phi$  to resolve stress clashes between two adjacent primary stresses.<sup>1</sup> In (4), for instance, the stress clash represented in (5a)<sup>2</sup> can be resolved by stress shift after the second and third  $\phi$  restructured into a single  $\phi^3$  as shown in (5b-c).

- (4) O Davi *comeu bolo*.  
*the Davi ate cake*  
 ‘Davi ate cakes.’
- (5) a. [o Davi] <sub>$\phi$</sub>  [coMEU] <sub>$\phi$</sub>  [BOlo] <sub>$\phi$</sub>   $\rightarrow$  restructuring  
 b. [o Davi] <sub>$\phi$</sub>  [coMEU Bolo] <sub>$\phi$</sub>   $\rightarrow$  stress shift  
 c. [o Davi] <sub>$\phi$</sub>  [COmeu Bolo] <sub>$\phi$</sub>

Santos (2002, 2003) shows that stress shift is also syntactically conditioned in Brazilian Portuguese. The sentences in (6) below, for instance, both meet the phonological requirements for stress shift to apply and are minimally different from a phonological perspective. However, only (6a) allows stress shift.

- (6) a. O José Maria *canTOU HOje*  $\rightarrow$  o José Maria *CANtou HOje*  
*the José Maria sang today*  
 ‘José Maria sang today.’
- b. O José Maria *conTOU HOje*  $\rightarrow$  #o José Maria *CONtou HOje*  
*the José Maria told today*  
 ‘José Maria told it today.’

Santos associates the contrast in (6) with a possible intransitive reading of *cantar* ‘sing’ in (6a), which is not possible with *cantar* ‘tell’ in (6b). More precisely, Santos argues that the empty category in the object position of *cantar* in (6b) breaks the adjacency between the two stresses, thus blocking stress shift.

The question then is what kind of empty category (6b) involves. Raposo (1986) argues that null objects in European Portuguese are traces left by a null operator, based on the fact that they are subject to island effects. Thus, sentences such as (7a)

1. For relevant discussion on stress shift in Brazilian Portuguese, see e.g. Abousalh (1997), Guimarães (1998), Santos (2003), and Sândalo & Truckenbrodt (2002).

2. Capital letters indicate stressed syllables and the relevant phonological context is in bold. Since asterisks will be used for syntactic ungrammaticality, we will employ # to mark prosodic ungrammaticality.

3. See Selkirk (1984) and Nespor & Vogel (1986) for the conditions on the restructuring of phonological phrases and related discussion.

are acceptable in European Portuguese, but sentences such as (7b), which involves an island, are not.

- (7) a. O João disse que a Maria comprou. (EP: OK; BP: OK)  
*the João said that the Maria bought*  
 ‘João said that Maria bought it.’
- b. O João conversou com a pessoa que comprou (EP: \*; BP: OK)  
*the João talked with the person who bought*  
 ‘João talked with the person who bought it.’

In Brazilian Portuguese, on the other hand, the types of sentences in (7) are both acceptable, indicating that the null object of Brazilian Portuguese is *pro* (see e.g. Galves, 1989). Assuming this to be the case, Santos then concludes based on the impossibility of stress shift in (6b) that *pro* in Brazilian Portuguese is computed for adjacency purposes despite being phonologically null. In other words, for the purposes of stress shift, the two stressed syllables in (6a) count as adjacent, but the ones in (6b) don’t, due to the intervention of *pro*.

Santos further argues that it is not the case that any type of empty category can obstruct stress shift. Take the paradigm in (8)-(11), for instance.

- (8) [esse casaco]<sub>i</sub> o João disse que ele ves<sup>TIU</sup> \_\_\_<sub>i</sub> HOje →  
 [esse casaco]<sub>i</sub> o João disse que ele VESTiu \_\_\_<sub>i</sub> HOje  
*this coat the João said that he dressed today*  
 ‘This coat, João said that he put on today.’
- (9) [esse casaco]<sub>i</sub>, a Maria ficou elegante [depois que ela ves<sup>TIU</sup> \_\_\_<sub>i</sub> HOje.] →  
 #[esse casaco]<sub>i</sub>, a Maria ficou elegante [depois que ela  
*this coat the Maria became elegant after that she*  
 VESTiu \_\_\_<sub>i</sub> HOje.]  
*dressed today*  
 ‘This coat, Mary became elegant after she put it on today.’
- (10) [essas árvores]<sub>i</sub> a Maria disse que ela poDOU \_\_\_<sub>i</sub> ONtem →  
 [essas árvores]<sub>i</sub> a Maria disse que ela POdou \_\_\_<sub>i</sub> ONtem  
*these trees, the Maria said that she pruned yesterday*  
 ‘These trees, Maria said that she pruned yesterday.’
- (11) [essas árvores]<sub>i</sub> a Maria pagou o jardineiro [que poDOU \_\_\_<sub>i</sub> Ontem] →  
 #[essas árvores]<sub>i</sub> a Maria pagou o jardineiro [que POdou \_\_\_<sub>i</sub>  
*these trees, the Maria paid the gardener who pruned*  
 Ontem]  
*yesterday*  
 ‘These trees, Maria paid the gardener who pruned them yesterday.’

All of these sentences have a gap in the embedded object position and an antecedent in the left periphery of the sentence. Since there are no islands involved in (8) and (10), the gap can in principle be a trace or *pro*. In (9) and (11), on the other hand, the empty category must be *pro*, given that it is separated from its antecedent by an island. Thus, the fact that (9) and (11) do not allow stress shift confirms what was already observed with respect to (6b): *pro* in Brazilian Portuguese blocks stress shift. If so, Santos reasons, the acceptability of (8) and (10) must then be due to its potential derivation employing a trace, rather than *pro*. In other words, traces in Brazilian Portuguese do not block stress shift.

Assuming Santos's (2002, 2003) conclusion regarding the different behavior of traces and *pro* in Brazilian Portuguese as far as stress shift is concerned, let us now examine the empty categories that appear in the apparent parasitic gap constructions and the "chopping" relative clauses mentioned in Section 1.

### 3. Distinguishing true and apparent parasitic gaps with stress shift

As mentioned in Section 1, parasitic gaps in Brazilian Portuguese are hard to pin down, for sentences that at surface correspond to ungrammatical parasitic gap constructions in other languages are acceptable thanks to the general availability of null objects in the language. Take the standard paradigm of parasitic gap constructions in English given in (12) below, for instance. (12b) shows that parasitic gaps cannot be licensed by an *in-situ* constituent (see e.g. Chomsky, 1982); (12c) that parasitic gaps cannot be licensed by A-movement (see e.g. Chomsky, 1982); (12d) that no more than one island can intervene between the parasitic gap and its antecedent (see e.g. Kayne, 1983); and (12e) that parasitic gaps cannot be c-commanded by the "real" gap (see e.g. Taraldsen, 1981).

- (12) a. [[which paper]<sub>i</sub> did you file t<sub>i</sub> [without reading pg<sub>i</sub>]]  
 b. \*[who filed [which paper]<sub>i</sub> [without reading pg<sub>i</sub>]]  
 c. \*[[this paper]<sub>i</sub> was filed t<sub>i</sub> [without my reading pg<sub>i</sub> first]]  
 d. \*[[which paper]<sub>i</sub> did you file t<sub>i</sub> [after consulting the student who read pg<sub>i</sub>]]  
 e. \*[which paper]<sub>i</sub> t<sub>i</sub> impressed you [after you read pg<sub>i</sub>]]

In Brazilian Portuguese, on the other hand, sentences analogous to the sentences in (12) are all acceptable, as illustrated in (13).

- (13) a. [[que artigo]<sub>i</sub> você arquivou t<sub>i</sub> [sem ler ec<sub>i</sub>]]  
*which article you filed without read*  
 'Which article did you file without reading?'

- b. [você arquivou [que artigo]<sub>i</sub> [sem ler *ec*<sub>i</sub>]]  
*you filed which article without read*  
 ‘Which article did you file without reading?’
- c. [[este artigo]<sub>i</sub> foi arquivado t<sub>i</sub> [sem eu ler *ec*<sub>i</sub>]]  
*this article was filed without I read*  
 ‘This article was filed without my reading it.’
- d. [[que artigo]<sub>i</sub> você arquivou t<sub>i</sub> [depois de consultar o estudante  
*which article you filed after of consult the student*  
 [que leu *ec*<sub>i</sub>]]]  
*who read*  
 ‘Which article did you file after consulting the student who read it?’
- e. [[que artigo]<sub>i</sub> [t<sub>i</sub> te impressionou [depois que você leu *ec*<sub>i</sub>]]]  
*which article you impressed after that you read*  
 ‘Which article impressed you after you read it?’

Given the existence of pronominal null objects in Brazilian Portuguese, sentences such as (13b)-(13e) can receive a straightforward account. They can have a convergent derivation if the empty category inside the adjunct clause is *pro*. Questions then arise regarding (13a), which is ambiguous between a true parasitic gap construction like (12a) and a null object construction along the lines (13b-e). The nature of the empty category in (13a) thus depends in part on what kind of category one takes a standard parasitic gap like (12a) to be.

The large literature on parasitic gap constructions can be roughly divided into general approaches: (i) the parasitic gap is a trace of  $A'$ -movement (see e.g. Chomsky, 1986) and (ii) the parasitic gap is a pronoun with special properties (see e.g. Cinque, 1990). Here we won't attempt to review the substantial differences between these two approaches. We will rather focus on their predictions on how the empty category of (13a) in Brazilian Portuguese should behave as far as stress shift is concerned.

If a parasitic gap is a pronoun of sorts, it should in principle behave like other null objects, which block stress shift, as we saw in Section 2. Thus, under this approach, sentences like (13) should all inhibit stress shift. On the other hand, if parasitic gaps are traces, ambiguous constructions similar to (13a) should allow stress shift thanks to the parasitic gap (i.e. trace) analysis and contrast with unambiguous

null object constructions analogous to (13b-e). Bearing these predictions in mind, let us consider the data in (14)-(17), which add stress clashes to the picture.

- (14) a. [[que livro]<sub>i</sub> você recomendou t<sub>i</sub> [depois que comPROU PG<sub>i</sub> ONtem]] →  
 [[que livro]<sub>i</sub> você recomendou t<sub>i</sub> [depois que COMprou PG<sub>i</sub>  
*which book you recommended after that bought*  
 ONtem]]  
*yesterday*
- b. [você recomendou [que livro]<sub>i</sub> [depois que comPROU pro<sub>i</sub> ONtem]] →  
 #[você recomendou [que livro]<sub>i</sub> [depois que COMprou pro<sub>i</sub>  
*you recommended which book after that bought*  
 ONtem]]  
*yesterday*  
 ‘Which book did you recommend after buying yesterday?’
- (15) a. [[que livro]<sub>i</sub> você encomendou t<sub>i</sub> [depois que ela perDEU PG<sub>i</sub> ONtem]] →  
 [[que livro]<sub>i</sub> você encomendou t<sub>i</sub> [depois que ela PERdeu PG<sub>i</sub>  
*which book you ordered after that she lost*  
 ONtem]]  
*yesterday*  
 ‘Which book did you order after she lost yesterday?’
- b. [[esse livro]<sub>i</sub> foi encomendado t<sub>i</sub> [depois que ela perDEU pro<sub>i</sub> ONtem]] →  
 #[[esse livro]<sub>i</sub> foi encomendado t<sub>i</sub> [depois que ela PERdeu pro<sub>i</sub>  
*this book was ordered after that she lost*  
 ONtem]]  
*yesterday*  
 ‘This book was ordered after she had lost it yesterday.’
- (16) a. [[que carro]<sub>i</sub> você decidiu comprar t<sub>i</sub> [depois que o mecânico  
*which car you decided buy after that the mechanic*  
 cheCOU PG<sub>i</sub> ONtem]] →  
*checked yesterday*  
 [[que carro]<sub>i</sub> você decidiu comprar t<sub>i</sub> [depois que o mecânico CHEcou  
 PG<sub>i</sub> ONtem]]  
 ‘Which car did you decide to buy after the mechanic having checked  
 yesterday?’
- b. [[que carro]<sub>i</sub> você decidiu comprar t<sub>i</sub> [depois de conversar com  
*which car you decided buy after of talk with*

o mecânico que cheCOU *pro*<sub>i</sub> ONtem]] →  
*the mechanic that checked yesterday*  
 #[[que carro]<sub>i</sub> você decidiu comprar *t*<sub>i</sub> [depois de conversar com o  
 mecânico que CHEcou *pro*<sub>i</sub> ONtem]]  
 ‘Which car did you decide to buy after talking with the mechanic that  
 checked it yesterday?’

- (17) a. [[que remédio]<sub>i</sub> você jogou *t*<sub>i</sub> fora [depois que ela toMOU *PG*<sub>i</sub> HOje] →  
 [[que remédio]<sub>i</sub> você jogou *t*<sub>i</sub> fora [depois que ela TOMou *PG*<sub>i</sub>  
*which medicine you threw away after that she took*  
 HOje]]  
*today*
- b. [[que remédio]<sub>i</sub> [*t*<sub>i</sub> te fez bem [depois que você toMOU *pro*<sub>i</sub> HOje]]] →  
 #[[que remédio]<sub>i</sub> [*t*<sub>i</sub> te fez bem [depois que você TOMou *pro*<sub>i</sub>  
*which medicine you made well after that you took*  
 HOje]]]  
*today*  
 ‘Which medicine made you fell well after you took it today?’

In all the sentences above, the sentences that can be analyzed as parasitic gap constructions (the *a*-sentences of (14)-(17)) allow stress shift, as opposed to the unambiguous null object constructions in the *b*-sentences of (14)-(17).<sup>4</sup> This result allows us to choose between the two general approaches mentioned above, based on stress shift. That is, the data indicate that parasitic gaps are indeed traces and not *pro*, for they are compatible with stress shift.

To put this conclusion in a broader setting, the existence of true parasitic gap constructions side by side with null object constructions in Brazilian Portuguese shows that even in a language with a wide spread use of null objects, the derivational mechanisms that are involved in the generation of parasitic gaps can be employed and are not blocked by the availability of null pronouns. If parasitic gaps are traces, this in turn suggests that pronominalization may indeed be a general

4. Although the contrast may not be strongly sharp in some cases due to the complexity of the structures involved, the directionality of the judgment is clear. Although some speakers may not get a clear contrast for some cases, when a contrast is identified, it is always the case that stress shift in parasitic gap constructions is more acceptable than unambiguous null object constructions, rather than the opposite.

last resort strategy when movement is precluded, as proposed by Hornstein (2001, 2007) in the context of the Minimalist Program.<sup>5</sup>

#### 4. Chopping relative clauses and stress shift in Brazilian Portuguese

As mentioned in Section 1, Brazilian Portuguese allows “chopping” relative clauses like (18a) and (19a), which seem to employ deletion of the PP that surfaces in the corresponding pied-piping and resumptive counterparts, respectively shown in (18b-c) and (19b-c) (see Tarallo, 1983).

- (18) a. a pessoa que eu falei hoje  
           *the person that I talked today*  
       b. a pessoa com que eu falei hoje  
           *the person with that I talked today*  
       c. a pessoa que eu falei com ela hoje  
           *the person that I talked with her today*  
           ‘the person who I talked to today’
- (19) a. a sala que eu fiquei ontem  
           *the room that I stayed yesterday*  
       b. a sala em que eu fiquei ontem  
           *the room in which I stayed yesterday*  
       c. a sala que eu fiquei nela ontem  
           *the room that I stayed in-it yesterday*  
           ‘the room where I stayed yesterday.’

Kato (1993a) proposes that the source for chopping and resumptive relative clauses in Brazilian Portuguese is to be found in analogous left dislocation structures, as illustrated in (20) and (21). More precisely, Kato proposes that in the three kinds of relative clauses illustrated in (18) and (19), *que* is a relative pronoun. In the specific case of the chopping and resumptive relatives as in (18a)/(19a) and (18c)/(19c), *que* is generated in the left dislocation position before moving to [Spec, CP]

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5. Assuming that parasitic gaps are traces, there remains the question of what a parasitic gap is a trace of. Unfortunately, one cannot tell based on stress shift in Brazilian Portuguese whether it is a trace of, say, a null operator (see Chomsky, 1986) or an element undergoing sideward movement (see Nunes, 2001, 2004), for all kinds of traces appear to be transparent for purposes of stress shift (see Section 5 for further discussion).



and, as such, it can be resumed by an empty category or a resumptive pronoun, as seen in (20) and (21).

- (20) a. Essa pessoa, eu falei hoje.  
           *this person I talked today*  
       b. Essa pessoa, eu falei com ela hoje.  
           *this person I talked with her today*  
           ‘This person, I talked with her today.’
- (21) a. Essa sala, eu fiquei ontem  
           *this room I stayed yesterday*  
       b. Essa sala, eu fiquei nela ontem  
           *this room I stayed in-it yesterday*  
           ‘This room, I stayed there yesterday.’

Kato & Nunes (this volume) maintain the essence of Kato’s (1993a) proposal, re-interpreting it in terms of Kayne’s (1994) analysis of relative clauses. Relevant for our current concerns is Kato & Nunes’s related proposal that chopping relatives and left dislocation constructions like (18a)/(19a) and (20a)/(21a) involve a null pronoun and that the preposition of (20b) and (21b), for instance, is a realization of inherent Case (in the sense of Chomsky 1986), which will surface only if the argument of the verb is phonetically realized. Thus, according to them, left dislocation and chopping pairs like (20a)/(18a) and (21a)/(19a) are to be associated with structures along the lines of (22) and (23), with *pro* in the object position.<sup>6</sup>

- (22) a. [<sub>LD</sub> [essa pessoa]<sub>i</sub> [<sub>IP</sub> eu falei *pro*<sub>i</sub> hoje]]  
           *this person I talked today*  
           ‘This person, I talked with her today.’  
       b. [[a pessoa]<sub>i</sub> [<sub>CP</sub> que<sub>i</sub> [<sub>LD</sub> *t*<sub>i</sub> [<sub>IP</sub> eu falei *pro*<sub>i</sub> hoje]]]]  
           *the person that I talked today*  
           ‘the person that I talked to today’
- (23) a. [<sub>LD</sub> [essa sala]<sub>i</sub> [<sub>IP</sub> eu fiquei *pro*<sub>i</sub> ontem]]  
           *this room I stayed yesterday*  
           ‘This room, I stayed in there yesterday.’

6. Kato & Nunes (this volume) actually argue that *que* in sentences such as (18) and (19) in Brazilian Portuguese is a relative determiner whose complement has raised. Since this point is orthogonal to our discussion, we will represent *que* as a relative pronoun for the sake of simplicity in the presentation.

- b. [[a sala]<sub>i</sub> [<sub>CP</sub> que<sub>i</sub> [<sub>LD</sub> t<sub>i</sub> [<sub>IP</sub> eu fiquei *pro*<sub>i</sub> ontem]]]]  
*the room that I stayed yesterday*  
 ‘the room where I stayed yesterday’

By relying on stress shift as a diagnostic for types of empty categories in Brazilian Portuguese, we can now test Kato’s (1993a) proposed correlation between left dislocation and nonstandard relative clauses in Brazilian Portuguese and Kato & Nunes’s (this volume) proposal that the apparent null PP is actually a null pronominal. Santos (2002) has independently shown that movement structures and left dislocation yield different results as far as stress shift is concerned, as illustrated in (24) and (25).

- (24) a. [[do bebê]<sub>i</sub> a babá cuiDOU t<sub>i</sub> ONtem] →  
 [[do bebê]<sub>i</sub> a babá CUIdou t<sub>i</sub> ONtem]  
*of-the baby the babysitter took-care yesterday*  
 ‘The nanny took care of the baby yesterday.’
- b. [[o bebê]<sub>i</sub> a babá cuiDOU *pro*<sub>i</sub> ONtem] →  
 #[[o bebê]<sub>i</sub> a babá CUIdou *pro*<sub>i</sub> ONtem]  
*the baby the babysitter took-care yesterday*  
 ‘The baby, the babysitter took care of him yesterday.’
- (25) a. [[*pro* João]<sub>i</sub> eu liGUEI t<sub>i</sub> HOje] →  
 [[*pro* João]<sub>i</sub> eu LIguei t<sub>i</sub> HOje]  
*to-the João I called today*
- b. [[o João]<sub>i</sub> eu liGUEI *pro*<sub>i</sub> HOje] →  
 #[[o João]<sub>i</sub> eu LIguei *pro*<sub>i</sub> HOje]  
*the João I called today*  
 ‘I called João today.’

Given that the verbs in (24) and (25) require a preposition if their arguments remain *in situ*, the sentences in (24b) and (25b) arguably involve base-generation of the DP in the left dislocated position and a *pro* in the object position (see Ferreira, 2000). The contrasts between (24a) and (25a), on the one hand, and (24b) and (25b), on the other, are thus another instantiation of the generalization that traces in Brazilian Portuguese are transparent for stress shift, but *pro* is not.

If Kato & Nunes’s proposal that chopping relatives involve *pro* is correct, we predict that pied-piping and chopping relatives should replicate the contrast observed in (24) and (25). That this is indeed the case is illustrated in (26)–(29) (see fn. 4).

- (26) a. [[o bebê]<sub>i</sub> [<sub>CP</sub> [de quem]<sub>k</sub> [<sub>IP</sub> a babá cuiDOU t<sub>k</sub> ONtem]]] →  
 [[o bebê]<sub>i</sub> [<sub>CP</sub> [de quem]<sub>k</sub> [<sub>IP</sub> a babá CUIdou t<sub>k</sub> ONtem]]]  
*the baby of who the babysitter took-care yesterday*

- b. [[o bebê]<sub>i</sub> [<sub>CP</sub> que<sub>i</sub> [<sub>LD</sub> t<sub>i</sub> [<sub>IP</sub> a babá cuiDOU pro<sub>i</sub> #[[o bebê]<sub>i</sub> [<sub>CP</sub> que<sub>i</sub> [<sub>LD</sub> t<sub>i</sub> [<sub>IP</sub> a babá CUIdou pro<sub>i</sub> the baby which the babysitter took-care ONtem]]]]] →  
ONtem]]]]  
yesterday  
'the baby that the babysitter took care of yesterday'
- (27) a. [[o rapaz]<sub>i</sub> [<sub>CP</sub> [pra quem]<sub>i</sub> [<sub>IP</sub> eu liGUEI t<sub>i</sub> HOje]]] →  
[[o rapaz]<sub>i</sub> [<sub>CP</sub> [pra quem]<sub>i</sub> eu LIguei t<sub>i</sub> HOje]]  
the guy to whom I called today
- b. [[o rapaz]<sub>i</sub> [<sub>CP</sub> que<sub>i</sub> [<sub>LD</sub> t<sub>i</sub> [<sub>IP</sub> eu liGUEI pro<sub>i</sub> HOje]]]] →  
#[[o rapaz]<sub>i</sub> [<sub>CP</sub> que<sub>i</sub> [<sub>LD</sub> t<sub>i</sub> [<sub>IP</sub> eu LIguei pro<sub>i</sub> HOje]]]  
the guy that I called today  
'the guy that I called today'
- (28) a. [[a pessoa]<sub>i</sub> [<sub>CP</sub> [de quem]<sub>k</sub> [<sub>IP</sub> eu faLEI t<sub>k</sub> ONtem]]] →  
[[a pessoa]<sub>i</sub> [<sub>CP</sub> [de quem]<sub>k</sub> [<sub>IP</sub> eu FAlei t<sub>k</sub> ONtem]]]  
the person of who I talked yesterday
- b. [[a pessoa]<sub>i</sub> [<sub>CP</sub> que<sub>i</sub> [<sub>LD</sub> t<sub>i</sub> [<sub>IP</sub> eu faLEI pro<sub>i</sub> ONtem]]]] →  
#[[a pessoa]<sub>i</sub> [<sub>CP</sub> que<sub>i</sub> [<sub>LD</sub> t<sub>i</sub> [<sub>IP</sub> eu FAlei pro<sub>i</sub> ONtem]]]]  
the person that I talked yesterday  
'the person that I talked about yesterday'
- (29) a. [[a sala]<sub>i</sub> [<sub>CP</sub> [em que]<sub>k</sub> [<sub>IP</sub> eu fiQUEI t<sub>k</sub> ONtem]]] →  
[[a sala]<sub>i</sub> [<sub>CP</sub> [em que]<sub>k</sub> [<sub>IP</sub> eu FIquei t<sub>k</sub> ONtem]]]  
the room in which I stayed yesterday
- b. [[a sala]<sub>i</sub> [<sub>CP</sub> que<sub>i</sub> [<sub>LD</sub> t<sub>i</sub> [<sub>IP</sub> eu fiQUEI pro<sub>i</sub> ONtem]]]] →  
#[[a sala]<sub>i</sub> [<sub>CP</sub> que<sub>i</sub> [<sub>LD</sub> t<sub>i</sub> [<sub>IP</sub> eu FIquei pro<sub>i</sub> ONtem]]]]  
the room that I stayed yesterday  
'the room in which I stayed yesterday'

Let us finally consider (30) below. Given that PP complements are not at stake and there are no islands intervening between the relative pronoun and the object position, *que* could in principle be generated in the object position, leaving a trace behind after moving to [Spec, CP], or be generated in the left dislocated position in association with *pro* in the object position.

- (30) o livro que a Maria comprou *ec* ontem  
the book which the Maria bought yesterday  
'the book that Maria bought yesterday'

The fact that (30) allows stress shift, as shown in (31), reveals that the structure with a trace must be not only theoretically possible, but actually available to the computational system. In turn, this again indicates that the general availability of resumption in a given language does not preclude movement.

- (31) [[o livro]<sub>i</sub> [<sub>CP</sub> que<sub>i</sub> a Maria comPROU  $t_i$  ONtem]] →  
 [[o livro]<sub>i</sub> [<sub>CP</sub> que<sub>i</sub> a Maria COMprou  $t_i$  ONtem]]

### 5. A note on the difference between traces and *pro*

The different behavior of traces and *pro* with respect to stress shift discussed in the previous sections is reminiscent of the well-known *wanna*-contraction phenomenon in English (see e.g. Lightfoot, 1976; and Jaeggli, 1980), where traces but not PRO block contraction, as illustrated in (32):

- (32) a. [who<sub>i</sub> do you want PRO to kiss  $t_i$ ] → [who<sub>i</sub> do you wanna kiss  $t_i$ ]  
 b. [who<sub>i</sub> do you want  $t_i$  to kiss you] → #[who<sub>i</sub> do you wanna kiss you]

The classic analysis of contrasts such as the one in (32) resorts to the Case properties of the empty category intervening between *want* and *to* (see Jaeggli, 1980, for instance). Assuming that the *wh*-trace in (32b) must be Case-marked and that PRO in (32a) cannot, the contrast in (32) is attributed to the Case-feature of the empty category, that is, only a Case-marked empty category is able to disrupt the adjacency between *want* and *to* and block contraction. That being so, one wonders if the contrast between traces and *pro* in Brazilian Portuguese could be subject to a similar explanation.

Two sorts of facts show that Case is not what is at stake as far as stress shift in Brazilian Portuguese is concerned. First, Case-marked and Caseless traces behave alike in allowing stress shift, as shown in (33a) with a transitive verb, and in (33b), with an unaccusative verb.

- (33) a. [[o vaso novo]<sub>i</sub> o bebê queBROU  $t_i$  ONtem] →  
 [[o vaso novo]<sub>i</sub> o bebê QUEbrou  $t_i$  ONtem]  
*the vase new the baby broke yesterday*  
 ‘The new vase, the baby broke yesterday.’  
 b. [[o vaso novo]<sub>i</sub> queBROU  $t_i$  ONtem] →  
 [[o vaso novo]<sub>i</sub> QUEbrou  $t_i$  ONtem]  
*the vase new broke yesterday*  
 ‘The new vase broke yesterday.’

Second, we have seen that *pro* in Brazilian Portuguese can appear in standard structural Case positions such as (34a) below, as well as positions which are arguably associated with inherent rather than structural Case, as illustrated in (34b). As discussed in Section 4, in both instances *pro* blocks stress shift.

- (34) a. [[esse carro]<sub>i</sub> eu conversei com o mecânico que cheCOU *pro*<sub>i</sub>  
 #[[esse carro]<sub>i</sub> eu conversei com o mecânico que CHEcou *pro*<sub>i</sub>  
*this car I talked with the mechanic that checked*  
 HOje] →  
 HOje]  
*today*  
 ‘This car, I talked with the mechanic that checked it today.’
- b. [[essa pessoa]<sub>i</sub> o João faLOU *pro*<sub>i</sub> ONtem] →  
 #[[essa pessoa]<sub>i</sub> o João FAlou *pro*<sub>i</sub> ONtem]  
*this person the João talked yesterday*  
 ‘This person, João talked to her yesterday.’

We would like to suggest instead that the different behavior exhibited by traces and *pro* is not due to some intrinsic property associated with them; rather, it is a by-product of the syntactic computation itself, after syntactic structures are shipped to the phonological component by Spell-Out. If traces are copies that are deleted in the phonological component, as proposed by Chomsky (1993), what we are informally describing as trace invisibility may be a misinterpretation of the facts. It may be the case that when stress shift is computed there are no longer traces/copies around to begin with.

For concreteness, consider Nunes’s (1999, 2004) proposal that deletion of copies is triggered by linearization considerations. Nunes proposes that given that traces are nondistinct in virtue of replicating material presented in the numeration that feeds the derivation, they should count as “the same” for purposes of linearization. If so, linearization of the structure in (35a) below, for instance, creates contradictory requirements, as *was* is required to follow and precede *John*. Deletion of the lower copy, which Nunes refers to as Chain Reduction, then allows (35a) to be linearized and surface as (35b).<sup>7</sup>

7. Nunes (1999, 2004) actually argues that the choice of the copy to be deleted is determined by economy considerations and there are actually cases where the head of the chain is deleted instead of lower copies and even cases where more than one link can be phonetically realized under special circumstances (see Bošković & Nunes, 2007 for several case studies). For our current purposes, it suffices to assume that Chain Reduction deletes lower copies in the phonological component. For further discussion, see the collection of papers in Corver & Nunes (2007).

- (35) a. [John<sup>i</sup> [was [arrested John<sup>i</sup>]]]  
 b. John was arrested.

Now, if prosodic parsing in the phonological component follows applications of Chain Reduction, traces won't have any impact on stress shift as they have been eliminated from the structure.<sup>8</sup> By contrast, an *in situ pro* is unaffected by Chain Reduction and can therefore block stress shift if it intervenes between two primary stresses.

## 5. Concluding remarks

This paper has dealt with the syntax-phonology interface, using stress shift as a diagnostic to identify null syntactic categories. Based on the fact that *pro* blocks stress shift while traces do not, we were able to show that Brazilian Portuguese does indeed have parasitic gap constructions, despite apparent counter-examples due to the general availability of null objects in the language. Stress shift was also shown to provide evidence for Kato's (1993a) correlation between left dislocated and nonstandard relatives in Brazilian Portuguese, as well as for Kato & Nunes's (this volume) proposal that chopping relatives involve *pro* in the object position.

If our analysis is correct, it not only shows that syntax-phonology mapping may be very helpful in choosing among competing syntactic analyses, but also makes some predictions about the organization of the mapping itself. We have suggested, for instance, that prosodic mapping follows Chain Reduction (i.e. deletion of traces/copies) and this is why traces seem to be invisible to stress shift. Testing the accuracy of this suggestion however requires the investigation of traces and *pro* with respect to other phonological processes in Brazilian Portuguese, something that we leave to future research.

## References

- Absousalh, E. (1997). Resolução de Choques de Acento no Português Brasileiro: Elementos para uma Reflexão sobre a Interface Fonologia-Sintaxe. Master's thesis, Universidade Estadual de Campinas.
- An, D.-K. (2007). Syntax at the PF Interface: Prosodic Mapping, Linear Order, and Deletion. Doctoral dissertation, University of Connecticut.
- Bošković, Ž. & J. Nunes (2007). The Copy Theory of Movement: A View from PF. In: *The Copy Theory of Movement* (N. Corver & J. Nunes, eds.), pp. 13–74. John Benjamins, Amsterdam.
- Chomsky, N. (1982). *Some Concepts and Consequences of the Theory of Government and Binding*. The MIT Press, Cambridge, MA.
- Chomsky, N. (1986). *Knowledge of Language: Its Nature, Origin, and Use*. Praeger, New York, NY.

8. See An (2007) for relevant discussion.

- Chomsky, N. (1993). A Minimalist Program for Linguistic Theory. In: *The View from Building 20: Essays in Honor of Sylvain Bromberger* (K. Hale & S. J. Keyser, eds.), pp. 1–29. The MIT Press, Cambridge, MA.
- Cinque, G. (1990). *Types of A-bar dependencies*. The MIT Press, Cambridge, MA.
- Corver, N. & J. Nunes (2007). *The Copy Theory of Movement*. John Benjamins, Amsterdam.
- Cyrino, S. (1997). *O Objeto Nulo no Português do Brasil: Um Estudo Sintático-Diacrônico*. Editora UEL, Londrina.
- Farrell, P. (1990). Null Objects in Brazilian Portuguese. *Natural Language and Linguistic Theory*, 8, 325–346.
- Ferreira, M. (2000). Argumentos Nulos em Português Brasileiro. Master's thesis, Universidade Estadual de Campinas.
- Galves, C. (1989). O Objeto Nulo no Português Brasileiro: Percurso de uma Pesquisa. *Cadernos de Estudos Linguísticos*, 17, 65–90.
- Guimarães, M. (1998). Repensando a Interface Fonologia-Sintaxe a partir do Axioma de Correspondência Linear. Master's thesis, Universidade Estadual de Campinas
- Hornstein, N. (2001). *Move! A minimalist theory of construal*. Blackwell, Malden, MA.
- Hornstein, N. (2007). Pronouns in a Minimalist Setting. In: *The Copy Theory of Movement* (N. Corver & J. Nunes, eds.), pp. 351–385. John Benjamins, Amsterdam.
- Jaeggli, O. (1980). Remarks on *To* Contraction. *Linguistic Inquiry*, 11(1), 239–245
- Kato, M. A. (1993a). Recontando a História das Relativas. In: *Português Brasileiro: Uma Viagem Diacrônica* (I. Roberts & M. A. Kato, eds.), pp. 223–261. Editora da UNICAMP, Campinas.
- Kato, M. A. (1993b). The Distribution of Pronouns and Null Elements in Object Position in Brazilian Portuguese. In *Linguistic Perspectives on the Romance Languages* (W. Ashby, M. M. G. Perissinotto, & E. Raposo, eds.), pp. 225–235. John Benjamins, Amsterdam.
- Kayne, R. (1983). Connectedness. *Linguistic Inquiry*, 14, 223–249.
- Kayne, R. (1994). *The Antisymmetry of Syntax*. The MIT Press, Cambridge, MA.
- Lightfoot, D. (1976). Trace Theory and Twice-moved NPs. *Linguistic Inquiry*, 7, 559–582
- Nespor, M. & I. Vogel (1986). *Prosodic Phonology*. Foris, Dordrecht
- Nunes, J. (1999). Linearization of Chains and Phonetic Realization of Chain Links. In: *Working Minimalism* (S. D. Epstein & N. Hornstein, eds.), pp. 217–249. The MIT Press, Cambridge, MA.
- Nunes, J. (2001). Sideward Movement. *Linguistic Inquiry*, 31, 303–344.
- Nunes, J. (2004). *Linearization of Chains and Sideward Movement*. The MIT Press, Cambridge, MA.
- Raposo, E. (1986). On the Null Object in European Portuguese. In *Studies in Romance Linguistics* (O. Jaeggli & C. Silva-Corvalan, eds.). Foris, Dordrecht
- Sândalo, F. & H. Truckenbrodt (2002). Some Notes on Phonological Phrasing in Brazilian Portuguese. *MIT Working Papers In Linguistics*, 42, 285 - 310.
- Santos, R. S. (2002). Categorias Sintáticas Vazias e Retração de Acento em Português Brasileiro. *D.E.L.T.A.*, 67 - 86
- Santos, R.S. (2003). Traces, pro and Stress Retraction in Brazilian Portuguese. *Journal of Portuguese Linguistics*, 2, 101–113.
- Selkirk, E.O. (1984). *Phonology and Syntax: the Relation between Sound and Structure*. The MIT Press, Cambridge, MA.
- Taraldsen, K.T. (1981). The Theoretical Implications of a Class of Marked Extractions. In: *Theory of Markedness in Generative Grammar* (A. Belletti, L. Brandi, & L. Rizzi, eds.) pp. 475–516. Scuola Normale Superiore, Pisa.
- Tarallo, F. (1983). Relativization Strategies in Brazilian Portuguese. Doctoral dissertation, University of Pennsylvania.

PART 2

## **Issues on the syntax-morphology interface**





## The comitative-copular basis of possessive-existential constructions in Brazilian Portuguese

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This paper shows that some properties of possessive and existential sentences in Brazilian Portuguese can be properly explained if the possessive-existential verb *ter* ‘have’ is derived by the combination of the features associated with *estar* ‘be’ and the features corresponding to the comitative preposition *com* ‘with’. I will concentrate on the following facts: (i) the thematic parallelism between *ter*- and *estar com*-clauses in possessive and existential domains; (ii) the restrict interpretation of null possessors in *ter*-constructions; and (iii) the emergence of *ter* as an existential verb in Brazilian Portuguese, but not in European Portuguese.

### 1. Introduction\*

A very influential idea concerning the syntax of possession posits that an inherently possessive verb such as *have* in English or *avoir* in French is obtained through the fusion of a copular verb and an adpositional category (see Lyons, 1967; Bach, 1967; Freeze, 1992; Kayne, 1993; Belvin & den Dikken, 1997; Longa, Lorenzo & Rigau, 1998; Ouhalla, 2000; Torrego, 2002; Avelar, 2004; Levinson, 2004; and Reintges & Lipták, 2006, among others). Kayne (1993), for example, suggests that in the generation of the possessive sentence in (1a) below, an abstract copular verb BE takes a “possessive” DP as complement, as represented in (1b). Kayne’s approach includes the combination of D and BE among the procedures necessary to derive the sentence, with the D+BE complex spelled out as the possessive *have*, as shown in (1c).

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- (1) a. John has a sister.  
 b. BE [<sub>DP</sub> D<sup>0</sup> [<sub>AgRP</sub> John [<sub>AgP</sub> Agr<sup>0</sup> [<sub>DP</sub> a sister ] ] ] ]  
 c. John<sub>i</sub>... [BE+D<sup>0</sup><sub>j</sub>] = HAS... [<sub>DP</sub> t<sub>i</sub> D<sup>0</sup> [<sub>AgRP</sub> t<sub>i</sub> [<sub>AgP</sub> Agr<sup>0</sup> [<sub>DP</sub> a sister ] ] ] ]

A relevant fact corroborating the link between copular and possessive expressions derives from languages in which the possessive verb overtly corresponds to a morphological amalgam involving a copular verb and an adposition. In Kamaiura and Coptic Egyptian sentences presented in (2)-(3) below, for example, the possessive verb (*ereko* and *wante*, respectively) morphologically exhibits the combination of a copular item and a comitative adposition.

- (2) Kamaiura (Seki, 2000: 304)  
 je-r            -a'yr-a w- **ereko**            ywyrapar-a.  
*1SG-LINK son 3-be+with (=have) bow*  
 'My son has a bow.'
- (3) Coptic Egyptian (Reintges & Lipták, 2006: 111)  
 ne-    **wante**            p-ərro            salpigks sante  
*PRET- be+with (=have) DEF.M.SG-king trumpet two*  
 ən-nuβ    ən-tšatšəh.  
*LINK-gold LINK-refined*  
 'The King had two trumpets of refined gold.'

Concentrating on data derived from Brazilian Portuguese (henceforth, BP) data, I will show that some properties of possessive and existential sentences in this language, exemplified in (4) below, can be properly explained if the possessive verb *ter* 'to have', also used in existential constructions, is treated as an element resulting from the fusion of features corresponding to the copula *estar* 'to be' and an abstract preposition.<sup>1,2</sup>

1. See Avelar (forthcoming<sub>a</sub>) for a diachronic view on the emergence of the possessive verb *ter* in Brazilian Portuguese existential clauses.

2. In European Portuguese, *ter* cannot be used in existential clauses, but only *haver* 'to exist', as in (i).

- (i) *Há muitos castelos na Europa.*  
 exist many castles in-the Europe  
 'There are many castles in Europe'

There are a considerable number of studies that seek to describe the variation involving *ter* and *haver* in BP existential environments (see Callou & Avelar 2002, 2003; Eleutério, 2003; Leite & Callou, 2002; and Silva, 2004, among others), and all of them confirm that *ter* is much more frequent in spoken BP than *haver*. As pointed out in Avelar (2006a), *haver* is largely preferred in formal written language, but its frequency is extremely low in spontaneous spoken language, even among people with a high level of schooling.

- (4) a. O professor tem muitos livros.  
*the professor has many books*  
 ‘The teacher has many books.’
- b. Tem muitos livros na biblioteca.  
*has many books in-the library*  
 ‘There are many books in the library.’

I will assume the general framework of the Minimalist Program (Chomsky, 1995, 2000, 2001) from a non-lexicalist perspective, following the Late Insertion Hypothesis of Distributed Morphology (Halle & Marantz, 1993, 1994). From this non-lexicalist perspective, there is no phonological matrix for *ter* along the syntactic computation, given that this item corresponds to a functional item (Embick & Noyer, 2001): it is only during vocabulary insertion in the PF branch that the phonological matrix of *ter* is inserted in the terminal node containing copular abstract features, in a way that I will clarify in the following sections.

This chapter is divided as follows. In Section 2, I present a pattern of possessive structures in Portuguese constructed with the copula *estar* and the preposition *com* ‘with’, suggesting that it is derivationally linked to the pattern with *ter*. In Section 3, I discuss a contrasting property of *ter*-constructions that can be associated with the presence of an abstract comitative category in its internal composition. In Section 4, I show how the assumption that the possessive *ter* has a copular nature can explain its reanalysis as an existential verb in BP. In Section 5, I consider some properties of *ter*-sentences that indicate the presence of a comitative preposition layer in existential structures with this verb. Finally, Section 6 concludes the chapter.

## 2. The copular basis of possessive sentences

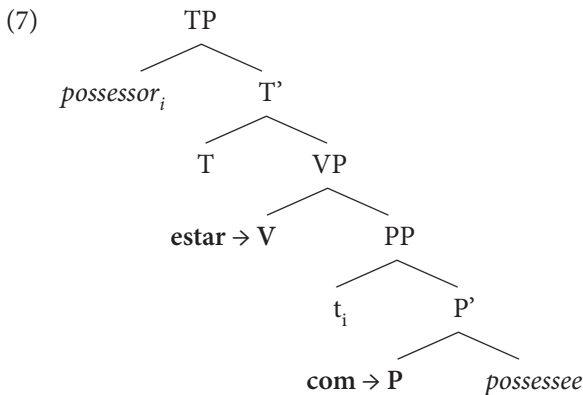
The basic premise behind the idea that there is a derivational link between *ter* and *estar* sentences comes from the existence of two types of possessive constructions in Portuguese, exemplified in (5) and (6). In (5a) and (6a), possession is expressed by the phrasal verb *estar com* (literally *to be with*); in (5b) and (6b), we have the pattern realized with *ter* (see Freeze, 1992 and Avelar, 2004).

- (5) a. O Pedro está com dinheiro.  
*the Pedro is with money*  
 ‘Pedro has money.’
- b. O Pedro tem dinheiro.  
*the Pedro has money*  
 ‘Pedro has money.’

- (6) a. As crianças estavam com dificuldades em matemática.  
*the children were with difficulties in mathematics*  
 ‘The children had difficulties with mathematics.’
- b. As crianças tinham dificuldades em matemática.  
*the children had difficulties in mathematics*  
 ‘The children had difficulties with mathematics.’

The semantic difference between *estar com* and *ter* can be characterized in aspectual terms: in (5a), for example, the relation between *Pedro* and *money* must be interpreted as a transitory or recently acquired possession, expressing the idea that Pedro has money now, at this moment. In (5b), by contrast, the relation between *Pedro* and *money* is normally taken as a more permanent or enduring possession. In other words, (5b) – but not (5a) – is easily interpreted as meaning that Pedro is rich.

Following Avelar (2004), I will explore the configurations in (7) and (8) below for both *estar com* and *ter* possessive constructions: in (7), the copula and the features of the preposition are not combined, which results in V and P receiving the phonological matrix of *estar* and *com*, respectively; in (8), the prepositional head moves to V, and the phonological matrix of *ter* is inserted in the node containing the P+V amalgam. In both cases, the element interpreted as *possessor* is inserted in [Spec,PP] and is then moved to [Spec,TP] in order to satisfy grammatical requirements (say, agreement and EPP). The aspectual difference between *ter* and *estar com* can be formally taken to result from the movement of P to V, with effects on the conceptual-intentional interface.





- (10) Irish (Harley, 2002; example (34c))

Tá an peann ag Maire.  
*be the pen at Mary*  
 ‘Mary has the pen.’

- (11) Icelandic (Levinson, 2004)

Maðurinn er með skegg.  
*man-the.NOM is with beard.ACC*  
 ‘The man has a beard.’

- (12) Yonomana (Heine, 1997)

kama e şama kî-a kî reh.  
*he GEN tapir there:is Q*  
 ‘Does he have a tapir?’  
 Lit.: ‘Does his tapir exist?’

Another point to be highlighted is that the coexistence of two or more ways of expressing possession, with different aspectual effects, is very common in natural languages. In Toba, for example, the copular verb *weto* can combine with the locative adpositions *-ot* and *-asop*, as in (13) below, indicating permanent and transitory possession, respectively (Messineo, 2004). In Moroccan Arabic, a similar opposition is established by means of a definiteness mark on the complement of the possessive verb: (14a), in which the possessee *ktab* ‘book’ is interpreted as an indefinite phrase, corresponds to a true possession (Ouhalla, 2000); by contrast, the occurrence of the definite phrase *l-ktab* ‘the book’ in (14b) leads to the interpretation of transitory possession.

- (13) Toba (Messineo, 2004)

- a. ni Romualdo weto-<sup>?</sup>ot ha-da taGaki  
*D Romualdo be-LOC fem-D pot*  
 ‘Romualdo has the pot.’ (permanent possession)
- b. ayem weta-<sup>?</sup>asop da pá  
*pro1 be-LOC D spade*  
 ‘I have the spade.’ (transitory possession)

- (14) Moroccan Arabic (Ouhalla, 2000: 228)

- a. Nadia ‘nd-ha ktab.  
*Nadia with-3F.SG book*  
 ‘Nadia has a book.’
- b. Nadia ‘nd-ha l-ktab.  
*Nadia with-3F.SG the-book*  
 ‘Nadia has the book.’

Given that the Portuguese possessive verb does not overtly reveal the combination of the copula and an adpositional element, in contrast with Coptic Egyptian and Kamaiura (see (2)-(3)), the key exercise throughout the next sections will be the presentation of non-morphological evidence to sustain the hypothesis regarding the comitative-copular nature of *ter*. In brief, I will show that some syntactic and semantic properties exhibited by possessive-existential domains in BP can be straightforwardly explained if we assume the existence of a prepositional layer and a copular layer in the underlying structure of *ter*-constructions.

### 3. Evidence for the presence of *com* within the possessive *ter*

The idea that there are invisible features of the preposition *com* within the structure of *ter*-constructions can account for a contrasting property of the possessive verb. Let us consider the sentences in (15) and (16) below. The meaning of the *ter*-construction in (15) presupposes that Pedro owns the wallet. Following Avelar (2004), this property will be represented by an empty category *ec* necessarily coindexed to Pedro within the DP *a carteira* ‘the wallet’, as indicated in (15b). By contrast, this interpretation is not obligatory in sentences constructed with verbs like *ver* ‘see’, exemplified in (16).

- (15) a. O Pedro tem vários documentos da Maria na carteira.  
*the Pedro has several documents of-the Maria in-the wallet*  
 ‘Pedro has Maria’s several documents in his wallet.’  
 b. [o Pedro]<sub>i</sub> tem vários documentos da Maria n[a carteira *ec*<sub>i/\*j</sub>]
- (16) a. O Pedro viu vários documentos da Maria na carteira.  
*the Pedro saw several documents of-the Maria in-the wallet*  
 ‘Pedro saw Maria’s several documents in his wallet.’  
 b. [o Pedro]<sub>i</sub> viu vários documentos da Maria n[a carteira *ec*<sub>i/j</sub>]

The same contrast is observed if we indicate the possessor of *carteira* within the adverbial locative phrase, but not the possessor of *documentos* ‘documents’, as in (17)-(18) below: in these constructions, the grammatical subject *Pedro* is necessarily the possessor of *documentos* in the sentence with *ter*, but not with *ver*.<sup>3</sup>

3. At first glance, one could take this property of *ter*-constructions to be derived from its possessive status. That is, if the subject of *ter* needs to be interpreted as possessor, then there would be a phrase that could be interpreted as a possessee. However, this view is invalidated by sentences such as (i), where the subject *Pedro* can be interpreted as the controller of the situation in which Ana’s several documents is in Maria’s bag. This indicates that the contrasts



- (17) a. O Pedro tem vários documentos na carteira da Maria.  
*the Pedro has several documents in-the wallet of-the Maria*  
 ‘Pedro has several documents in Maria’s wallet.’
- b. [o Pedro]<sub>i</sub> tem [vários documentos ec<sub>i/\*j</sub>] na carteira da Maria
- (18) a. O Pedro viu vários documentos na carteira da Maria.  
*the Pedro saw several documents in-the wallet of-the Maria*  
 ‘Pedro saw several documents in Maria’s wallet.’
- b. [o Pedro]<sub>i</sub> viu [vários documentos ec<sub>ij</sub>] na carteira da Maria

Interestingly, sentences constructed with different verbs (including *estar* ‘to be’) exhibit the same property found in *ter*-constructions when they have a comitative phrase. In (19) below, for instance, the subject *Pedro* must be interpreted as the possessor of *carteira* ‘wallet’, which is within the comitative PP headed by *com*. This fact suggests that features of *com* are the responsible for this same property in *ter*-constructions.

- (19) O Pedro dormiu / viajou / chegou / veio / foi roubado  
*the Pedro slept / traveled / arrived / came / was mugged*  
 com vários documentos da Maria na carteira.  
*with several documents of-the Maria in-the wallet*  
 ‘Pedro slept / traveled / arrived / came / was mugged with several Maria’s document in his wallet.’

Regarding this property triggered by *com*, Avelar (2006b) proposed that in certain non-verbal predicative domains, this preposition may correspond to the counterpart of a sentential complementizer. Concentrating on the cases in (20) below, we are then able to explore the idea that *com* takes a locative PP as complement, in the same way the sentential C takes a TP as complement. Observe that the DP preceding *com* must be interpreted in some position inside the locative domain. In (20a), for example, the DP *aquele armário* ‘this closet’ must correspond to the element interpreted as ground in the complement position of the adverbial preposition *dentro* ‘within’; in (20b), the DP *aquele rapaz* ‘that guy’, interpreted as a possessor, corresponds to the adnominal modifier of *o carro* ‘the car’. In this sense, we may

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between (15) and (16) and between (17) and (18) do not follow directly from a required possessive interpretation by *ter*.

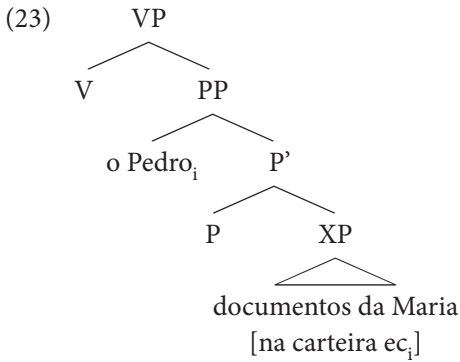
- (i) O Pedro tem/está com vários documentos da Ana na mochila  
*the Pedro has/is with several documents of-the Ana in-the bag*  
 da Maria.  
*of-the Maria.*  
 Lit.: ‘Pedro has Ana’s several documents within Maria’s bag.’

assume that the syntactic relation between a DP and its *com*-phrase modifier is similar to the one established between a DP and the relative or interrogative clause in (21), in which the DP must be interpreted in some position within the CP domain.

- (20) a. *aquele armário<sub>i</sub> com várias calças (lá) dentro (dele<sub>i/\*j</sub>)*  
*this closet with several pants there inside of-it*  
 ‘this closet with several dirty pants in it.’
- b. *o rapaz<sub>i</sub> com o carro (dele<sub>i/\*j</sub>) (aí) em frente de casa*  
*the guy with the car (of-he) there in front of house*  
 ‘that guy with his car there in front of my house’
- (21) a. *Qual professor<sub>i</sub> (que) você sempre vê (ele<sub>i/\*j</sub>)?*  
*which professor COMP you always see he*  
 ‘Which professor do you always see?’
- b. *Aquele professor<sub>i</sub> que você sempre vê (ele<sub>i/\*j</sub>) é estrangeiro.*  
*that professor COMP you always see he is foreign*  
 ‘That professor who you always see is foreign.’

Returning to possessive sentences, the contrasting property of *ter* presented in (15)-(18) can be straightforwardly explained if we assume that there is a layer headed by an abstract *com* in the configuration of *ter*-constructions. In other words, the need for the grammatical subject of possessive sentences to be interpreted as the possessor of some element that is within the possessive predicate is due to its presence in the Spec of the PP headed by *com*. As we can see in the *ter*- and *estar com*-constructions in (22) below, the coreference between the grammatical subject *o Pedro* and the possessor of *carteira* is required in both patterns by the merger of the subject in the specifier of a PP headed by features associated with *com*, as illustrated in (23).

- (22) a. *O Pedro tinha documentos da Maria na carteira.*  
*the Pedro had documents of-the Maria in-the wallet*
- b. *O Pedro estava com documentos da Maria na carteira.*  
*the Pedro was with documents of-the Maria in-the wallet*  
 ‘Peter had Maria’s documents in his wallet.’



#### 4. *Ter* as an existential verb

Some facts involved in the emergence of *ter* as an impersonal verb in BP corroborate the idea that there is a comitative-copular structure in the basis of *ter* possessive constructions. Consider the sentences in (24) and (25) below. As pointed out in Avelar (forthcoming<sub>a</sub>), *ter*-constructions such as (24) are interpreted as possessive sentences with a referential null subject in European Portuguese (EP), but not in BP: in out-of-the-blue contexts, a BP speaker interprets them as existential. To obtain a possessive interpretation in BP, it is necessary to realize phonologically the possessor subject, as *ele/ela* ‘he/she’ in (25).

- (24) Dentro do armário tem várias calças.  
*inside of-the closet has several pants*  
 EP: ‘(S)he has several pants inside the closet.’  
 BP: ‘There are several pants inside the closet.’
- (25) Dentro do armário ele/ela tem várias calças.  
*inside of-the closet he/she has several pants*  
 EP/BP: ‘(S)he has several pants inside the closet.’

Callou & Avelar (2002) and Avelar (forthcoming<sub>a</sub>) speculate that the reanalysis of *ter* as existential in BP results from the gradual impoverishment of its inflectional verbal paradigm, which became sharply reduced in comparison with the paradigm in EP. For example, the only clear distinction in the BP inflection of the present tense is in the singular first person, as seen in (27); in contrast, EP has morphologically rich inflection, with clear distinctions for the six different persons.

(27)	<b>Brazilian Portuguese</b>	<b>European Portuguese</b>	
	eu <b>fal-o</b>	eu <b>fal-o</b>	‘I speak’
	você <b>fala-Ø</b>	tu <b>fala-s</b>	‘you speak’
	ele/ela <b>fala-Ø</b>	ele/ela <b>fala-Ø</b>	‘he/she/it speaks’
	nós <b>fala-Ø / fala-mos</b>	nós <b>fala-mos</b>	‘We speak’
	a gente <b>fala-Ø</b>		
	vocês <b>fala-Ø / fala-m</b>	vós <b>fala-is</b>	‘you speak’
		vocês <b>fala-m</b>	
	eles <b>fala-Ø / fala-m</b>	eles <b>fala-m</b>	‘they speak’

As pointed out in different analyses (cf. Duarte, 1995; Tarallo, 1996; Figueiredo Silva, 1996; Galves, 1996, 2001; Ferreira, 2000, this volume; Rodrigues, 2002; and Kato, 2000, 2004 among others), this inflectional impoverishment makes the licensing of referential null subjects in BP very restricted, as we can see in (28).

- (28) a. Bebe *cerveja*. ( EP: OK / BP: \* )  
*drinks beer*  
‘He/She drinks beer.’
- b. Ele bebe *cerveja*. ( EP: OK / BP: OK )  
*he drinks beer*  
‘He drinks beer.’

This contrast between BP and EP suggests that the existential interpretation for *ter* in (24) above is an extension of the innovation involving the inflectional paradigm in BP. In other words, the reanalysis of *ter* as an existential verb can be viewed as a solution found by the grammatical system to deal with the loss of referential null subjects in the domain of possessive constructions. But, returning to a question raised in Avelar (forthcoming<sub>a</sub>), why exactly did *ter*-constructions without a realized subject acquire an existential meaning in BP? The restrictions on referential null subjects can only explain why null subject sentences with *ter* cannot be possessive, but do not account for why they must receive an existential meaning.

The constructions presented in (29) below, which reveal another innovation in BP, can shed some light on this question. In BP, many transitive verbs, like *vender* ‘to sell’ and *roubar* ‘to steal’, can dispense with a referential subject when a locative PP (or a locative deictic adverb) is present in the sentence. In EP, by contrast, these same constructions are taken to have a referential null subject (necessarily *human* in these cases).

- (29) a. (Ali) naquela loja vende muitos livros.  
*there in-that shop sells many books*  
 EP: ‘In that shop, (s)he sells many books.’  
 BP: ‘That shop sells many books.’ or  
 ‘In that shop, many books are sold.’
- b. (Aqui) nessa rua rouba muito carro.  
*here in-this street steals many car*  
 EP: ‘(S)he steals many cars in this street.’  
 BP: ‘Many cars are stolen in this street.’

In order to characterize this innovation, Avelar (2006b) and Avelar & Cyrino (2007) propose that locative PPs can occupy the subject position of sentences with verbs like *vender* and *roubar* in BP, but not in EP.<sup>4</sup> Evidence for this proposal comes from the facts observed in (30)-(31) below. The embedded clause in (30) exhibits a null subject coindexed with the main subject; however, the interpretation with a null subject is unacceptable in BP (but the only reading available in EP) if a locative phrase is realized in preverbal position within the embedded clause, as in (31).<sup>5</sup> The only alternative with a preverbal locative PP in BP is given in (32), where there is no null category coindexed with the main subject. These facts can be straightforwardly explained by the premise that locative PPs can occupy the subject position in BP sentences, blocking the presence of another element at the same position, in contrast to EP.

- (30) O rapaz<sub>i</sub> disse que *ec<sub>i</sub>* vende livros  
*the man said that sells books*  
 EP/BP: ‘The man<sub>i</sub> said that he<sub>i</sub> sells books.’

4. In Avelar (2006b), this opposition between BP and EP is associated with differences in the properties of T(ense)’s  $\varphi$ -features: the inflectional impoverishment in BP conditioned the emergence of a defective version of  $\varphi$ -features in finite T (see Ferreira, 2000, this volume). In this situation, elements without accessible interpretable  $\varphi$ -features (and auto-sufficient for Case) are largely licensed in subject position when T is defective. By contrast, finite T in EP always displays complete  $\varphi$ -features, which requires the presence of an element with interpretable  $\varphi$ -features (and an unvalued Case feature) to properly interact with the complete set of uninterpretable  $\varphi$ -features of T. In other words, EP rejects locative PPs as subjects in the relevant sentences due to its need to satisfy morphological requirements resulting from its rich inflectional paradigm. If this view is correct, the relevant contrasts between EP and BP concerning the licensing of subject locative PPs can be explained within the same picture explored to account for differences in the licensing of referential null subjects.

5. The context in (30) is one of the rare environments in which referential null subjects are accepted in BP. Exploring the possibility of movement to thematic positions, Ferreira (2000, this volume) argues that the empty category in the subject position of these BP embedded clauses is not a null pronoun, but a deleted copy of the subject DP appearing in the main clause.

- (31) O rapaz<sub>i</sub> disse que (lá) naquela loja *ec*<sub>i</sub> vende livros  
*the man said that there in-that shop sells books*  
 EP/\*BP: ‘The man said that, in that shop, he sells books.’
- (32) O rapaz disse que (lá) naquela loja vende livros  
*the man said that there in-that shop sells books*  
 \*EP/BP: ‘The man said that that shop sells books’ or  
 ‘The man said that books are sold in that shop’

*Ter*-constructions are subject to the same restrictions: as seen in (33) below, the presence of a locative phrase rescues *ter*-constructions without a realized referential subject from being ill-formed in BP. Furthermore, a referential null subject is also blocked within embedded *ter*-constructions if a preverbal locative phrase is realized, as shown by the contrast between (34a) and (34b). In this light, we need to explain why a sentence with *ter* is interpreted as existential when a locative PP appears in the subject position. Recall that verbs like *vender* ‘to sell’ or *roubar* ‘to steal’, exemplified in (29), maintain their essential meaning when they co-occur with locative subjects, but *ter* loses its possessive value and acquires an existential sense.

- (33) \*(Na bolsa) tem livros.  
*in-the bag has books*  
 BP: ‘There are books in the bag.’
- (34) a. O rapaz disse que tem livros.  
*the man said that has books*  
 EP/BP: ‘The man<sub>i</sub> said that he<sub>i</sub> has books.’
- b. O rapaz disse que naquela loja tem livros.  
*the man said that in-that shop has books*  
 EP: ‘The man<sub>i</sub> said that he<sub>i</sub> has books in that shop.’  
 BP: ‘The man said that there are books in that shop.’

We can account for these facts by exploring Freeze’s (1992) proposal that copular sentences with locative elements in subject position yield an expression of existence. (35) below presents sentences from Hindi, Chamorro, Tagalog, and Finnish that show that the existential interpretation is linked to the realization of a locative phrase in the canonical subject position of copular structures.

- (35) a. kamree-mēē aadmī hai. (Hindi – sov)  
*room-in man COP.3SG.MASC.PRES*  
 ‘There is a man in the room.’
- b. guäha lahi gi gima. (Chamorro – vos)  
*be man P house*  
 ‘There is a man in the house.’

- c. may gera as ewropa. (Tagalog – vos)  
*COP war in Europa*  
 ‘There is a war in Europe.’
- d. huonee-ssa on mies. (Finnish – svo)  
*room-INESSIVE is man.NOM*  
 ‘There is a man in the room.’  
 (Freeze, 1992: 555–556)

From this perspective, it should come as no surprise that sentences with a verb like *ter* exhibiting a locative PP as subject receives an existential interpretation, given that in the light of the assumptions I am adopting, the possessive sentence is a version of the copular structure. In other words, impersonal *ter*-constructions became existential in BP because they have a copular structure that allows a locative PP to occur as the subject. This reanalysis of *ter* as existential was arguably the natural solution found by learners of BP when dealing with constructions without an overt subject.<sup>6</sup>

6. For the sake of completeness, let me add a few words on existential *ter*-constructions in which the locative phrase is not preverbal, as illustrated in (i) below, given that BP is an SVO language. If it is assumed that the existential interpretation is conditioned by the presence of a locative element in the copular subject position, it would be expected that sentences with a locative in final position were ill-formed as existential, contrary to fact.

- (i) a. *Tinha muitos livros na biblioteca.*  
*had many books in-the library*  
 ‘There were many books in the library.’
- b. *Tem bastante gente dentro desse avião.*  
*has many people inside of-this airplane*  
 ‘There are many people inside of this airplane’

However, BP allows final position subjects (the so-called anti-topics) in specific pragmatic situations. The constructions in (ii) below, for instance, are cases in which the subject is placed in final position, with an optional pronoun in preverbal position co-indexed with it. In (iii), the locative PP I am analyzing as subject also appears in the final position, optionally co-indexed with a locative pronominal deictic in the preverbal position. In (iv), *ter* existential sentences show this same property: their preverbal position can be occupied by a deictic pronominal element co-indexed with the locative phrase on the right. Thus, I will assume that locative PPs occurring in the final position of *ter*-existential sentences can preserve their subject status, given the possibilities of subject placement observed in BP.

- (ii) (ele<sub>i</sub>) não almoçou, o Roberto<sub>i</sub>.  
*he not have lunch the Roberto*  
 ‘Roberto doesn’t have lunch.’
- (iii) a. (Lá<sub>i</sub>) vende muitas calças, naquela loja<sub>i</sub>.  
*there sells many pants in-that shop*  
 ‘That shop sells many pants.’

## 5. A prepositional layer in existential structures

If the analysis in the previous section is on the right track, one of its consequences is that there must be a prepositional layer in the underlying structure of existential *ter*-constructions, for the structural configuration that yields the possessive meaning is also the one that yields the existential meaning. A piece of evidence for this comes from the fact that BP presents impersonal clauses with *estar com*, as exemplified in (36a) and (37a) below, which are unacceptable in EP (see Avelar, forthcoming<sub>a</sub>). This type of construction with *estar com* is semantically parallel to the existential *ter*-constructions in (36b) and (37b). As we observed in the case of possessive expressions (see section 2), the existential version of *estar com* also involves a transitory condition: *um grande engarrafamento* ‘a big traffic jam’ and *filmes excelentes em promoção* ‘excellent movies on sale’ in (36) and (37), respectively, are necessarily interpreted as temporary episodes in the sentences with *estar com*, but this same interpretation is not necessary with *ter*.<sup>7</sup> Such contrast indicates that: (i)

- 
- b. (Aí<sub>i</sub>) grava todo tipo de filme, nesse meu DVD<sub>i</sub>.  
*there records all type of movie in-this my DVD*  
 ‘My DVD records any kind of movie.’
- (iv) a. (Lá<sub>i</sub>) tinha muitos livros, na biblioteca<sub>i</sub>.  
*there had many books in-the library*  
 ‘There were many books in the library.’
- b. (Aqui<sub>i</sub>) tem bastante gente, dentro desse avião<sub>i</sub>.  
*here has many people inside of-this airplane*  
 ‘There are many people inside of this airplane.’

Concerning intonational properties of the sentences above, the existence of an intonational pause before sentence-final subjects is not clear. I think that the presence of commas results, in fact, from the perception that a constituent is not in its canonic position, and not because there is a pause preceding it. The insertion of comma in these BP sentences is conventional, and not a strategy based on facts linked with intonational structures. In the *ter* sentences below, for example, I do not see any intonational differences between (a), with a sentence-final PP, and (b), with a sentence-final DP, although it is common to insert a comma only in the latter case.

- (v) a. Tem muito livro naquela biblioteca.  
*have many book in-that library*  
 ‘There are many books in that library.’
- b. Tem muito livro, aquela biblioteca.  
*have many book, that library*  
 ‘That library has many books.’

7. Interestingly, impersonal sentences with *estar com* are pragmatically unacceptable if their content reports an enduring or permanent condition, as in the sentences exemplified below. (ia) would be acceptable only if Brazil has recently acquired beaches, which corresponds to a pragmatically strange context.



*ter* is also obtained from features associated with *estar com* in existential contexts, and (ii) EP has no *estar com* existential sentences due to a general restriction on the occurrence of locative PPs in subject position, which is in turn linked to the fact that it has no *ter*-existential sentences (see Section 3).

- (36) a. Na cidade **tava com** um engarrafamento enorme.  
*in-the city was with a traffic jam big*  
 ‘There was a big traffic jam in downtown.’
- b. Na cidade **tinha** um engarrafamento enorme.  
*in-the center had a traffic jam big*  
 ‘There was a big traffic jam in downtown’ or  
 ‘There were big traffic jams in downtown’
- (37) a. Na locadora **tá com** filmes ótimos em promoção.  
*in-the movie store is with movies excellent on sale*  
 ‘There are excellent movies on sale in the movie store.’
- b. Na locadora **tem** filmes ótimos em promoção.  
*in-the movie store has movies excellent on sale*  
 ‘There are excellent movies on sale in the movie store’

The paradigm in (38)-(39) below, with *estar*, *ter* and *estar com*, provides additional evidence supporting the idea that there is a prepositional layer in existential *ter*-constructions. The grammatical sentences of this paradigm can receive an interpretation corresponding to *there is a movie being broadcasted by the TV this afternoon*, regardless of the verb being used. In (38), the gerund *passando* ‘broadcasting’ occurs between the verb and the DP *um filme* ‘a movie’; in this situation, we can use *estar*, but not *ter* or *estar com*. By contrast, the gerund appears after the post-verbal DP in (39), and *ter* and *estar com* are licensed in this case, but not *estar*.

- (38) a. Na TV agora à tarde **tá** passando um filme.  
*in-the TV now to-the afternoon is broadcasting a movie*
- b. \*Na TV agora à tarde **tem** passando um filme.  
*in-the TV now to-the afternoon has broadcasting a movie*
- c. \*Na TV agora à tarde **tá com** passando um filme.  
*in-the TV now to-the afternoon is with broadcasting a movie*  
 ‘There is a movie being broadcasted by the TV this afternoon.’

- 
- (i) a. #Tá com muitas praias no Brasil.  
*is with many beaches in-the Brazil*
- b. Tem muitas praias no Brasil.  
*had many beaches in-the Brazil*  
 ‘There are many beaches in Brazil.’

- (39) a. \*Na TV agora à tarde tá um filme passando.  
*in-the TV now to-the afternoon is a movie broadcasting*
- b. Na TV agora à tarde tem um filme passando.  
*in-the TV now to-the afternoon has a movie broadcasting*
- c. Na TV agora à tarde tá com um filme passando.  
*in-the TV now to-the afternoon is with a movie broadcasting*  
 ‘There is a movie being broadcasted by the TV this afternoon.’

Through the comparison between (38) and (39), we can see that *ter* is only accepted if *estar* and *com* can co-occur; conversely, if the context prevents the realization of *com*, the verb *ter* is not licensed. This fact can be straightforwardly accounted for if the existential version of *ter* is necessarily obtained by the fusion of the abstract features corresponding to *estar* and *com*. From this perspective, the unacceptability of (38b)-(38c) is formally explained by the idea that the preposition *com* has to interact with a DP in order to provide it with Case (say, via probe-goal agreement in Chomsky’s (2000, 2001) sense); such a condition is not satisfied because the only available DP interacts with the gerund (or with some category within the embedded clause introduced by the gerund) for the same purpose, which blocks the agreement relation between the preposition and the DP. Note that the DP immediately follows the preposition in the well-formed example in (39c), satisfying the structural conditions for the required relation.

The possessive sentences in (40)-(41) below, constructed from the same constituents of (38)-(39), confirm the relevant link between *ter* and *estar com*. In (40), the DP *o filme* ‘the movie’ appears in subject position, yielding a context where *ter* and *com* are rejected, as shown respectively in (40b) and (40c). In (41), it is the DP *a TV* ‘the TV’ that appears in subject position, and both *ter* and *estar com* are licensed in this context. These facts reinforce the idea that the same comitative prepositional layer is shared by both possessive and existential sentences with *ter*.

- (40) a. O filme tá passando na TV agora à tarde.  
*the movie is broadcasting in-the TV now to-the afternoon*
- b. \*O filme tem passando na TV agora à tarde.  
*the movie has broadcasting in-the TV now to-the afternoon*
- c. \*O filme tá com passando na TV agora à tarde.  
*the movie is with broadcasting in-the TV now to-the afternoon*  
 ‘That movie is being broadcasted by the TV this afternoon.’

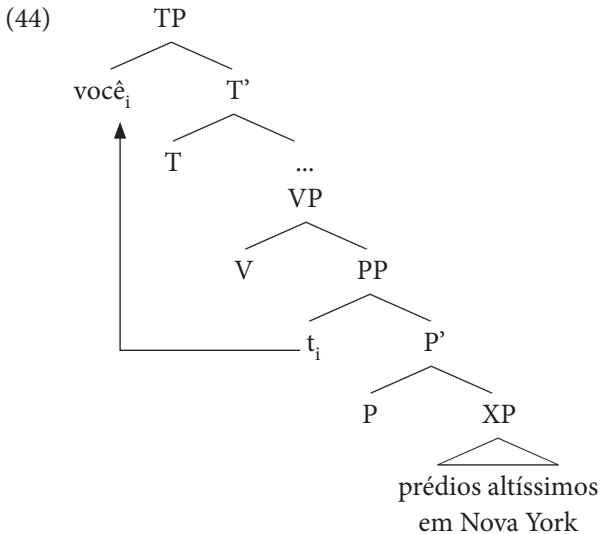
- (41) a. \*A TV tá um filme passando agora à tarde.  
*the TV is a movie broadcasting now to-the afternoon*
- b. A TV tem um filme passando agora à tarde.  
*the TV has a movie broadcasting now to-the afternoon*
- c. A TV tá com um filme passando agora à tarde.  
*the TV is with a movie broadcasting now to-the afternoon*  
 ‘The TV is broadcasting an excellent movie this afternoon.’

Further evidence for the view I am arguing for here involves the use of an expletive-like version of the pronoun *você* in BP. As seen in (42)-(43) below, *você* is licensed in the subject position of existential sentences with *ter*, but not with *haver* (see notes 2 and 3).<sup>8</sup>

- (42) a. (Você) tem prédios altíssimos em Nova York.  
*you has buildings very high in New York*  
 ‘There are huge buildings in New York.’
- b. (Você) tem muitos jogadores brasileiros em times europeus.  
*you has many players Brazilians in teams Europeans*  
 ‘There are many Brazilian soccer players in European football teams.’
- (43) a. (\*Você) há prédios altíssimos em Nova York.  
*you exists buildings very high in New York*  
 ‘There are huge buildings in New York.’
- b. (\*Você) há muitos jogadores brasileiros em times europeus.  
*you exists many players Brazilians in teams Europeans*  
 ‘There are many Brazilian soccer players in European football teams.’

Following Avelar (2004, forthcoming<sub>b</sub>), I take this expletive-like category to be not a true expletive, but a version of *você* with a generic reference. This implies that, in order to be properly licensed, *você* in these contexts must first be inserted in a thematic position and not directly in [Spec,TP]. If we assume an abstract prepositional head in the existential construction with *ter*, the required thematic position can be identified as the specifier of its projection. As illustrated in (44), the fake expletive must be initially merged in [Spec,PP], and then moved to [Spec,TP]. If this approach is correct, the pronoun does not co-occur with *haver* because there is no PP inside *haver*-constructions to properly license the pronoun, given that *haver* does not function as possessive verb in contemporary (Brazilian and European) Portuguese. In other words, there is no proper thematic locus to host the generic pronoun in sentences with *haver*.

8. See Duarte (1999) and Avelar (2004, forthcoming<sub>b</sub>) for discussions on this specific use of *você*.



Finally, I would like to mention a fact noted by Viotti (1999, 2002) involving the weakness of the definiteness effect in BP. As generally observed in the literature, existential clauses are subject to the so-called definiteness effect, which bars the occurrence of definite DP as complements of existential verbs. However, existential *ter*-constructions in BP are not so rigid with respect to this property: the sentences in (45) below, which present definite DPs as complements, can be realized regardless of any contextual anchorage.

- (45) a. Naquela loja tem o livro novo do Saramago.  
*in-that store has the book new of-the Saramago*  
 Lit.: ‘There is the new book of Saramago in that store.’
- b. Hoje tem o jogo do Brasil.  
*today has the game of-the Brazil*  
 Lit.: ‘There is the game of Brazil today.’
- c. No Rio de Janeiro tem a Praia de Copacabana.  
*in-the Rio de Janeiro have the beach of Copacabana*  
 Lit.: ‘There is Copacabana beach in Rio de Janeiro.’

In fact, definiteness restrictions on complements in existential structures can not be taken as a universal property. In languages such as Japanese and Catalan, for example, there is no restriction on definite DPs in existential environments, as shown in (46)-(47) below. Longa, Lorenzo & Rigau (1997) suggest that the relevant contrast in Catalan is related with Case: if the Case available for the complement of the existential verb is partitive, then it must be an indefinite DP; if not, there is no requirement involving the (in)definiteness of the complement. As the existential

*haber*-constructions in Catalan have the same internal structure of possessive sentences with this verb (as Longa, Lorenzo & Rigau argue for), the existential version of *haber* must have prepositional features in its composition; in this type of situation, it is the abstract preposition that provides Case to the DP, and not the verb. Under the assumption that this preposition is not associated with partitive Case, the existential *haber*-constructions in Catalan dispense with the requirement of indefiniteness, which explains the well-formed nature of the Catalan *haber*-construction in (47).

- (46) Japanese (Kishimoto, 2000)  
 Koko-ni-wa hotondo-no / subete-no / korera-no hon-ga aru.  
*here-DAT-TOP most-GEN / all-GEN / those-GEN book-NOM be-IN*  
 Lit.: 'There are most/all/those books here.'
- (47) Catalan (Longa, Lorenzo & Rigau, 1998)  
 Hi ha el meu pare.  
*CL has the my father*  
 'My father is there.'

This idea can be extended to the relevant facts in BP: the definiteness restriction in existential *ter*-constructions is weak because it is the comitative preposition, which is not related to partitive Case, that assigns Case to the complement DP. In sum, although this topic deserves a more detailed discussion, the weakness of the definiteness effect in BP can also be seen as a clue to the existence of a preposition layer in its existential domains.

## 6. Concluding remarks

This chapter concentrates on three particular aspects of the possessive-existential domain in Brazilian Portuguese: (i) the thematic parallelism between *ter* and *estar com* in both possessive and existential clauses; (ii) the obligatory co-reference involving the grammatical subject of possessive expressions and the possessor of an element in possessive *ter*-constructions; and (iii) the emergence of the possessive as an existential verb in BP, but not in EP. Although there is no overt morphological indication of the fusion involving the features of *estar* and *com* to form the possessive verb, these three aspects are straightforwardly explained within the view that copular and comitative features underlie possessive and existential constructions with *ter*.

## References

- Avelar, J. (2004). Dinâmicas Morfossintáticas com Ter, Ser e Estar em Português Brasileiro. Master's thesis, Universidade Estadual de Campinas.
- Avelar, J. (2006a). De Verbo Funcional a Verbo Substantivo: Uma Hipótese para a Supressão de *Haver* no Português Brasileiro. *Letras de Hoje*, 143, 49–74.
- Avelar, J. (2006b). Adjuntos Adnominais Preposicionados no Português Brasileiro. Doctoral dissertation, Universidade Estadual de Campinas.
- Avelar, J. (forthcoming<sub>a</sub>). On the Emergence of TER as an Existential Verb in Brazilian Portuguese. In: *Historical Syntax and Linguistic Theory* (P. Crisma & G. Longobardi, eds). Oxford University Press, Oxford.
- Avelar, J. (forthcoming<sub>b</sub>). The Status of the (Supposed) Expletive in Brazilian Portuguese Existential Clauses. In: *Romance Languages and Linguistic Theory 2006* (D. Törck & W. L. Wetters, eds). John Benjamins, Amsterdam.
- Avelar, J. & S. Cyrino. (2007). Locative Phrases in Subject Position: a Possible Contribution of Bantu Languages to the Syntax of Brazilian Portuguese. Presented at the Colloquium on Change and Variation in Romance, Universidade do Porto, 2007, December 13–15.
- Bach, E. (1967). *Have* and *Be* in English Syntax. *Language*, 43, 462–485.
- Belvin, R. & M. den Dikken. (1997). *There*, *Happens*, *To*, *Be*, *Have*. *Lingua*, 101, 151–183.
- Callou, D. & J. Avelar. (2002). Sobre *Ter* e *Haver* em Construções Existenciais: Variação e Mudança no Português do Brasil. *Gragoatá*, 9, 85–114.
- Callou, D. & J. Avelar. (2003). Estruturas com *Ter* e *Haver* em Anúncios do Século XIX. In: *Para a História do Português Brasileiro* (T. Alkmim, ed.), Vol. III, pp. 47–68. Humanitas-USP, São Paulo.
- Chomsky, N. (1995). *The Minimalist Program*. The MIT Press, Cambridge, MA.
- Chomsky, N. (2000). Minimalist Inquiries: The framework. In: *Step-by-step: Essays in Minimalist Syntax in Honor of Howard Lasnik* (R. Martin, D. Michaels & J. Uriagereka, eds), pp. 89–155. The MIT Press, Cambridge, MA.
- Chomsky, N. (2001). Derivation by Phase. In: *Ken Hale: A Life in Language* (M. Kenstowicz, ed.), pp. 1–52. The MIT Press, Cambridge, MA.
- Duarte, E. (1995). A Perda do Princípio 'Evite Pronome' no Português Brasileiro. Doctoral dissertation, Universidade Estadual de Campinas.
- Duarte, E. (1999). Sociolinguística Paramétrica: Perspectivas. In: *Estudos Lingüísticos: Realidade Brasileira* (D. Hora & E. Christiano, eds), pp. 107–114. Idéia, João Pessoa.
- Eleutério, S. (2003). A Variação *Ter/Haver*: Documentos Notariais do Século XVII. Doctoral Dissertation, Universidade Federal do Rio de Janeiro.
- Embick, D. & R. Noyer. (2001). Movement Operations after Syntax. *Linguistic Inquiry*, 32, 555–595.
- Ferreira, M. (2000). Argumentos Nulos em Português Brasileiro. Master's thesis, Universidade Estadual de Campinas.
- Figueiredo Silva, M. C. (1996). *A Posição Sujeito no Português Brasileiro*. Editora da Unicamp, Campinas.
- Freeze, R. (1992). Existential and Other Locatives. *Language*, 68, 553–595.
- Galves, C. (1996). O Enfraquecimento da Concordância no Português Brasileiro. In: *Português Brasileiro – Uma Viagem Diacrônica* (I. Roberts & M. Kato, eds), pp. 387–408. Editora da Unicamp, Campinas.
- Galves, C. (2001). *Ensaio sobre as Gramáticas do Português*. Editora da Unicamp, Campinas.

- Halle, M. & A. Marantz. (1993). Distributed Morphology and Pieces of Inflection. In: *The view from building 20* (K. Hale & S. Keyser, eds), pp. 111–176. The MIT Press, Cambridge, MA.
- Halle, M. & A. Marantz. (1994). Some Key Features of Distributed Morphology. *MIT Working Papers in Linguistics*, 21, 275–288.
- Harley, H. (2002). Possession and the Double Object Construction. *Linguistic Variation Yearbook*, 2, 29–68.
- Heine, B. (1997). *Possession: Cognitive Sources, Forces and Grammaticalization*. Cambridge University Press, Cambridge.
- Kato, M. (2000). The Partial Pro-Drop Nature and the Restricted VS Order in Brazilian Portuguese. In: *The Null Subject Parameter in Brazilian Portuguese* (M. Kato & E. Negrão), pp. 223–258. Vervuert – Latino-Americana, Frankfurt.
- Kato, M. (2004). Desvendando a Gramática do Português Brasileiro. In: *Saudades da língua* (E. Albano et al., eds), pp. 261–271. Mercado de Letras, Campinas.
- Kayne, R. (1993). Toward a Modular Theory of Auxiliary Selection. *Studia Linguistica*, 47, 3–31.
- Kishimoto, H. (2000). Locational Verbs, Agreement, and Object Shift in Japanese. *The Linguistic Review*, 17, 53–109.
- Leite, Y. & D. Callou. (2002). *Como Falam os Brasileiros?* Jorge Zahar, Rio de Janeiro.
- Levinson, L. (2004). *HAVE minus BE Equals P*. Paper presented at the 19th Comparative Germanic Syntax Workshop, The Graduate Center of the City University of New York, 2004, June 3–5.
- Longa, V., G. Lorenzo & G. Rigau. (1998). Subject Clitics and Clitics Recycling: Locative Sentences in Some Iberian Romance Languages. *Journal of Linguistics*, 34, 125–164.
- Lyons, J. (1967). A Note on Possessive, Existential, and Locative Sentences. *Foundations of Language*, 3, 390–396.
- Messineo, C. (2004). La Posesión em Toba. Ms, Universidad de Buenos Aires.
- Ouhalla, J. (2000). Possession in Sentences and Noun Phrases. In: *Research in Afroasiatic Grammar*, (J. Lecarme, J. Lowestamm & U. Shlonsky, eds), pp. 221–242. John Benjamins, Amsterdam/Philadelphia.
- Reintges, C. H. & A. Lipták. (2006). HAVE = BE + PREP(osition): New Evidence for the Preposition Incorporation Analysis of Clausal Possession. In: *Phases in Interpretation*. (M. Frascarelli, ed.), pp. 112–128. Mouton de Gruyter, Berlin.
- Rodrigues, C. (2002). Morphology and Null Subjects in Brazilian Portuguese. In: *Syntactic Effects of Morphological Changes*. (D. Lightfoot, ed.), pp. 160–178. Oxford University Press, Oxford.
- Seki, L. (2000). *Gramática do Kamaiurá – Língua Tupi-Guarani do Alto Xingu*. Editora da Unicamp, Campinas.
- Silva, R. N. A. (2004). A Variação *Ter/Haver* na Fala Pessoense. In: *Estudos Sociolinguísticos: Perfil de uma Comunidade*, (D. Hora, ed.), pp. 219–234. João Pessoa.
- Tarallo, F. (1996). Diagnosticando uma Gramática Brasileira: O Português d'aquém e d'além-mar ao Final do Século XIX. In: *Português Brasileiro – Uma viagem diacrônica* (I. Roberts & M. Kato, eds), pp. 35–68. Editora da Unicamp, Campinas.
- Torrego, E. (2002). Aspect in the Prepositional System of Romance. In: *Current issues in Romance Languages* (T. Satterfield, C. Tortora & D. Cresti, eds), pp. 337–357. John Benjamins, Amsterdam.
- Viotti, E. (1999). A Sintaxe das Sentenças Existenciais no Português do Brasil. Doctoral dissertation, Universidade de São Paulo.
- Viotti, E. (2002). Sobre o Efeito de Definitude nas Sentenças Existenciais. *Revista do GEL*, 11, 127–153.

## Topicalization of verbal projections in Brazilian Portuguese

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In this paper, I examine verbal constituents in the left periphery in Brazilian Portuguese and argue that they should be analyzed as topics. I identify three types of topicalization of verbal projections depending on whether the derivation involves movement or base-generation and whether the movement involves a verb or a full vP. In addition to providing a semantic and pragmatic characterization of these three types, I also discuss why the constructions derived by movement surface with two copies of the verb phonetically realized with different inflections (an infinitival and a finite form).

### 1. Introduction\*

In this paper I argue that some constructions involving vP/verb fronting in Brazilian Portuguese (BP) should be analyzed as topicalization of verbal projections, and that they should be classified in three different types, based on the type of fronted element (a vP or just a verb) and on the derivation of the construction (movement or base-generation).

The constructions considered in this paper follow the scheme in (1), which is also found in several other languages (see Prince, 1981, 1998 and Källgren & Prince, 1989 for Yiddish; Koopman, 1984 for Vata; Lumsden & Lefebvre, 1990 and Larson & Lefebvre, 1991 for Haitian Creole; Dekydtspotter, 1992 for Yoruba; Matos, 1992 for European Portuguese; Nishiyama & Cho, 1997 for Japanese and Korean; Abels,

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2001 for Russian; Landau, 2004 for Hebrew; Vicente, 2007 for Spanish and Hungarian; and Nunes & Quadros 2008 for Brazilian Sign Language).

- (1) [<sub>Syntactic periphery</sub> infinitival verb (...)][(...) finite verb (...)]

Basically, the topicalization of verbal projections in BP is characterized by two instances of the same verb with different morphology. The first instance is located in the syntactic periphery of the sentence, and the second one is in the regular position of inflected verbs.

In Section 2, I will classify constructions with two occurrences of the same verb in three types and discuss the criteria used for this classification. In Section 3, I will provide evidence for an analysis in terms of topicalization of verbal projections and against focalization. Finally, in Section 4, I will contribute with an argument in favor of the copy theory of movement (Chomsky, 1993, 1995) and late insertion of verbal morphology, in the sense of Distributed Morphology (DM) (Halle & Marantz, 1993). My main claim in the final section is that the topic projection has a morphological requirement that triggers the application of a repair operation in the higher instance of the verb. This repair operation allows the phonetic realization of more than one copy of the same verb in these constructions.

## 2. Criteria for the classification

### 2.1 Type of the fronted element

There are three types of verbal projections that can be fronted in constructions with two occurrences of the same verb in BP. The following sentences provide examples of these three types.

- (2) Type 1:  
 [Temperar] o cozinheiro temperou o peixe (não a carne).  
*season-INF the cook seasoned the fish not the meat*  
 'As for seasoning something, the cook seasoned the fish (not the meat).'
- (3) Type 2:  
 [Temperar aquele peixe] o cozinheiro temperou (mas...)  
*season-INF that fish the cook seasoned (but...)*  
 'As for seasoning that fish, the cook seasoned it (but...).'
- (4) Type 3:  
 [Temperar peixe] o cozinheiro sempre tempera nos fins de semana.  
*season-INF fish-SG the cook always seasons on-the ends of week*  
 'As for seasoning fish, the cook always seasons it on weekends.'

The sentence in (2) is an example of a Type 1 construction. This type of construction is characterized by having only an infinitival verb on the left periphery. The sentences in (3) and (4) are respectively examples of Type 2 and Type 3 constructions. In both cases, there is an infinitival verb on the left periphery followed by its internal argument. The only difference between Types 2 and 3 with respect to the fronted constituent is that in Type 2 the internal argument of the verb, *aquele peixe* ‘that fish’, has a specific reading and in Type 3, the internal argument of the verb, *peixe* ‘fish’, has a generic reading. The generalization I propose is the following: If the internal argument only allows a specific reading, the construction belongs to Type 2. If the internal argument only allows a generic reading, the construction belongs to Type 3. If the internal argument allows both specific and generic readings, the relevant structures are potentially ambiguous between Types 2 and 3.<sup>1</sup>

These fine differences between types of topicalized verbal projections are the key to explain some syntactic properties of the major phenomenon. For instance, every time the generic reading of the argument is possible, the base-generation of the fronted constituent is also possible. This correlation is discussed in the next section.

## 2.2 Derivation

Each of the three types of constructions with topicalization of verbal projections in BP proved to be derived differently from the others. Types 1 and 2 are derived by movement and Type 3 is base-generated. The difference between Types 1 and 2 is that Type 1 is generated by the movement of the head of the verbal projection and Type 2 is generated by the movement of vP. As for Types 2 and 3, there are several sentences that can be potentially ambiguous with respect to their syntactic derivation; however, it is possible to find unambiguous cases that show that whenever the topicalized constituent contains an argument with specific reading, the possibility of base-generation is blocked.

1. The linguistic judgments used in this paper are my own, as well as judgments from informants from different regions of Brazil. According to these informants, the fronted verb in the constructions above must be in the infinitive form and fronted participial forms are not allowed, contrary to judgments presented in Cable (2004).

(i) \*[Comido]<sub>Topic</sub> eu tenho comido peixe.  
*eaten I have eaten fish*  
 “As for having eaten, I have eaten fish”

2.2.1 *Diagnostics for movement*

In this section I discuss the results of the tests for movement applied to constructions with fronted verbal projections in BP. Let us start with Types 1 and 2.<sup>2</sup>

## (5) Type 1

## a. No islands:

**Temperar**, eu acho que o cozinheiro **temperou** o peixe  
*season-INF I think that the cook seasoned the fish*  
 (não a carne).  
 (not the meat)

‘As for seasoning something, I think the cook seasoned the fish (not the meat).’

## b. Complex NPs (relative clauses):

\***Temperar**, eu conheci [o cozinheiro que **temperou** o peixe]  
*season-INF I met [the cook that seasoned the fish]*  
 (não a carne).  
 (not the meat)

‘As for seasoning something, I met the cook that seasoned the fish (not the meat).’

## c. Coordinate structures:

\***Temperar**, o cozinheiro [comprou o sal e **temperou** o peixe]  
*season-INF the cook [bought the salt and seasoned the fish]*  
 (não a carne).  
 (not the meat)

‘As for seasoning something, the cook bought salt and seasoned the fish (not the meat).’

## d. Adjunct islands:

\***Temperar**, o cozinheiro comprou o sal [antes de **temperar** o  
*season-INF the cook bought the salt [before of season-INF the*  
*peixe](não a carne).*  
*fish] (not the meat)*

‘As for seasoning something, the cook bought salt before seasoning the fish (not the meat).’

2. For the sake of brevity, I will only discuss the Complex Noun Phrase Constraint, the Coordinate Structure Constraint (Ross, 1967) and the Adjunct Island (Huang, 1982).

## (6) Type 2

## a. No islands:

**Temperar** aquele **peixe**, eu acho que o cozinheiro  
*season-INF that fish I think that the cook*  
**temperou** (mas...)  
*seasoned (but)*

‘As for seasoning that fish, I think the cook seasoned it (but...)’

## b. Complex NPs (relative clauses):

\***Temperar** aquele **peixe**, eu conheci [o cozinheiro que  
*season-INF that fish I met [the cook that*  
**temperou]** (mas...)  
*seasoned] (but)*

‘As for seasoning that fish, I met the cook that seasoned it (but...)’

## c. Coordinate structures:

\***Temperar** aquele **peixe**, o cozinheiro [comprou o sal e  
*season-INF that fish the cook [bought the salt and*  
**temperou]** (mas...)  
*seasoned] (but)*

‘As for seasoning that fish, the cook bought salt and seasoned it (but...)’

## d. Adjunct islands:

\***Temperar** aquele **peixe**, o cozinheiro comprou o sal [antes de  
*season-INF that fish the cook bought the salt [before of*  
**temperar]** (mas...)  
*season-INF] (but)*

‘As for seasoning that fish, the cook bought salt before seasoning it (but...)’

The sentences in (5a) and (6a) show that the constituents *temperar* ‘to season’ and *temperar aquele peixe* ‘to season that fish’ can occur in the left periphery of a complex sentence involving no islands. The sentences in (5b-d) and (6b-d) show that these fronted constituents are subject to the Complex NP Constraint, the Coordinate Structure Constraint, and the Adjunct Condition, since the sentences are not acceptable. These results lead us to the conclusion that Types 1 and 2 involve movement of the fronted constituents.

Now, let us see the results for Type 3.

(7) Type 3

a. No islands:

**Temperar peixe**, eu acho que o cozinheiro (só) **tempera**  
*season-INF fish I think that the cook (only) seasons*  
 nos fins de semana.  
*on-the ends of week*

‘As for seasoning fish, I think the cook (only) seasons it on weekends.’

b. Complex NPs (relative clauses):

**Temperar peixe**, eu conheço [um cozinheiro que (só) **tempera**  
*season-INF fish I met [a cook that (only) seasons*  
 nos fins de semana].  
*on-the ends of week]*

‘As for seasoning fish, I met a cook that (only) seasons it on weekends.’

c. Coordinate structures:

**Temperar peixe**, o cozinheiro [compra sal e **tempera** nos  
*season-INF fish the cook [buys salt and seasons on-the*  
 fins de semana].  
*ends of week]*

‘As for seasoning fish, the cook buys salt and seasons it on weekends.’

d. Adjunct islands:

**Temperar peixe**, o cozinheiro (só) compra sal [antes de  
*season-INF fish the cook (only) buys salt [before of*  
**temperar**].  
*season-INF]*

‘As for seasoning fish, the cook (only) buys salt before seasoning.’

As we can see, the constituent *temperar peixe* ‘to season fish’ can occur in the left periphery of all types of structures considered as tests for movement, such as the complex NP in (7b), the coordinate structure in (7c), and the adjunct island in (7d), as well as in complex sentences without islands such as (7a). This result leads us to the conclusion that base-generation of some verb phrases is possible in BP.

### 2.2.2 The type of the internal argument in the left periphery

Type 2 and Type 3 are both constructions that have a vP (verb + objects) in the left periphery. I pointed out above that the type of the internal argument plays an important role in the characterization of Types 2 and 3 as different constructions. In this section, I argue that the relevant feature to distinguish them is the specificity of the internal argument.

There are two cases that will be discussed here: the first one is the case of internal arguments that can be potentially ambiguous between generic and specific readings, depending on tense/aspect properties and the second one is the case of certain arguments that seem to be intrinsically generic or specific.

Let us start with the type of ambiguity related to the tense/aspect properties of the sentence.<sup>3</sup>

- (8) a. *Ler o jornal, eu acho que ele leu (mas...)*  
*read-INF the newspaper I think that he read-P1 (but)*  
 ‘As for reading the newspaper, I think that he read it (but...)’
- b. *Ler o jornal, eu acho que ele lê (mas...)*  
*read-INF the newspaper I think that he read-PR (but)*  
 ‘As for reading the newspaper, I think that he reads it (but...)’
- c. *Ler o jornal, eu acho que ele lia (mas...)*  
*read-INF the newspaper I think that he read-P2 (but)*  
 ‘As for reading the newspaper, I think that he used to read it (but...)’

In (8a-c), we have a full DP following the infinitival verb. In (8a), the combination of the verb in perfect-past *leu* with the full DP [*o jornal*] produces a punctual reading: it means someone read a given newspaper at a specific moment in the past and the action was completed. So, the whole sentence has perfective aspect. In (8b-c), the combination of the present and imperfective verbal forms *lê* and *lia* with the full DP [*o jornal*] produces a habitual reading: it means someone usually reads newspapers or used to read them. In this case, the DP [*o jornal*] can have a generic reading referring to different elements of a group of newspapers or can have a specific (but pragmatically weird) reading according to which someone habitually reads/used to read the same specific newspaper over and over again.

When the tests for movement are applied, the following results are obtained.

- (9) Complex NP Constraint (relative clauses):
- a. \**Ler o jornal, eu tenho/tive [um amigo que leu]*  
*read-INF the newspaper I have/had [a friend that read-P1]*  
 (mas...)  
 (but)  
 ‘As for reading the newspaper, I have/had a friend that read it  
 (but...)’

3. P1 = perfect-past; P2 = imperfect-past; PR = present.

- b. Ler o jornal, eu tenho [um amigo que lê]  
*read-INF the newspaper I have [a friend that read-PR]*  
 (mas...)  
 (but)  
 ‘As for reading the newspaper, I have a friend that read it (but...)’
- c. Ler o jornal, eu tenho/tinha [um amigo que lia]  
*read-INF the newspaper I have/had [a friend that read-P2]*  
 (mas...)  
 (but)  
 ‘As for reading newspaper, I have/had a friend that used to read it  
 (but...)’

The construction in (9a), where the specific reading is the only available, shows island effects, while both constructions in (9b) and (9c), where the generic reading is possible, do not. These results provide evidence for the claim that the specific reading of the internal argument in the topic characterizes the constructions of Type 2. Going back to the examples in (8), the sentence in (8a) is a construction of Type 2, while the sentences in (8b-c) are ambiguous between Types 2 and 3, given that the internal arguments allow both specific and generic readings.

In some cases, aspectual adverbs can disambiguate the two readings:

(10) Complex NP Constraint (relative clause)

- Ler o jornal, eu tenho [um irmão que leu **diariamente**  
*read-INF the newspaper I have [a brother that read-P1 daily*  
**durante dez anos]**.  
*during ten years]*  
 ‘As for reading newspaper, I have a brother that read it daily for ten years’

In (10), despite the fact that the verbal form is in the perfect-past *leu*, the presence of an adverbial phrase that expresses a period of time yields a habitual reading: it means that the person in question used to read newspapers during a certain period in past. In this case, the DP *o jornal* can receive a generic reading and the resulting sentence is acceptable, which shows that the fronted verb phrase *ler o jornal* did not move out of the Complex NP island, but was instead base-generated in the left periphery.

However, if the adverb refers to a punctual time, the VP-topicalization becomes impossible out of the domain of the island, as illustrated in (11).

## (11) Type 2

Complex NP Constraint (relative clauses):

\*Ler o jornal, eu tenho [um irmão que leu ontem].  
*read-INF the newspaper I have [a brother that read-P1 yesterday]*  
 ‘As for reading newspaper, I have a brother that read it yesterday.’

The verb in perfect-past *leu* and the adverb *ontem* in (11) yield a punctual reading. Now the resulting sentence is acceptable, which shows that the fronted verb phrase *ler o jornal* must have moved out of the Complex NP island.

The contrast presented above becomes even more clear when one compares different kinds of arguments that seem to be intrinsically generic or specific. Take bare singular NPs (see Saraiva, 1997) and proper names, for instance. These two types of arguments seem to be in opposing points in a scale of specificity.

## (12) Bare NPs:

O veterinário vacinou cachorro de rua.  
*the veterinarian vaccinated dog of street*  
 ‘The veterinarian vaccinated stray dog.’

## (13) Proper names:

O veterinário vacinou o Rex.  
*the veterinarian vaccinated the Rex*  
 ‘The veterinarian vaccinated Rex.’

The sentence in (12) means that the veterinarian has vaccinated a non-specified number of dogs in a period in the past, while the sentence in (13) means that the veterinarian vaccinated the dog named Rex in a specific time in the past. When we apply our tests for movement, the results obtained are the following.

## (14) Bare NPs:

Vacinar cachorro de rua, eu conheço [um veterinário que  
*vaccinate-INF dog of street I met [a veterinarian that*  
*vacina].*  
*vaccinates]*  
 ‘As for vaccinating stray dogs, I met a veterinarian that vaccinates.’

## (15) Proper names:

\*Vacinar o Rex, eu briguei com o veterinário que vacinou  
*vaccinate-INF the Rex I fought with the veterinarian that vaccinated*  
 (mas...)  
 (but)  
 ‘As for vaccinating the Rex, I fought with the veterinarian that vaccinated.’



The sentence in which a bare singular NP is in the left periphery is acceptable, while the sentence with a proper name is not. Given that the type of internal argument is the main difference between (14) and (15), we can now rely on the specificity of the internal argument as a diagnostic for movement to tease apart Type 2 from Type 3.

### 2.2.3 *The resumptive form FAZER ISSO ('do this')*

An additional piece of evidence for this difference between the types generated by movement (Types 1 and 2) and the type base-generated (Type 3) is the possibility of licensing a resumptive form in the comment of Type 3, but not in the comment of Types 1 and 2, as illustrated in (16)-(18).

(16) Type 1:

- a. Vacinar, o veterinário vacinou o cachorro.  
*vaccinate-INF the veterinarian vaccinated the dog*  
'As for vaccinating, the veterinarian vaccinated the dog.'
- b. \*Vacinar, o veterinário fez isso com o cachorro.  
*vaccinate-INF the veterinarian did this with the dog*  
'As for vaccinating, the veterinarian did it with the dog.'

(17) Type 2:

- a. Vacinar o Rex, o veterinário vacinou (mas...)  
*vaccinate-INF the Rex the veterinarian vaccinated (but)*  
'As for vaccinating the Rex, the veterinarian vaccinated it' (but...)
- b. \*Vacinar o Rex, o veterinário fez isso (mas...)  
*vaccinate-INF the Rex the veterinarian did this (but)*  
'As for vaccinating the Rex, the veterinarian did it.'

(18) Type 3:

- a. Vacinar cachorro, eu conheço [um veterinário que vacina].  
*vaccinate-INF dog I know [a veterinarian that vaccinates]*  
'As for vaccinating dog, I know a veterinarian that does it.'
- b. Vacinar cachorro, eu conheço [um veterinário que faz isso].  
*vaccinate-INF dog I know [a veterinarian that does it]*  
'As for vaccinating dog, I know a veterinarian that does it.'

In (16b) and (17b), the resumptive form *fez isso* 'did it' cannot replace *vacinou* 'vaccinated' while in (18b) it can.

Table 1 Syntactic properties

	Fronted constituent	Derivation	Internal argument in the topic	Resumptive
Type 1	verb by itself	by movement	–	no
Type 2	vP	by movement	specific	no
Type 3	vP	base-generation	generic	yes

This asymmetry between Types 1 and 2, on the one hand, and Type 3, on the other, can therefore be used as an additional test to distinguish between cases generated by movement and base-generated cases.<sup>4</sup>

The most important syntactic properties of the constructions studied here can be summarized in Table 1. With respect to the type of the fronted constituent, it can be either a verb by itself (Type 1) or a vP (Types 2 and 3). As for the syntactic derivation of these constructions, the fronted verbal constituents are moved to the left periphery in Types 1 and 2 and are base-generated there in Type 3. Two other properties that support the classification proposed here are: (i) the contrast between specific and generic readings of the internal argument in the topic, and (ii) the possibility of replacing the verb in the comment by the resumptive *fazer isso*.

### 3. Topic or focus?

#### 3.1 Question-answer tests

In order to determine the informational status of the fronted verb/vP constituents studied in this paper, I use two types of question-answer tests, following Zubizarreta (1998): one with *wh*-questions in order to identify presentational focus and other with *yes-no* questions (or statements) in order to identify contrastive focus. Question-answer tests are especially useful because the constructions with

4. Landau (2004) and Cable (2004) discuss sentences such as the following as an argument that verb/vP fronting is always base-generated.

- (i) Comer peixe, a Maria acha que eu como salmão.  
*Eat-INF fish, the Mary thinks that I eat salmon.*  
 As for eating fish, Mary thinks I eat salmon.

My analysis differs from their analyses in arguing that base-generation is not the only mechanism for verb/vP fronting and that there are also cases of verb/vP movement to the left periphery. The sentence in (i) is therefore predicted by my analysis, and corresponds to a Type 3 construction, in which the inflected verb *comer* 'to eat' is not a copy of the verb in the topic.

two verbal instances in BP require a linguistic antecedent (LA), and cannot be licensed by a pragmatic antecedent (PA), in sense of Hankamer & Sag (1976):

(19) Type 1:

- a. LA: A Maria tocou o violino?  
'Did Mary play the violin?'
- b. Tocar, ela tocou o saxofone (e não o violino).  
*play-INF she played the saxophone (not the violin)*  
'As for playing, she played the saxophone (not the violin).'

(20) Type 2:

- a. LA: O João comeu o bolo?  
'Did John eat the cake?'
- b. Comer o bolo, ele comeu (mas...)  
*eat-INF the cake he ate (but...)*  
'As for eating the cake, he ate it (but...).'

(21) Type 3:

- a. LA: O João joga tênis todo dia?  
'Does John play tennis every day?'
- b. Jogar tênis, ele joga nos fins de semana.  
*play-INF tennis he plays on-the ends of week*  
'As for playing tennis, he plays it on weekends'

(22) Type 1:

- a. PA: [Mary is tuning up a violin].
- b. #Tocar, a Maria tocou o saxofone (e não o violino).  
*play-INF the Mary played the saxophone (and not the violin)*  
'As for playing, she played the saxophone (not the violin).'

(23) Type 2:

- a. PA: [One slice of cake is missing].
- b. #Comer o bolo, o João comeu (mas...)  
*eat-INF the cake the John ate (but)*  
'As for eating the cake, he ate it (but...).'

(24) Type 3:

- a. PA: [John is going to the tennis court with a racket and a tennis ball].
- b. #Jogar tênis, ele joga nos fins de semana.  
*play-INF tennis he plays on-the ends of week*  
'As for playing tennis, he plays it on weekends.'

In (19)-(21), linguistic antecedents may license constructions with two verbal instances in BP, but in (22)-(24) pragmatic antecedents do not. However, not all kinds of questions provide an adequate context for these constructions. For instance, questions that require a focalized verbal constituent for an answer do not:

- (25) a. O que a Maria fez com o violino?  
 'What did Mary do with the violin?'  
 b. Ela [<sub>F</sub> **afinou**] o violino.  
 'She [<sub>F</sub> tuned up] the violin.'
- (26) a. O que a Maria fez com o violino?  
 'What did Mary do with the violin?'  
 b. Type 1:  
 # [<sub>F</sub> **Afinar**] ela afinou o violino.  
*tune up-INF she tuned up the violin*  
 'What she did was [<sub>F</sub> tune up] the violin.'

As argued by Zubizarreta (1998), a question such as (25a) is an appropriate context for sentences in which the presentational focus is the verb, as in (25b). However, the same question repeated in (26a) does not work as an appropriate context for Type 1. This result can be taken as evidence against analyzing *afinar* 'to tune up' in (26b) as presentational focus.

Similarly, the question in (27a) is an adequate context for sentences in which the full verb phrase is the presentational focus, as shown in (27b). Let us now consider Type 2 presented below in (28).

- (27) a. O que o João fez?  
 'What did John do?'  
 b. Ele [<sub>F</sub> **comeu o bolo**].  
 'He [<sub>F</sub> ate the cake].'
- (28) a. O que o João fez?  
 'What did John do?'  
 b. Type 2:  
 # [<sub>F</sub> **Comer o bolo**] ele comeu (mas...)  
*eat-INF the cake he ate (but)*  
 'What he did was [<sub>F</sub> eat the cake].'

Applying the question-answer test to Type 2 constructions, we can see that the question in (28a) does not provide an appropriate context for Type 2. This result shows that the verb phrase [*comer o bolo*] is not the presentational focus in (28b).

Similar results are obtained with Type 3:

- (29) a. O que o João faz nos fins de semana?  
 ‘What does John do on weekends?’
- b. Type 3:  
 #<sub>[F]</sub> **Jogar tênis**] ele joga nos fins de semana.  
*play-<sub>INF</sub> tennis he plays on-the ends of week*  
 ‘What he does on weekends is [<sub>F</sub> play tennis].’

The question in (29a) cannot be used as an appropriate context for (29b). Again, this can be interpreted as evidence against analyzing the infinitival constituent as presentational focus.

The kind of question-answer pairs used above is a test for presentational focus. Zubizarreta (1998) also applies question-answer tests for contrastive focus. One example of this kind of test is given in (30).

- (30) a. A Maria *tocou* o violino dela?  
 ‘Did Mary *play* the violin of-hers?’
- b. Não. Ela **AFINOU** o violino dela (e não *tocou*)  
 ‘No. She **TUNED UP** the violin of-her (not played).’

The question in (30a) is an adequate context for sentences in which the contrastive focus is on the verb in (30b). Applying this test to Type 1, we obtain the following:

- (31) a. A Maria *tocou* o violino?  
 ‘Did Mary *play* the violin?’
- b. Type 1:  
 #<sub>AFINAR</sub>, ela **afinou** o violino (\*e não *tocar*).  
*TUNE-<sub>INF</sub> she tuned up the violin (and not play)*  
 ‘What she did was **TUNE UP** the violin (not play it).’

The yes-no question used to provide context for contrastive focus cannot be used as a linguistic antecedent for Type 1. The verb [*afinar*] in (31b) cannot be interpreted as contrastive focus.

The question in (32a) below works as an appropriate context for sentences in which the contrastive focus falls on the verb phrase, as shown in (32b).

- (32) a. O João *tomou a sopa*?  
 ‘Did John *have the soup*?’
- b. Não. Ele **COMEU A TORTA** (e não *tomou a sopa*).  
 ‘No. He **ATE THE PIE** (not had the soup).’

In (33a) below, on the other hand, we can see that the same question cannot introduce Type 2. This shows that the verb phrase [*comer a torta*] in (33b) is not a contrastive constituent.

- (33) a. O João *tomou a sopa*?  
 ‘Did John *have the soup*?’
- b. Type 2:  
 #COMER A TORTA, ele *comeu* (\*e não tomar a sopa).  
*EAT-INF THE PIE he ate (and not had the soup)*  
 ‘What he did was *EAT THE PIE* (not have the soup).’

Similarly, the constituent [*jogar tênis*] in (34b) cannot be the contrastive focus of the Type 3 construction.

- (34) a. O João *pratica ioga* nos fins de semana?  
 ‘Does John *practice yoga* on weekends?’
- b. Type 3:  
 #JOGAR TÊNIS, ele *joga* nos fins de  
*PLAY-INF TENNIS he plays on-the ends of*  
*semana* (\*e não praticar ioga).  
*week (not practice yoga)*  
 ‘What he does on weekends is *PLAY TENNIS* (not practice yoga).’

In light of these results, we can conclude that the fronted verbal constituent in constructions with two verbal instances is not focalized. In fact, the verb phrase on the left in these constructions refers back to the verb phrases in their linguistic antecedents, as we could see in (19)-(21) above. It is important to note that the linguistic antecedent does not have to be a question:

- (35) a. LA: Eu acho que a Maria *toca* violino.  
 ‘I think that Mary *plays the violin*’
- b. Não. *Tocar*, ela *toca* saxofone (e não violino).  
*No play-INF she plays saxophone (and not violin)*  
 ‘No. As for *playing*, she *plays the saxophone* (not the violin).’
- (36) a. LA: O João não **comeu a torta** e nem tomou o suco que  
 ‘John *neither ate the pie nor had the juice that*  
 eu preparei.  
 I have prepared’
- b. Bom, **comer a torta**, eu acho que ele *comeu* (mas...)  
*Well eat-INF the pie I think that he ate (but)*  
 ‘Well, as for *eating the pie*, I think that John did it (but...)’

Table 2. Semantic-pragmatic properties

	Fronted constituent	Informational status of the fronted verb/vP	Focus in the comment
Type 1	verb by itself	old information	yes
Type 2	vP	old information	no
Type 3	vP	old information	yes

- (37) a. LA: Eu queria saber se o João **joga tênis** todo dia.  
 'I would like to know if John plays tennis every day.'
- b. Não, **jogar tênis**, ele joga nos fins de semana.  
*No play-INF tennis he plays on-the ends of week*  
 'No, as for playing tennis, he does it on weekends.'

The verb *tocar* in (35b), the verb phrase [*comer a torta*] in (36b) and the verb phrase [*jogar tênis*] in (37b) correspond to old information in the discourse because they were previously mentioned in the context. So, I analyze them as fronted topics and the resulting sentences as verb phrase topicalization constructions (VP-topicalization)<sup>5</sup>. Assuming Rizzi's (1997) split CP system, I propose that the fronted verbal topics are hosted by TopP, which is the phrase that hosts the topics in the CP domain<sup>6</sup>.

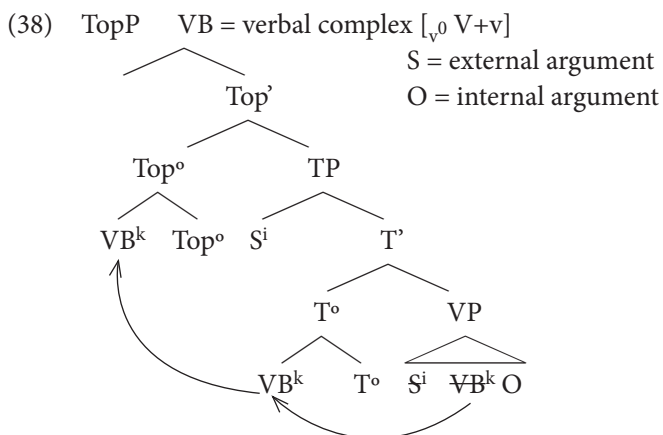
Table 2 summarizes the discussion presented in this section. The fronted verb/vPs on the left periphery of Types 1, 2 and 3 express old information with respect to their informational status and should therefore be analyzed as topics. As for Types 1 and 3, it is possible to find a focused element in their comment, but this is not true for Type 2.

### 3.2 Derivations

Assuming the copy theory of movement (Chomsky, 1993, 1995), I propose that the structures for Types 1 and 2 are derived by movement of topicalized verbal projections and phonetic realization of multiple copies. The derivation for Type 1 is shown in the following tree diagram, where strikethrough indicates lower copies that will be deleted.

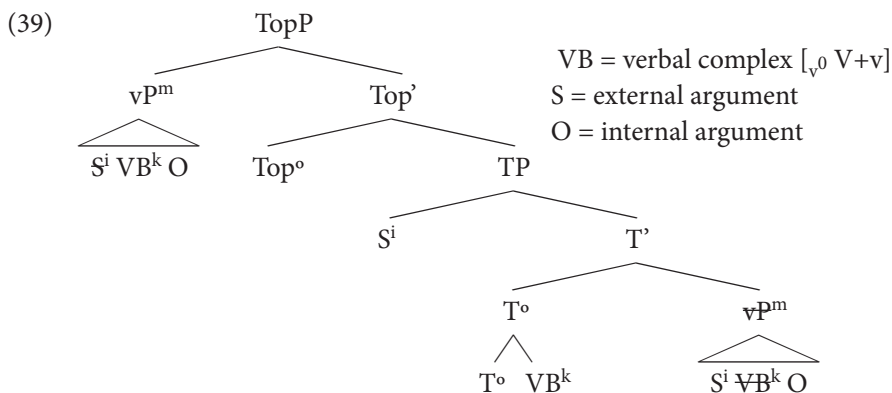
5. See Bastos (2001) for a proposal on how to capture these semantic-pragmatic properties in logical form.

6. To simplify the next representations, I will omit the other phrases, except for TopP.



In the derivation for Type 1 in (38), VB undergoes two instances of head movement. The first movement of VB is to the head of T° (see Galves 1993, 1998 and Figueiredo Silva 1996) and the second one is to the head of Top°. As for the fact that there are two instances of the same verb in the sentence, I analyze it as a case of pronunciation of multiple copies in the sense of Nunes (1999).<sup>7</sup>

As for the Type 2, the relevant derivation is shown below.



7. My analysis is consistent with other analyses of verb and VP-fronting in the literature on several languages, such as predicate cleft construction in Vata (Koopman, 1984), verb-topicalization in Yiddish (Källgren & Prince, 1989), contrastive TP constructions in Japanese and Korean (Nishiyama & Cho, 1997), predicate cleft in Russian (Abels, 2001) and VP-fronting in Hebrew (Landau, 2004). In all these papers the second verb occurrence is analyzed as overt pronunciation of a lower trace. The technical details of the implementation of the Copy Theory of Movement I am assuming to account for how copies can have different morphological endings will be discussed in Section 4.

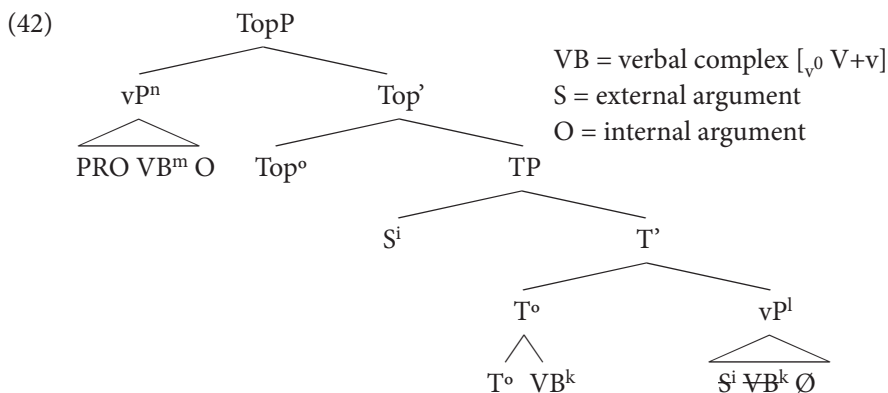


The derivations for Types 1 and 2 are identical up to the TP level, i.e., the external argument and the VB move out of the vP. The difference between them is that in Type 2 the whole vP moves to Spec-TopP. Similarly to what happens in Type 1, the copy of VB in T° and the copy in the vP in the specifier of TopP in (39) are both phonetically realized.

It is important to notice that the fronted verbal projection in Type 2 is not bigger than vP, as indicated by the impossibility of negation and high adverbs in the fronted verbal projection in (40) below. Note also that the fronted verbal projection cannot be smaller than vP given the linear order we obtain with ditransitive verbs, as shown in (41a). This order is arguably derived as shown schematically in (41b). If the fronted verb phrase were VP instead of vP, we would obtain the order in (41c) which is not acceptable.

- (40) a. \*Não terminar a tese, a Maria (não) terminou...  
*not finish the thesis, the Mary (not) finished*  
 ‘As for not finishing the thesis, Mary did (not).’
- b. \*Certamente terminar a tese, a Maria (certamente) terminou...  
*certainly finish the thesis the Mary (certainly) finished*  
 ‘As for certainly finishing the thesis, Mary (certainly) did.’
- (41) a. Emprestar o livro para a Maria, o João emprestou (mas...)  
*lend-INF the book to the Mary, the John lent (but)*  
 ‘As for lending the book to Mary, John did it, but...’
- b.  $[_{vP} DP_{\text{external}} [_v V_i + v [_{VP} DP [_v V_i PP]]]$
- c. \*O livro emprestar para a Maria, o João emprestou (mas...)  
*the book lend-INF to the Mary, the John lent (but)*  
 ‘As for lending the book to Mary, John did it, but...’

Finally, as for Type 3, I propose that the relevant structure is the following.<sup>8</sup>



The topicalized verbal projection is base-generated in the specifier of TopP and it is completely independent of the lower vP. Under this analysis, the identity between the two verbal instances in Type 3 is just accidental and mostly related to the general fact that base generated topics usually express an “aboutness” relation with their comments.

#### 4. Realization of multiple copies and verbal morphology

In Section 3.2, the two instances of the verb in constructions of Type 1 and 2 were analyzed as copies that end up being pronounced. This proposal raises two issues: (i) how is it possible that more than one copy of same verb can be phonetically realized, given that for the most part only the head of a chain is pronounced? And (ii) Why aren't the two verbal copies completely identical in constructions of Type 1 and 2, i.e. why do they have different morphology?

##### 4.1 An argument for the copy theory of movement

One analysis in the literature that successfully explains the phonetic realization of multiple copies can be found in Nunes (1999, 2004). Following Chomsky (1995, 337) regarding the linearization of two heads in a mutual c-command relation, Nunes (1995) argues that a derivation containing a structure such as [<sub>L</sub> m p] cannot be linearized in consonance with the LCA (Kayne 1994), unless the structure [<sub>L</sub> m p] has been converted by Morphology into a “phonological word” before the

8. I am assuming with Hornstein (2001: 58) that PRO does not have to check Case, if it is not obligatorily controlled.

application of the LCA. Converting the structure  $[L \ m \ p]$  into a “phonological word” turns its internal structure “invisible” for LCA. In other words, assuming that the LCA applies after Morphology, the additional copy that is pronounced in constructions with phonetic realization of multiple copies is invisible for linearization purposes as it is hidden inside a complex word.<sup>9</sup> In Nunes (2004, 40), this operation of morphological reanalysis is implemented as *fusion* in the sense of Distributed Morphology (Halle & Marantz, 1993), which takes two terminal heads that are sisters under a single category node and fuses them into a single terminal node, reducing the number of independent morphemes in a structure.

In (43a) below, we can see an example from multiple realization of copies in Vata. Nunes’s (1999) analysis for predicate cleft constructions in Vata explains the realization of multiple copies of the verb in the following way. The structure  $[_{Foc} \ li + Foc^{\circ}]$  in (43b) is fused, and its internal structure becomes irrelevant to the LCA. That being so, the copy of *li* ‘to eat’ inside  $Foc^{\circ}$  is then pronounced in addition to the copy located under  $I^{\circ}$ .

(43) Vata (Koopman, 1984: 42, 38)

a. *li à li saká*

*eat we eat rice*

‘We ATE rice.’

b.  $[_{Foc} \ [_{Foc^{\circ}} \ li + Foc^{\circ}]] \ [_{IP} \ à \ [_{I'} \ [_{I^{\circ}} \ li \ I^{\circ}]] \ [_{VP} \ saká \ h]$

*eat we eat rice eat*

‘We ATE rice.’

In Bastos (2001), I applied Nunes’s system to cases of Types 1 and 2, arguing that morphological fusion is the relevant process that explains the phonetic realization of multiple verbal copies in topicalization of verbal projections in BP. Notice that there is one crucial difference between the predicate cleft construction in Vata and Types 1 and 2 of topicalization of verbal projections in BP: in Vata, the verbal copies are identical (except for their tonal patterns) and in BP, they have different morphological endings. I assume that in Types 1 and 2, the topicalized copy of VB is fused to the infinitival morpheme, as shown below.

(44) a. Type 1:

$\#[Tempera+r]\#$  *o cozinheiro temper-ou o peixe (não a carne).*

*season-INF the cook season-PAST the fish (not the meat)*

‘As for seasoning something, the cook seasoned the fish (not the meat).’

9. This presentation is a simplification of Nunes’s (1999) system and several aspects of his implementation were omitted for sake of space.

## b. Type 2:

#[**Tempera+r**]# *aquele peixe, o cozinheiro temper-ou* (mas...)  
*season-INF that fish the cook season-PAST (but...)*  
 ‘As for seasoning that fish, the cook seasoned it (but...)’

In Type 1 constructions, the infinitival morpheme *-r* is added to VB in the configuration [<sub>Top°</sub> VB+*-r* Top°], which is very similar to the configuration presented for Vata above. The infinitive morpheme *-r* and the VB *tempera* are then fused into one phonological word, and the verbal copy inside the phonological word becomes invisible to LCA.

As for Type 2, the head Top° enters into a Spec-head relation with the vP that has moved to its specifier. As a result, the head of vP becomes eligible to receive the infinitive morpheme. After the infinitive morpheme *-r* is added to VB in the configuration in (44) and fuses with it, rendering VB invisible to the LCA.

Evidence in favor of this analysis comes from the fact that in BP, verbs that have suppletive stems, such as the verbs *ir* ‘to go’ and *ser* ‘to be’, do not appear in constructions with fronted topics when movement is the only derivational possibility.

- (45) a. \**Ir, o João foi para a Bahia.*  
*go-INF the John went to the Bahia*  
 ‘John went to Bahia.’
- b. \**Ser, o João era inteligente.*  
*be-INF the John was smart*  
 ‘John is smart.’

The examples in (45) are arguably cases of Type 1, since the fronted verb appears by itself in the left periphery. As we can see, the resulting sentences are unacceptable. This is expected under my analysis because the verbs *ir* ‘to go’ and *ser* ‘to be’ have suppletive stems, i.e. in the examples above the past-tense stems are *fo-* in (45a) and *e-* in (45b), and the infinitive stems are *-i* in (45a) and *se-* in (45b). Under my analysis for Type 1, VB is copied and undergoes head-movement to Top°. This would generate the following sequences that contain ill-formed infinitive forms in Portuguese.

- (46) a. \*[**fo+r**]... [**fo+i**]...  
 go+INF go+PERSON/PAST
- b. \*[**e+r**]... [**e+ra**]...  
 be+INF be+PERSON/PAST

To put it differently, the sentences in (45) are unacceptable because they cannot be generated. Similar considerations apply to Type 2, which blocks constructions involving these verbs.

If my analysis is in the right track, constructions of Type 3 should be acceptable since the two occurrences of the verb are derived independently in Type 3 cases. This prediction is borne out, as we can see below.

- (47) a. **Ir** para a Bahia, eu conheço [muita gente que foi]  
*go-INF to the Bahia I know many people who went*  
 ‘As for going to Bahia, I know many people who went there.’
- b. **Ser** inteligente, eu conheço [muita gente que era]  
*be-INF smart I know many people who was*  
 ‘As for being smart, I know many people who were.’

The sentences in (47) are of Type 3 given that the verb forms *foi* ‘went’ and *era* ‘was’ are in an island configuration and the topicalization of the verb phrases *ir para a Bahia* ‘go to Bahia’ and *ser inteligente* ‘be intelligent’ are possible. The acceptability of the sentences in (47) provides additional evidence that the two verb instances are independently generated in those cases.

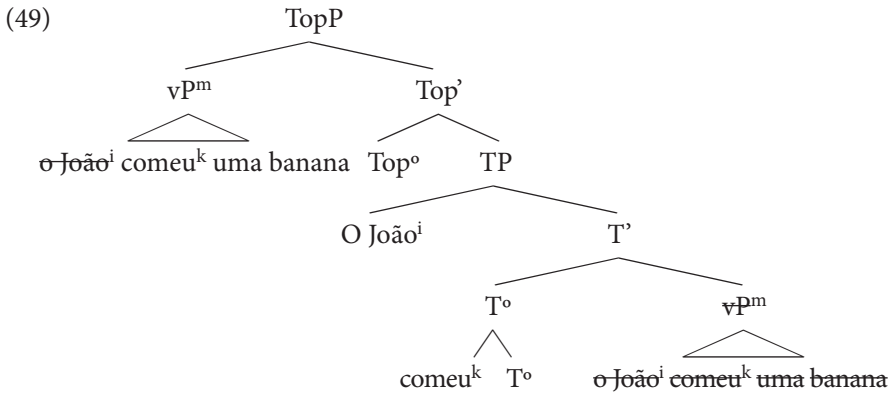
If the analysis presented in this section is on the right track, it supports both the copy theory of movement and Nunes’s (1999, 2004) analysis for realization of multiple copies.

#### 4.2 An argument for late insertion of morphology

The analysis presented in the previous section for Types 1 and 2 makes predictions for the “place” of Morphology in the computational system. In other words, if my analysis is correct, constructions of Types 1 and 2 provide an argument for Distributed Morphology (Halle & Marantz, 1993), and against the checking theory (Chomsky, 1995).

Chomsky (1993) proposed a strictly lexicalist view on Morphology, arguing that lexical items are taken fully inflected from the lexicon. This morphological hypothesis does not make the correct prediction for the output of Types 1 and 2 in BP, since it predicts that all the verbal instances should have identical morphological endings (see Lasnik, 1999 for relevant discussion). Let us consider the construction of Type 2 in (48), for instance, with its derivation under the lexicalist hypothesis represented in (49).

- (48) \*Come-u a banana, o João come-u (mas...)  
*eat-PAST the banana the John eat-PAST (but)*  
 ‘As for eating a banana, John did it (but...).’



As we can see, if the verb *comer* ‘to eat’ comes fully inflected from the lexicon, the copy moved within the vP would be fully inflected in the left periphery. However, the resulting sentence in (48) is not acceptable in BP.

The checking theory, similarly to any other morphological theory in which verbal morphology feeds syntactic derivations, is not able to explain the morphological patterns in Type 2, because the final morphological realization is defined in the course of the derivation. By contrast, if the actual verbal morphology is determined after syntax, as in Distributed Morphology (Halle & Marantz, 1993), the copy of VB within the topicalized vP and the one in T<sup>0</sup> will surface with different forms as they have participated in different syntactic relations.

(50) a. Spell-Out:

$$\begin{array}{l} [{}_{\text{TopP}} [{}_{\text{vP}} \text{o João}^i [ \text{come-v} ]^k \text{ arroz} ]^m [{}_{\text{Top}} \text{Top}^0 [{}_{\text{TP}} \text{o João}^i \\ \text{the John eat rice the John} \\ [{}_{\text{T}'} [{}_{\text{T}^0} [ \text{come-v} ]^k \text{ PAST} ] [{}_{\text{vP}} \text{o João}^i [ \text{come-v} ]^k \text{ arroz} ]^m ]]] \\ \text{eat the John eat rice} \end{array}$$

b. Morphological output:

$$[{}_{\text{TopP}} [{}_{\text{vP}} \text{comer arroz} ]^m [{}_{\text{Top}} \text{Top}^0 [{}_{\text{TP}} \text{o João}^i [{}_{\text{T}'} [{}_{\text{T}^0} \text{comeu} ]]]]$$

In other words, the verb under I<sup>0</sup> will receive the regular inflected morphology, and the higher copy within the fronted vP will receive the infinitive form, which is a default form.

It is worth observing that I am not assuming that Morphology will add default infinitive to all verbal instances, but only to the one hosted by TopP. If Morphology could insert a default infinitive in any verbal copy, we would predict the existence of multiple verbal copies in ordinary sentences and this is not possible.

Insertion of default infinitive in Types 1 and 2 is a last resort operation, which happens to satisfy a requirement of the head Top<sup>0</sup>. I am assuming with Rizzi (1997, 282) that the heads that form the CP system can have morphological requirements.

In the case of TopP, Top° can only host nouns or nominalized items.<sup>10</sup> In order to accommodate the bare verb to the requirement of the landing site, Morphology “fixes” the bare verb by adding the infinitival morpheme, which is also a nominal element. This procedure is a repair operation that can turn a copy invisible to the LCA, if VB and the infinitive morpheme undergo *fusion*.

### 5. The *but*-effect

As discussed above, Type 2 constructions involve the movement of vP to Spec-TopP. The movement of such a large chunk of informational material to the left periphery participates in the creation of an inference that I will call “the *but*-effect”. This inference is an additional difference between Type 2 constructions and the other two types discussed in this paper, i.e. Type 2 is usually marked by the presence of a *but* at the end of the sentence, which triggers an inference that something about the content of the utterance is wrong or inappropriate.

The presence of the *but*-effect has led Nishiyama & Cho (1997) to propose that sentences with two instances of the same verb in Japanese and Korean are cases of contrastive focalization, despite of the presence of *-wa* in Japanese and *-nun* in Korean, which are commonly assumed to be topic markers. The relevant constructions are shown in (51a-b) below.

- (51) a. Japanese (from Nishiyama & Cho, 1997: 463)<sup>11</sup>  
*John-ga computer-o kat-ta-koto-wa kat-ta*  
*John-NOM computer-ACC buy-T-koto-CON buy-T*
- b. Korean  
 John-i computer-lul sa-ss-ki-nun sa-ss-ta.  
*John-NOM computer-ACC buy-T-ki-CON buy-T-M*  
 Both: ‘John bought a computer, (but...)’

However, the *but*-effect has different properties from contrastive focus. In fact, the *but*-effect is in complementary distribution with contrastive focus in the comment; it is compatible with context questions that potentially involve a conjunction, while contrastive focus is compatible with context questions that potentially involve a disjunction. The examples below illustrate this fact for Type 1 and Type 2 (contrastive focus is indicated with capital letters).

10. It is true that adverbs can be topicalized, but in BP, topicalized adverbs are restricted to those derived from adjectives, and adjectives are [+N, +V] items.

11. T = Tense; CON = Contrastive Particle; M = Modality; ACC = accusative; NOM = nominative

- (52) Question: O João lavou o carro e os pratos?  
 ‘Did John wash *the car* **and** *the dishes*?’

Type 1: #Lavar, ele lavou O CARRO, e não os pratos.  
*wash-INF he washed THE CAR and not the dishes*  
 ‘As for washing something, he washed the car, not the dishes.’

Type 2: Lavar o carro, ele lavou, mas...  
*wash-INF the car he washed but*  
 ‘As for washing the car, he did it, but...’

- (53) Question: O João lavou o carro **ou** os pratos?  
 ‘Did John wash *the car* **or** *the dishes*?’

Type 1: Lavar, ele lavou O CARRO, e não os pratos.  
*wash-INF he washed THE CAR and not the dishes*  
 ‘As for washing something, he washed the car, not the dishes.’

Type 2: # Lavar o carro, ele lavou, mas...  
*wash-INF the car he washed but*  
 ‘As for washing the car, he did it, but...’

My proposal to explain these facts is that the *but*-effect arises as a conversational implicature in the sense of Grice (1975). One example of conversational implicature of the relevant kind is provided by (54) below.

- (54) a. Mother: Did you eat the chicken and the green stuff?  
 b. Son: I ate the chicken...

In (54a), the mother’s question is about both chicken and vegetables. The fact that the son failed to mention vegetables in his answer creates an inference that he did not eat them. That he did not eat the vegetables was not asserted by the son and does not follow logically from what he said. In fact, it is inferred from what he did not say.

Now, let us come back to sentences of Type 2 and to the *but*-effect. Intuitively, the focus of an utterance is an essential part of the discourse-semantic relations that a sentence expresses. Suppose that a participant A of a conversation intentionally fails to indicate the focus of the sentence by the regular means (intonation and right-alignment) and that the rightmost element is, for some reason, unable to host the sentential focus. In this situation, a participant B may wonder why the participant A was intentionally hiding the non-presupposed part of the utterance, which is essential, and consequently being less informative than what is required. The participant B would conclude that there is something wrong or inappropriate about the main content of A’s utterance. This would constitute a violation of the



part (i) of the quantity maxim in the sense of Grice (1975), which states that one should not be less informative than what is required.<sup>12</sup>

The suggestion presented above depends largely on the assumption that participant A intentionally fails to indicate a focused word or phrase in a giving utterance. I argue that in constructions of Type 2 this is accomplished by syntactic means. Normally, a word or phrase is marked as focus by stress/prominence (mostly for contrastive focus) or by right alignment, indicated by a falling intonation (mostly for presentational focus). In the case of Type 2 constructions, the movement of a full vP to the specifier of TopP in Type 2 indicates that no element inside vP bears a [+focus] feature and crucially, VB does not have a [+focus] feature, but a [+Topic] feature.

Given my syntactic analysis presented above, the rightmost element in Type 2 constructions is a copy of VB and being a copy of an element that contains a [+Topic] feature, it is not available to receive the falling intonation that characterizes the presentational focus. Indeed, the inflected verb in Type 2 constructions receives a rising intonation. (See Bastos, 2001 for other relevant properties and arguments). In short, Type 2 constructions do not contain a focused word or phrase.

I propose that the conversational implicature that arises from utterances that do not contain a focused word or phrase obeys the following formula:

(55) Conversational implicature of informational status:

If there is a non-presupposed information that was intentionally omitted, then there is something wrong or inappropriate about it that participant A does not want to mention.

Conversational implicatures differ from entailments and presuppositions in that they can be canceled. Suppose that the dialogue in (54) repeated below was continued as follow in (56).

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12. Vicente (2007) has proposed an alternative analysis for the *but*-effect in which he resorts to the Maxim of Manner (be brief). He argues that VP-fronting is usually used to answer yes-no questions and when the speaker uses VP-fronting instead of a simple *yes* or *no* answer, this gives rise to the implicature that the speaker intends to convey something extra on top of *yes* or *no*. I agree with Vicente (2007) that these constructions contribute to the information that the proposition is true or false, but I disagree with the solution proposed by him, since it would fail to explain cases in which the question involves a conjunction, such as (54) above. In (54), if the speaker answers *yes*, this means *yes* for both conjuncts and if the speaker answers *no*, this means *no* for both conjuncts. By uttering the less informative answer in (54b), the speaker implies that the second term of the conjunction is not true.

- (56) a. Mother: Did you eat the chicken and the green stuff?  
 b. Son: I ate the chicken...  
 c. Mother: Why didn't you eat your vegetables?  
 d. Son: I did eat them, but I like the chicken better.

The statement in (56d) clearly cancels the inference that the son did not eat the vegetables, and is still a perfect continuation for the dialogue in (54).

If the analysis of the *but*-effect as a conversational implicature is correct, then we expect that it can be cancelled. The following test shows that in fact it can.

- (57) a. Participant A:  
 O João lavou o carro e os pratos?  
 'Did John wash the car **and** the dishes?'  
 b. Participant B:  
 Lavar o carro, ele lavou, mas...  
*wash-INF the car he washed but*  
 'As for washing the car, he did it, but...'  
 c. Participant A:  
 Mas por que ele não lavou os pratos? É obrigação dele!  
 'But why didn't he wash the dishes? It is his obligation!'  
 d. Participant B:  
 Não, calma lá! Acho que ele lavou sim.  
*No quiet-down there Think that he washed yes*  
 'Calm down. I think he did it.'

The statement in (57d) cancels the inference that he did not wash the dishes, and is still a perfect continuation for the dialogue in (57a-b). My conclusion from the discussion in this section is that the inference, introduced by *but-effect*, is a conversational implicature.<sup>13</sup>

13. One possible development of the conclusions of this section is to associate Type 2 constructions and the notion of contrastive topic (Vallduví 1992, Roberts 1996, Büring 1997, 1999, Choi 1999, Kadmon 2001, Abels 2001, Vicente 2007, among others). Thanks to Marina Augusto (p.c.) who brought to my attention some similarities between Type 2 constructions and some constructions argued to be cases of contrastive topic. I will not pursue this line of analysis here for limitation of space.

## 6. Final remarks

In this paper, I suggested that the multiple occurrences of verbs in some constructions in BP are strongly related to the informational status of fronted vP/verbs. I provided evidence for topicalization of verbal projections in three different types of constructions involving fronting of vP/verbs. As for Types 1 and 2, they are generated by movement of a verb or vP to the left periphery. Taking these two types into consideration, I argued in favor of late insertion of morphology (Halle & Marantz, 1993) and realizations of multiple copies in the sense of Nunes (1999), which is consequently an argument in favor of the copy theory (Chomsky, 1993, 1995). As for Type 3, it is base-generated as a specifier of TopP. This possibility of base-generation of a verbal phrase was shown to be impossible in perfective sentences. Additionally, I showed that the two verbal instances in Type 3 are only accidentally identical, since the verbal instance in the comment can be replaced by a resumptive form.

## References

- Abels, K. (2001). The predicate cleft constructions in Russian. In: *Formal Approaches to Slavic Linguistics 10: The Indiana meeting 2000*, ed. by Steven Franks, Tracy King, and Michael Yadroff, 1–19. Michigan Slavic Publications, Ann Arbor, MI.
- Bastos, A.C. (2001). *Fazer, eu faço! Topicalização de constituintes verbais em português brasileiro*. Ms., Master's thesis, Universidade de Campinas.
- Büring, D. (1997). *The Meaning of Topic and Focus - The 59th Street Bridge Accent*. Routledge, London.
- Büring, D. (1999). *On D-Trees, Beans, and B-Accents*. Ms., UCLA.
- Cable, S. (2004). *The Yiddish predicate cleft: a base-generation analysis*. Ms., MIT.
- Choi, H. (1999). *Optimizing Structure in Context*, CSLI, Stanford, CA.
- Chomsky, N. (1993). A minimalist program for linguistic theory. In: *The view from Building 20* (Hale and Keiser, ed.). The MIT Press, Cambridge, MA.
- Chomsky, N. (1995). *The minimalist program*. The MIT Press, Cambridge, MA.
- Dekydspotter, L. (1992). The syntax of predicate cleft. In: *NELS Proceedings*.
- Figueiredo Silva, M.C. (1996). *A posição sujeito no português brasileiro*. UNICAMP, Campinas.
- Galves, C. (1993). O enfraquecimento da concordância no Português Brasileiro. In: *O Português Brasileiro: uma viagem diacrônica*. (Roberts, I. & M. Kato, eds.) Campinas, Ed. Unicamp.
- Galves, C. (1998). Tópicos e sujeitos, Pronomes e Concordância no Português Brasileiro. *Cader-nos de Estudos Lingüísticos*, 34: 19–31.
- Grice, H. P. (1975). Logic and conversation. In: *Syntax and Semantics*. (P. Cole and J. L. Morgan.) v.3. pp. 41–58. Academic Press, New York, NY.
- Halle, M. & A. Marantz. (1993). *Distributed morphology and the pieces of Inflection*. The MIT Press, Cambridge, MA.
- Hankamer, J. & I. Sag. (1976). Deep and surface anaphora. *Linguistic Inquiry* 7: 391–428.

- Hornstein, N. (2001). *Move! A Minimalist Theory of Construal*. Blackwell, Malden, MA.
- Huang, C. (1982). *Logical relations in Chinese and the theory of grammar*. Doctoral dissertation. MIT, Cambridge, MA.
- Kadmon, N. (2001). *Formal Pragmatics: Semantics, Pragmatics, Presupposition and Focus*. Blackwell, Oxford.
- Källgren, G. & E. Prince. (1989). Swedish VP-Topicalization and Yiddish Verb-Topicalization. In: *Nordic Journal of Linguistics*, 12: 47–58.
- Kayne, R. S. (1994). *The Antisymmetry of Syntax*. The MIT Press, Cambridge, MA.
- Koopman, H. (1984). *The Syntax of Verbs*. Foris, Dordrecht.
- Landau, I. (2004). Chain resolution in Hebrew V(P)-fronting. Ms., Ben-Gurion
- Larson, R. & C. Lefebvre. (1991). Predicate Clefting in Haitian Creole. *NELS* 21, pp. 247–261.
- Lasnik, H. (1999). *Minimalist analysis*. Blackwell, Malden, MA.
- Lumsden, J. & C. Lefebvre. (1990). Predicate Cleft Constructions and Why They Aren't What you Might Think. *Linguistic* 28.4: 761–783.
- Matos, M. G. (1992). *Construções de elipse do predicado em português*. Doctoral dissertation, Universidade de Lisboa.
- Nishiyama, K. & E. Cho. (1997). Predicate Cleft Constructions in Japanese and Korean: The Role of Dummy Verbs in TP/VP-Preposing. *Japanese/Korean Linguistics*. CSLI Publications, Stanford.
- Nunes, J. (1999). Linearization of chains and phonetic realization of chain links. In: *Working Minimalism* (D. Epstein and N. Hornstein, eds.), pp. 217–249. The MIT Press, Cambridge, MA.
- Nunes, J. (2004). *Linearization of Chains and Sideward Movement*. The MIT Press, Cambridge, MA.
- Nunes, J.M. & R. Quadros (2008). Phonetic realization of multiple copies in Brazilian Sign Language. In: *Signs of the Time: Selected Papers from TISLR 2004* (J. Quer, ed.), pp. 177–190. Signum-Verlag, Seedorf.
- Prince, E. F. (1981). Topicalization, focus movement and Yiddish-movement. In: *Berkeley Linguistics Society*, pp. 249–264.
- Prince, E. F. (1998). On limits of Syntax, with Reference to Left-Dislocation and Topicalization. *Syntax and Semantics*, 29. Academic Press, San Diego, CA.
- Rizzi, L. (1997). The fine structure of left periphery. In: *Elements of Grammar* (L. Haegeman, ed.), pp. 281–337. Kluwer, Dordrecht.
- Roberts, C. (1996). *Information Structure in Discourse: towards an Integrated Formal Theory of Pragmatics*. In: J. Hak Yoon and A. Kathol (eds.), *Ohio State University Working Papers in Linguistics* 49.
- Ross, J. R. (1967). *Constraints on Variables in Syntax*. Doctoral dissertation, MIT, Cambridge, MA.
- Saraiva, M. E. F. (1997). “*Buscar menino no colégio*” a questão do objeto incorporado em Português. Campinas, Pontes.
- Vallduví, E. (1992). *The Informational Component*. Garland, New York, NY.
- Vicente, L. (2007). *The syntax of heads and phrases: a study of verb (phrase) fronting*. Ph.D. dissertation, Leiden.
- Zubizarreta, M. L. (1998). *Prosody, Focus and Word Order*. The MIT Press, Cambridge, MA.



# Preposition contraction and morphological sideward movement in Brazilian Portuguese

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In this paper we discuss data from Brazilian Portuguese which arguably involve one instance of a preposition in the syntactic component but end up surfacing with two instances, yielding what at first sight looks like PP coordination. We argue that the copying of the preposition takes place in the morphological component and is triggered by the Parallelism Requirement on coordinated structures. More specifically, we propose that if morphological merger affects a preposition and an adjacent determiner that is part of a coordinated structure, all conjuncts must undergo similar morphological merger. If the syntactic structure has only one preposition, the morphological component then copies the preposition and merges the copies with all the conjuncts so that the Parallelism Requirement can be satisfied.

## 1. Introduction\*

In this paper we discuss constructions such as (1) in Brazilian Portuguese, where the coordinated subject of an inflected infinitival surprisingly displays PP coordination instead of DP coordination.

- (1) Ela não pensou **no** João e **na** Maria viajarem  
*she not thought in-the João and in-the Maria travel-INF.3PL*  
(junto com eles).  
*together with them*  
'She didn't think about John and Mary traveling with them.'

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The fact that the infinitival verb in (1) shows up with third person plural morphology, thus requiring a plural subject, presents us with the following paradox. On the one hand, if (1) is to be associated with the structure in (2) below to account for the presence of two PPs, there is no plural subject with which the verb can agree. In addition, the coordinated PP is not a likely candidate to hold the external  $\theta$ -role assigned by the infinitival verb. On the other hand, if (1) is to be associated with a structure involving a coordinated DP, as in (3), in order to capture verbal agreement, there is no explanation for why the second conjunct surfaces as a PP.

- (2) Ela não pensou [<sub>CP</sub>... [<sub>andP</sub> [<sub>PP</sub> **no** João] [<sub>and</sub> e [<sub>PP</sub> **na**  
*she not thought in-the João and in-the*  
 Maria]]] viajarem... ]  
*Maria travel-INF-3PL*
- (3) Ela não pensou **em** [<sub>CP</sub>... [<sub>andP</sub> [<sub>DP</sub> **o** João] [<sub>and</sub> e [<sub>DP</sub> **a**  
*she not thought in the João and the*  
 Maria]]] viajarem... ]  
*Maria travel-INF-3PL*

We propose that this syntax-phonology mismatch can be solved if one assumes that the standardly assumed Parallelism Requirement on coordinated structures (e.g. Chomsky, 1995; Fox, 2000; and Hornstein & Nunes, 2002) also applies to the morphological component (see Ximenes, 2002, 2004). More specifically, we propose that sentences such as (1) have a syntactic structure along the lines of (3), but in the morphological component, the preposition is copied and merged with the second conjunct, yielding what superficially looks like PP coordination. In other words, the derivation of sentences such as (1) involves sideward movement (in the sense of Nunes, 2001, 2004) of the selecting preposition in the morphological component.

The discussion is organized as follows. In Section 2, we discuss preposition contraction in coordination environments in simple sentences. In Section 3, we discuss sentences with inflected infinitives in European and Brazilian Portuguese (henceforth EP and BP). In Section 4 we present a detailed analysis of morphological sideward movement. Section 5 discusses feature projection based on intriguing data involving duplication of prepositions. Finally, Section 6 presents some concluding remarks.

## 2. Preposition contraction and spurious prepositions in coordinated structures

A common phenomenon found in many languages is that some prepositions are lexically specified as triggering contraction with some determiners following them, as illustrated in (4)-(6) for Portuguese, Italian and French.

### (4) Portuguese

- a. \*Eu votei **em o** Pedro.  
*I voted in the Pedro*
- b. Eu votei **no** Pedro.  
*I voted in-the Pedro*  
'I voted for Pedro.'

### (5) Italian

- a. \*Mi ricordo **di la** tua faccia.  
*myself remember of the your face*
- b. Mi ricordo **della** tua faccia.  
*myself remember of-the your face*  
'I remember your face.'

### (6) French

- a. \*Il a parlé **de le** garçon.  
*he has talked of the boy*
- b. Il a parlé **du** garçon  
*he has talked of-the boy*  
'He talked about the boy.'

The contrast in (4) in Portuguese, for instance, shows that part of the lexical specification underlying the preposition *em* and the determiner *o* should contain the information that they must contract under adjacency. Within the framework of Distributed Morphology (see Halle & Marantz, 1993), we may interpret such contraction along the lines of (7) below. Given the spelled-out structure in (7a), P and D undergo morphological merger in (7b), followed by fusion in (7c), and Vocabulary Insertion then plugs in a single vocabulary item, namely, *no*, as shown in (7d).<sup>1</sup>

- (7) a. Spelled-out structure:  $[_{PP} P [_{DP} D N]]$   
b. Morphological merger:  $[_{PP} [_{DP} P+D N]]$

1. For purposes of exposition, we will henceforth make reference to words rather than sets of features.



- c. Fusion: [PP [DP P/D N]]  
 d. Vocabulary insertion: [PP [DP **no** N]]

Interestingly, if contraction takes place at the edge of a coordinated phrase, the preposition must be present in both conjuncts, as shown in (8)-(10).<sup>2</sup>

(8) *Portuguese*

- a. \*Eu me lembrei **do** João e **a** Maria.  
*I myself remembered of-the João and the Maria*
- b. Eu me lembrei **do** João e **da** Maria.  
*I myself remembered of-the João and of-the Maria*  
 'I remembered João and Maria.'

(9) *Italian*

- a. \*Mi ricordo **della** tua faccia e **la** tua voce.  
*myself remember of-the your face and the your voice*
- b. Mi ricordo **della** tua faccia e **della** tua voce.  
*myself remember of-the your face and of-the your voice*  
 'I remember your face and your voice.'

(10) *French*

- a. \*Il a parlé **du** garçon et **la** fille.  
*he has talked of-the boy and the girl*
- b. Il a parlé **du** garçon et **de la** fille.  
*he has talked of-the boy and of the girl*  
 'He talked about the boy and the girl.'

2. Languages like German show optional contraction with some prepositions, as exemplified in (i) below (see e.g. van Riemsdijk, 1998 for relevant discussion). But like the languages discussed here, if contraction takes place in the first conjunct, it must also take place in the other conjuncts, as illustrated by the contrast in (ii).

*German*

- (i) a. Briefe **von dem** Präsidenten  
*letters from the(DAT.) president*
- b. Briefe **vom** Präsidenten  
*letters from-the(DAT.) president*  
 'letters from the president'
- (ii) a. \*Briefe **vom** Präsidenten und **dem** Kanzler  
*letters from-the(DAT.) president and the(DAT.) chancellor*
- b. Briefe **vom** Präsidenten und **vom** Kanzler  
*letters from-the(DAT.) president and from-the(DAT.) chancellor*  
 'letters from the president and the chancellor'

Evidence that the preposition contraction involving the first conjunct of (8)-(10) is what triggers the presence of the preposition in the second conjunct is provided by the Portuguese data in (11)-(13) below, for example. In (11), the names are not preceded by a determiner with phonological content; in (12), the preposition *sobre* never undergoes contraction; and in (13), the preposition is of the contracting type but the numerals preceding the nouns do not allow contraction. In all these cases, preposition contraction cannot obtain in the first conjunct and, accordingly, the preposition in the second conjunct is optional.<sup>3</sup>

- (11) a. Eu votei **em** Pedro e Ana.  
*I voted in Pedro and Ana*
- b. Eu votei **em** Pedro e **em** Ana.  
*I voted in Pedro and in Ana*  
 'I voted for Pedro and (for) Ana.'
- (12) a. Eu falei **sobre a** música e **o** filme.  
*I spoke about the song and the movie*
- b. Eu falei **sobre a** música e **sobre o** filme.  
*I spoke about the song and about the movie*  
 'I spoke about the song and (about) the movie.'
- (13) a. Eu votei **em dois** homens e **duas** mulheres.  
*I voted in two men and two women*
- b. Eu votei **em dois** homens e **em duas** mulheres.  
*I voted in two men and in two women*  
 'I voted for two men and (for) two women.'

The contrasts in (8)-(10) may be taken to show that the Parallelism Requirement on coordinated structures imposes restrictions not only on syntactic and semantic structures (see e.g. Chomsky, 1995; Fox, 2000; and Hornstein & Nunes, 2002), but on morphological structures, as well.<sup>4</sup> That is, if contraction happens in the boundary of the first conjunct, it must also happen in the other conjunct. The question that then arises is what exactly is being computed with respect to the Parallelism Requirement. Given that fusion only affects sister nodes, thus requiring merger (Halle & Marantz, 1993), the data above could be accounted for if the Parallelism Requirement took either morphological merger or fusion into consideration. How-

3. This does not mean that the two structures necessarily mean the same. As discussed in Nunes (2001, 2004) and Hornstein & Nunes (2002), for instance, only coordination of PPs gives rise to a multiple event interpretation in Romance.

4. See Ximenes (2002, 2004) for further examples and discussion of the effects of the Parallelism Requirement in the morphological component.

ever, the contrast in (14) below indicates that morphological merger is what is at stake: an instance of the preposition *em* is required in the second conjunct, despite the fact that it does not fuse with the numeral (We return to this issue below).

- (14) a. Eu votei **no** Pedro e **em** duas outras pessoas.  
*I voted in-the Pedro and in two other people*
- b. ?\*Eu votei **no** Pedro e duas outras pessoas.  
*I voted in-the Pedro and two other people*  
 ‘I voted for Pedro and (for) two other people.’

At first sight, the full range of data could be accounted for if the syntactic component could freely coordinate PPs or DPs, depending on the number of prepositions available in the numeration. That is, given two potential derivations  $D_1$ , with a numeration containing a single instance of the preposition *em*, for instance, and  $D_2$ , with a numeration containing two instances of *em*, only  $D_2$  could converge in the morphological component if *em* undergoes morphological merger with an adjacent element within a coordinated structure. Take the sentences in (15a) and (16a) and the respective structures associated with them, for example.

- (15) a. \*Eu votei **no** João e **a** Maria.  
*I voted in-the João and the Maria*  
 ‘I voted for João and Maria.’
- b. Eu votei em [<sub>andP</sub> [<sub>DP</sub> o João] [<sub>and'</sub> e [<sub>DP</sub> a Maria]]]  
*I voted in the João and the Maria*
- (16) a. Eu votei **no** João e **na** Maria.  
*I voted in-the João and in-the Maria*  
 ‘I voted for João and (for) Maria.’
- b. Eu votei [<sub>andP</sub> [<sub>PP</sub> em o João] [<sub>and'</sub> e [<sub>PP</sub> em a Maria]]]  
*I voted in the João and in the Maria*

When (15b) gets to the morphological component, contraction (morphological merger + fusion) must happen between the preposition and the determiner in the first conjunct. The Parallelism Requirement then requires that the second conjunct should also undergo morphological merger. However, there is no preposition in the second conjunct for the second conjunct to merge with and the derivation violates the Parallelism Requirement. By contrast, in (16b) two PPs are coordinated, which allows for morphological merger to take place in both conjuncts, in compliance with the Parallelism Requirement. Hence, the contrast between (15a) and (16a).

Despite its attractiveness, a proposal based simply on the possibility of coordinating DPs or PPs proves too simplistic when sentences like (1), repeated here as (17), are taken into consideration.

- (17) Ela não pensou **no** João e **na** Maria viajarem  
*she not thought in-the João and in-the Maria travel-INF-3PL*  
 (junto com eles).  
*together with them*  
 ‘She didn’t think about John and Mary traveling with them.’

As mentioned in Section 1, we cannot analyze (17) as involving coordination of two PPs, because we wouldn’t obtain agreement on the verb. In order for verbal agreement to be captured, (17) must involve DP-coordination in the syntactic component and, consequently, only one preposition should be present, as represented in (18).

- (18) Ela não pensou **em** [<sub>CP</sub> ... [<sub>andP</sub> [<sub>DP</sub> **o** João] [<sub>and'</sub> e [<sub>DP</sub> **a**  
*she not thought in the João and the*  
 Maria]]] viajarem... ]  
*Maria travel-INF-3PL*

Constructions such as (17) therefore indicate that at least in some cases, the second preposition has to be inserted in the structure later in the derivation, after the syntactic computation. This is the line of reasoning we will pursue in this paper. But before presenting our analysis proper, we will first discuss the general pattern of contraction involving prepositions and determiners embedded in the subject of an inflected infinitival clause in both European and Brazilian Portuguese.

### 3. Preposition contraction and inflected infinitives in Portuguese

Although both European and Brazilian Portuguese permit inflected infinitives, the two dialects contrast in several aspects that are relevant to our discussion. The first difference is that in the contexts where both dialects allow an inflected infinitival, such as (19) below, for instance, contraction is the canonical form in BP, whereas speakers of EP reject it or accept it only marginally. In fact, BP speakers associate lack of contraction in structures like (19a) with formal style, typical of written language.

- (19) a. A hipótese **de os** meninos terem  
*the hypothesis of the boys have-INF-3PL*

viajado é implausível. (BP:√; EP:√)  
*traveled is implausible*

- b. A hipótese **dos** meninos terem  
*the hypothesis of-the boys have-INF-3PL*  
 viajado é implausível. (BP:√; EP:\*/\*)  
*traveled is implausible*  
 ‘The hypothesis that the boys have traveled is implausible.’

Interestingly, this contrast between the two dialects does not arise when an infinitival clause is not involved. That is, all speakers detect a very strong contrast between (19a) and (20a), for instance.

- (20) a. \*A hipótese **de os** meninos é implausível. (BP:\*; EP:\*)  
*the hypothesis of the boys is implausible*  
 b. A hipótese **dos** meninos é implausível. (BP:√; EP:√)  
*the hypothesis of-the boys is implausible*  
 ‘The boys’ *hypothesis* is implausible.’

The second difference is that BP optionally allows the dummy preposition *de* before inflected infinitivals in impersonal constructions, as illustrated in (21) (see Martins & Nunes, 2005 and Nunes, 2007, 2008).

- (21) a. É difícil todos aqueles professores elogiarem  
*is hard all those professors praise-INF-3PL*  
 os alunos. (BP:√; EP:√)  
*the students*  
 b. É difícil **de** todos aqueles professores  
*is hard of all those professors*  
 elogiarem os alunos. (BP:√; EP:\*)  
*praise-INF-3PL the students*  
 ‘It is hard for all those professors to praise the students.’

Yet another difference is that BP allows inflected infinitives as prepositional complements in environments where this is not permitted or is rather marginal in EP, as illustrated in (22) and (23) (see Ximenes & Nunes, 2004 and Martins & Nunes, 2005).

- (22) a. Ninguém se lembrou **de os** meninos  
*nobody REFL remembered of the boys*  
 estarem doentes. (BP:√; EP:\*)  
*be-INF-3PL sick-PL*  
 b. Ninguém se lembrou **dos** meninos  
*nobody REFL remembered of-the boys*

estarem doentes. (BP:√; EP:\*)

*be-INF-3PL sick-PL*

‘Nobody remembered that the boys were sick.’

(23) a. Eu pensei **em os** meninos fazerem a tarefa. (BP:√; EP:\*)

*I thought in the boys do-INF-3PL the job*

b. Eu pensei **nos** meninos fazerem a tarefa. (BP:√; EP:\*)

*I thought in-the boys do-INF-3PL the job*

‘I thought about the boys doing the job.’

Finally, as opposed to EP, BP also allows ECM prepositional complementizers, as illustrated in (24) (see among others Lightfoot, 1991; Salles, 1997; and Hornstein, Martins & Nunes, 2008 for relevant discussion).

(24) O João trouxe o relatório pra mim ler. (BP:√; EP:\*)

*the João brought the report for 1SG.OBL read-INF*

‘João brought the report for me to read.’

All these differences seem to stem from the different categorial status the preposition preceding infinitives has in each dialect. Nunes (2007, 2008) proposes that the dummy preposition *de* in impersonal constructions such as (19b) in BP is actually a marker of inherent Case assigned by the impersonal predicate. By receiving inherent Case, Nunes argues, the infinitival clause becomes immobile, as illustrated by the contrast in (25) below. In turn, as the infinitival clause preceded by *de* cannot move, it does not prevent movement of the embedded subject, thus yielding hyper-raising constructions (see Ferreira, 2000, 2004, this volume; and Nunes, 2007, 2008), as illustrated in (26).

(25) a. Todos aqueles professores elogiarem os alunos é difícil.

*all those professors praise-INF-3PL the students is hard*

b. \*De todos aqueles professores elogiarem os alunos é difícil.

*of all those professors praise-INF-3PL the students is hard*

‘It is unlikely for all those professors to praise the students.’

(26) a. \*Todos aqueles professores são difíceis elogiarem os alunos.

*all those professors are hard praise-INF-3PL the students*

b. Todos aqueles professores são difíceis de elogiarem os alunos.

*all those professors are hard of praise-INF-3PL the students*

‘It is unlikely for all those professors to praise the students.’

Here we will assume the gist of Nunes’s proposal, reinterpreting it as follows. Whenever one finds an inflected infinitival preceded by a preposition in EP, we have a standard form of clausal complementation, namely, the preposition takes

an infinitival CP headed by a null C for its complement, as sketched in (27) below. In BP, on the other hand, the prepositions under discussion came to be reanalyzed as Cs, as sketched in (28), being either ECM complementizers, as in (24), or the morphological realization of the inherent Case assigned by the embedding predicate, as in (19b), (21b), (22b), and (23b).

(27) [ ... X [<sub>PP</sub> P [<sub>infinitival-CP</sub> C [<sub>TP</sub> ... ]]]]

(28) [ ... X [<sub>infinitival-CP</sub> C/P [<sub>TP</sub> ... ]]]

Thus, the subject of the inflected infinitival in (19a), for instance, is not really adjacent to the subcategorizing preposition in EP, for the null complementizer intervenes, as illustrated in (29) below.<sup>5</sup> The marginal acceptability of contraction in (19b) for some EP speakers is presumably due to later phonetic readjustment rules (see Vigário, 2001).

(29) [[ a hipótese de [<sub>CP</sub> C [ os meninos terem viajado]]]  
*the hypothesis of the boys have-INF-3PL traveled*  
 é implausível]  
*is implausible*

By contrast, in BP the preposition and the infinitival subject in (19b) are indeed adjacent, as shown in (30) below, explaining why contraction is the canonical option. As mentioned above, lack of contraction in BP as in (19a) is restricted to formal style in written texts, which suggests that these conservative registers still keep the structure in (27) as an option.

(30) [[ a hipótese [<sub>CP</sub> de [ os meninos terem viajado]]]  
*the hypothesis of the boys have-INF-3PL traveled*  
 é implausível]  
*is implausible*

Once these differences between EP and BP are pointed out, from now on we will focus on BP since it exhibits a more complex paradigm. Also, given that all BP speakers distinguish lack of contraction involving infinitives and standard nominal complements ((19a) vs. (20a)), we will assume that BP infinitival clauses preceded by a preposition is to be associated with the structure in (28), unless we are

5. See Bošković (1997), who argues that lack of *wanna*-contraction in (i) is due not to the intervention of traces, which are deleted copies (see Chomsky, 1995; Nunes, 2004), but to the intervention of a (Case-marking) empty complementizer.

(i) [ who<sub>i</sub> do you want [<sub>CP</sub> t<sub>i</sub> C [ t<sub>i</sub> to buy a car ] ] ]

dealing with formal registers or late phonetic readjustments (see Section 4.3 below), in which case the structure in (27) is also available.<sup>6</sup>

We now turn to the apparent instances of PP coordination in the subject position of infinitival clauses.

#### 4. Preposition duplication and inflected infinitives in Brazilian Portuguese

So far we have discussed inflected infinitivals with simple subjects. The paradigm in BP becomes more interesting when the general structures in (27) and (28), with CP-external and CP-internal prepositions, involve coordinated subjects, as sketched in (31) and (32).

- (31) [ ... X [<sub>PP</sub> P [<sub>infinitival-CP</sub> C [<sub>TP</sub> [<sub>andP</sub> [<sub>DP1</sub> D NP] [<sub>and'</sub> and [<sub>DP2</sub> D NP]]] ... ]]]]  
 (32) [ ... X [<sub>infinitival-CP</sub> C/P [<sub>TP</sub> [<sub>andP</sub> [<sub>DP1</sub> D NP] [<sub>and'</sub> and [<sub>DP2</sub> D NP]]] ... ]]]

We are particularly interested in cases where the preposition and the determiner of the first conjunct in the structures outlined in (31) and (32) are of the contracting type. Below we discuss the outputs of each structure when it is shipped to the phonological component.

##### 4.1 Infinitives with CP-external prepositions and lack of contraction

The configuration in (31) is illustrated by sentences like the ones in (33a) and (34a) in formal registers of BP. Although the relevant prepositions and the determiner of the first conjunct are lexically specified as triggering contraction, the adjacency requirement is not met. As shown in (33b) and (34b), the null complementizer intervenes between the preposition and the determiner, blocking contraction (but see Section 4.3 below for further discussion). Once contraction with the first conjunct does not happen, the Parallelism Requirement on coordinated terms is vacuously satisfied.

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6. Earlier versions of this work explored the idea that the optionality of contraction in BP when infinitival clauses are involved could be due to unordered applications of morphological merger and deletion of the null complementizer (Ximenes, 2002, 2004) or to a structural ambiguity of infinitival clauses between CPs and TPs (Ximenes & Nunes, 2004; see also Benucci, 1992 and Longa, 1994 for relevant discussion). We believe that our current interpretation of the facts provides a more natural account of the data in that it relies on independent properties that distinguish BP and EP with respect to inflected infinitives.



- (33) a. Ele não aprovou a ideia **de o** João e a Maria viajarem.  
*he not approved the idea of the João and the Maria travel-INF-3PL*  
 ‘He didn’t approve of the idea of João and Maria traveling.’
- b. ... a ideia **de** [<sub>CP</sub> C [<sub>TP</sub> **o** João e a Maria viajarem ]]
- (34) a. Ela não pensou **em o** João e a Maria viajarem.  
*she not thought in the João and the Maria travel-INF-3PL*  
 ‘She didn’t think about João and Maria traveling.’
- b. ... pensou **em** [<sub>CP</sub> C [<sub>TP</sub> **o** João e a Maria viajarem ]]

Thus, in the formal registers of BP, with CP-external prepositions, there is no difference between simple and coordinated infinitival subjects as far as contraction is concerned. As we will see below, things become quite different when CP-internal prepositions are involved.

#### 4.2 Infinitives with CP-internal prepositions

Let us now return to the unexpected instances of coordinated PPs in the subject position of infinitival clauses such as the ones in (35), for instance.

- (35) a. Ele não aprovou a ideia **do** João e **da** Maria  
*he not approved the idea of-the João and of-the Maria*  
 viajarem.  
*travel-INF-3PL*  
 ‘He didn’t approve of João and Maria’s traveling.’
- b. Ela não pensou **no** João e **na** Maria viajarem.  
*she not thought in-the João and in-the Maria travel-INF-3PL*  
 ‘She didn’t think about João and Maria traveling.’

As mentioned in Sections 1 and 2 there is no obvious derivational source for sentences like these. For instance, if (35a) is associated with the structure in (36) below, the coordinated PP arguably cannot bear the external  $\theta$ -role assigned by the infinitival verb, nor can it trigger plural agreement. If the first preposition is CP-external, as in (37), in addition to the thematic and agreement problems, we would now have coordination of dissimilar categories (a DP and a PP). Finally, if (35a) were associated with (38), the agreement and thematic problems would disappear and coordination would involve the same type of categories. However, the intervening null complementizer should block contraction with the first conjunct, as seen in Section 4.1, and there would be no explanation for the presence of the preposition in the second conjunct.

- (36) \*... ideia [<sub>CP</sub> C [<sub>TP</sub> [<sub>andP</sub> [<sub>PP</sub> **do** João] [<sub>and<sup>r</sup></sub> e [<sub>PP</sub> **da** Maria]]]]] viajarem...

(37) \*... ideia [<sub>PP</sub> **de** [<sub>CP</sub> C [<sub>TP</sub> [<sub>andP</sub> [<sub>DP</sub> **o** João] [<sub>and'</sub> e [<sub>PP</sub> **da** Maria]]]]]]] viajar-em...

(38) ... ideia [<sub>PP</sub> **de** [<sub>CP</sub> C [<sub>TP</sub> [<sub>andP</sub> [<sub>DP</sub> **o** João] [<sub>and'</sub> e [<sub>DP</sub> **a** Maria]]]]]]] viajarem...

Given that the structure in (38) is successful in capturing the thematic and agreement properties within the embedded TP, let us keep it constant and explore an alternative representation for the upper part of the embedded clause. Consider the structure in (39), which differs from (38) in that the preposition is CP-internal.

(39) ... ideia [<sub>CP</sub> **de** [<sub>TP</sub> [<sub>andP</sub> [<sub>DP</sub> **o** João] [<sub>and'</sub> e [<sub>DP</sub> **a** Maria]]]]]]] viajarem...

After (39) is spelled out, *de* and *o* must undergo morphological merger, as shown in (40), for they are adjacent.

(40) ... ideia [<sub>CP</sub> [<sub>TP</sub> [<sub>andP</sub> [<sub>DP</sub> **de+o** João] [<sub>and'</sub> e [<sub>DP</sub> **a** Maria]]]]]]] viajarem...

Moreover, given that the merger in (40) affects the boundary of a coordinated structure, the Parallelism Requirement then demands that the other conjunct also display merger. At first sight, there seems to be no way to satisfy this demand. However, one of the most typical morphological processes in grammar is reduplication, where a segment is copied from a given structure in order to fulfill some morphological requirement. If the inadequacy in (40) is morphological in nature, the system should in principle be allowed to use this morphological copy operation to remedy the problem.

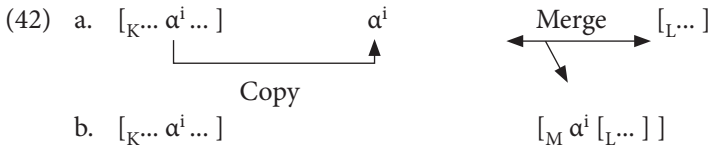
We propose that this is exactly what happens. More specifically, the morphological component copies the preposition *de* from the first conjunct of (40) and merges it with the determiner of the second conjunct, as shown in (41a), and after fusion takes place in (41b), the sentence surfaces as in (35a), with an apparent instance of syntactic PP coordination.

(41) a. *Copy and morphological merger:*  
... ideia [<sub>CP</sub> [<sub>TP</sub> [<sub>andP</sub> [<sub>DP</sub> **de<sup>i</sup>+o** João] [<sub>and'</sub> e [<sub>DP</sub> **de<sup>i</sup>+a** Maria]]]]]]] viajar-em...

b. *Fusion:*  
... ideia [<sub>CP</sub> [<sub>TP</sub> [<sub>andP</sub> [<sub>DP</sub> **do** João] [<sub>and'</sub> e [<sub>DP</sub> **da** Maria]]]]]]] viajarem...

The step depicted in (41a) resembles sideward movement (in the sense of Nunes, 2001, 2004), with the difference that in (41a) we are dealing with computations in the morphological component. Nunes (2001, 2004) has observed that once the Minimalist Program resorts to the structure-building operation Merge and adopts the copy theory of movement (see Chomsky, 1995), the computational system should in principle allow instances of sideward movement, where a given element

is copied from one syntactic object and merged into another independent syntactic object, as illustrated in (42):



According to Nunes, ATB extraction constructions are among the constructions that require steps like the ones in (42). A sentence such as (43) below, for example, is to be derived along the lines of (44)-(46). After K and L are formed in (44), the computational system copies *[which book]* from K and merges it with L to satisfy the  $\theta$ -requirements of *recommend*, as shown in (45). After further computations, K and M are integrated into a single structure and another copy of *[which book]* is created to check the strong *wh*-feature of C, as shown in (46a). The lower copies are then deleted in the phonological component, as shown in (46b), yielding (43).<sup>7</sup>

(43) Which book did you recommend and Mary buy?

(44) a.  $K = [_{andP} \text{ and } [_{TP} \text{ Mary did buy } [which\ book]]]$   
 b.  $L = \text{recommend}$

(45) Sideward movement of *[which book]*:

a.  $K = [_{andP} \text{ and } [_{TP} \text{ Mary did buy } [which\ book]^i]]$   
 b.  $L = [_{VP} \text{ recommend } [which\ book]^i]$

(46) a.  $[_{CP} [which\ book]^i \text{ did } [_{andP} [_{TP} \text{ you } [recommend [which\ book]^i]]] [_{and} \text{ and } [_{TP} \text{ Mary buy } [which\ book]^i]]]]$   
 b.  $[_{CP} [which\ book]^i \text{ did } [_{andP} [_{TP} \text{ you } [recommend \{which\ book\}^i]]] [_{and} \text{ and } [_{TP} \text{ Mary buy } \{which\ book\}^i]]]]$

To sum up, once both the syntactic and the morphological components have copying and merger procedures, one should in principle expect sideward movement (that is, copying from one constituent and merging with another) in both components. The spurious prepositions found in the second conjunct of sentences like (35), repeated here in (47), attest the existence of sideward movement in the morphological component.

(47) a. Ele não aprovou a ideia do João e da Maria  
*he not approved the idea of-the João and of-the Maria*  
 viajarão.  
*travel-INF-3PL*  
 'He didn't approve of João and Maria's traveling.'

7. See Nunes, 2001, 2004 and Hornstein & Nunes, 2002 for details and relevant discussion.

- b. Ela não pensou **no** João e **na** Maria viajarem.  
*she not thought in-the João and in-the Maria travel-INF-3PL*  
 ‘She didn’t think about João and Maria traveling.’

Once prepositions selecting inflected infinitives came to be reanalyzed as CP-internal in BP, the infinitival subjects became adjacent to the preposition in C and from the perspective of the morphological component, this is no longer different from standard PPs, where the preposition is adjacent to its DP complement. Given the morphological demands of the Parallelism Requirement on coordinated structures, morphological merger of the preposition with the adjacent determiner of the infinitival subject triggers further computations when the subject is coordinated (the second conjunct must undergo morphological merger, as well). Sideward movement of the preposition to the second conjunct then makes it possible for the Parallelism Requirement to be complied with and after fusion of the prepositions with the relevant determiners, the subject surfaces with a misleading PP coordination shape, as in (47).<sup>8</sup>

Interesting evidence for the analysis of spurious PP coordination proposed above is provided by discourse fragments, as illustrated by the contrast between (48) and (49).

- (48) a. A: – Nós aprovamos a proposta **de o** João e **a** Maria  
*we approved the proposal of the João and the Maria*  
*viajarem.*  
*travel-INF-3PL*  
 ‘We approved the proposal of João and Maria traveling.’

- B: – \***De o** Pedro e **a** Susana também.  
*of the Pedro and the Susana too*  
 ‘And also the proposal of Pedro and Susana traveling.’

- b. [ ... [ <sub>PP</sub> P [ C [ <sub>TP</sub> [ <sub>andP</sub> [ <sub>DP1</sub> D NP ] [ <sub>and</sub> and [ <sub>DP2</sub> D NP ] ] ] ] ... ] ] ]

- (49) a. A: – Nós aprovamos a proposta **do** João e **da** Maria  
*we approved the proposal of-the João and of-the Maria*

8. If this reasoning is on the right track, it also has consequences for standard coordination of complements. (i) below, for instance, could in principle be derived from a numeration containing two instances of the preposition *em* in the numeration, yielding PP coordination, or from a numeration containing only one instance of *em*, yielding DP coordination in syntax, but PP coordination in the morphological component, along the lines of (41). We leave an exploration of these possibilities for another occasion.

- (i) Eu votei **no** João e **na** Maria.  
*I voted in-the João and in-the Maria*  
 ‘I voted for João and (for) Maria.’

viajarem

*travel-INF-3PL*

‘We approved the proposal of João and Maria traveling.’

B: – **Do** Pedro e **da** Susana também.

*of-the Pedro and of-the Susana too*

‘And also the proposal of Pedro and Susana traveling.’

- b. [ ... [CP P [TP [<sub>andP</sub> [<sub>DP1</sub> D NP] [<sub>and</sub> and [<sub>DP2</sub> D NP]]] ... ] ] ]  
 c. [ ... [CP [TP [<sub>andP</sub> [<sub>DP1</sub> P<sup>i</sup>+D NP] [<sub>and</sub> and [<sub>DP2</sub> P<sup>i</sup>+D NP]]] ... ] ] ]

Given that (48a) involves the uncontracted version, it must be associated with a structure where the preposition is CP-external, as outlined in (48b). Conversely, once (49a) involves contraction and preposition duplication, it should be associated with a structure with a CP-internal preposition in the syntactic component, as in (49b), and a fake PP coordination in the morphological component, as in (49c). The contrast between the fragments in (48a) and (49a) can now receive a straightforward explanation: whereas the preposition and the *andP* in (48a) do not form a constituent in any step of the derivation (cf. (48b)), in (49a) the prepositions end up being within the *andP* constituent in the morphological component (cf. (49c)).

Let us now consider an apparent problem for the correlation between preposition contraction and preposition duplication.

#### 4.3 Apparent violations of the Parallelism Requirement

We have been assuming that contraction is the result of morphological merger followed by fusion and that if morphological merger affects the border of the first conjunct of a coordinated DP, the Parallelism Requirement demands that the remaining conjuncts must also undergo morphological merger. Although these assumptions made it possible for us to account for the syntax-phonology mismatches discussed in Section 4.2, where syntactic DP coordination surfaces as PP coordination in the morphological component, they seem to incorrectly rule out BP sentences like the ones in (50).

- (50) a. Ele não aprovou a ideia **do** João e **a** Maria viajarem.  
*he not approved the idea of-the João and the Maria travel-INF-3PL*  
 ‘He didn’t approve of the idea of João and Maria’s traveling.’  
 b. Ela não pensou **no** João e **a** Maria viajarem.  
*she not thought in-the João and the Maria travel-INF-3PL*  
 ‘She didn’t think about João and Maria traveling.’

In (50), contraction obtains between the preposition and the determiner of the first conjunct, but the second conjunct does not show any signs of having undergone morphological merger. At face value, this should flatly violate the Parallelism Requirement and undermine the proposal we advanced in Section 4.2.

However, there is still a scenario that would render (50) compatible with the Parallelism Requirement. Recall that we have been crucially assuming that the Parallelism Requirement imposes some demands on coordinated structures in the *morphological* component. So, the contraction depicted in (50) would not violate the Parallelism Requirement if it resulted from late phonetic readjustment rules (see Vigário, 2001), after morphological computations. We would like to propose that this is what indeed happens in (50). More specifically, we propose that the contracted forms *do* and *no* are ambiguous in terms of their derivational source: they can result from fusion in the morphological component or late phonetic readjustment. From this perspective, if the derivation of the sentences in (50) does not involve fusion in the morphological component, it must be the case that the adjacency requirements are not met in their morphological structures; in other words, the sentences in (50) are to be associated with the structures in (33b) and (34b), repeated below in (51), with a CP-external preposition.

- (51) a. ... a ideia **de** [<sub>CP</sub> C [<sub>TP</sub> **o** João e a Maria viajarem ] ]  
 b. ... pensou **em** [<sub>CP</sub> C [<sub>TP</sub> **o** João e a Maria viajarem ] ]

Given the structures in (51), contraction between *de* and *o* and between *em* and *o* take place as late phonetic readjustments, after all morphological computations have been executed.

The type of ambiguity exhibited by *do* and *no* with respect to their morphological or phonetic source is not unusual. As pointed by Vigário (2001: 340) with respect to phonological clitics in EP, “coexisting variants of very frequent words may either be the result of reduction of strong forms or follow from lexically stored allomorphy.” Fortunately, there are reduced forms that can unambiguously be analyzed as resulting from fusion or phonetic readjustment, which allow us to appropriately test the predictions of the proposal advocated here.

The first case is provided by the preposition *por*, which under contraction is replaced by its allomorph *per*, as illustrated in (52) below.

- (52) a. \*Eu torço **por o** presidente.  
       *I root by the president*  
 b. Eu torço **pelo** presidente. (*por + o = pelo*)  
       *I root by-the president*  
       ‘I root for the president’

Given that contracted forms involving *por* resort to allomorphy, we predict that they should not be found in sentences analogous to (50), with contraction affecting only the first conjunct of the embedded subject. That this prediction is borne out is shown by the data in (53), which should be derived from either of the structures in (54) (see Section 3).

- (53) a. Eu fiquei contente **por a** Maria e o João ganharem  
*I was happy by the Maria and the João win-INF-3PL*  
 o prêmio.  
*the prize*
- b. \*Eu fiquei contente **pela** Maria e o João ganharem  
*I was happy by-the Maria and the João win-INF-3PL*  
 o prêmio.  
*the prize*
- c. Eu fiquei contente **pela** Maria e **pelo** João ganharem  
*I was happy by-the Maria and by-the João win-INF-3PL*  
 o prêmio.  
*the prize*  
 ‘I was happy because João and Maria won the prize.’
- (54) a. ... contente **por** [<sub>CP</sub> C [<sub>TP</sub> **o** João e a Maria ganharem... ] ]  
 b. ... contente [<sub>CP</sub> **por** [<sub>TP</sub> **o** João e a Maria ganharem... ] ]

In (54a), there is no adjacency between *por* and *o*; accordingly, morphological merger and fusion are blocked in the morphological component and the derivation surfaces as (53a). Crucially, *por* and *o* cannot be converted to *pelo* by phonetic readjustment; hence, (53b) is ruled out. In turn, morphological merger in (54b) is obligatory as *por* and *o* are adjacent; the Parallelism Requirement then triggers copying and morphological merger of *por* with the second conjunct (an instance of morphological sideward movement), as shown in (55), yielding (53c) after fusion takes place in both conjuncts.

- (55) ... contente [<sub>CP</sub> [<sub>TP</sub> **por**<sup>i</sup>+**o** João e **por**<sup>i</sup>+**a** Maria ganharem... ] ]

The converse situation is presented by data such as (56).

- (56) a. Ela pensou **em eu** fazer isso.  
*she thought in I do-INF this*
- b. Ela pensou **n'eu** fazer isso.  
*she thought in-I do-INF this*  
 ‘She thought about me doing this.’

- c. Ela pensou **n**eu e a Maria fazermos isso.  
*she thought in-I and the Maria do-INF-1PL this*
- d. \*Ela pensou **n**eu e na Maria fazermos isso.  
*she thought in-I and in-the Maria do-INF-1PL this*

(56a) and (56b) show that the sequence *em eu* may be reduced to *n*eu in BP. The contrast between (56c) and (56d) in turn shows that such reduction does not license preposition duplication. Thus, it must be the case that the contracted form *n*eu results from later phonetic readjustment rules and not from morphological merger. That this is correct is indicated by the fact that there is no syntactic environment for licensing *n*eu, as *em* assigns oblique Case and *eu* bears nominative, as illustrated in (57).

- (57) a. \*Ela pensou **em eu**.  
*she thought of I*
- b. \*Ela pensou **n**eu.  
*she thought of-I*
- c. Ela pensou **em mim**.  
*she thought of me*  
 ‘She thought of me.’

Let us now consider some consequences of the approach explored here.

## 5. Further consequences

### 5.1 Contraction involving small clauses

We argued above that the apparent cases of PP coordination in the subject position of an infinitival clause in BP are attributed to the possibility of reanalyzing CP external prepositions as heads of CP. Evidence for this proposal is provided by instances of contraction involving small clauses. Consider the contrast between (58) and (59), for instance.

- (58) a. Apesar **de o** meu pé estar quebrado, eu fui à festa.  
*despite of the my foot be-INF broken, I went to-the party*
- b. Apesar **do** meu pé estar quebrado, eu fui à festa.  
*despite of-the my foot be-INF broken, I went to-the party*  
 ‘Despite my foot being broken, I went to the party.’
- (59) a. \*Apesar **de o** meu pé quebrado, eu fui à festa.  
*despite of the my foot broken, I went to-the party*



- b. Apesar **do** meu pé quebrado, eu fui à festa.  
*despite of-the my foot broken, I went to-the party*  
 ‘Despite my broken foot, I went to the party.’

Given that in BP, prepositions preceding inflected infinitives can be CP-external or CP-internal (see Section 3), (58a) can be derived from the spelled-out structure in (60a), where the intervening C blocks contraction between the preposition and the determiner. In turn, (58b) is to be associated with the spelled-out structure in (60b), where the preposition and the determiner are adjacent and must undergo contraction in the morphological component.<sup>9</sup>

- (60) a. *Spelled-out structure:*  
 ... apesar **de** [<sub>CP</sub> C [<sub>TP</sub> [o meu pé]...]] →... **de** o...
- b. *Spelled-out structure:*  
 ... apesar [<sub>CP</sub> **de** [<sub>TP</sub> [o meu pé]...]] →... **do**...

By contrast, under the standard assumption that small clauses do not contain a CP layer, the subject of a small clause should be adjacent to a subcategorizing head. In other words, both sentences in (59) are to be associated with the spelled-out structure in (61), where the preposition and the determiner are adjacent and contraction is obligatory; hence the contrast between (58a) and (59a).

- (61) *Spelled-out structure:*  
 ... apesar **de** [<sub>SC</sub> [o meu pé]...] →... **do**...

As we should expect by now, if the subject of structures analogous to (59b) involves coordination, we should obligatorily find apparent PP coordination. That this is exactly what we find is illustrated in (62).

- (62) a. \*Apesar **do** meu pé e **o** meu braço quebrados, eu fui  
*despite of-the my foot and the my arm broken I went*  
 à festa.  
*to-the party*
- b. Apesar **do** meu pé e **do** meu braço quebrados, eu fui  
*despite of-the my foot and of-the my arm broken I went*  
 à festa.  
*to-the party*  
 ‘Despite my broken foot and arm, I went to the party.’

9. (58b) could also be derived from the structure in (60a) with late phonetic readjustments, as discussed in Section 4.3.

Given the spelled-out structure in (63a), the derivation of (62b) involves sideward movement of *de* in the morphological component, as illustrated in (63c).

- (63) a. *Spelled-out structure:*  
 ... apesar **de** [<sub>SC</sub> [<sub>andP</sub> [o meu pé] [<sub>and'</sub> e [o meu braço]]]]...
- b. *Morphological merger:*  
 ... apesar [<sub>SC</sub> [<sub>andP</sub> [**de+o** meu pé] [<sub>and'</sub> e [o meu braço]]]]...
- c. *Morphological sideward movement:*  
 ... apesar [<sub>SC</sub> [<sub>andP</sub> [**de**<sup>i</sup>+o meu pé] [<sub>and'</sub> e [**de**<sup>i</sup>+o meu braço]]]]...
- d. *Fusion:*  
 ... apesar [<sub>SC</sub> [<sub>andP</sub> [**do** meu pé] [<sub>and'</sub> e [**do** meu braço]]]]...

## 5.2 Feature projection under coordination

Let us finally examine the puzzling contrasts in (64) and (65).

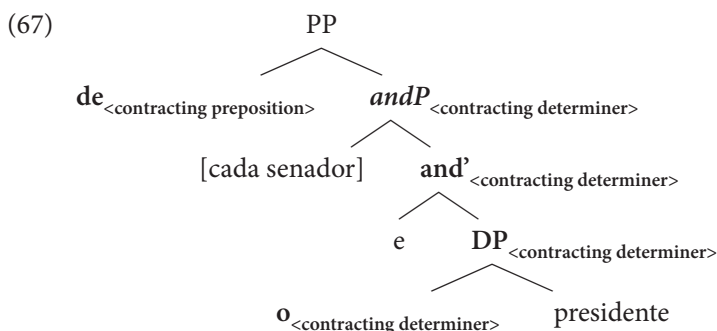
- (64) a. \*Eu lembrei **de** cada senador e **o** presidente  
*I remembered of each senator and the president*
- b. Eu lembrei **de** cada senador e **do** presidente  
*I remembered of each senator and of-the president*  
 'I remembered each senator and the president.'
- (65) a. \*Eu confio **em** Deus e **o** João  
*I trust in God and the João*
- b. Eu confio **em** Deus e **no** João  
*I trust in God and in-the João*  
 'I trust in God and John.'

In these sentences, the determiner that triggers contraction is in the second conjunct. Once the preposition and the contracting determiner are not adjacent, as respectively illustrated in (66), contraction cannot take place and, consequently, preposition duplication should not be obligatory. In other words, (64a) and (65a) should be acceptable, contrary to fact.

- (66) a. ... [ **de** [<sub>andP</sub> [<sub>DP</sub> cada senador] [<sub>and'</sub> e [<sub>DP</sub> o presidente]]]]  
 b. ... [ **em** [<sub>andP</sub> [<sub>DP</sub> Deus] [<sub>and'</sub> e [<sub>DP</sub> o João]]]]

Intuitively, the unacceptability of (64a) and (65a) seems to suggest that the preposition is sensitive to the morphological properties of nonadjacent conjuncts. Exploring this idea, we would like to propose that *andP*, the coordinated phrase, bears not only syntactic and semantic information about its members, as is standardly assumed, but morphological information, as well. Percolation of the morphological

specifications of the head of second conjunct of (64a), for example, places them in a local configuration with the selecting preposition, as sketched in (67).

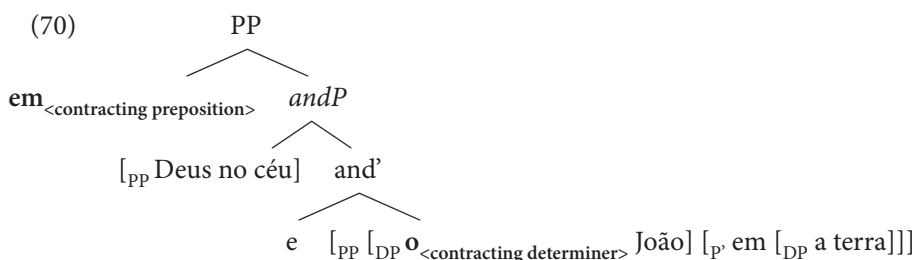


Given (67), the Parallelism Requirement should enforce that each conjunct undergoes morphological merger through sideward movement of the preposition, as illustrated in (68); hence, the unacceptability of sentences such as (64a) and (65a).

- (68) a. *Morphological sideward movement:*  
 [<sub>andP</sub> [<sub>DP</sub> **de**+cada senador] [<sub>and'</sub> e [<sub>DP</sub> **de**<sup>i</sup>+o presidente]]]
- b. *Fusion:*  
 [<sub>andP</sub> [<sub>DP</sub> **de**+cada senador] [<sub>and'</sub> e [<sub>DP</sub> **do** presidente]]]

Evidence for this proposal comes from coordination of small clauses, as illustrated by the contrast between (65a) and (69) below. The only relevant difference between these sentences is that (69) involves coordination of PP small clauses, as shown in (70).

- (69) Eu confio **em** Deus no Céu e **o** João na Terra  
*I trust in God in-the Heaven and the João in-the Earth*  
 'I trust in God in Heaven and John on Earth.'



In (70), the information that the determiner inside the second conjunct is of the contracting type does not percolate up the tree, as it is embedded within the PP small clause. Since *andP* doesn't carry the information of the contracting preposition, duplication of *em* is not triggered.

Interestingly, if we switch the conjuncts in (69), placing the conjunct with the contracting determiner adjacent to *em*, preposition duplication now becomes obligatory:

- (71) a. \*Eu confio **em o** João na Terra e Deus no Céu  
*I trust in the João in-the Earth and God in-the Heaven*
- b. Eu confio **no** João na Terra e **em** Deus no Céu  
*I trust in-the João in-the Earth and in God in-the Heaven*  
 ‘I trust in God in Heaven and John on Earth.’

Given what we said regarding (70), the morphological information of the determiner in (71) does not percolate up for it is also embedded within the PP small clause, as shown in (72). However, the determiner is adjacent to the preposition *em* and contraction is obligatory in this circumstance. Morphological sideward movement of *em* is then triggered in order for the Parallelism Requirement to be satisfied, as illustrated in (73).

- (72)  $[_{PP} \mathbf{em}_{\langle \text{contracting preposition} \rangle} [_{andP} [_{PP} [\mathbf{o}_{\langle \text{contracting determiner} \rangle} \text{João na terra}]]] [_{and'} e [_{PP} \text{Deus no céu}]]]]]$
- (73) a. *Morphological sideward movement:*  
 $[_{PP} [_{andP} [_{PP} [\mathbf{em}^i + \mathbf{o} \text{João na terra}]]] [_{and'} e [_{PP} \mathbf{em}^i + \text{Deus no céu}]]]]]$
- b. *Fusion:*  
 $[_{PP} [_{andP} [_{PP} [\mathbf{no} \text{João na terra}]]] [_{and'} e [_{PP} \mathbf{em} + \text{Deus no céu}]]]]]$

## 6. Concluding remarks

Based on data on contraction between prepositions and determiners, this paper has argued that the morphological component can resort to morphological sideward movement (a sequence of copy and merger in the morphological component) in order to comply with the demands of the Parallelism Requirement on coordinate structures – more specifically, to comply with the requirement that if morphological merger applies to the boundary of a given conjunct, it must apply to all the other conjuncts. The core pieces of empirical evidence for this proposal come from mismatches between syntactic and morphological structures in Brazilian Portuguese inflected infinitives, where the coordinated subject of the infinitival clause ends up realized in the morphological component as a coordinated PP. We argued that in these cases the preposition preceding the infinitival is duplicated in the morphological component and integrated into the structure via morphological sideward movement.

## References

- Benucci, F. (1992). Prepositional Particles and the Portuguese Inflected Infinitive. *University of Venice Working Papers in Linguistics*, 1–20.
- Bošković, Ž. (1997). *The Syntax of Nonfinite Complementation: An Economy Approach*. The MIT Press, Cambridge, MA.
- Chomsky, N. (1995). *The Minimalist Program*. The MIT Press, Cambridge, MA.
- Ferreira, M. (2000). Argumentos Nulos em Português Brasileiro. Master's thesis, Universidade Estadual de Campinas.
- Ferreira, M. (2004). Hyper-raising and Null Subjects in Brazilian Portuguese. *MIT Working Papers in Linguistics 47: Collected Papers on Romance Syntax*, 57–85.
- Fox, D. (2000). *Economy and Semantic Interpretation*. The MIT Press, Cambridge, MA.
- Halle, M. & A. Marantz (1993). Distributed Morphology and the Pieces of Inflection. In: *The View from Building 20: Essays in honor of Sylvian Bromberger* (K. Hale & S. J. Keyser, eds.), pp. 111–176. The MIT Press, Cambridge, MA.
- Hornstein, N. & J. Nunes (2002). On Asymmetries Between Parasitic Gaps and Across-the-Board Constructions. *Syntax*, 5, 26–54.
- Hornstein, N., A. M. Martins, & J. Nunes (2008). Perception and Causative Structures in English and European Portuguese:  $\phi$ -feature Agreement and the Distribution of Bare and Prepositional Infinitives. *Syntax*, 11, 198–222.
- Lightfoot, D. (1991). *How to Set Parameters: Arguments from Language Change*. The MIT Press, Cambridge, MA.
- Longa, V. (1994). The Galician Inflected Infinitive and the Theory of UG. *Catalan Working Papers in Linguistics*, 4, 23–44.
- Martins, A.M & J. Nunes. (2005). Raising Issues in Brazilian and European Portuguese. *Journal of Portuguese Linguistics*, 4, 53–77.
- Nunes, J. (2001). Sideward Movement. *Linguistic Inquiry*, 32, 303–344
- Nunes, J. (2004). *Linearization of Chains and Sideward Movement*. The MIT Press, Cambridge, MA.
- Nunes, J. (2007). A-over-A, Inherent Case, and Relativized Probing. *GLOW Newsletter*, 58.
- Nunes, J. (2008). Inherent Case as a Licensing Condition for A-movement: The Case of Hyper-raising Constructions in Brazilian Portuguese. *Journal of Portuguese Linguistics*.
- Salles, H. (1997). Prepositions and the Syntax of Complementation. Doctoral dissertation, University of Wales.
- van Riemsdijk, H. (1998). Head Movement and Adjacency. *Natural Language and Linguistics Theory*, 36, 633–678.
- Vigário, M. (2001). The Prosodic Word in European Portuguese. PhD Dissertation. Universidade de Lisboa
- Ximenes, C. (2002). Contração de Preposição em Estruturas Coordenadas. Master's thesis. Universidade Estadual de Campinas
- Ximenes, C. (2004). Preposition Contraction in Coordinated Structures in Brazilian Portuguese. *MIT Working Papers in Linguistics*, 47, 179–194.
- Ximenes, C. & J. Nunes (2004). Contraction and Duplication of Prepositions in Coordinated Structures in Brazilian Portuguese. In *WCFFL 23: Proceedings of the 23rd West Coast Conference on Formal Linguistics* (V. Chand, A. Kelleher, A. J. Rodriguez, and B. Schmeiser, eds.), pp. 815–828. Cascadilla Press, Somerville, MA.

## Lack of morphological identity and ellipsis resolution in Brazilian Portuguese

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In this paper we investigate grammatical cases of verbal and nominal ellipsis in which there is no full morphological identity between the antecedent and the elided constituent. We argue that lack of identity in these cases can be captured if inflectional material is hosted by functional categories and valued in the course of the derivation, as in Chomsky's (2001) Agree-based system.

### 1. Introduction\*

Lack of morphological identity in the verbal domain may or may not yield a good result in what concerns ellipsis resolution, as illustrated in (1) with English (see e.g. Warner, 1986; Lasnik, 1999; and Lightfoot, 1999) and (2) with Brazilian Portuguese (see Zocca, 2003; Nunes & Zocca, 2005).<sup>1</sup>

- (1) a. John **slept** and Mary will too. [sleep]  
b. \*John **was** here and Mary will too. [be here]
- (2) *Brazilian Portuguese*  
a. A Maria **estudou** muito, mas o João não vai. [estudar]  
*the Maria studied much but the João not goes study-INF*  
'Maria studied a lot, but João won't.'

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1. Throughout the text, elided material will be presented inside brackets.

- b. \*O João **era** famoso e o filho dele  
*the João was famous and the son of.his*  
 também vai. [ser famoso]  
*also goes be-INF famous*  
 ‘João was famous and his son will be famous too.’

In the nominal domain, we also observe that some  $\varphi$ -features can be mismatched in the antecedent and the ellipsis site, while others cannot. More specifically, whereas number differences can consistently be ignored, as shown in (3) and (4), gender has a more erratic behaviour, as shown in (5) and (6).<sup>2</sup>

- (3) a. Mickey is a **mouse**, but Donald and Daisy aren't. [mice]  
 b. Pete and Drew are **children**, but Chris isn't. [a child]
- (4) *Brazilian Portuguese*  
 a. Aquele rapaz é **americano**, mas esses dois não são. [americanos]  
*that guy is American-SG but these two are not American-PL*  
 ‘That guy is American, but these two aren't.’  
 b. Estes esqueletos são **fósseis**, mas aquele ali não é. [fóssil]  
*these skeletons are fossil-PL but that there not is fossil.SG*  
 ‘The skeletons are fossilized, but that one over there isn't.’
- (5) a. Brad is an **actor** and Angelina is too. [an actress]  
 b. \*Angelina is an **actress** and Brad is too. [an actor]  
 c. \*Dracula is a **count** and Mina is too. [a countess]  
 d. \*Mina is a **countess** and Dracula is too. [a count]
- (6) *Brazilian Portuguese*  
 a. O João é **médico** e a Maria também é. [médica]  
*the João is doctor-MASC and the Maria also is doctor-FEM*  
 ‘João is a doctor and Maria is too.’  
 b. A Maria é **médica** e o João também é. [médico]  
*the Maria is doctor-FEM and the João also is doctor-MASC*  
 ‘Maria is a doctor and João is too.’  
 c. ?O Paulo é **ator** e a Fernanda também é. [atriz]  
*the Paulo is actor and the Fernanda also is actress*  
 ‘Paulo is an actor and Fernanda is also an actress.’

2. For further discussion on the kinds of nouns that allow for gender mismatches in ellipsis, see Bobaljik & Zocca (to appear).

- d. ??A Fernanda é atriz e o Paulo também é. [ator]  
*the Fernanda is actress and the Paulo also is actor*  
 ‘Fernanda is an actress and Paulo is an actor.’
- e. \*O Drácula é conde e a Mina também é. [condessa]  
*the Dracula is count and the Mina also is countess*  
 ‘Dracula is a count and Mina is a countess.’
- f. \*A Mina é condessa e o Drácula também é. [conde]  
*the Mina is countess and the Dracula also is count*  
 ‘Mina is a countess and Dracula is a count.’

In this paper we show that the similarities between English and Brazilian Portuguese present problems for proposals that rely on (verb) movement to account for crosslinguistic variation in ellipsis resolution, such as Lasnik (1999). We argue that the crucial aspect for the possibility of lack of identity in ellipsis resolution concerns the way in which lexical information is stored, something that is independently needed.

The paper is organized as follows. In Section 2.1 we review Lasnik’s (1999) proposal to account for contrasts such as the one in (1) based on properties of Infl. Section 2.2 discusses problems that such a proposal faces when VP-ellipsis data such as (2) in Brazilian Portuguese are taken into consideration. Section 2.3 proposes an account of morphological mismatches in ellipsis constructions in terms of Chomsky’s (2001) Agree operation. Section 3 then extends this approach to ellipsis involving nominal predicates such as the ones in (3)-(6). Finally, we present some concluding remarks in Section 4.

## 2. Verbal morphology and ellipsis

### 2.1 Lasnik’s (1999) hybrid lexicalist approach

The traditional analysis of verbal morphology within GB (see e.g. Emonds, 1978; Chomsky, 1981; and Pollock, 1989) was essentially a development of Chomsky’s (1957) original proposal that verbs and their corresponding affixes were generated in separate positions. Within minimalism, Chomsky (1993) proposes an alternative lexicalist approach, according to which verbs enter the derivation fully inflected and check their features against Infl heads.

Lasnik (1999) notes that the strictly lexicalist approach advocated by Chomsky (1993) does not capture the *do*-support facts of English, which the earlier analysis so nicely handled. He then proposes a hybrid approach according to which Infl is freely an affix or a set of abstract features. In case Infl is affixal, it must



merge with the verb in the phonological component; conversely, if Infl is featural, it must check its features against the corresponding features of the verb.

To account for the difference between English and French with respect to verb movement, Lasnik makes the assumptions in (7) (see Lasnik, 1999: 105).

- (7) a. French verbs are fully inflected in the lexicon (possibly correlating with the fact that there are no bare forms; even the infinitive has an ending).  
 b. *Have* and *be* are totally inflected in the lexicon (possibly correlating with the fact that they are highly suppletive (...)).  
 c. All other English verbs are bare in the lexicon.  
 d. Finite featural Infl is strong in both French and English.

This proposal predicts the results in (8) below. (8a) illustrates the case of English main verbs. An affixal Infl and a bare verb must be merged in the phonological component under adjacency; otherwise, *do*-support is triggered. Since no strong feature is involved, no overt movement takes place. In turn, if an English main verb is inserted in a structure containing a featural Infl, as sketched in (8b), or if a French verb is inserted in a structure containing an affixal Infl, as shown in (8c), the relevant features will fail to be checked and the derivation will crash. A convergent result can however obtain if the relevant verb is inflected, as is the case with French verbs as well as English *be* and auxiliary *have* (cf. (7a)-(7b)) and Infl is featural, as represented in (8d). Given the assumption in (7d), the relevant feature checking required in (8d) must take place before Spell-Out; hence the overt movement of main verbs in French and *be* and auxiliary *have* in English as far as finite clauses are concerned.

- (8) a. Infl<sub>affixal</sub> V<sub>bare</sub>  
 b. \*Infl<sub>featural</sub> V<sub>bare</sub>  
 c. \*Infl<sub>affixal</sub> V<sub>inflected</sub>  
 d. Infl<sub>featural</sub> V<sub>inflected</sub>

As evidence for this approach, Lasnik (1999: 108–109) presents the intriguing paradigm in (9) (see Warner, 1986), which shows that ellipsis resolution in English may tolerate lack of morphological identity involving main verbs, but not *be* or the auxiliary *have*.

- (9) a. John **slept**, and Mary will too. [sleep]  
 b. John **sleeps** every afternoon, and Mary should too. [sleep every afternoon]  
 c. \*John **was** here, and Mary will too. [be here]  
 d. \*John **has** left, but Mary shouldn't. [have left]

Given the picture in (8), the sentences in (9) are to be analyzed along the lines of (10). That is, the lack of morphological identity in (9a) and (9b) is only apparent. At the point where ellipsis resolution applies, the elided verb is identical to the verb in the first conjunct (cf. (10a) and (10b)). As for (9c) and (9d), if the elided verbs are inflected like their antecedents (cf. (10c) and (10d)), they will not have their features checked, causing the derivations to crash.

- (10) a. [John -ED [<sub>VP</sub> sleep]] and [Mary will [<sub>VP</sub> sleep]] too  
 b. [John -S [<sub>VP</sub> sleep every afternoon]] and [Mary should [<sub>VP</sub> sleep every afternoon]] too  
 c. \*[John was+Infl<sub>featural</sub> [<sub>VP</sub> was here]] and [Mary will [<sub>VP</sub> was here]] too  
 d. \*[John has+Infl<sub>featural</sub> [<sub>VP</sub> has left]] and [Mary will [<sub>VP</sub> has left]] too

Lasnik's analysis is partly based on the difference between French and English and correctly predicts that VP ellipsis is not possible in French. We will see in the next section that although elegant, this account of the contrasts in (9) faces problems when we consider languages with verb movement that also allow for VP ellipsis, such as Brazilian Portuguese.

## 2.2 Shortcomings of Lasnik's system

Lasnik's proposal reviewed in Section 2.1 makes the prediction that in languages with fully inflected verbs, VP ellipsis should not admit any lack of isomorphism, for the relevant features of the elided verb would fail to be checked. This prediction cannot be tested in French or in languages such as Spanish or Italian, for instance, which under Lasnik's analysis should also be fully inflected, for they do not allow for VP ellipsis even under strict identity, as illustrated in (11) (see e.g. Zagona, 1988; Depiante, 2000; and Lightfoot, 2006 for relevant discussion).<sup>3</sup>

3. Nevertheless, as Andrés Saab (p.c.) points out, Spanish allows for other kinds of ellipsis that can be used to test the predictions of Lasnik's (1999) proposal, as shown in (i) below with sluicing, (ii) with stripping, and (iii) with gapping. All of these examples involve surface anaphora (see Hankamer and Sag, 1976) and lack of identity between the relevant verbs, contrary to what Lasnik's (1999) proposal would predict. For further discussion, see Saab (2008) and fn. 9 below.

- (i) a. Recuerdo haber visto a Juan, pero no  
*remember-1P.SG have-INF seen to Juan, but not*  
 recuerdo dónde. [ví a Juan]  
*remember-1P.SG where saw-1P.SG. to Juan*  
 'I remember having seen Juan, but I don't remember where.'

- (11) a. \*Jean peut **travailler** et Marie peut aussi. [**travailler**] (French)  
*Jean can work and Marie can too work*  
 ‘Jean can work and Marie can too.’
- b. \*Juan había **leído** este libro y Pedro  
*Juan had read this book and Pedro*  
 también había. [**leído**] (Spanish)  
*also had read*  
 ‘Juan had read this book and Pedro had too.’
- c. \*Gianni ha **letto** questo libro e anche  
*Gianni has read this book and also*  
 Piero ha. [**letto**] (Italian)  
*Peter has read*  
 ‘Gianni read this book and Piero did too.’

However, Brazilian Portuguese has an ideal combination of characteristics that can put Lasnik’s predictions to the test: it has a paradigm for verbal inflection richer than English, it has verb movement (see e.g. Galves, 1994; Figueiredo Silva, 1996), and it allows for VP ellipsis (see e.g. Kato & Tarallo, 1992; Martins, 1994; Cyrino, 1997; Kato, 2003; Cyrino & Matos, 2002, 2005), as illustrated in (12).

- (12) a. Eu **dei** um livro pra Maria e o Pedro também **deu**.  
*I gave-1SG a book to.the Maria and the Pedro also gave-3SG*  
 [<sub>t<sub>i</sub></sub> um livro pra Maria]  
*a book to.the Maria*  
 ‘I gave a book to Maria, and Pedro did, too.’
- b. O João já tinha **lido** este livro, mas a Maria não tinha.  
*the João already had read this book but the Maria not had*  
 [**lido** este livro]  
*read this book*  
 ‘João had already read this book, but Maria hadn’t.’

- 
- b. Juan **arreglará** el auto aunque no sabe cómo. [**arreglar el auto**]  
*Juan fix-FUT the car even.though not knows how fix-INF the car*  
 ‘Juan will fix the car even though he doesn’t know how.’
- (ii) Juan **fue** al cine y nosotros también. [**fuimos**]  
*Juan went-3P.PL to.the cinema and we also went-3P.PL*  
 ‘John went to the movies and so did we.’
- (iii) **Ahorra** plata, no [**ahorres**] palabras  
*save-IMP money not save-SUBJ words*  
 ‘Save money, not words.’

Contrary to what Lasnik's proposal would lead us to expect, Brazilian Portuguese patterns with English in tolerating lack of isomorphism in ellipsis involving main verbs, as shown in (13), but not when *ser* 'be', *estar* 'be', and the auxiliary *ter* 'have' are involved, as exemplified in (14).

- (13) a. Eu já **comi**, mas a Maria  
*I already ate-1SG but the Maria*  
 ainda vai. [comer]  
*still goes eat-INF*  
 'I've already eaten, but Maria's still going to eat.'
- b. Nós não **convidamos** o João, mas você deveria.  
*we not invited-1PL the João but you should*  
 [convidar o João]  
*invite-INF the João*  
 'We didn't invite João, but you should.'
- c. Ontem eles **assistiram** este filme, e amanhã eu vou.  
*yesterday they watched-3PL this movie and tomorrow I go*  
 [assistir este filme]  
*watch-INF this movie*  
 'Yesterday, they watched this movie, and tomorrow I will.'
- (14) a. \*O João **era** famoso e o filho dele também vai.  
*the João was famous and the son of-his also goes*  
 [ser famoso]  
*be-INF famous*  
 'João was famous and his son will be famous too.'
- b. \*Ontem o João **esteve** aqui e  
*yesterday the João was here and*  
 amanhã a Maria vai. [estar aqui]  
*tomorrow the Maria goes be-INF here*  
 'Yesterday João was here and tomorrow Maria will be here too'
- c. \*Até ontem ele ainda não **tinha** chegado,  
*until yesterday he still not had arrived,*  
 mas até terça já vai. [ter chegado]  
*but until Tuesday already goes [have arrived]*  
 'Until yesterday, he hadn't arrived yet, but until Tuesday will already have arrived'

In fact, Brazilian Portuguese behaves like English even with respect to ellipsis involving main verbs where lack of isomorphism is not allowed. This is the case when the elided verb is in the progressive form, as illustrated in (15).

- (15) a. \*John will **sleep**. Mary is now. [sleeping]  
 b. \*O João já **dormiu** e agora a Maria está. [dormindo]  
*the João already slept and now the Maria is sleeping*  
 ‘John has already slept and now Mary is sleeping.’

Let us consider why exactly the sentences in (13) present problems for Lasnik’s account, by examining in some detail the structure of (13a), for instance, given in (16).

- (16) \*[eu já comi+Infl<sub>feat</sub> [<sub>VP</sub> comi]] mas [a Maria ainda  
*I already ate-1SG ate-1SG but the Maria still*  
 vai [<sub>VP</sub> comi]]  
*goes ate-1SG*

Assuming the copy theory of movement, the trace of the verb in the VP of the first conjunct is a copy of the verb adjoined to Infl and, as such, it should be fully inflected. If ellipsis resolution must involve identity, the main verb in the second conjunct should then be identical to the one in the first conjunct. That being so, the verb in the second conjunct cannot check its features even if Infl is featural, for the verb is specified as first person, whereas Infl is specified as third person. Similar observations apply to the tense mismatch between *comi* (past) and *vai* (present). Hence, if we assume Lasnik’s system, sentences such as the ones in (13) should be as unacceptable as the ones in (14), contrary to fact.

Together with the Spanish data discussed in fn. 3, the acceptability of (13) could call into question Lasnik’s original account of VP ellipsis in English. However, we show in the next section that it is possible to maintain the essentials of Lasnik’s hybrid lexicalist analysis and still account for the ellipsis data in Brazilian Portuguese.

### 2.3 Lexical specification and VP ellipsis

To account for the data discussed thus far, all we need to assume is that neither in English nor in Brazilian Portuguese are verbs lexically inflected, unless they are idiosyncratically specified as being so. To make the proposal concrete, let us assume Chomsky’s (2001) Agree-based system of checking relations, according to which T probes into vP in search of a DP to value its uninterpretable  $\phi$ -features. To make things simpler, let us consider a derivation involving an unaccusative structure, as illustrated in (17).

- (17) a.  $[_{TP} T_{\varphi:1SG} [_{VP} V DP_{\varphi:1SG}]]$   
 b.  $[_{TP} T_{\varphi:1SG} [_{VP} V DP_{\varphi:1SG}]]$   
 c.  $[_{TP} DP_{\varphi:1SG} [_{T'} T_{\varphi:1SG} [_{VP} V DP_{\varphi:1SG}]]]$

In (17a), T enters into an agreeing relation with the DP within VP and gets its features specified as first person singular (cf. (17b)); the DP then moves to check the EPP, yielding the structure in (17c).

What is relevant for our current discussion is the relation between T and V in (17c). If T does not have a strong feature, Lasnik's proposal can be adopted in full. That is, V and T will merge in the phonological component (see e.g. Halle & Marantz, 1993; and Bobaljik, 1994) and before such merger takes place, ellipsis resolution may apply, allowing VP ellipsis like the one found in English involving main verbs, as illustrated in (18).<sup>4</sup>

- (18) a. John sleeps every afternoon, and Mary should too.  
 b.  $[_{TP} \text{John} [_{T'} T_{3SG} [_{VP} \text{sleep every afternoon}]]]$  and  $[_{TP} \text{Mary should} [_{VP} \text{sleep every afternoon}]]$  too

If, differently from English, T in (17c) has a strong V-feature, triggering verb movement and yielding (19) below, nothing will essentially change with respect to ellipsis resolution. Crucially, the copy of the verb left behind within VP is *not* inflected.

- (19)  $[_{TP} DP_{\varphi:1SG} [_{T'} V+T_{\varphi:1SG} [_{VP} V DP_{\varphi:1SG}]]]$

Thus, VP ellipsis involving main verbs in Brazilian Portuguese will behave like their counterparts in English, as illustrated in (20) below.

- (20) a. Eu já comi, mas a Maria ainda vai.  
*I already ate-1SG but the Maria still goes*  
 'I've already eaten, but Maria's still going to eat.'  
 b.  $[_{TP} \text{Eu já} [_{T'} \text{com-}+T_{1SG} [_{VP} \text{com-}]]]$  mas  $[_{TP} \text{a Maria ainda} [_{T'} \text{vai}_{3SG} [_{VP} \text{com-}]]]$

The only relevant difference between English and Brazilian Portuguese in this regard is that, in the latter, bare stems cannot stand by themselves and require infinitival morphology, as illustrated in (21). But such a requirement does not mean that we

4. For presentational purposes we ignore the trace of the subject within VP.

have an infinitival projection in the second conjunct of (21), it just reflects the fact that the infinitival form is the default morphological form for Portuguese verbs.<sup>5</sup>

- (21) Eu já comi, mas a Maria ainda vai comer.  
*I already ate-1SG but the Maria still goes eat-INF*  
 ‘I’ve already eaten, but Maria’s still going to eat.’

Let us now examine the sentences in (15), repeated below in (22). Lasnik analyzes cases like (22a) in terms of the Stranded Affix Filter (see Lasnik 1981) and such an analysis can be adequately extended to (22b), as well. More specifically, given that the tense/aspect features of gerundive T are [+interpretable], they are lexically specified and should be present throughout the derivation. Thus, if the gerund morpheme does not combine with the verb, as sketched in (23), a violation of the Stranded Affix Filter obtains.<sup>6</sup>

5. That this is indeed the case is suggested by the fact that the citation form for any verb in Portuguese is the infinitival form. Furthermore, Bastos (2001) and Bastos-Gee (this volume) have convincingly argued that verb topicalization in Brazilian Portuguese as in (ia) below proceeds along the lines of (ib), where the verbal complex V+v adjoins to T, leaving a copy, and then adjoins to a Top head. In the absence of specific overt topic morphology to support the highest copy of the verb in (ib), it surfaces in the default infinitival form, as seen in (ia).

- (i) a. **Comprar**, eu **comprei** o livro.  
*buy-INF I bought-1SG the book*  
 ‘As for buying something, I bought the book.’  
 b. [<sub>TopP</sub> [V+v]+Top [<sub>TP</sub> SUBJ [<sub>T</sub> [V+v]+T<sub>φ</sub> [<sub>VP</sub> SUBJ V+v [<sub>VP</sub> V OBJ]]]]

6. It is worth mentioning that Brazilian Portuguese is actually more well behaved than English with respect to participial clauses, as shown in (i) below. If these sentences were to be analyzed like the ones in (18), as shown in (ii), both of them should give rise to a violation of the Stranded Affix Filter.

- (i) a. John may be **questioning** our motives, but Peter hasn’t. [**questioned** our motives]  
 b. \*Só ontem o João **viajou**. Na semana passada, a Maria já **tinha**. [**viajado**]  
*only yesterday the João travel-PASTin.the week past the Mary already had travel-PART*  
 ‘Only yesterday did João travel. Last week Maria had already [traveled]’  
 (ii) a. [<sub>TP</sub> Peter hasn’t [<sub>TP</sub> -EN [<sub>VP</sub> question our motives]]]  
 b. [<sub>TP</sub> a Maria já tinha [<sub>TP</sub> -DO [<sub>VP</sub> viaja-]]]

Discussing the problem posed by the acceptability of the sentence in (ia), Lasnik (1999:fn. 8) speculates that “it is as if *-en* is spelled out as zero”. As Oku (1998) observes, this idiosyncratic behavior of the participial morphology is also noticeable with respect to VP fronting, as illustrated in (iii) (see Oku 1998: 21–30 for discussion).

- (iii) Mary once predicted that John would pass an exam eventually, and **pass** one he now has.

- (22) a. \*John will sleep. Mary is now. [sleeping]  
 b. \*O João dormiu e agora a Maria está. [dormindo]  
*the João slept and now the Maria is sleeping*  
 'John slept and now Mary is sleeping.'
- (23) a. [<sub>TP</sub> Mary is [<sub>TP</sub> -ING [<sub>VP</sub> sleep]] now]  
 b. [agora [<sub>TP</sub> a Maria está [<sub>TP</sub> -NDO [<sub>VP</sub> dormi-]]]]

As for *be* and *have* in English and *ser* 'be', *estar* 'be', and *ter* in Brazilian Portuguese, we may adopt Lasnik's proposal that they are inherently inflected, slightly adapting it under Chomsky's (2001) valuation approach to feature checking. More specifically, we may assume that the relationship between being interpretable and being valued is not a biconditional (see also Pesetsky & Torrego, 2004 and Bošković, 2007 for relevant discussion). In other words, whereas [+interpretable] features will always be valued, as in Chomsky's (2001) system, [-interpretable] features will be unvalued in the general case, but may be valued in some marked cases (perhaps associated with idiosyncratic morphology). Importantly, these marked cases will also require feature checking against [+interpretable] features so that they can be deleted for LF purposes.

Bearing in mind this reinterpretation of Lasnik's hybrid lexicalist approach to verbal morphology, consider the unacceptable cases of VP ellipsis in (24) and (25) below, for instance.<sup>7</sup> In both (24b) and (25b), the verb in the second conjunct cannot have its ([-interpretable]) tense features checked and so the derivation crashes.

- (24) a. \*John was here and Mary will too.  
 b. \*[[<sub>TP</sub> John [<sub>T</sub> was<sub>PAST.SG</sub>+T<sub>3SG</sub> [<sub>VP</sub> was<sub>PAST.SG</sub> here]]] and [<sub>TP</sub> Mary [<sub>T</sub> will [<sub>VP</sub> was<sub>PAST.SG</sub> here]]] too
- (25) a. \*O João esteve aqui e a Maria também vai.  
*the João was here and the Maria also goes*  
 'João was here and Maria will be here too.'
- b. \*[[<sub>TP</sub> o João [<sub>T</sub> esteve<sub>PAST.3SG</sub>+T<sub>3SG</sub> [<sub>VP</sub> esteve<sub>PAST.3SG</sub> aqui]]] e [<sub>TP</sub> a Maria também [<sub>T</sub> vai [<sub>VP</sub> esteve<sub>PAST.3SG</sub> aqui]]]

The discussion above shows that what is relevant for determining (lack of) identity in ellipsis resolution is not whether or not the verb must move overtly, but whether or not the [-interpretable] features associated with the verb are lexically specified.

7. Under this approach, obligatory movement of *be* and the auxiliary *have* in English must be tied to a property of these elements and not to Infl (i.e. these verbs must be associated with a strong feature; see Hornstein, Nunes & Grohmann, 2005 for relevant discussion). As for Portuguese sentences such as (20a), nothing special need be added, for Infl already has a strong V-feature triggering overt verb movement.



Based on work by Warner (1995), Lightfoot (1999) in fact provides very compelling evidence for such a conclusion. First, he shows that different forms of *be* in Modern English may select different complements, as illustrated in (26)-(28).

- (26) a. Kim **was to** go to Paris.  
 b. \*Kim will **be to** go to Paris.
- (27) a. Kim has **been to** Paris.  
 b. \*Kim **was to** Paris.
- (28) a. I regretted that Kim **was reading** that chapter.  
 b. \*I regretted Kim **being reading** that chapter.

Interestingly, as Lightfoot observes, in earlier stages of English the ungrammatical forms in (26b), (27b), and (28b) were attested, and so were ellipsis constructions that are ungrammatical nowadays, as respectively shown in the examples reproduced in (29) and (30) below. This clearly shows, as Lightfoot points out, that at a time when the forms of *be* were not listed separately in the lexicon with their own selection idiosyncrasies, ellipsis resolution did not treat *be* and main verbs differently.<sup>8</sup>

- (29) a. You will **be to** visit me in prison with a basket of provisions;... 1814 Jane Austen, *Mansfield Park*, ed. by J. Lucas, Oxford University Press, 1970: 122.  
 b. I **was** this morning **to** buy silk. 1762 Oliver Goldsmith, *Cit W*: 158 (meaning 'I went to...', not 'I had to...').  
 c. Two large wax candles were also set on another table, the ladies **being going** to cards. 1762 Daniel Defoe, *The Political History of the Devil*, Talboys, Oxford: 1840: 336.
- (30) a. I wish our opinions **were** the same. But in time they will [**be** the same]. 1816 Jane Austen, *Emma*, ed. by R. W. Chapman, London: OUP, 1933: 471  
 b. And Lady Middleton, is she angry? I cannot suppose that she should [**be** angry]. 1811 Jane Austen, *Sense and Sensibility*, ed. by C. Lamont, London: OUP, 1970: 237.

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8. Of relevance here is also Thompson's (2004) study of speech errors in which the verb and its inflection are separated. She found a distinctive contrast between English and Spanish in this regard. Whereas in English all the attested errors (13 instances) involved a main verb and none involved an auxiliary, in Spanish such errors are attested with both kinds of verbs (15 with main verbs and 5 with auxiliaries). Her conclusion, compatible with the analysis entertained here, is that auxiliaries in English enter the derivation fully inflected, whereas main verbs in English and all the verbs in Spanish enter the derivation as simple stems.

- c. I think, added he, all the Charges attending it, and the Trouble you had, **were** defray'd by my Attorney: I ordered that they should [**be** defrayed]. 1740–1 Samuel Richardson, *Pamela*, London: 3rd edition 1741, vol. 2: 129.

Selection restrictions of the type seen in Modern English are also found in Brazilian Portuguese for the verbs *ser* 'be' and *estar* 'be', as illustrated in (31) and (32) (see Zocca 2003), which supports our claim that their features are inherently specified.

- (31) a. O João **estava para** sair quando a Maria chegou.  
*the João was to leave when the Maria arrived*  
 'João was about to leave when Mary arrived.'
- b. \*O João **estará para** sair quando a Maria chegar.  
*the João be-FUT to leave when the Maria arrives*  
 'João will be about to leave when Mary arrives.'
- (32) a. **Era para** o João fazer isso.  
*was for the João do this*  
 'João was supposed to do this.'
- b. \***Tinha sido para** o João fazer isso.  
*had been for the João do this*  
 'João had been supposed to do this.'

To sum up, English and Portuguese are much more similar than different in what concerns VP ellipsis constructions and this fact can be captured if the morphological inflection on the verb is to be specified in Infl under agreement as in Chomsky's (2001) system.<sup>9</sup> This is arguably the general case, which should be assumed by children acquiring either of these languages in absence of evidence to the contrary. By contrast, marked cases where a given verb is to be lexically associated with inflectional features in addition to the features present in Infl should require positive evidence for their acquisition. The fact that the exceptional cases discussed here involve verbs that are more functional in nature and have very salient morphological idiosyncrasies is consistent with this view.

9. The analysis proposed here can be extended to cases of lack of identity in constructions involving ellipsis of constituents bigger than VP (see the data in fn. 3, for instance) if we assume with Chomsky (2008) that the  $\phi$ -features in T are actually generated in C and transmitted to T in the morphological component, perhaps via affix hopping. Thus, at the derivational step when identity is computed for purposes of ellipsis licensing, mismatching  $\phi$ -features are still in C and TP can be elided.

### 3. Lack of isomorphy in nominal predicates

#### 3.1 Adjectival predicates

The analysis outlined in Section 2.3 can also be extended to apparent lack of isomorphy in ellipsis constructions involving adjectival predicates. Consider the sentences in (33), for instance.

- (33) a. O João é **alto** e a Maria também é. [alta]  
*the João is tall-MASC.SG and the Maria also is tall-FEM.SG*  
 'John is tall and Mary is too.'
- b. O João é **alto** e aqueles meninos  
*the João is tall-MASC.SG and those boys*  
 também são. [altos]  
*also are tall-MASC-PL*  
 'John is tall and those boys are too.'

In (33a) there is a mismatch in gender and in (33b) a mismatch in number between the two conjuncts. Assuming that there is a functional head, say Agr, dominating the adjectival predicates, and that adjectives in general enter the derivation in their bare forms as well, the derivation of the first conjunct in (33) proceeds along the lines of (34) below. Agr probes into the AP and values its [-interpretable]  $\phi$ -features as MASC.SG, as shown in (34a), and *o João* later moves to [Spec, TP], as shown in (34b).<sup>10</sup> Further concatenation between Agr and the adjective may take place overtly via head movement or in the phonological component via morphological merger. Be that as it may, the crucial point here is that the adjectival stem in (34) may license the ellipsis in the second conjuncts of (33) in virtue of being uninflected, as illustrated in (35).<sup>11</sup>

- (34) a. [<sub>AgrP</sub> Agr<sub>MASC.SG</sub> [<sub>AP</sub> alt- o João]]  
 b. [[o João] é [<sub>AgrP</sub> Agr<sub>MASC.SG</sub> [<sub>AP</sub> alt-]]]
- (35) a. [[a Maria] também é [<sub>AgrP</sub> Agr<sub>FEM.SG</sub> [<sub>AP</sub> alt-]]]  
 b. [[aqueles meninos] também são [<sub>AgrP</sub> Agr<sub>MASC.PL</sub> [<sub>AP</sub> alt-]]]

10. Again we will ignore the trace of the moved DP for presentational purposes.

11. The contrast between (15b) and (ib) in fn. 6, on the one hand, and (33), on the other, seems to suggest that in languages like Portuguese, the Stranded Affix Filter only applies to morphemes that are [+interpretable]. We leave a fuller exploration of this idea to another occasion.

3.2 Predicative nouns<sup>12</sup>

In (3)-(6) above, repeated below as (36)-(39), we showed that, in predicative nouns, number differences can be ignored by ellipsis, but gender differences do not behave uniformly.

- (36) a. Mickey is a **mouse**, but Donald and Daisy aren't. [mice]  
 b. Pete and Drew are **children**, but Chris isn't. [a child]
- (37) a. Aquele rapaz é **americano**, mas esses dois não são. [americanos]  
*that guy is American-SG but these two are not American-PL*  
 'That guy is American, but these two aren't.'  
 b. Estes esqueletos são **fósseis**, mas aquele ali não é. [fóssil]  
*these skeletons are fossil-PL but that there not is fossil-SG*  
 'The skeletons are fossilized, but that one over there isn't.'
- (38) a. ?Brad is an **actor** and Angelina is too. [an actress]  
 b. \*Angelina is an **actress** and Brad is too. [an actor]  
 c. \*Dracula is a **count** and Mina is too. [a countess]  
 d. \*Mina is a **countess** and Dracula is too. [a count]
- (39) a. O João é **médico** e a Maria também é. [médica]  
*the João is doctor-MASC and the Maria also is doctor-FEM*  
 'João is a doctor and Mary is, too.'  
 b. A Maria é **médica** e o João também é. [médico]  
*the Maria is doctor-FEM and the João also is doctor-MASC*  
 'Maria is a doctor and João is, too.'  
 c. ?O Paulo é **ator** e a Fernanda também é. [atriz]  
*the Paulo is actor and the Fernanda also is actress*  
 'Paulo is an actor and Fernanda is also an actress.'  
 d. ??A Fernanda é **atriz** e o Paulo também é. [ator]  
*the Fernanda is actress and the Paulo also is actor*  
 'Fernanda is an actress and Paulo is an actor.'  
 e. \*O Drácula é **conde** e a Mina também é. [condessa]  
*the Dracula is count and the Mina also is countess*  
 'Dracula is a count and Mina is a countess.'  
 f. \*A Mina é **condessa** e o Drácula também é. [conde]  
*the Mina is countess and the Dracula also is count*  
 'Mina is a countess and Dracula is a count.'

12. We would like to thank Jonathan Bobaljik for comments and suggestions about the material discussed in this section.

(40) summarizes the properties exhibited by (36)-(39).

- (40) a. Differences in number do not matter, whereas differences in gender sometimes matter (cf. (36)-(37) vs. (38)-(39)).  
 b. Masculine can license feminine in some cases, but not *vice-versa* (cf. (38a)/(39c) vs. (38b)/(39d)).  
 c. In some cases, no difference in gender is allowed at all (cf. (38c-d) and (39e-f)).

Discussing related phenomena within Spanish DPs, as illustrated in (41) below, Depiante & Masullo (2001) propose that in Spanish, gender is an intrinsic feature of the noun, while number is syntactic and heads a functional projection intervening between DP and NP. In other words, nouns enter the numeration bare in number, but inflected in gender. The contrast between (41a-b) and (41c) is taken to show that since number features are acquired in the course of the derivation, the relevant nouns will be identical as far as number is concerned before they acquire such specification. On the other hand, nouns associated with different specification for gender will be morphologically distinct throughout the derivation.

(41) *Spanish*

- a. Juan visitó a sus tíos y Pedro prometió visitar  
*Juan visited to his uncles and Pedro promised visit*  
 al de él.  
*to-the-MASC.SG of his*  
 'Juan visited his uncles and Pedro promised to visit his uncle.'
- b. Juan visitó a su tío y Pedro prometió visitar a  
*Juan visited to his uncle and Pedro promised visit to*  
 los de él.  
*the-MASC.PL of his*  
 'Juan visited his uncle and Pedro promised to visit his uncles.'
- c. \*Juan visitó a su tía y Pedro prometió visitar a  
*Juan visited to his aunt and Pedro promised visit to*  
 la de él.  
*the-FEM.SG of his*  
 'Juan visited his aunt and Pedro promised to visit his aunt.'

Although interesting, this proposal does not account for fine-grained differences in acceptability when gender is involved. In Brazilian Portuguese, contrasts such as (41) are also found with pairs like *tio/tia* 'uncle/aunt', for instance, but not with pairs like *médico/médica* 'doctor-MASC/doctor-FEM', as shown in (42) and (43).

- (42) a. O João visitou os **tios** dele e o Pedro prometeu visitar  
*the João visited the **uncles** of-his and the Pedro promised visit*  
 o dele.  
*the-MASC.SG of-his*  
 ‘João visited his uncles and Pedro promised to visit his uncle.’
- b. \*O João visitou o **tio** dele e o Pedro prometeu visitar  
*the João visited the **uncle** of-his and the Pedro promised visit*  
 a dele.  
*the.FEM.SG of-his*  
 ‘João visited his uncle and Pedro promised to visit his aunt.’
- (43) a. O João visitou os **médicos** dele e o Pedro visitou  
*the João visited the **doctor-MASC-PL** of-his and the Pedro visited*  
 o dele.  
*the.MASC.SG of-his*  
 ‘João visited his doctors and Pedro visited his (male) doctor.’
- b. O João visitou o **médico** dele e o Pedro visitou  
*the João visited the **doctor-MASC.SG** of-his and the Pedro visited*  
 a dele.  
*the.FEM.SG of-his.*  
 ‘João visited his doctors and Pedro visited his (female) doctor.’

Similarly to the contrast between (39a-b) and (39e-f), the alternation *médico/médica* in (43b) is possible, whereas *tio/tia* in (42b) is not. This indicates that purely syntactic accounts are not enough to accommodate this contrast.

Saab (2004) and Kornfeld & Saab (2004) propose a morphological alternative to handle contrasts such as (41). They propose that a sentence such as (41b), for instance, is to be associated with the simplified scheme in (44) below after Spell-Out. When insertion of lexical items is to take place, two possibilities arise. If all the items are inserted, we obtain the sentence in (45) after the relevant operations of fusion and phonological adjustment. It is also possible to skip the insertion of the phonological features of *tíos*, in which case the sentence with ellipsis in (41b) is generated. From this perspective, ellipsis means non-insertion of phonological features and can only happen when there is identity. Since the plural morpheme in (44) can be associated with the determiner, the instances of *tío* in both conjuncts are phonologically identical and the second one can be elided.<sup>13</sup>

13. We refer the reader to Saab (2008:Chap. 3), where these proposals are further elaborated to offer a more explicit account of how phrases are marked for non-insertion.

- (44) Juan visit *past pos-3SG* tío y Pedro promet *past* visitar D  
*Juan visit uncle and Pedro promise visit*  
 tío *PL* de D-3SG  
*uncle of*
- (45) Juan visitó a su tío y Pedro prometió visitar a los tíos de él.  
*Juan visited to his uncle and Pedro promised visit to the uncles of his*  
 ‘Juan visited his uncle and Pedro promised to visit his uncles.’

Again, without further amendments, this proposal is unable to account for why a masculine antecedent can license feminine ellipsis in some cases, but not in others (cf. (39)). Interestingly, the more idiosyncratic the alternation between the masculine and the feminine forms is, the less acceptable the corresponding ellipsis becomes, as illustrated in (46) and (47) with Brazilian Portuguese.

- (46) a. ??O Brad é ator e a Angelina também é. [atriz]  
*the Brad is actor and the Angelina also is actress*  
 ‘Brad is an actor and Angelina is an actress, too.’
- b. \*A Angelina é atriz e o Brad também é. [ator]  
*the Angelina is actress and the Brad also is actor*  
 ‘Angelina is an actress and Brad is an actor, too.’
- (47) a. \*O João já é pai e a Maria também  
*the João already is father and the Maria also*  
 já é. [mãe]  
*already is mother*  
 ‘João is already a father and Maria is already a mother.’
- b. \*A Maria já é mãe e o João também  
*the Maria already is mother and the João also*  
 já é. [pai]  
*already is father*  
 ‘Maria is already a mother and João is already a father.’

Natural gender in different languages seems at first glance to require a two-way distinction, i.e. male and female, as in the pair *lion/lioness* in English. This distinction could be accommodated in a binary feature system as either [ $\pm$ male] or [ $\pm$ female]. There are cases, however, that evoke the need of another category that is not specified for gender. Among the earliest examples pointed out in the literature is Jakobson’s (1932/1984: 2–3) observation that the Russian word *oslíca* ‘she-ass’ indicates the female sex of the animal, whereas the general meaning of the word *osěl* ‘donkey’ contains no indication of the sex of the animal in question. In other

words, the feminine word has a gender mark, say [fem], whereas the masculine word has no gender mark at all.

Taking this observation into consideration, the contrast between (38a) and (38b), for instance, repeated here in (48), can now receive an appropriate account if they are to be analysed along the lines of (49).

- (48) a. ?Brad is an **actor** and Angelina is too. [an **actress**]  
 b. \*Angelina is an **actress** and Brad is too. [an **actor**]
- (49) a. Brad is an [Agr<sub>φ</sub> **act-∅**] and Angelina is too an [Agr<sub>φ</sub> **act-∅**]  
 b. Angelina is an [Agr<sub>φ</sub> **act-FEM**] Brad is too an [Agr<sub>φ</sub> **act-∅**]

In (49), regardless of whether Agr gets valued as [fem] or [∅] when it agrees with the subject, it is semantically compatible with the unmarked specification of *act-∅*. Thus, ellipsis can delete the second *act-∅* in (49a) under identity. By contrast, the [fem] mark in (49b) is only compatible with feminine and cannot be present in the second conjunct. Thus, ellipsis cannot apply (cf. (51b)), as the nominal predicates are not identical.

There are, however, cases in which Jakobson's notion of markedness does not work, such as the classes of nouns referring to family relations or nobility terms.<sup>14</sup> Take the forms *king* and *baron*, for instance, which arguably have a [∅] mark for gender. If they were unmarked for gender, the sentences in (50) should be felicitous in a context where the relevant groups involved kings and queens and barons and baronesses, contrary to fact.

- (50) a. This is a group of kings.  
 b. This is a group of barons.

This suggests that some classes of nouns are lexically specified for gender in a way that is similar to the lexical specification displayed by the verbs *be* and *have* in English and *ser*, *estar*, and *ter* in Brazilian Portuguese, as discussed in Section 2.3. If so, the data in (38c) and (38d), repeated here in (51), can be analyzed along the lines of the structures in (52), which do not license ellipsis as the relevant terms are not identical

- (51) a. \*Dracula is a **count** and Mina is too. [a **countess**]  
 b. \*Mina is a **countess** and Dracula is too. [a **count**]
- (52) a. Dracula is a [**count-MASC**] and Mina is too a [**count-FEM**]  
 b. Mina is a [**count-FEM**] and Dracula is too a [**count-MASC**]

14. Bobaljik and Zocca (to appear) present similar data from Russian, Spanish, English, German, and Portuguese, and in all these languages words for nobility and family relations do not license ellipsis containing the same word with a different gender. Once again, number mismatches do not create problems for ellipsis resolution.



Mary Kato (p.c.) observes that the nouns in the anomalous classes can also be used as vocatives, which might suggest that they behave like proper nouns, which are arguably always marked for gender. A full investigation of the reasons for the different behaviours of different lexical fields, however, would be beyond the scope of this paper. What is important for our analysis here is the observation that mismatches in ellipsis of predicative nouns are more easily tolerated in the case of nouns that can be paired as marked/unmarked for gender than in the case of nouns that seem to be marked in both genders. This observation is compatible with what we proposed in the verbal domain, i.e. that there are items that enter the derivation fully specified and never have bare forms that can license ellipsis before they take their full morphological form.<sup>15</sup>

To summarize, a complete account of the lack of identity in ellipsis constructions involving predicative nouns must rely not only on the different ways number and gender may be encoded, but also incorporate a notion of markedness and lexical specification.

#### 4. Concluding remarks

The investigation of the behaviour of ellipsis in the absence of full identity between the antecedent and the elided elements can provide useful tools for the study of the distribution and computation of lexical features throughout the derivation. For instance, the fact that VP ellipsis works basically in the same way regardless of whether or not the language in question has verb movement to Infl or rich verbal agreement morphology indicates that in the unmarked case, inflectional morphology is not associated with verbs as they enter the derivation. This general conclusion has also been reached when ellipsis constructions involving nominal predicates are concerned. This state of affairs thus supports an approach in which [-interpretable] features are valued in the course of the derivation, as in Chomsky's (2001) system, combined with late insertion of vocabulary items, as proposed, among others, by Halle & Marantz (1993).

#### References

- Bastos, A. C. (2001). *Fazer, eu faço!* Topicalização de Constituintes Verbais em Português Brasileiro. Master's thesis, Universidade Estadual de Campinas.
- Bobaljik, J. (1994). What does adjacency do? *MIT Working Papers in Linguistics*, 22, 1–32.

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15. See Bobaljik & Zocca (to appear) for arguments showing the limitations of a purely syntactic account for the behaviour of gender in nouns.

- Bobaljik, J. & Zocca, C. (to appear). Gender Markedness – The Anatomy of a Counterexample. 2008 draft available at <http://ling.auf.net/lingBuzz/000732>.
- Bošković, Ž. (2007). On the locality and motivation of Move and Agree: An even more minimal theory. *Linguistic Inquiry* 38:589–644.
- Chomsky, N. (1957). *Syntactic Structures*. Mouton, Paris.
- Chomsky, N. (1981). *Lectures on Government and Binding*. Foris, Dordrecht.
- Chomsky, N. (1993). A Minimalist Program for Linguistic Theory. In: *The View from Building 20: Essays in Honor of Sylvain Bromberger* (K. Hale & S. J. Keyser, eds.), pp. 1–29. MIT Press, Cambridge, Mass.
- Chomsky, N. (2001). Derivation by Phase. In: *Ken Hale: A life in language* (M. Kenstowicz, ed.), pp. 1–52. MIT Press, Cambridge, Mass.
- Chomsky, N. (2008). On Phases. In: *Foundational Issues in Linguistic Theory: Essays in Honor of Jean-Roger Vergnaud* (R. Freidin, C. P. Otero & M. L. Zubizarreta, eds.), pp.133–166. MIT Press, Cambridge, Mass.
- Cyrino, S. (1997). *O Objeto Nulo no Português do Brasil: Um Estudo Sintático-Diacrônico*. Editora UEL, Londrina.
- Cyrino, S. & M. G. Matos (2002). VP ellipsis in European and Brazilian Portuguese: A comparative Analysis. *Journal of Portuguese Linguistics* 1:177–195.
- Cyrino, S. & M. G. Matos (2005). Local licensers and recovering in VP ellipsis. *Journal of Portuguese Linguistics* 4:79–112.
- Depiante, M. (2000). The Syntax of Deep and Surface Anaphora: A Study of Null Complement Anaphora and Stripping/Bare Argument Ellipsis. Doctoral dissertation, University of Connecticut.
- Depiante, M. & P. Masullo. (2001). Género y Número en la Elipsis Nominal: Consecuencias para la Hipótesis Lexicalista. Paper presented at I Encuentro de Gramática Generativa, Gral. Roca, 22–24 November 2001.
- Emonds, J. (1978). The Verbal Complex V'-V in French. *Linguistic Inquiry*, 9, 151–175.
- Figueiredo Silva, M. C. (1996). *A Posição Sujeito no Português Brasileiro: Frases Finitas e Infinitivas*. Editora da UNICAMP, Campinas.
- Galves, C. (1994). V-movement, Levels of Representation, and the Structure of S. *Letras de Hoje*, 96, 35–58.
- Halle, M. & A. Marantz (1993). Distributed Morphology and the Pieces of Inflection. In: *The View from Building 20: Essays in honor of Sylvain Bromberger* (K. Hale & S. J. Keyser, eds.), pp. 111–176. MIT Press, Cambridge, Mass.
- Hankamer, J. and I. Sag. (1976). Deep and Surface Anaphora. *Linguistic Inquiry*, 7, 391–428.
- Hornstein, N., J. Nunes, & K. Grohmann (2005). *Understanding Minimalism*. Cambridge University Press, Cambridge.
- Jakobson, R. (1932/1984). Structure of the Russian Verb. In *Russian and Slavic Grammar - Studies 1931–1981* (L. R. Waugh & M., eds.), pp. 1–14. Mouton de Gruyter, Berlin.
- Kato, M. & F. Tarallo (1992). *Sim*: Respondendo Afirmativamente em Português. In: *Linguística Aplicada: da Aplicação da Linguística para uma Linguística Transdisciplinar* (M. de Paschoal & M. Celani, eds.), pp. 259–278. EDUC, São Paulo.
- Kato, M. (2003). Null Objects, Null Resumptives and VP-ellipsis in European and Brazilian Portuguese. In: *Romance Languages and Linguistic Theory* (J. Quer, J. J. Schrotten, M. Scorgetti, P. Sleeman, & E. Verheugd, eds.), pp. 131–154. John Benjamins, Amsterdam/Philadelphia.

- Kornfeld, L. & A. Saab. (2004). Nominal Ellipsis and Morphological Structure in Spanish. In: *Romance Languages and Linguistic Theory 2002* (R. Bok-Bennema, B. Hollebrandse, B. Kamper-Manhe & P. Sleeman, eds.), pp. 183–198. John Benjamins, Amsterdam/Philadelphia.
- Lasnik, H. (1981). Restricting the Theory of Transformations: A Case Study. In: *Explanations in Linguistics* (N. Hornstein & D. Lightfoot, eds.) pp. 152–173. Longman, London.
- Lasnik, H. (1999). Verbal Morphology: *Syntactic Structures* Meets the Minimalist Program. In: *Minimalist Analysis* (H. Lasnik), pp. 97–119. Blackwell, Malden, Mass.
- Lightfoot, D. (1999). *The Development of Language: Acquisition, Change, and Evolution*. Blackwell, Malden, Mass.
- Lightfoot, D. (2006). Cuing a New Grammar. In: *Handbook on the History of English* (A. van Kemenade & B. Los, eds.). Blackwell, Malden, Mass.
- Martins, A.M. (1994). Enclisis, VP-deletion and the nature of Sigma. *Probus* 6:173–205.
- Nunes, J. & C. Zocca (2005). Morphological Identity in Ellipsis. *Leiden Papers in Linguistics*, 2, 29–42. (<http://www.ulcl.leidenuniv.nl/index.php3?m=&c=109>)
- Oku, S. (1998). A Theory of Selection and Reconstruction in the Minimalist Perspective. Doctoral dissertation, University of Connecticut.
- Pesetsky, D. & E. Torrego (2004). The syntax of valuation and the interpretability of features. Ms., MIT and UMass/Boston, Cambridge, Mass. and Boston. <http://web.mit.edu/linguistics/www/bibliography/pesetsky.html>
- Pollock, J.-Y. (1989). Verb Movement, Universal Grammar, and the Structure of IP. *Linguistic Inquiry*, 20, 365–424.
- Saab, A. (2004). El Dominio de la Elipsis Nominal en Español: Identidad Estricta e Inserción Tardía. Master's thesis, Universidad Nacional del Comahue.
- Saab, A. (2008). Hacia una Teoría de Identidad Parcial en la Elipsis. Doctoral dissertation, Universidad de Buenos Aires.
- Thompson, E. (2004). Manipulation of Verbal Inflection in English and Spanish Spontaneous Speech Errors. Ms., Florida International University.
- Warner, A. (1986). Ellipsis Conditions and the Status of the English Copula. *York Papers in Linguistics*, 12, 153–172.
- Warner, A. (1995). Predicting the Progressive Passive: Parametric change within a lexicalist framework. *Language* 71: 533–557.
- Zagona, K. (1988). *Verb Phrase Syntax: A Parametric Study of Spanish and English*. Reidel, Dordrecht.
- Zocca, C. (2003). O que não está lá? Um estudo sobre morfologia flexional em elipses. Master's thesis, Universidade Estadual de Campinas.

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