

ABSTRACT

Title of Dissertation: IMPOVERISHED MORPHOLOGY AND A-MOVEMENT
OUT OF CASE DOMAINS

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This dissertation suggests that referential 3rdP null subjects in Modern Brazilian Portuguese (BP) and Finnish are residues of A-movement, rather than null pronouns.

These grammars exhibit weak 3rdP verbal and possessive agreement morphology, and do not obey the Avoid Pronoun Principle, allowing non-emphatic overt pronouns in subject position. This state of affairs has affected the licensing of referential null subjects, which are licensed only within embedded domains.

I correlate the loss of agreement with this peculiar behavior of null subjects and

advance the hypothesis that BP and Finnish are not pro-drop grammars, arguing on empirical grounds that in BP and Finnish null subject inside the embedded clauses and possessive DPs are residues of A-movement. Putting it boldly, these null subjects are salient copies of their antecedents.

The arguments I present in favor of a movement analysis are: (i) Finnish and BP null subjects have an anaphoric behavior, requiring a sentential antecedent, which is the closest c-commanding DP. (ii) They cannot occur within relative clauses if the head of the relative clause intervenes between them and their antecedents. (iii) They display all the diagnostics used to characterize obligatory control as formed by movement; (iv) They do not occur inside paratactic constructions. (v) Inside coordinated DPs, they must occur in an across-the-board fashion. (vi) Floating quantifiers and participial forms within their c-command domains agree with their antecedents in $\bar{\kappa}$ -features.

Presupposing that in pro-drop languages *pro* is the verbal agreement morpheme (Agr) itself, I suggest in that in BP and Finnish Agr underwent $\bar{\kappa}$ -degradation and was lexically reanalyzed as part of the verb. However, it is hypothesized that in these languages Agr retained a D-feature, and, consequently, it can satisfy the EPP feature of a Case-checking functional projection. As result, in these grammatical systems, a DP can undergo A-movement out of a Case-domain.

IMPOVERISHED MORPHOLOGY AND A-MOVEMENT OUT OF CASE DOMAINS

by

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CHAPTER 1

STATING THE PROBLEM

1.1 The Leading Question

The research projection of this dissertation is an investigation – within the Generative Grammar framework – of sentential and nominal null subjects in two of the so-called *partial pro-drop languages*: Modern Colloquial Brazilian Portuguese (BP, henceforth) and Finnish. In short, what follows is an answer to the question in (1).

- (1) What is the syntactic nature of referential null subjects in BP and Finnish?

The possibility of dropping any pronominal subject is considered to be a manifestation of the pro-drop parameter (see, among others, Chomsky 1981, Rizzi 1982, 1986, Jaeggli and Safir 1989). Thus, Romance grammars like Italian, in which expletives as well as referential subjects can be null (cf. (2)), are taken to be bona fide examples of a positive setting of this parameter.

- (2) a. Piove
rain-3Sg
'It rains'
- b. Ho telefonato
have-3Sg called
'S/he has called'

Partial pro-drop languages also display null expletives, as (3) illustrates.¹ However, in matrix clauses, only 1st and 2nd Person referential null subjects are allowed to be null (cf (4)-(5)).²

- (3) a. Chove (BP)
rain-3Sg
- b. Sataa (Finnish)
rain-3Sg
'It rains'
- (4) a. Falei com o João ontem a noite (BP)
spoke-1Sg with the João yesterday at night
'I spoke with João yesterday night'

¹ The term partial pro-drop has been ambiguously used to characterize two types of grammars: (a) grammars like German where expletive subjects can be omitted, even though referential null subjects cannot; and (b) grammars like BP and Finnish which can drop referential subjects, but only in a restricted set of configurations. In this thesis, putting aside grammars of type (a), I shall employ the term partial pro-drop unambiguously in reference to grammars of type (b), which are also called *semi null subject* languages.

² BP allows only 1stP null subjects in matrix clauses, see chapter 3.

- (5) a. Istun siä (Finnish)
sit-1Sg here
- b. Istut siä
sit-2Sg here
 ‘I/you/ am/are sitting here’

3rdP referential null subjects are licensed only in embedded clauses:

- (6) a. * Embarcou no trem (BP)
boarded -3Sg in.the train
- b. * Nousin junaan (Finnish)
stepped-3Sg train-into
 ‘S/he boarded the train’
- (7) a. Hän₁ kertoi että e_{1/*2} nousin junaan
he-Nom said-3Sg that stepped-3Sg train-into
- b. Ele₁ disse que e_{1/*2} embarcou no trem
he said-3Sg that boarded-3Sg in.the train
 ‘He said that he boarded the train’

Nevertheless the licensing of these subjects is unexpected. In pro-drop grammars (e.g. Italian and Spanish) 3rdP referential null subjects pattern like *pronouns* in being free in

reference. Conversely, in partial pro-drop grammars, 3rdP null subjects behave like *anaphors*, being referentially dependent on a nominal phrase projected within the sentence in which they occur. Thus, as the assigned indexes show, the null subjects in (7) must be interpreted as referring back to the matrix subject.

This anaphoric behavior is also observed in null possessors, i.e., 3rdP null subjects of possessive nominal expressions. The Spanish datum in (8) suggests that in pro-drop languages a null possessor may receive a deictic interpretation, referring to an entity previously mentioned in the discourse. In BP and Finnish, however, this is not possible. As shown in (9), BP and Finnish 3rdP null possessors have an anaphoric behavior, requiring a syntactic antecedent.

- (8) ? Parece que [el padre *e*] se murió ayer
 seem-3Sg that the father SE died yesterday
 ‘It seems that her/his father died yesterday’

- (9) a. [a Julia]₁ lavou [as mãos *e*_{1/*2}] .
 the Julia washed-3Sg the-Pl hands
 ‘Julia washed her hands’
 b. Maija₁ pitää [kirjastansa *e*_{1/*2}]
 Maija-Nom like-3Sg book-Ela-3
 ‘Maija like her book’

In conclusion, the state of affairs is as follows: in pro-drop grammars, nominal or clausal 3rdP referential null subjects are pronominal null categories (*pro*), whereas, in partial pro-drop languages, they are anaphoric. This raises a concern for the pro-drop parameter. Shall we take BP and Finnish to be pro-drop grammars? If the answer is positive, then we need to understand how a fixed parameter can have different outcomes. While a positive setting of the pro-drop parameter in Italian and Spanish opens up the availability of *pronominal* null subjects, in BP and Finnish the fixation of this parameter results in *anaphoric* referential null subjects. On the other hand, analyzing the grammars under consideration as non pro-drop, one needs to explain the data in (4), (5), (7), and (9) and explain the nature of the empty category observed there. At any rate, the question posed in (1) is inevitable, and any theory about the pro-drop nature of BP and Finnish has to be built upon an answer for that question.

1.2 The Answer To Be Provided

Romance pro-drop grammars are known to have rich agreement morphology. This is often analyzed as correlated with the licensing of *pro* (cf. Taraldsen, 1980, Rizzi 1986, Jaeggli and Safir 1989). Interestingly, as discussed in chapters 3 and 6, BP and Finnish display weak agreement morphology inside clauses and nominals. In addition to that, these languages differ from pro-drop languages in that they are insensitive to the *Avoid Pronoun Principle* (cf. Chomsky, 1981), allowing non-emphatic overt subject pronouns. This has led me to hypothesize that we are dealing with **non** pro-drop

languages. Under this hypothesis, however, these languages are expected to ban null subjects altogether. On the other hand, as shown above this expectation fails because 1st and 2nd Person null subjects seem to be licensed matrix clauses, and 3rd Person null subjects inside embedded clauses. However, as the present research shows, these null subjects should not be taken as counterevidence for the proposed hypothesis. First, matrix null subjects result from a topic deletion process, along the lines proposed by Huang (1984), while anaphoric 3rdP null subjects are the result of A-movement. That is, the empty subjects in (7) and (9) are traces of their antecedents. Thence, I answer question (1) by suggesting that the empty subjects in BP and Finnish are residues of movement, rather than genuine instances of *pro*.

Note however that this analysis has two important features. First, it involves movement into theta-positions. Second, it allows A-movement out of Case domains. As discussed in chapter 2, I advocate in favor of a theory that sanctions movement into theta-positions. As for the allowance of A-movement out of Case domains, I suggest that this is related to the fact that the verbal and possessive agreement systems of BP and Finnish are deficient in $\bar{\alpha}$ -features, being able to license null expletives, but not referential null arguments.³

1.3 The Outline of The Thesis

Chapter two is a layout of the theoretical background, focusing mainly on minimalist views of Move, a syntactic operation of the computational system. As will be shown in chapters four and six, the null subjects studied here display all the properties

that are used to characterize obligatory control as movement. Thus, in chapter two, I will introduce these properties vis-à-vis analyses of obligatory control as resultant from movement. I will follow Hornstein's (1999, 2001) NP-movement, and, as consequence, I will commit myself to the following ideas: (a) sideward movement (Nunes 1995, 2004, among others) is applied by the computational system, which also performs (b) movement into theta-positions.

In chapter three, I hypothesize that BP and Finnish are not null subject languages due to their weak verbal agreement morphology. In accordance with this hypothesis, it is suggested that 1st and 2nd Person null subjects in matrix are not genuine null subjects, being rather the result of topic deletion. Moreover, I will revise previous analyses for embedded 3rdP null subjects, paving the way for the movement analysis I will argue for in chapter four.

3rdP referential null subjects inside embedded clauses are the topic of chapter four. Mainly, I will defend the A-movement analysis discussed in 1.1.2, suggesting that BP and Finnish allow this sort of movement because their weak verbal agreement system are still able to license null expletives.

As evidence for movement, I will show the following: (i) the subjects under consideration are anaphoric, requiring a syntactic antecedent (cf. (7)); (ii) their DP is the closest c-commanding DP, in accordance with the Minimal Link Condition, taken to be a condition on movement (cf. Chomsky, 1995). (iii) In BP, these subjects fail the resumption test, being disallowed inside relative clauses. Finnish relative clauses might have 3rdP referential null subjects, but only because the nominal head of the relative

³ The relation between movement and □-defectiveness of agreement has its antecedents in other works; see Boeckx (2003) and references therein.

clause undergoes object shift. (iv) In Finnish and BP, these subjects display all the diagnostics used to characterize obligatory control as the residue of movement; (v) In BP, clauses embedded under the connective *como* cannot host a 3rdP referential null subjects, arguably because these clauses are left branches inside a DP.

The last source of evidence that I discuss is related to the valuation of the gender feature of past participles and floating quantifiers. It will be observed that in Romance non-finite obligatory control configurations, the antecedent of PRO controls the value of the gender feature of a past participle form or of a floating quantifier embedded under the c-command domain of PRO. In BP, the same phenomenon is observed in structures involving a 3rdP referential null subject. As discussed, this follows straightforwardly from a movement analysis.

In the last section of chapter 4, I consider 3rdP referential null subjects inside finite adjunct clauses, suggesting a sideward-movement analysis.

Since the structure of nominal descriptions is less studied than the structure of clauses, I open chapter five discussing this topic. Then, I show that BP and Finnish both display weak possessive agreement morphology; thus, under the hypothesis that loss of morphology ($\bar{\kappa}$ -features degradation) is responsible for loss of referential null subjects, I conclude that the 3rd null possessors found in these languages (cf. (6)) are not genuine null pronominal categories.

In chapter six, I extend the movement analysis proposed in chapter four to the 3rdP null possessors illustrated in (9). As will be shown, these possessors are akin to the null subjects discussed in chapter four, in that: (i) they are anaphoric, requiring a

syntactic antecedent, which is the closest c-commanding DP; (ii) they fail the resumption test, being disallowed inside relative clauses, and (iii) they are obligatory controlled categories.

The last section of the chapter is dedicated to the occurrence of null possessors inside adjuncts and in coordinate structures. Following the analysis proposed in 4.5, these possessors will be analyzed as gaps formed via sideward movement.

In Chapter seven, I summarize of the content the dissertation, provide remarks on its contribution to our understanding of the theory of grammar, and discuss possible ramifications of the movement analysis suggested here.

CHAPTER 2

EXPLORING MOVEMENT

2.1.1 Preliminaries

As already stated, this research seeks an answer to the question in (1):

- (1) What is the syntactic nature of referential null subjects in Brazilian Portuguese and Finnish?

To answer this question, I will make some theoretical commitments that will be introduced in the present chapter.

First, my answer accords to the methodological guidelines of Minimalist Program, the most recent version of the Principles & Parameters model (cf. Chomsky 1993, 1995, 2000, 2001a, 2001b).¹

The Minimalist Program is methodologically devoted to the development of well-designed linguistic theory, where goodness is based upon the notions of elegance, parsimony and simplicity. Thus, a minimalist grammar is a device that employs the

minimum necessary to deliver a pairing of sound & meaning. Therefore, given that sound and meaning are drawn from the interface levels (PF and LF), a particular linguistic expression is just a formal object that satisfies the requirement (bare output conditions) of these interfaces in an optimal way.

The Government-Binding theory was a four-level model, containing, in addition to PF and LF, two representational levels internal to the grammar: D-Structure and S-Structure. D-structure was the level in which lexical properties like subcategorization and thematic relations were satisfied. S-Structure was composed by series of conditions and principles, including principles of the Binding theory, the subadjacency condition, Case theory, etc. D-structure was also the starting point of a derivation, a single structure formed by combination of lexical items in accordance with the X-bar theory (see Chomsky 1970, 1981, 1986a, Jackendoff 1977 and Stowell 1981). Thus, D-structure was the ‘base’, the feeder of the transformational component. Minimalism rejects this four-level model. It dispenses with D- and S-Structure by proposing that derivations are evaluated only by the bare output conditions of the interfaces PF and LF. It also gives up the idea that a derivation starts with a single structure that feeds the transformational component. Rather, it is assumed that derivations are built through a generalized transformation process that might assemble a tree by combining already assembled trees.

The Minimalist Program also departs from the Government-Binding theory in the way that movement is conceived. Inside this program, movement does not apply freely. It is a last resort operation, triggered only by the necessity of checking a feature

¹ For expositions and discussions on the minimalist goals, see Uriagereka (1998), Martin and Uriagereka (2000), Jenkins (2000), Freidin and Vergnaud (2001), Lasnik (2002), among others.

uninterpretable at the interfaces. This new view of movement is the topic of the next section.

Here is the arrangement of the sections: 2.2 presents the Copy theory of movement as proposed in Chomsky (1993, 1995a) and also sideward movement (Nunes 1995, Bobaljik and Brown 1997 and Uriagereka 1998). 2.3 lays out some proposals for copy deletion at PF. The focus is on the role of chains in the process of deletion. 2.4 is dedicated to the presentation of some minimalist proposals that relate obligatory control to movement. A discussion on movement into theta-positions is offered in 2.5, and 2.6 summarizes the theoretical commitments of this dissertation.

2.2 Movement

Given everything we know about natural language, one of its indisputable attributes is displacement: an expression can be pronounced in a position, but interpreted in another. The grammar proposed by Chomsky at the mid of the last century (cf. Chomsky 1957, 1965) captures displacement via grammatical transformations.² Take as an example the passive sentence in (2). (2) and (3) are akin sentences because (2) is derived from (3) by application of the passive transformation in (4). In the model laid out *Syntactic Structure*, grammatical transformations have two parts: a structural analysis (4a) that indicate the type of structure to which the transformation applies, and a structural change (4b) that indicates the type of alteration the target structure will undergo. Therefore, (2) is result of the application of (4) to (3). The structural change in

² See Lasnik (2000) for a review of this theory.

(4b) applies to the structure of (3), changing, among other things, the subject and object positions.

(2) The wine was drunk by the guests

(3) The guests drunk the wine

(4) Passive Transformation (T_p)

a. NP – Aux – V – NP

b. $X_1 - X_2 - X_3 - X_4 \rightarrow X_4 - X_2 + be + en - X_3 - by + X_1$

In the classical Government-Binding theory (cf. Chomsky 1981, 1986a, among others) displacement is taken to be a consequence of move- \square , a rule that constitutes the transformational component, as originally suggested in Chomsky and Lasnik (1977). Move- \square displaces phrasal constituents, leaving co-indexed traces behind. For concreteness, consider the application of move- \square in (5). (5a) is the deep structure of (5b). By application of move- \square , the NP *the man* is moved from the embedded subject position to the subject position of the matrix clause, and a trace co-indexed with *the man* is placed in the base position.

(5) a. [seems [[_{NP} the man] to be sick]]

b. [[_{NP} the man]_i seems [_{t_i} to be sick]]

There are no constraints on Move- $\bar{\alpha}$.³ Constituents move freely, moving any anything to anywhere. Thus, constituents move for no reason, and if the results of their movement do not violate any principle, the outcome derivations are grammatical.

In the Minimalist Program, movement (Move) is taken to be a last resort operation. Its application is legitimate only if it is necessary for convergence. Technically movement is licensed only when it creates a checking configuration, where a feature that is uninterpretable at the interfaces, PF and LF, is checked off. Thus, there is no grammatical derivation in which a constituent is moved for no reason. In other words, vacuous application of Move is not Move for it falls outside the definition of Move, a last resort operation.

The Minimalist program also opposes traces as part of the grammar. Traces as defined by the Government-Binding theory are representational empty categories that are introduced during the course of the derivation as a by-product of movement. Chomsky's (1995a) implementation of the Minimalist Program requires that any structure is constituted only of elements already presented in the lexical items selected from the lexicon (Inclusiveness Condition – Chomsky 1995a: 228). Hence, the notion of traces introduced above is incompatible with this implementation.

³ Lasnik and Saito (1992) defend a more radical version of move- $\bar{\alpha}$, *Affect- $\bar{\alpha}$* which does anything to anything.

2.2.1 The Composition of Movement

Chomsky (1993:202) suggests the copy theory of movement to account for reconstruction effects. According this theory, the launching site of movement is occupied by a copy of the moved expression. This copy is deleted at PF, but remains at LF, providing material for reconstruction.

The introduction of copies into the computational system made feasible a theory in which movement is not a primitive operation, but the interaction of two basic operations: Copy and Merge. Copy doubles a syntactic object by copying all of its features.⁴ The syntactic object thus copied is then merged with the target of movement. Chomsky (1995a: 226) defines Merge as an operation of the computational system that takes two syntactic objects and replaces them by a new combined one, as illustrated in (4)⁵. Note that (6) is not in accordance with the standard X-theory, but with the bare version of the X'-theory proposed in Chomsky (1995a, 1995b), where the distinction between heads and terminal nodes is eliminated.⁶

(6) a. [VP [love Mary]] b. John $\xrightarrow{\text{Merge}}$ c. [VP John [V' [love Mary]]]

⁴ But see Groat and O'Neils (1996) proposal, which is presented in section 2.3.

⁵ (6) illustrates a case of substitution. In cases of adjunction, merge creates a two-segment category (cf. Chomsky 1995a:248).

⁶ This discussion is eliminated because vacuous (non-breaching) is redundant since both the head and the terminal node encode the same featural information. But see Guimarães (2000) for a defense of vacuous projection inside the Minimalist Program.

Another innovation of this framework is the suggestion that Move, contrary to Select and Merge,⁷ has some derivational costs (cf. Chomsky 1995a, 2000). The reasoning of this suggestion is the following: if Select and Merge do not apply, no derivation is generated. Therefore, since economy issues are raised for convergent derivation only, Select and Merge do not fall within the domain of these issues. As for Move, a derivation is generated without its application. The derivation thus formed may not converge, but it is generated. That is, application of Move is to guarantee convergence. Hence, Move is subject to economy considerations. The structure (7) illustrates well the role of economy in constraining Move.

(7) [_{NP} there seems [_{NP} to be [_{NP} a man in the room]

Chomsky (1995a) assumes that, at stage \square , merger of a category into spec of TP is required to satisfy the properties of the infinitival T. Thus, if the numeration contains an expletive, there are two optional ways to fill up the spec of the infinitival TP: (a) merger of the expletive *it*, (b) copy and merger (Move) of the DP *a man*. Both options lead to a convergent route. Hence, application of Move is not necessary for convergence, thereby economy considerations regarding the cost of the derivation blocks movement of the DP *the man*, and *there* is merged in spec of the infinitival TP. At stage \square the numeration has already been exhausted, and the requirements of the matrix T can be satisfied only if

⁷ Select is the operation that takes a lexical item from numeration, reduces its index by 1 and introduces it into the derivation (cf. Chomsky 1995a: 226). A Numeration is defined by Chomsky (1995a: 225) as a set of pairs formed by a lexical item and its index,

Move applies copying and merging the expletive with matrix TP. Thus, since at this stage Merge is not an option, Move is allowed to apply.

Hornstein (2001) also reasons that the compositionality of Move makes its application more expensive than application of Merge. Since Move composed by Merge and Copy, it is arguably the case that application of just Merge is cheaper than application of Merge and Copy.

In conclusion, Merge has preference over Move. This preference is known as the Merge-over-Move Condition (cf. Castillo et al. 1999 and Hornstein 2001). It is worth emphasizing that this condition is an economy metric that applies to convergent derivations. This amounts to saying that Move is allowed to supercede Merge if it is necessary to ensure the convergence.

I will adopt the minimalist framework outlined above. But, for expository purpose, I will use the trace notation when convenient. Thus, henceforth, the term ‘trace’ is to be understood as a shorthand form for ‘silent copies formed by copy-and-deletion.’⁸

2.2.2 Sideward Movement

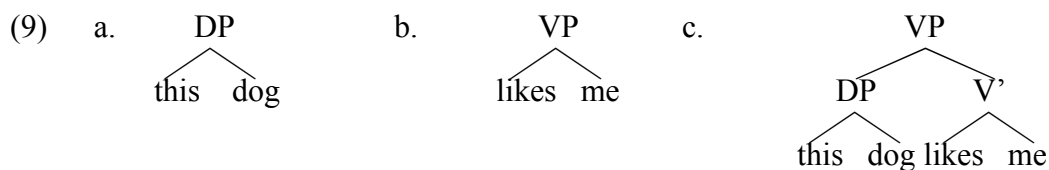
Chomsky (1993,1995) proposes that movement obeys the Extension condition, extending the structure to which it applies. Thus, when movement applies to a phrase marker K, K becomes L, “which includes K as a proper part” (Chomsky 1995: 190). However, head movement, an adjunct process, violates the extension condition in that it

⁸ On deletion of copies, see 2.3.

does not extend the target phrase marker. This result forced Chomsky to propose a weak version of the extension condition, which holds only for substitution operations.⁹

Yet, Nunes (1995), Bobaljik and Brown (1997), exploring an idea originally developed by Juan Uriagereka in the early nineties (cf. Uriagereka 1993), argued that head adjunction are in accordance with the Extension Condition in a system that allows sideward movement.¹⁰ Their line of reasoning is the following: The VP in (8) conforms to Extension, if its derivation unfolds as shown in (9). The DP *this dog* (9a) and the VP *likes me* (9b) are first built in different sub-structures. After that, the DP merges with (9b), forming the VP in (9c).

(8) [VP this dog [V' likes me]]

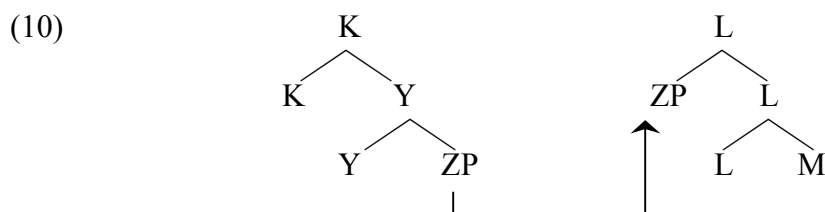


Therefore, a derivation might proceed by building parallel structures (9a,b) and storing them in the derivational workspace. Nunes (1995), Bobaljik and Brown (1997) claim that availability of such derivational process makes viable a theory in which transformational operations affect parallel structures. Thus, sideward movement is a possibility to be tested.

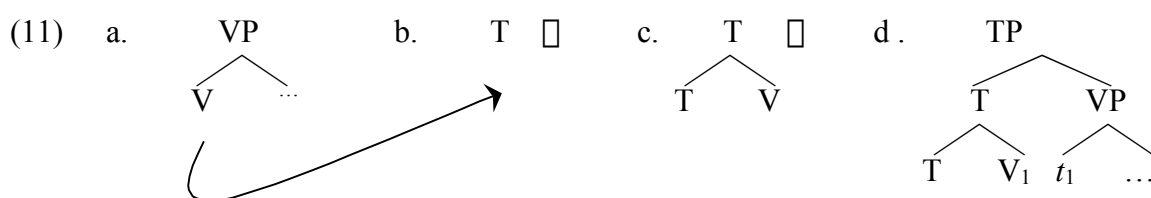
⁹ For a discussion on Extension, see Kitahara (1995).

¹⁰ This type of movement has received many names: Nunes named it sideways movement, Bobaljik and Brown proposed the term interarboreal movement, and in Uriagereka (1998) it is called parallel movement.

Sideward movement proceeds as shown in (10). A constituent (ZP) of the sub-structure K is copied and merged with the sub-structure L. Note that movement of ZP extends the structure of L as required by the Extension Condition.



Head movement is carried on in the same way, as (11), a case of V-to-T movement, exemplifies. First, the VP is built (11a). T is selected and placed in the derivational workspace as a separate sub-structure (11b). Next, the verb undergoes sideways movement and adjoins to T, forming the complex head in (11c). Finally the complex head T merges with the VP, forming the TP in (11d):



The sideways movement of V to T enlarges the structure of T, as shown in (10c). Thus, likewise movement of maximal categories (substitution), movement of heads (adjunction) also obeys the Extension Condition.

Nunes (1995, 2004) extends the application of sideways movement to

John, i.e., the copy in spec of TP, is pronounced, the lower copy is silent. Chomsky (1993, 1995a) proposes that this is the case because copies are subject to deletion at PF. But the question is why does deletion target the lower copies?

(14) [TP John₁ [T' was [VP seen John₁]]]

Nunes (op. cit.) addresses the deletion issue by arguing that chains are subject to linearization at PF. Elimination of all members of chain but one is forced by the LCA (Linear Correspondence Axiom – Kayne 1994), which maps the terminals of a phrase marker into a linear order.¹² Thence, Chains have to have their members reduced to one because a linear order is asymmetric (if α precedes β , β does not precede α) and irreflexive (if α precedes β , $\alpha \neq \beta$). Chain reduction (15) is taken to be an operation responsible for deletion of the links of a chain.

(15) *Chain Reduction* (Nunes, 1995)

Delete the minimal number of constituents of a nontrivial chain CH which suffices for CH to be mapped into a linear order in accordance with the LCA.

Following this proposal, in (14), linearization prevents the phonetic realization of the two members of the chain formed by the movement of *John*. Thus, one of these members is

¹² The definition of the LCA is given in (i).

(i) Let X, Y be nonterminals and x, y terminals such X dominates x and Y dominates y. Then if X asymmetrically c-commands Y, x precedes y.
(Kayne, 1994:33)

deleted in accordance with Chain Reduction. But still the question is why has it to be the lower one? Nunes suggests that uninterpretable features that reach PF are eliminated at that level by an operation called Formal Feature (FF)-Elimination. Furthermore, the links of non-trivial chains are not identical because a feature checked in the head of the chain remains unchecked in the tail.¹³ Therefore, economy considerations regarding application of FF-elimination, dictates that deletion of the tail is the optimal choice.

Like Nunes, Groat and O' Neil (1996) also assume the operation Form Chain. However, they depart from Nunes in proposing that "forming a chain results in copying all syntactic features of the category moved, but does not copy the category's phonological matrix. It either moves it to the new position or fails to move it." (cf. 1996: 127). Thus, Copy is instructed to copy all but the phonological features of a category. Hence, only one link of a given chain contains phonological features. It is proposed that the computational system decides which link will carry the phonological features based on the principles in (16).

- (16) a. Strong features may be checked only in a checking relation with a node specified for phonological features
- b. Moving phonological features to the head of a chain is more costly than leaving them in the tail of the chain
- (Groat and O' Neil, 1996:124)

¹³ Note that this is contrary to Chomsky's (1995a) assumption that if a link of chain checks a feature then all links of that chain have that feature checked.

Accordingly, in (15) movement of *John* to spec of TP is to check a strong feature. Thus, in accordance to (16a), the phonological features of *John* are moved.

In this model, all movement, including ‘covert movement’ occurs before spell-out. Thus, the principle in (16b) substitutes for the Procrastinate Principle proposed by Chomsky (1995). All non-trivial chains are formed before spell-out and the upper link is pronounced only if the feature being checked is a strong one.

Hornstein (1998, 2001) questions the assumption that chains are syntactic objects.¹⁴ He observes that Nunes’ proposal for copy deletion is redundant. If there is no choice in terms of which copies survives deletion, then the deletion process does not piggyback on chains, but on the features of members of the chain. Hence, beside Nunes’ stipulation that deletion targets chains, chains seem to play no role on the deletion process. In addition, Hornstein points out that there is a technical argument for eliminating chains. In a strong reading of the Inclusiveness Condition (cf. Chomsky, 1995a:228), chains cannot be syntactic objects because they are neither lexical objects nor rearrangements of lexical items.

In Hornstein’s (2001) proposal, it is not chains that are linearized, but the lexical array, i. e. the array of items selected from the lexicon. All the items present in the initial lexical array have to be mapped into a unique linear order at PF. Therefore, since a linear order is asymmetric and irreflexive, copies have to be reduced to one before the mapping.

Another feature of Hornstein’s theory is that deletion applies deterministically. Copies with unchecked uninterpretable features have to be eliminated at PF, otherwise the derivation crashes at this level. Therefore, since movement creates a configuration in

¹⁴ See also Epstein and Seely (1999) and Kiguchi (2002).

which uninterpretable features are checked, it is arguably the case that the highest link of a chain is free of uninterpretable features, whereas the lower links are not. That's why lower copies are the targets of deletion. To see how this proposal works, consider the passive sentence in (14) again. (14) is repeated here as (17b) and (17a) is the lexical array from which the (17b) is built.

- (17) a. {John, was, T, seen}
 b. [_{CP}[_{TP} John_i [_{T'} was [_{VP} seen John_i]]]]

If all the items present in the lexical array in (17a) are to be mapped into a linear order, in (17b) one and only one copy of *John* should not be deleted. The lower copy has an uninterpretable Case feature, which has been checked in the higher copy. Hence, the lower copy is the target of deletion because its presence leads the derivation to crash at PF. Consequently, only the copy of *John* in spec of TP is mapped into the linear order.

My account for Brazilian Portuguese and Finnish null subjects does not require chains to be part of the computational system. Hence, I will follow Hornstein's approach of copy deletion. However, it is right to mention that in principle my analysis is compatible with any of the proposals mentioned here.

2.4 Obligatory Control: Movement

Control configurations has been the topic of many debates. For instance, Chomsky and Lasnik (1977) and Chomsky (1977, 1981, 1986a), among others, propose that non-nominal complements of control verbs are sentences (cf. (18a). Chierchia (1984) and Dowty (1985), among others, suggest a different analysis; for them the complement of a control verb is a bare VP as illustrated in (18b).

- (18) a. [John hopes [_S to win the game]
 b. [John hopes [_{VP} to win the game]

The standard Government-Binding theory (cf. Chomsky 1981, 1986a) assumes the sentential analysis in (18a), and assumes that the subject position of the embedded clause is occupied by an empty category. The Government-Binding reasons for postulating an empty category in (18a) is the following: (18) contains two verbs (*hope* and *win*) that assign an external $\bar{\alpha}$ -role. Since $\bar{\alpha}$ -roles are assigned at D-Structure, in (18) *John* is lexically inserted as the external argument of *hope* and an empty category as the external argument of *win*. This alleged empty category was analyzed as being PRO, a [+anaphor, +pronominal] null lexical item that does not have a governing category and receives a null case as proposed by Chomsky and Lasnik (1993).¹⁵ Therefore, the structure underlying (18a) is the one in (19):

¹⁵ But, see Koster (1984), who argues that in Dutch PRO is governed by the matrix verb, Manzini (1983), for whom PRO lacks Case and Zwart (1988) and San Martin (2002), who suggest that PRO receives a nominative Case.

(19) [John tried [_S PRO to dance]]

Since PRO is anaphoric, it does not have an inherent reference. Thus, its referent is either free (arbitrary) or determined by its antecedent (e.g. by *John* in (19)). Inside the Government and Binding model, coreference between PRO and its antecedent result from application of the Index rule, a construal rule responsible for indexing one expression to another (cf. Chomsky 1981, 1986a).¹⁶ In (19), for instance, PRO and *John* have the same referent they share the same same index.

In sum, the Government and Binding assumption that theta-positions are filled at D-structure led to an analysis of obligatory control according to which the subject of the infinitival embedded clause is a [+anaphoric, + pronominal] category, which is co-indexed with a NP by a construal rule of indexation.

In what follows I present three minimalist approaches of obligatory control that dispense with the construal rule of indexation by suggesting that obligatory control is the result of movement.¹⁷

¹⁶ On coreference, see also Lasnik (1976).

¹⁷ Since I am focusing on Movement, I will leave aside Landau's (1999, 2000) proposal, according to which obligatory control is an instance of Agree (cf. Chomsky 2000). Landau observes there are two types of obligatory control: exhaustive control involving implicative, aspectual or modal verbs, and Partial control involving factive, propositional, desiderative or interrogative verbs. In cases of exhaustive obligatory control, the functional category F that Agrees with the controller (T^0 in subject control and v^0 in object control) also agree with PRO, as shown in (i). In Partial Control, the embedded T^0 is tensed and moves to C^0 , blocking, thus, Agree between a higher Functional category and PRO.

(i) [... F ... DP ... [_{CP} [_{IP} PRO T-Agr [_{VP} T_{PRO}]]]]

The diagram illustrates the Agree relations in the structure [... F ... DP ... [_{CP} [_{IP} PRO T-Agr [_{VP} T_{PRO}]]]]. A horizontal line is drawn above the 'F' and 'DP' elements. An arrow labeled 'Agree' points from 'F' to 'DP'. Another arrow labeled 'Agree' points from 'F' to 'PRO' in the embedded clause.

For a discussion of Landau's proposal, see Hornstein (2003), see also Barrie (2004) for an analysis of partial control under movement.

2.4.1 PRO Climbing at LF

Martin (1996) accepts the premise that the subject of an infinitival complement of a control predicate is PRO and assumes that PRO receives a null Case. He ties the latter assumption to the fact that, in control configurations, the event of the infinitival clause is disjoint temporally from the event denoted by the matrix clause.¹⁸ Following Stowell (1982), he takes this temporal dissociation to mean that the non-finite T embedded under a control predicate is [+tense], and proposes that a [+Tense, - Finite] T checks null Case.

The novelty of Martin's proposal is the unification of obligatory control and clitic climbing.¹⁹ PRO is taken to be an anaphoric clitic similar to the reflexive impersonal clitic SE/SI found in the Romance languages (cf. (20)).²⁰ Both PRO and SE/SI are understood to be morphologically weak.

- (20) Se levanto (a si mismo) (Spanish – Martin 1996:132)
 Se raised-3Sg to the same
 ‘He raised himself’

Building on Uriagereka (1995), Martin suggests that, due to its morphological weakness, SE/SI overtly adjoins to T, winding up in the same checking domain as the subject. If the feature content of SE is not rich enough to distinguish SE from the subject,

¹⁸ This fact was originally observed by Stowell (1981, 1982).

¹⁹ On clitic climbing, v. Kayne (1989), Roberts (1997), Lightfoot and Rodrigues (2003), among others.

²⁰ Martin presents a series of arguments showing that obligatory control and clitic climbing have the same syntactic behavior. However, it is important to notice that these two phenomena do not behave alike with respect to adjuncts. While obligatory Control is not sensitive to the island-hood of adjunct clauses, clitic climbing is.

the chain formed by SE collapse with the subject's chains, forming a single chain with two $\bar{\alpha}$ -roles.²¹ Thus, the LF structure of (20) is (21):

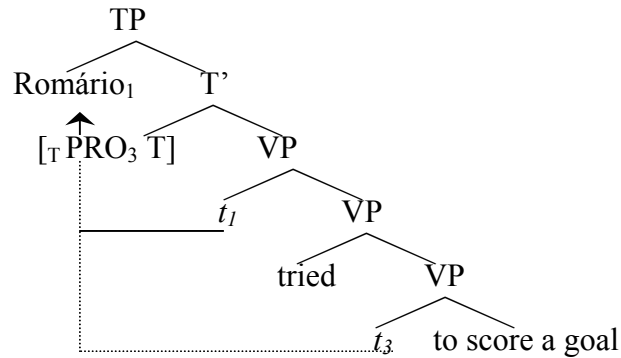
$$(21) \quad [_{TP} \text{pro}_1 [_{T'} [_{T'} \text{se}_3, [_{T'} V_2, T]] [_{VP} t_1 [_{V'} t_2 t_3]]]]$$

In obligatory control configurations, the same happens to PRO at LF. PRO adjoins to the matrix T and since its features are impoverished, PRO's chain fuses with the matrix subject's chains, thus forming a super chain with multiple $\bar{\alpha}$ -roles.²²

The structure in (22b) illustrates Martins' proposal.²³ (The dotted lines represent covert movement.)

(22) a. Romário tried to score a goal

b.



²¹ This author assumes (I) as a condition on chain fusion, as proposed in Uriagereka (1995):

(i) *Chain Fusion Situation*

Where $\bar{\alpha}$ and $\bar{\beta}$ are different Chains, if $\bar{\alpha}$'s head is non-distinct from $\bar{\beta}$'s head within a given checking domain (containing within the same X^{0MAX}), and the tail of $\bar{\alpha}$ -commands the tail of $\bar{\beta}$, then $\bar{\alpha}$ and $\bar{\beta}$ can fuse into an integrated Chain $\bar{\gamma}$ subsuming the properties of $\bar{\alpha}$ and $\bar{\beta}$.

²² San Martin (2002) develops a similar analysis.

²³ Here I am simplifying Martin's proposal. Following Uriagereka (1988, 1995), he assumes that SE/SI and PRO have the following internal structure:

(i) $[_{DP} [_{D'} [_{D'} \text{PRO/SE}] [_{NP} \text{pro}]]]$

In conclusion, Martin's proposal can be summarized in the following way: It holds the Government-Binding biuniqueness condition on the assignment of θ -roles and assumes that PRO is inserted as the external argument of the embedded predicate. However, it dispenses with the construal rule of indexing by proposing that PRO adjoins to the matrix T at LF, and, as a consequence, its chain is collapsed with its antecedent's chain, forming a single chain.

2.4.2 Feature Movement

Manzini and Roussou's (2000) account for obligatory control departs from standard assumptions on movement, for it is argued that there is no A-movement for categories. Arguments are base generated in their spell-out positions. Subjects are lexically inserted in spec of finite Ts in order to lexicalize a D-feature of T. Non-finite Ts do not have a D-feature, hence they do not trigger lexical insertion of a DP.

These authors argue that this proposal provides a neat explanation for (a) lack of reconstruction in argumental sites; (b) the fact that empty categories in A-positions do not block phonological process, as such as contraction and (c) obligatory control.²⁴ In (23), for instance, it is explained that *them* cannot bind *each other* because reconstruction inside the infinitival clause is impossible given that *each other* is base generated in the spec of matrix clause.

²⁴ Though the authors did not comment on the issue, it is worth noticing that their proposal leaves open questions about sentential idioms embedded under raising predicates (cf (i)). Manzini and Roussou's idea that raising subjects are base generated in their surface position is incompatible with the assumption that idioms are confined to certain syntactic domains. For instance, Marantz (1997) proposes that idiomatic readings are confined to the domain of little v.

(i) a. The shit seems to have hit the fan

(23) [TP each other [seem to them [to work]]]

In (24), taken to be a raising construction, the phonological rule of contraction can apply because *have* and *to* are structurally adjacent to each other. That is, there is no trace (copy) of *I* between *have* and *to* because *I* is base-generated in its surface position.

(24) I hafta leave

To explain how a subject is thematically marked by a verb without being part of the VP-shell, Manzini and Roussou propose a generalized F-attraction operation.²⁵ From its surface position, a DP attracts all the predicates in its scope.²⁶ Manzini and Roussou define attraction as an operation that forms an order pair of elements. In (24), for instance, when *I* attracts the predicate *leave*, the pair (*I*, *leave*) is formed.

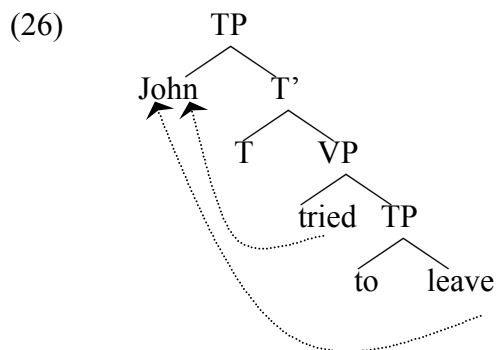
In obligatory control configuration in (25), there is not an empty category inside the embedded clause. The DP *John* is lexically inserted as the spec of the matrix TP and attracts both the matrix and embedded predicate, as shown in (26).

(25) John tried to leave

b. All hell seems to have broken loose

²⁵ On attraction, see Chomsky (1995a).

²⁶ However, it is unclear which feature of a predicate is attracted.



In a nutshell: Manzini and Roussou offer a theory of A-movement whereby only F-movement is involved. In obligatory control configurations, a DP lexically inserted in the spec of the matrix finite TP attracts all the predicates in its scope.

2.4.3 Overt NP Movement

The raising analysis of (27) has been accepted without controversies (see, for instance, the arguments given by Burzio 1981). The DP *Ira* receives its \square -role inside the infinitival clause and then moves to the spec of the matrix TP, where it receives/ checks a Case feature.

(27) *Ira seems to be playing his harmonica*

The Government-Binding theory did not extend this analysis to cases of obligatory control because control verbs theta-mark their external arguments. Hence, in (28) the spec of the matrix VP has to be filled at D-Structure. Consequently, *Ira* could not

have been base generated inside the embedded domain and then moved to the matrix clause.

(27) Ira tried to play his harmonica

The main trend of the Minimalism dispensed with D-structure, but kept the ban on movement into theta-positions (cf. 2.5). Therefore, it grants the difference between (27) and (28).

This minimalist view is disputed by Hornstein (1999, 2000), who argues against the ban on movement into theta-positions proposing that \square -roles are features on verbs and that there is no upper bound on the number of \square -roles an argument can have. Thus, for this author, obligatory control and raising analysis are alike structures in that both of them involve overt A-movement out of infinitival clauses.²⁷

To see how this proposal works for obligatory control, consider the derivation sketched in (29). The DP *Ira* started the derivation in the spec of the embedded VP, where it checks the external \square -role of *play*. Then it moves to the spec of infinitival TP arguably to check the EPP feature of T. After that, the matrix verb *tried* is merged with the embedded clause and a copy of *Ira* is made and merged with the matrix VP, checking the \square -role of *tried*. When the matrix TP is built, *Paul* moves to spec of TP, where it has its Case feature checked.

(29) [TP Ira₁ [VP *t_I* [V' tried [TP *t₁* to [VP *t₁* [V' play his harmonica]

²⁷ O' Neil (1995) also defends a movement analysis.

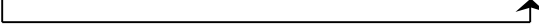
Notice that, according to this proposal, obligatory control differs from raising only in that in the DP under movement visits the spec of the matrix VP in latter type of construction, not in the former. This difference is due to the fact that control verbs assign an external \square -role, whereas raising verbs do not.

Hornstein claims that his analysis provides a straightforward explanation for the obligatory control properties observed by Williams (1980). A controlled PRO must have an antecedent (cf. (30a) because it is the residue of movement. The antecedent is the closest c-commanding DP (cf. (30b) because movement is to the closest c-commanding position. Split antecedents are not allowed (30c) because movement cannot target more than one position at a time. PRO requires a sloppy reading (30d) because it is a trace. A *de se* interpretation (30e) is forced because antecedent saturates more than one argumental position forming then a semantic compound monadic predicate. In addition, when the antecedent has the format *only-NP*, the whole phrase, not the contained NP, is the antecedent because movement is to a c-commanding position.

- (30)
- a. It was expected PRO to shave himself
 - b. John₁ said [Paul₂'s bother]₃ expects PRO_{*1/*2/3} to shave himself
 - c. John₁ told Mary₂ to PRO_{*1+2} leave together
 - d. John expected PRO to win and Bill does too (= Bill win)
 - e. The unfortunate expects PRO to get the medal
 - f. Only Churchill remembers PRO giving the BST speech

To account for the licensing of control inside non-finite adjunct clauses, Hornstein's analysis relies on sideways movement (cf. section 2.2.2). Thus, (31) is derived as shown in (32). The non-finite clause and the matrix VP are built as parallel structures. The DP *John* starts the derivation inside the gerundive clause, where it checks the $\bar{\lambda}$ -role of *leaving* and EPP feature of the non-finite T, and undergoes sideways movement to the spec of the matrix VP, where it checks the $\bar{\lambda}$ -role of *saw*. When the matrix VP is complete, the gerundive clause adjoins to VP, forming a VP with two-segments.²⁸ In the final stage of the derivation, John moves to the spec of matrix TP to check its Case feature and the EPP feature of T.

(31) John saw Mary before leaving the party

(32) a. [before [TP t_1 [VP t [V' leaving the party]]]] b. [VP John [V' saw Mary]]

 b. [TP John_i [T' [VP [VP t_1 [V' saw Mary]] [before [TP t_1 [VP t [V' leaving the party]]]]]]]

In sum, Hornstein's proposes that obligatory controlled PRO is a residue of category movement. This analysis dispenses with the assumption that PRO receives a special Case (null Case) and also dispenses with the construal rule of indexing. PRO is just a silent copy of this antecedent.²⁹

²⁸ For a discussion on the island behavior of adjuncts, see section 4.4.

²⁹ Hornstein's movement analysis has been extended to other domains of the grammar (cf. Grohmann 2003, Hornstein 2001 and Kiguchi 2002) and explored crosslinguistically. See, for example, Aoshima (2000) and

As I will show in chapter 4, 3rdPerson referential null subjects in BP and Finnish display all the obligatory control properties listed in (30). I account for this fact by proposing a movement analysis along the lines suggested by Hornstein (*op. cit.*). That is, I suggest that these null subjects are traces of their antecedents.

Since I am assuming a movement analysis of obligatory control, I am theoretically committed to sideward movement and movement into theta-positions. Therefore, for the completeness of this dissertation, the next section provides a detailed discussion on movement into theta-positions.

2.5 Movement into Theta-Positions

One of the questions that have recently gained some importance in the discussion about the best theory for the language faculty is the one in (33), and at least three different answers have already been offered.

(33) How do \square -roles behave in syntax?

Jackendoff has consistently argued that \square -roles are just a convenient way to describe particular configurations at the level of conceptual structure, an autonomous level with its own set of formation rules to generate well-formed objects (*cf.* Jackendoff

Matsuya (2000) for control in infinitival and gerundive clauses in Japanese, Pires (2000) for control and inflected infinitives in Portuguese, Ferreira (2000) and Rodrigues (2000, 2002) for an analysis of thematic null subjects in Brazilian Portuguese, Hornstein and San Martin (2000) for obviation effects in Basque, and Hornstein and Motomura (2002) for Object/Experiencer psych predicates in English and Japanese.

1983, 1990 and 1997).³⁰ Thus, I think that it is fair to say that in his view questions about the syntactic behavior of \square -roles (i.e. (33)) are simply ill-formed given that he takes \square -roles to be terminological conveniences.

In their theory of verbal decomposition, Hale and Keyser (1993, 1998, 2002) defend \square -roles as syntactic configurations. That is, they take \square -roles to be part of semantic relations that are defined over structural relations, configurations formed by the lexical categories (V, N, P, A) and their projections.³¹ Hence, for them, \square -roles behaves syntactically insofar as configurations are defined in syntactic terms.³²

The main trend of the Principle & Parameters approach, mainly Chomsky's proposals, does not deny the syntactic import of \square -roles. However, it is claimed that \square -roles have a special status inside the computational system in the sense that they are assigned in a stage of the derivation in which all the objects involved in the assignment have not yet being manipulated by transformational operations. Chomsky (1995b) mixes this view with the configurational view of Hale and Keyser, suggesting that thematic relations are configurations formed by non-transformed objects.

This special syntactic status of \square -roles is disputed by Boskovic (1994), who argues that moved objects, or chains, are perfectly able to saturate thematic positions.

³⁰ Jackendoff understands the grammar as having three independent levels: Phonology, Syntax (which corresponds to Chomsky's notion of broad syntax) and conceptual structure. These levels are connected by correspondence rules, and syntax is connected to conceptual structure via projection rules. I will not discuss Jackendoff's proposal any further because it poses deep questions about properties of the Conceptual–Intentional (C-I) interface, which lie far beyond the scope of this thesis.

³¹ These structural relations are the so-called argument structure, and they are formed in the lexicon (*l-syntax* in Hale and Keyser's terminology).

³² I refrain from going into details here, but for arguments against the configurational view of \square -roles, see Boeckx (1998). See also Kuroda (1999) who, working on head-internal relative clauses in Japanese, claims that \square -role assignment, being blind to syntactic barriers, does not require government. That is, \square -roles do not need to be assigned locally


Boskovic and Takahashi (1998), in their account of scrambling in Japanese, raise the possibility of treating $\bar{\lambda}$ -roles in a simpler way: as syntactic features.

As shown in the last section, Hornstein (1999, 2001) also take $\bar{\lambda}$ -roles to be features. For them, $\bar{\lambda}$ -roles are syntactic features in the sense that they are able to trigger movement. His argument is that the featural view makes feasible a minimalist movement analysis of obligatory control, eliminating the Government-Binding assumption that there is construal rule of indexing, and also avoiding certain complications related to the distribution of PRO, mainly the necessity of null Case.

On his account for pseudogapping (34a), Lasnik (1999a) also assumes $\bar{\lambda}$ -roles to be features. He proposes that these gaps are the result of VP deletion at PF according to the derivation sketched in (34b). The verb *dated* has a strong $\bar{\lambda}$ -feature that must be checked against the external argument prior to spell-out in order to avoid PF crash. But, since the external argument is base generated in the spec of the upper V and *dated* does not move from inside the inner VP, the derivation reaches PF with an unchecked strong feature on *dated*. Thus, to salvage the derivation at PF, deletion is applied to what remained inside VP, eliminating the offensive $\bar{\lambda}$ -feature.³³

- (34) a. Mary hasn't dated Bill, but she has Harry

³³ He follows Koizumi's (1993) split VP hypothesis.

- b. [...[A_{grs}P she₂ [A_{grs}' [TP has [VP t₂ [V' [A_{gro}P harry₁ [A_{gro}' [~~VP~~ dated ~~t₁~~]]]]]]]]]]]

[strong □-feature]

Working on the lack of reconstruction in argumental positions, Lasnik (2003) shows that treating □-roles as features has the advantage of allowing elimination of argumental traces (A-traces) from the Movement theory. A-traces serve the purpose of giving instructions to the C-I interface about the thematic relations created during the derivation. Hence, if a □-role is checked by an NP, that NP carries the information related to that □-role throughout the derivation. Therefore, given that the NP itself contains the thematic information required by the interface, there is no need for leaving a trace in the thematic position, if later on the NP moves to an A-position. If there are no A-traces, the fact that there is no reconstruction in argumental sites follows without further assumptions.

Taking into consideration the debate presented so far, the goal of this section is twofold. The first goal (section 2.5.1) is to offer a discussion of the theoretical motivations within Chomsky's proposals for imposing a restriction on the type of objects that are eligible to participate in thematic relations. The purpose of this discussion is to show that this restriction hinges on assumptions and stipulations for which the conceptual motivations are not firm. The second goal (section 2.5.2) is to present some empirical evidence that for movement into thematic positions. The conclusion to be offered is that, no matter how we understand the syntactic behavior of □-roles, either as configurations or as features, the mainstream of Principle & Parameters approach needs revision with

respect to its prohibition against movement into theta-positions.

2.5.1 The Ban on Movement into Theta-Positions

On *Lectures on Government and Binding* (Chomsky 1981), the Theta-Criterion is proposed as a condition of adequacy at the level of D-Structure:³⁴

(35) *Theta-Criterion* (Chomsky 1981:36)

Each argument bears one and only one θ -role and each
 θ -role is assigned to one and only one argument.

However, the Theta-Criterion is too strong. As noticed by Chomsky (1981, 1986a), in sentences involving secondary predication, an argument receives more than one θ -role.³⁵ In (36), for instance, *Mary* receives one θ -role from *left* and a second one from *sad*.

(36) Mary left sad

Thus, to avoid problems with constructions like (36), Chomsky proposes that the Theta-Criterion is built into the system as a property of chains:

³⁴ It is assumed that this criterion also holds at S-Structure and LF. In (1981, chapter 6), as well as in (1982), Chomsky formulates (35) in terms of chains.

³⁵ For other arguments against having the Theta-Criterion at the D-Structure, see Boskovic (1994) and references therein.

(37) *Chain Condition* (Chomsky 1986a: 137)

If $C = (\sigma_1, \dots, \sigma_n)$ is a maximal CHAIN, then σ_n occupies its unique σ -position and σ_1 its unique Case-marked position.³⁶

According to (37), there is nothing wrong with an argument receiving more than one σ -role, as long as it does not involve movement into a theta-position.

To derive the correct thematic relations of (36) without movement from one theta-position to the other, one could argue in favor of using an analysis similar to that proposed by Williams (1994), among others, in which the adjective phrase adjoins to the VP, forming a complex predicate that discharges two σ -roles to the subject. A small clause account, along the lines proposed by (Chomsky 1981) and Stowell (1983) could also be defended, taking the adjective phrase to be a small clause containing an empty category PRO. Though I will defer the discussion of these two possibilities to section 2.1,³⁷ note that if the small clause account is adopted, (36) is no longer a reason for formulating the Theta-Criterion in terms of Chain Condition. If there is a PRO in the structure of (36), (35) is obeyed: PRO is assigned the σ -role from *sad* and *John* the σ -role from *left*.

In the Minimalist Program, D-Structure is abandoned and, as a consequence, the Theta-Criterion lost its primary role, and the operation *satisfy* (selection of an array from lexicon and formation of a structure in accordance with the X-bar theory before Transformation) is also dispensed with. Therefore, lexical insertion/pure merge can intermingle with movement/second merge. But, despite this shift in the theoretical

³⁶ CHAINS are defined to include chains and also expletive-associate pairs (cf. 1986a:132).

perspectives, the incompatibility between \bar{A} -role assignment and transformed objects is nevertheless part of the theory in the minimalist framework proposed by Chomsky: theta-positions are not to be filled via movement.

In Chomsky (1993) and (1995a), an LF version of the Theta-Criterion is not adopted, and the Chain Condition is not mentioned as the way to ensure the prohibition against movement into theta-positions. The suggestion there is that this prohibition is derived from economy considerations, mainly by the Last Resort principle, which is constrained by Greed, the “self-serving” basis of movement:

- (38) Move raises \bar{A} to a position \bar{A} only if morphological properties of \bar{A} itself would otherwise not be satisfied in the derivation.

(Chomsky 1995a: 400,7)

Putting it plainly, (38), a strong version of Greed, dictates that movement is for feature checking purposes only, and a phrase \bar{A} is allowed to move to a position \bar{A} in \bar{A} 's checking domain only if \bar{A} itself has a formal feature F that \bar{A} is able to check and F wouldn't be checked otherwise. Thus, crucially, a feature of \bar{A} cannot drive movement of \bar{A} to \bar{A} .

According to Chomsky, Greed provides a rationale for why a verbal item like HIT with the thematic structure of *hit*, but without a Case feature, does not exist.³⁷ The existence of such a verb would presuppose a derivation like the one in (39) (1995a: 401,

³⁷ In section 2.1, I will show that neither the complex-predicate approach nor the control analysis is able to explain properties of secondary predication in double object constructions.

³⁸ Chomsky (1981, 1986) uses the prohibition against movement into theta-positions to rule out (39). Brody (1993) argues that the ban on (39) follows from the projection principle if D-structure is defined as a level in which all and only chain root positions are present. Taking the projection principle to be satisfied in all levels, including D-Structure, it follows, then, that only chain roots can have a \bar{A} -role.

9a). *John* receives the internal $\bar{\lambda}$ -role in its base position, moves to spec of VP to pick up the external $\bar{\lambda}$ -role, and then moves to Infl to check its Case. Since the definition of Move accords to Greed, movement of *John* to spec of VP does not take place because such step is not motivated by any feature of *John* that needs to be checked.

(39) John_I [_{VP} *t_I* [_{VP} HIT *t_I*]]

Lasnik (1995) argues that the system of Chomsky (1993) is redundant. Putting (39) aside, all the cases in which Greed is used to block a bad derivation can be explained independently by other principles.³⁹ Thus, the mechanics of the system are not in accordance with its minimalist spirit. As for Chomsky's explanation for the ill-formedness of (39), Lasnik's observation is that its success depends on our assumptions about the nature of $\bar{\lambda}$ -roles. If we take them to be similar to Case feature, being formal features of DPs that can be checked only once, then Greed is not necessary to rule out (39). Moreover, Lasnik points out that it is not clear that Greed can block (39), for it is assumed in Chomsky (1993) that a phrase can move cyclically, through intermediate sites as long as the final landing site is a checking site for that phrase.⁴⁰

Boskovic (1994), building on Saito and Murasugi's (1993) condition on the length of chain links (each chain link must be at least of length 1, and a chain link from $\bar{\lambda}$ to $\bar{\lambda}$ is

³⁹ See also Marantz (1995).

⁴⁰ Reflexive Predicates (ia), according to Lasnik (1995), might be like HIT, having the derivation in (ib), the surface subject starts as the logical object and moves to the sentential subject position, passing through the external argument position:

- (i) a. John washed/shaved/dressed (= John washed/shaved/dressed himself)
- b. John [_{VP} *t'* [_{VP} washed *t*]]

of length n , if there are n XPs that cover \square but not \square), argues that (39) is ruled out because the chain link between the traces inside the VP is of length zero, given that there is no maximal projection that covers one but not other.

Thus given Lasnik's and Boskovic's counter arguments, Chomsky's (1993) proposal is not convincing. It does not prove either that Greed is a necessary principle independently of (39) or that its use is necessary to rule out (39). In addition, considering the proposal in total, (39) is predicted to be a possible derivation, the movement into the theta-position being an intermediate step towards the feature checking position.

In *Categories and Transformations* (Chomsky 1995b), Greed is not formulated as a principle, and a configurational view of \square -roles à la Hale and Keyser is adopted.⁴¹

There, the argument against movement into theta positions is the following:

Suppose \square [a \square -role assigner, \underline{CR}] raises, forming the CH = (\square, \dots, t). The trace t remains in the structural configuration that determines a \square -role and can therefore function as a \square -role assigner; but the chain CH is not in a configuration at all, so cannot assign a \square -role. In its raised position, \square can function insofar as it has internal formal features: as a Case assigner or a binder. But in a configurational theory of \square -relations, it makes little sense to think of the head of a chain as assigning a \square -role.

With regard to receipt of \square -roles, similar reasoning applies. If \square raises to a \square -position Th, forming the chain CH = (\square, t), the argument that must bear a \square -role is CH, not \square . But CH is not in any configuration, and \square is not an argument that can receive a \square -role. Other conditions too are violated under earlier assumptions or other like them, but I will not spell out the problem further. (Chomsky, 1995b: 313)

As López (2001) puts it,⁴² the ban on having a chain checking or assigning a \square -role depends on what we take chains to be.⁴³ If movement creates identical copies, as

⁴¹ Notice that, by adopting Hale and Keyser's configurational view, Chomsky departs from the GB assumption that "if an argument is in a chain, it gets its \square -role only by virtue of its membership in the chain, not by virtue of the position it occupies". (Chomsky 1981: 338).

suggested by Chomsky, then the claim that the head of a chain cannot receive or assign a $\bar{\alpha}$ -role does not follow straightforwardly. As pointed out by Hornstein (1998), there is no reason to assume that chains themselves are assigned $\bar{\alpha}$ -roles. In virtue of its first member being assigned a $\bar{\alpha}$ -role, a chain is interpreted as having a $\bar{\alpha}$ -role. Therefore, if movement into a theta-position takes place, it is not the chain itself that will be in a thematic configuration, but one of its members.

Had this been the only problem, we could minimize our worries by assuming with Chomsky that the Chain Condition (cf (37)) is an LF condition on the well-formedness of a structure. If the head of a chain receives a $\bar{\alpha}$ -role, the Chain Condition rules out the structure. However, even if we do so, it seems to me that there is nothing in Chomsky 1995b, besides a stipulation on chain formation, preventing movement into theta-positions.

The claim that a moved head does not assign a $\bar{\alpha}$ -role in its derived position might be right.⁴⁴ But it fails to be a counterargument for movement into theta-positions if we consider the developments of the Minimalist Program. In an Agr-less checking theory,

⁴² López does not defend $\bar{\alpha}$ -roles as features. His point is that theta-domains and checking domains may be the same module, contrary to Chomsky's (1995) assumption that they are two complementary modules. But, as López himself notices, his criticism may not be valid for the phase theory, given that in this theory, an argument in situ, besides being assigned a $\bar{\alpha}$ -role, can also check its Case Feature via Agree with a functional category.

⁴³ Note that this argument hinges on the existence of chains as real objects formed by the computational system, but as already discussed in section (2.3) chains may be not be real at all.

⁴⁴ But see Larson (1988), according to whom, ditransitive verbs like *give* assign the external $\bar{\alpha}$ -role only after moving to the upper head of the VP shell. See also Saito and Hoshi (2000). On their account of the Japanese light verb construction illustrated in (i), they suggest that $\bar{\alpha}$ -role assignment happens only at LF after *kekkon* 'marriage' has raised covertly to the light verb *su*.

(i) Mary-ga John-to (kyonen) [_{NP} kekkon]-o sita (sita = su + ta (past))
 Mary-Nom John-with last year marriage-acc did
 'Mary married John last year'

which is adopted by the end of Chapter 4 (Chomsky 1995b) and thereafter, this claim is valid for formal features in general.⁴⁵ Heads do not move in order to check a feature of an upstairs DP. Therefore, Chomsky's argument using head movement might, contrary to his intention, count as an argument for treating $\bar{\alpha}$ -roles as features. In addition, notice that Chomsky (1995) (see also Boeckx and Stjepanovic, 2001) suggests that head movement might be a PF phenomenon. Thus, if he maintains this suggestion, the assumption that a moved head does not assign a $\bar{\alpha}$ -role in its derived position shows nothing about the nature of $\bar{\alpha}$ -roles and the (im)possibility of movement into theta-positions. Since PF does not feed LF, and heads move only at PF, a moved head cannot possibly be a $\bar{\alpha}$ -role assigner given the semantic import of $\bar{\alpha}$ -roles. In other words, by opening up the possibility of analyzing head-movement as occurring at PF, Chomsky himself provides an independent explanation for why moved heads does not assign $\bar{\alpha}$ -roles.

It is important to remark that I do not follow this idea in this thesis, rather I assume with Larson (1988) and Saito Hoshi (2000) (cf fn. 51) that head movement occurs at syntax.

The discussion about argumental chains is more complex requires a revision of Chomsky's proposal for chain formation and chain interpretation at LF. To do so, consider the LF representation sketched in (40), which corresponds to number (88) of chapter 4.⁴⁶

⁴⁵ By the end of Chomsky (1995b), it is assumed that V is the Accusative Case carrier, and this Case is checked only after V adjunction to little v. However, in the latter developments of the theory (cf. for instance, Chomsky 2000) little v is the carrier of Accusative Case feature.

⁴⁶ Chomsky's original example (cf. 1995b: 300, 88) is given in (i). However as Howard Lasnik (personal communication) pointed out to me (i) is a misanalysis because it treats *ask* as an ECM verb. Thus, in (40) I replaced *asked* with *expected*, a bona fide ECM verb.

(i) We are likely [_{t₃} to be asked [_{t₂} to t₁ build airplanes]]]

(40) we are likely [t_3 to be expected [t_2 to t_1 build airplanes]]]

According to Chomsky, the successive cyclic movement of *we* forms the following chains.

(41) $CH_1 = (t_2, t_1)$

$CH_2 = (t_3, t_1)$

$CH_3 = (we, t_1)$

Since the Chain Condition is an LF condition, the only way to guarantee the convergence of (41) is via elimination of CH_1 and CH_2 for they violate the Chain Condition. To solve this problem, Chomsky proposes that traces that are not considered for interpretation can be eliminated, that is, “marked as invisible at LF”.⁴⁷ t_1 cannot be eliminated because it is assigned a θ -role, hence it is important for the interpretation of the structure. t_2 , and t_3 , on the other hand, do not have an effect on the interpretation, and are, therefore marked as invisible. Consequently, chains CH_1 and CH_2 are eliminated. Hence, CH_3 is the only chain visible for interpretative purposes at LF.

Though it works, there is a stipulation hidden in this mechanism. The trace in the theta-position is always the second member of each of the chains formed. If, instead of

⁴⁷ Technically it is not the trace (i.e., a term) that is eliminated, but its formal features. And to use appropriate terminology, they are erased.

(41), we had (42), (40) would not converge because all the chains formed by *we* would violate the Chain Condition.⁴⁸

$$(42) \quad CH_1 = (t_2, t_1)$$

$$CH_2 = (t_3, t_2)$$

$$CH_3 = (we, t_3)$$

There is another way of computing chains that was not considered by Chomsky. We can stipulate that each chain contains, as one of its members, the topmost copy of the moved element, which is free from uninterpretable features. Assuming this stipulation, from (40) we form (43). Interestingly, (41) and (43) achieve the same results: Only CH_3 is interpreted at LF. CH_1 and CH_2 violate the Chain Condition, but can be eliminated because they contain LF vacuous intermediate traces.

$$(43) \quad CH_1 = (we, t_3)$$

$$CH_2 = (we, t_2)$$

$$CH_3 = (we, t_1)$$

Now, let's see how this mechanism works if movement into theta-positions takes place. For illustrative purposes, I will use Hornstein's (1999, 2001) analysis of

⁴⁸ Notice that apparently there is a redundancy in this system. It seems that if we have elimination of chains, the Chain Condition can be dispensed with given that only chains that satisfy the Chain Condition survive elimination. One possible way to solve this problem is by assuming that movement into intermediate vacuous positions does not take place. Castillo et al. (1999) and Hornstein (2001) embrace this assumption, denying the existence of EPP.

obligatory control. According to this analysis, (44a) has the LF in (44b), in which t_1 and t_3 are copies of *John* in theta-positions.

- (44) a. John wanted to eat a bagel
 b. $[_{TP} \text{John } [_{VP} t_3 \text{ wanted } [_{TP} t_2 \text{ to } [_{VP} t_1 \text{ eat a bagel}]]]]]$

Following Chomsky, we have the following chains:

- (45) $CH_1 = (t_2, t_1)$
 $CH_2 = (t_3, t_1)$
 $CH_3 = (\text{John}, t_1)$

Everything is fine with CH_3 . CH_1 violates the Chain Condition, but is eliminated. CH_2 violates the Chain Condition, but cannot be eliminated because its members occupy theta-positions, so they must be visible at LF. Hence, (44b) is either a non-convergent derivation or it converges receiving a deviant interpretation.

However, we can conversely assume what was suggested in (43); and doing so from (44b) we form the chains in (46):

- (46) $CH_1 = (\text{John}, t_3)$
 $CH_2 = (\text{John}, t_2)$
 $CH_3 = (\text{John}, t_1)$

CH₃ is fine. CH₂ violates the Chain Condition, but is eliminated. Now, importantly, CH₁ is also fine. Thus, (44b) converges, with two chains: CH₁ and CH₃, which are structurally disconnected since t_2 is invisible at LF. Moreover, although the members of these chains are copies of the same source and identical in constitution, they are distinct terms.

In essence, Chomsky's argument that chains are incompatible with assignment of $\bar{\alpha}$ -roles is as strong as his stipulation about chain formation. Of course, his stipulation can be maintained blocking movement into theta-positions. But, it is important to keep in mind that a slightly revised version of the system allows this type of movement; and neither the original nor the revised version seems conceptually superior. Hence, the choice between them must be empirical.

To close the discussion on Chomsky (1995b), let me bring forward Lasnik's (1999b) observation. If chains are not in any configuration, and as a result are unable to participate in thematic relations, we are lead straightforwardly to the following radical conclusion: A-movement of an argument must be disallowed altogether, given that movement **from** a theta-position should create a chain just as much as movement **to** a theta-position. Thus, the chain $(\bar{\alpha}_1 \dots \bar{\alpha}_n)$, with $\bar{\alpha}_n$ in a theta-position and $\bar{\alpha}_1$ in a Case position, should not exist to begin with.⁴⁹

⁴⁹ Watanabe (1999) and López (2001) argue that there is also a tension between the configurational view of $\bar{\alpha}$ -roles and Chomsky's idea that little *v* is the locus of the external $\bar{\alpha}$ -role and accusative Case. If the object moves overtly to spec of vP, creating a second specifier (the first being occupied by the external argument), at LF both the subject and object will be configurationally in the right position to be interpreted as the 'agent' of the event. The assumption that only one specifier is interpreted as the 'agent' does not make the problem go away because it does not tell us whichever is first merged. As pointed out by Usama Soltan (personal communication), Watanabe's and Lopez's argument might not be a strong one. If LF does not allow the head of a multimembered chain to be in a theta-position, as suggested by Chomsky, then a shifted object should be prevented from being interpreted as the external argument.

In recent developments of the Minimalist Program (cf. Chomsky 1999, 2001a, 2001b), Chomsky suggests that the ban on movement into theta-positions is actually a principle of the Grammar:

(47) Pure merge in theta-positions is required of and (restricted to) arguments

But here we should question the use of the term ‘argument’. How do we define arguments? A DP is defined as an argument because it saturates a \square -role; thus lexical items are defined as arguments or adjuncts only after being merged. As observed by Cedric Boeckx (personal communication), *yesterday* is an argument in (48a), but an adjunct in (48b). Therefore, (47) is problematic in the sense that it requires a lexical item to be somehow marked as an argument or an adjunct prior to merge.⁵⁰

- (48) a. Yesterday was a fine day
b. John arrived yesterday

Chomsky (1981) defines arguments as NPs with some sort of “referential function”, such as names, variables, anaphors and pronouns. However, this definition does not make (48) compatible with (47). Moreover, if arguments are so defined and (47) maintained, a sentence involving left-dislocated NPs as in (49a) is arguably a violation of

⁵⁰ Moreover, as pointed out by Cedric Boeckx, a companion of (47) is Chomsky’s assumption that adjuncts can be inserted later in the derivation. However, recently (cf. 2001b), Chomsky has dropped this assumption. Thus, once the companion of (47) is gone, (47) is even less justified.

(47).⁵¹ One could follow Williams (1994) and say that in (49a) *John* is in a thematic relationship with the proposition *Mary likes him*, *John* being the topic of the comment. However, if this is so and topicalization is achieved via movement, (49b) should be prohibited since it would involve movement/second merge of an argument into a theta-position.

- (49) a. John, Mary likes him
b. Fish, I don't like

Therefore, I close this section concluding that there is no strong conceptual argument supporting the idea that \square -roles have a special syntactic status, being assigned only in a stage of the derivation in which the objects involved in the assignment are not yet complex objects expanded by movement.

In the next section, I will present some empirical evidence to support the opposite conclusion: certain thematic relations are in fact formed only after NP movement.

2.5.2 Moving into Theta-Positions

In section 2.5.2.1, I attempt to show that Chomsky's (1986) motive (i.e.; secondary predication) to formulate the Theta-Criterion in terms of the Chain Condition

⁵¹ Ross (1967) differentiates left dislocation (47a) from topicalization (47b). Chomsky (1977) proposes that left-dislocated NPs are base generated in their surface position, whereas topicalization involves movement. However, as Masaya Yoshida (personal communication) observed, (49a) could in principle be treated as a case of movement, leaving behind a resumptive pronoun `a la Boeckx (2001). Anyway, the right analysis of left-dislocation is not important for the present discussion. On the distinction between left dislocation and topicalization, see also Lasnik and Uriagereka (1988).

(cf. (37)) might, conversely, be an argument against the Chain Condition. I will focus on the thematic relationship between secondary predicates and indirect objects in an attempt to show that it may not be explained if a moved argument is not allowed to receive a θ -role.

In section 2.2, I will review Boskovic's (1994) argument for assuming that Romance restructuring configurations involve movement into theta-positions, and in section 2.3, I will discuss Pesetsky's (1992) observation that some ECM subjects receive a second θ -role from the matrix verb.

2.5.2.1 Secondary Predicates and Indirect Objects

Recall from section 1 that, for Chomsky (1986), a single NP is interpreted as receiving two θ -roles in cases of secondary predication. In (50), for instance, *John* is predicated by both the adjective *sad* and the verb *arrived*.

(50) John arrived sad.

Chomsky's response to this type of construction was the formulation of the Theta-Criterion (35) as part of the Chain Condition (37). Thus, following the restriction of the Chain Condition, the analysis of (50) must guarantee that the two θ -roles are assigned to *John* prior to *John*'s movement to the sentential subject position. That is, the two θ -roles must be assigned when *John* is still in the object position. One problem for this analysis

is that it predicts that (51) is acceptable, though it is not.⁵²

(51) * There arrived a man sad

Notice that in general depictive adjectives can predicate with subjects and direct objects, as illustrated in (52).

- (52) a. I₁ wrote my confession drunk₁
 b. I put the food₁ on the table hot₁

This might suggest there is something special about presentational *there* constructions that make them incompatible with secondary predication.⁵³ Thus, being cautious, I will

⁵² Brazilian Portuguese displays the same phenomenon. (ia) allows only a reading in which *falastrona* ‘talkative’ is a simple adjective, describing a permanent property of the entity *Maria*. In (ib), on the other hand, *falastrona* is interpreted only as depictive predicate, denoting the state in which *Maria* was when she arrived. Hence, if (ia) has a structure in which the logical object stays in situ, while an expletive pronoun is inserted in the subject position, as suggested by Rizzi (1982), among others, then the conclusion is that depictive adjectives can only predicate with the logical object if it moves to the sentential subject position. Therefore, in (ib) the predicative relationship between *Maria em falastrona* cannot be established prior to the movement of the DP *a Maria* to the sentential subject position.

- (i) a. Chegou a Maria falastrona
 arrived-3Sg the Maria talkative
 ‘There arrived the talkative Maria’
 b. A Maria chegou falastrona
 the Maria arrived-3Sg talkative
 ‘Maria arrived talkative’

Max Guimarães (personal communication) observed that in special contexts (for instance, iteration and special prosody in (ii)) inverted subjects tend to accept secondary predication.

- (ii) Chegou a Maria falastrona, falastrona
 arrived-3Sg the Maria talkative, talkative
 ‘There arrived Mary very talkative’

⁵³ As Hornstein pointed out to me, the unacceptability of (51) might be due to a definite effect created by *sad*. *S*, if replaced *sad* is replaced by *singing*, for instance, the sentence is better.

put (51) aside. But this is not the end of the discussion yet. In Some languages, including English,⁵⁴ secondary predicates fail to predicate with indirect objects, as observed by Baker (1997) and Romero (1997):⁵⁵

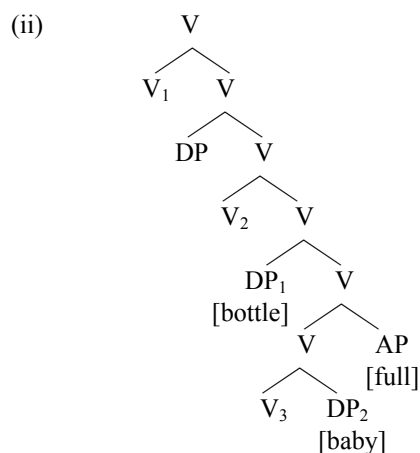
- (53) a. * I gave the meat to Mary₁ hungry₁
 b. * I gave Mary₁ the meat hungry₁

⁵⁴ See Pylkkänen (2002) for a crosslinguistic survey.

⁵⁵ Hale and Keyser (2002) discuss (i), where the indirect object does not accept a secondary predicate.

- (i) I gave the bottle₁ to the baby₂ full_{1/*2}

Though unclear, their explanation seems to be that the secondary predicate is inserted at D-structure as an adjunct to the inner verbal projection that composes the argument structure of *give*, as represented in (ii), the representation of (i) at D-structure (cf p. 162, 11). They take D-structure to be the level in which predicative relations are formed. Thus, in (ii), since DP₂ does not c-command the adjective (cf. Williams' (1980:206) C-Command Condition on Predication), there can be no predicative relation between the two of them:



What is missing from their account is an explanation for why the adjective is allowed within the argument structure of the verb, even though it is not selected by the verb. Moreover, we also need an explanation for why this type of adjunct is allowed within a verbal argument structure, whereas other adjuncts are not, given Fodor's (1970) objections against lexical decomposition.

Interestingly though, as pointed out in Koizumi (1994), a logical indirect object can be the understood argument of a depictive adjective if passivization takes place and the indirect object is displaced to the sentential subject position, as in (54):

- (54) The patients_i were given the drugs drunk_i
 (cf. * The drugs were given to the patients_i drunk_i)

The underlying indirect object of (54) must first be merged in the complement domain of *given* in order to be interpreted as the goal of the *giving* event. But, from its VP internal position, *the patients* cannot be interpreted as being in a theta-relation with *drunk* given (53). Hence, the theta-relation between the NP *the patient* and *drunk* is licensed only after movement of the NP into the sentential subject position. This clearly shows that the head of a chain can be interpreted as being in a thematic relation, contrary to Chomsky's restriction.

One could disagree with the conclusion above, arguing that the phenomenon in question might be explained by appealing to the control analysis sketched in (55) and defended by Chomsky (1981) and Stowell (1983). According to this analysis, the conclusion that the NP movement in (54) licenses the thematic relationship between the underlying indirect object and *drunk* is just a misinterpretation of the datum. What the movement really does is put the indirect object in a position from which it c-commands and, therefore, controls PRO, the argument of the adjunct small clause.

(55) [IP the patients₁ were [VP [VP given *t*₁ the drugs [SC PRO₁ drunk]]]]

However, there is evidence that something different from control is responsible for secondary predication. An indirect object within a VP can be a controller (56) (cf. Koizumi, 1994) and this clearly contrasts with (53).⁵⁶

(56) I wrote him₁ a letter [PRO₁ to show his mother]

Taking into consideration languages like Russian, where secondary predicates are morphologically case marked, Schein (1995) provides another type of evidence against a control analysis for secondary predication. The Russian facts are the following: If a depictive adjective predicates with the subject, it is marked with nominative case, as (57a) shows, but if it is a predicate of the object, then it is marked with instrumental case (57b). If the sentential subject is an underlying object, as in unaccusative constructions (57c), the secondary predicate can be marked either with nominative or instrumental case.

(57) a. Marik ubil lošad' pjannyj (Nom)

Marik killed horse drunk

b. Ja kupil mjaso zamoro-enym (Instr)

I bought meat frozen

⁵⁶ Besides that, observe the contrast in (i): depictive adjectives cannot be predicates of prepositional objects (Williams 1980), though prepositional objects can be controllers (Schein, 1995).

(i) a. *John ate at the meat₁ raw₁

- c. Maša prišla veseloj (Nom)/ veselaja (Intr)

Maša arrived cheerful

Schein's observation is that (57) cannot be a case of control because in a bona fide control configuration (58), a secondary predicate cannot bear nominative case. According to his analysis, the presence of PRO in the embedded subject position of (58) blocks agreement between the nominative matrix subject and the adjective. Therefore, if there were a small clause containing a PRO in (57), nominative case agreement would be blocked.

- (58) Vanja xočet byt'vernym (Instr)/*vernoj (Nom) partii

'Vanya wants to be faithful to the party'

Therefore, based on these facts, we can exclude the possibility of having a control analysis for secondary predication.

A complex predicate analysis has been supported by Roberts (1986), Williams (1994) and Geuder (2000), among others. Putting aside differences in technical implementation, the proposal made by these authors is that depictive adjectives are predicates that combine with another predicate, forming a complex that predicated with an argument under the right c-command condition: the argument c-commanding the complex predicate.

This might be the right analysis for secondary predication, however it does not make the secondary predication in (54) compatible with Chain Condition. Given the facts

b. John pleaded with Bill₁ [PRO₁ to leave]

in (53), if a complex predicate is formed in (54), it does not predicate with the logical indirect object prior to its raising to the sentential subject position. Therefore, (54) should be seen as a counter argument for Chain Condition. The head of chain is able to participate in theta-relations.

2.5.2.2 Prepositional Subjects in Restructuring Configurations

Consider the following pair of Spanish sentences:

- (59) a. Marta le quiere gustar a Juan

Marta clitic wants please-inf to Juan

‘Marta wants for Juan to like her’

- b. A Juan le quiere gustar Marta

to Juan clitic wants please-inf Marta

‘Juan wants to please Marta’

According to González (1988), (59a) and (59b) differ in meaning. In (59a), *Marta* is receiving the external \square -role of *querer* 'want', whereas in (59b) this very same \square -role is assigned to *Juan*. This contrast in meaning does not show up if the matrix verb is a raising verb, as illustrated in (60). This is explained by the fact that *querer* assigns an external theta-role, while the raising verb in (60) does not.

- (60) a. Las estudiantes le empezaron a gustar al professor
 the students-fem clitic began to like to-the professor
- b. Al professor le empezaron a gustar las estudiantes
 to-the professor clitic began to like the students-fem
 ‘The professors began to like the students’

Boskovic (1994) argues that (59b) cannot be derived via control. The preposition *a* preceding *Juan* indicates that at some stage of the derivation, the DP *Juan* is an argument of the embedded verb *gustar*, being marked with inherent case, as in (59a). Hence, if (59b) were an obligatory control configuration, it would involve the derivation represented in (61), in which both PRO and *Juan* (t_1) are taken by the embedded verb as its external argument.

- (61) A Juan₁ le quiere [PRO₁ gustar Marta t_1]

Hence, as suggested by Boskovic, (59b) seems to be a strong argument for assuming that an NP can receive a \square -role in its derived position.⁵⁷

⁵⁷ López (2001) presents a similar argument, claiming that in some Spanish causative constructions a DP receives a \square -role after undergoing movement.

2.5.2.3 Exceptional Theta-Marking

Originally discussed by Postal (1994), the sentence in (62) is taken by Pesetsky (1992) (also by Boscovic 1997 and López 2001) as a case in which an ECM subject receives a second \square -role from an agentive matrix verb.

(62) Sue estimated Bill's weight to be 150 lbs

The argument is the following: verbs like *estimated* select, as their complements, NPs denoting measurement. In (63a), for instance, the NP *Bill's weight* matches this selectional requirement and the sentence is acceptable. (63b), on the other hand, is unacceptable because the NP *Bill* does not denote measurement.

- (63) a. Sue estimated Bill's weight
b. * Sue estimated Bill

Thus, if in (62) we substitute *Bill's weight* for *Bill*, it results in an unacceptable sentence.

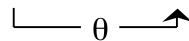
(64) * Sue estimated Bill to weigh 150 lbs

It seems then that the main verb in (62) selects as its complement the NP *Bill's weight*. Hence, considering selection restrictions to be an indication of \square -role assignment, it is reasonable to assume that in (62) *Bill's weight* is assigned a \square -role from *estimated*.

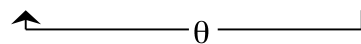
And, taking thematic relations to be local, as defended by Hale and Keyser, the θ -role in question cannot be assigned before the embedded subject moves from its base-generated position, otherwise locality wouldn't be satisfied. Therefore, it is plausible to assume that the LF representation of (62) has a nontrivial chain bearing more than one θ -role.⁵⁸

For Pesetsky, this case might be analyzed as involving a θ -role assignment across a clause boundary, similarly to the GB account for exceptional Case marking, as shown in (65a). Boscovic suggests that the embedded subject raises to the matrix AgroP projection in order to check its Case feature, and its second θ -role is assigned when the matrix verb adjoins to the head of AgroP, as represented in (65b):

- (65) a. [..._{VP} estimated [_{IP} Bill's weight_{t1} [_{T'} [_{VP} *t1* [to be 150 lbs]]]]]]



- b. [..._{AgroP} Bill's weight_{t1} [_{Agro'} [_{Agro} estimated+Agro] [_{VP} *t2* [_{IP} *t1*...]]]]]



As Norbert Hornstein pointed out to me, (62) can also be analyzed as a case of backwards control (cf. Farrell 1995, Polinsky & Potsdam 2002 and Hornstein 2002), where the controlled gap c-commands its antecedent. Following, an analysis of Control

⁵⁸ This type of exceptional theta-marking might also be involved in ECM constructions like (i) in which the verb *declared* is interpreted as affecting the embedded subject in the sense that *Bill's* status is changed by *Mary's* declaration (Cf. Pesetsky, 1992)

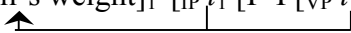
(i) Mary declared Bill to be dead.

where PRO is lexically inserted in the gap position, one could suggest that the structure of (62) is (66):

(66) [..._{VP} estimated PRO_i [_{IP} [Bill's weight]_i [_{I'} [_{VP} *t*_i [to be 150 lbs]]]]]]

However, the analysis above is not free of problems. For instance, it violates principle C of Binding Theory. On the other hand, if Polinsky & Potsdam (2002) and Hornstein (2002) are right, backwards control is also the result of movement. Particularly, under this account, in (62) the embedded subject moves to the matrix object position, receiving, thus, its second $\bar{\lambda}$ -role, which is assigned by *estimated*.

(67) [..._{VP} estimated [Bill's weight]_i [_{IP} *t*_i [_{I'} I [_{VP} *t*_i [to be 150 lbs]]]]]



2.5.2.4 $\bar{\lambda}$ -Roles in a Nutshell

Upon closer inspection, the ban on movement into theta-positions reveals itself as conceptually unjustified. The developments of the Principle and Parameter approach do not provide any well-motivated argument against having $\bar{\lambda}$ -roles affecting complex phrasal markers. Therefore, the right answer about the syntactic behavior of $\bar{\lambda}$ -roles is to be decided on empirical grounds; and, as presented here, there is some empirical evidence that $\bar{\lambda}$ -roles can be saturated by derived objects.

The theoretical implications of this conclusion is the following: if \square -roles are understood as configurations, we need to redefine the operation Move such that it can be applied for purposes other than that of feature checking. On the other hand, if we hold our current understanding of Move, then \square -roles are to be defined as features, as defended by the authors cited in the introduction. Therefore, mainstream Principle and Parameters assumptions about how theta-relations are formed need to be revised.

Having said that, an important addendum to this discussion is the following: in the present work, I will adopt movement into theta-positions, and, since I am assuming that Movement is for feature checking purposes, I will implement movement into theta-positions by taking \square -roles to be features.

2.6 Conclusions

In order to provide an answer to question (1), I will assume the minimalist ideas in (66):

- (1) What is the syntactic nature of referential null subjects in Brazilian Portuguese and Finnish?
- (66)
- a. The checking theory
 - b. The Copy & Merge theory of movement
 - c. Sideward movement

- d. Deterministic deletion of copies
- e. $\bar{\lambda}$ -roles are features
- f. Obligatory control is a residue of movement.

CHAPTER 3

VERBAL MORPHOLOGY AND NULL SUBEJCTS

3.1 Preliminaries

This chapter is a transition piece. Its main purpose is to set up the empirical background necessary for the discussion of the nature of referential 3rdPerson null subjects in Colloquial Brazilian Portuguese (BP, henceforth) and Finnish.¹ Section 2 offers an overview of the verbal agreement morphology properties of BP, Standard Finnish (SF) and Colloquial Finnish (CF). Section 3 is an overview of the type of null subjects licensed in these grammars. Concentrating on referential null subjects, in section 4, it is suggested that 1stP and 2ndP null subjects in matrix clauses should not be taken as evidence that Modern BP and Finnish license referential null subjects. These null subjects are not genuine null subjects, being rather the result of topic deletion à la Huang (1984). Section 5 paves the way for a new analysis of embedded 3rdP referential null subjects in the grammars under consideration: the possibility of this category being treated as a logophoric anaphor will be dismissed and the previous accounts reviewed.

¹ I will use the term *Finnish* to refer to both colloquial and standard Finnish. And to avoid an overflow of data, I will distinguish colloquial Finnish and standard Finnish only when necessary.

3.2 Verbal Agreement Morphology

Duarte (1995, 1996) shows that from 1845 to 1992 Brazilian Portuguese underwent a simplification in its verbal inflection. In figure 1, a paradigm with six forms (paradigm 1) was reduced to a paradigm with four forms (paradigm 2), and then to a paradigm with only three forms (paradigm 3).

From paradigm 1 to paradigm 2, the indirect 2ndSg replaced the direct 2ndSg agreement, which is phonologically identical to 3rdSg. From paradigm 2 to paradigm 3, the 1stPl was replaced by 3rdSg, since the pronoun *a gente* ('we, literally, the people'), which triggers 3rdSg agreement, is used instead of the 1stPl pronoun *nós* 'we'.²

Fig. 1. *Falar Finlandês* 'to speak Finnish'

Person and Number	Paradigm 1	Paradigm 2	Paradigm 3
1 st Psg	Fal-o Finlandês	Fal-o Finlandês	Fal-o Finlandês
2 nd PSg direct	Fala-s	-----	-----
2 nd PSg indirect	Fala-0	Falo-0	Fala-0
3 rd PSg	Fala-0	Fala-0	Fala-0
1 st PPl	Fala-mos	Fala-mos	Fala-0
2 nd PPl direct	<i>Fala-is</i>	-----	-----
2 nd PPl indirect	Fala-m	Fala-m	Fala-m
3 rd PPl	Fala-m	Fala-m	Fala-m

Source: Duarte (1996)

The verbal agreement morphology of Standard Finnish seems to be quite rich when compared to that of BP. For every combination of person and number, there is a different ending on the verb, as figure 2 illustrates:

² Standard BP still has a parallel agreement system with the 1stPl. It is also worth mentioning that in some dialects, the direct 2ndSg pronoun is still in use.

Fig. 2. Puhu Portugalia ‘to speak Portuguese’

Person and Number	Standard Finnish
1 st PSg	Puhu- n Portugalia
2 nd PSg	Puhu-t
3 rd PSg	Puhu-u
1 st PPl	Puhu-mme
2 nd PPl	Puhu-tte
3 rd PPl	Puhu-vat

Note that the richness of this paradigm becomes questionable if we consider the 3rdPSg in detail. As apparent on figure 2, for 1stPSg/Pl, 2ndPSg/Pl and 3rdPPl the verbal inflection contains a consonant, but for the 3rdPSg, the verbal inflection consists of lengthening of the last vowel of the stem. This lengthening process occurs in the present tense only. In the past and conditional tense (cf. (1)), the process is neutralized and there is no overt agreement suffix for the 3rdPSg. This gap in verbal paradigm is reported by Vainikka (1989) and Holmberg and Nikkane (1993).³

- (1) a. Hän *puhui* ⁴
s/he spoke-3Sg Portuguese
‘S/he spoke Portuguese’
- b. Hän *puhuisi* Portugalia
s/he speak-3Sg-Cond Portuguese
‘S/he would speak Portuguese’

³ In Finnish, there is no verbal suffix for the future tense.

⁴ This is SF. In CF, the past tense is *puhu* since the past tense marker *i* was lost.

Vainikka and Levi (1999), citing work done by Hakulinen (1979), present further evidence that in Finnish the 3rdP verbal agreement morpheme is weak. According to them, all the agreement suffixes are phonologically related to the corresponding pronoun, except for the 3rdP suffixes (cf. figure 3). The 2ndPSg agreement suffix *t* is diachronically related to the pronoun *sinä*, since this pronoun is reconstructed as **tinä*.⁵ But between the 3rdSg/Pl agreement suffixes and the corresponding pronouns there is not such historical connection.

Fig. 3.

	1 st Sg	2 nd Sg	3 rd Sg	1 st Pl	2 nd Pl	3 rd Pl
Agreement Suffix	-n	-t	-V	-mme	-tte	-vat
Pronoun	minä	sinä	hän	me	te	he

Source: Vainikka and Levy (1999)

This leads us to consider that, at least in the past and conditional tense, the verbal inflection paradigm of SF is not uniform under the Jaeggli and Safir (1989) definition of a morphological uniform verbal inflection paradigm. It is a mixed paradigm, containing an underived inflectional form, mainly the form 3rdPSg.⁶ Therefore, given Jaeggli and Safir's theory of null subjects, SF is predicted not to be a null subject language. The null subject properties of this variety of Finnish will be discussed in the next section.

⁵ Synchronically and diachronically Finnish follows a general /ti/ → /si/ rule.

⁶ Jaeggli and Safir (p. 30) states morphological uniformity in the following way:

(i) *Morphological Uniformity*

An inflectional paradigm P in a language L is morphologically uniform iff P has either only underived inflectional forms or only derived inflectional forms.

Similarly to BP, CF has a simplified verbal inflection paradigm. The 3rdPSg replaced the 3rdPPl and the 1stPPl was substituted by a new form that is phonologically identical to the impersonal passive morpheme (2)⁷

Fig. 4. *Puhu Portugalia* ‘to speak Portuguese’

Person and Number	Colloquial Finnish
1 st Psg	Puhu- n Portugalia
2 nd PSg	Puhu-t
3 rd PSg	Puhu-u
1 st PPl	Puhu-taan
2 nd PPl	Puhu-tte
3 rd PPl	Puhu-u

- (2) Koulussa opetetaan lapsia
school-Ine teach-Pass children-Par
 ‘Children are taught at school’

Thus, the grammars under investigation share the property of having a weak verbal morphology for the 3rdP. If this is so, given the fruitful literature on the correlation between rich morphology and licensing of null subjects (cf. Taraldsen 1980, Chomsky, 1981, 1982, Rizzi, 1982, Borer 1986, 1989, Jaeggli and Safir 1989, among others), the content of the next section is predictable.

⁷ The weak verbal morphology in CF seems to be correlated with a reduction in the morphological form of the pronouns, see (i) which should be compared with figure 3:

- (i) Mä/sä/se/me/te/ne (se also means ‘it’ and ne also means ‘those’)
 I / you/(s)he/we/you/they

3.3 Null Subjects

This section starts with a brief description of overt/null expletives and generic null subjects in the languages under investigation. However, there will be no in depth discussion of these issues. Rather, I concentrate on referential null subjects. Section 3.3.2 is dedicated to referential null subjects, especially to 1stP and 2ndP null subjects in matrix clauses. After that, the scope of the investigation will be reduced, and I take up the question of embedded 3rdP null subjects.

3.3.1 Expletives and Generic Null Subjects

The data in (3a,b) is evidence that BP allows null expletives.⁸ (3c) shows that that this language also allows generic null subjects.

- (3) a. *e tem muita coisa aqui nessa loja*
 have-3Sg many things here in.this store
 ‘There are many things in this store’
- b. *e já está tarde demais*
 already be-3Sg late too.much
 ‘It is already too late’
- c. *Aqui conserta sapato* (Kato, 1999)
 here repair-3Sg shoe
 ‘One repair shoes here’

⁸ For a discussion on null expletive in BP, see Viotti (1999).

It is unclear, however, that the missing external argument of sentences like (3c) is syntactically realized. If this argument were present in the structure, we would expect it to be able to bind anaphors and control inside infinitival clauses. Allowance of secondary predicates oriented to the subject should also be possible. But, as shown in (4), the alleged external argument of generic sentences like (4c) does not display any of the properties mentioned:⁹

- (4) a. *Aqui não vende nada de si mesmo
 here not sell-3Sg nothing of oneself
 ‘Here one sells nothing from oneself’
- b. ?? Aqui vende sapato caro [para PRO evitar cliente pobre]
 here sell-3Sg shoe expensive to avoid-Inf customer poor
 ‘Here one sells expensive shoes in order to avoid having poor customers’
- c. *Aqui conserta sapato bêbado/irritado
 here repair-3Sg shoe drunk/irritated
 ‘Here one repair shoes drunk/irritated’

Interestingly, though, in the presence of a modal verb, control is possible and secondary predicates oriented to the subject are allowed:

⁹ On this matter, see Cavalcante (2003)

- (5) a. Nesse hotel pode entrar na piscina [sem PRO
in.this hotel can-3Sg enter-Inf in.the swimming pool without
 tirar a roupa]
take.off-Inf the clothes
 ‘In this hotel one can enter into the swimming pool without taking his or
 her clothes off’
- b. Nesse hotel não pode entrar na piscina
in.this hotel not can-3Sg enter-Inf in.the swimming pool
 bêbado
drunk
 ‘In this hotel one can enter into the swimming pool drunk’

This can be explained, if modality involves embedding clauses, the modal verb selecting an infinitival clause, as in the representation sketched in (6), where I am assuming that the subject of the root clause is a null expletive.

- (6) [Adv_{Loc} [Infl Pro_{expl} [VP Verb_{Modal} [Infl PRO_i [VP t_i V-inf.]]]]]

Guimarães and Rodrigues (2002) suggest that the locative adverb function as the sentential subject of these generic sentences. This would explain the obligatory presence of this adverb and also the fact that it has to precede the verb.¹⁰ I will not develop this

¹⁰ According to Postal (2002), fronted locative adverbs present some of canonical the subject properties. For instance, they cannot link to a standard floating quantifier like *both* or to a non-standard floating quantifier like *each*. See Soltan (2003) for a review of Postal’s arguments.

idea, though in chapter 4 I will suggest that in BP fronted locative adverbs do block sub-extraction from embedded clauses.

Finnish is a SVO language that avoids verb initial in declarative sentences (cf. Vilkuna 1989 and Vainikka 1989). Thus, in SF, existential and generic constructions are acceptable as long as the locative adverb or the indefinite NP is fronted:^{11,12}

- (7) a. *leikkii lapsia kadula (Holmberg and Nikkane, 2002)
 play-3Sg children in.street
- b. Kadulla leikkii lapsia
 in.street play-3Sg children
- c. Lapsia leikkii kadula
 children play-3Sg in.street
- ‘There are children playing in the street/Children are playing in the street’
- (8) a. *?Voi anoa lainaa pankista (Vainikka, 1989)
 can-3Sg apply loan-Par bank-Ela
- b. Pankista voi anoa lainaa)
 bank-Ela can-3Sg apply loan-Par

¹¹ Holmberg (op. cit.) points out that only referential phrases can be fronted. Thus, locative, instrumental and temporal adverbs can be fronted, whereas manner and reason adverbs cannot.

¹² For a discussion on generic null subjects in Finnish, see Hakulinen and Karttunen (1973). Given the observation in BP, it is worth mentioning that according to these authors these verbs that are best suited for this generic sentences are modals or verbs that imply modality.

- c. Lainaa voi anoa pankista)
loan-Par can-3Sg apply bank-Ela
 ‘One can apply for a loan from the bank’

Verb initial is allowed if there is no category that could be fronted, as shown in (9):¹³

- (9) a. Sataa (Nikanne and Holmberg, 2002)
rain-3Sg
 ‘It rains/it is raining’
- b. Näyttää tuvevan sade (Sulkala and Karjalainen, 1992)
look-3Sg come-lpart-acc rain-ACC
 ‘It looks as if it is going to rain’

CF differs from SF and BP in that it has overt expletives (Holmberg and Nikanne 1994, 2002 and Holmberg 2003). Therefore, in order to avoid verb initial declarative sentences, either a constituent is fronted (7) or an expletive is inserted (10). If the

¹³ Verb initial is also allowed if the verb is in the imperative mood (ia), in yes/no questions (ib) and also if the verb is focalized (ic). These cases are analyzed as involving V-to-C movement (cf. Vainikka 1989, Vilkuna 1989, Nikanne 1994, among others).

- (i) a. kävelkää taloon (Nikanne, 1994)
walk-2Pl house-III
 ‘Walk into the house!’
- b. Kävelikö ihmisiä taloon (Q-Cl stands for ‘question clitic’)
walked-Q-Cl people-Par house-III
 ‘Were there people walking into the house?’ (Foc-Cl stands for ‘Focus clitic’)
- c. Käveli(+päs) ihmisiä taloon
walked-Foc-Cl people-Par house-III
 ‘There WERE people walking into the house’

sentence contains no constituent that could be fronted, insertion of the expletive is optional, as exemplified in (11):¹⁴

- (10) Sitä leikkii lapsia kadulla (Holmlberg, 2003)

expl played children in-street

‘There were children playing the street’

- (11) a. (Se) sataa

expl rain-3Sg

‘It rains/it is raining’

- b. (Se) näyttää tuvevan sade

expl look-3Sg come-lpart-acc rain-ACC

‘It looks as if it is going to rain’

The position occupied by the fronted categories in (7) is taken to be the sentential subject position by Vainikka (1989), Vilkuna (1989), Holmberg and Nikanne (2002) and Holmberg (2003). Holmberg and Nikanne assume that the movement is driven by an EPP. For them, Finnish subjects move to spec of FP (FiniteP), a projection that immediately dominates TP.¹⁵ Thus, in (7), the EPP feature of FP is checked by the

¹⁴ *Sitä* is the partitive form of *se*. Though Holmberg and Nikanne (1994) say that constructions with this expletive are extremely common, I acknowledge that some speakers do not accept them, characterizing them as substandard.

¹⁵ Vainikka and Vilkuna argue that this movement is to spec of IP.

fronted category, whereas in (10) it is checked by the overt expletives.¹⁶ Notice, however, that none of these analyses explain the lack of agreement between the verb and the fronted indefinite NP *lapsia* ‘children’ in (7c).

3.3.2 Referential Null Subjects

Present-day data from BP and Finnish clearly show that these grammars do not behave like the Romance Pro-drop languages.¹⁷ For instance, while the Romance Pro-Drop languages obey the Avoid Pronoun Principle (12), accepting overt subject pronouns only when they are emphatic, BP and Finnish allow overt subject pronouns that do not carry any emphatic force.

¹⁶ Holmberg and Nikanne (1994) observe that CF has transitive expletive constructions (i). In this paper, instead of postulating an F Projection, the authors assumed that TP is dominated by an AgrSP whose specifier is occupied by the expletive in (i), whereas the DP subject stays in spec of TP. This analysis is built around central ideas developed by Bobaljik and Jonas (1996) for Icelandic transitive expletive constructions.

(i) *sitä ovat nämä lapset jo oppineet lukemaan*
expl have-3Pls those children already learnt read-Inf
 ‘These children have already learned to read’

¹⁷ In this thesis, I do not discuss all the properties related to the pro-drop parameter (cf. Chapter 1), rather I will focus only on referential null subjects, but see Kato and Tarallo (1988), and Kato (2000) on loss of free inversion in BP. For a discussion of violation of the [**that-t*] filter in Portuguese, see Zubizarreta (1982). Finnish does not have free subject inversion. It has only triggered inversion (using Shlonsky’s (1997) terminology) which occurs when the verb moves to C, v. fn 9. With respect to the [*that-t*] filter, in Finnish the complementizer *että* ‘that’ is optionally dropped when wh-movement occurs, as shown in (ii)

(ii) a. *Kuka₁ Jukka sanoi että t₁ oli myynyt auton*
 who-Nom Jukka-Nom said-3Sg that was-3Sg sold car
 b. *Kuka₁ Jukka sanoi t₁ oli myynyt auton*
 who-Nom Jukka-Nom said-3Sg was-3Sg sold car
 ‘Who did Jukka say had sold the car’

(12) *Avoid pronoun*

Empty categories have preference over overt pronoun

(cf. Chomsky, 1981:65)

In fact, Modern BP and CF seem to prefer overt subject pronouns rather than null subjects.¹⁸ Duarte (1995, 1996) presents historical facts from BP indicating that in this

¹⁸ In BP there are particular cases in which this preference either does not arise or is blocked. (a) In object position, null pronouns are allowed in a broad range of configurations. See Cyrino (1996) for BP. (b) accordingly, Montalbetti's (1984) Overt Pronoun Constraint, configurations involving co-indexing with an A-bar antecedent block overt pronouns. In (ia,b), for instance, the overt pronoun *ele* 'he' must be free in reference. For a discussion of Montalbetti's constraint in BP, see Negrão (1999): It is worth mentioning, however, that in some dialects a quantifier expressions with the format *todo-NP* 'every NP' can bind an overt antecedent, as in (ic) for example.

- (i) a. Ninguém₁ acha que ele*_{1/2} é um gênio
 nobody think-3Sgs that he is-3Sg a genius
 'Nobody thinks that he is a genius'
 b. Quem₁ acha que ele*_{1/2} é um gênio
 who think-3Sg that he is-3Sg a genius
 'Who thinks that he is genius'
 c. Toda criança acha que ela é um gênio
 every child think 3Sg that she is a genius
 'Every child thinks that she is a genius'

(c) Co-indexing with an overt pronoun is also blocked in coordinated structures as (ii), though these structures arguably involve an A-antecedent (the matrix subject).

- (ii) O João₁ cantou e ele*_{1/2} dançou
 the João sang-3Sg and he danced-3Sg
 'John sang and he danced'

By analyzing coordinate clauses as a coordination of VPs (Johnson 1994 and Zoerner and Agbayani 2001), we can take the obligatory disjoint reference in (ii) as a Principle B effect: The pronoun cannot be co-indexed with the DP *o João* because they are clause mates. Notice that co-indexation is possible in (iii), in which the second conjunct is a clause as the presence of the complementizer indicates.

- (iii) Eu acho que o João vai voltar para lá e que ele vai ser feliz
 I think-1Sgs that the João wil-3Sg go.back-Inf to there and that he wil-3Sg be-Inf happy
 'I think that João will come back to Brazil and that he will be happy there'

If (ii) is a case of VP coordination, we can also explain the temporal dependency between the time of each of the two conjoined structures. As shown in (iv), unless adverbs are inserted to delimit the time scope of each coordinate structure, time independence is impossible:

language the use of referential null subjects has decreased considerably. As represented in figure 5, there was a certain stability in the preference for null subjects until 1918, but around 1937 this preference started falling, reaching less than 30% of the occurrence in 1992.

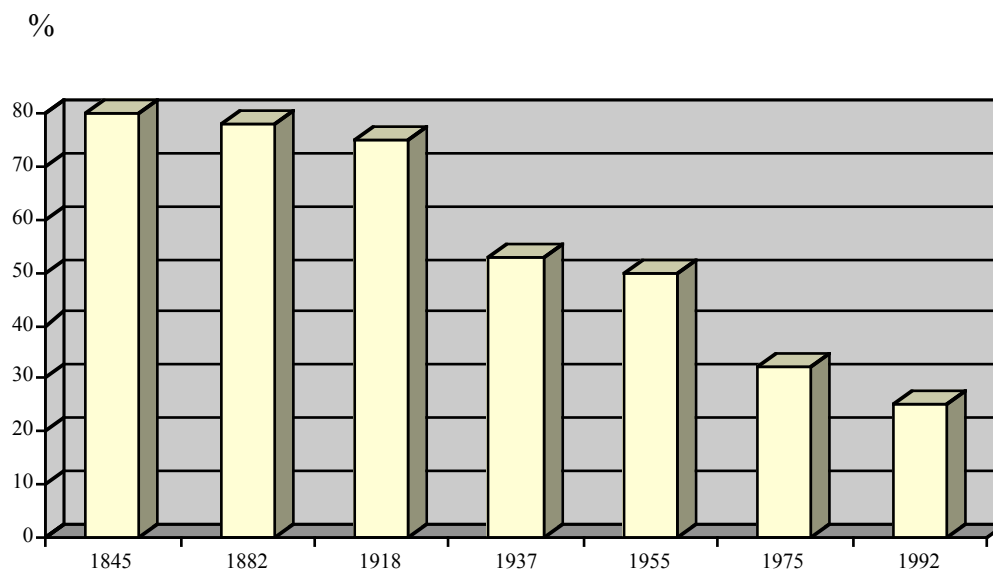


Fig. 5 (adapted from Duarte, 1996)

Interestingly, it seems that BP loss of null subjects is correlated with its loss of verbal morphology. Duarte's work shows that the stable period in Figure 5 corresponds to a period in which the first paradigm of figure 1 was in use. Hence, while the verbal inflection paradigm was rich, the null subject properties of BP were intact. When the

-
- (iv) O João cantou *(ontem) e vai dançar *(hoje)
the João sang-3Sg yesterday and wil-3Sg dance-Inf today
 'João sang yesterday and will dance tomorrow'

Besides that, these languages do not license referential 3rdPerson null subjects in matrix clauses. As observed in Tarallo (1996), the null subject in (14a) can receive a referential, specific reading in European Portuguese (14b), but in BP only an undetermined, non-specific reading (14c) is available. The data in (15) illustrate the unacceptability of matrix clauses containing a referential 3rdP null subject in Finnish:

- (14) a. *e não usa mais saia*
 not wear-3Sg more skirts
 b. ‘He/she does no wear skirts any more’ (EP/*BP)
 c. ‘Skirts are not worn any more’ (BP)
- (15) a. *(Hän) oli väsynyt. (SF)
 he was-3Sg tired
 b. *(Se) oli väsynyt (CF)
 he was-3Sg tired
 ‘He was tired’

In sum, the facts presented so far suggest that neither BP nor Finnish are not null subject grammars. Here I will argue that this incapability of licensing null subjects is to be correlated to the fact that these grammars have weak verbal morphology at least for the 3rdP. Hence, one might expect referential null subjects to be disallowed altogether in these grammars. However, this expectation fails because, as shown in (16), 1stP and 2ndP

null subjects are allowed in main clauses, and 3rdPerson referential null subjects in embedded clauses are also possible, as illustrated in (17):

- (16) a. *e falei com o João ontem a noite* (BP)
spoke-1Sg with the João yesterday at night
 ‘I spoke with João yesterday night’
- b. *e istun siä* (Finnish)
sit-1Sg here
- c. *e istut siä*
sit-2Sg here
- d. *e istumme siä*
sit-1Pl here
- f. *e istutte siä*
sit-2Pl here
 ‘I/you(Sg)/we you(Pl) am/are sitting here’
- (17) a. *João₁ disse que e₁ vem amanhã* (BP)
the João said-3Sg that come-3Sg tomorrow
 ‘João said that he will come tomorrow’
- b. *Veljeni₁ oli niin iloinen ettei e₁ voinut nukkua* (SF)
brother-1stPx be-3SgPres so happy that-not-3Sg could sleep-Inf

- c. [Mun veli]_i oli ninn iolnen ettei *e*₁ voinu nukkua (CF)
my-Gen brother-Nom be-3SgPres so happy that-not-3Sg could sleep-Inf
 ‘My brother was so happy that he couldn’t sleep’

Clarifications about the data in (17) are in order. First, in matrix clauses, BP allows only 1stPSg null subjects. Second, according to Vainikka (1989) and Vanikka and Levi (1999), in matrix clauses, CF does not license referential null subjects at all. However, Hoinonen’s work shows that 1stP null subjects are allowed in special contexts, as replies to answers.

All in all, in the remainder of this chapter and in chapter 4, I will argue that (16) and (17) should not be taken as evidence that Finnish and BP still license referential null subjects. I will suggest that these empty subjects should be analyzed as traces rather than as null pronouns.

3.4 Matrix Null Subjects: Cases of Topic Deletion²⁰

Duarte (1999) observed that, although 1stSg empty subjects are still allowed in Modern BP, there is an evident preference for the use of an overt pronoun in configurations like (18), in which Spec CP is filled:

²⁰ The discussion presented here on BP was first published in Rodrigues (2002).

- (18) Eu nao sei [CP quanto tempo [**eu** moro lá]] (Duarte 1995)

I not know-1Sgs how-many time I live-1Sg there

‘I don’t know how long I have been living there’

The correlation between filled Spec CP and overt subject pronouns seems to be stronger than pointed out by Duarte. It is not the case that there is a *preference* for the insertion of an overt subject pronoun in configurations with filled Spec CP. In these configurations, the presence of the overt pronoun is obligatory, as exemplified by the unacceptability of (19):

- (19) a. *? Quem *e* esqueci de citar

who forgot-1St of quote

(cf. Quem **eu** esqueci de citar)

‘Whom did I forgot to quote’

- b. *? O que *e* fiz

(cf. O que **eu** fiz)

what I did-1Sg

‘What did I do’

- c. ?*Por que fui despedida

why was-1Sgt fired

(cf. Por que **eu** fui despedida)

‘Why was I fired’

estará

be-3SgFut

‘But, look, my dress is almost done, and yours, I don’t know when it will be done’

(Martins Pena 1844. *O Judas no Sábado de Aleluia*)

Another contrast between 19th-century and modern BP is that 1stSg null subjects could occur inside relative clause in the 19th century (23), but nowadays they cannot, as shown in (24):

- (23) Que se case, e quanto antes, com a noiva [que *e* lhe
that SE marry-3Sg and as soon as possible with the fiancée that to.you
 dou]
give-1Sg

‘As soon as possible, get married with the fiancée that I give you’

(Martins Pena 1844. *O Judas no Sábado de Aleluia*)

- (24) *? Eu comprei aquele vestido [que *e* vi ontem]
I buy-1SgPast that dress that saw-1Sg yesterday
 ‘I bought that dress that I saw yesterday’

As expected, (24) becomes acceptable if the overt pronoun *eu* is inserted as the subject of the relative clause:

- (25) Eu comprei aquele vestido que **eu** vi ontem
I bought-1Sg that dress that I saw-1Sg yesterday
 ‘I bought that dress that I saw’

In sum, the licensing conditions of 1stPSg null subjects in BP have changed: during the 19th century, these subjects were licensed in more configurations than they are now. This leads us to speculate about the nature of these subjects in current BP. If they are real null subjects, they should not be subject to the restrictions shown above; they would behave as in the 19th century.

To understand the real nature of these empty subjects, it might be interesting to compare modern BP with spoken German, which, despite being a non pro-drop language, allows omission of the 1stPSg subject pronoun in sentences like (26):

- (26) (Ich) hab’ ihn schon gesehen (Ross, 1982)
 ‘I saw him already’

Like the BP pronoun *eu* ‘I’, *ich* cannot be dropped in all configurations. Ross (1982) remarked that *ich* can be omitted only in the sentence-initial position, *i.e.* when it is a topic. In (27), for instance, since the topic position is occupied by the object pronoun *ihn* ‘him’, the subject *ich* remains in the third position and cannot be omitted:

- (27) Ihn hab *(ich) schon gesehen (Ross, 1982)
 ‘I saw him already’

In addition to the similarity in topic-position dependency, 1stPSg empty subjects in spoken German and in modern BP pattern alike in that they are both prohibited in clauses with a fronted *wh*-phrase and inside relative clauses. The data in (28) make the case for spoken German (for BP, see examples (19) and (24)).

- (28) a. * Was machte
 ‘What did I make’
 b. *Ich kenne das mädchen, daß gestern getroffen habe
 ‘I know the girl that I met yesterday’

In essence, 1stPSg null subjects in modern BP behave exactly as *ich* omission in spoken German. Thus, given that German is not a pro-drop language, an analysis accounting for this parallelism should not assume that those subjects are null pronouns in modern BP.

Ross (1982) analyzes these gaps in German as formed by deletion of the topicalized subject pronoun (“Pronoun Zap” in his terminology). Thus, in (27) *ich* cannot be deleted because it is not in a topic position.

Huang (1984) unifies German null subjects with Chinese null objects, arguing that they are both variables. According to his proposal, these empty arguments are formed in

the transformational component via movement of an overt pronoun to a topic position, which turns out to be a target for deletion. Therefore, the gap created by the movement is a variable bound by a zero topic.

Modesto (2000) already extended Huang's analysis for BP assuming that the possibility of having 3rdPSg null subjects in question-answer contexts like (98) is due to a topic-deletion operation:

- (29) A: O João telefonou
 *the João caled*3Sg
 ‘Did João call’
- B: e telefonou ontem de manhã
 *called*Sg *yesterday of morning*
 ‘He called yesterday morning’

Following a suggestion of Jairo Nunes (personal communication), I propose we take topic deletion as responsible also for the allowance of 1stPSg empty subjects in modern BP matrix clauses. I believe this proposal is motivated by the similarity with spoken German. As in spoken German, the BP 1stPSg pronoun can be deleted only if it is in a topic position. Thus, if this position is already filled by another constituent, the deletion cannot take place (cf. (20)). The unacceptability of those empty subjects in configurations containing a fronted wh-phrase (cf (19)) and inside relative clauses (cf. (20)) can be explained by considering that movement of another constituent towards Spec

of CP blocks the movement of the subject pronoun to the topic position, a Minimality effect (Rizzi, 1990).

I will not work out the technical details of the topic-deletion operation (see Huang 1984). Here, the main point is that modern BP 1stPSg null subjects are not null pronouns. They do not have the freedom of null pronouns, being allowed only in configurations in which spoken German can drop the pronoun *ich*. The disallowance of those subjects in structures with either a filled Spec of CP or a topicalized phrase indicates that the topic deletion analysis might be right.

The application of this topic deletion or pronoun zap might be possible only when the verbal morphology expressing agreement is rich enough to recover the features of the deleted subject pronoun.

Now let me turn to Finnish. There is empirical evidence that this analysis can be extended for matrix null subjects in this language.

First, notice that Finnish referential 3rdP subject pronouns can be dropped in question-answer contexts (cf. (30)).²¹ Topic deletion analysis suggested above explains (3) in a straightforward manner.

- (30) a. A: *Puhuuko Liisa englantia* (S/CF)
 Speak-3Sg-Qcl Liisa-Nom English-Acc
 ‘Does Liisa speak English’

²¹ For an analysis of Yes/No questions in Finnish, see Holmberg (2001)

B: *e puhuu*
speak-3Sg
 ‘Yes, she does’

As for 1stP and 2ndP null subjects, Vainikka and Levi (1999) remark that they are not allowed in matrix clauses with a topicalized constituent. That’s why the sentences in (31) are unacceptable.

- (31) a. * kun soititte, **kaupassa e** olimme juuri ostamassa takkia
when called-2Pl store-Ine were-1Pl just buy-Inf coat-Part
 ‘When you called, we were just at the store buying a coat’
- b. * Palkankorotusta e pyysin heti
raise-Par asked-1Sg immediately
 ‘I asked for a raise immediately’

It is worth noting that if the subject is a full DP or a pronoun, topicalization occurs without difficulty:

- (32) a. Jos kaupalta soittaa asiakas, Pekan on
if store-Abl call-3Sg costumer-Nom Pekka-Gen have-3Sg

lähdettävä sinne

Leave-PastPart there

‘If a customer calls from the store, Pekka has to go there’

- b. Palkankorotusta pyysi heti. Liisa.

raise-Par asked-1Sg immediately Liisa-Nom

‘Liisa asked for a raise immediately’

- c. Pariisissa mina olen käynyt (Holmberg, 2003)

Paris-Ine I-Nom have-1Sg visited

‘It is Paris that I’ve been to’

Since Finnish allows only one fronted topic per sentence (cf. Holmberg and Nikanne 2002), it follows that in (31)-(32) topicalization of another constituent bars topicalization of the subject, which, being forced to stay in a lower external-VP position, arguably in spec of TP, cannot be the target of deletion.

Holmberg and Nikanne (2002) and Holmberg (2003) cite the fact, originally observed by Auli Hakuninen, that 1stP and 2ndP null subjects cannot co-occur with an expletive, as exemplified in (33):

- (33) * Sitä uskon vallankomousksen

Expl believe+1stSg revolutions+Ill

‘I believe in Revolution’

This datum leads Holmberg (2003) to propose the very same analysis I am suggesting here: null subjects in Finnish involve pronoun deletion.²² The idea here is that the expletive occurs in the topic position (spec of FP in Holmberg and Nikanne's analysis), blocking, thus, deletion of the subject pronoun.

One could object to extending the topic deletion analysis to Finnish since in this language 1stP and 2ndP null subjects can co-occur with a wh-phrase in spec of CP:

- (34) Missä *e* voimme lukea sanomalehtiä
Where can-1Pl read-Inf newspapers-Par
 'Where can we read newspapers'

If (34) involves topicalization followed by deletion of the subject pronouns, we expect this topicalization process to interfere with the wh-movement. Therefore, given that (34) is acceptable, an objection to a topic deletion analysis of Finnish should be in principle granted. Nevertheless, I maintain that this objection might be too hasty. As the data in (35), extracted from Holmberg and Nikanne (2002), show, Finnish has an uncommon property: It does not display Minimality effects in structures with both wh-movement and topicalization.

- (35) Kuka tämän kirjan on kirjoittanut
who this book-Acc have-3SgPres write-PastPart
 '(What about this book:) Who has written this book'

²² Basing his argument on Finnish, Holmberg generalizes and propose that null subjects are universally deleted pronouns.

Still, as pointed out by Holmberg and Nikanne, it could be that the derivation of (35) does not make use of topicalization, rather it involves scrambling the DP *tämän kirjan* ‘this book’ to a position outside the VP shell, but lower than the topic site. Holmberg and Nikanne disregard, correctly, I think, a scrambling-analysis for (35) because there are cases like (36), where the displaced constituent surfaces in a position higher than the negation, which is higher than the verb. The verb, in turn, is adjoined to T⁰. Putting it a more direct way: the surface position of *minusta* in (36) is too distant for scrambling, being reasonably a topic position.

- (36) Kuka minusta ei pidä²³
 who me not-3Sg like
 ‘Who doesn’t like me’

As already said, Holmberg and Nikanne take this topic position to be spec of FP. They try to explain the absence of interaction between movement to spec of CP and movement to spec of FP as following from the movement theory stated in Chomsky (1995b), where attraction is defined with respect to features. Their line of reasoning is the following: if the phrase occupying the spec of FP does not contain a wh-feature, it does not block attraction between C⁰ and a lower wh-feature.

I will not offer an alternative analysis for this lack of Minimality effects. For the purpose of the present discussion, it is sufficient to observe that whatever explains (35) also explains the topicalization of the deleted subject pronoun in (34). However, it is

²³ In Finnish, the negation word behaves like a verb, agreeing with the subject in $\bar{\kappa}$ -features. When it is present, it carries the $\bar{\kappa}$ -feature agreement, and the verb is marked only for tense.

important to observe that Holmberg and Nikanne's solution is not a desirable one. They explain Finnish leaving uncovered all the cross-linguistic data that shows interaction between *wh*-movement and topicalization.

3.5 Embedded 3rdP Null Subjects

In this section, I will prepare the way for a new analysis of embedded 3rdP referential null subjects in the languages under investigation. To do so, I will first dismiss the possibility of being dealing with logophoric anaphors, and then will revise the previous proposals, trying to justify the necessity of a new one.

3.5.1 Absence of Logophoric Properties

Sells (1987) and Reinhart and Reuland (1991) show that relations between antecedents and pronouns or anaphors might be logophoric. According to them, a logophoric relationship has two distinct features: (a) the relationship between the pronoun/anaphor and its antecedent does not obey locality conditions; (b) the antecedent is the logophoric center of the sentence.²⁴ That is, the antecedent is the thinker, the perceiver or the entity whose consciousness or feelings are reported by the sentence. In (37), for instance, the relationship between *Bill* and *PRO* is logophoric: Even though *Bill*

²⁴ Sells identifies three types of logophoric antecedents: (a) the source of the report, (b) the Self, the entity whose mental states the report describes, and (c) the Pivot, which provides the center of deixis or perspective the report.

does not c-command PRO, *Bill* is the antecedent of PRO and the entity whose point of view is being reported.

- (37) PRO_i having arrived in town, the main hotel seemed to Bill_i to be the best place to stay

(37) contrasts with (38), a BP sentence, with a referential 3rdP null subject. (38) is ungrammatical because the antecedent of the null subject does not c-command it, and, as I will show in chapter 4 (4.3.1), BP null subjects are anaphoric elements being dependent on the presence of a sentential antecedent.

- (38) ?* Nada mais fazia sentido para o João_i quando *e_i* ficou depressivo
nothing more made-3sg sense to the João when got-3sg depressed
 ‘Everything lost its sense to João when he got depressed’

Therefore, in BP locality matters for the anaphoric relationship between a 3rdP null subject and a DP. In (38), even though *João* is the entity whose point of view is being reported, it fails to be the antecedent because it does not c-command the null subject. Observe that if an overt pronoun replaces the null subject, the sentence becomes acceptable:

- (39) Nada mais fazia sentido para o João₁ quando ele ficou depressivo
nothing more made-3sg sense to the João when he got-3sg depressed
 ‘Everything lost its sense to João when he got depressed’

Another property of a logophoric relationship is that the antecedent may not be overtly realized, remaining implicit as (40).

- (40) Having just arrived in town, the new hotel seemed like a good place to stop

The unacceptability of (41) is another piece of evidence that referential 3rdP null subjects in BP are not logophors. The antecedent of these null subjects cannot be implicit.

- (41) * A Ana foi tida como a moça mais bonita da região, quando *e* viu
the Ana was-3Sg taken as the girl most beautiful of the region when saw-3Sg
 ela andando sozinha pela praia
she walking-3Sg alone on the beach
 ‘Ana was taken as the most beautiful girl of the region when he saw her talking alone along the beach’

One again notice that the presence of an overt subject pronoun improves the acceptability of the sentence:

- (42) ? A Ana foi tida como a moça mais bonita da região, quando ele viu
the Ana was-3Sg taken as the girl most beautiful of.the region when he saw-3Sg
 ela andando sozinha pela praia
she walking-3Sg alone on.the beach
 ‘Ana was taken as the most beautiful girl of the region when he saw her talking
 alone along the beach’

Reinhart and Reuland (1993) mention that another property of logophoric anaphors is that they can be inside a subjectless NP, as (43) exemplifies:

- (43) Lucie₁ saw a picture of herself₁

If this is right, the unacceptability of (44) is extra evidence that the referential null subjects we are studying are not logophoric anaphors. If they were they would be license inside subjectless NPs.

- (44) ?? A Leticia viu as fotos de quando *e* foi visitar a Ana
the Leticia saw-3Sg the pictures of when went-3Sg visit-Inf the Ana
 (cf. A Leticia viu as fotos de quando **ela** foi visitar a Ana)
 ‘Leticia saw the picture of the visit she paid Ana’

In sum, the evidence above suggests that the null subjects under discussion are not logophoric anaphors.

3.5.2 Previous Analysis

3.5.2.1 Referential 3rdP Null Subjects as PRO

Pursuing the old idea (Taraldsen, 1980) that allowance of null subjects is correlated to rich morphology, and building on Givón's (1978) insight that verbal agreement (Agr, hereafter) is the result of grammaticalization of subject pronouns,²⁵ Kato (1999, 2000) eliminates *pro* from the list of lexical pronouns. She proposes that in Romance what is named as *pro* is actually Agr itself, which is taken to be an independent lexical D item furnished with Case and $\bar{\lambda}$ -features. Agr enters the derivation as the external argument of VP. Being a maximal minimal projection, Agr adjoins to T^0 , where it checks the EPP features of T and its own Case feature. Thus, a projection of a specifier inside the TP is prevented.²⁶ Accordingly, the Spanish sentence (45a) has the structure in (45b), in which Agr attaches to the verbs after V-to-T movement:

- (45) a. *viajó.*
 traveled-3sg
 ‘S/he traveled’
- b. $[_{TP} [_{T'} [_{T} \text{viaj}_2 - [_{Agr} o]_1 + T] [_{VP} t_1 \ t_2]]]$

²⁵ On this grammaticalization process, see also Speas (1994) and Roberts and Roussou (1999).

²⁶ Rohrbacher (1992), Galves (1993), Speas (1994), Alexiadou and Anagnostopoulou (1998), Manzini and Savoia (2002) and Platzack (1995).

Moreover, as represented in (45), in this proposal overt subjects are taken to be instances of doubled subjects in the sense that they double Agr, being generated in spec of $\bar{\text{P}}$, a left periphery functional projection proposed as proposed in Martins (1994).²⁷

- (46) a. El viajó
 he traveled-3sg
 ‘He traveled’
- b. $[_{\bar{\text{P}}} \text{el } [_{\text{TP}} [_{\text{T}}' [_{\text{T}} \text{viaj}]_2 -[_{\text{Agr}} -\text{o}]_1 + \text{T}]] [_{\text{VP}} \text{t}_2 \text{t}_1]]$

Taking Agr to be in complementary distribution/competition with weak pronouns, Kato proposes that the existence of weak pronouns is the trigger for the loss of null subjects. Children take the existence of such pronouns in the Primarily Linguistic Data (PLD) to mean that Agr is not an independent lexical item in their target grammar. Thus, since BP has developed a series of nominative weak pronouns, the author concludes that this language is on its way to become non Pro-Drop. Her hypothesis is that BP Agr has lost its syntactic independence and may enter the derivation already as a verbal suffix. This hypothesis posits a question about the licensing of the embedded 3rdP null subjects in sentence like (47).

- (47) O Pedro₁ disse que *e₁* conserta sapato
 the Pedro say-3SgPast that repair-3SgPres shoe
 ‘Pedro said that he repairs shoes’

²⁷ For a defense of $\bar{\text{P}}$ in Brazilian Portuguese Grammars, see also Galves (2001) and Britto (1998). Britto argues that, since the Brazilian Portuguese grammars lost subject inversion, they encode categorial

Kato (1999) argues that these null subjects are licensed via a traditional obligatory control configuration. As shown in (48), in her proposal, (47) involves the presence of a PRO in spec of spec of $\square P$, doubling Agr. It is assumed by the author that PRO is deficient with respect to \square -features and, as a result, it is dependent on external control. Hence in (48) PRO is obligatorily controlled by the matrix subject.

- (48) a. [O Pedro₁ disse que [$\square P$ PRO₁ [TP conserta-Agr₁ sapato]]]
 the Pedro said-3Sg that repair-3Sg shoe
 ‘Pedro said that he repairs shoes’

It is also assumed that in a structure in which no antecedent is provided, the \square -features of PRO remains unspecified, causing PRO to receive a generic or arbitrary reading, as in (49):

- (49) [$\square P$ PRO₁ [TP aqui conserta-Agr₁ sapato]]
 here repair-3Sg shoe
 ‘One repairs shoes here’

Thus, I think it is fair to present Kato’s achievements in the following way: she succeeded in eliminating *pro* as a lexical category by proposing that embedded referential null subjects in BP are cases of obligatory control à la Borer (1989). I concur with the elimination of *pro* as an independent lexical item (cf. section 4.2), however I think we

judgements (Kuroda 1972) via NP-movement to $\square P$.

can accomplish a more elegant analysis for embedded null subjects in BP if we treat them as the residue of movement. A new analysis for these null subjects seems to be motivated empirically. As discussed below, the analysis shown in (48) and (49) is not free of problems.

First, though Kato does not discuss the mechanism behind her analysis for generic null subjects (49), it should be noticed that the presence of a possible controller does not ensure obligatory control. In (50), for instance, although the matrix DP would be an appropriate antecedent, the presupposed PRO remains unbound receiving a generic interpretation.

- (50) a. [O Pedro₁ disse que [_{NP} PRO₁ [_{TP} conserta-Agr₁ sapato]]]
 the Pedro said-3Sg that repair-3Sg shoe
 ‘Pedro said that one repairs shoes here’

Moreover, it seems to me that the presence of PRO in (48) and (49) is not well motivated. For Kato, both the 3rdP Agr and PRO are $\bar{\lambda}$ -deficient lacking person,²⁸ hence it is unclear what the empirical or conceptual gain is in assuming that a $\bar{\lambda}$ -deficient item is doubled by another $\bar{\lambda}$ -deficient item. Actually, we have a reason to believe that this doubling does suit the analysis in its total. As Kato acknowledged, placing a PRO, a deficient empty category, in spec of $\bar{\lambda}$ P is an unnatural move, since she follows Cardinaletti and Starke (1994) in reserving spec of $\bar{\lambda}$ P for strong pronouns and Full DPs.

²⁸ Cf Kato (1999:27) for a discussion on the $\bar{\lambda}$ -features of Agr.

identifier can be either the verbal agreement morpheme (Agr), which is taken to be generated as an adjunction to the functional head AGR, or an antecedent in an A'-position. Identification via Agr occurs in languages with rich agreement morphology like Spanish, Italian and European Portuguese. In these languages, *pro* acquires its index from Agr in a Spec-Head relation. In BP, the agreement morphology is too meager to identify *pro*; hence *pro* is identified by an antecedent in an A'-position and interpreted as a bound variable at LF.³²

To account for the fact that in BP subjects can be the binder of *pro* (cf. (52a)), the author argues that in this language the subject occupies an A'-position which is taken to be spec of AgrsP. Consequently, (52a) has the structure in (52b), where non-relevant projections have been omitted.

- (52) a. João₁ disse que pro₁ nadou ontem
João said-3Sg that swam-3Sg yesterday
 'John said that he swam yesterday'
- b. [AGRP João₂[AGR' [TP t₂ [T' [VP t₂ disse[CP que [AGRP pro₂ [AGR' [TP t₂ [T' [VP t₂ nadou ontem]]]]]]]]]]

Inside the embedded clause of (52b), *pro* is generated in spec of VP, moves to spec of TP, where it has its Case feature checked, and then, driven by the EPP feature of Agr, *pro* moves to spec of AgrsP. In the matrix clause, the same happens to the DP subject: it starts in spec of VP, moves to spec of TP and then to spec of AgrP. At LF, *pro* is

³² Since indices are assigned at LF, this analysis tacitly denies the idea the inclusiveness condition (Chomsky, 1995:228). holds of the computation from the numeration to LF

interpreted as a variable bound by the matrix subject, which shares its denotational index with *pro*.

The advantage of this analysis is that it neatly explains the pair of sentences in (53).³³ In (53a), the *in situ* object cannot be the binder of *pro* because it is not in an A'-position. Therefore, if it undergoes movement to spec of CP, it becomes the binder, as shown in (53b).

- (53) a. A Maria₁ convenceu o Pedro₂ que pro_{1,*2} tinha de sair
 the Maria convinced-3Sg the Pedro that had-3Sg of leave-INF
 ‘Maria convinced Pedro that she had to leave’
- b. Quem₂ que a Maria₁ convenceu t₂ que pro_{??1/2} tinha de sair
 who that the Maria convince-3Sg that have-3Sg of leave-INF
 ‘Who did Maria convince that he had to leave’

Modesto explains that in (53b) the DP subject cannot be the binder because it is in spec of TP. On its way to spec of CP, the *wh*-object passes through spec of AgrP, checking the EPP feature of Agr, blocking, thus, further movement of the subject, which remains in spec of TP throughout the derivation.

Now that I have briefly shown how the analysis works, let me go through some of its problems.

The assignment of indices mentioned above is not particularly easy to understand. By adopting Zubizarreta and Vergnaud’s (1992) framework, Modesto includes as part of

³³ In 4.5.3, I will revisit these sentences.

his theory a level of representation of sentence grammar named L-Structure. This level functions as an indexing of nominal categories. Vergnaud and Zubizarreta define it as a set of indices (denotata) that are mapped into the nominal expressions of the sentence.³⁴ Though Modesto doesn't discuss it, in his analysis this mapping should occur before the binding process of *pro*, such that the binder (a nominal expression) is already furnished with the index to be transmitted to *pro* during the process of binding. Another possibility is that the binding process itself consists of mapping *pro* and its antecedent into the same index/element in the set of denotata. Either way, there is a question about the interaction between L-structure and the grammar. Should L-structure be considered a level of representation within the grammar or not? If yes, the analysis poses a question about the number of levels of representation that compose the grammar. If not, the question is about the interaction between the grammar and this mapping process.

Apart from questions about its mechanics, the analysis has some unsolved empirical issues as well. Modesto explains (53b) by assuming that Minimality imposes a derivation in which the wh-movement forces the subject to stay in spec of TP. However in (54), despite the occurrence of wh-movement, *pro* is bound by the subject.

- (54) a. O que o Pedro₁ disse depois que *pro*₁ saiu da festa
 what the Pedro said-3Sg after that left-3Sg the party
 ‘What did Pedro say after having left the party’

³⁴ It is formalized in the following way:

- (i) L-Structure is a set of elements $D = \{i, j, k, \dots\}$ such that each element of D is associated with some Nominal in the sentence. (Vergnaud and Zubizarreta 1992:610)

- b. Para quem o Pedro₁ mentiu que *pro*₁ tinha de sair
to whom the Pedro lied-3Sg that have-3Sg of leave-INF
 ‘To whom did Pedro lie that he had to leave’

Modesto’s solution to this problem is to assume that the derivations of (54a&b) are allowed to violate Minimality in order to converge. Despite occurrence wh-movement, the subject is raised to spec of AgrP because otherwise there wouldn’t be a convergent derivation. *Pro* would reach LF without being bound. This is not the most desirable solution since usually one is not allowed to violate Minimality in order to ensure the mapping of a lexical array into a pair of sound and meaning. Moreover, this solution raises a difficult question. Let me start by setting up the context needed in order to make the question understandable. Wh-movement is optional in Brazilian Portuguese and the distinction between overt and covert wh-movement has no impact on the meaning conveyed by the sentence. For instance, (54a&b) means essentially the same as (55a&b). The only difference between them is that (54a&b) display overt wh-movement, whereas (55a&b) do not.

- (55) a. O Pedro₁ disse o que depois que *pro*₁ saiu da festa
the Pedro said-3Sg what after that left-3Sg the party
 ‘What did Pedro say after having left the party’

- b. O Pedro₁ mentiu para quem que *pro*₁ tinha de sair
the Pedro lied-3sg to whom that have-3sgPast of leave-INF
 ‘To whom did Pedro lie that he had to leave’

Thus, (55a & b) are similar to (56) and, as noticed by Modesto, (56) is unambiguous with respect to the binding of *pro*. Only a reading in which the matrix subject is the binder is possible. Hence, Modesto needs to assume that covert wh-movement does not interact with subject movement to AGRP.

- (56) O Pedro₁ convenceu quem₂ que *e*_{1/*2} tinha de sair?
the peter convinced-3Sg who that had-3Sg of leave-Inf
 ‘Who did Peter convince that he had to leave?’

Now, one could imagine a grammar that is almost exactly like BP, call it BP’. The only difference between BP and BP’ would be that, when the *wh*-element is not a proper binder for *pro*, instead of using minimality violation as the strategy to guarantee convergence, BP’ uses *wh-in-situ* as the strategy. Putting it in different words, In BP’ if a *wh*-phrase is not a good semantic binder for *pro*, the *wh*-phrase is forced to stay in situ. Thus, the difficult question is: why does BP’ not exist? Or why is it that BP is not BP’? The absence of an answer to these questions in Modesto’s analysis creates an impasse. This impasse dissolves if we drop the assumption that BP embedded 3rdP null subjects are bound variables.

It seems to me that the datum in (57) is also problematic for this analysis.

- (57) O João₁ forçou a Maria₂ a PRO_{*1/2} dizer que *pro*_{*1/2} tinha de sair
the João forced-3sg the Maria to say-Inf that had-3sg of leave-Inf
 ‘João forced Maria to say that she had to leave.’

Modesto argues that only subjects can be binders of *pro* in BP. But, this is not an accurate description since an object can be the ultimate binder as long as PRO intermediates the relation, as in (57). Hence, PRO must be in an A-position, otherwise condition C would be violated. It follows, then, that *pro* cannot be an A'-bound variable, as proposed by Modesto. Note that if *pro* can be A-bound this problem just disappears.

Modesto actually argues that this problem is circumvented because, following Borer (1989) and Landau (1999), he takes the AGR of infinitive clauses to be anaphoric. In (57) AGR is bound and assigned its denotational index by the matrix object. After that, AGR transfers its index to PRO. Therefore, PRO gets the index of the matrix object in a roundabout way, via AGR. It remains, however, unclear to me how this mechanism avoids the problem. First, if AGR is the head of an A'-projection, AGR itself is arguably an A'-element. Hence, like PRO, AGR should be subject to principle C. Second, the assignment of indices via binding as proposed by Modesto seems to be very similar to the indexing mechanism used in the Government and Binding Theory (GB) (cf. for instance Chomsky 1981). A property of GB indexing is transitivity: if α is coindexed with β and β

is coindexed with α then α is coindexed with α ³⁵ There is nothing in Modesto's analysis saying that assignment of indices is not transitive. If we take it to be transitive, the result is clear: the binding of PRO in (57) violates condition C.

Therefore I conclude that A'-bar binding is not clearly involved in the licensing of Brazilian Portuguese 3rdP null subjects.

3.5.2.3 3rdP Null Subjects and The Principle of Obligatory Occupant Licensing³⁶

Vainikka's (1989) proposes that verbal agreement suffixes in SF are anaphors. The 1stP and 2ndP agreement suffixes are bound by an implicit speaker-NP and by an implicit hearer-NP respectively. Since there is no corresponding implicit NP that could bind the 3rdP agreement suffixes, 3rdP null subjects are not allowed in matrix clauses.

Vainikka and Levy (1999), basing on Vainikka (1999), entertain an analysis for the mixed pattern of null subject in Finnish and Hebrew, assuming a system of binary features, according to which 1stP is coded as [+speaker], the 2ndP as [+ hearer] and the 3rdP as [-speaker, - hearer].³⁶ They suggest that these features are carried by pronouns, by inflected verbs and by the head of the AGR Projection. The essence of their proposal can be summarized in the representation (58) and (59). The features [+speaker] and [+ hearer] can be independently base generated in spec of VP, instead of being base generated

³⁵ That's why the coindexation in (i) violates the *i-within-i* filter, even if *himself* is coindexed AGR. AGR is coindexed with the whole NP by virtue of its person and number agreement. Therefore, if *himself* is coindexed with AGR, it is by transitivity coindexed with the NP.

(i) $[[_{NPi} \text{ a picture of } [_{NPi} \text{ himself}] \text{ AGR}_i \text{ will be on display.}]$

³⁶ This is only syntactic account I am aware of for Null Subjects in Finnish. Gutman (1999) provides an account within a theory of discourse. Since our frameworks are different, I will not revise her proposal.

³⁶ They take these features to be N-features.

directly in AGR. For the authors, these features can be inserted as the VP external argument because they are able to restrict the set of potential referents that are relevant for the conversational situation (cf. p.623). Since the 3rdP features [-speaker, - hearer] are not able to restrict the set of potential referents, these features can not be independently inserted as the external argument. Therefore, they are base generated directly as part of AGR. Thus, the deficiency of the 3rdP features forces the derivation in (59b), where an overt pronoun is inserted as the external argument of the verb:³⁷

(58) a. Tulen (SF)

come-1stsgPres

‘ I come.’

b. [AGRP [AGR' [VP [+speaker] [V' tulen]]]]

(59) a. *(Hän) tule. (S/CF)

he/she come-3SgPres

‘He she comes’

b. [AGRP [AGR' [AGR0 [-speaker] –hearer]] [VP hän [-speak] [-hearer] [V' tulen]]]]

They adopt as part of the Universal Grammar the principle in (60), which is a modified version of Speas' (1994) principle of licensing.³⁸

³⁷ I am being faithful to the authors' structures (cf. their examples (7) and (8), p. 626-27), in which no projection intervenes between AGRP and VP.

(60) *Principle of Obligatory Occupant Licensing*

In order to be licensed, both the head and the specifier of a syntactic projection must be filled by syntactic material at some level of representation.

(Vainikka and Levy, 1999:627)

Since AGRP is subject to (60), both its head and its specifier must be filled at some point of the derivation. Hence, the derivations in (58)-(59) are completed when the functional projection AGRP is licensed. For this to happen, the element inserted in spec of VP, (the [+speaker] features in (58), the pronoun *hän* in (59), moves to spec of AGRP and V adjoins to AGR⁰.

As for the allowance of 3rdPerson subjects inside embedded clauses (61a), it is proposed that in this case, the 3rdP features [-speaker, - hearer] are generated in spec of VP and then moves to spec of AGRP to satisfy the principle in (60), as shown in representation sketched in (61b):

(61) a. Jukka₁ kertoi että e₁ oli väsynyt

jukka-Nom said-3Sg that was--3Sg tired

‘Jukka said that he was tired’

b. [...Jukka...[_{CP} että [_{AGP} [-speaker,-hearer]₁ [_{AGR'} [_{AGR0} oli₂] [...[_{VP} t₁ [_{V'} t₂ väsynyt]]]]]]]

³⁸ Speas' principle of licensing is defined as in (i), where 'having content' means 'having a distinction of itself phonological or semantic matrix': Project XP only if XP has content.

The authors contend that this derivation is possible because the referent of embedded 3rdP features is determined indirectly via the derived context of matrix clause. That is, the embedded subject does not refer by itself, hence it has to borrow the referent of a DP in the matrix clause. It means that in (61), the embedded null subject is semantically dependent on the matrix subject, *Jukka*.

Though this proposal is mechanically doable, it appears only to encode the facts. Moreover, as notice by the authors, this analysis provides no way of accounting for the conditions under which embedded subject omission is possible. Thus, the embedded referential null subjects in Finnish require further research, as the authors acknowledged, and I will provide in chapter 4.

3.6 Conclusions

The big picture of the present chapter can be summarized as follows: Modern BP and Finnish are not genuine null subject languages. This is arguably related to the fact that in these languages the verbal agreement morphology is weak at least for the 3rdP.

I suggested that cases of matrix referential null subjects do not constitute evidence that referential subjects are licensed. These subjects seem to be cases of topic deletion. As for the embedded 3rdPerson null subjects, I showed that these subjects cannot be treated as logophors. I also show that none of previous analysis provides a satisfactory explanation for the partial pro-drop character of BP and Finnish.

In the next chapter, I suggest a new analysis for the possibility of embedded

3rdPerson null subjects, according to which these subjects are the result of hyper-raising movement. The allowance of this type movement will be correlated to the weakness of the verbal agreement morphology.

CHAPTER 4

A-MOVEMENT OUT OF FINITE CLAUSES

4.1 Preliminaries

The bulk of this chapter is devoted to the analysis of the embedded 3rdP null subjects introduced in the previous chapters. It contributes to the understanding of the grammars under investigation by suggestion that these empty subjects are gaps formed by the operation Move, i.e, they are silent copies of their antecedents. Thus, I will present for consideration the idea that A-movement from one thematic subject position to another is to be allowed even in finite configurations. This amounts to saying that the content of this chapter can be seen as an extension of Hornstein's analysis for obligatory control in the sense that it also defends NP-movement as a creator of 'traces' in subject positions. However, despite the similarity, there are important differences to be considered. First, Hornstein analyzed non-finite configurations, whereas the configurations I am dealing with are finite. Second, the present research differs from that of Hornstein's in that the phenomenon I am investigating is not universally attested. Therefore, it must be correlated with a specific feature of the grammars in which it is allowed. I will suggest

that this feature is the weak verbal agreement morphology discussed in the last chapter.

The sections are organized as follows: In 4.2, I lay out the details of the technical implementation of the movement analysis adopted. The purpose of this section is to make explicit the correlation between allowance of subject-to-subject movement and weak verbal agreement morphology. 4.3 presents a series of evidence of movement. 4.4 shows a new argument for a movement analysis of obligatory control, viz. in Romance, the antecedent of PRO controls the gender agreement features of embedded universal quantifiers and past participle forms. It will be shown that the same is observed in BP constructions involving embedded 3rdP referential null subjects. 4.5 deals with a potential counterargument for the analysis defended in this thesis: allowance of null subjects inside finite adjuncts clauses. The solution to be offered hinges on two assumptions: (a) islands emerge derivationally and adjuncts becomes islands only after being integrated into the main spine of the structure (cf. Uriagereka 1999, Hornstein 2001); (b) movement might target positions in disconnected substructures (Sideward movement – cf. 2.2.2). Section 4.5.1 looks into another case of null subject inside adjuncts. The novelty of this case is that the null subject, being within an adjunct clause that surfaces in a clause initial position, is not c-commanded by its antecedent at the surface structure. I will treat this as a case of adjunct remnant movement. Modesto's argument against movement (sentences involving double object verbs like *convencer* 'to convince') is revisited in 4.5.6. Section 4.6 offers a summary of the chapter and there will be an appendix, where I will consider null subjects within adnominal adjunct clauses.

A movement analysis was previously defended in Rodrigues (2000, 2002) and

much of what follows is built on ideas introduced there.

Ferreira (2000) also argues for a movement analysis.¹ According to him, a finite $\bar{\square}$ -defective tense has emerged in the BP grammars that, as result, have now two types of finite tenses: one that is $\bar{\square}$ -complete and another one that is $\bar{\square}$ -incomplete. To see how it works, consider the sentence in (1) and its derivation in (2). The derivation starts with one token of each type of tense being ‘copied’ from the lexicon and place into the numeration (2a). The defective tense is inserted first into the derivation and consequently the DP *o João* does not check its Case feature inside the embedded clause (2b). Thus, when the derivation reaches the matrix $\bar{\nu}$ P, the DP moves to spec of $\bar{\nu}$ P to check the relevant $\bar{\square}$ -role (2c) and from there it is raised to the spec of the matrix TP, where it checks its Case feature against the $\bar{\square}$ -complete T.

- (1) O João₁ disse que e₁ viu a Maria

the João say-3SgPast that see-3sgPast the Maria

‘John said that he saw Mary’

- (2) a. Num = {o₁, João₁, $\bar{\square}$ ₁, T $\bar{\square}$ -def₁, T $\bar{\square}$ ₁, disse₁, que₁, viu₁, a₁, Maria₁}
- b. [CP que [C' [TP [DP o João_{Case}]₁ [T' [T $\bar{\square}$ -def] [$\bar{\square}$ P t₁] [$\bar{\square}$ ' [VP viu a Maria]]]]]]]
- c. [TP [DP o João_{case}]₁ [T- $\bar{\square}$] [T' [$\bar{\square}$ P t₁ [$\bar{\square}$ ' [VP disse [CP que [C' [TP t₁ [T' [T $\bar{\square}$ -def] [$\bar{\square}$ P t₁] [$\bar{\square}$ ' [VP viu a Maria]]]]]]]]]]

¹ Rodrigues (2000) and Ferreira (2000) analysis developed simultaneously, but independent of each other.

The existence of two types of finite tense is crucial for this analysis, and the order in which they are merged defines the success of the derivation. If the defective tense is merged first, the derivation converges because the DP does not check its Case feature inside the embedded domain being, thus, available for computations at the matrix level. Conversely, if the $\bar{\lambda}$ -complete tense is the first one to be merged, the derivation crashes. The DP checks its Case feature too early, becoming unavailable for computations at the matrix domain.

Although it works, this analysis encounters some difficulties. First, the author offers no independent motivation for the existence of two types of tense. He says it is morphologically based, but he doesn't show how. The distinction cannot simply be a function of loss of verbal morphology because French lost verbal morphology like BP but did not develop the alleged defective tense. Second, in Rodrigues (2000), I observed that if children are cue-based learners that scan only root domains, as argued by Lightfoot (1989, 1991, 1994 – the Degree-0 Hypothesis), they cannot acquire the alleged defective tense for it occurs only in embedded domain, i.e.; out of reach of children. Ferreira addressed this issue by bringing forward a fact originally observed by Moreira da Silva's (1983), according to which Brazilian Portuguese allows constructions like (3), called hyper-raising in Ura's (1994) terminology.² According to Ferreira, since this type of construction is available on the primarily linguistic data (PLD), it serves as the necessary cue for the existence of a $\bar{\lambda}$ -defective tense. As the raising verbs do not assign a $\bar{\lambda}$ -role, children are led to conclude that in (3) the matrix subject comes from the embedded

² According to Ura (1994), Finnish also allows hyper-raising.

domain and its nominative Case is checked only at the matrix clause because the embedded tense is \square -defective.

- (3) A Maria₁ parece que t₁ está doente
the Maria seem-3Sg that is-3sg-Pres sick
 ‘Maria seems to be sick’

This is a legitimate way to address the problem raised. However, it leaves open the question about the robustness of (3) as a cue.³ Is (3) a cue robust enough to trigger the emergence of the defective tense? Occurrences of sentences like (3) in the Primarily linguistic (PLD) may not achieve the threshold necessary to change the grammar, specially because (3) has a twin sentence, mainly (4), which is also available in the PLD and cannot be a cue because it does not involve hyper-raising.

- (4) e parece que a Maria está doente
seem-3Sg that the Maria is-3Sg sick
 ‘It seems that Maria is sick’
 (Lit. * He seems that is sick)

Notice that there is a twist in the way the author sees the processes of language change and language acquisition. Saying that the emergence of a defective tense is morphologically based amounts to saying that at certain point in the history of BP, children piggybacked on the loss of morphology to cognize a grammar with a defective

tense. In a cue-based theory, this means that the loss of verbal morphology was the cue that triggered the system with the defective tense. Therefore, allowance of hyper-raising (3) is the consequence of the new system, not its cause.⁴

A remaining question about this analysis is how we can test it, given that the alleged defective tense is present in a derivation only when subject-to-subject movement occurs. In other words, a defective finite tense does not occur in any other cases besides that it purports to explain. This means that the proposed analysis cannot be tested, as there is no conceivable linguistic phenomenon that would refute it. Therefore, it does not match the criterion of falsifiability, which is required from scientific hypothesis (cf. Popper, 1963).

4.1 Implementing the Proposal

4.1.1 Verbal Agreement Morphology and Null Subject Pronouns

Since Taraldsen (1980) there has been the intuitive idea that the licensing of referential null subject is somehow related to verbal agreement morphology. Recently it has been proposed that in null subject languages with a rich agreement morphology, spec of TP/AgrP might not be realized by *pro* or any other material because the verbal agreement morphology carries a D feature, being, thus, able to satisfy the EPP features of these non-substantive categories. For developments of this idea, see Rohrbacher (1992),

³ For a discussion about robustness, see Clark (1992) and Lightfoot (1999).

Speas (1994), Platzack (1995), Alexiadou and Anagnostopoulou (1997, 1998), Vainikka and Levy (1998), Benmamoun (1999) and Kato (1999, 2000), among others.

Alexiadou and Anagnostopoulou distinguish a two types of verbal agreement systems a weak and a strong one. In weak system, verbal agreement affixes (Agr, henceforth) are not independent units the computational component, entering derivations already attaches to their host. A weak, therefore, is arguably not manipulatable by syntactic operations. In a strong system, instances of Agr are listed in the lexicon as separate lexical items, and enter the computational component as independent syntactic units that can be used by syntactic operations. It is particularly suggested that a strong Agr enters a derivation furnished with D-feature, \bar{A} -features and perhaps with Case feature too. Hence syntactically, it is expected to function as a pronominal category.

The authors were concerned mainly with null expletive constructions, and their suggestion is that in grammars with a strong agreement system, a null expletive pronoun is Agr itself. The assumption is that a strong Agr might be merged directly on the head of the Agreement phrase (AGRP), satisfying, thus, the EPP feature of AGR. Hence, when the verb adjoins to AGR, AGR projects, but, since its EPP feature had already being satisfied, it does not project a specifier.

Though they did not explore it, Alexiadou and Anagnostopoulou raised the possibility of replacing referential *pro* by Agr, presupposing that Agr counts as theta bearing argument in Null Subjects Grammars. As already shown in chapter 3 (cf. 3.5.2), Kato (1999, 2000) puts this possibility forward, suggesting that in Romance Pro-Drop languages, a sentence like (5a) is derived as shown in (5b), Agr enters the derivation as

⁴ Cf Rodrigues (2000), where I suggested that Children use the presence of null expletives in matrix clauses as a cue to the availability of A-movement. This suggestion accords to theory I offer here.

the external argument of VP. Being a maximal minimal projection, Agr adjoins to T^0 , where it checks the EPP features of T and its own Case feature. Thus, a projection of a specifier inside the TP is prevented.

- (5) a. *viajó*
 traveled-3sg
 ‘S/he traveled’
- b. $[TP [T' [T \text{ viaj}_2 - [Agr \text{ o}]_1 + T] [VP \text{ } t_1 \text{ } t_2]]]$

As Kato observes, this analysis presupposes that DPs overt pronouns in subject positions are instances of doubled subjects in the sense that they double Agr, being generated at the left periphery of the clause, possibly receiving a default Case. That is, according to this treatment overt subjects are left-dislocated DP, and Agr a resumptive subject clitic pronoun.⁵

Assuming this analysis to be on right track and considering the correlation between loss of referential null subjects and weak verbal agreement morphology in BP and Finnish (cf. chapter 3),⁶ I hypothesize that in these grammars Agr became $\bar{\lambda}$ -defective, being unable to instantiate person&number distinctions (for discussion on BP, see Galves 1996 and Kato 1999) and, as a consequence, was reanalyzed as part of verb, losing its syntactic independence. However, I presuppose that BP and Finnish Agrs still have a D-

⁵ For evidence that Romance and Greek preverbal subjects surface at the left periphery of the clause, see Barbosa (1995), Ordóñez (1997) and Alexiadou and Anagnostopoulou (1997), among others.

⁶ It is important to remark, though, that in my proposal, the $\bar{\lambda}$ -features of Agr might not have phonological realization. Hence, Agr is an empty pronominal category. This will be proposed in chapter 6, where I will consider null possessors in Romance.

João/Jukka needs to be first merged within the embedded clause, and then moved to the matrix clause. Moreover, this movement may not involve spec of TP.

- (7) a. João₁ disse que *e*₁ comprou um carro. (BP)
the João said-3Sg that brought-3Sg a car
 ‘João said that he will come tomorrow’
- b. Veljeni₁ oli niin iloinen ettei *e*₁ voinut nukkua (Finnish)
brother-1stPx be-3SgPres so happy that-not-3Sg could sleep-Inf
my-Gen brother-Nom be-3SgPres so happy that-not-3Sg could sleep-Inf
 ‘My brother was so happy that he couldn’t sleep’

4.2.2 Deriving Embedded Null Subjects by Movement

If the empty subjects in (7) are the result of movement, then two questions arise:

(i) How can a DP receive more than one \square -role? (ii) How can a DP check more than one structural Case? The first question can be answered by assuming that \square -roles are features and that there is no upper bound on number of \square -roles a Dp can have. The second reason is more complex since it is standardly assume that a DP checks structural Case only once.

I provide an answer to this question without overgenerating, I assume that Case-checking accords to (8):

- (8) a. A structural Case feature is checked in a spec-head relation

b. Agreement in ϕ -features prompts movement to check Case

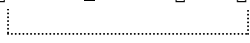
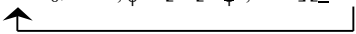
(8a) revamps Chomsky's (1993) proposal, according to which, a DP could check its Nominative Case against a functional Category only if it had moved to the spec of that functional category, checking thus the EPP feature related to the functional head. For example, a DP checks Nominative Case against T only after having moved to spec of TP, checking the EPP feature of T. In his recent proposals (2000 and thereafter) however, Chomsky disassociates Case checking from EPP checking, and correlates Case with agreement in ϕ -features. This correlation is expressed through the following technical mechanism: if a functional head H (a probe) has uninterpretable ϕ -features, H probes its domain looking for a goal, an element with an identical (identical in the choice of the features, not in their values) set of ϕ -features. As soon as the goal is found, the operation Agree takes place, deleting the ϕ -features of H and the Case feature of the goal. If H also has an EPP feature, the goal is pied-piped and merged with HP.

I maintain the correlation between agreement in ϕ -features and Case checking, but I retain the 'old' idea that structural Case is checkable only in a spec-head configuration. To do so, I assume (8b): a goal can move to the specifier of a probe and check its Case feature only if they both agree in ϕ -features. Intuitively, the idea is that Case is a feature that allows an element to enter a functional projection. What ϕ -feature agreement does is to identify the element before 'opening the door'.

To give a concrete example of how this works, consider the sentence in (10). The relevant step in the derivation of (9) is represented in (10a). *John* was merged with up,

checking the theta role of \bar{v} . When T was inserted, T established agreement with *John*, and the $\bar{\phi}$ -features of T was deleted. But the Case feature of *John* was not deleted because it requires *John* to enter TP. The movement per se has already been authorized since T and *John* agreed in $\bar{\phi}$ -features. Note that the raising of *John* is also demanded by the EPP feature of T. When *John* moves to [spec TP], its Case feature and the EPP feature of T is checked, forming a convergent phrase marker (10b):

(9) John left

- (10) a. $[TP [T_{\bar{\phi}, EPP}] [VP John_{\bar{\phi}, Case, \bar{\phi}-F} [\bar{v}' left_{\bar{\phi}}]]]$

- b. $[TP John_{\bar{\phi}, Case, \bar{\phi}-F} [T' [T_{\bar{\phi}, EPP}] [VP t [\bar{v}' left]]]]$


If the grammar works like this, the null subjects (7) are derived as exemplified below. The Deveriation of (7a), repetead here as (11), starts with the numeration in (12).

- (11) João₁ disse que *e*₁ comprou o carro
João said-3^{Sg} that bought-3Sg the car
 ‘John said the he bought the car’

- (12) Num = {T₂, o₁, João₁, disse₁, que₁ comprou₁, o₁, carro₁, \bar{v}_1 ,}

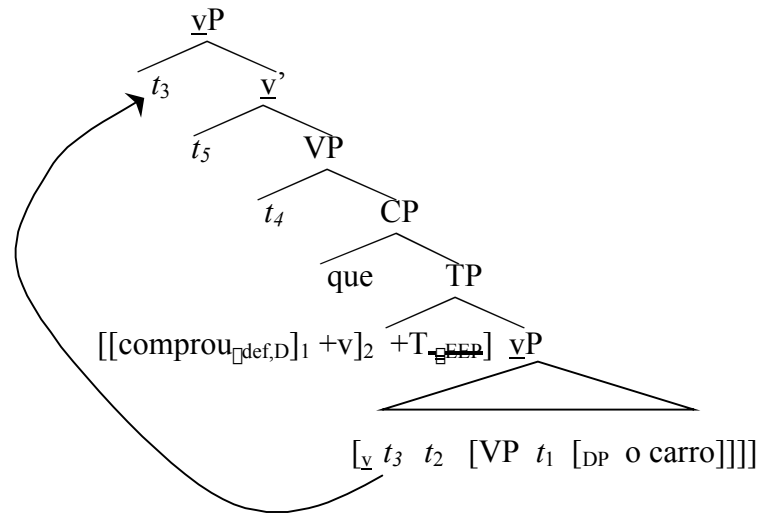
The verb *comprou* merges with its internal argument, the DP *um carro*, which checks the $\bar{\lambda}$ -role of the verb. This merge forms the embedded VP. When \bar{y} is selected, V adjoins to \bar{y}^0 . Next, the DP *o João* is built and merged with $\bar{y}P$, checking the $\bar{\lambda}$ -role of \bar{y} . At this step of derivation of embedded $\bar{y}P$ (cf. (13a)) is formed. After that, T is selected and the complex [*comprou*+ \bar{y}] adjoins to T^0 , carrying Agr that has a defective set of $\bar{\lambda}$ -features and a D-feature. Thus, Agr checks the EPP feature of T, but not the $\bar{\lambda}$ -features, which probe the complement domain of T, looking for a goal. The DP *o João* in [Spec, VP] is localized and the agree operation takes place, deleting the $\bar{\lambda}$ -features of T (13b):

- (13) a. $[_{VP} [_{DP} \text{ o João}]_{\bar{\lambda}, \text{Case}, \bar{\lambda}} [_{V'} [_{V} [\text{comprou}]_{\bar{\lambda}\text{-def}, D}]_1 +\bar{y}] [_{VP} t_1 [_{DP} \text{ o carro}]]]]]$
- b. $[_{TP} [_{T} [_{V} [\text{comprou}]_{\bar{\lambda}\text{-def}, D}]_1 +\bar{y}]_2 +T_{\text{EPP}}] [_{VP} [_{DP} \text{ o João}]_{\text{Case}, \bar{\lambda}} [_{V'} t_2 [_{VP} t_1 [_{DP} \text{ o carro}]]]]]]]$

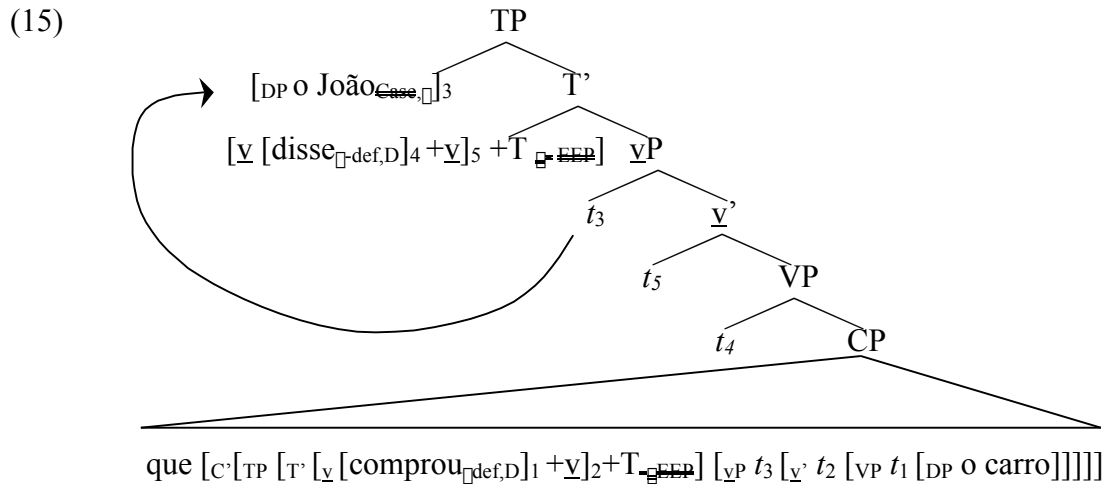
At this point of the derivation, the system can either move the DP *o João* to [spec, TP] and consequently check its Case feature or continue the derivation by merging the next item in the numeration, namely the complementizer *que*. The Case of the DP demands the movement, but, if the DP is moved, it becomes inactive for further computation, and the derivation will crash at the matrix level because there will be no item available to check the external theta role of the matrix \bar{y} and the $\bar{\lambda}$ -features of T. On the other hand, if the system continues the derivation by selecting and merging the complementizer *que*, delaying thus the deletion of the Case feature of *o João*, the derivation converges. At the

stage represented in (14), the numeration contains only a T. Hence, to check the matrix external theta role, the system must apply move, copying the *o João* and merging the copy with the matrix $\underline{v}P$:

(14)



When the matrix T is inserted, the complex $[disse+\underline{v}]$ adjoins to T^0 , Agr checks the EPP feature of T, but fails to delete the \square -features of T. These agree with the copy of *o João* in the matrix $[spec, \underline{v}P]$. The DP *o João* is now pied-piped and merged with TP, checking its Case feature. The convergent phrase marker in (15) is sent to the interfaces.

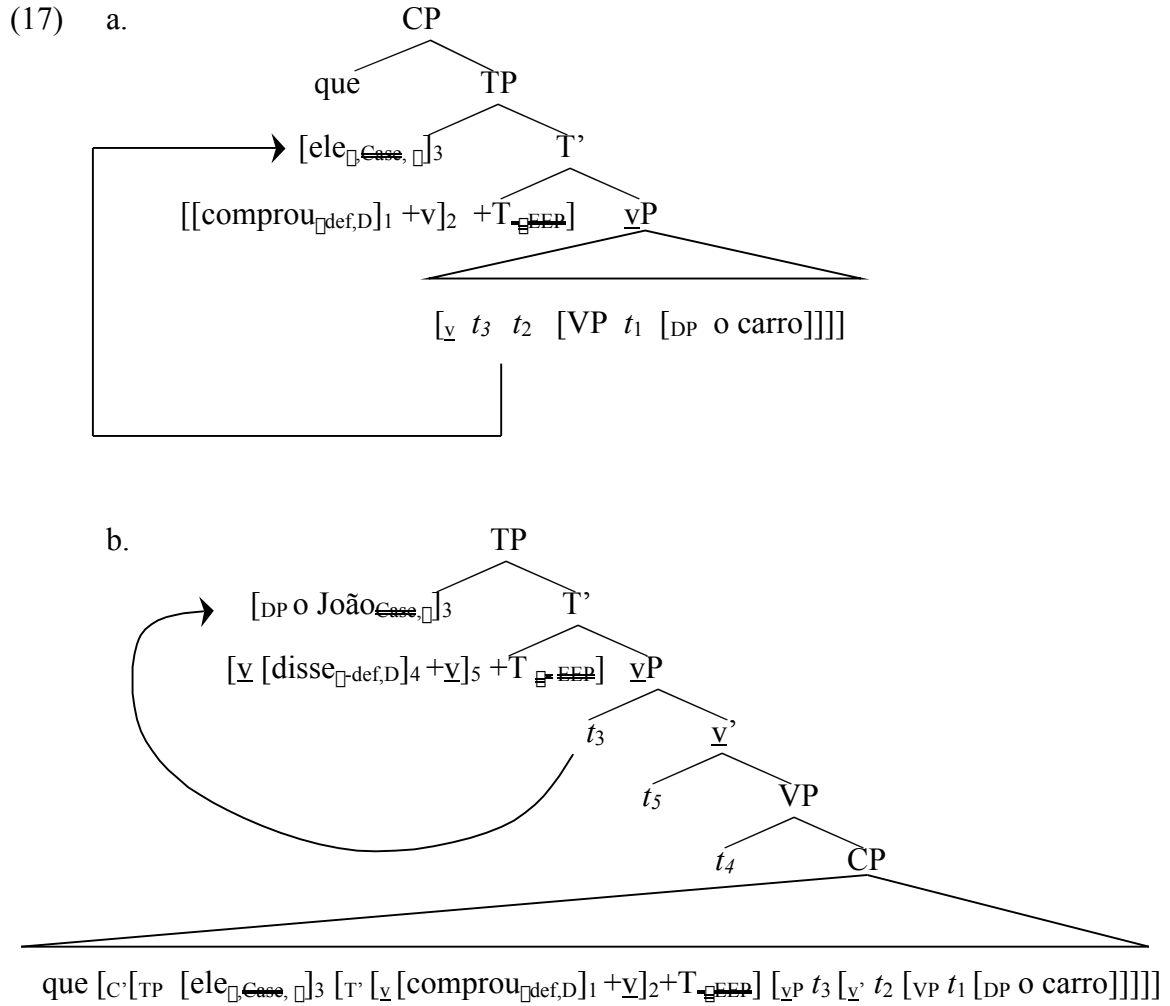


Consider now a case in which an overt pronoun is inserted as the subject of the embedded clause, as in (16).

- (16) a. O João₁ disse que ele_{1/2} comprou o carro
João said-3^{Sg} that he bought-3Sg the car
 'John said that he bought o car'

The first relevant step of the derivation of (16) is the one in (17a). The embedded clause has been constructed and the pronoun *ele* was selected from the numeration and inserted as the external argument of \bar{v} . When T entered into the derivation, the complex $[\bar{v}[\textit{comprou} + \bar{v}]]$ adjoins to T^0 and Agr checks the EPP features of T, but not the $[\bar{v}]$ -features. Hence, T agrees $[\bar{v}]$ -features with *ele* and, as a result, the pronoun can move to [spec, TP] and check its Case. If Move does not apply at this point, the derivation would not converge. The Case feature of *ele* would remain unchecked since at the matrix level,

the DP *o João* is inserted as the subject. Therefore, the only way to ensure convergence is by moving the pronoun *ele* to [spec, TP], forming the CP represented in (17a). At the matrix level, *o João* is inserted in [spec, \bar{y} P], getting the theta role assigned by \bar{y} , and then moving to [spec, TP] to check its own Case feature, as depicted in (17b):



In brief, the analysis proposed here accounts for the presence of null subjects in BP and Finnish by taking them to be formed via category movement. The loss of

referential null subjects in these grammars is due to the fact that Agr lost its status as an independent D item, being demoted to a verbal affix, conserving its D-feature, but having undergone degradation of \bar{A} -features. Movement of the external argument of an embedded VP to the subject position of an immediately higher clause is possible because, in the current stage of BP and Finnish, V moves to T, carrying Agr, which checks the EPP-feature of T. Technically, it was suggested that the system can delay the movement of a DP to the spec of a functional projection to check Case.

4.1.2 CP as a Phase and Intermediate Movement

In the analysis proposed above, a DP can move directly from an embedded \bar{A} -domain to a non-embedded one. But this movement is rather suspicious because it is too long and finite clauses are standardly taken to be opaque domains for extraction unless the movement proceeds cyclically through spec of CP, as in wh-movement. Putting it in recent Minimalist terms, in (14), the DP-movement to the spec of the matrix $\bar{y}P$ should be considered illicit because the embedded CP is a phase (cf. Chomsky 2000, 2001a, 2000b) and only the head and the border (specs) of a phrase are visible for computations outside that phase, in accordance with the Phase Impenetrability Condition.

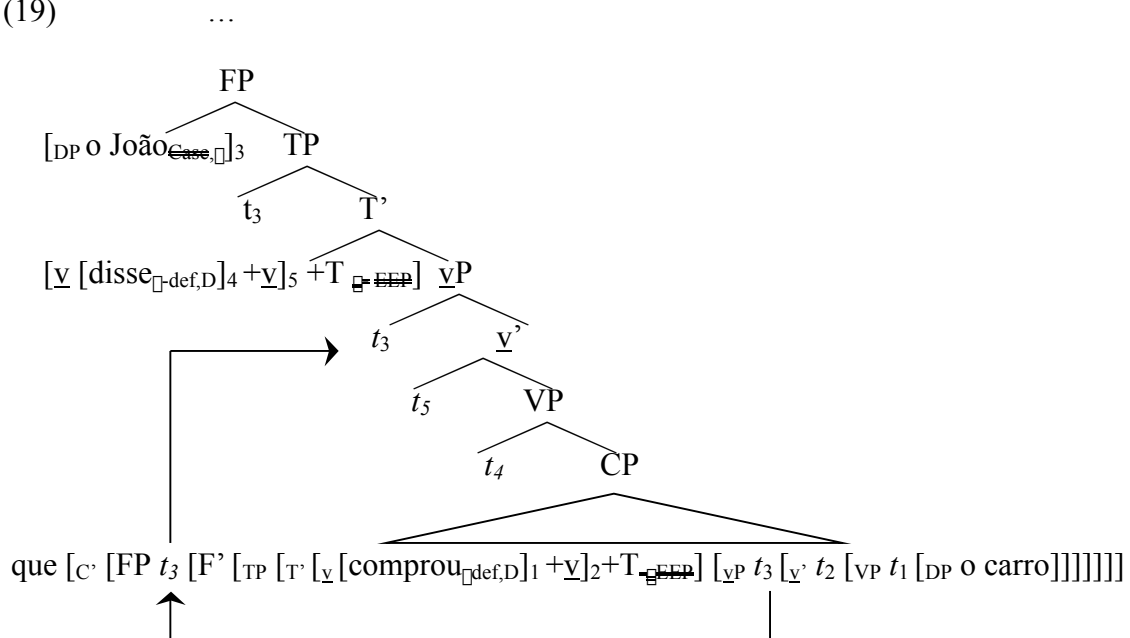
(18) *Phase-Impenetrability Condition* (Chomsky, 2000: 108)

In phase $\bar{\alpha}$ with head H, the domain of H is not accessible to operations outside $\bar{\alpha}$, only H and its edge are accessible to such computations.

One way to make the movement analysis proposed here compatible with the phase approach is to do the following: modify the left periphery of the embedded structure in (14) such that it can host an intermediate A-movement of the extracted DP. Second, refine the phrase-impenetrability condition with respect to extraction out of a left periphery

Uriagereka (1988, 1995, and 1997) proposes that in Romance western languages TP is dominated by a functional projection FP. I will extend this proposal to BP and Finnish, suggesting that in these grammars subjects might move to spec of FP.⁸ Hence, the left periphery of the embedded clause in (14) contains a FP and it is plausible that the DP *o João* moves to its specifier before moving to matrix clause, as represented in (19).

(19)



⁸ Raposo and Uriagereka (1995, 2002) assume that spec of FP is spell-out position of Romance preverbal subjects.

Chomsky's formulation of phases is neutral on the possibility of having extra projections inside the CP domain. He assumes the abstract structure in (20), and suggests CP and \bar{v} P are strong phases, whereas TP and VP are weak phrase (cf. 2000b). In addition, he proposes that a strong phase is evaluated and spelt-out when the derivation reaches the head of the next strong phase. Therefore, in (20) when the computational system reaches the embedded \bar{v} P, the material below C^0 (i.e. the TP phrase) is evaluated and spelled-out, being, therefore, not available for computations outside CP. That is, nothing below C^0 can be used to build the upper VP shell.

(20) [\bar{v} P [VP [CP [TP [\bar{v} P [VP...]]]]]

In (19) above the embedded CP domain contains an extra projection and material immediately contained by this projection is available for computations outside the CP, so we need further clarification.

As proposed in Lightfoot and Rodrigues (20003), the phrase-impenetrability condition can be defined in such way that inside the domain of a strong phase (HP) only sub-domains that are themselves phases are not accessible to operations outside HP. That means that when spell-out applies, it applies to phases, leaving behind elements of the structure that are not dominated by the head of the phase that is being spelled-out. If this is correct, in (20) the embedded TP is part of the domain of the head of the strong phase CP, and it is a phase; therefore, when the system reaches \bar{v} P, CP is evaluated and TP, being a phase, is spelled-out.

If the spell-out process of phases is understood in this way, in (19), the movement of the DP *o João* from spec of FP to the spec of the matrix vP is not an issue. When the derivation reaches the matrix vP, CP is evaluated, and spell-out applies, sending TP, which is phase, to the interfaces, but not FP, because FP is not phase. This means that the material in FP is accessible for computation at the $\bar{v}P$ level.

In summary, in this section I suggested that the A-movement under consideration in this thesis might procede in a cyclically way, though spec of FP, and left periphery Functional Category. This suggestion couple with Lightfoot and Rodrigues' interpretation of the spell-out process of phases suggests that the movement analysis defended here is ompatible with the concept of phases.

In what follows, for the sake of the space, I will put this this intermediate movement aside, omitting the FP functional projection on the representations. Thus, from now on, the A-movement under consideration will be represented as if it were directly from one $\bar{\square}$ -domain to another.

4.3 Evidence for a Movement Analysis

This section provides evidence of movement. The main arguments are: (i) the null subjects under consideration have anaphoric behavior, requiring a sentential antecedent; (ii) the relationship between a null subject and its antecedent obeys the Minimal Link Condition, the antecedent being the closest c-commanding DP; (iii) In BP null subjects fail the resumption test, being unable to occur inside relative clauses. In Finnish null

subjects can occur inside relative clauses but only because the nominal head of the relative clause may undergo object shift; (iv) BP and Finnish null subjects display all the diagnostics used to characterize obligatory control as the residue of movement. Moreover in BP null subjects are not allowed in clauses after the connective *como* which is arguably a left branch, occupying a specifier positions inside of a DP (Torrego and Uriagereka 1995).

4.3.1 Anaphoric Behavior

A crucial difference between the sentences below is that the null subjects are provided with an antecedent in (21), but not in (22):

- (21) **e* estava cansado
 was-3Sg tired-Sg

- (22) O João₁ disse que *e*₁ estava cansado
 the João said-3Sg that was-3Sg tired-Sg
 ‘João said that he was tired’

Notice that in (22), the empty subjects must refer back to the matrix subject and cannot take a discourse referent. This anaphoric behavior is confirmed by the unacceptability of (23) in which a proper antecedent is not available:

(23) * pro_{expl} parece que *e* tinha telefonado

seem-3Sg that had-3Sg called

‘It seems that s/he had called’

In the Pro-drop Romance languages, represented here by European Portuguese, null subjects are free in reference. Thus, they can appear in matrix clauses, being interpreted as referring to an entity mentioned in the discourse. When they appear in embedded clauses (24), they are ambiguous in reference, being interpreted either as coreferential with a DP in a higher clause or as related to some person identifiable in the discourse.

(24) O Pedro₁ disse que $pro_{1/2}$ ganhou na loto

the Pedro said-3Sg that won-3Sg in.the lottery

‘Pedro said that s/he won the lottery’

(EP - Modesto, 2000)

The 19th-century BP seems to behave like European Portuguese in that embedded null subjects are free in reference:

(25) *e* creio que *e* teve aviso

believe-1Sg that had-3Sg warning

‘I believe that he was informed’

(Martins Pena 1844, O Judas no Sábado de Aleluia)

Chomsky and Lasnik (1993) remark that a [+anaphor] empty category, i.e. NP-trace, gets its reference from an antecedent, while a [+pronoun] empty category, pro/PRO, can have reference on its own, although its reference may also be determined by an antecedent. Thus, in the Pro-drop Romance languages (24) and in 19th-century BP (25), null subjects behave as a [+pronoun] empty category (pro). In modern BP and Finnish, on the other hand, null subjects are identified as [+anaphor] empty categories, therefore as NP-traces, according to Chomsky and Lasnik's classification.

4.3.2 Locality Matters

Chomsky (1995b: 311) suggests that the definition of Move incorporates the property in (26), where closeness can be defined as in (27):

(26) Minimal Link Condition (MLC)

K attracts α only if there is no β , β closer to K than α , such that K attracts β .

(27) Closeness

α is closer to K than β if α c-commands β , and α is not in the same minimal domain as β or γ , where γ is the target of raising.

(Chomsky, 1995b: 335-6)

These definitions were included because in BP the antecedence relationship

between a 3rdP null subjects and a DP obeys the MLC, the antecedent being the closest c-commanding DP. In (28a,b) for instance, the DP *o Paulo* cannot be the antecedents because they do not c-command the null subjects. In (29a,b), the matrix subjects fail to be the antecedents because the subjects of the higher embedded clause intervene:

- (28) [o pai do Paulo₁]₂ disse que *e*_{1/2}* vai ser promovido

the father of.the Paulo said-3Sg that will be-Inf promoted

‘João said to Paul that he will be promoted’

- (29) a. O Paulo₁ me contou que o João₂ disse que *e*_{1/2}* vai ser promovido

the Paulo me told-3Sg that the João said-3Sg that will-3Sg promoted

‘Paulo told me that João said that he (João) will be promoted’

Again, in the Pro-drop Romance grammars, when a null subject is interpreted as co-referential with a higher DP, the relation is not subject to the MLC. In (30a) and (30b), for instance, the null subject can take the DP *o Pedro* as its antecedent:⁹

- (30) a. [O amigo do Pedro₂] disse que *pro*₂ ganhou na loto

the friend of.the Pedro said-3Sg that won-3Sg in.the lottery

‘Pedro’s friend said that s/he won the lottery’

⁹ In European Portuguese, there is a strong preference for the readings in which the null subject takes the whole DP *o amigo do Pedro* in (30a) and the DP *o Paulo* in (30b) as its antecedent (João Costa, personal communication). As discussed in Calabrese (1986), this strong preference is also observed in Italian. Thus, the real contrast between Romance null subject languages and BP and Finnish seems to be the fact that in the former the co-indexation in (30a) and (30b) is possible, though dispreferred; while in the latter it is impossible.

- b. O Pedro₁ disse que o Paulo acredita que pro₁ ganhou na loto
the Pedro said-3Sg that the Paulo believe-3Sg that won-3Sg in.the lottery
 ‘Paulo said that Pedro believes that s/he won the lottery’
 (EP - Modesto, 2000)

The 19th-century BP is like European Portuguese in that the co-indexation between a null subject and a DP does not obey the MLC.¹⁰ In (31), for instance, the null subject inside the adjunct clause is not c-commanded by its antecedent *senhor*, and the closest potential antecedent is the 1stP null subject of the matrix clause:

- (31) E do senhor pro queixo me, porque da primeira vez pro
and of.the sir complain-1Sg me because of-the first time
 abusou da minha posição.
abused-2Sg of.the mine position
 ‘And I complain about you, sir, because the first time you took advantage of my position.’
 (Martins Pena 1844, O Judas no Sábado de Aleluia)

The restrictions in (28) and (29) follow straightforwardly if the null subjects are formed by movement. The antecedent of the subject must be the closest c-commanding DP because the MLC is a locality condition on movement. (29a,b) is parallel to the super-

¹⁰ It may be worthy to mention that data from 19th -century BP suggest that at that time there are at least two competing grammars in the sense of Kroch (1988): one was pro-drop and the other one was non-pro-drop. The non-pro-drop replaced the pro-drop at the beginning of the 20th century. On this topic, see Lightfoot and Rodrigues (2003).

raising construction in (32). In (29a,b), the DPs *o Paulo* and *Jukka* cannot be the antecedents because movement to the matrix subject position would cross over the subjects of the intermediate clauses. (32) is ungrammatical for the same reason: the subject of the intermediate clause intervenes, blocking the movement of the DP John towards the matrix subject clause.

(32) *John₁ seems that it is likely t₁ to win

4.3.2.2 Potential Interveners

4.3.2.2.1 Crossing Over a Subjectless Clause

The comparison made with (32) above brings forward an intriguing property of the null subjects under discussion. As show in (33), a clause containing a raising predicate may in fact intervene between the null subject and its antecedent:

- (33) a. A Maria₁ me disse que parece que e₁ vai ser promovida
the Maria me told-3Sg that seems-3Sg that will-3sg be-Inf promoted
 ‘ Maria told me that it seems that she will be promoted’
- b. Jukka₁ sanoi, että oli onni, että e₁ oli arpajaisissa
Jukka₁-Nom said-3sg that be-3sg fortune that pro₁ was-3sg won

voittanut

lottery-In

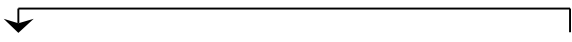
‘Jukka said that it was fortunate that he had won the lottery’

Moreover, the raising verb might not agree in $\bar{\lambda}$ -features with the matrix subject (cf (34)).

This suggests that that the movement from the inner to the upper subject position may not involve the sentential subject position of intermediate clause.

- (34) *? Os meninos₁ me falaram que parece que *e*₁ vão ser promovidos
the boys-Pl me told-3Pl that seem-3Sg that will-3Pl be-Inf promoted
 ‘The boys told me that it seems that they will be promoted’

If the movement analysis I am proposing is on the right track, the structure of (2) involves a long movement, as represented in (3). The DP *os meninos* is base generated inside the lowest clause and moves directly to the matrix clause, crossing over the upper embedded clause.

- (35) 
 [[os meninos] me falaram [CP que parece [CP que *t* vão ser promovidos]]]
the boys-Pl me told-3Pl that seem-3Sg that will-3Pl be-Inf promoted

This analysis poses a fundamental question about the sentential subject position of raising predicates. If there is a phonetically null expletive occupying this position, in

(35) the movement of *os meninos* ‘the boys’ would violate Minimality. The expletive occupies a Case Position, hence a position in which the DP under movement could have checked its Case feature had it not been taken by the expletive. On the other hand, if null expletives in BP and Finnish (as well in grammars like Romance and Greek) does not exist as independent lexical items, as we hypothesized in 4.2.1, then there is no intervening Case position in (35) and, consequently, the long movement represented does not violate Minimality.

According our hypothesis, Agr are BP and Finnish are able to satisfy the EPP feature of TP. Thus, in (35) the spec of the intermediate TP is not projected, and the DP under movement does not cross over a specified subject. The sentential EPP feature of intermediate TP is satisfied by Agr, which is assumed to have a D-feature.

4.3.2.2.2. Referential Expressions Blocking Movement

As I briefly showed at chapter 3 (3.5.2.1), in Brazilian Portuguese, a preverbal locative adverb has the effect of blocking coreference between a null subject and a higher DP. In (36), for example, since the locative adverb *na praia* ‘on the beach’ intervenes, the embedded clause is understood as a generic statement with a missing subject. Notice that if we demote the locative adverb to a lower adjunct position, then coreference becomes possible, as shown in (37):

- (36) João me contou que na praia *(e_1) vende cachorro quente

João me told that at.the beach sell-3Sg dog hot

‘João told me that hot dogs are sold at the beach’

‘João told me that he sells hot dogs at the beach’

- (37) João me contou que e_1 vende cachorro quente na praia

João me told that sell-3Sg dog hot at.the beach

‘João told me that he sells hot dog at the beach’

‘João told me that hot dogs are sold at the beach’

Vainikka and Levi (1999), citing Kakulinen (1976), show that Finnish displays the same blocking effect. While in (38) the null subject is coreferent with the matrix subject, in (4) the coreference is blocked and the embedded clause is interpreted as a generic statement. The only difference between (38) and (39) is the left dislocation of the direct object in (39):

- (38) Oppilas₁ tietää ettei e_1 pysty ratkaisemaan tehtävää

student-Nom know-3Sg that.not-3Sg can-3Sg solve-Inf assignment-Par

‘The student knows that he cannot solve the assignment’

‘The student knows that one cannot solve the assignment’

- (39) Oppilas₁ tietää ettei tehtävää pysty ratkaisemaan
student-Nom know-3Sg that.not-3Sg assignment-Par can-3Sg solve-Inf

‘The student knows that one cannot solve the assignment’

‘The student knows that he cannot solve the assignment’

The contrast in (36) and (37) indicates that locative adverbs, like a displaced verbal complement (38) and (38) can block A-movement out an embedded finite clause. I will take these elements to be in spec FP. Therefore, if CP is a phase, in the examples above, the matrix DP subject couldn’t be extracted from inside the embedded clauses because the scape hatch from the CP domain, viz. spec of FP, is already occupied by another consitituent.

Note that only referential expression is able to create the blocking effect under discussion. In (40), for instance, a temporal adverb is placed in a preverbal position, but its does interact with movement of the DP *o João*.

- (40) O João₁ me contou que todos os dias *e₁* vende cachorro quente na praia
the João me told that every the days sell-3Sg dog hot at.the beach

‘João told me that he sells hot dogs at the beach every day’

4.3.3 Obligatory Control Properties

As shown in section 2.4, Hornstein (1999, 2001) proposes that obligatory control configurations (OC) are formed by movement. For expository purposes, I repeat here the core of his proposal. The sentence in (41a) has the structure in (41b). The DP *John* is first merged as the external argument of the verb *win*. In this position, *John* receives the winner $\bar{\lambda}$ -role. After that, *John* moves to the spec of the embedded infinitival TP to check the relevant EPP feature. When the matrix VP is built, the same DP moves to spec of the matrix clause to check the external $\bar{\lambda}$ -role of *hope*. Finally, a TP is projected on the top of the structure and *John* moves spec of TP, where it checks its Case feature.

- (41) a. John hopes to win
- b. $[_{TP} \text{John}_{\bar{\lambda}} \text{Nom} [_{T'} [_{VP} \text{John}_{\bar{\lambda}} \text{Case}] [_{\text{hopes}} [_{TP} [_{\text{John}}_{\bar{\lambda}} \text{Case}] \text{to} [_{T'} [_{VP} \text{John}_{\bar{\lambda}} \text{Case}} \text{win}]]]]]]]]]$

I will not go into details here (see 2.4.3), but it is worth recapitulating Hornstein's evidence for a movement analysis. In cases of obligatory control, (a) the controlled element is anaphoric, taking the closest c-commanding NP as its antecedent, (b) split antecedents are not allowed, (c) a de se reading is forced and (d) if the closest c-commanding NP has the format only-NP, then only a covariant interpretation is possible.

In what follows, I show that modern BP and Finnish 3rdP embedded null subjects display all these properties:¹¹

¹¹ For a discussion about OC and the loss of inflected infinitives in Modern BP, see Pires (2001).

First, as already shown, these null subjects require a sentential antecedent, which must be the closest c-commanding DP.

- (42) a. * Parece que *e* saiu
seem-3Sg that left-3Sg
 ‘It seems that he left’
- b. [O pai do Paulo₁]₂ disse que *e*_{*1/2} vai ser promovido
the father of.the Paulo said-3Sg that will-3Sg be-Inf promoted
 ‘Paulo’s father said that he will be promoted’
- c. O Paulo₁ sabe que o João₂ disse que *e*_{*1/2} tinha de sair
the Paulo know-3Sg that the João said-3Sg had-3Sg of leave-Inf
 ‘Paulo knows that João said that he had to leave’
- (43) a. * Vaikuttaa siltä että *e* oli oittanut
seem-3Sg it that had-3Sg called
 ‘It seems that s/he had called’
- b. [Veljeni₁ vaimo]₂ oli niin iloinen, ettei *e*_{*1/2} voinut
brother-Gen1stPx wife-Nom was-3Sg so happy that-not-3Sg could
nukkua
sleep-Inf
 ‘My brother’s wife was so happy that she couldn’t sleep’
 (Vainikka and Levi, 1999)

- c. Jukka₁ sanoi että Pekka₂ ajattelee että $e_{*1/2}$ oli voittanut
Jukka-Nom said-3Sg that Pekka-Nom think-3Sg that had-3Sg won
 arpajaisissa
lottery-In
 ‘Jukka₁ said that Pekka₂ thinks that he (Pekka) had won the lottery’

Figueiredo Silva (1996) reports a prohibition against split antecedents in modern BP (44), and Gutman (1999) and Vainikka and Levi (1999) report the same prohibition in Finnish (45).

- (44) *A Maria₁ disse que o João₂ acredita que e_{1+2} vão morar juntos
the Maria said-3Sg that the João believe-3Sg that will-3Pl live-Inf together
 ‘Maria said that João believes they will live together’

- (45) *? Pekka₁ kysyi vaimoltaan₂ voiovatko e_{1+2} mennä Espanjaan
Pekka-Nom asked-3Sg wife-Abl-3Px can-3Pl-Q-Cl go-Inf Spain-III
 Lomalle
vacation-All
 ‘Pekka asked his wife if they can go to Spain for a vacation’

Notice that the unacceptability of (44) and (45) contrasts with the acceptability of (46) and (47), in which an overt pronoun was inserted in the embedded subject position.

Hence, overt pronouns allow split antecedents, but null subjects do not:

- (46) A Maria₁ disse que o João₂ acredita que eles₁₊₂ vão morar juntos
the Maria said-3Sg that the João think-3Sg that they will-Pl live-Inf together
 ‘Maria said that João believes they will live together’

- (47) Pekka₁ kysyi vaimoltaan₂, viovatko he₁₊₂ mennä Espanjaan
Pekka-Nom asked-3Sg wife-Abl-3Px can-3Pl-Q-CI they-Nom go-Inf Spain-III
 lomalle
vacation-All
 ‘Pekka asked his wife if they can go to Spain for a vacation’

Negrão (1999) shows in BP, that under VP ellipsis, only a sloppy reading is available for an embedded null subject:

- (48) A Maria₁ encucou que e₁ estava grávida e o Paulo também
the Maria worried-3Sg that was-3Sg pregnant and the Paulo too
 (sloppy/*strict/*deictic)
 ‘Maria got worried that she was pregnant and Paulo did too’

(48) is anomalous since the elided part is interpreted as *Paulo* *1* got worried that *he* *1* was pregnant. Note that if an overt pronoun is inserted, the strict reading becomes available.

In (49), for example, the elided part can receive a strict reading, being interpreted as *Paulo got worried that she, Maria, was pregnant*. The pronoun *ela* ‘she’ can also be interpreted as referring to a person not mentioned in the sentence (the deictic reading):

- (49) A Maria encucou que ela estava grávida e o Paulo também
 the Maria got.worried-3Sg that she was-3Sg pregnant and the Paulo too
 ‘Mary got worried that she was pregnant and Paulo did too’

The anomaly observed in (48) is also observed in raising constructions as shown below:

- (50) A Maria₁ parece e₁ estar grávida e o Paulo também
 the Maria seem-3Sg be-Inf pregnant and the Paulo Paulo too
 ‘Maria seems to be pregnant and Paulo does too’

The same interpretative restriction seems to hold in Finnish. In (51a) only a sloppy reading is possible, whereas (51b) allows a strict or a deictic interpretation:

- (51) a. Jukka₁ sanoi että e₁ oli voittanut arpajaisissa, ja niin
 Jukka-Nom said-3sg that had-3sg won lottery-IN and so
 Pekkakin
 Pekka-also
 ‘Jukka said that he (Jukka) had won the lottery and so did Pekka’
 b. Jukka sanoi että hän oli voittanut arpajaisissa, ja niin

Jukka-Nom said-3sg that s/he had-3sg won lottery-IN and so

Pekkakin

Pekka-also

‘Jukka said that s/he had won the lottery and so did Pekka’

With respect to *de se* interpretation, the embedded null subjects of BP and Finnish behave exactly like an obligatory controlled empty category. For instance, in the context given in (52), the BP statement in (53) is false. For (53) to be true, it demands a *de se* belief (cf. Castañeda 1966, Salmon 1986 and Chierchia 1990). That is, *Ronald Reagan* must be aware that it is himself that he believes to be the fortieth president of the United States. Using Cole’s et al. (2001) way to put it, we say that under a *de se reading* the protagonist of the event actually ascribes, or is disposed to ascribe, to himself/herself the property denoted by the predicate containing the empty category or anaphoric element.

- (52) Because of his Alzheimer’s disease, Ronald Reagan cannot remember who he was. One day, reading the newspaper, he read the headline ‘Reagan was the fortieth President of the United States’. After having finished reading the article, Ronald Reagan comes to know that the person called Reagan was the fortieth President of the United States.

- (53) O Ronald Reagan₁ sabe que *e*₁ foi o quadragéssimo presidente
the Ronald Reagan know-3Sg that was-3Sg the fortieth president

dos Estados Unidos

of.the States United

‘Ronald Reagan knows that he himself was the fortieth president of the United Stated ’

Although subtle, there is a contrast between (53) and (54) below. (54) is ambiguous. The pronouns *ele* ‘he’ might refer back to Ronald Reagan, forcing us to attribute a *de se* knowing to this entity, and judge the statement as false given the context in (52). However, the pronoun might refer not to Ronald Reagan, but to Reagan, the name in the headline. Following Higginbotham (1992), I indicate the concept of Reagan as [| the person whom Ronald Reagan is reading about |]. If *ele* refers to Reagan, a *de se* reading does not emerge, and (54) is true even in the context given in (52).

(54) O Ronald Reagan sabe que ele foi o quadragéssimo presidente

the Ronal Reagan know-3Sg that he was-3Sg the fortieth president

dos Estados Unidos

of.the States United

‘Ronald Reagan knows that he was the fortieth president of the United Stated ’

In this sense, null subjects patterns not with overt subject pronouns, but rather with emphatic reflexive forms like *ele mesmo* ‘he himself’. In (55), for instance, the subject of the embedded clause is filled out with the emphatic reflexive form *ele mesmo*

and the statement is unambiguously false if (52) is taken into consideration.

- (55) Ronald Reagan sabe que ele mesmo foi o quadragéssimo
 the Ronald Reagan know-3Sg that he himself was-3Sg thefortieth
 presidente dos Estados Unidos
 president of.the States United
 ‘Ronald Reagan knows that he himself was the fortieth president of the United
 Stated ’

The contrast between a null and an overt subject pronoun becomes acute in (56) and (57) (cf. Chierchia 1990). (56) is a contradiction, whereas (57) is not. In (56) the null subject induces a *de se* reading, which is contradicted by the content of the conjoined sentence. The contradiction disappears in (57) because the overt subject pronoun does not force a *de se* reading.

- (56) # O Ronald Reagan sabe que *e* foi o quadragéssimo presidente
 the Ronald Reagan know-3Sg that was-3Sg thefortieth president
 dos Estados Unidos, mas o Ronald Reagan não sabe que ele mesmo
 of.the States United. But the Ronald Reagan not know-3Sg that he himself

foi o quadragéssimo presidente dos Estados Unidos

was-3Sg the fortieth president of.the States United

‘Ronald Reagan knows that he himself was the fortieth president of the United States, but Ronald Reagan does not know that he himself was the fortieth president of the United States’

(57) O Ronald Reagan sabe que ele foi o quadragéssimo presidente

the Ronald Reagan know-3Sg that he was-3Sg the fortieth president

dos Estados Unidos, mas o Ronald Reagan não sabe que ele mesmo

of.the States United But the Ronald Reagan not know-3Sg that he himself

foi o quadragéssimo presidente dos estados Unidos

was-3Sg the fortieth president of.the States United

‘Ronald Reagan knows that he was the fortieth president of the United States, but Ronald Reagan does not know that he himself was the fortieth president of the United States’

Traditionally attitude report verbs are taken to express relations between agents and propositions (cf. Salmon 1986).¹² Hence, in the sentence above, the matrix verb *saber* ‘know’ express a knowing relation between Ronald Reagan and the proposition ‘x was the fortieth president of the United States’. Therefore, if an overt pronoun is inserted as the subject of the embedded sentence, the x in the proposition can be valued either as

¹² For a different view about propositional attitudes, see Moltmann (2003), who argues that these types of verbs do not express a 2-place relation between an agent and a proposition, but rather an n-place relation between an agent and the constituents of the proposition.

Ronald Reagan or as Reagan. If it is valued as Ronald Reagan, then Ronald Reagan is in a knowing relation with a proposition about himself; therefore, this entity is in a *de se* knowing relation. Conversely, if x is value as Reagan, Ronald Reagan is not in a *de se* knowing relation for he knows a proposition that is about somebody else, mainly the person whom he read about.

Having said that, the question is about (53). Why is it that the presence of a null subject forces us to attribute a *de se* knowing to Ronald Reagan? The movement analysis proposed here gives us a straightforward answer. In the structure of (53), the embedded sentence is *Ronald Reagan foi o quadragéssimo presidente dos Estados Unidos* ‘Ronald Reagan was the fortieth president of the United States’, where *Ronald Reagan* is a copy of the subject of the matrix clause. Therefore, (53) asserts that Ronald Reagan is a knowing relation with the proposition ‘Ronald Reagan was the fortieth president of the United States’. In other words, Ronald Reagan is a knowing relation with a proposition about himself.¹³

Let me turn now to another property of obligatory control configurations: the absence of an invariant interpretation for sentences containing only-NPs.

Higginbotham (1992) observes that the co-indexation of the pronoun *he* in (58) is ambiguous, it either takes *John* as its antecedent (59a), or the antecedent is the whole DP *only John*, as in (19b).

(58) Only John expects [that he will win]

(59) a. [Only [John]₁]₂ expects [that he₂ will win]

- b. [Only [John₁]]₂ expects [that he₁ will win]

The author remarks that the given co-indexations lead to two different readings. (59a) is assigned the covariant interpretation in (60a), whereas (60b) gets the covariant interpretation in (60b)

- (60) a. Only John is an x such that x expects x will win
(Covariant interpretation - (59a))
- b. Only John is an x such that x expects he, John, will win
(Invariant interpretation - (59b))

Negrão (1999) pointed out that the BP sentences in (61) receive different interpretations. While (61a) is assigned the covariant interpretation in (62a), (61b) is assigned the invariant interpretation in (62b):

- (61) a. Só o Maluf acha que *e* vai ganhar as eleições
only the Maluf think-3Sg that will-3Sg win-Inf the elections
- b. Só o Maluf acha que ele vai ganhar as eleições
only the Maluf think-3Sg that he will-3Sg win-Inf the elections
'Only Maluf thinks that he win the elections'

- (62) a. Only Maluf is an x such that x thinks that x will win the elections

¹³ I failed to test the *de se* reading in Finnish.

- b. Only Maluf is an x such that x thinks that he, Maluf, will win the elections

Therefore, we reach the conclusion that in BP a 3rdPerson null subject cannot be co-indexed with the NP contained in the *only-NP* phrase. It must be co-indexed with the whole *only-NP* phrase, as represented in (63a). Conversely, an overt pronoun must be co-indexed with the NP contained in the *only-NP* phrase, as in (63b). According to Higginbotham the restrained co-indexation in (63a) is responsible for the covariant reading in (62a), whereas the restrained co-indexation in (63b) leads to the invariant reading in (62b).

- (63) a. [só [o Maluf]₁]₂ acha que $e_{*1/2}$ vai ganhar as eleições (62a)
 only the Maluf think-3Sg that will-3Sg win-Inf the elections
- b. [só [o Maluf]₁]₂ acha que ele_{1/*2} vai ganhar as eleições (62b)
 only the Maluf think-3Sg that he will-3Sg win-Inf the elections

As already pointed out, (cf. fn. 18, section 3.3.2) BP grammars generally obey Montalbetti's constraint, prohibiting co-indexation between an overt pronoun and a quantifier-like expression. Therefore, if the phrase *only-NP* is a quantified NP, the impossible co-indexation in (63b) might fall within the realm of the Montalbetti's Constraint.

The interaction between Montalbetti's Constraint and impossibility of a covariant

interpretation for a full pronoun in *only-NPs* contexts can be tested. As I mentioned earlier (fn. 18, section 3.3.2), in some dialects of BP the quantifier expression *todo-NP* ‘every-NP’ allows co-indexation with an overt pronoun. Therefore, if *todo-NP* can violate Montalbetti’s constraint, it can be co-indexed with an overt pronoun, triggering, thus, a covariant interpretation. The ambiguity of (64) shows that this is indeed true. (64), similarly to the English sentence in (58), can receive either the covariant (65a) or invariant (65b) interpretation.

- (64) [toda fã da [Carla Peres]₁]₂ acha que ela_{1/2} deve agir como esposa do Xande
every fan of.the Carla Peres think-3Sg that she have-3Sg act-Inf as wife of Xande
 ‘Every fan of Carla Peres thinks that she has to behave as Xande’s wife’

- (65) a. $\Box x (x = \text{a fan of Carla Peres}) x \text{ thinks that } x \text{ has to behave like Xande's}$
 wife
 b. $\Box x (x = \text{a fan of Carla Peres}) x \text{ thinks that she, Carla Peres, has to behave}$
 as Xande’s wife

In sum, with respect to the co-indexing relations between an overt subject pronoun and the terms of a *only-NP*, BP is different from English only in that the former, but not the latter, is subject to Montalbetti’s constraint.

Having discussed the non-occurrence of a covariant interpretation in (61b), we should now ask ourselves about the impossibility of an invariant interpretation for (61a).

(61a), repeated here (66a) allows only the co-indexation in (66b) (= (63a)).

- (66) a. Só o Maluf acha que *e* vai ganhar as eleições
only the Maluf think-3Sg that will-3Sg win-Inf the elections
 ‘Only Maluf thinks that he win the elections’
- b. [só [o Maluf]₁]₂ acha que *e*_{*1/2} vai ganhar as eleições

According to the proposal I am defending here, the gap in (66) is not a null pronoun, but a salient copy of its antecedent. Therefore, the antecedent cannot be the DP *o Maluf* because this DP does not c-command anything outside the containing phrase *só o Maluf*. Conclusion, the antecedent, i.e. the moved element in (66), must be the whole quantifier phrase *só o Maluf*.

Finnish is not subject to Montalbetti’s constraint, as shown in (67).¹³

- (67) a. Kukaan₁ ei luule, että hän₁ on fiksu
anybody-Nom not-3S believe that he is-3Sg smart
 ‘Nobody thinks that he is smart’

¹³ Tor Ashan (personal communication) pointed out me that the sentence (67a) is unusual in Finnish. Instead of a full finite embedded clause, native speakers prefer a participial embedded clause, as exemplified in (i).

(i) Kukaan₁ ei luule olevansa₁ fiksu
anybody-Nom not-3Sg believe be-Part.3Sg smart
 ‘Nobody thinks that he is smart’

- b. Joka tyttö₁ luulee, että on totta, että hän₁ on
every-Nom girl-Nom think-3Sg that is-3Sg truth-Part that she is-3Sg
 täydellinen
perfect
 ‘Every girl thinks that it is true that she is perfect’

Therefore, (68a) can receive either an invariant or a covariant interpretation; the pronoun *hän/se* ‘he’ being co-indexed either with *Jukka* or with *vain Jukka*. In (68b), as predicted by the movement analysis proposed, only a covariant interpretation is possible: the gap in the embedded subject position must take the whole quantifier phrase *vain Jukka* as its antecedent.

- (68) a. [vain [Jukka₁]]₂ ajatteli että hän(se)_{1/2} oli voittanut arpajaisissa
only Jukka-Nom though-3sg that he was-3sg won lottery-In
 (Covariant/ Invariant)
- b. [vain [Jukka₁]]₂ ajatteli että e*_{1/2} oli voittanut arpajaisissa
only Jukka-Nom though-3sg that be-PAST-3sg won lottery-In
 (Covariant/ *Invariant)
 ‘ Only Jukka thinks that he had won the lottery’

- b. Veras **como** tu madre llevaba razon (Parataxis)

see-Fut-2Sg how your mother took-3Sg right

‘You will see how your mother was right’

Their analysis predicts that, while the computational system can produce syntactic dependencies across *que*, syntactic dependencies across *como* are not possible because the clause after *como* is not syntactically connected to the chief phrase marker, remaining as a separate text throughout the derivation. This prediction is borne out, as the authors show. Dependencies such as wh-movement (71a), predicate raising (71b), neg-raising (71c), licensing of polarity items (71d), and bound variable binding (71e) are fine with the connective *que*, but not with the connective *como*.

- (71) a. Qué os enseñó que/*como estaba escribiendo
what you-cl showed-3Sg that/ how was writing
 ‘What did s/he show to you that/* how s/he was writing’
- b. A punto de llorar vieron que/*como estaba
up of cry-Inf saw-3Pl that/how was-3Sg
 ‘Up to crying, they saw that/*how s/he was’
- c. No verás que/*como diga la verdad jamás
not see-Fut-3Sg that how say-3Sg the truth never
 ‘You will see that/*how she never says the truth’

- d. No verás que/*como venga bicho viviente

not see-2Sg that how arrive-3Sg bug living

‘You won’t see a soul coming’

- e. Nadie ve como es tonto

nobody see-3Sg how is-2Sg stupid

‘Nobody sees how he is stupid’

The behavior of the BP *como* is similar to its Spanish counterpart. As shown in (72), all the restrictions illustrated in (71) are observed in Brazilian Portuguese (cf. (72)), except for predicate and neg-raising, which, according to my own judgements, are unacceptable independently of the connective chosen.

- (72) a. [o que]₁ a Maria não é capaz de ver que/*como ela está fazendo
what the Maria not is-3sg able of see-Inf that how she is-3Sg doing
errado *t*₁

wrong

‘What is Mary not able to realize that she is doing wrong’

- b. Ele nunca vai ver que/*?como nada está acontecendo na
he never will-3Sg see-Inf that how nothing is-3Sg happening in-the
vida dele

life of-he

‘He will never see that nothing is going on in his life’

- c. Ninguém vê que/*como é parte do sistema
nobody see that how is-3sg part of.the system
 ‘Nobody sees that he is part of the system’

But, there are two striking differences between BP and Spanish: First, while in Spanish the sentence after *como* cannot be introduced by an overt complementizer, in BP the presence of an overt complementizer does not alter the acceptability of the sentence.

- (73) a. *Juan explicó como que la tierra es redonda (Sp.)
Juan explained-3Sg that the the earth is-3Sg round
 (Torrego and Uriagereka, 1995)
- b. Você vai ver como que a Maria tinha razão (BP)
you will-3Sg see how that the Maria had-3Sg right
 ‘You going to see that Mary was right’

Second, in Spanish the clause following *como* can contain a 3rdP null subject that might be co-indexed with the subject of the main clause (74a). This is impossible in BP. (74b) can have an overt subject pronoun, co-indexed or not with the matrix subject, but not a null subject.

- (74) a. Con el tiempo, María₁ verá como pro_{1/2} tiene razón (Sp.)
with the time, María see-3SgFut how has-3Sg right

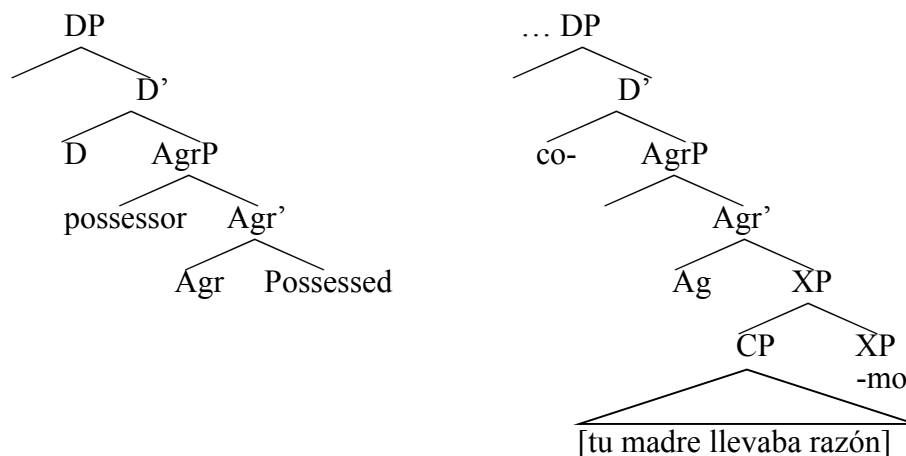
- b. Com o tempo, a Maria₁ vai ver como ela_{1/2}/*e₁ tem razão (BP)
with the time, the Maria will-3Sg see-Inf how she has-3Sg right
 ‘With time, Maria will see how s/he is right’

The difference concerning the presence of an overt complementizer can be easily explained if we accept Torrego and Uriagereka’s analysis for the connective *como* and also grant the hypothesis that BP does not license referential null subjects anymore. So, it is necessary to get acquainted with the details of Torrego and Uriagereka’s proposal.

Since *como* is etymologically derived from the Latin *quod mod*, Torrego and Uriagereka entertain the possibility of treating *como* as a bimorphemic category, composed by a D item, instantiated by the morpheme *co-*, and a predicate represented by *-mo*. Therefore, *como* is taken to be a DP. Particularly, it is proposed that the internal structure of *como* is similar to the structure of possessive DPs suggested by Kayne (1993) and Szabolcsi (1983, 1994), proposed a layered DP in the modes of (75a). The representation below capitalize the suggested similarity between these types of DPs. (75b) is an enriched version of (75a) because of the predication nature of *-mo*.¹⁴

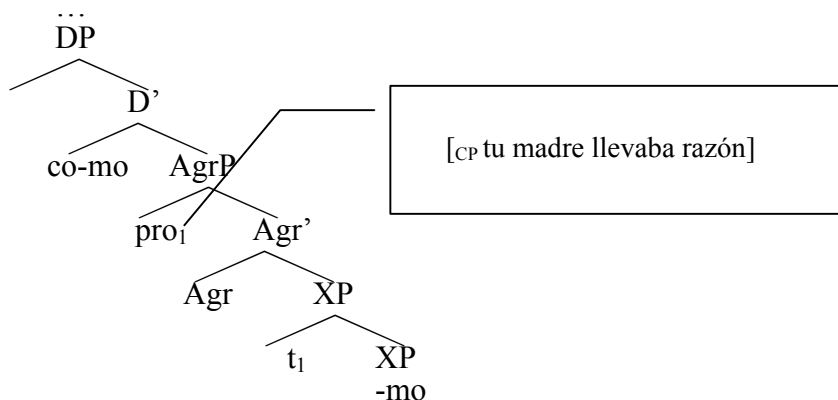
¹⁴ On this matter, see also Hornstein et al. (1994).

- (75) a. Possessive DP b. *verás como tu madre llevaba razón*
 ‘you will see how your mother was right’



Torrego and Uriagereka take (75b) to be an LF representation however. For them, in the overt syntax (75b) looks rather like (76), in which the clause *tu madre llevaba razón* is not merged, remaining as an independent matrix clause. This is possible because a null pronoun (*pro*), cataphorically related to the non-merged clause is inserted in the spec of XP, moving later to spec of AgrsP.

(76)



At LF the separated clause reconstructs into the *pro*-site, as in (74b). Thus, the clause after *como* is associated with the main structure in a paratactic way. This explains why syntactic dependencies across *como* are not permitted.

According to the authors, the impossibility of inserting an overt complementizer on the top of the separate clause follows from Chomsky's (1995b) conjecture that an overt complementizer cannot be inserted on the top of a matrix clause because lexical insertion after spell-out violates the Extension Condition. It is also suggested that insertion of *pro* in the overt syntax is necessary on grounds of economy. If the separate clause in (76) is not overtly merged, insertion of an overt complementizer is avoided. Hence, insertion of *pro* is less expensive than insertion of the clause.¹⁵

If this is right, we need now an explanation for why an overt complementizer is possible in BP.

I will defer the discussion about null possessors until chapters 5 and 6, where I suggest that in BP referential empty pronouns are not licensed as the external argument of possessive description. For now, let me present it as hypothesis. This hypothesis explains the allowance of an overt complementizer after *como* in (73b) in the following way: If null pronouns are banned altogether in this language, it follows that the external argument of the predicate *-mo* cannot be null. That is, this language cannot use the strategy used in (76) in order to avoid overt insertion of a full clause headed by an overt complementizer. Therefore, in BP the clause that is represented as a separate clause in (76) is actually overtly merged within XP. It amounts to saying that in this language the connective *como* may not create a paratactic dependency. The clause after *como* is connected to the main

¹⁵ This falls under the Avoid Pronoun Principle (cf. 3.3.2) if we take this principle to be restriction on the insertion of material with phonological content.

structure in a hypotactic fashion. As a consequence, an overt complementizer is allowed. Now, if this is right, we need an account for the facts in (77), which show that, despite the presence of an overt complementizer, syntactic dependencies across *como* are not allowed in BP:

- (77) a. * [o que]_i a Maria não é capaz de ver como que ela está fazendo
what the Maria not is-3sg able of see-Inf how that she is-3Sg doing
 errado *t*₁
wrong
- b. * Ele nunca vai ver como que nada está acontecendo na
he never will-3Sg see-Inf how that nothing is-3Sg happening in-the
 vida dele
life of-he
- c. ?? Ninguém vê como que sua memória está ficando fraca
nobody see-3Sg how that his memory is-3Sg getting weak

The *wh*-extraction movement in (77a) is occluded because the embedded clause occupies a specifier position (spec of AgrP) within a DP. Hence it is within an island which is itself embedded within another island. As for the non-licensing of polarity items and the impossibility of a bound variable binding (77b,c), they might as well be a reflex of the fact that the clause containing these items are embedded within a DP. (78a) shows that a negative polarity item embedded within a complex noun phrase is not licensed by

the matrix negation. The same seems to be valid for bound variables. If they occur inside a complex nominal, they can hardly be bound by an external, as (78b) suggests.

- (78) a. * Eu não ouvi o boato de que o João comprou nada
I not heard-3Sg the rumor of that the João bought-3Sg nothing
 ‘I did not hear the rumor that João bought nothing’
- b. ?? Ninguém ouviu o boato de que a sua avô morreu
nobody heard-3Sg the rumor of that the his grandma died-3Sg
 ‘Nobody heard the rumor that his grandma died’

Let me now return to the contrast in (74), repeated here as (79). This shows that whereas Spanish allows the subject of the independent clause to be null, in BP it is not possible, even though the clause after *como* is syntactically part of the main structure.

- (79) a. Con el tiempo, María₁ verá como pro_{1/2} tiene razón
with the time, María see-3SgFut how has-3Sg right
- b. Com o tempo, a Maria₁ vai ver como que ela_{1/2}/*e₁ tem
with the time, the Maria will-3Sg see-Inf how that she has-3Sg
 razão
right
 ‘With time, Maria is going to see how s/he is right’

(79a) is not surprising, since Spanish is a pro-drop language and, as such, allows referential null subject in matrix clauses. (79b) also is expected because 3rdP null subjects in BP are the result of NP-movement, and the embedded domain in (79) is a island for extraction (cf. (77a)).

Summarizing, the behavior of constructions involving the connective *como* in BP provides two arguments for the proposal of this thesis. First, Modern BP is not a pro-drop language, therefore the paratactic structure proposed by Torrego and Uriagereka may not be possible. Second, BP 3rdP referential null subjects are formed by movement; as a result, they are not licensed inside a clause that follows the connective because this clause is an opaque domain for subextractions.

4.3.5 Referential Null Subjects Inside Relative Clauses

The unacceptability of the Spanish sentence in (80), in which the direct object was extracted, shows that relative clauses are strong islands in Romance languages. But as observed in Rizzi (1982), Chomsky (1981) and Jaeggli and Safir (1989), these languages have a resumption strategy that salvages subject extraction from relative clauses via insertion of a resumptive pro, as illustrated in (81):¹⁶

(80) * Qué₁ besó Juan a la chica₂ que t₂ compró t₁

what kissed-3Sg Juan to the girl that bough-3Sg

‘What did Juan kiss the girl that bought ’

¹⁶ Since Italian null objects receive only an arbitrary reading (Rizzi, 1986), the analogue of (81) is also unacceptable.

- (81) a. Ese es el tipo que₁ María conoce a la mujer [con quien pro₁ se casó]]
this is the guy that Maria know-3Sg to the woman with whom_{SE} married-3Sg
 ‘That is the guy that María knows the woman who he married’
 (Jaeggli and Safir, 1989)
- b. Ecco la ragazza [che₁ me domando [chi crede [che pro₁ possa VP]]]
this the girl that me ask-1Sg who thinks-3Sg that can-3Sg
 ‘This is the girl who I wonder who thinks that she may ...’
 (Chomsky, 1981)

By comparing Spanish and Italian with BP, we can have extra proof that null subjects in modern BP do not behave like null subject pronouns. In (82), the empty subject fails the resumption test. As in English, only an overt pronoun can be used in a resumption strategy in BP:

- (82) Esse é o rapaz que₁ a Maria conhece a garota₂ que₂ ele₁/*e₁ beijou t₂
this is the guy that the Maria know-3Sg the girl that he kissed-3Sg
 ‘This is the guy that Maria knows the girl that he kissed’

The contrast in (83a) and (83b) shows that in Spanish non-resumptive null pronouns can freely occur inside a relative clause, whereas in BP, only an overt pronoun is allowed as the subject of a relative clause:

- (83) a. Juan₁ vió a la chica que él/pro besó anoche
Juan saw-3Sg to the girl that kissed-3Sg last.night
 ‘Juan saw the girl that he kissed last night’
- b. O João encontrou a carteira que ele/*e perdeu
the João met-3Sg the wallet that he lost-3Sg
 ‘João found the wallet that he lost’

Clearly, embedded null subjects in modern BP pattern like wh-traces (cf. 84) in being prohibited inside relative clauses:

- (84) * Quem₁ que o João encontrou a carteira que t₁ perdeu
who that the João met-3Sg the wallet that lost-3Sg
 ‘Who did João find the wallet that he lost’

The traditional view of restrictive relative clauses involves adjunction; the embedded CP is an adjunct to the maximal projection of the NP, which is taken as the nominal head of the relative clause. In this adjunction analysis, the head of relative clause is generated outside of the relative clause and the relative pronoun inside. The relative pronoun, being an operator, moves to spec of the relative CP, becoming adjacent to the nominal head of the relative clause (cf. Safir 1986, Browning 1987 and Fabb 1990).

Kayne (1994), concerned with linearization and its relation to c-command, concluded that the adjunct analysis is not right. According to him, if the relative clause is

a CP that is adjoined to the maximal projection of the noun phrase (NP), the CP would asymmetrically c-command the NP, therefore, the CP should linearly precede the NP. Based on that, Kayne advocates in favor of the raising/promotion analysis originally suggested in Vergnaud (1974). In the raising analysis, the whole relative CP is taken as a complement of D^0 . In Kayne's proposal, the noun, which is usually taken to be complement of the D, forms a constituent with the relative pronoun. This constituent is taken to be a DP headed by the relative pronoun and is first merged in the extraction site inside the relative clause as in (85a). Then it moves to the spec of the relative CP (85b). At this stage, the noun splits off from the relative pronoun, raising to the spec of the upper DP, as in (85c).

- (85) a. the [C^0 Bill saw [$_{DP}$ which picture]]
 b. the [$_{CP}$ [$_{DP}$ which picture] $_1$ [$_{C'}$ [Bill saw t_1]]]
 c. the [$_{CP}$ [$_{DP}$ picture $_2$ [$_{D'}$ which t_2] $_1$ [$_{C'}$ [Bill saw t_1]]]]

There are some empirical facts that favor Kayne's raising analysis.¹⁷ One of them is that in sentences like the *Paris that I love* or *the three books of John's that I read* the presence of the article is dependent on the presence of the relative clause. Hence, it seems that there is a selectional relation between the determiner and the relative clause. Moreover, Bianchi (1999) shows evidence that the determiner is not part of the head of the relative clause. For example, there are certain idiomatic expressions that require an indefinite NP as the complement of the verb, as *made* in (86). Thus, if reconstruction

¹⁷ For an elaborate discussion and presentation of the raising analysis, see Bianchi (1999). For evidence that the nominal head escapes the relative CP, see Hornstein (2001).

takes place in (86b), putting the complement of *made* back into its original place, the determiner *the* that precedes *fun*, cannot be part of the reconstructed constituent, otherwise the indefinite restriction shown in (86a) would be violated.

- (86) a. They made (*the) fun of me
 b. The fun₁ that he made *t*₁ of me

As originally presented in Schachter (1973) and Vergnaud (1974), idiomatic expression also provides evidence that relative clauses involve raising of the NP head. In French, idiomatic expressions allow the object to be relativized only if the idiomatic verb is inside the relative clause. If it is external, relativization is not possible. This is shown by the contrast in (87), extracted from Vergnaud (1974):

- (87) a. Peu de gens ont parlé du [parti qu'il a tiré *t*
few of people have-3Pl spoken of.the advantages that.he have-3Sg taken
 des difficultés économiques]
of.the difficulties economic
 'Few people have spoken of the advantages that he has taken from the
 economical difficulties'
- b. * Il a tiré (des difficultés économiques [un parti don't peu de
he has-3Sg of.the difficulties economic an advantage of.which few of

gens ont parlé *t*]

people have-3Sg spoken

At any rate, the raising analysis of restrictive relative clause appears to be well motivated, and I will adopt it, returning now to the disallowance of null subjects inside relatives in BP. I will make use of Kayne's implementation in terms of raising, even though my analysis does not crucially depend on it.

We may resume the discussion on the unacceptability of null subjects inside relative clauses in BP by arguing that A-movement cannot cross over the nominal head of relative clause. To see this point, consider the sentence in (83b), repeated here as (88):

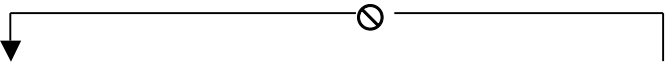
(88) * O João₁ encontrou a carteira que e₁ perdeu

the João kissed-3Sg the wallet that lost-3Sg

'The João found the wallet that he lost'

The derivation of (88) starts by building the relative clause. The DP *que carteira* 'that wallet', formed by merging the relative pronoun and the noun *carteira* 'wallet', is first inserted in the complement position of *perdeu* 'lost' and the DP *o João* is taken as the external argument of the same verb, receiving, thus, the agent q-role, as shown in (89a). When the complementizer is merged on the top of the object built in (89a), the DP *que carteira* moves to spec of CP, and the noun splits off from the relative pronoun as shown in (89b). The CP thus formed is taken as the complement of *a* 'the', and the determiner

projects forming a DP, as represented in (89c). When the matrix verb is pulled from the numeration and merged with its internal argument, the DP constructed in (89c), it needs to check its external $\bar{\lambda}$ -role (89d). At this point of derivation, the numeration does not contain any element that could check the verbal $\bar{\lambda}$ -role. Hence, movement has to take place. Assuming the proposal presented in section 4.2, in (89d) the DP *o João* hasn't checked its Case feature yet, hence it is available for further computation. Thus, this DP could in principle be copied and merged in spec of the matrix VP. However, this movement violates the Minimal Link Condition. The head of the relative clause, the DP *que carteira* 'that wallet', occupying spec of CP, is closer to the matrix verb than the DP *o João* is. That is, the DP in the spec of the relative CP creates an intervention effect, blocking the movement of the subject of the relative clause towards spec of VP, as represented in (89e):

- (89) a. $[_{TP} [_{DP} \text{ o João}]_1 [_{T'} [_{VP} t_1 [_{V'} \text{ perdeu } [_{DP} \text{ que carteira}]]]]]$
- b. $[_{CP} [_{DP} [\text{carteira}_1 [\text{que } t_1]]]_2 [_{C'} [_{TP} [_{DP} \text{ o João}]_1 [_{T'} [_{VP} t_1 [_{V'} \text{ perdeu } t_2]]]]]]]$
- c. $[_{DP} a [_{DP} [\text{carteira}_1 [\text{que } t_1]]]_2 [_{C'} [_{TP} [_{DP} \text{ o João}]_1 [_{T'} [_{VP} t_1 [_{V'} \text{ perdeu } t_2]]]]]]]$
- d. $[_{VP} \text{ encontrou } [_{DP} a [_{CP} [_{DP} [\text{carteira}_1 [\text{que } t_1]]]_2 [_{C'} [_{TP} [_{DP} \text{ o João}]_1 [_{T'} [_{VP} t_1 [_{V'} \text{ perdeu } t_2]]]]]]]]]$
- d
- e. $[_{VP} [_{V'} \text{ encontrou } [_{DP} a [_{CP} [_{DP} [\text{carteira}_1 [\text{que } t_1]]]_2 [_{C'} [_{TP} [_{DP} \text{ o João}]_1 [_{T'} [_{VP} t_1 [_{V'} \text{ perdeu } t_2]]]]]]]]]$
- 

Note that null subjects are not licensed inside relative clauses even when the antecedent is a quantifier expression, which in accordance with Montalbetti's constraint (cf. 3.3.2, fn. 18), cannot be co-indexed with an overt pronoun. Hence the sentence (90) is ungrammatical independently of the phonetic realization of the subject pronoun. This shows that BP 3rdP null subjects cannot be used in a resumptive strategy even it is necessary for convergence.

- (90) * Ninguem₁ encontrou a carteira que *e*₁/*ele*₁ perdeu
nobody found-3Sg the wallet that he lost-3Sg
 'Nobody found the wallet that he lost'

Finnish, differently from BP, allows null subjects inside restrictive relative clauses. Witness the data in (91).

- (91) a. Sietä tulee se tyttö, josta puhuin
there come-3Sg it girl which-Ela talked-1Sg
 'Here come the girl I was telling you about'
- b. Pekka₁ näki tytön, jota *e*₁ oli suudellut
Pekka-Nom saw-3sg girl-Acc which-Part have-3sg kissed-3Sg
juhlissa
party-In
 'Pekka saw the girl that he had kissed at the party'

Notice that in this language restrictive relative clauses behave like islands with respect to *wh*-movement (cf. (92)). Therefore, Finnish null subjects do not pattern like *wh*-traces, in that they can occur inside relative clauses. This is rather unexpected under the treatment I am suggesting in this thesis.

- (92) * Kuka₁ Pekka näki tytön, jota *t*₁ oli suudellut juhlassa
who-Nom Pekka-Nom saw3Sg girl-Acc which-Part have-3sg kissed party-In
 ‘Who did Pekka see the girl that he kissed’

As already remarked on chapter 3 (section 3.4), an important property of this language is that it allows topicalization to co-occur with *wh*-movement in both free and relative clauses. This is exemplified below:

- (93) a. Kuka tämän kirjan on kirjoittanut
who this book-Acc have-3SgPres written
 ‘(What about this book) Who has written this book’
- b. Iti antaa kirjan [lapselle₁, joka sitä₂ *t*₁ odottaa *t*₂]
mother give-3Sg book-Acc child-All which-Acc it-Part wait-3Sg
 ‘The mother is giving the book to the child who is expecting it’
 (Sulkala and Karjalainen, 1992)

Therefore, we may assume that in Finnish the structure inside a restrictive relative clause is the one in (94). The DP heading the relative clause moves to spec of CP, and the subject also moves to the left periphery, arguably to spec of FP, which according to the proposal we presented in 4.2, is right below CP.

(94) [CP NP₁ [FP NP₂ [TP t₂ V t₁]]]

If this is right, (91a) is compatible with the topic deletion I proposed in 3.4 for 1stP null subjects. During the derivation of this sentence, the 1stP overt subject pronouns *minä* moves to spec of FP, becoming thus the target of deletion.

(95) Sietä tulee [DP se [CP tyttö₂ josta [FP ~~minä~~₁ [t₁... puhuin ...t₂...]]]]
there come-3Sg it girl which-Ela (I) talked-1Sg

The allowance of a null subject in (91b) seems to suggest that in Finnish, the antecedence relationship between a null subject and a DP does not obey MLC. However, this conclusion is unlikely to be correct because as I have shown before this relationship displays locality restrictions, the antecedent being the closest c-commanding DP (see 4.3.1 and 4.3.2). Therefore, it must be the case in (91b) the nominal head of the relative clause is not actually intervening between the null subject and the DP *Pekka*.

One interesting aspect of restrictive relative clauses in Finnish is that the relative pronoun and the noun that heads the relative clause are morphologically marked with

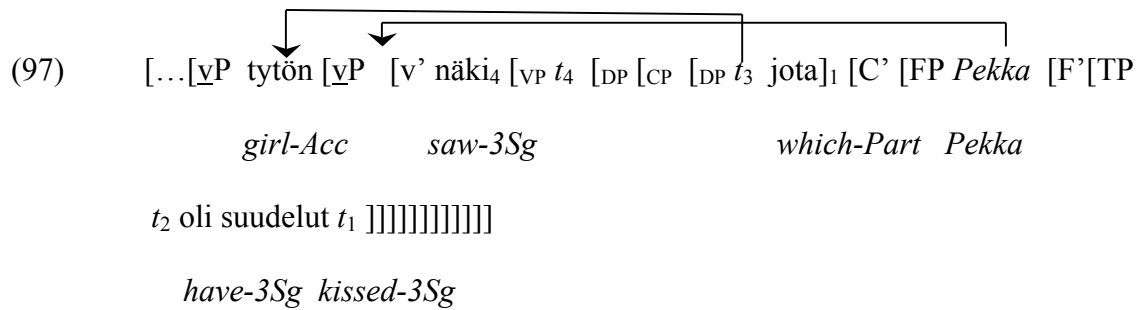
different cases. The relative pronoun is marked with the Case assigned by the embedded verb (partitive in (91b)), whereas the nominal head realizes the Case assigned by the matrix verb (accusative in (91b)). Moreover, as shown in (96) the head of relative clause might surface separated from the relative CP (Cf. Sulkala and Karjalainen 1992 and Helasvuo 1994):

- (96) ja sil oli sitten päärynäkorit puun alla joihin se
and he-Ade had-3Sg then pear.baskets-Nom tree-gen under whichIll he-Nom
 tyhjensi ne päärynät.^{18,19}
emptied-3Sg those pear-Acc
 ‘And he had then the pear baskets under the tree into which he emptied the pears’
 (Helasvuo, 1994:164)

Therefore, it is plausible that nominal head moves from the relative CP to a Case position position in the matrix VP shell, as represented in (97). The question is about the empty subject inside the relative clause. Can it be a trace of the DP *Pekka*? If the noun is the element that matters for thematic relations, in (97) the presupposed movement of *tytön* to spec of vP might remove the blockage on the extraction the DP *Pekka*. Representationally, *Pekka*’s movement towards spec of vP crosses a trace (ie. a non-pronounced copy).

¹⁸ I will put the particle *se* aside. Its syntactic and semantic functions are unclear to me.

¹⁹ This is recorded spoken Finnish. To avoid an overflow of irrelevant I cut from the original sentence the hesitations and repetitions.



This raises an issue about the Minimal Link Condition. From (97) one can conclude that a trace (ie. unpronounced copy) does not block extraction of a lower constituent. That is, the Minimal Link Condition does not count copies when defining closeness. This accords to Chomsky's (2001a) idea that only the head of an A-chain (i.e., the whole chain) blocks matching under the Minimal Link Condition. Notice, however, that the movement of *Pekka* to spec of vP might happen before the movement *tytön*. Therefore, it is possible that *Pekka*'s movement does violate Minimal Link Condition derivationally, though not representationally. This leads to the conclusion that the Minimal Link Condition is a condition on representations, as already suggested elsewhere (cf. Chomsky (2001a) for instance).

4.4 Controlling Gender Agreement

There is an interesting aspect of control in Romance that has hitherto remained unnoticed: in obligatory control configurations the antecedent of PRO controls gender agreement inside the embedded domain. I will investigate this phenomenon here, suggesting that this accords to an NP-movement analysis of obligatory control. In addition, I will show that the same happens with 3rdP referential null subjects in BP.

4.4.1 Feminine Agreement

There are certain nouns in Romance that are invariably marked as [+feminine], though semantically they can refer to either male or female entities. One of these nouns is the Romance counterpart of *victim*. Thus, given the property just mentioned, in Romance, when *victim* is combined with the auxiliary verb *to be* followed by a participial form, the participial form records feminine gender agreement, as Italian, Spanish, European and Brazilian Portuguese illustrate.

- (98) a. La vittima fu aggredita/*aggredito dai fascisti (It.)
 the victims-Fem was.3sg attacked-Fem/Masc by fascists
- b. La víctima₁ fue atacada₁/??atacado₁ en la calle (Sp.)
 the victim-Fem was-3Sg attacked-Fem/-Masc in the street
- c. A vítima₁ foi atacada₁/??atacado₁ na rua (E/BP)
 the victim-Fem was-3Sg attacked-Fem/-Masc in.the street
 ‘The victim was attacked by (the) fascists/on the street’

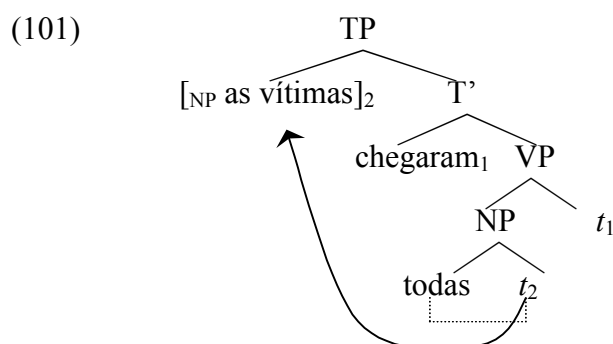
(99) shows that feminine gender is also morphologically recorded by an universal quantifier all that is related to the [+feminine] noun.

- (99) a. Tutte/*tutti le vittime arrivarano nello stesso momento (It.)
all-Fem/-Masc the victims-Fem arrived-3Pl in-the same moment
 ‘All the victims arrived at the same time’
- b. Todas/*todos las víctimas llegaron al mismo tiempo (Sp.)
all-Fem/-Masc the victims-FEM arrived-3Pl at.the same time
- c. Todas/*todos as vítimas chegaram no mesmo horário (E/BP)
all-Fem/-Masc the victims-FEM arrived-3Pl at.the same time
 ‘All the victims arrived at the same time’

It does not matter whether the quantifier is floating is not, it is always [+feminine]:

- (100) a. Le vittime arrivarano tutte/*tutti nello stesso momento (It.)
the victims-Fem arrived-3Pl all-Fem/-Masc in-the same moment
- b. Las víctimas llegaron todas/*todos (Sp.)
the victims-Fem arrived-3Sg all-Fem/-Mas
- c. As vítimas chegaram todas/*todos (E/BP)
the victims-Fem arrived-3Sg all-Fem/-Masc
 ‘All the victims arrived (at the same time)’

The agreement in (100) is predictable in a theory that treats floating quantifiers as a type of antecedent-trace, like the one suggested by Sportiche (1988). As well-known, Sportiche takes the syntactic dependency between a floating quantifier and an NP to be the result of NP-movement.²⁰ The quantifier is base generated as an adjunct to the NP, but the NP undergoes leftwards movement leaving the quantifier behind. Thus, as represented in (101), it is arguably the case that in (100) the agreement in gender between the [feminine] noun and the quantifier happens locally, i.e. inside the NP, prior to the movement of *as vítimas* ‘the victims’ to spec of TP.



It is assumed that agreement between a noun and a past participle form also obeys locality. Actually, it is taken to be the result of a spec-head relation. That's why past participle agreement has been used as a diagnosis of movement in clitic climbing configurations (cf. Kayne 1989, Rouveret 1989, Belletti 2000, Sportiche 1996, 1998, among others). The essence of the argument is the following: in French, a direct object

²⁰ For a different analysis of floating quantifiers, see Boskovic (2000), among others. Boskovic suggests that floating quantifiers are inserted acyclically. After NP-movement, the quantifier adjoins to the copy left behind.

agrees with a participial form only if the former precedes the latter. The data in (102) exemplifies this restriction.

- (102) a. Jean a peint(*e) la porte (Sportiche, 1998)

*Jean has-3Sg painted-(*Fem) the door*

‘Jean painted the door’

- b. La porte₁ que Jean a peint(e) t₁

the door that Jean has-3Sg painted-(Fem)

‘The door that Jean painted’

Sportiche (1996) takes this fact to mean that, in order to trigger $\bar{\lambda}$ -feature agreement on a participial form, an NP has to move to/through the specifier of the maximal projection that hosts the past participle. Hence, past participle agreement is a reflection of a relation between a specifier and a head. It follows, then, that in (103a) the clitic moved to its spell-out position, passing through the specifier of the maximal projection hosting the participial form, as represented in (103b). This is exactly what Sportiche (1996) defends.

- (103) a. Jean l’a peint(e)

Jean it has-3Sg painted(Fem)

‘Jean has painted it’

- b. Jean [le₁ a [t₁ [peinte ... t₁]]]

or a past participle form is at a first sight a syntactic phenomenon that does not require locality. If the so-called controller is [+feminine] noun, it obligatorily agrees in gender with a universal quantifier or a past participle form inside the infinitival clause. Thus, at the surface of obligatory control configurations, the gender agreement under discussion looks like a long-distance process. However, as I will show, by assuming a NP-movement analysis of obligatory control, we can get rid of this unexpected lack of locality. The agreement is local since the controller is base-generated within the infinitival clause. Unsurprisingly, non-obligatory control configurations, which are not formed by movement according to Hornstein, do not display this ‘long-distance’ agreement.

I will also show that in BP sentences containing an embedded finite null subject clause behave like obligatory control structures in that a [+feminine] noun in the subject position of the matrix clause controls the gender agreement of an embedded universal quantifier or past participle form. This fact corroborates the idea that BP null subjects are obligatory controlled empty categories, and bolsters the movement analysis I am defending in this thesis.

4.4.2 Controlling Gender Agreement in Non-Finite Control Configurations

In Romance obligatory control configuration, when a [+feminine] noun is the antecedent of PRO, a universal quantifier or a past participle form inside the embedded infinitival clause must be morphologically marked for feminine gender.

²² Note that this proposal does not explain the French facts in (102) and (103).

- (105) a. La vittima₁ ha cercato di essere trasferita₁/??trasferido₁ (It.)
the victim-Fem had-3Sg tried of be-inf transferred-Fem/-Masc
 alla stazione di polizia de College Park
to.the station of police of College Park
- b. La víctima intentó ser transferida /?? transferido (Sp.)
la victim-Fem tried-3Sg be-Inf transferred-Fem/-Masc
- c. A vítima₁ tentou ser transferida₁/??transferido₁ (E/BP)
the victim-Fem tried be-inf transferred-Fem/-Masc
 para a delegacia de polícia de College Park
to the station of police of College Park
 ‘The victim tried to be transferred (to the police station at College Park)’
- (106) a. Le vittime₁ hanno cercato di testimoniare tutte₁/*tuttti₁ (It.)
the victims-Fem have-3Sg tried of testify-Inf all-Fem/-Masc
 lo stesso giorno
the same day
- b. Las víctimas₁ intentaron testificar todas₁/*?todos₁ (Sp.)
the victims-Fem tried-3rdPl testify-Inf all-Fem/-Masc
 el mismo día
the same day
- c. As vítimas₁ tentaram testemunhar todas₁/*todos₁ (E/BP)
the victims-Fem tried-3rdPl testify-Inf all-Fem/-Masc

no mesmo dia

in.the same day

‘All the victims tried to testify the same day’

It is worth noticing that this gender agreement is obligatory even in a context in which **all the victims are known to be males**. This means that the agreement is defined syntactically, not semantically. Moreover, notice that this obligatory agreement is also observed in obligatory control inside non-finite adjunct clauses.

- (107) a. La vittima₁ morì’ dopo essere stata trasportata₁/??stato trasportato₁ (It.)

the victim-Fem died-3rdSg after brought-Fem/-Masc

all’ ospedale

to.the hospital

- b. La víctima₁ murió después de ser traída₁/?(?)traído₁ (Sp.)

the victim died after of be-inf brought-Fem/-Masc

al hospital

to.the hospital

- c. A vítima₁ morreu depois de ser trazida₁/??trazido₁ (BP)²³

the victim died after of be-inf brought-Fem/-Masc

para o hospital

to the hospital

‘The victim died after being brought to the hospital’

²³ According to João Costa in European Portuguese the agreement is optional.

- (108) a. Le vittime₁ lasciarono l'aula subito dopo aver (It.)
the victims-FEM left-3rdSg the-courtroom right after have-Inf
 testimoniato tutte₁/*tutti₁ insieme contro il mafioso
testified all-FEM /-Masc together against the gangster
- b. Las víctimas₁ se fueron después de testificar todas₁/*todos₁ (Sp.)
the victims SE left-3Pl after of testify-Inf all-Fem/-Masc
 contra el mafioso
against the gangster
- c. As vítimas₁ foram embora logo depois de testemunhar (BP)²⁴
the victims-Fem left-3rdpl right after of testify-Inf
 todas₁/*todos₁ contra o mafioso
all-Fem/-Masc together against the gangster
 'The victims left after (the courtroom) having testified all (together)
 against the gangster'

In sum, if we were to assume a Government-Binding theory of control, we could state the phenomenon under discussion in the following way: in obligatory control configurations, an embedded quantifier or a past participle form syntactically dependent on PRO agrees in gender with the controller of PRO, as represented in (109). This suggests that PRO does not have $\bar{\lambda}$ -features and, as result, it allows the long distance agreement relation indicated below.

(109) *Obligatory Control*: [... DP...[_{CP} [_{TP} PRO [...Quant/Past Participle...]]]



Consider now, cases of non-obligatory control. As exemplified in (110) and (111), in these constructions, agreement with the [+ feminine] noun is not obligatory. In fact, it is rejected in Italian. In Portuguese, it is quite acceptable if the embedded element is a universal quantifier, but, if the embedded element is a past participle, the agreement is at most marginal. In Spanish it seems that the past participle and the quantifier can be either [+masculine] or [+feminine].

- (110) a. La vittima₁ ha detto che essere *portata₁/portato (It.)
the victim-Fem has-3Sg said that be-Inf brought-Fem/-Masc
 alla stazione di polizia non era una buona idea
to.the station of police not was-3Sg a good idea
 ‘The victim said that being brought to the police station was not a good idea’
- b. La víctima₁ dijo que ser ?transferida₁/transferido a (Sp.)
the victim-Fem said-3Sg that be-Inf transferred-Fem/-Masc to
 otra ciudad no es buena idea
another city not is-3Sg good idea
- c. A vítima₁ disse que ser ??transferida₁/trasferido₁ (E/BP)
the victim-Fem said-3Sg that be-Inf transferred-Fem/-Masc

²⁴ Here I am not considering European Portuguese. In this language, the adjunct clause would contain an inflected infinitival verb, allowing, then, non-obligatory control, as discussed by Pires (2001). As for BP, I am considering the colloquial dialect, which has lost inflected infinitives.

para outra cidade não é uma boa idéia

to another city not is-3Sg a good idea

‘The victim said that being transferred to another city is not good idea’

- (111) a. Le vittimme₁ hanno detto che testimoniare *tutte₁/tutti (It.)

the victim-Fem have-3Pl said that testify-Inf all-Fem/-Masc

lo stesso giorno puo’ non essere una bona idea

the same day may-3Pl not be-ing a good idea

- b. Las víctimas₁ piensan que testificar todas₁/?todos (Sp.)

the victims-Fem think-3Pl that testify-Inf all-Fem/-Masc

el mismo día puede no ser una buena idea

at.the same day may-3Sg not be-inf a good idea

- c. As vítimas₁ acham-3Sg que testemunhar ?todas₁/todos (BP)²⁵

the victims-Fem think-3Pl that testify-Inf all-Fem/-Masc

no mesmo dia pode não ser uma boa idéia

at.the same day may-3Sg not be-inf a good idea

‘The victims said/think that all testifying at the same day may not be a good idea’

Therefore, differently from obligatorily controlled PRO, a non-obligatorily controlled PRO has its own set of \square -features. Therefore, an embedded universal

²⁵ In European Portuguese, this infinitival clause would also contain an inflected infinitive. Hence, I am not considering European Portuguese.

quantifier and past participle dependent on PRO agree with PRO itself, not with a possible antecedent of PRO that is outside the infinitival clause.

- (112) *Non-Obligatory control*: [... DP..._{[CP [TP PRO [...Quant/Pparticiple...]]]}]
-

This difference between obligatory and non-obligatory control hasn't been investigated yet, and to maintain an adequate linguistic theory we need to explain it. If we assume the standard Government-Binding theory of control, we are forced to say that in obligatory control the agreement between an NP and a past participle or a universal quantifier can be non-local, being rather a case long distance agreement, as the representation in (112) suggests. Notice however that this is an undesirable solution. If a past participle form is a head with non-interpretable $\bar{\kappa}$ -features, how can it get its $\bar{\kappa}$ -features checked by an NP that is base generated in a higher clause?

A theory of obligatory control based on Agree, along the lines proposed by Landau (1999, 2000), fares better than the Government and Binding theory does without invoking movement of the controller. In this theory, a universal quantifier or a past form within the infinitival clause has its $\bar{\kappa}$ -features checked not by the controller, but by PRO, which, in its turn, agrees with its antecedent. Thus, in the obligatory control configurations presented above, the quantifier or the past participle agrees with the controller only in an indirect way, via PRO. Though mechanically doable, note that this analysis requires an elaborate feature transmission process, according to which PRO is

able to check the ϕ -features of the past participle form/quantifier only when it agrees with its antecedent.

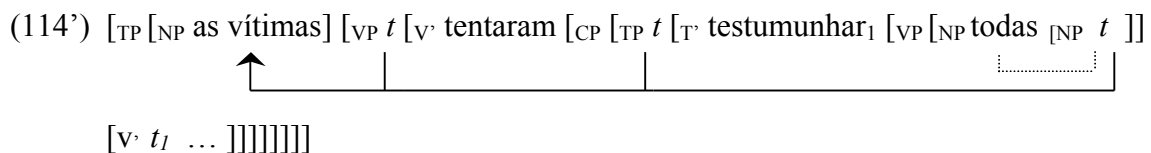
Under a movement analysis, obligatory control configurations are akin to raising constructions in that both of them involve subject-to-subject movement. There is no obligatory controlled PRO. The empty subject of an infinitival clause embedded under a control verb is actually a trace (i.e. a silent copy created by the operation of copy and deletion) of the controller (cf. 2.4). Therefore, in this theory, the quantifier or the past form gets its ϕ -features checked by the [+feminine] controller locally, i. e, prior to the movement of the controller to matrix clause, as shown in (113) and (114).²⁶ The sentences are Portuguese and, according to my own judgements, (114) is better if the quantifier follows the infinitive verb. Since this a V-to-T grammar, in (114) I am assuming that the quantifier is stranded in spec of VP.

- (113) As vítimas₁ tentaram ser transferidas₁ para outra cidade
the victims-Fem tried-3Pl be-inf transferidas-Fem to another city
 ‘The victims tried to be transferred to another city’

(113') [TP [NP the victims] [VP t [V' tried [CP [TP t [T' ser [PastPP t [PastPP' tranferida...]]]]]]]]

- (114) As vítimas₁ tentaram testemunhar todas₁ no mesmo dia
the victims-Fem tried-3Sg testify-Inf all-Fem at the same day
 ‘All the victims tried to testify at the same day’

²⁶ (113') is a simplified structure, where I am assuming that the past participle form heads its own maximal projection.



This analysis provides us with an elegant explanation for obligatory gender agreement observed. In addition, notice that under a movement analysis obligatory control configurations are parallel to raising constructions. This predicts correctly (cf. (115)-(116)) that raising constructions also display the gender agreement under discussion.²⁷

- (115) a. La vittima sembra essere ferita/*ferito (It.)
the victim-Fem seems be-inf injured-Fem/Masc
- b. La víctima parecía estar herida/*?herido (Sp.)
the victim seemed-3rdSg be-inf injured-Fem/-Masc
- c. A vítima pareceu estar ferida/*?ferido (E/BP)
the victim seemed-3rdSh be-Inf injured-Fem/-Masc
 ‘The victim seemed to be injured’
- (116) a. Le vittime sembrano essere tutte/*tutti malate/*malati (It.)
the victims-Fem seem-3Pl be-Inf all-Fem/-Masc sick-Fem/-Masc

²⁷ Raising constructions with *sembrare* ‘seem’ are not perfect in Italian. In (115) and (116), for instance, speakers prefer to omit the copula or use a finite complement clause. However, despite this, they report that there is a clear contrast between the sentences with the gender and the sentences without it.

- b. Las víctimas parecen estar todas/?*todos en el juzgado (Sp.)
the victims-FEM seem-3rdPl be-Inf all-FEM/-Masc in the courtroom
 ‘The victims seems all to be in the courtroom’
- c. As vítimas parecem estar todas/*todos doentes (E/BP)
the victims seem-3rdPl be-inf all-Fem/-Masc sick
 ‘The victims seem all to be sick/ in the courtroom’

Let us turn now to non-obligatory control. According to Hornstein’s analysis, in non-obligatory control, the empty subject of the embedded clause is not PRO, but pro. Hence, assuming that pro has its own random set of ϕ -features in (115) and (116) the embedded quantifier and the participle form get their ϕ -features checked by pro. Putting it baldly, in non-obligatory control, the presence of an empty pronominal category inside the embedded clause blocks the agreement between a [+feminine] noun in the matrix clause and an embedded quantifier or past participle form.

As the next subsection shows, in Romance null subject languages, pro also blocks the agreement under consideration.

4.4.3 Controlling Gender Agreement in Finite Control Configurations

In the Romance null subject languages there is no obligatory gender agreement between the antecedent of pro and a universal quantifier or past participle form related to pro. For instance, in (117) and (118), gender agreement between the [+feminine] noun

and the universal quantifier or the past participle is not required.²⁸ In fact, while in European Portuguese and Spanish, the agreement seems to be optional, in Italian it is prohibited.

- (117) a. La vittima₁ ha detto che pro₁ era *stata (It.)

the victims-Fem has-3rdSg said-3Sg that was-3Sg been-Fem

aggredita₁/stato aggredito₁ in strata

attacked-Fem/-Masc in street

- b. La víctima₁ dice que pro₁ fue atacada₁/atacado₁ en la calle (Sp.)

the victim said-3Sg that was-3Sg attacked-Fem/Masc in the street

- c. A vítima₁ disse que pro₁ foi atacada₁/ atacado₁ (EP)

the victims said-3Sg that was-3Sg attacked-Fem/Masc

na rua

in.the street

‘The victim said that he was attacked on the street’

- (118) a. Le vittime₁ hanno detto che pro₁ faranno ricorso *tutte₁/tutti₁ (It.)

the victims has-3Pl said that will.do-3Pl appeal all-Fem/-Masc

insieme

together

‘The victims have said that they will testify all together’

²⁸ Again, the speakers were asked to judge all the sentences taking into consideration a situation in which all the victims are males.

- b. Las víctimas₁ dijeron que van a testificar todas₁/todos₁ (Sp.)
the victims said-3Pl that will-3Pl to testify-Inf all-Fem/-Masc
 al mismo tiempo
the same time
- c. As vítimas₁ falaram que vão todas₁/todos₁ depor (EP.)
the victims said-3Pl that will-3Pl all-Fem/-Masc testify-Inf
 no mesmo dia
at.the same day
 ‘The victims said that they will all testify at same time’

This is an expected fact since in these languages *pro* is syntactically independent of its antecedent, having its own features. Thus, in (117) and (118), the past participle and the quantifier arguably agree with *pro* in gender. In conclusion, Romance null subjects behave as a non-obligatorily controlled PRO.

- (119) *Romance null subjects:* [... DP...[_{CP} [_{TP} *pro* [...Quant/Pparticiple...]]]]
-

Colloquial Brazilian Portuguese (BP) differs from Romance null subject languages in that a participle form or a universal quantifier embedded under a null subject finite clause obligatorily agrees with the antecedent of the null subject. Thus, in (120), the quantifier and the past participial must record feminine gender.²⁹

²⁹ Some speakers do allow a [+masculine] quantifier. It take it to be an interference of the standard grammar.

- (120) a. A vítima₁ disse que e₁ foi atacada₁/??atacado₁
the victim-Fem said-3Sg that was-3Sg attacked-Fem/-Masc
 na rua
in.the street
 ‘The victim said that he was attacked on the street’
- b. As vítimas₁ falaram que e₁ todas₁/??todos₁ vão depor
the victims-Fem said-3Pl that all-Fem/-Masc will-3Pl testify-Inf
 no mesmo dia
at.the same day
 ‘The victims said that they will all testify at the same day’

This clearly shows that BP null subjects have a different nature from their Romance counterpart. The f-feature is syntactically dependent on the \square -features of the antecedent. In other words, null subjects in Brazilian Portuguese behave like an obligatory controlled PRO:

- (121) *Brazilian null subjects*: [... DP...[_{CP} [_{TP} e [...Quant/PastParticiple...]]]

The agreement in (121) falls under the movement analysis I am defending in this dissertation. In (120), the embedded null subject is just a trace of this antecedent, the [+feminine] noun. As in (113) and (114), in (120) the [+feminine] noun is base generated as the external argument of the embedded predicate and moved to the matrix clause as the

derivation unfolds. Thus, the universal quantifier and the past participle form agree with it prior to its movement to the matrix clause. Thus, we can say that the quantifier in (120b) is floating in the sense of Sportiche (1988).

Unsurprisingly, in BP the gender agreement we are investigating is obviated if an overt pronoun is inserted in the subject position of the embedded clause.³⁰

- (122) a. A vítima₁ morreu depois que e₁ foi transferida₁/?? transferido₁
 the victims died-3Sg after that was-3Sg transferred-Fem/-Masc
 para um hospital em São Paulo
 to a hospital in São Paulo
 ‘The victim died after he had being transferred to a hospital in São Paulo’
- b. As vítimas₁ ganharam o caso depois que e₁ todas₁/?? todos₁ concordaram
 the victims won-3Pl the case after that all-Fem/-Masc decided-3Pl
 em testemunhar
 in testify-Inf
 ‘The victims won the case after they all agreed on testifying’

Here, as in (117) and (118), since the [+feminine] noun is base generated in the matrix clause, it is unable to trigger gender agreement inside the embedded clause.

As final remark, notice that this obligatory agreement is also observed if the universal quantifier and/or the past participle is embedded under a null subject finite adjunct clause:

³⁰ The possibility of inserting an overt pronoun in the embedded subject position of sentences like (122a) was first reported by Menuzzi (1999), who also observes that this is not possible in European Portuguese.

- (123) a. A vítima₁ morreu depois que e₁ foi transferida₁/?? transferido₁
the victims died-3Sg after that was-3Sg transferred-Fem/-Masc
 para um hospital em São Paulo
to a hospital in São Paulo
 ‘The victim died after he had being transferred to a hospital in São Paulo’
- c. As vítimas₁ ganharam o caso depois que e₁ todas₁/?? todos₁ concordaram
the victims won-3Pl the case after that all-Fem/-Masc decided-3Pl
 em testemunhar
in testify-Inf
 ‘The victims won the case after they all agreed on testifying’

4.5 Referential Null Subjects Inside Finite Adjunct Clauses

4.5.1 Right Adjuncts

Adjuncts are islands for wh-extraction, as exemplified in (124) (v. Huang 1982, Lasnik and Saito 1984, 1992, Chomsky 1986, among others). This fact led Figueiredo Silva (1996) to argue that a movement analysis for BP 3rdP null subjects is out of the question given that these subjects can occur inside adjuncts, as shown in (125):

- (124) * Quem₁ o João saiu depois que t₁ jantou
who the João left-3Sg after that had.dinner-3Sg
 ‘Which *x* is an *x* such that João left after *x* having had dinner’

- (125) O João₁ saiu depois que e₁ jantou
the João left-3Sg after that had.dinner-3Sg
 ‘João₁ left after having had dinner’

The very same contrast between wh-traces and null subjects is observed in Finnish:

- (126) a. * Kuka-Nom Heikki₁ ostaa auton kun t₁ muuttaa Suomeen
Kuka-Nom Heikki-Nom buy-3sg car-Acc when move-3Sg Finland
 ‘Who is the *x* such that Heikki will buy a car when *x* moves to Finland’
- b. Heikki₁ ostaa auton kun e₁ muuttaa Suomeen
Heikki-Nom buy-3sg car-Acc when move-3Sg Finland
 ‘Heikki will buy a car when he moves to Finland’

In what follows, I argue that the movement analysis I am proposing is not incompatible with the data above. This section examines only adjuncts that surface to the right of the VP. Adjuncts that appear to the left of matrix clause are considered in the next section.

As already shown in Chapter 2, some recent work has challenged the idea that

movement out of adjuncts is to be disallowed altogether. Assuming that the computational system of natural language has sideways movement, Nunes (1995, 2004) proposes that parasitic gaps are cases of A-movement out of adjuncts. Hornstein (1999, 2001), building on Nunes' work, proposes that obligatory controlled empty subjects inside infinitival adjunct clauses are also derived by A-movement.

I will adopt the core of Hornstein's analysis. But, before laying out the details of his proposal, I should demonstrate that the null subjects in (125) and (126b) reproduce all the proprieties of obligatory control discussed in section 4.3.4. Here are the tags for the examples below: (127) and (128) show that these null subjects are anaphoric, requiring a proper antecedent. (129) and (130) demonstrate that the relationship between one of them and an antecedent obeys the MLC in that the antecedent is the closest c-commanding DP. (131) exemplifies the ban on split antecedents. (132), (133) and (134) show the semantic restrictions on sentences containing null subjects: only a sloppy reading is permitted under ellipsis (132); with only-NPs only a covariant interpretation is allowed (133), and, a *de se* belief is required (134).

- (127) a. * Chove quando *e* fala com a Maria
 rain-3rdSg when speak-3Sg with the Maria
 ‘It rains when she/he speaks with Maria’
- b. *? Sataa kun e tulee tänne
 rain-3Sg when come-3Sg here
 ‘ It rains when he/she comes here’

- (128) a. O João₁ chora quando e₁ fala com a Maria
the João crie-3rdSg when speak-3Sg with the Maria
 ‘João cries when he speaks with Maria’
- b. Jukka₁ meni suihkuun, kun e₁ saapui kotiin
Jukka-Nom went-3Sg shower-Ill when arrived-3Sg home-Ill
 ‘Jukka took a shower when he arrived at home’
- (129) a. A Ana₁ disse que a Maria₂ olha para o chão quando e*_{1/2} fala
the Ana said-3Sg that the Maria look-3Sg at the ground when speak-3Sg
 com o Paulo
with the Paulo
 ‘Ana said that Maria looks at the ground when she speaks with Paulo’
- b. Pekka₁ sanoi, että Jukka₂ itkee, kun e*_{1/2} puhuu Suomesta
Pekka-Nom said-3Sg that Jukka-Nom cry-3Sg when speak-3Sg Finland-Ela
 ‘Pekka said that Jukka cries when he talks about Finland’
- (130) a. [A amiga da Ana₁]₂ olha para o chão quando e*_{1/2} fala com
the friend of.the Ana look-3Sg at the ground when speak-3Sg with
 o Paulo
the Paulo
 ‘Maria’s mother looks at the ground every time she speaks with Paulo’

- b. [Pekan₁ ystävä]₂ itkee, kun *e**_{1/2} puhuu Suomesta
Pekka-Gen friend-Nom cry-3Sg when speak-3Sg Finland-Ela
 ‘Pekka’s friend cries when he/she talks about Finland’

- (131) a. * O Luca₁ disse que a Ana₂ chorou pra caramba depois que *e*₁₊₂ deixaram
the Luca said-3Sg that Ana cried-3Sg a lot after that left-3Pl

o Brasil

the Brazil

‘Luca said that Ana cried a lot after they left Brazil’

- b. *? Pekka₁ sanoi, että Jukka₂ itki, kun *e*₁₊₂ lähtivät
Pekka-Nom said-3Sg that Jukka-Nom cried-3Sg when departed-3Pl

Suomesta

Finland-Ela

‘Pekka said that Jukka cried when they left Finland’

- (132) a. A Ana₁ voltou para o Rio depois que *e*₁ ficou grávida e o Luca também.
the Ana went-3Sg back to Rio after that got-3Sg pregnant and the Luca too

‘Maria went back to Rio after having got pregnant and João went too’

(= and Luca also went back to Rio after he himself having got pregnant)

- b. Maija₁ meni Suomeen, kun *e*₁ tuli raskaaksi,
Maija-Nom went-3Sg Finland-Illa when came-3Sg pregnant-Trans

ja niin Jukkakin³¹

and so Jukka-Nom

‘Maija went to Finland when she got pregnant and so did Jukka’

(= and Jukka also went to Finland when he himself got pregnant)

- (133) a. Só o Maluf₁ ficou chateado depois que e_1 perdeu as eleições

only Maluf got-3Sg upset after that lost-3Sg the elections

‘Only Maluf is an x such that x got upset x after having lost the elections’

- b. [vain [Jukka]₁]₂ oli surullinen, kun $e_{*1/2}$ menetti pelin

only Jukka-Nom was-3Sg sad-Nom when lost-3Sg game-Acc

‘Only Jukka is an x such that x was sad when x lost the/a game’

- (134) O Ronald Reagan₁ acredita que e_1 ficou doente depois que e_1 foi

the Ronald Reagan believe-3Sg that got-3Sg sick after that was-3Sg

presidente dos Estados Unidos

President of.the States United

‘Reagan believes that he himself got sick after he himself had been the president

of the United States’

In addition, recall that in BP if a participle or unversal quantifier is inserted inside a null subject adjunct clause, its gender feature is determined by the antecedent of the null subject (cf. (123).

³¹ *Kin* is an inclusive particle, and Trans = Translative

As shown in 2.4.3, according to the movement analysis of obligatory control, the derivation of (135) is built as shown in (136). First, from the lexical array in (136a), the adjunct (136b) is constructed. Next, the matrix vP is assembled by merging *saw* with the DP *Mary* forming a VP which in turn merges with the functional category *v*. Since *v* has a $\bar{\lambda}$ -role to check, *John* is moved sideways from the adjunct clause to the spec of vP, creating the vP in (136c). When the matrix vP is assembled, the adjunct adjoins to vP forming the two-segment category in (136d). After that, a finite tense is merged on the top of the matrix vP and *John* is moved again to spec of TP (136e) to check its Case feature and satisfy the EPP feature of T.

(135) John saw Mary before leaving the party

- (136) a. {John₁, saw₁, Mary₁, before₁, leaving₁, the₁, party₁, assorted functional categories}
- b. before [IP John₁ [I [_{VP} t₁ $\bar{\lambda}$ [_{VP} leaving the party]]]]
- c. [_{VP} John₁ $\bar{\lambda}$ [_{VP} saw Mary]] $\bar{\lambda}$ Sideways movement from (b) to (c)
- d. [_{VP} [_{VP} John₁ $\bar{\lambda}$ [_{VP} saw Mary]] before [IP t₁ [I [_{VP} t₁ $\bar{\lambda}$ [_{VP} leaving the party]]]]]]
- e. [_{TP} John T [_{VP} [_{VP} t₁ $\bar{\lambda}$ [_{VP} saw Mary]] before [IP t₁ [I [_{VP} t₁ $\bar{\lambda}$ [_{VP} leaving the party]]]]]]]]

This proposal has two features that I will preserve in my treatment of Finnish and

BP referential null subjects: First, the adjunct is merged with the matrix vP in a strictly cyclic way, i.e, obeying the Extension Condition (Chomsky 1993 – cf. 2.2.2). Second, the merge of the adjunct happens only after the sideways A-movement illustrated in (136c). This feature follows from the assumption that adjuncts became islands only after having been merged onto the main spine of the tree. This assumption carries over in a theory in which an adjunct is not an adjunct per se, but becomes one after being adjoined to the main spine of the tree. Hornstein implements this theory by revamping the concept of barrierhood proposed in Chomsky (1986b), according to which an adjunct clause is a barrier because it is not \bar{A} -marked. Crucially, however, the non \bar{A} -marked status of a constituent is defined only upon insertion of that constituent into the structure. Hence, an adjunct is defined as barrier only after being adjoined to a maximal projection. It follows then, that the sideways movement in (136c) does not cross a barrier. In other words, in Hornstein's proposal, the availability of sideways movement is predicted by the dynamics of the computational system.

Uriagereka's (1999) multiple spell-out system, as Hornstein observed, also assents to the idea that adjuncts are islands only after being integrated to the main phrase marker. For Uriagereka, when two sub-structures (or c-command units, using the author's terminology) are about to be merged, one of them has to be spelled-out in order to ensure the linearization of the resultant phrase marker. Thus, it is plausible that in (136) the adjunct is spelled-out prior to its merge with VP for the same reason. The adjunct clause (136b) and the matrix vP (136c) are built in different substructures and there is no c-command relation between the terminals inside the adjunct and the terminals inside the

VP. As result, there is no way to impose a linear order among them and the derivation is doomed to crash for violating the LCA (cf. Kayne 1994 and Uriagereka 1999). Thus, the system saves the derivation by applying the spell-out operation to the adjunct, transforming it into a frozen unit, akin to giant word.

In what follows, I will assume the idea that an adjunct becomes an island only after being adjoined to the maximal projection that hosts it. However, I will not adopt any particular implementation. Rather, I leave the implementation issue open.

The derivation below provides a concrete example of how the movement analysis proposed here encompasses cases of null subjects inside of finite adjunct clauses:

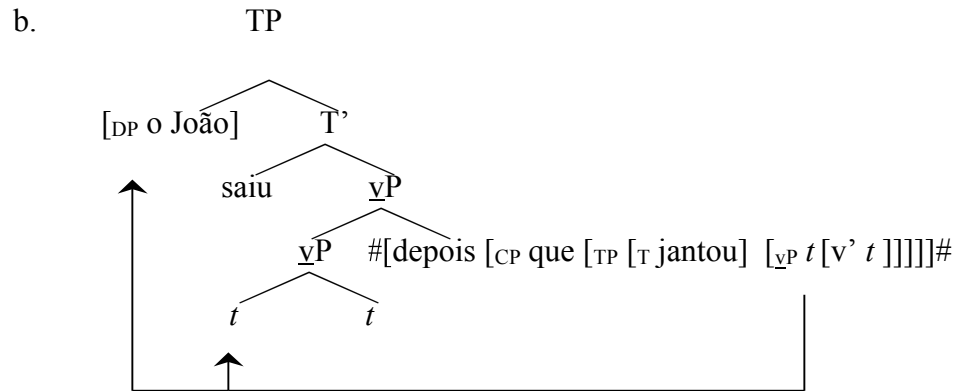
- (137) O João₁ saiu depois que *e*₁ jantou
 the João left-3Sg after that had.dinner-3Sg
 ‘John left after having had dinner’

The derivation of (137) is built upon the numeration in (138a). By putting together tokens from (138a), the adjunct clause in (138b) is constructed. Note the DP *o João* is first merged inside the adjunct clause, as the external argument of predicate headed by *jantou* ‘had dinner’. When the derivation reaches the matrix vP, the same DP is moved sideways to the matrix vP to check the \square -role of v (138c). Notice that at this step of the derivation, merge of a DP in spec of vP is not a possibility given that the numeration contains only functional categories.

- (138) a. Num = {o1, João1, jantou1, saiu1, depois1, que1, v2, T2}
 b. depois [CP que [TP [T, jantou1] [vP [DP o João] [v' t1]]]]
 c. [vP [DP o João] [v' [saiu]]] □ sideward movement from (b) to (c)

Obeying Extension, in the next step, the adjunct clause needs to be merged with the matrix vP. Thus, this constituent is first spelled-out and then merged with vP forming the object in (139a). Next, the matrix T is selected, and the DP *o João* moves to spec of TP to checks its Case feature. (139b) is thus a convergent phrase marker.

- (139) a. [vP [vP [DP o João]₂ [v' [v saiu]]] # [depois [CP que [TP [T jantou₁] [vP t₂ [v' t₁]]]]]#] □ (138b) is spelled-out and merged with (138c)



All in all, the possibility of having 3rdP null subjects inside adjuncts can be accounted for if sideward movement is allowed, and the island status of adjuncts emerges derivationally, from the necessity of satisfying the LCA or from the barrier status of

adjuncts as proposed by Hornstein.

According to this system, A-bar extraction from inside adjuncts (cf. (124) and (126a)) is not allowed because by the time the derivation reaches the stage in which the matrix C is inserted, the adjunct clause has already being adjoined to matrix vP and sub-extraction is impossible. This conclusion makes an interesting prediction about the licensing of 3rdP referential null subjects inside finite adjunct clauses: their antecedents must be the subject of the clause that hosts the adjunct. Assuming that our movement analysis is correct, a DP in a higher clause cannot be interpreted as the antecedent for the same reason that a fronted wh-phrase cannot be paired with a trace inside an adjunct: movement out of an adjunct must proceed sideways; it cannot occur after the merge of the adjunction with vP. Urpo Nikanne (personal communication) showed that there is a compelling piece of evidence for this locality restriction. In 4.3.2.2.1, it was observed that in sentences like (140), the null subject of most embedded clauses can take the subject of matrix subject as its antecedent, despite the presence of a raising predicate in between.

- (140) a. A Maria₁ me disse que parece que e₁ vai ser promovida.
 the Maria me told-3Sg that seems-3Sg that will-3sg be-Inf promoted
 ‘ Maria told me that it seems that she will be promoted.’
- b. Jukka₁ sanoi, että oli onni, että e₁ oli arpajaisissa
 Jukka₁-Nom said-3sg that be-3sg fortune that pro₁ was-3sg won

voittanut

lottery-In

‘Jukka said that it was fortunate that he had won the lottery’

Now, note that if in BP and Finnish 3rdP null subjects inside adjunct clauses are the result of sideways movement, we expect the long distance antecedence relationship observed in (140) to be disallowed if the clause containing the empty subject is an adjunct to the raising predicate. This expectation is fulfilled by the unacceptability of (141).³²

- (141) a. *O João₁ me disse [CP que choveu [quando *e*₁ chegou em casa]]
the João me told-3Sg that rained-3Sg when arrived-3SG at home
 ‘João told me that it rained when he arrived at home’
- b. * Jukka₁ sanoi [CP että satoi [kun *e*₁ saapui kotiin]]
Jukka-Nom said-3Sg that rained/snowed-3Sg when arrived-3Sg home
 ‘Jukka said that it was raining/snowing when he arrived at home’

Here the adjunct modifies the embedded clause, in which spec of TP is arguably not projected (cf. 4.3.2.2). Therefore, when compared with (140), (141) is an argument for the sideward movement analysis proposed here.

Concluding thus, the contrast between (124) & (125) and (126a) & (126b) is due to their different derivational histories. In (125) and (126b), the matrix subject starts as

³² These sentences are fine if the adjunct is interpreted as modifying the matrix clause. However, this reading is irrelevant for what we are testing here.

the external argument of the adjunct clause, and moves sideways to spec of the matrix vP, and then to spec of the matrix TP to check its Case. In (124) & (126a) the wh-phrase starts as the external argument of the adjunct clause, checks its Case locally and remains inside the adjunct. Thence, when the matrix CP is built, it is too late to extract the wh-phrase because the adjunct is already an island for extraction.

4.5.2 Left-Dislocated Adjuncts³³

At the last section, we took into consideration adjuncts that surface adjoined at the right of the VP shell. However there are a host of cases of finite adjunct clauses that surface to the left of the matrix clause. The data below show that BP referential 3rdP null subjects are also licensed inside these adjuncts:

- (142) Depois que e_1 tomou banho, [o João]_i saiu
after that took-3Sg bath the João left-3Sg
 ‘After having taken a bath, João left’

As in cases involving right adjuncts, the null subject above obligatorily co-refers with the matrix subject and all the obligatory control properties discussed in section 4.3.3 hold between them except for the local c-command requirement on the antecedent. Thus, (142) is similar to cases of backward control (cf. Farrell 1995, Polinsky and Potsdam 2002 and Hornstein 2003) in that the antecedent does not c-command the null subject.

³³ The analysis presented was first delivered as Rodrigues (2000), but it derives great benefit from Pires and Rodrigues (2002) who analyzed left-dislocated non-finite adjuncts.

However, it differs from backward control in that the null subject, by virtue of being inside the left-dislocated adjunct, does not c-command the antecedent either.

The adjunct clauses in (142) can also appear to the right of the VP shell, as (143) exemplifies. The only evident difference between (142) and (143) is that the adjunct clause receives a focused reading in (142), but not (143).

(143) [o João]₁ saiu depois que *e*₁ tomou banho

the João left-3Sg after that took-3Sg bath

‘João left after having taken a bath’

Note that the lack of interaction between left-dislocation of adjuncts and binding properties is quite general. Take as an example (144), in which the matrix subject binds the reciprocal phrase despite the lack of c-command.

(144) After each other’s trial, they were in shock

This suggests that left dislocated adjuncts are generated in a lower position. There are at least two pieces of evidence favoring this conclusion. The first one comes from binding relations in ECM constructions involving left dislocated adjuncts; the second one is the interaction between left dislocated adjuncts and the inner island constraint proposed by Ross (1984).

Concerned with binding relations in ECM constructions, Lasnik and Saito (1992)

observed the contrast in (145). They (as well as Branigan 1992 and Lasnik 1999) proposed that ECM subjects move in the overt syntax to a position high enough to c-command the adjunct clause and bind the reciprocal each other. In Branigan's and Lasnik's analysis this movement is to the spec of matrix AgroP, as represented in (145c):

- (145) a. ? The DA proved the defendants to be guilty during each other's trials
 b. ?* The DA proved that the defendants were guilty during each other's trials
 c. The DA proved ₂[_{AgroP} the defendants₁ [_{VP} [_{VP} *t*₂ *t*₁ to be guilty] [during each other trials]]]

With (144) in mind, note that the adjunct during each other's trial of (145a) may appear displaced, at the left periphery of the clause, as in (145). In addition, observe that the considerations on the binding relations shown in (145) are also valid for (146). That is, DP the defendants is able to bind of each other inside the left dislocated adjunct only if it moves to spec of the matrix AgroP, according to the analysis in (144c).

- (146) a. ? During each other's trials, the DA proved the defendants to be guilty
 b. ?* During each other's trials, the DP proved that the defendants were guilty

This suggests that (145c) is also a step of the derivation of (146a). That's why the

DP the defendants can bind the reciprocal each other in (146a), but not in (146b). If this conclusion is right, difference between (145a) and (145a) is that (146a) involves leftwards movement of the adjunct, whereas (145a) does not. Hence, (145a) has the spelt-out structure in (147), where the copy of the adjunct adjoined to VP, represented as t_3 , is c-commanded by the ECM subject:

- (147) [_{CP} [during each other trials]₃ [_{TP} the DA [proved ₂ [_{AgroP} the defendants₁ [_{VP} [_{VP} t_2 t_1 to be guilty] t_3]]]]]

Let us consider now the interaction between left dislocated adjuncts and the inner island constraint. Ross (1984) showed that wh-movement of certain adverbs (manner, degree, instruments and frequency) produces bad results if a negation is present. The negation creates an island for extraction of adverbs (the inner island constraint, in Ross' terms).³⁴

- (148) How did (*n't) you find a solution

The very same effect is observed in (149), which contains a left-dislocated adjunct clause. The presence of the negation bars the presence of left dislocated adjunct. Hence, to the extent that Ross was right in suggesting that negation blocks extraction of certain adjuncts, the sentence in (149) is evidence the left-dislocated adjuncts are moved to their surface position.

³⁴ For an explanation in terms of relativized minimality, see Rizzi (1990).

(149) ?? [e1 dirigindo o BMW], [o Rafael]₁ não chegou em casa

driving the BMW the Rafael not arrived-3Sg at home

‘Driving the BMW, Rafael did not arrive at home’

(cf. O Rafael não chegou em casa dirigindo o BMW

the Rafael not arrived-3Sg at home driving the BMW

‘Rafael did not arrive at home driving the BMW’)

I will assume, therefore, that (142) also involves movement of the adjunct clause. Thus, (142) differs from (143) only in that (142) involves remnant movement of the adjunct. More precisely, I account for licensing of the null subjects in (142) by suggesting that left-dislocated adjuncts are not base generated in their spell-out position. Rather they start the derivation as adjuncts to the matrix VP shell as in (143), and then move to the left periphery of the clause. This means that in (142) the DP *o João* ‘the João’ is moved sideways from inside the adjunct clause before the adjunction of this clause to the matrix VP shell. After that, when the derivation reaches the left periphery of the matrix clause, the remnant (cf. Müller 1998, Nunes 2003) of the adjunct clause moves to a position in the matrix CP domain, receiving thus a focused reading. I will assume here that this movement is to check an EPP feature of the functional projection that hosts the adjunct. This is concretely shown in (151), the derivation of (150).³⁵ The derivation starts with construction of the adjunct (stage1). After that (stage 2), the DP *o João* ‘the João’ moves to the specifier of the matrix VP, and the adjunct clause is spelled-out and merged with VP. Stage (2) is completed when the DP *o João* undergoes movement to spec of TP,

³⁵ In (151), I am not representing irrelevant functional projections

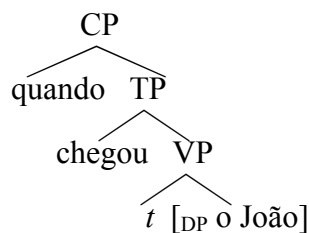
where it checks its Case feature. In stage (3), a complementizer is merged on the top of the TP and the remnant of the adjunct clause moves to spec of CP.

(150) Quando e_1 chegou, o João₁ tomou banho

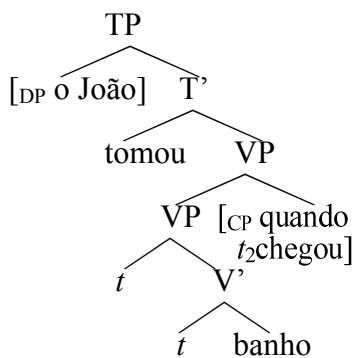
when arrived-3Sg the João took-3Sg bath

‘When he arrived (at home), João took a bath’

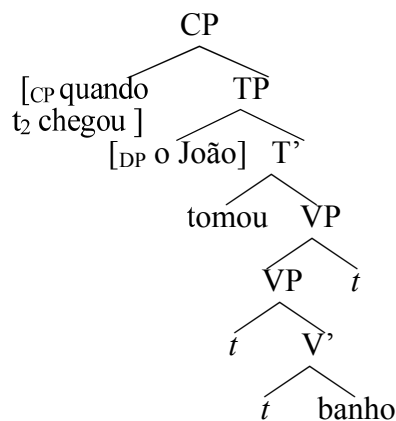
(151) Stage 1



Stage 2



Stage 3



In a nutshell, the analysis proposed in this section subsumes 3rdP referential null subjects inside left dislocated adjuncts under the movement analysis I am arguing for.

4.5.3 Null Subjects Inside Clausal Complements of Double Object Constructions

Modesto (1999, 2000) proposes that BP 3rdP null subjects are interpreted as variables at LF in the sense that they are bound by a DP in A'-position. This proposal was driven mainly by the contrast in (152). In effect, the DP *a Maria* in (152a) cannot be the antecedent of the null subject because it is in an A-position. In (152b), on the other hand, the underlying direct object is a legitimate antecedent because it has been raised to A'-position, spec of CP.³⁶

- (152) a. O Max₁ convenceu a Maria₂ que *e*_{1/*2} tinha de sair
 the Max convinced-3Sg the Maria that had-3Sg of leave-Inf
 ‘Max convinced Mary that he had to leave’
- b. Quem₂ o Max₁ convenceu *t*₂ que *e*_{?1/2} tinha de sair
 who the Max convinced-3Sg that had-3Sg of leave-Inf
 ‘Who did Max convince that had he had to leave’

In 3.5.2.2, after having reviewed Modesto’s proposal I suggest we abandon it, for it presents problems in its implementation and empirical coverage. However, if we do so, we will need an alternative explanation for (152). That is the purpose of this section. My goal here is to show that a movement analysis might give us this alternative explanation.

³⁶ For Modesto only the wh-phrase can be the antecedent in (152b). Indeed some speakers do not allow co-indexation with the matrix subject. However, when confronted with the sentence in (i), the majority of the speakers take the matrix subject as the antecedent. Hence, there might be nothing within the grammar preventing the matrix subject in (152b) to be the antecedent.

(i) Quem₁ a Maria₁ convenceu *t*₁ que *e*₁ estava grávida.
 ‘Who did Maria convince that she was pregnant’

Modesto took for granted the assumption that in (152) the direct object of the verb *convencer* ‘to convince’ c-commands the embedded clause. However, as I discuss below, it is unclear that this assumption is correct.

Ferreira (2000) observed that the subject of sentences embedded under the verb *convencer* ‘to convince’ can be an epithet referring back to the matrix object:

- (153) O Ira₁ convenceu o Diogo₂ que a bobão*_{1/2} não deveria comprar o carro
 the Ira convinced-3Sg the Diogo that the silly should-3Sg buy-Inf the car
 da Cilene
 of.the Cilene
 ‘Ira convinced Diogo that the silly shouldn’t buy Cilene’s car’

If epithets cannot be coindexed with a c-commanding nominal in argument position (cf. Lasnik 1976, 1989, Hornstein and Weinberg 1990 and Higginbotham 1992), then in (153), the fact that co-indexation between the epithet *a bobona* ‘the silly’ and the DP *a Maria* is allowed suggests that the matrix direct object does not c-command the embedded subject.³⁷

³⁷ Juan Uriagereka (personal communication) observed that this analysis wrongly predicts that the pronoun can be co-indexed with the DP *a Maria* in (i):

- (i) O João convenceu ela*_{1,2} que a Maria₁ está errada
 the João convinced-3Sg her that the Maria is-3Sg wrong
 ‘João convinced her that Maria was wrong’

The point is well taken, but it is not entirely persuasive as counterevidence to the lack of c-command assigned to (152). BP seems to disallow co-indexation of DP with pronoun that precedes it even in a configuration like (iii), where it is clear that the pronoun does not c-command the DP which it is co-indexed with.

Thus, if the matrix object does not c-command the embedded clause, the question is about the structural position occupied by embedded clause. In Rodrigues (2000), I suggest that this is an adjunct position. That's why these clauses resist wh-extraction, as (154) illustrates:

- (154) a. ?? Quem₁ o João convenceu a Maria que *t*₁ vem amanhã
 who the João convinced-3Sg the Maria that come-3Sg tomorrow
 ‘Who is *x* such that João convinced Maria that *x* will come tomorrow’
- b. ??O que₁ o João convenceu a Maria que o Pedro precisa comprar *t*₁
 what the João convinced-3Sg the Maria that the Pedro need-3Sg buy-Inf
 ‘What is *x* such that João convince Maria that Pedro needs to buy *x*’
- c. ?*Como/porque₁ o João₂ convenceu a Maria que *e*₂ tinha consertado
 how/why the João convinced the Maria that had-3Sg fixed
 o carro *t*₁
 the car
 ‘How/why did João convinced Maria that he had fixed the car’

-
- (iii) O João vai acreditar [que ele_{1/2} está falando a verdade] muito mais rápido do que a
 the João will-3Sg believe-Inf that he is-3Sg speaking the truth much more fast of.the that the
 mãe do Paulo₁ (vai)
 mother of.the Paulo will-3Sg
 ‘João will believe that he is speaking the truth much more fast than Paulo’s mother will’

This clearly contrasts with English, where a non-commanding pronoun can freely corefer with an R-expression, as Lasnik and Saito (1991) show with (iv):

- (iv) Joan believes that he_{1/2} is a genius even more fervently than Bob₁’s mother does

This adjunction status of the finite clause following the verb convencer can be seen as demotion of an argument in the sense of Larson (1991).³⁸ I will assume that it is an adjunction to the vP shell. Therefore, given the movement analysis I am arguing for, (152a) is to be analyzed as an instance of movement out of an adjunct clause. The sentence in (152a), repeated here as (155), is derived as shown in (156). The derivation starts in the numeration in (156a). First the adjunct clause in (156b) is assembled, with the DP *o João* being inserted as the external argument of the leaving predicate. After that, the matrix vP (156c) is constructed. The DP *a Maria* is merged as the internal argument of the matrix verb, being assigned the theme q-role. Since *convencer* ‘to convince’ is a transitive predicate, it requires an external argument. At this stage of the derivation, there is no item in the numeration that can hold a \square -role feature, therefore the DP *o João* is moves sideways to the matrix spec of vP, forming the vP in (156d).

- (155) O João₁ convenceu a Maria₂ que *e*_{1/*2} tinha de sair
 the João convinced-3Sg the Maria that had-3Sg of leave-Inf
 ‘John convinced Mary that he had to leave’

- (156) a. N= {o₁ , João₁, a₁ , Maria₁, convenceu₁, v₁, T₁, C₁, tinha₁, de₁, sair₁, que₁}
 b. [_{CP} que [_{TP} [_{T'} [_T tinha₁] [_{VP} [o João] [_{V'} t₁ tinha de sair]]]]]
 c. [_{VP} [_{V'} [_V convenceu] [_{VP} t₂ a Maria]]]

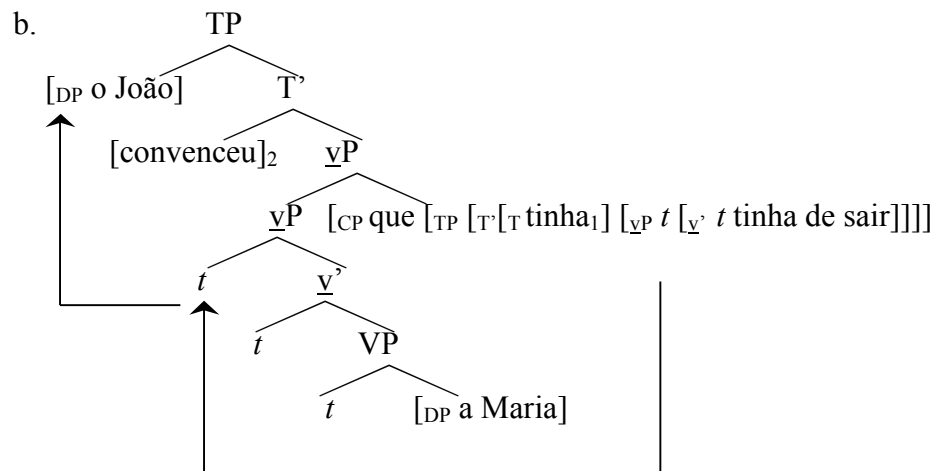
³⁸ Based on the VP shell structure proposed by Larson (1988), Larson (1991) suggests that in the VP shell headed by *promise*, the inner VP-subject position is dethematized, as a consequence, the notional direct object – the embedded clause in (i) is structurally realized as V' adjunct. In as shown in (i), in this proposal, the indirect object, *Mary*, moves to the empty specifier of the inner VP for Case reasons.

(i) [_{VP} John [_{V'} promise₂ [_{VP} Mary₁ [_{V'} t₂ t₁ [_{V'} to return home by 5:00 p.m]]]]]

- d. $[_{VP} [_{VP} [_{DP} \text{o João}]_3 [_{V'} [_{V} \text{convenceu}]_2] [_{VP} t_2 [_{DP} \text{a Maria}]]]]] \square$ Sideways movement
from (b) to (c)

In order to obey extension, at this step of the derivation the adjunct clause in (156b) needs to adjoin to vP. Given that (156b) and (156c) are different c-command units, for linearization purposes (156b) is spelled-out before being merged with vP. The object in (157a) is thus formed. Finally, a finite Tense is merged on the top of the matrix vP and the DP *o João* moves to spec of TP where it has its Case feature checked, and the convergent structure in (157b) is sent to the interfaces.

- (157) a. $[_{VP} [_{VP} [_{DP} \text{o João}]_3 [_{V'} [_{V} \text{convenceu}]_2] [_{VP} t_2 [_{DP} \text{a Maria}]]]]] \# [_{CP} \text{que} [_{TP} [_{T'} [_{T} \text{tinha}]_1] [_{VP} t_1 [_{V'} t_1 \text{tinha de sair}]]]]] \# \square$ (b) is spelled-out and
merged with (d)



In sum, the movement analysis can account for (152a). The movement of the DP *o João* is taken to be a case of intra-arboreal (sideways) movement from the adjunct to matrix clause.

Note that Merge-over-Move as an economy condition (cf. 2.2.1) blocks the matrix objects from being the antecedent. Had the derivation in (156)-(157) taken a different path, with the DP *a Maria* being merged as the subject of the adjunct clause and then moved to the matrix object position, Merge-over-Move would have been violated. The DP *o João* could have been assembled and merged in the matrix object position, blocking, therefore, the movement of the DP *a Maria*.

Consider now (152b). The derivation of this sentence diverges from economy conditions because movement of the wh-phrase *quem* ‘who’ from subject position of the adjunct clause to matrix direct object position supercedes merge of the DP *o João*. I will return to this issue below.

Norbert Hornstein (personal communication) pointed out to me that (152b) resembles parasitic gap constructions (cf. (158)) in that the gap inside the embedded clause is parasitic of the gap in the matrix object position. (Following the terminology suggested in Culicover (2001), hereafter, I will call these two gaps the parasitic gap and the true gap, respectively). To see the similarity under discussion compare (158) with (159). Among the sentences in (159), only (159c) (=152b) contains a true gap, therefore only in this sentence the parasitic gap (the null subject) is licensed.³⁹

(158) Which report₁ did you file t₁ without reading PG.

³⁹ On the properties of parastic gaps, see Engdahl (1983), among others.

- (159) a. * O João convenceu a Maria_i que *e*_i tinha de sair
the João convinced-3Sg the Maria that had-3Sg of leave-Inf
 ‘João convinced Maria that she had to leave’
- b. ?? Quem_i o João convenceu a Maria que *t*_i tinha de sair
who the João convinced-3Sg the Maria that had-3Sg of leave-Inf
 ‘Who did John convinced Maria that he had to leave’
- c. Quem_i o João convenceu *t*_i que *e*_i tinha de sair
who the João convinced-3Sg that had-3Sg of leave-Inf
 ‘Who did João convince that he had to leave’

Another similarity between the cases under discussion and parasitic gap constructions is the prohibition against replacing the true gap with a resumptive pronoun. The Spanish sentence in (160), for instance, is unacceptable with the resumptive pronoun *lo* as discussed in Chomsky (1982).

- (160) El reloj de que me hablaste, que (**lo*) han conseguido arreglar *t* sin mover PG, ha quedado muy bien
 ‘The clock you spoke to me about, which they got to fix (it) without moving, now works very well’

In (152a), as noted by Modesto, the DP *a Maria* can be the antecedent if it is topicalized, as in (161a). However, if a resumptive pronoun replaces the true gap, the

antecedent relationship between a Maria and the parasitic gap (the null subject) is blocked:

- (161) a. A Maria₁, o João convenceu t_1 que e_1 tinha de sair
the Maria, the João convinced-3Sg that had-3Sg of leave-Inf
- b. * A Maria₁, o João convenceu **ela**₁ que e_1 tinha de sair
the Maria, the João convinced-3Sg her that had-3Sg of leave-Inf
 ‘As for Maria, João told her that she had to leave’

(162) shows another similarity between (152b) and parasitic gap constructions: the parasitic gaps in (162a) and (162b) cannot occur within an island within another island. (This condition on parasitic gaps was discussed in Kayne 1984, Contreras 1998, and Chomsky 1986a).

- (162) a. * Which book did read t [before Fred asked Bill [whether you review PG]]
- b. *Quem₁ o João convenceu t_1 [que choveu [assim que e_1 saiu]]
who the João convinced-3Sg that rained-3Sg as.soon.as that left-3g
 ‘Who did João convince that it rained as soon as he left’

In short, the null subject in (152b) displays the hallmarks of parasitic gaps. Therefore, I proposed a unified analysis, treating (152a) as a parasitic gap construction. To do so, I will adopt Hornstein’s (2001) account of parasitic gaps. The derivation of

(163a) gives us an overview of Hornstein's proposal.

- (163) a. Which book did you read before Fred reviewed
- b. {which, book, you read, before, Fred, reviewed, assorted functional categories}
- c. before [which book₁ [IP Fred I [VP Fred [V' reviewed t₁]]]]
- d. [VP you [V' read which book]]
- e. [CP which book₁ [IP you I [VP [VP you [V' read t₁]] [before [t₁ [IP Fred I [VP Fred [V' reviewed t₁]]]]]]]]

Using lexical items from the numeration in (163b), the adjunct in (163c) is built. Notice that inside the adjunct clause the wh-phrase *which book* moves to A'-bar position, which Hornstein takes to be either an outer spec of IP or spec of CP. After having built (163c), the matrix verb is pulled out from the numeration. To check the theme \square -role of *read*, *which book* is moved sideways from (163c) to the object position of *read*. This step of the derivation violates Merge over Move. The pronoun *you*, which is still available in the lexical array could have been merged with *read*, checking theme \square -role feature. But, the wh-phrase is moved anyway and *you* is merged later in spec of VP, being assigned the agent \square -role of *read* (cf. (163d). As represented in (163e), when the matrix C is inserted, the wh-phrase moves to spec of CP to check its wh-feature.

Thus, building on Nunes (1995, 2003), Hornstein's adopts a movement analysis for parasitic gaps. However, differently from Nunes, this author proposes that the wh-

phrase moves to an A'-position inside the adjunct clause. This A'-movement according to him is the reason for why the derivation of (162a) is allowed to violate merge over Move. This violation of economy is a strategy to satisfy Principle C. The A'-movement of *which book* in (163c) created a variable, defined by Hornstein (2000:84) as a 'Case-marked trace'. Since variables are to be A-free, in (163d), movement to the matrix object position, a non-commanding position, is the only way to guarantee that the variable inside the adjunct will not be A-bound. Consequently, Move supervenes upon Merge in order to satisfy Principle C. Note that Merge over Move is understood as an economic evaluation on convergent derivations, whereas condition C is condition on convergence.⁴⁰

Now consider sentence (152b), repeated here as (164):

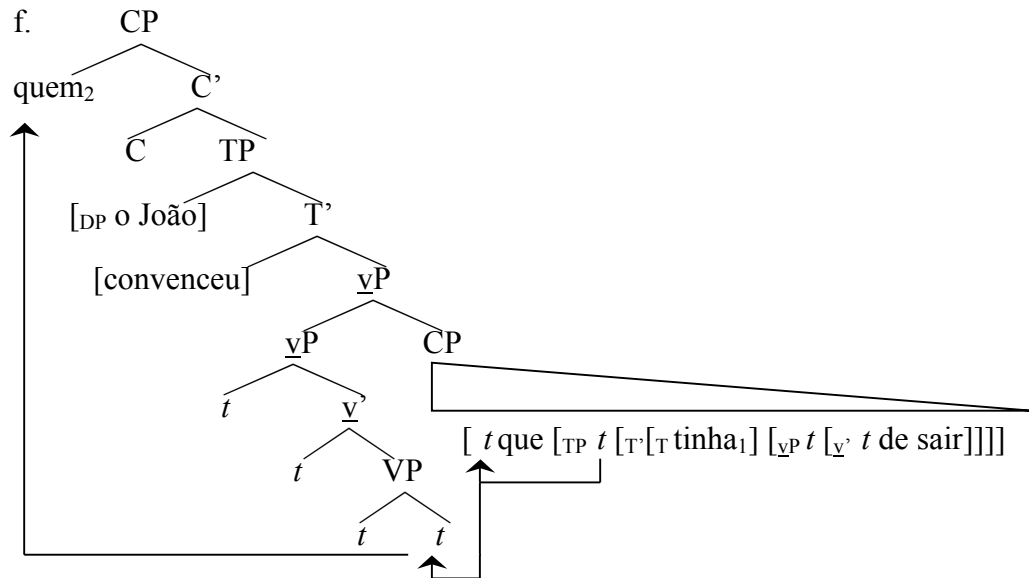
- (164) Quem_i que o João convenceu t_i que e_i tinha de sair
who that o João convinced-3Sg that had-3Sg of leave-3Sg
 'Who did João convinced that he had to leave'

I propose that the derivation of (164) is on a par with the derivation in (163). From the numeration in (165a), the adjunct clause in (165b) is constructed. Here, the wh-phrase *quem* checks the \square -role of the *leaving* predicate and after that it moves to spec of TP here it checks its Case feature, and then it moves to the specifier of the local CP. Thus, the copy of the wh-phrase is spec of TP has its Case feature checked and it is also bound by an operator. Hence, a variable is created. When the matrix verb is pulled out from the numeration, a copy of the wh-phrase is merged with it, creating the VP in

⁴⁰ Hornstein (2001) attempts to derived principle C from the restriction imposed upon the mapping of einitial array into linear scope order at LF.

(165c). The functional category *v* is merged on the top of the matrix VP and the DP *o João* is assembled and merged with *vP*, checking the external \square -role of the matrix predicate (165d). The adjunct clause is spelled-out and merged with (165c), creating (165e). After that, a finite *T* is selected from the numeration and merged with (165d), and the DP *o João* moves to spec of TP in order to check its Case feature. When the matrix CP is built, the *wh*-phrase moves to spec of CP, where it has its *wh*-feature checked. The convergent structure in (165f) is, thus, formed.

- (165) a. $N = \{o_1, João_1, quem_1, convenceu_1, v_1, T_1, C_1, tinha_1, de_1, sair_1, que_1\}$
 b. $[CP\ quem_2 [CP\ que [TP\ t_2 [T' [T\ tinha_1] [\underline{vP}\ t_2 [\underline{v'}\ t_1\ tinha\ de\ sair]]]]]$
 c. $[\underline{vP}\ [\underline{v'}\ [\underline{v}\ convenceu] [\underline{vP}\ t_2\ quem_1]]] \square$ Sideways movement from (b) to (c)
 d. $[\underline{vP}\ [o\ João] [\underline{v'}\ [\underline{v}\ convenceu_2] [\underline{vP}\ t_2\ quem_2]]]$
 e. $[\underline{vP}\ [\underline{vP}\ [o\ João] [\underline{v'}\ [\underline{v}\ convenceu_3] [\underline{vP}\ t_3\ quem_2]]] [CP_2 [CP\ t_2\ que [TP\ t_2 [T' [T\ tinha_1] [\underline{vP}\ t_2 [\underline{v'}\ t_1\ tinha\ de\ sair]]]]]]] \square$ (b) is spelt-out and merged with (c)



The violation of economy in (165c), where movement of the wh-phrase *quem* takes precedence over merge of the DP *o João*, is required for convergence. Inside the adjunct clause, the trace of the wh-phrase in spec of TP is a variable, hence it cannot be A-bound. Therefore, as in (164d), in (165c) violation Merge over Move is allowed because there is no other convergent route. If the wh-phrase had moved through spec of the matrix vP, principle C, which is a condition on convergence, would have been violated.

An important remark concerns the availability of the ‘parasitic gap’ movement proposed in (165) in structures with other types of adjuncts. Since we are assuming that the embedded clause in (152) is an adjunct, we are predicting that the derivational conspiracy that forced sideways movement through the object of the matrix in (165) is also observed in structures involving bona fide adjunct clauses. This prediction is indeed borne out, as (166) shows.⁴¹

(166) Quem₁ a Maria visitou t₁ [quando e₁ foi para Brasília]]

who the Maria visited -3Sg when went-3Sg to Brasilia

‘What is the *x* such that Mary visited *x* when *x* went to Brasilia.’

Interestingly, speakers that accept (166) do not accept (167), where an overt pronoun is inserted in matrix object position. This shows that bona-fide adjuncts behave exactly like the case we discussed in this section.

⁴¹ It is important thought to observe that (166) is allowed only in the right pragmatic context. According to the speakers, this sentence is marginal in an out of the blue context.

- (167) * O Pedro₁, a Maria visitou ele₁ [quando *e*₁ foi para Brasília]
the Pedro, the Maria visited-3Sg he when was-3Sg to Brasilia
 ‘Pedro, Maria visited him when he went to Brasilia’

I will leave skirted the question as to how movement from one Case position to another is possible. In (165c), the wh-phrase *quem* moves a Case position (the object position of the matrix clause) after having checked its Case feature against the embedded finite T. Although, I will leave this issue unsolved, notice that it is resolved if we follow Nunes and Uriagereka (2000) in assuming that, when one copy ‘migrates’ from a command unit to another, its already checked uninterpretable features become active again. In (165) the sideways movement of the wh-phrase *quem* from the adjunct clause to matrix object position results in the reactivation of the Case feature of wh-phrase, which is thus checked again against the matrix v.

4.6 Conclusions

In this chapter, I analyzed 3rdP referential null subjects in Finnish and Modern BP vis-à-vis NP-movement. Mainly, it was proposed that in these grammars A-movement out of finite clauses occurs and correlates with the weakening of the 3rdP verbal agreement morphology (Agr).

Presupposing that in pro-drop languages *pro* is the verbal agreement morpheme (Agr) itself, I suggested in that the grammars under investigation are not null subject

grammars, because Agr underwent $\bar{\lambda}$ -degradation and was lexically reanalyzed as part of the verb. However, it was hypothesized that Agr retained a D-feature that can satisfy the EPP feature of T when the verb moves to T. As result, in this grammatical system, a DP can move from a finite embedded clause without visiting spec of TP, the Nominative Case checking position.

The following arguments were presented in favor of a movement analysis: (i) the null subjects under consideration have an anaphoric behavior, requiring a sentential antecedent. (ii) Their antecedence relationship with a DP obeys the Minimal Link Condition, the antecedent being the closest c-commanding DP. (iii) In BP these subjects fail the resumption test, being disallowed inside relative clauses. Finnish relative clauses might have 3rdP referential null subjects but only because the nominal head of the relative clause undergo object shift. (iv) In Finnish and BP, these subjects display all the diagnostics used to characterize obligatory control as the residue of movement; (v) In BP, clauses embedded under the connective *como* cannot host a 3rdP referential null subjects arguably because these clauses are left branches inside a DP.

The last source of evidence that I discussed was related to gender feature of past participles and floating quantifiers. It was observed that in Romance non-finite obligatory control configurations, the antecedent of PRO controls the value of the gender feature of a past participle form or a floating quantifier embedded under the c-command domain of PRO. In BP, the same phenomenon is observed in structures involving an embedded 3rdP referential null subjects. As discussed, this follows straightforwardly if the considered empty subjects are residues of movement.

I also analysed the occurrence of 3rdP referential null subjects inside finite adjunct clauses and suggested that they are formed via sideward movemnt.

I Appendix More on Adjuncts

I turn now to another potential case of A-movement out of a finite adjunct clause. However, this time I will be considering the DP domain, as the examples in (167) indicate:

- (168) a. [DP o susto do João₁ [quando *e*₁ chegou em casa]] foi grande
 the shock of.the João when arrived-3Sg at home was-3Sg big
 ‘João’s shock when she arrived at home was huge’
- b. Você perdeu [a cara do João₁ [quando *e*₁ viu a Maria chegando]]
 you missed-3Sg the face of.the João when saw-3Sg the Maria arriving
 ‘You missed John’s face when he saw Maria arriving’

In (168), the possessor is the antecedent of the null subject and the sentences are fine. But, as illustrated in (169), the complement of NP cannot be the antecedent. Note that the sentences in (169) are acceptable with a full pronoun replaces the null subject:

- (169) a. *[aquela foto da Gisele₁ quando *e*₁ desfilou em São
 that picture of Gisele when waked-3Sg down the cat way in São
 Paulo] é linda
 Paulo is-3Sg beautiful
 (cf. Aquela foto da Gisele₁ quando **ela** desfilou em São Paulo é linda)
 ‘That picture of Gisele in the São Paulo Fashion show in very beautiful’

- b. *A polícia não falou das condições do cadáver quando *e* foi encontrado
the police not talked-3Sg of.the condition of.the cadaver when was-3Sg found
 (cf. A polícia não falou das condições do cadáver quando **ele** foi encontrado)
 ‘The police did not talk about cadaver’s condition when it was found’

In addition, a DP inside the possessor phrase also fails to be the antecedent of the null subject (cf. (170)). Again, (170) are acceptable with an overt pronoun replaces the null subject:

- (170) a. [O susto [da mãe [do João₁]]₂ quando *e*_{*1/2} chegou em casa]
the shock of.the mother of.the João when arrived-3Sg at home foi grande
was-3Sg big
 (cf. O susto [da mãe [do João₁]]₂ quando **ela**_{1/2} chegou em casa] foi grande)
 ‘João’s mother’s shock when she arrived at home was big’
- b. Você perdeu [a cara [do pai [do João]₁]]₂ quando *e*_{*1/2} estava
you missed-3Sg the face of.the father of.the João when was-3Sg

conversando] com a Maria

talking with the Maria

(cf. Você perdeu a cara [da mãe [do João]₁]₂ quando **ele**_{1/2} estava conversando com a Maria)

Assuming that in BP nominal complements stays *in situ* throughout the derivation and that nominal adjuncts are adjoined to the NP, (169) and (170) corroborate the c-command requirement on the antecedent. In these sentences, the null subject is not license because it is not c-commanded by its antecedent.

The occurrence of a null subject in (168) poses two questions about propositioned possessors:

- (171) a. What is their position inside DP? That is, are they high enough to c-command the adjunct clause that is arguably adjoined to NP?
- b. What is the role of a proposition phrase headed by *de* ‘of’ in defining a c-command domain?

A possessor phrase is arguably generated inside *de* NP as an argument of possessed NP (cf. chapter 5 for a discussion), but it has being largely assumed that it moves to a position outside the NP (cf. Szabolcsi 1983, 1994, Abney 1986, Giorgi and Longobardi 1991, Ritter 1991, Cinque 1994, Kayne 1994, Wit 1997, Longobardi 2001 among other). For instance, in (172) the NP is elided, but not the possessor phrase. I take

it to be evidence that in BP the possessor phrase moves inside the NP. If the possessor phrase survives NP ellipsis, it is because it has been raised to a position outside the NP.⁴²

- (172) a. Eu li o livro do Chomsky, mas o do Lakoff não
I read the book of Chomsky, but the of.the Lakoff not
 ‘I read Chomsky’s book, but Lakoff’s book’

Moreover, notice that in general the possessor precedes NP adjuncts:

- (173) a. Eu encontrei aquela filha do João [de cabelo comprido]
I met-1Sg that daughter of.the João of hair long
 ‘I met John’s daughter with long hair’

I will not discuss the details of this movement here. Based on (172) and (173) I will simply assume that it occurs. Thence, I will answer question (171a) with the following hypothesis: in (168) the possessor phrase moves to position higher than the adjunct clause.

Let me now address (171b). If the c-command requirement on the antecedent is real, then in (168), the DP *o João* ‘the João’ contained inside prepositional phrase *do João* ‘of João’ must be able to c-command outside the prepositional phrase. This falls in place if the preposition *de* ‘of’ is a dummy preposition, as proposed by Giorgi and

⁴² On movement of the possessor phrase, see Schoorlemmer (1998), ad Raposo (1999). I am following Raposo (1998) in assuming that *one* substitution (Hornstein and Lightfoot 1981) corresponds to ellipsis in Portuguese.

Longobardi (1993). As these authors show, the complement of the proposition *de* (*di* in Italian) ‘of’ is able to command outside the prepositional phrase containing it. In (174a), for instance of DP *Gianni* is able to bind the reflexive *se stesso*, and in (174b), the *Gianni* binds the pronouns, which, as result is not free in its minimal domain.

- (174) a. L’opinione [di [se stesso]_i] [di [Gianni]_i] è troppo lusinghiera
the opinion of himself of Gianni is too flattering
 ‘Gianni’s opinion about himself is too flattering’
- b. *L’opinione [di [lui]_i] [di [Gianni]_i] è troppo lusinghiera
The opinion of him of Gianni is too flattering
 ‘Gianni’s opinion about him is too flattering’

Martín (1995) shows that Spanish behave in the same way:

- (175) a. La opinión [de [sí mismo]_i] [de [Juan]_i] es demasiado halagadora
the opinion of himself of Juan is too flattering
 ‘Juan’s opinion about himself is too flattering’
- c. *L’opinión [de [él]_i] [de [Juan]_i] es demasiado halagadora
the opinion of him of Juan is too flattering
 ‘Juan’s opinion about him is too flattering’

And Brazilian Portuguese does too, as the data in (176) show:

- (176) a. A visão [d[a Maria]_i] [de [si mesma]_i] é esquisita demais
 the view of.the Maria of herself is weird too
 ‘Maria’s view of herself is too weird’
- b. A visão [d[a Maria]_i] [d[ela]_i] é esquisita demais
 the view of.the Maria of.her is weird too
 ‘Maria’s view of herself is too weird’

Thus, following Giorgi and Longobardi (1993) and Martín (1995), I will assume that *de* ‘of’ does not define a c-command domain. This answers (171b).

One could propose an alternative answer to (171b) basing on Anderson (1979). Anderson shows that in English a complement of a thematic preposition inside a VP can c-command other object inside the VP. Some of her examples are reproduced in (177). The negative polarity item *anything* in (177a), the reciprocal *each other* in (177b) and the bound variable pronoun *he* in (177c) are licensed by a element inside a prepositional phrase.

- (177) a. He spoke with to very few people about anything important
 b. Jake likes to talk to his daughter about herself
 c. The shift boss talked to every blaster before he left the job

Given that a possessor is arguably an argument of the noun (cf. chapter 5), (168) could in principle be grouped with Anderson’s case. This would explain the why the DP

o João inside an *of* phrase is allowed to be the antecedent of the null subject. Notice, however, that this explanation raises questions about the unacceptability of (178), where *ninguém* ‘nobody’ inside a thematic preposition phrase fails to license the negative polarity item *nada* ‘nothing’.⁴³

- (178) *A Maria conversou com ninguém sobre nada
the Maria talked-3Sg with nobody about anything
 ‘Maria talked to nobody about anything’

In addition, assuming an analysis à la Anderson, an explanation for (179) is also required. In these sentence, the DP *o João* ‘the João’ cannot be the antecedent of the null subject, even though it occurs inside a prepositional phrase that is an argument of the bridge verb *disse* ‘say’:

- (179) [a Maria]₁ disse para [o João]₂ que *e*_{1/*2} tinha de sair
the Maria said-3Sg to the João that had-3Sg of leave-Inf
 ‘Maria told João that she had to leave’

Anderson tied the facts in (177) to the availability of preposition stranding in English. For her, the c-command relations in (177) are possible because the preposition is

⁴³ Notice that (178) becomes acceptable if the negative polarity item is properly licensed, as in (i), where *nada* ‘nothing’ is licensed by the negative item *nunca* ‘never’.

- (i) A Maria nunca conversou com ninguém sobre nada da vida dela.
the Maria never talked-3Sg with nobody about nothing of the life of-she
 ‘Maria never talked to anybody about any aspect of her life’

reanalyzed, being adjoined to the adjacent verb.⁴⁴ Branigan (1992) suggests a minimalist analysis for the cases, proposing that at LF the DP inside the prepositional phrase moves to spec of AgroP, leaving the preposition stranded.

If the grammaticality (177) is due to preposition stranding, then the fact that BP does not allow preposition stranding explains why the sentences in (178) and (179) are unacceptable. It also indicates that (168) is not be related to Anderson's findings. Therefore, we can dismiss an analysis along the lines proposed by Anderson.

⁴⁴ On reanalysis of prepositions, see also Hornstein and Weinberg (1981).

CHAPTER 5

LOSS OF NOMINAL MORPHOLOGY AND NULL POSSESSORS

5.1 Preliminaries

Like chapter 3, this chapter is a transition piece. Its main purpose is to set up the background necessary for the movement analysis I will defend in chapter 6 for BP null possessors. Differently from chapter 3, however, this chapter starts with a brief overview of the syntax of nominals because they are less studied. In this overview I will provide neither a deep discussion of the matter nor analyze new data; rather my purpose is to make explicit the theoretical apparatus necessary to understand the technical implementation of the movement analysis I will offer in chapter 6. In the second part of the chapter, I discuss loss of morphology inside the nominals and also the licensing of null possessors in BP and Finnish.

Here is the division of the sections: 5.2 is dedicated to the structure of nominal descriptions. It starts presenting the ‘DP hypothesis’ and ends with the DP structure I am

assuming this thesis. Section 5.3 is about possessive phrases. In particular, following Abney (1987), and Vergnaud and Zubizarreta (1992), among others, I will assume that relational nouns are argument-taking categories that \square -mark the possessor phrase. Section 5.4 discusses the loss of morphology inside nominals in BP grammars, where the pronominal possessive system was simplified due to the loss of the 2ndP possessive form *tua* ‘your’, which was replaced by *sua*, originally a 3rdP pronoun. In section 5.5, I take on null possessors in Standard Finnish, showing that this grammar also displays correlation between agreement morphology and the allowance of null possessors. Section 5.6 is dedicated to final remarks.

5.2 The Nominal Structure

5.2.1 The DP Hypothesis

The traditional view of nominal descriptions takes them to be NPs whose specifier is occupied by a determiner. This view became obsolete after Szabolcsi’s and Abney’s work showing that nominals are structurally similar to clauses.

Szabolcsi (1981, 1983) claimed that nominals, likewise clauses, have an expanded syntactic structure composed by lexical and functional projections.¹ She was taking into consideration Hungarian possessive descriptions. As shown above, in Hungarian the

¹ A parallelism between clauses and nominals was first suggested by Lees (1960), who noticed that both clauses and nominals can be taken as arguments and can undergo passivization. Lees’ suggestion was that embedded sentences are dominated by an NP node.

possessor phrase agrees in ϕ -features with the possessive noun and displays Nominative Case. Thus, syntactically it behaves like a subject.

- (1) a. az én- \emptyset kar-ja-i-m (Szabolcsi, 1981)
 the I-Nom arm-Poss-Pl-1Sg
 ‘my arms’
- b. (a) Péter- \emptyset kar-ja-i- \emptyset
 the Peter-Nom arm-Poss-Pl-3Sg
 ‘Peter’s arms’

However, as exemplified in (2), Hungarian possessors can also be marked with Dative Case, and, when it happens, the possessor obligatorily precedes the article.

- (2) a. én-nek-e-m a kar-ja-i-m (Szabolcsi, 1981)
 I-Dat-Poss-1Sg the arm-Poss-Pl-1Sg
 ‘My arms’
- b. Péter- nek a kar-ja-i- \emptyset
 Peter-Dat the arm-Poss-Pl-3Sg
 ‘Peter’s arms’

In addition, a dative-marked possessor can appear detached from the possessive description, surfacing in a position outside the nominal domain.

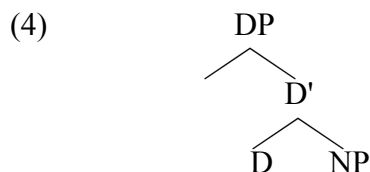
- (3) [s' [s' Péter-nek [s_o hosszú-ak a karja-i- ø- ø]]] (Szabolcsi, 1981)

Peter-Dat long-pl the arm-poss-pl-3Sg-Nom

‘It is Peter whose arms are long’

These facts led Szabolcsi to a nominal structure composed by two functional categories: [+Poss] Infl and KomP, KomP being the nominal counterpart of CP, headed by lexical categories of the determiner class. Whereas nominative possessor phrases move to spec of [+Poss] Infl,² dative possessors raised to spec of KomP, which serves as an escape-hatch for movement out of the nominal domain. Hence, dative-marked possessors can move away from the nominal domain, as shown in (3).

Abney (1987) put forward the so-called ‘DP hypothesis’. Defending an analysis similar to that of Szabolcsi, he argued that determiners head the D-N constituent, forming the structure in (4):



Coupled with the assumption that non-lexical categories also participate in X-bar schema, the DP-hypothesis unifies the clausal and the nominal domains by considering that determiners, similar to complementizers and modals, are a functional category heading its own phrase.³

² In her (1994) paper, Szabolcsi, building on Kayne (1993), proposes that the nominal structure is composed by an AgrP projection, where Nominative Case is assigned.

³ Abney (1987:64) lists the following reasons for classifying D as a functional element: D categories constitute a close lexical class, lack descriptive content and can be phonologically dependent.

In short, work by Szabolcsi and Abney gained a broad consensus mainly because it permits a conceptual unification between clauses and nominals, and, as a result, accounts for the cross-linguistic similarities between these two domains.^{4,5}

5.2.2 What's Between DP and NP

Even though the DP-hypothesis is well accepted, the actual structure of the DP remains an open issue. Researchers have argued that the structure in (4) needs to be enriched to accommodate the empirical evidence for the existence of structural material between the DP and the NP. In particular, the spell-out position of Romance nouns has been taken as strong evidence for a more elaborate structure.

It is commonly assumed that the underlying order inside nominals is Adjective-Noun (cf. Valois 1991, Picallo 1991, Bernstein 1993, Zamparelli 1995, Cinque 1994, Crisma 1996 and Longobardi 2001), among others. However, as the examples in (5) and (6) show, depending on the grammar, the noun surfaces in a position lower than the determiner and higher than some adjectives. In Romance, the noun appears sandwiched between the article and restrictive manner adjectives. Conversely, in Germanic, nouns follow restrictive manner adjectives, as shown in (6). (These examples are from Longobardi, 2001.)

⁴ For a summary and discussion of the empirical evidence in favor of the DP hypothesis, see Bernstein (2001). See also Ogawa (2001) for additional arguments in favor of a structural unification between clauses and nominals.

⁵ Larson (2004) challenges the correlation between DP and CP (i.e., Szabolcsi's insight) or between DP and Infl (Abney's theory arguing that D is similar to a transitive predicate). For him, the clausal correlate of a

- (5) a. La probabile **reazione** ostile tedesca (Italian (Most of Romance))
the probable reaction hostile German
- b. The probable hostile German **reaction** (English (Germanic))
- (6) a. Un bel **vestito** azzurro tedesco (Italian (Most of Romance))
a nice dress blue german
- b. A nice blue German **dress** (English (Germanic))

According to the authors cited in the last paragraph, the word order in (5a) and (6a) is derived by noun raising. Even though there is no consensus with respect to the identity of the functional projection hosting the movement, the fact that an adjective can intervene between the determiner and the noun suggests that this projection is not the DP. Therefore, granting that restrictive manner adjectives precede the noun in the underlying structure, the word order in Romance is evidence for an extra projection inside the DP.

Noun raising is not confined to Romance. In considering a different type of nominal construction, Ritter (1991) claims that Hebrew nouns move to an intermediate projection too. Her argument is the following: in Hebrew, N-to-D happens only if D is null, as in the construct state illustrated in (7a). In (7b), a free state construction, the presence of an overt determiner blocks N-to-D movement, but the order Noun-Possessor signifies that the noun has left the NP.

DP is a VP shell in the sense of Larson (1988, 1990, 1991) and Chomsky (1995b). I will put this possibility aside.

- (7) a. ha-axila shel Dan et ha-tapuax
 the-eating of Dan of the-apple
 ‘Dan’s eating of the apple’
- b. parat ikar
 cow farmer
 ‘A farmer’s cow’

For Ritter, in (7b) the noun moves to Num(ber)P, the base position of numerals and quantifiers.⁶

Brugè’s (1996) and Bernstein’s (1997, 2001) research indicates that the left periphery of nominals is also more elaborated than the structure in (4) suggests. It contains at least a functional projection in which *reinforcer* elements are base generated and to the left of which focused nouns are moved.

- (8) a. Ce livre –ci (French) (Bernstein, 1997)⁷
 this book here
- b. Questo libro qui (Italian)
 this book here
 ‘This book’

⁶ Bernstein (1993,2001) suggests that the plural marker that appears attached to pre-nominal adjectives below is the phonological realization of the head of the NumP projection.

(i) dès nèurs-ouy (Walloon; Bernstein 2001)
 some black eyes
 ‘Some black eyes’

⁷ The emphasis is mine (CR).

Brugè and Bernstein are not alone in suggesting a more elaborated nominal left periphery. Ormazabal (1991), for example, proposes that the DP is dominated by a K(om)P, whose spec serves as an escape hatch for extraction from DPs. Ticio (2003) also assumes that an extra projection is involved in wh-extraction from DPs, however, following Grohmann & Haegeman (2002), she labels it TopP.

There is much to be said about the structure of DP, but I not going to enter into that debate here because it would take us far beyond the scope of this dissertation. Suffice it to observe the existence of extra functional projections inside the DP domain, even though their identity is still an open issue. Another open issue is their number. Longobardi (2001), for instance, based on a cross-linguistic study, concluded that UG makes available two Case positions between DP and NP. Zamparelli (1995) defended the hypothesis that the DP layer splits into three projections: SDP - Strong Determiner Phrase, an individual denoting phrase, PDP - Predicative determiner Phrase, which denotes predicates, and KID - Kind determiner Phrase, which is a Kind-denoting phrase in the sense of Carlson (1977). Crisma (1990) and Cinque (1994) argued that each prenominal adjective occupies the specifier of a different functional projection. Hence, for Crisma and Cinque, the number of functional projections corresponds to the number of prenominal adjectives.

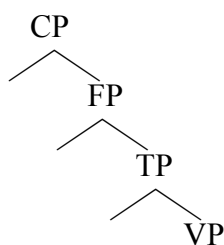
5.2.3 The DP Structure Adopted in This Thesis

From the exposition above, one can see that the syntax of the nominal domain is not yet fully understood. Thus, since I am specifically interested in the syntactic properties of null possessors in BP, I will put aside many of the issues concerning the actual format of DPs, and assume a simplified and generic structure.

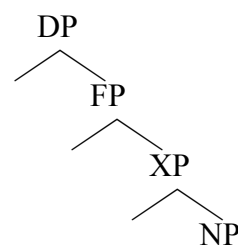
First, I will take for grant the existence of an Agr-like projection whose specifier is a Case position for possessors (cf. Kayne 1993 and Szabolcsi 1994). The identity of this category does not matter for the purposes of this thesis and I will use the generic XP label.⁸

Building on Bernstein (1997, 2001), I will also assume that the nominal left periphery contains an extra functional projection - FP. Therefore, the DP structure I am considering mirrors the clausal structure I used in chapter 4 (section 4.2). XP is the nominal counterpart of TP, whereas DP is an analogue of CP. Between CP/DP and TP/XP there is an FP projection.

(9) a. Clausal structure⁹



b. Nominal structure



⁸ Based on clausal structure proposed by Chomsky (1993), Kayne and Szabolcsi labeled this projection AgrP. De Wit (1997) and Schoorlemmer (1998) used Ritter's Num(ber)P label.

⁹ I am omitting the vP projection.

In Bernstein's (1997, 2001) proposal, the nominal FP is the locus of reinforcers. Reinforcers are the nominal counterpart of sentential locative adverbs which, according to my analysis (cf. 4.3.2.2), surface in the spec of FP. Hence, across domains, FP is arguably a host for referential locative expressions.

For Bernstein, reinforcers are the heads of FP, but she offers no evidence for that. Here I will explore the possibility of taking them to be in the spec of FP, rather than in the head. The reason for doing so is related to the licensing of null arguments in BP. As I showed in chapter 4, locative adverbs in the spec of an embedded FP block an antecedence relationship between an embedded null subject and a higher subject DP. The relevant data is repeated in (10). In (10a), the locative adverb *aqui* 'here' is in spec of FP, and, as a consequence, the embedded null subject can receive only an arbitrary interpretation. In contrast, (10b), where the locative adverb *aqui* is placed at the end of sentence, allows a coreferential reading; in fact, this is the only interpretation available.

- (10) a. [a Maria₁ disse [CP que [FP aqui [F' e_{arb/*1} vende sapatos]]]]
 the Maria said-3Sg that here sell-3Sg shoes
 'Maria said that shoes are sold here'
- b. A Maria₁ disse que e_{??arb/1} vende sapatos aqui
 the Maria said-3Sg that sell-3Sg shoes here
 'Maria said that she sell shoes in the market'

I haven't introduced BP null possessors yet, but as shown below, these possessors

pattern like sentential referential null subjects in that they require a sentential antecedent.

- (11) Maria₁ encontrou com [um *e*_{1/*2} primo]
Maria met-3Sg with a cousin
 ‘Maria met with her cousin’

Interestingly, the antecedence relationship in (11) is blocked if a reinforcer is inserted inside the DP:¹⁰

- (12) ?? A Maria encontrou com [_{DP} um primo lá *e*₁]
the Maria met -3Sg with a cousin there
 ‘Maria met a cousin of hers’

Note that (12) is fine if the null possessor is replaced by an overt pronoun:

- (13) A Maria₁ encontrou com [um primo lá dela₁]¹¹
the Maria met-3Sg with a cousin there of.she
 ‘Mary met a cousin of hers’

¹⁰ I am putting aside questions about the spell-out position of the noun in (12).

¹¹ The possessor phrase can also precede the reinforcer, as in (i). Arguably (i) involves XP movement to the left of the reinforcer, whereas (13) involves only head movement.

(i) A Maria encontrou com [um primo dela₁ lá]
the Maria met -3Sg with a cousin of.she there
 ‘Mary met her cousin’

The parallelism between (10) and (12) will be addressed in 6.3.2 in connection with the locality requirements on the antecedent-null-possessor relationship. But let me observe at this point that reinforcers behave like preverbal locative adverbs in being able to prevent an antecedence relationship between a DP and null argument. In view of that, I will consider that the position of reinforcers inside the nominal domain duplicates the position of preverbal locative adverbs inside the clausal domain.

5.3 Possessive Descriptions

Like verbs, nouns admit satellite phrases, some of them being arguments, rather than modifiers.¹² In (14), for instance, it is arguably the case that the phrases *Scipio* and *Carthage* are arguments of the deverbal noun *destruction*, as argued in Chomsky (1970).

(14) Scipio's destruction of Carthage

That non-deverbal nouns can take arguments is disputable (cf. Anderson 1983, among others).¹³ Nevertheless, (15) is similar to (14) in that the two phrases in construction with the noun are interpreted as an agent (*Rembrandt*) and a theme (*Saskia*). Thus, some authors (cf. Longobardi, 2001) have assumed that nouns like *portrait* are argument-taking categories.

¹² However, nouns optionally take argument, whereas verbs take them obligatorily. For a discussion, see Grimshaw (1990).

(15) Rembrandt's portraits of Saskia

Aside considerations on pragmatics, *Rembrandt* in (15) can be interpreted as the possessor of the portraits of Saskia, rather than its agent/author.¹⁴ Hence, nouns may have another satellite: the possessor or the R-related phrases in the sense of Higginbotham (1983).

A more convincing example of possessor is given in (16), where *Paul* might be interpreted as being in a possessive relation with the noun *eyes*, *eyes* being an inalienable possession of *John*.

(16) John's eyes

The syntactic properties of the possessor phrase are the topic of this section. The goal is to present a short summary of the literature discussion on the possessor-possessum semantic relation. Presupposing that possessors, agents and themes are always nominal arguments, I will show the evidence we already have for assuming that the possessor is the highest argument inside the DP. This review of the literature will allow me to expose the groundwork of my explanation of possessor raising in BP.

¹³ In fact, Grimshaw argues that the satellites of nouns like *destructions* are argument adjuncts. Like arguments, these satellites satisfy the argument structure of the noun, but, like adjuncts, they are not \square -marked.

5.3.1 The Possessive Thematic Relation

The existence of a semantic relation between a possessor and a possessum seems to conform to our intuitions. However, the nature of this relation is not self-evident. As Williams (1982) and Szabolcsi (1994), among others, pointed out, it can be massively vague. Take, for instance, Williams' example in (17), where the noun *cat* could refer to the cat that John owns, the cat that is sitting on John's lap or even to the cat that John stepped on. The same observation is valid for (17b), Szabolcsi's example.

- (17) a. John's cat
b. My train

Nevertheless, Williams's conclusion that a possessive relation can be any relation at all is misleading for it ignores the fact that there are constraints on what counts as possessive relation. Revamping Chomsky (1970), Barker (1995) and Uriagereka (1996) observed that, in possessive part-whole relations, the possessor must be the entity representing the whole, and the possessum, the entity representing the part.

- (18) a. The table's leg (Barker, 1995)
b. * The leg's table
c. The city's poor neighborhoods (Uriagereka, 1996)
d. *The/a poor neighborhood's city

It is worth noticing, however, that the nouns in (17) and (18) may not have the same semantic type (cf. Partee 1987, Barker 1995 and Partee and Borschev 2000). For Barker, there are two classes of possessive nouns, extrinsic possessives (cf. (19), which contains nouns like the ones in (17), and lexical possessives which are formed by nouns expressing part-whole relations (cf. (20)).

(19) *Extrinsic Possessives*

- a. John's cat
- b. John's yogurt
- c. John's firetruck

(20) *Lexical Possessives*

- | | | |
|----|---------------------|------------------------------------|
| a. | John's purchase | (Derived nominals) |
| b. | John's child | (Kinship terms) |
| c. | John's nose | (Body part terms) |
| d. | The table's top | (Generalized part/whole relations) |
| e. | The woman's pen pal | (Arbitrary relational nouns) |

Lexical nouns, contrary to extrinsic noun, are relational. That is, they denote relations over a pair of entities, the possessor and the possessum. This translates into a semantic approach in which lexical nouns are two-place predicates, whereas extrinsic nouns are plain one-place predicates:

- (21) a. $[[\text{child}]] = \lambda x \lambda y [\text{child}(x, y)]$
 b. $[[\text{firetruck}]] = \lambda y [\text{firetruck}(y)]$

Barker remarks that this distinction has some syntactic consequences: with relational nouns, a possessor can show up as a postnominal *of*-phrase, as in (22a), but with non-relational nouns this is not allowed.

- (22) a. A child of John
 b. *A firetruck of John

In Barker's analysis, the contrast in (22) follows from the fact that relational nouns are able to take a possessor phrase as their argument, but non-relational are not.

Szabolcsi (1994), not considering the difference between relational and non relational nouns, proposes that the possessor in general is assigned a \square -role in the spec of PossP, a functional category that immediately dominates the NP. Particularly, it is suggested that N adjoins to the head of PossP, and the syntactic unit thus formed assigns the possessor's \square -role. While Poss has the formal ability to assign a \square -role in accordance with the Theta-Criterion, N has the ability of specify the content of the \square -role assigned.

Uriagereka (1996), trying to subsume the possessive relations in (23) under the same syntactic analysis, suggests that these sentences share an underlying small clause structure, consisting of the possessor and the possessum.¹⁵

- (23) a. John's sister
 b. John has a sister

In this analysis, there is not inherently relational noun and the possessor is not assigned a \square -role. Rather, it is proposed that a possessive relation is an abstract semantic relation R that holds within the small clause that underlies the structure of possessive DPs.

Den Dikken (1998) also explores an analysis that involves an underlying small clause. However, differently from Uriagereka, he suggests that the possessor phrase is contained inside a prepositional phrase that predicates of the possessum. Hence, for him, the insertion of possessor is not thematic licensed by the possessum, and a possessive relation results from the fact that the possessor is contained by the prepositional phrase that modifies the possessum.

In conclusion, there are various proposals for the semantic relation between a possessor phrase and a possessum noun. Arbitrating between them is not my goal here; rather, as have already stated, I will assume a simplified structure. Following Abney (1987), Authier (1988), Tellier (1991) and Vergnaud & Zubizarreta (1992), I will consider that inalienable possessed nouns (kinship and body part terms) are inherently relational, being argument-taking categories that \square -mark the possessor. Being more specific, I will entertain the possibility of having a \square -role checking relation between the possessor and the possessum: when merged with a relational noun, a possessor phrase checks a \square -role feature of that noun.

¹⁵ This analysis stems from Freeze's (1992), Kayne's (1993) and Hornstein et al. (1994). For developments of this idea, see Muromatsu (1994) and Castillo (2001).

For the time being, I will put non-relational possessions aside, assuming that possessors of relational and non-relational nouns does not differ in terms of height inside the DP. This allows me to talk about possessor of non-relational nouns as arguments, even though it has been argued that they are adjuncts (cf. Tellier 1990 and Partee and Borschev 2000). Tellier offers an interesting argument for this view. Observe the contrast in (24), which are French relativizations in which the genitive relative marker *dont* corresponds to two empty possessor phrases.

- (24) a. La fille dont₁ [DP le e₁ père] ne parle plus avec [DP la e₁ mère]
 the daughter of whom the father not talk-3Sg more with the mother
 ‘the girl whose the father no longer speaks with her mother’
- b. * Une employée dont₁ [DP la e₁ patronne] ne parle plus avec
 one employee of who the boss not speak-3Sg more with
 [DP la e secrétaire]
 the secretary
 ‘An employee whose boss no longer speaks with the secretary’

Tellier analyzes this type of relativization as parasitic gap constructions because they contain a gap inside a domain that is inaccessible for extraction. In (24a), for example, the second gap (i.e. the gap inside the DP *la mère*) is inside a prepositional phrase that is opaque for extraction. Moreover, this gap is obligatorily interpreted as coreferent with the first gap (i.e. the gap inside the DP *le père*); and this anaphoric

dependency is licensed only under the presence of a c-commanding A'-binder.

Given that both (24a) and (24b) match the properties above, the fact that only (24a) is acceptable is quite mysterious. There is, however, a crucial difference between these two sentences: the gaps in (24a) are inside relational nouns, whereas the gaps in (24b) are inside non-relational nouns. This difference relates in an interesting way with Stowell's (1985) observation that a parasitic gap corresponds to an argument: If only possessors of relational nouns are arguments, as Tellier proposes, then (24b) in which a parasitic gap is in an adjunct position is ruled out.¹⁶

5.3.2 The Position of The Possessor

The structural hierarchy in (25) has been proposed in the literature:

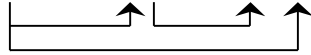
(25) Possessor > Agent > Theme

The evidence for this hierarchy comes from binding relations. Among the nominal arguments, if one of them is an anaphoric expression or contains one, and the other is the antecedent, then it is always the case that the possessor will be the antecedent and the agent or the theme will be (or will contain) the anaphor. If the possessor is absent, then the agent is the antecedent and theme the anaphor, as the scheme in (26) illustrates, and

¹⁶ If Tellier's reasoning about the contrast in (24) is right, then my suggestion that the possessor is a $\bar{\lambda}$ -role is risky because even adjuncts can be interpreted as possessors, as in (24b). This is a problem and I acknowledge it. However, it is also important to notice that, the potential problem just raised is everybody's problem since it is traditionally assumed that arguments are $\bar{\lambda}$ -marked, but adjuncts are not. Note further that a small-clause account of possessive relations does not fare better for it does not predict the contrast in (24).

(27) and (28) from BP exemplify:^{17,18}

(26) [Poss ...[Agent ...[Theme]]]



(27) a. ? Uma scultura [do Rodin]_{agent/poss} [de si mesmo]_{theme}

a sculpture of.the Rodin of himself

‘Rodin’s sculpture of himself’

b. A insatisfação do João consigo mesmo

the dissatisfaction of.the João with himself

‘João’s dissatisfaction of João with himself’

(28) a. * Uma scultura [de si mesmo]_{agent/poss} [do Rodin₁]_{theme}

the poem of himself of Rodin

* ‘Himself’s sculpture of Rodin’

b. * A insatisfação de si mesmo com o João

the dissatisfaction of himself with João

‘Himself’s dissatisfaction with João’

¹⁷ On the relation between the hierarchy in (26) and binding relation discussed here, see Giorgi and Longobardi (1994) and Ticio (2003), among others.

¹⁸ In Colloquial BP, the reflexive form *si mesmo* is not frequently used. Thus, the sentence in (27a) is not totally accepted.

Another source of evidence in favor of the structure in (26) is wh-extraction (cf. Cinque 1980, Ormazabal 1991, Giorgi and Longobardi 1991 and Ticio 2003). As shown in (29), a theme can undergo wh-movement only if it is the only argument of the noun:

- (29) a. [de quem]₁ que você viu [uma foto t₁] (BP)
of who that you saw-3Sg take-inf a picture
 ‘Of whom did you see a picture’
- b. ?? [sobre o que]₁ que já você leu [DP vários livros [do Chomsky]_{agent} t₁]
about what that already you copied- 3Sg several book of Chomsky
 ‘*About what did you already copy several books of Chomsky’
- c. * [sobre o que]₁ que você já leu [vários livros [da biblioteca]_{poss} t₁]
about what that you already read-3Sg several books of.the library
 ‘*About what did you already read several books of the library’

As for agents, they can be extracted in the presence of a theme but not in the presence of a possessor:

- (30) a. De que autor você leu vários livros [de lingüística]_{theme} (BP)
of which author you read-3Sg several books of lingüística
 ‘*Of which author did you read several books of linguistics’

- b. * De que autor você leu [_{DP} vários livros [da biblioteca central]_{POSS} *t*₁]
of which author you read-3Sg several books of library central
 ‘Of which author did you read several books of the central library’

Possessors, on the other hand, can be extracted in the presence of agents and themes, as the BP examples below illustrate:

- (31) a. ? [de qual shopping]₁ você viu [*t*₁ a decoração *t*₁ [de natal]_{theme}]
Of which shopping you saw-3Sg the decoration of christmas
 ‘*Of which shopping center did you saw the Christmas decoration’
- b. De que museu você viu [as esculturas *t*₁ [da Camille Claudel]_{agent}]
of which museum you saw-3Sg the sculptures of the Camille Claudel
 ‘*Of which museum did you see the sculptures of Camille Claudel’

In summary, inside the DP, possessors are higher than agents and themes. As a consequence, the syntactic realization of a possessor blocks extraction of an agent or a theme, but not vice-versa. Thus, given this lack of interaction between extraction of a possessor and presence of other nominal arguments, I will ignore the presence of other nominal arguments when analyzing possessor raising.

5.3.3 Null Possessors

In Romance, a possessor can be syntactically realized as an *of*-phrase (30a), but if it is a co-indexed pronoun, it is either realized as genitive pronominal form (30b) or as a null category (30c). It is noteworthy that, for some speakers, in (30c) the null possessor can be interpreted as a deictic pronoun, referring to somebody else rather than to *Juan*.

- (31) a. Juan se encontró con [DP el primo de María] (Spanish)
 Juan SE met-3Sg with the cousin of Maria
 ‘Juan met with Maria’s cousin’
- b. Juan se encontró con [DP su primo]
 Juan SE met-3Sg with his cousin
- c. Juan se encontró con [el e primo]
 Juan SE met-3Sg with cousin
 ‘Juan met his cousin’

As illustrated in (32), emphatic or contrastive co-indexed pronouns can also occur as *of*-phrases in Romance. But crucially, this possibility is restricted to emphatic or contrastive pronouns, as the unacceptability of (33) reveals:

- (32) a. Maria₁ gusta do namorado DELA₁ (Galician and Eur. Port.)
 the Maria like-3Sg of.the boyfriend of.she
 ‘Maria likes HER boyfriend’

- b. María₁ ama al novio de ELLA₁, no al de Ana. (Spanish)
 Maria love-3Sg to.the boyfriend of her, not to.the the Ana
 ‘Maria loves HER boyfriend, not Ana’s boyfriend’
- (33) a. ?? María₁ gusta do namorado dela₁ (Galician and Eur. Port.)
 the Maria like-3Sg of.the boyfriend of.she
- b. * María₁ ama al novio de ella₁ (Spanish)
 Maria love-3Sg to.the boyfriend of her
 ‘Maria loves her boyfriend’

Cardinaletti (1998) argues that possessive pronouns fall into the weak/strong partition that she and Starke proposed for personal pronouns in (1994). According to her, prenominal possessive pronouns are weak forms. That’s why they cannot receive contrastive stress, be coordinated or modified:¹⁹

- (34) a. * la SUA casa, non tua (Italian - Cardinaletti, 1998)
 the his/her house, not yours
- b. * la sua e tua/ sua e di Maria Casa
 the his(her)/his(his) and of Maria house
- c. la solo/proprio sua casa
 the only/own his/her house

¹⁹ The same is true for Spanish, cf. Picallo (1994).

Thus, assuming that the empty category in (31c) is a null pronoun, which is a weak form for Cardinaletti and Starke, we can speculate that Romance has a preference for weak possessive pronominal forms and that the unacceptability of (33) follows from this preference. Since in (33) the possessive is not emphatic or contrastive; a weak form can be used, blocking the insertion of a strong pronoun.

This state for affairs resembles the restrictions on overt subject pronouns we discussed in chapter three. According to the Avoid Pronoun Principle, an overt subject pronoun is allowed only if it is emphatic or contrastive. Hence, if the Avoid Pronoun Principle is now taken to be a principle that regulates the use of weak and strong pronominal forms, as stated in (35), we can determine that the unacceptability of (33) follows from the Avoid Pronoun Principle.²⁰

(35) *Avoid Pronoun Principle*

Give preference to weak pronominal forms

In the next section, I will examine possessive DPs in BP. But, before focusing on other language, let me make a digression and consider Castillo's (2000) analysis for (35).

²⁰ Or from whatever deeper principle that may turn out to be responsible for its effects. For Cardinaletti and Starke (1994) this deeper principle is their economy of representations principle. Since, weak forms are structurally smaller than strong forms, they are preferred in accordance with (i). I will not discuss this issue here.

(i) *Economy of Representations* (Cardinaletti and Starke, 1994:40)
Minimize structure

(36) Juan levantó la mano.

Juan raised-3Sg the hand

‘Juan raised his hand’

According to Castillo, (36) involves possessor raising to the sentential subject position, as the derivation in (37) shows:

(37) [TP Juan₂ [T' [vP [v' [VP levantó [DP t₂ [D' [D⁰ la] [AgrP mano₁ [Agrs' [SC t₂ t₁]]]]]]]]]]]

The assumption behind the derivation in (37) is that the movement of *Juan* is Case driven. Considering that DPs comes from the numeration with their Case feature already valued, Castillo suggests that in (37) *Juan* enters the derivation with a nominative Case feature. Hence, since its Nominative cannot be checked inside the DP, *Juan* is forced to move to spec of TP.

Another assumption of Castillo's proposal is that there is no movement into theta-positions. Following Parsons (1990), the author claims that the verb *levantar* ‘lift’ is a direct-motion type of verb, and, as such, it does not involve a causative subevent as bona-fide transitive verbs do. That is, *levantar* behaves like an unaccusative verb in that it does not assign an external \square -role. This is the reason whereby in (37) *Juan* moves directly from inside the possessive DP to spec of TP.

I will not question whether a movement analysis is right or not, but I would like to review Castillo's assumption that (37) does not involve movement into theta-positions.

I take it that the author is assuming a configurational view of \square -roles, otherwise it is unclear why movement into a theta-position is banned. However, if this is the case, Castillo needs to address the following issue: by assumption, in a theory that takes \square -roles to be the result of configurations, the v-VP configuration expresses the causative/agentive \square -role of the external argument (cf. Chomsky 1995b:315). Therefore, it is not obvious why this very same configuration fails to express a cause or an agent in (37).

Apart from the unclear nature of its assumptions, this analysis has some unsolved empirical issues. If *levantar* ‘lift/raise’ is an unaccusative verb, why is (38) unacceptable?

(38) * La mano de Juan levantó

the hand of Juan raised

‘John’s hand raised’

Notice further that in a language like BP, where the counterparts of (36) and (38) are both acceptable, (36) does not mean the same as (38). (36) implies a volitional action from *Juan*’s part, whereas (38) does not.²¹ This difference in interpretation is unexpected if *levantar* does not assign an external \square -role.

²¹ According to my own judgments, in BP (37) is fine only in specific contexts like the one in (i), which clearly does not involve a volitional action:

(i) Por causa do Parkinson, o braço da vovó levanta toda hora
because of.the Parkinson, the arm of.the grandma raise-3Sg every time
 ‘Because of her Parkinson’s disease, grandma’s arm raises all the time’

5.4 Possessives in Brazilian Portuguese

I will start this section by showing the change that BP underwent in its weak possessive pronominal system. Next, I will focus on null possessive pronouns in BP grammars.

5.4.1 Loss of Pronominal Possessive Forms

Silva (1984) and Cerqueira (1996) show that the change in the pronominal system of BP (cf. section 3.2) also affected weak possessive forms. As show in figure 1, a paradigm with 6 genitive possessive pronominal forms (paradigm 1) was reduced to a paradigm with only three forms (paradigm 2 – Colloquial BP). The 2ndP possessive form *tua* ‘your’ was replaced by *sua*, which was originally a 3rdP possessive pronoun. As consequence of this replacement, 3rdP possessors are now realized by analytic genitive forms *dele/deles* ‘of he/of them’. Notice in addition that the 2ndPl pronominal form *vosso* was also replaced by an analytic form *de vocês* ‘of you’.²²

Fig. 1. *Change in the Possessive forms in BP*

Person and Number	Paradigm 1	Paradigm 2
1 st Psg	Meu <i>my</i>	meu <i>my</i>
2 nd PSg direct	teu <i>your</i>	seu <i>your</i>
3 rd PSg	Seu <i>his</i>	dele <i>of.he</i>
1 st PPl	Nosso <i>our</i>	nosso <i>our</i>
2 nd PPl direct	<i>Vosso</i> <i>your</i>	de vocês <i>of.you</i>
3 rd PPl	seu <i>them</i>	deles <i>of.they</i>

The data below illustrate the simplified possessive system of Modern BP:

²² A 1stPl possessor can also be expressed by analytic form ‘da gente’ of we, literally, the folks’.

- (39) a. Eu nunca vi o meu pai
I never saw-3Sg the my father
- b. Você nunca viu o seu pai
you never saw-2Sg the your father
- c. Ele nunca viu o pai dele
he never saw-3Sg the father of.he
- d. Nós nunca vimos o nosso pai
we never saw-1Pl the our father
- e. Vocês nunca viram o pai de vocês
you-Pl never saw-3Pl the father of you-pl
- f. Eles nunca viram o pai deles
they never saw-3Pl the father of.they
- ‘I/you/he/we/they never saw my/your/his/our/their father’

The data below from the 19th-century BP suggest that at that time the pronoun *sua* was already used as a 2ndP pronoun:

- (40) a. Dê cá o **seu** chapéu
give here the your hat
- ‘Give me your hat’

- b. Concede-me a mão de **sua** fillha
give-me the hand of your daughter
 Give-me your daughter hand (in marriage)’
 (Martins Pena, *O Judas no Sábado de Aleluia*, 1844)

Notice, however, that *sua* could also be used as 3rdP possessive pronoun:

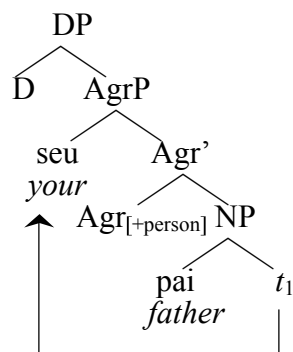
- (41) a. ...mas prove a Deus que eles me servissem para descobrir a **sua**
but wanted-3^{Sg} to God that they me served-3Sg to find-out-Inf the her
 perfidia e ouvir a **tua** ingênua confissão
disloyalty and hear-Inf the your naïve confession
 But thanks God, they helped me realizing about her disloyalty and hearing
 you naïve confession.’
- b. Estava com meu amigo Antônio falando de **seus** negócios....
was-1Sg with my friend Antônio talking of his business
 ‘I was with my friend Antônio talking about his business’
 (Martins Pena, *O Judas no Sábado de Aleluia*, 1844:139)

Following Kroch’s (1989) theory of coexisting grammars, I presuppose that during the 19-century there were at least two competing grammars, one with Paradigm 1 of figure 1, and another one with simplified paradigm, where *sua* was already a 2nd Person pronoun.

Silva's (1984) research shows that in Modern spoken Portuguese the 3rdP analytic form *dele/dela* 'of.he/of.she' occurs 75% of the time, whereas *sua* as third person pronoun occurs only 14.1% of the time.²³

Cerqueira (1996) interprets this simplification in the possessive pronominal system as correlated with the impoverishment of Agr in BP. Assuming a layered DP à la Kayne (1993) and Szabolcsi (1987), he argues that possessive pronominal forms are licensed only in languages in which Agr contains a person feature, which is taken to be crucial for the licensing of the possessive pronoun. In Romance, Agr has a person feature, thus Romance possessive pronouns move to spec of AgrP and have genitive Case feature checked.

(42) Romance

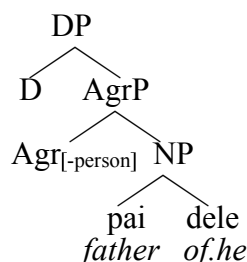


²³ It is worth mentioning Negrão and Müller's observation (citing Almeida 1993), that in Modern BP, when the antecedent is non-specific or generic, the pronoun *sua* can be used as 3rdP pronoun, as the data in (i) show. I will put this observation aside, waiting for future research.

- (i) a. ...um rapaz que paga **seus** estudos com sacrifícios ele não pode ter dinheiro
 a guy that pay-3Sg his studies with sacrifice he not can-3Sg have-inf money
 nunca para ir ao teatro
 never to go-ing to.the theater
 '...A guy that pays his studies with sacrifice cannot have money to go to the theater'
- b. Acho que a televisão Brasileira (...) irá encontrar **seu** caminho
 think-1Sg that a television brazilian will-3Sg find-inf its way
 'I think that the Brazilian television will find its way'

Assuming that an Agr lacking a person feature is unable to assign Case, Cerqueira suggests that Agr in Modern BP lost its person feature, being, consequently, unable to assign genitive Case. As a result, the possessive pronoun stays in its base generated position, receiving genitive Case from the proposition *de* ‘of’.²⁴

(43) Brazilian Portuguese



In Cerqueira’s analysis, BP loss of referential null subjects is related to the loss of possessive form because both the nominal and the sentential Agr became weak, being, consequently unable to license weak pronominal forms.

All in all, leaving aside the details of Cerqueira’s analysis, the relevant issue here is the correlation between the effects of loss of morphology inside the nominal and the clausal domain. Thus, given the content of this thesis, main question is about the availability of null possessors in BP Colloquial Grammars.

(Negrão and Müller 1996)

²⁴ Since, the second paradigm in fig. 1 retained a possessive pronoun form the 1st and 2nd Person, Cerqueira is forced to assume that Agr related to 1st and 2nd persons still has number feature in BP.

5.4.2 Brazilian's Null Possessor

A crucial difference between Brazilians and speakers of Romance pro-drop languages is that Brazilians allow strong possessive forms that do not carry a contrastive stress or emphasis (cf. (44)), whereas speakers of pro-drop languages do not, as illustrated in (33).²⁵

- (44) a. A Maria₁ gosta muito do pai dela₁
 the Maria like-3Sg a.lot of.the father of.she
 ‘Maria likes her father a great deal’
- b. A Maria₁ adora pentear o cabelo dela₁
 the Maria love-3Sg comb-3Sg the hair of.she
 ‘Maria loves to comb her hair’

This supports the hypothesis that BP colloquial grammars have become insensitive to the Avoid Pronoun Principle as a result of losing its pro-drop properties. This is the hypothesis I defended in chapter 3, and there I face two issues: (i) 1stP null subjects are allowed in matrix clauses; and (ii) 3rdP referential null subjects are allowed inside embedded clauses if provided with a sentential antecedent. In the course of chapters three and four, I argued that (i) and (ii) are not counter-evidence to the hypothesis I proposed

²⁵ However, as the unacceptability of the sentences in (i) show, a strong pronoun is not allowed if it's co-indexed to a quantifier expression. This follows from Montalbetti's (1984) constraint (cf. 3.3.2, fn.16):

- (i) a. ?? [nenhuma mulher interesseira]₁ ama o marido dela₁
 no woman selfish like-3Sg the husband of.her
 ‘No selfish woman loves her husband’
- b. ??...mas [qualquer mulher sã]₁ ama o filho dela₁
 but any woman sane love-3Sg the son of.her
 ‘But any sane woman loves her son’

since the allowed null subjects are residue of movement, rather than null pronouns. Interestingly, the investigation of possessive DPs in BP brings back the same difficulties: (i') for some speakers, a 1stP null possessor is licensed even in the absence of a sentential antecedent, as illustrated in (45a); (ii') 3rdP null possessors are allowed if provided with a sentential antecedent as in (45b):

- (45) a. [DP o pai e] é uma pessoa muito querida
 the father is-3rdP a person very lovely
 ‘My father is an lovely person’
- b. As meninas₁ adoram [DP o pai e]₁
 the girls adore-3rdPl the father
 ‘The girls love their father’

In the remainder of this dissertation, I will show that, likewise to (i) and (ii), (i') and (ii') should not be taken as evidence that Modern BP still licenses null pronouns. Similar to sentential null subjects analyzed in the previous chapters, the null categories in (44) should be analyzed as residues of movement, rather than as null pronouns.

5.4.3 1stP Null Possessors: Cases of Pronoun Deletion

In section 3.4, I suggested that 1stP referential null subjects in BP and Finnish are the result of pronoun zap (Ross 1982). Following Huang's (1984) topic deletion

operation, I suggested that 1stP in BP and Finnish results from topic deletion. A 1stP pronoun moves to a topic position, which is a target of deletion. Assuming this on the right track, here I want to consider the possibility of analyzing 1stP null possessors along the same lines. That is, inside the DP, 1st possessive pronouns can be topicalized, and, as a consequence, deleted.

While, in the clausal domain, there are direct ways of testing subject movement to a topic position, it is not easy to test topicalization of possessor phrases inside the DP. For instance, in chapter 3 (3.4), it was shown that wh-movement of any other constituent blocks topicalization of the subject. Thus, in chapter 3 (section 3.4), I took the complementary distribution of 1stP null subjects and wh-movement as evidence that 1stP null subjects are the result of topic deletion in BP and Finnish. This test cannot be used to verify a topic-deletion analysis of 1stP null possessors. As shown in 5.3.2, the presence of an overt possessor blocks wh-movement of other arguments of the noun. That is, even overt possessor phrases are incompatible with wh-movement. Therefore the wh-movement test says nothing about the possibility of topicalization and consequent deletion of a 1stP possessive pronoun.²⁶

There is, however, indirect evidence for a topic deletion analysis of BP 1stP null possessors. In BP, in possessive descriptions containing a possessive pronominal form like (44a), a chunk of the DP containing the noun and the possessive pronoun might be topicalized, surfacing in position that precedes the reinforcer, as shown in (46). If possessive pronouns move to spec of XP as I claimed in 5.2.3., then in (46), the XP node is the constituent under movement, as the structure sketched in (46b) shows:

²⁶ Notice further that body-part and kinship nouns take only an argument: the possessor. This makes the wh-movement test even harder (if not impossible) to be done.

- (46) a. Esse meu pai aqui é uma pessoa muito querida.
this my father here is-3Sg a person very lovely
 ‘My father here is lovely a person.’
- b. [[_{DP} esse [_{XP} meu₁ [_{NP} t₁ pai]]]₂ [_{FP} aqui [_{F'} t₂]]] é uma pessoa muito querida]

Interestingly, in (46), the possessive pronoun must be overt. Witness the unacceptability of (47):

- (47) * [_{DP} Esse *e* pai aqui] é uma pessoa muito querida
this father here is-3Sg a person very lovely
 ‘My father here is lovely a person’

If 1stP null possessors are residues of topic deletion, the unacceptability of (47) follows: The topicalization of the whole XP blocks topicalization of the pronoun and, consequently, deletion does not apply to the pronoun.

At any rate, this suggestion clearly requires further investigation, but the fact that 1stP null possessors are incompatible with topicalization of other constituents is a hint towards an analysis along the lines I am proposing.

5.5 Possessives in Finnish

5.5.1 Possessive Agreement Morphology and Availability of Null Possessors

Some languages display overt morphological agreement between the possessor and the possessum and unsurprisingly license null possessors. Consider for instance the Turkish data in (48), extracted from Kornfilt (1984):

- (48) a. **ben-im/pro istakoz-um**
 I-Gen lobster-1Sg
- b. **biz-im/pro istakoz-umuz**
 we-Gen lobster-1Pl
 ‘My/our lobster’

Standard Finnish also exhibits overt agreement between nouns and possessors, the so-called possessive suffixes. Conversely, Colloquial Finnish does not display morphological agreement of this sort (cf. Vainikka (1989)).²⁷ The contrast between the two dialects is given in figure 2.²⁸

²⁷ I am putting aside the colloquial dialect spoken in Tampere, where, as reported by Vainikka, possessive suffixes exist for the singular, but not the plural.

²⁸ As apparent in figure 2, in CF the possessive pronouns underwent morphological reduction too. I believe this is to be correlated with the loss of possessive suffixes, though I will not investigate it here.

Fig. 2. ‘my/your/his/her/our/your/their cat’

Person and Number	Standard Finnish (SF)	Colloquial Finnish (CF)
1 st Psg	Minun kissa-ni	mun kissa-0
2 nd Psg direct	Sinun kissa-si	sun kissa-0
3 rd Psg	Hänen kissa-nsa ²⁹	se kissa-0
1 st PPl	Meidän kissa-mme	Meiän kissa-0
2 nd PPl direct	<i>Teidän kissa-nne</i>	Teiän kissa-0
3 rd PPl	Heidän kissa-nsa	niiten kissa-0

Another difference between SF and CF is the availability of null possessors. In SF, for all combinations of person & number, except for 3rdP Singular and plural, the possessive pronoun can be dropped (cf (49)). In CF, this is not possible, as shown in (50).

- (49) a. (minun) kirjani (SF – Vainikka, 1989)
my book-1stSg
- b. (sinun) Kirjasi
your book-2ndSg
- c. *(hänen) kirjansa
his/her book-3rdSg
- d. (meidän) kirjamme
our book-1stPl

²⁹ The third person possessive suffix has the allomorph –Vn, where V is a vowel copied from the stem, see examples in (i):

- (i) a. hänen veljen
he-Gen brother-Part-3rdSg
‘His brother’
- b. hänen ksivarttaan
he-Gen arm-Part-3rdSg
‘His arm’

- e. (teidän) kirjanne
your book-2ndPl
- f. *(heidän) kirjansa
their book-3rdSg

- (50) a. *(mun) kirja. (CF – Vainikka, 1989)
I-Gen book
- b. *(sun) kirjasi
you-Gen book
- c. *(sen) kirja
his/her book
- d. *(meiän) kirja
our book
- e. *(teiän) kirja
your book
- f. *(niiten) kirja
their book

Under the hypothesis that licensing of null pronouns are correlated with the presence of rich morphology, the ungrammaticality of (50) is arguably due to the loss of possessive agreement morphology in CF.

Vainikka (1989) reports a third difference between Standard and Colloquial

dialects of Finnish. In SF, but not in CF, overt genitive possessive pronouns obligatorily obviate in reference from local DPs. That is, in standard grammars, overt genitive pronouns are interpreted only as pronouns, never as anaphors that refer to a syntactic local antecedent. Contrastively, colloquial grammars seem to accept an anaphoric interpretation.

- (51) a. Minä löysin ??(minun) rahakukkaroni (SF)

I-Nom found-1stSg my wallet-1stSg

‘I found my wallet’

- b. Maija₁ hukkasi hänen_{1/*2} kasettinsa

Maija-Nom lost-3rdSg her-Gen tape-3rdSg

‘Maija lost her tape’

- (52) a. Mä kävelytin mun koira (CF)

I-Nom walked-1stPsg my-Gen dog

‘I walked my dog’

- b. Jukka kävelytti se koira

Jukka-Nom walked his-Gen dog

‘Jukka walked his dog’

This can be seen as a reflex of the Avoid Pronoun Principle (cf. (35)). In SF the availability of null possessive pronominal forms blocks the use overt pronouns. CF does

not license null possessive pronouns, hence the Avoid Pronoun Principle is arguably not operative in these grammars. Note that this conclusion is not straightforward, though. It predicts lack of obviation effects for 3rdP possessive pronouns in SF. As illustrated in (49), 3rdP null possessors are not allowed in SF. Hence an overt 3rdP pronoun should be insensitive to the Avoid Pronoun Principle, but, as shown in (51b), they are not.

Figure 2, SF 3rdSg and 3rdPl agreement is morphologically indistinguishable. That is, this particular agreement marker is morphologically weak, not instantiating number distinctions. Therefore, unavailability of the 3rdP null pronouns in (49) is expected under the hypothesis I am arguing for. But interestingly, a 3rdP null possessor is licensed in SF if provided with a sentential antecedent, as (53) illustrates. That is, 3rdP null possessors pattern like anaphors, differently from its overt analogue (cf. (51)).

- (53) a. Jukka₁ kävelytti kassaansa_{1/*2}. (Vainikka, 1989)

Jukka-Nom walked-3rdSg dog-3rdSg

‘Jukka walked his own dog.’

- b. He₁ tulevat autollaan_{1/*2}

they-Nom coming-3rdPl car-3rdSg

‘They are coming in their own car.’

This state of affairs is quite similar to that described in chapter 3 with respect to sentential null subjects: when the agreement morphology becomes impoverished, referential null pronouns turn into anaphoric gaps.

I will put aside SF 3rdP null possessors for a while, returning to them only in appendix of chapter 6, where I will discuss evidence both in favor of and against analyzing these element as residues of NP-movement. In the next section, I will rather offer some speculations on the nature of possessive suffixes in Finnish. Sketching an analysis along the lines suggested in 4.2 for verbal agreement morphemes, I will take SF 1st and 2ndP possessive markers to be clitic-like categories at the syntax level. This amounts to saying that the structure of the relevant DPs in (49) does not involve the presence of a null pronoun. The possessive agreement marker itself is the element that saturates the possessor argument position.

5.5.2 Speculations on Finnish Possessive Suffixes

Possessive agreement markers are not an exclusive property of nominals, they occur in a variety of syntactic environments. For example, they appear with past participle forms, which can, as a result, function as the main verb of an embedded clause as shown in (54a). They can also show up with infinitival forms inside adjunct clauses (54b), adjectives (54c), and also with pospositions (54d):

- (54) a. Jorma kertoo tuleva-**nsa**
Jorma say-3rdSg come.Past part-3rdSgPoss it
 ‘Jorma said he will come’

- b. Kompastuin joustessa-**ni**
stumble-past-1stSg run-Inf-Iness-1Sg
 ‘I stumbled while running’
- c. kaltaisekse-**en** Jumala loi ihmisen
like-Trans-3rdSg God made-3rdSg men
 ‘God made men like himself’
- d. Tulet kanssa-**mme**
come-2ndSg with-1stPl
 ‘You will come with us, won’t you?’

These many functions of possessive markers have leaded scholars to debate about their morpho-syntactic nature. Pierrehumbert (1980) and Nevis (1984, 1985), for example, have argued that these suffixes are clitics. They observe that similarly to clitics, possessive markers always follow inflectional and derivational suffixes. Kanerva (1987) represents the structural order in which these elements appear as follows.

- (55) a. Nouns: stem>(number)>(Case)>(Possessive suffix)>(clitics)
- b. Verbs: stem>non-finite suffix³⁰>(case)>(possessive suffix)>(clitics)

³⁰ These suffixes are:

- | | | |
|-----|-----------|-------------------------|
| (i) | -ta | first infinitive |
| | -te | second infinitive |
| | -ma | third infinitive |
| | -va | (non-part) participle |
| | -nee/-nut | past participle |
| | -ttu | passive past participle |

Nevis (1984) also notices that possessive suffixes do not trigger consonant gradation, a word-internal phonological rule that lenites obstruents in the onset of a closed syllable. Hence, these suffixes are arguably outside the word domain, being thus clitics, rather than suffixes.

Kanerva (1987) discusses the possessive markers under discussion at length and, contrastively, concluded that are better analyzed as suffixes. First, she remarks that the word order in (55) does not decide between a clitic and a suffix analysis. Possessive markers do pattern like clitics in that they follow suffixes; but, on the other hand, they are like suffixes in that they precede clitics. Kanerva also offers several pieces of empirical evidence showing that these markers behave as suffixes at PF. I will not reproduce all of her arguments here, but for the benefit of the discussion I will bring some of them forward. First, the phonology of Finnish rules out words that begin with consonant clusters like *mm* and *nn*. Nevertheless, the 1stP and 2ndP possessive suffixes (*-mme* and *-nne*) begin with these clusters. Thence, analyzing them as clitics requires stipulating that phonology treats them as exceptions. Second, the morphological behavior of possessive markers resembles that of suffixes in that they can condition allomorphy in the stem that they attach to. (56), for instance, illustrated that the word *nainen* ‘woman’ exhibits stem-final allomorphy: *-nen* becomes *-se* before derivational and inflected suffixes. This change also occurs before possessive suffixes, but not after clitics, as shown in (57).

- (56) a. *naise-linen*
 woman-like (or feminine)

- b. *naise-lla*
 woman- Adess
- c. *naise-n*
 woman-Gen
- (57) a. *naise-nsa* /**naine-nsa*
 woman-3rdSg
- b. **naise-o/ nainen-ko*
 woman-question-clitic

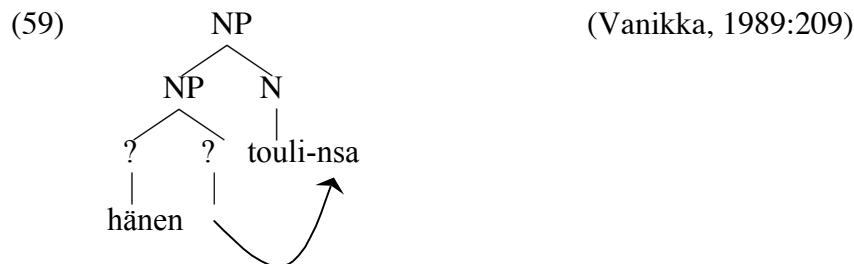
Additional morphological evidence comes from compound-formation. Finnish compounds might be formed from both inflected and uninflected stems, and the example in (58) suggests that they can also be formed by words containing a possessive suffix.

- (58) Jorma näyttää hyvin ***itse-e-nsä/tyytyväise-itä*** mieheltä ³¹
 Jorma-Nom look-3rdSg very self-Illa-3rdP/satisfied-Ablat man-Ablat
 ‘Jorma looks like a very self-satisfied man’

Clitics, on the other hand, do not condition allomorphy processes and do not appear within compounds. Therefore at the word-formation level, possessive markers are treated as suffixes, not as clitics.

³¹ The deverbal adjective *tyytyväinen* ‘satisfied’ case marks its complement with Illative case, explaining why *itse* ‘self’ is marked with illative Case.

At any rate, Kanerva is arguably right in claiming that Finnish possessive markers are suffixes at PF. However, she does not present any evidence that these markers are not clitics at the syntax level. Vainikka (1989) actually suggests that these markers are syntactic units that do not depend on their morphological hosts. She takes into consideration possessive markers inside the DP domain, and assumes that they are lexically inserted in spec of NP, where genitive Case is assigned. That the implementation of her analysis is more complex and less clear than just described for her suggests that possessive markers is co-indexed with a pronoun already in the lexicon, and, for these reason, in the syntax these two items are base generated together forming a complex NP that is inserted in spec of NP. For concreteness, she argues that the possessive phrase *hänen tuolinsa* ‘his/her chair’ has structure in (59), where the possessive marker attaches to the possessum via affix hopping.

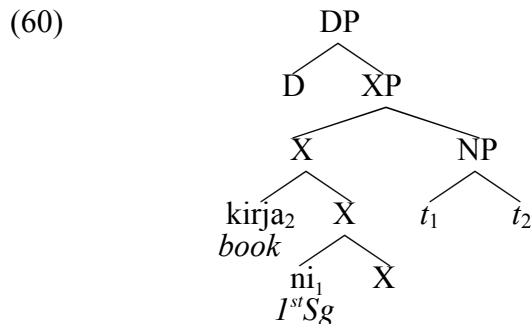


As for 1st and 2nd Person possessive markers, Vainikka stipulates that they are generated inside a DP containing an implicit binder, which can be taken to be a null pronoun.

This is very much in the spirit of our proposal for verbal agreement morphology

(cf. 4.2) and I take it to be on the right track, though I recommend we drop the stipulation that possessive markers are generated inside a complex NP containing a pronominal form.

Taking seriously the idea that agreement markers can function as syntactic clitics, we can have a simplified version of Vanikka's analysis. Putting it in a bold way, I consider Finnish nominals containing 1stP and 2ndP possessive markers to be structurally similar to Romance finite clauses (cf 4.2). The possessive marker is a minimal maximal projection that starts the derivation as an independent lexical item and is arguably furnished with Case feature. It is first merged in the possessor theta-position, and then adjoins to X, the nominal counterpart of Infl, in order to have its Case feature checked. To illustrate, a possessive DP like *kirjani* 'my book' would have the structure in (60), where I am taking for grant the N(oun)-to-X movement.



This analysis raised an issue concerning the Case feature of the possessive marker. Finnish displays overt Case morphology; therefore, the assumption that possessive markers bear Genitive Case features faces a question about the lack of morphological realization of this Case. I will not explore this issue here, however it might

be related to the fact that the possessive markers under consideration are word-internal units (suffixes) at PF. Hence, they might be invisible for the process of Case realization.

At any rate, the analysis sketched above provides an account for the pronominal behavior of 1st and 2ndP possessive suffixes in Finnish without invoking the existence of explicit binders.

As for 3rdP possessive marker, I will suggest in the chapter 6 (cf. appendix) that similarly to what happens to the 3rdP verbal agreement morpheme in BP and Finnish, this agreement marker, being morphologically weak, became lexically reanalyzed as nominal suffix, losing, thus, its syntactic independency.

5.6 Conclusions

The core of this chapter was dedicated to following aspects of the nominal domain:

- (61) a. The structure of nominal is parallel to that of clauses, and possessors are arguably the nominal counterpart of clausal subjects.
- b. Relational nouns are argument-taking categories furnished with a \square -role that is checked by the possessor phrase, which might be syntactically realized by null pronoun.
- c. The correlation between weak morphology and loss of null pronominal categories is also attested inside the nominal domain. Weak morphology is observed inside DPs in BP and SF and, as a consequence, in these

grammars 3rdP null possessors behave as anaphors, rather than as pronouns.

In the Next chapter, I will argue that these anaphoric null possessors are formed by A-movement, similarly to the sentential null subjects discussed in chapter 4.

CHAPTER 6

A-MOVEMENT OUT OF NOMINALS

6.1 Preliminaries

All sentences in (1) display the possessor phrase outside the nominal vicinity. That is, the possessor phrase appears as a verbal satellite, rather than as a satellite of the noun. For that reason, these are often called external possessor constructions.

- (1) a. Gil sataf le-Rina et ha-panim (Hebrew – Landau, 1999)
 Gil washed-3Sg to-Rina Acc the-face
 ‘Gil washed Rina’s face’
- b. Julie l’a frappé dans le ventre (French – Tellier, 1990)
 Julie him has-3Sg hit-3Sg in the stomach
 ‘Julie hit his stomach’

- c. Juan le levantó la mano a María (Spanish – Castillo, 2000)
Juan cl lifted the hand to María
 ‘Juan lifted Maria’ hand’
- d. John-i Mary-lul phal-lul ttayryessta (Korean – Yoon, 1990)
John-Mom Mary-Acc arm-Acc hit
 ‘John hit Mary’s arm’

Different accounts for these constructions have been proposed, many of them assuming a non-movement analysis. For example, Guerón (1985) for French, and Borer and Grodzinsky (1986) for Hebrew postulate the existence of a bound anaphoric null category inside the possessive DP. The essence of this proposal is also shared by Cheng & Ritter (1987) and Tellier (1990, 1991). Tellier, for instance, argues that this anaphoric category is a null operator in spec of DP, as represented in (2). Zubizarreta and Vergnaud (1992) also defend a similar analysis, suggesting that the external possessor binds (à la Williams, 1980) the empty argument position of the possessum noun.

- (2) Elle lui_i a coupé [_{DP} Op₁ [_{D'} les cheveux t₁]] (Tellier, 1991)
she him had-3Sg cut-3Sg the hair
 ‘She cut her hair’

Contrastively, Landau (1999) and Castillo (2001) advocate in favor of movement. Landau’s arguments bear on the fact that external possessor constructions – particularly

in Hebrew – are characterized by (i) having the external possessor c-commanding the possessum, as in (3); (ii) not allowing the possessum to be the external argument of the verb, as in (4) and (iii) requiring the possessor-possessum relationship to be strictly local. (5), for instance, illustrate that the possessor and the possessum must be clause mates and may not be separated by more than one DP:

- (3) a. Gil lixlex [le-Rina]₁ et [ha-xulca e₁]
Gil dirtied-3Sg to-Rina Acc the-shirt
 b. * Gil lixlex et [ha-xulca e₁] [le-Rina]₁
Gil dirtied-3Sg Acc the-shirt to-Rina
 ‘Gil dirtied Rina’s shirt’
- (4) * [ha-kelev e₁] hitrocec [le-Rina]₁
the-dog ran.around-3Sg to-Rina
 ‘Rina’s dog ran around’
- (5) a. Jean lui₁ semble avoir lavé [les cheveux e₁]
Jean him-Dat seem-3Sg have-Inf washed-3Sg the hair
 ‘Jeans seems to have washed his hair’
 b. Gil ripe [le-Rina]₁ et [ha-ima e₁ s&el [ha-gur e₂]]
Gil cured-3Sg to-Rina Acc the-mother of the-puppy
 ‘Gil cured the puppy’s mother which belongs to Rina’

Landau assumes that these possessors move to spec of VP where they have their Dative Case feature checked. Hence, (4) is ruled out by a prohibition against lowering. Since Spec of VP is lower than spec of vP (the position occupied by the external argument of the verb), its occupant (the external possessor) cannot originate inside the verbal external argument, which is arguably in spec of vP, a position higher than spec of VP. The explanation for (5) is straightforward: movement is strictly local; therefore these are impossible derivations.

In Castillo's and Landau's analyses there is no movement into theta-positions; hence the displaced possessors in (1) are not $\bar{\alpha}$ -marked by the verb.¹ Landau presupposes that a possessor of a non-relational noun is base generated in spec of DP, where it is assigned a $\bar{\alpha}$ -role by D, and then moves to spec of VP in order to check its Dative Case against V.² Hence, the chain thus formed conforms to the Chain Condition: its tail is $\bar{\alpha}$ -marked and its head is Case-marked.

Given this set of assumptions, a question for Landau and Castillo is about external possessors in double object constructions. Is it the case that a possessor cannot surface as the indirect object of a ditransitive verb? Neither Landau nor Castillo address this question directly, but Landau presents an empirical argument against having a goal or a benefactive argument accumulating a possessor $\bar{\alpha}$ -role. The argument is mainly tied to the availability of bound variable readings for (6). Whereas (6a) favors a bound variable reading, (6b) does not. That is, in (6a) values of *girls* determine the values of tokens of 'the prettiest shirts', but in (6b) 'the prettiest shirt' is interpreted as a unique token.

¹ But see Kayne (1975), among others for arguments that dative external possessors are to be analyzed as a malefactive/benefactive argument of the verb. Orhle and Nishio (1981) defend a different view, arguing that the malefactive reading comes from our knowledge of the word.

- (6) a. Gil saraf le-kol yalda et [ha-xulca haxi yafa] (Landau, 1999)

Gil burned-3Sg to-every girl Acc the-shirt the-most pretty

‘Gil burned every girl’s prettiest shirt’

- b. # Gil natan le-kol yalda et [ha-xulca haxi yafa]

Gil gave-3Sg to-every girl Acc the-shirt the-most pretty

‘Gil gave to every girl the prettiest shirt’

Thus, since empty categories behave semantically as variables, allowing a bound variable reading when the antecedent is a quantificational DP, it seems that (6a) contains an empty category inside the DP ‘the prettiest shirt’, but (6b) does not.

There is, however, a problem with this argument. The test in (6) is not quite accurate because the author did not control the type of ditransitive verb he used. Due to its lexical semantics, the verb *give* is incompatible with a possessive reading. A giving event results in possession; therefore the existence of a prior possession is pragmatically awkward. (7) shows that this is a relevant observation. When *give* is replaced by another verb (*return* in (7)), speakers do allow a bound variable reading.³

- (7) Ha-mora hexzira lekol yalda et ha-meil ha-xam beyoter

the teacher-Fem returned-3Sg to.every gir Acc the-coat warm most

‘The teacher returned to every girl her warmest coat’

² For a brief summary and comments on Castillo’s analysis, see section 5.3.3.

³ The same observation is valid for Spanish, as (i) shows. Some of the speakers report that the presence of a comparative adjective makes the bound variable reading harder.

(i) La profesora devolvió a cada alumna la chaqueta más abrigada
the teacher-Fem returned-3Sg to every student-Fem the coat most warm
 ‘The teacher returned to every student her warmest coat’

In other words, (7) suggests that double object constructions do allow a possessive relation with the external possessor being the indirect object of the verb, the goal participant of the given event. If this is right, a movement analysis of external possessors is forced either to admit movement into theta-positions or to assume that the possessive relation in (7) is the result of a different mechanism, say, an anaphoric binding relation. This last solution has the drawback of not explaining why possessive relations in double object constructions like (7) display the restrictions given in (3)-(5) which Landau's takes to be evidence for movement. In (8a), for example, the indirect object does not c-command the direct object and, as a consequence, a bound variable reading is not possible. This shows that the goal cannot be interpreted as the possessor of the entity expressed by the theme if structurally it does not c-command the theme. (8b) is parallel to (4): the possessum cannot be the external argument of the verb. And (8c) shows that locality is also crucial in licensing a possessive reading in double object constructions. According to the speaker's judgments, one cannot interpret *every girl* as the possessor of *the mother* without interpreting it as the possessor of *the pictures* too. That is, the possessor and the possessum cannot be separated by more than one DP.

- (8) a. # Ha-mora hexzira et ha-meil ha-xam beyoter lekol
 the teacher-Fem returned-3Sg Acc the-coat warm most to.every
 yalda
 girl
 'The teacher returned to every girl her warmest coat'

- b. # Ha-kelev hexzir lekol yeled et hakadur
the-dog returned-3Sg to-every boy Acc the-ball
 ‘The dog returned to every boy the ball’
- c. Gil hexzir lekol yalda et hatmuna [s&el haem]
Gil returned-3Sg to-every girl Acc the.picture of.the mother
 ‘Gil returned to every girl the/her mother’s picture’

In sum, if (3)-(5) serve as evidence for movement, so does (8).

The discussion above indicates that the ban on possessor raising into a theta-position is at odds with the empirical data. More evidence for possessor raising into theta-positions is the empty 3rdP null possessor in BP which is the topic of this chapter.

The chapter is parallel to chapter four and its sections are organized as follows. 6.2 shows the technical details of the movement analysis I am presenting for consideration. 6.3 contains empirical support for this analysis and 6.4 discusses the licensing of null possessors inside adjuncts. Similarly to what was proposed for null subject in 4.5, in 6.4.1, I will suggest that 3rdP null possessors inside adjuncts are derived via sideways movement. In 6.4.2, null possessors in across-the-board configurations will be discussed. 6.5 presents the outline of the semantic effects of possessor raising. Exploring the idea of context-dependency à la Higginbotham (1988) and Raposo and Uriagereka (2002), in 6.5 I will offer some remarks on how to proceed from the syntax to the semantics. 6.6 contains the interim conclusions.

Before showing the technical details of my analysis, let me briefly show that BP

grammars allow possessor-raising, independently of our assumptions on movement into theta-positions.

First, consider the examples in (9), discussed by Galves (1999) Lobato (2000) and Lunguinho (2003), among others:

- (9) a. O relógio quebrou o ponteiro
 the watch broke-3Sg the hand
 ‘The watch, its hand broke’
- b. A geladeira estragou o termostato
 the fridge damaged-3Sg the thermostat
 ‘The fridge, its thermostat damaged’

In these cases, the possessor is spelled-out in the sentential subject position. Evidence for that comes from verbal agreement. As shown in (10), the external possessor controls the verbal agreement as sentential subjects do.⁴

⁴ Another evidence is given in (i) where the possessor is a quantifier phrase that cannot be topicalized:

- (i) a. Alguns relógios quebraram o ponteiro
 some watches broke-3Pl the hand
 ‘Some watches had their hands broke’
- b. * Alguns relógios, a Maria quebrou
 some watches the Maria broke-3Sg
 ‘Maria broke some watches’

- (10) a. Esses relógios quebram sempre o ponteiro menor
these watches break-3Pl always the hand smaller
 ‘These watches, their smallest hands always break’
- b. * Esse relógio quebraram os dois ponteiros
this watch broke-3Pl the-pl two hand-Pl
 ‘This watch, their hands broke’

Another important observation is that (9) and (11) have the same propositional content. That is, apart from considerations on topic-hood, these sentences seem to have the same semantic interpretation.

- (11) a. O ponteiro do relógio quebrou
the hand of.the watch broke-3Sg
 ‘The watch, its hand broke’
- b. A porta da geladeira quebrou
the door of.the fridge broke-3Sg
 ‘The fridge, it’s door broke’

As Lunguinho (2003) argues, this paradigm suggests that these are unaccusative constructions with two possible derivational outcomes: (12a) in which the possessor is sub-extracted and moved to spec of TP, and (10b) where the whole possessive DP is raised to spec of TP.

- (12) a. [TP [o relógio]₁ [T' [T₀ quebrou₁, T⁰] [VP t₁ [DP o ponteiro t₁]]]] (= (9a))
 the watch *broke-3Sg* *the hand*
- b. [TP [DP o ponteiro do relógio]₁ [T' [T₀ quebrou₁, T⁰] [VP t₁]]] (= (10a))
 the hand of.the watch *broke-3Sg*

Mechanical details apart, it is important to consider closely that (10a) matches standard cases of possessor raising: the possessor phrase is spelled-out in a Case position outside the DP domain and linked to a single theta-position inside the DP.^{5,6}

Of course, this possibility raises question about the nominal domain in BP. Since the DP is a domain where a possessor can have its Case feature checked, any analyses defending (10) needs to explain why possessors in BP can escape the DP domain and have their Case feature checked by a sentential Case checker.⁷ In the next section, I will provide an answer to this question, suggesting that this is to be correlated with the loss of morphology discussed in chapter 5.

⁵ (If 10)) is an unaccusative structure, explaining how the possessive DP has its Case checked is not a trivial matter. I will not discuss the issue here, but it is worth noticing that this might be case of double Nominative Case checking relation, similarly to what happens in Japanese (cf. (i)) and Korean.

(i) Kono konpyuutaa-ga monitaa-ga kowareta (koto)
 this computer-nom monitor-nom broke (fact)
 ‘ (the fact that) this computer’s monitor broke ’

⁶ Notice that, this analysis predicts that possessor-raising of this sort is possible in passive construction where the possessive DP surfaces in the object position and the possessor in spec of TP. This prediction is borne out, as the acceptability of (i) suggests. Notice that in (ib), the past participle agrees with the possessor. On past participle agreement and object movement, see 4.4.

(i) a. Esse carros foram trocados o motor
 these car-Pl were changed-Pl the engine
 ‘These car, their engines were changed’
 b. Esse computador foi concertado a tela
 this computer was-3Sg fixed the screen
 ‘This computer, its screen was fixed’

⁷ Of course the same question is relevant for the analysis of (1), which I am putting aside here.

Given that, I will postulate that Romance has a possessive agreement marker (possessive Agr, henceforth) similar to that of Turkish, the difference being that only the plural number feature of Agr is overtly realized in Romance. That is, in Romance the possessive Agr is phonetically null (*pro*) when its number feature is valued as singular. It is possible that this Agr is a clitic form in the sense of Cardinaletti and Starke (1994). This would explain why it requires an antecedent prominent in the discourse. The data in (15) illustrate this point. Though they prefer an overt possessive pronoun, Spanish speakers allow the possessor in (15) to be null as long as it refers to the topic of the conversation.⁸

- (15) ? Parece que [el padre *e*] se murió ayer
 seem-3Sg that the father SE died yesterday
 ‘It seems that her father died yesterday’

We can hypothesize that the possessive Agr under consideration is like the verbal Agr discussed in 4.2 in that it may enter the derivation as an independent item. Being able to check the possessor $\bar{\lambda}$ -role, it is first merged with the relational noun, adjoining then to X (cf. 5.2.3), which also hosts the noun.⁹

Consider now Modern Colloquial BP, which has undergone a reduction in its possessive pronominal forms (cf. 5.4). As exemplified in (16), these grammars have also lost number agreement between a noun and a possessor:

⁸ Though a preference of an overt possessive pronoun is reported.

⁹ For evidence that Romance nouns move inside the DP, see 5.2.2

- (16) a. minhas coisa
 My-pl stuff-Sg
 ‘my stuff’
- b. minhas filha
 my-pl daughter-Sg
 ‘my daughters’

According to Cardinaletti and Starke (1994), pronominal forms form a tripartite paradigm from which the hierarchy in (17) is obtained.

- (17) Clitic \square weak pronouns \square strong pronouns

The essential idea is that clitics are morphologically and structurally deficient versions of weak pronouns, which, in turn, are morphologically and structurally deficient versions of strong pronouns. That is to say, clitics are a proper subset of weak pronouns, which are a proper subset of strong pronouns.

Suppose, then, that such subset relation is correct. This leads to the expectation that if a historical change targets weak pronouns, reducing their number, the clitic forms will also be affected. I believe that this is what happened in BP. BP grammars underwent a loss of weak possessive pronominal forms and, consequently, the possessive Agr, which is a clitic, was lost.¹⁰ But, if this is the correct conclusion about the effects of loss of morphology inside the nominal domain in these languages, we must now return to the

¹⁰ It is important to remark that clitics in general are disappearing in BP; see Pagotto (1992) and Cyrino (1996), among others.

problem I left open in chapter 5. That is, we want to understand the availability of null possessors in sentences like (18).

- (18) a. [o João]_i encontrou [a e_i irmã]
 the João met-3Sg the sister
 ‘João met his sister’
- b. [o João]_i lavou [as e_i mãos]
 the João washed-3Sg the hands
 ‘João washed his hands’

If the possessive Agr is not generated as an independent clitic form in Modern BP, then it might be that the gaps in (17) are NP-traces, similar to the anaphoric null subjects discussed in chapter 4. This amounts to saying that (18a&b) involve movement of the DP *o João* from the possessor \square -position to the verbal external \square -position.

6.2.2 Deriving Null Possessors from Movement

A movement analysis of (18) requires a theory compatible with movement into \square -positions. In addition, it also requires a discussion about Case checking relations inside the DP in the grammars under investigation. It is standardly assumed that a possessor checks genitive Case inside the DP domain; hence we must explain why in BP a possessor phrase is allowed to check its Case feature outside the DP, as in (18).

In BP, it is arguably the case that nouns move to a position outside the NP. Witness the data in (19), where the noun precedes restrictive manner adjectives, which are considered to be outside the NP domain (see 5.2.2)

(19) Uma blusa vermelha italiana

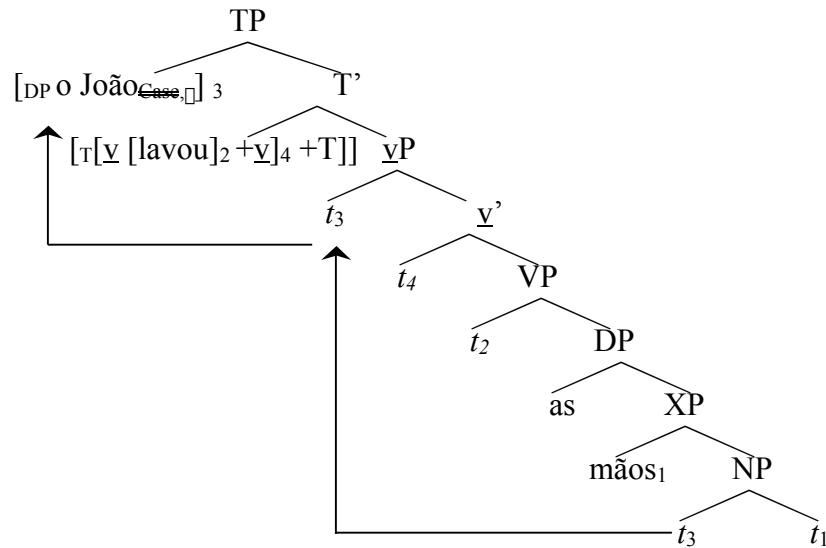
a blouse red Italian

‘An Italian red blouse’

Therefore, taking into consideration the DP structure I proposed in 5.2.3, BP nouns move at least to the XP domain. Moreover, if X is a category that syntactically requires a nominal expression inside its projection (something equivalent to the sentential EPP), in BP the syntactic requirements of X are satisfied via N-raising. Thus, accordingly to our understanding of the Case checking procedure (cf. 4.2), we may say that in this language X optionally projects a specifier. Once N adjoins to X, spec of XP will be projected only if there is an element inside the NP that checks its Case feature against XP. Recall that it was suggested that the computational system can delay the movement of a DP to a Case position. More concretely, the suggestion is that sentences in (18) are derived as shown in (20). The DP *o João* is merged with the relational noun, checking the possessor $\bar{\alpha}$ -role, and then it moves to spec of $\bar{y}P$, where it checks the $\bar{\alpha}$ -role assigned by \bar{y} . After that, it moves to spec of TP, where it has its Case feature finally checked.¹¹

¹¹ With Chomsky (2000 and thereafter), I am assuming that Case features receive a value only after being checked.

(20)



In summary, the gist of this implementation is that it allows movement to a Case position (i.e. creation of a spec-head configuration) to be optional as long it is not forced by features of the checker.

6.2.3. DP as a Phase and Intermediate Movement

It has been assumed that A-bar extraction out of DPs in Romance involves movement to spec of DP (cf. Cinque 1980, Giorgi and Longobardi 1991, Tellier and Valois 1995, Gavruseva 2000 and Ticio 2003, among others). This is supported by what is often called Cinque's generalization, which states that an extractable nominal argument must appear as a prenominal possessive (i.e. as a weak pronominal possessive form), which surfaces in spec of DP according to the authors cited above. In a phase-based approach to linguistic derivations, this condition is captured by the assumption that DPs,

like CPs, are strong phases (cf. Chomsky 2001a, Matushansky 2003, among others).

Thus, only the determiner and the border (specs) of the DP are visible for computations outside the DP domain, in accordance with the Phase Impenetrability Condition (cf. 4.2.3). Therefore, in a structure with the format in (21), nothing below D^0 can be used to build the $\underline{y}P$ shell.

$$(21) \quad [_{\underline{y}P} [_{VP} [_{DP} D^0 [_{XP} [_{NP}]]]]]$$

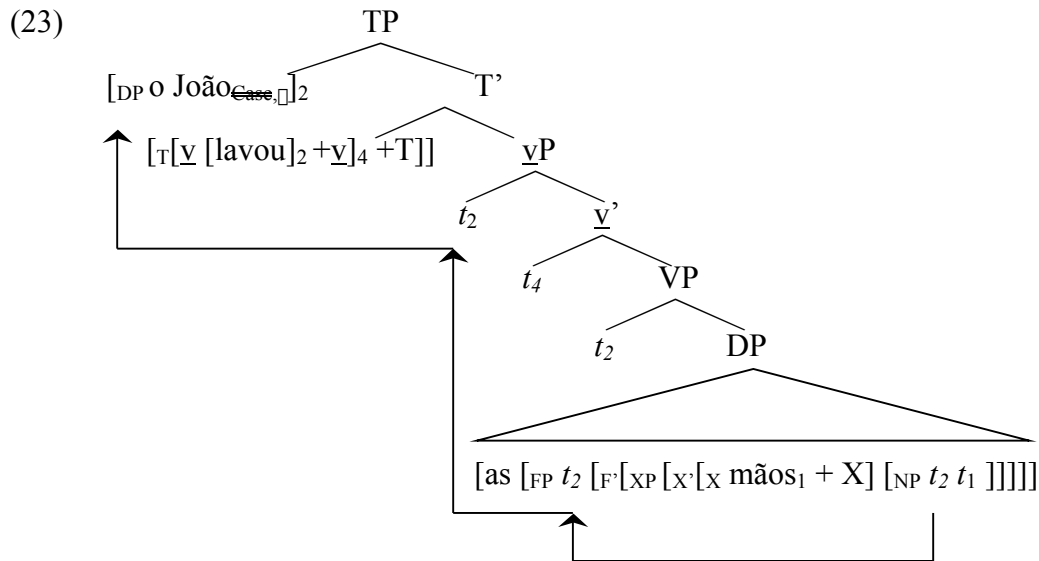
Consequently, assuming that this is the right way to analyze the island-like behavior of DPs, we need to rethink the movement analysis suggested in the last section. In (20), the described movement of the possessor from the \square -position inside the DP to spec of $\underline{y}P$ crosses over the DP, a strong phrase.

This is the same issue I considered in 4.2.3 with respect to A-movement out of finite CPs and the solution I proposed there was that the clausal left periphery contains a functional category FP whose spec hosts an intermediate trace of the extracted DP. That is, A-movement out of finite embedded clauses proceeds through spec of FP. Since the FP projection itself does not constitute a phase level, it is not spelled-out when the derivation reaches the next strong phase (i.e. $\underline{y}P$). Consequently, movement from spec of FP to spec of $\underline{y}P$ is allowed by the computational system.

Now taking seriously the idea that XP is nominal counterpart of TP, one can posit that XP is a weak phase in the sense of Chomsky (2000a). Therefore, if we understand the phase spell-out process as formulated in 4.2.3 and grant the DP structure proposed in

5.3.3, repeated here as (22), we can entertain the possibility of analyzing possessor A-movement in BP as proceeding through spec of FP, as represented in (23):

(22) $[_{VP} [_{VP} [_{DP} D^0 [_{FP} [_{XP} [_{NP}]]]]]]$



In summary, Possessor raising in BP might proceed in a cyclic way, though spec of FP, a left peripheral Functional Category. This possibility, when coupled with the assumption that FP is not spelled-out as part of the complement of DP/CP within a phase-based approach to locality, suggests that the movement analysis defended here is compatible with the concept of phases.

In what follows, for the sake of space, I will put this intermediate movement aside. Omitting some functional projections, I will represent the nominal domain as being a DP dominating an NP. Thus, the possessor movement under consideration will be represented as if it were directly from one \bar{A} -domain to another.

6.3 Evidence for a Movement Analysis

6.3.1 Anaphoric Behavior

As already discussed in chapter 5, a BP 3rdP null possessor is allowed only if provided with a sentential antecedent. Thus, (24) is perfectly acceptable as long as the DP in the subject position is taken to be the antecedent of the empty possessor.¹²

- (24) a. [o João]₁ machucou [o braço *e*_{1/*2}] ontem (BP)
 the João cut-3Sg the arm yesterday
 ‘João hurt his arm yesterday’
- b. [o João]₁ encontrou [o irmão *e*_{1/*2}] no supermercado
 the João met-3Sg the brother in.the supermarket
 ‘João met his brother in the supermarket’

The requirement of a sentential antecedent is reinforced by the data in (25) in which the absence of an appropriate antecedent renders the sentence unacceptable.

- (25) a. * Parece que [o braço *e*] quebrou (BP)
 seem-3Sg that the arm broke
 ‘It seems that his/her arm broke’

- b. * Parece que [o irmão *e*] foi encontrado
seem-3Sg that the arm was-3Sg found
 ‘It seems that his/her brother was found’

This contrasts with the behavior of null possessors in Romance pro-drop languages in which a null possessor can find its antecedent outside the sentence, as already shown.

- (26) ? Parece que [el padre *e*] se murió ayer
seem-3Sg that the father SE died yesterday
 ‘It seems that her father died yesterday’

Now, for the completeness of the paradigm, notice that in BP, constructions like a deictic interpretation are reserved for overt pronominal possessors:

- (27) a. Parece que [o braco dele] quebrou
seem-3Sg that the arm of.he broke
 ‘It seems that his arm broke’
 b. Parece que [o irmão dele] foi encontrado
seem-3Sg that the arm of.he was-3Sg found
 ‘It seems that his brother was found’

In other words, contrasting with null possessors in Romance Pro-drop languages, BP and Finnish null possessors do not pattern like pronouns. Instead, they pattern rather

¹² Notice that I am disregarding non-relational readings of kinship and body-part nouns.

similarly with traces, in that they are dependent on the presence of a suitable sentential antecedent.

6.3.2 Locality Matters

6.3.2.1 The Basic Facts

The anaphoric behavior of null possessors in BP and Finnish is more complex than depicted above for one reason: their antecedent has to be the closest c-commanding DP. The sentences in (28), for example, are unacceptable because the closest c-commanding DPs are semantically/pragmatically inappropriate antecedents. In our world, snakes do not have arms, and doctors who are male do not have uteruses.¹³ The unacceptability of the following sentences, then, shows that non-local DPs are not interpreted as antecedents, even when this interpretation is pragmatically biased in favor of. This suggests that an antecedence relationship between a null possessor and a DP is restricted by syntactic principles.

¹³ Although in (28), I am using body-part terms, note that the same observation is valid for kinship terms:

- (i) a. * [a cobra [do João]₁]₂ mordeu [a irmã *e*₁]
 the snake of.the João bit-3Sg the sister
 ‘João’s snake bit his sister’
 ?? O João₁ disse que a cobra mordeu [a irmã *e*₁]
 the João said-3Sg that the snake bit-3Sg the sister
 ‘João said that the snake bit the sister’

- (28) a. * [a cobra [do João]₁] mordeu [o braço *e₁*]
the snake of.the João bit-3Sg the arm
 ‘João’s snake bit his arm’
- b. * [a Maria]₁ falou que [aquele médico de Brasília] vai
the Maria said-3Sg that that doctor-Masc of Brasilia will-3Sg do fazer
 a cirurgia [no útero *e₁*]
do-Inf the surgery in.the uterus
 ‘Maria said that that doctor from Brasilia will do the surgery in her uterus’

As expected, these sentences become acceptable if an overt genitive pronoun replaces the null possessor.

- (29)a. [a cobra [do João]₁] mordeu [o braço dele]
the snake of.the João bit-3Sg the arm of.he
 ‘João’s snake bit his arm’
- b. [a Maria] falou que [aquele médico de Brasília] vai fazer a
the Maria said-3Sg that that doctor of Brasilia will-3S do-Inf the cirurgia
 [no útero dela]
surgery in.the uterus of.she
 ‘Maria said that a doctor from Brasilia will do the surgery in her uterus’

These findings are on par with the BP sentential null subject data discussed in chapter four. In both cases, the relationship between the empty category and its antecedent obeys the Minimal Link Condition (MLC). Thus, to the extent that MLC is a condition on the operation Move (see 4.3.2), the data above corroborates a movement analysis.

The locality restriction is also illustrated by cases like (30). (30) is similar to (28b), the difference being that (28b) involves clausal embedding, whereas (30) displays nominal embedding. In (30), the matrix direct object is a possessive DP containing a noun that takes as its complement a prepositional phrase containing another possessive DP. That is, in these sentences, the matrix direct object is a complex DP containing two possessors. In (30a), both possessors are null, but in (30b) only the most embedded one is null.

- (30) a. [a Maria]₁ nunca assumiu [DP o relacionamento *e*_{1/*2} [PP com
the Maria never assumed-3Sg the relationship with
 [DP o namorado *e*_{1/*2}]]]
the boyfriend
 ‘Maria never assumed her relationship with her boyfriend’
- b. [a Maria]₁ acha engraçado [DP o relacionamento [da Ana]₂
the Maria think-3Sg funny the relationship of.the Ana

[_{PP} com [_o namorado $e_{*1/2}$]]]

with the boyfriend

‘Maria thinks that Ana’s relationship with her boyfriend is funny’

As the indexes show, in (30a), the DP *a Maria* ‘Maria’ is obligatorily interpreted as the antecedent of both possessors. Contrastively, in (30b), *a Maria* is prevented from being interpreted as the antecedent of the null possessor that co-refers with *a Ana*, the possessor of the highest DP.

According to the analysis I am suggesting, (30a) is generated by successive movements of the DP *a Maria* into $\bar{\alpha}$ -positions. This DP is first merged inside the lowest possessive DP, where it checks the $\bar{\alpha}$ -role of the relational noun *namorado* ‘boyfriend’, from which it moves to the spec of the NP headed by the noun *relacionamento* ‘relationship’, and in this position, it checks the possessor $\bar{\alpha}$ -role of this noun. Later on, when the matrix $\bar{y}P$ is built, the same DP moves to spec of $\bar{y}P$, thereby checking the agent $\bar{\alpha}$ -role of the verb *assumiu* ‘assumed’. After that, it moves to spec of TP where it has its Case feature checked.

In (30b), the successive movement just described is blocked by the possessor DP *a Ana*. This possessor DP is closer to spec of $\bar{y}P$ than the lowest possessor. Therefore, if the DP *a Maria* starts as the lower possessor, its movement towards spec of $\bar{y}P$ crosses over the DP *a Ana* and infringes the MLC.¹⁴

Notice that the blocking effect observed in (30b) brings back the discussion of the role of the preposition *de* ‘of’ in defining the c-command domain of a genitive possessor.

¹⁴ Similarly to what happens in external dative possessors; see example (5b).

The DP *a Ana* in (30b) is inside a prepositional phrase, hence it should in principle be unable to c-command the lowest possessor position and should not be, contrary to fact, an intervener for the movement of the DP *a Maria* from the embedded possessive DP to spec of vP. I will not repeat the content of the appendix of chapter 4 here, but as presented there, there is evidence that a prepositional phrase headed by *de* ‘of’ does not define the c-command domain of a genitive possessor. Thus, the data in (30) shows once again that in BP the relationship between a 3rdP null possessor and its antecedent is subject to locality constraints.

6.3.2.2 Potential Interveners: Reinforcers

As already discussed in chapter 3, In BP whenever a reinforcer is present inside a possessive DP, a null possessor is not licensed.

(31) * A Maria₁ encontrou com [um irmão lá *e_I*]

the Maria met-3Sg with a brother there

‘Maria met one of her brothers’

Assuming that (a) BP null possessors are formed by the operation Move; and (b) reinforcers, similar to preverbal locative adverbs (see 4.3.2.2), are overt expletive-like categories that surfaces in spec of FP, we can provide an explanation for the interaction between reinforcers and null possessors. The presence of a reinforcer blocks movement

of the possessor to the left periphery of the nominal domain.

(32) * De quem_i que a Maria encontrou [um irmão lá t_i]

of whom that a Maria met-3Sg a brother there

‘Of whom did Maria meet a brother’

(30) becomes acceptable when the null possessor is substituted by an overt pronoun, as in (33). This follows from the analysis proposed here. (31) but not (33) involves movement. Thus, in this respect (31) is syntactically similar to (32), not to (33).

(33) A Maria_i encontrou com [um irmão lá dela_i]

the Maria met-3Sg with a cousin there of.she

‘Maria met one of her brothers’

In 6.3.4, I will revisit reinforcers vis-à-vis the matter of specificity.

6.3.3 Obligatory Control Properties

Following Hornstein (1999, 2001), I’ve been taking obligatory control as the result of movement. Thus, we expect BP configurations containing 3rdP null possessors to display obligatory control properties. As shown below, this expectation is fulfilled.

First, as discussed in the previous sections, these elements are anaphoric, taking the closest c-commanding DPs as their antecedents. Furthermore, the unacceptability of

(34) reveals that split antecedents are not allowed if the possessor is null. Compare (34) with (35) which contains an overt possessive pronoun:

- (34) a. * A Maria₁ disse que o Paulo₂ encontrou [o amigo e_{1+2}]
the Maria said-3Sg that the Paulo found-3Sg the friend
 ‘A Maria said that Paulo found their friend’
- b. * A Maria₁ prometeu para a Ana₂ que ia cortar
the Maria promised-3Sg to the Ana that would-3Sg cut-inf
 [o cabelo e_{1+2}]
the hair
 ‘Maria promised to Ana that would cut their hair’
- (35) a. A Maria₁ disse que o Paulo₂ encontrou [o amigo deles₁₊₂]
the Maria said-3Sg that the Paulo found-3Sg the friend of.they
 ‘A Maria said that Paulo found their friend’
- b. A Maria₁ prometeu para a Ana₂ que ia cortar
the Maria promised-3Sg to the Ana that would-3Sg cut-inf
 [o cabelo delas₁₊₂]
the hair of.they
 ‘Maria promised to Ana that would cut their hair’

Under VP ellipsis, only a sloppy reading of obligatory controlled gap is possible.

Thus, (36) confirms that BP null possessors are obligatory controlled gaps.

- (36) a. O vovô₁ não corta [as unhas *e*₁] e a vovó também não
the grandpa not cut-3Sg the nails and the grandma too not
 ‘Grandpa does not cut his nails and grandma doesn’t either’
- b. A Maria bateu no irmão e a Ana também
the Maria hit-3Sg in.the brother and the Ana too
 ‘Maria hit her brother and Ana did too’

Unsurprisingly, strict and deictic readings are allowed if the possessor is realized by an overt pronoun.

- (37) a. O vovô não corta [as unhas dele] e a vovó também não
the grandpa not cut-3Sg the nails of.he and the grandma too not
 ‘Grandpa does not cut his nails and grandma doesn’t either’
- b. A Maria bateu no irmão dela e a Ana também
the Maria hit-3Sg in.the brother of.she and the Ana too
 ‘Maria hit her brother and Ana did too’

As discussed in the literature, a gap resulting from obligatory control forces a *de se* reading. In chapter 4, I have shown that this is a property of 3rdP referential null sentential subjects in BP. This seems to be true of 3rdP null possessors as well. For

example, given the context in (38), the statement in (39) is false, as Ronald Reagan does not remember *his wife*, but Nancy Reagan, Reagan's wife.

(38) Because of his Alzheimer disease, Ronald Reagan does not have memories about who he was or about who his kin is. He remembers Nancy Reagan, which he takes to be the wife of President Reagan. However, he fails to remember that he himself is former President Reagan and Nancy Reagan his wife.

(39) O Ronald Reagan lembra d[a esposa]
the Ronald Reagan remember-3Sg of.the wife
 'Ronald Reagan remember his own wife'

Though subtle, there is a contrast between (39) and (40) where an overt pronoun is inserted. (39) accepts only a *de se* reading. That is, the gap in the possessor position must refer back to Ronald Reagan, forcing us to attribute *de se* memories to Ronald Reagan. Conversely, (40) is ambiguous between a *de se* and a *non-de se* reading. The overt pronoun can either refer back to Ronald Reagan, which results in a *de se* reading, or refer to Reagan, the former president. If the pronoun co-refers with Ronald Reagan, (40) is false, but if it refers to Reagan, a *de se* reading does not emerge, and the statement is judged as being true.

(40) O Ronald Reagan lembra d[a esposa dele]

the Ronald Reagan remember-3Sg of.the wife of.he

‘Ronald Reagan remembers Reagan’s wife very well’

Similar to BP null subjects (cf. 4.3.3), BP null possessors pattern like the emphatic reflexive form *dele mesmo* ‘of he himself’, which also triggers a *de se* reading. For instance, (41) is false, if (38) is taken as the contextual background.

(41) O Ronald Reagan lembra d[a esposa dele mesmo]

the Ronald Reagan remember-3Sg of.the wife of.he himself

‘Ronald Reagan remember his own wife’

To make this paradigm self-evident, let me apply Chierchia’s (1990) diagnosis for *de se* readings (cf. 4.4.3). When (39) is conjoined with a negative version of (41), as in (42), the expressed thought is incoherent. This incoherence is avoided if an overt genitive possessive pronoun is inserted and understood as referring to Reagan, rather than to Ronald Reagan, as in (43):

(42) # O Ronald Reagan lembra d[a esposa e], mas Ronald Reagan não

the Ronald Reagan remember-3Sg of.the wife, but Ronald Reagan not

lembra a esposa dele mesmo

remember-3Sg the wife of.he himself

‘Ronald Reagan remember his own wife, but Ronald Reagan does not remember his own wife’

(43) O Ronald Reagan lembra d[a esposa dele_{Reagan}], mas o Ronald Reagan

the Ronald Reagan remember-3Sg of.the wife of.he but the Ronald Reagan

não lembra a esposa dele mesmo

not remember-3Sg the wife of.he himself

‘Ronald Reagan remembers Reagan’s wife, but Ronald Reagan does not remember his own wife’

The intimate relation between a null possessor and the *de se* reading falls under our movement analysis. If the empty category in (39) is a silent copy of the DP *Ronald Reagan*, this sentence asserts that Ronald Reagan remembers Ronald Reagan’s wife, i.e., Ronald Reagan remembers one of his own kin. Conversely, movement is not involved in the derivation of (40) and, if the possessive genitive pronoun is interpreted as referring to Reagan, then, the assertion is about Ronald Reagan remembering Reagan’s wife.

Consider now sentences with *only-NP* phrases. As presented in the previous chapters (Chapters 2 and 4), in obligatory control configurations if the antecedent of PRO has the format *only-NP*, then only a covariant reading is possible. Thus, if BP 3rdP null possessors are also obligatory controlled elements, they are expected to trigger a

covariant interpretation when the antecedent is an *only-NP* constituent. The data below illustrate that this indeed happens. (44a) contains a null possessor and is assigned the covariant interpretation (44a). In (44b), the null possessor is replaced by an overt pronoun and, as a result, the sentence receives the invariant interpretation in (45b).

- (44) a. Só a Maria respeita [o marido *e*]
only the Maria respect-3Sg the husband
- b. Só a Maria respeita [o marido dela]
only the Maria respect-3Sg the husband of.she
 ‘Only Maria respects her husband’
- (45) a. Only Maria is an *x* such that *x* respects *x*’s husband
 (Covariant interpretation – (44a))
- b. Only Maria is an *x* such that *x* respects her, Maria’s, husband
 (Invariant interpretation – (44b))

This can be paraphrased in the following way: (44a) asserts that only Maria is a good wife because only she has the husband-respecting property. (44b), on the other hand, asserts that Maria’s husband is an unpopular guy, since nobody but Maria has respect for him.

Consider now sentences containing body-part terms, as in (46). According to (46a), Maria is the only person that combs their hair (covariant interpretation). (46b), on

the hand, is compatible with a context in which Maria is the sort of person that doesn't like to be touched, thus, only her, and nobody else, is allowed to comb her own hair (invariant interpretation).

- (46) a. Só a Maria penteia [o cabelo *e*]
 only the Maria comb-3Sg the hair
 (Only Maria is an *x* such that *x* combs *x*'s hair)
- b. Só a Maria penteia [o cabelo dela]
 only the Maria comb-3Sg the hair of.she
 (Only Maria is an *x* such that *x* combs Maria's hair)
 'Only Maria combs her hair'

As presented in 4.3.3, a covariant interpretation is forced upon structures containing obligatory control gaps because these gaps, being the result of movement, require a c-commanding antecedent. Hence, when the closest DP has the format *only-NP*, the possessor gap must be co-indexed with the whole *only-NP* constituent; it cannot be co-indexed with the NP contained inside the *only-NP* as represented in (47a). On the other hand, an overt possessive pronoun, which is not formed by movement, allows co-indexation with the NP, as illustrated in (47b)

- (47) a. [... [DP only [NP]₁]₂ ... [DP ... *e*_{poss*1/2} ...]]
- b. [... [DP only [NP]₁]₂ ... [DP ... Pronoun_{poss1/*2} ...]]

Suppose that *only-NPs* are quantified phrases, as already suggested in this thesis. Then, by virtue of being subject to Montalbetti's Constraint, a BP overt possessive pronoun cannot be co-indexed to the entire *only-NP* phrase. Hence, a structure with the abstract schema in (47b) cannot receive a covariant interpretation.

Notice again that in the dialects of BP where quantified phrases with the format *todo-NP* 'every-NP' can violate Montalbetti's constraint, an overt possessive pronoun can be bound by the *todo-NP* phrase, triggering, thus, an covariant t interpretation. For example, the interpretation of (48a) is unambiguously covariant (49a); but (48b) accepts both a covariant and an invariant (49b) interpretation. This corroborates our hypothesis that there is an interaction between Montalbetti's constraint and the restricted interpretation of (46b).

- (48) a. [toda fã [da Carla Peres]₁]₂ gosta de falar [do marido *e*_{*1/2}]
every fan of.the Carlas Peres like-3Sg of speak of.the husband
- b. [toda fã [da Carla Peres]₁]₂ gosta de falar [do marido
every fan of.the Carlas Peres like-3Sg of speak-Inf of.the husband
dela_{1/2}]
of.she

- (49) a. $\Box x$ (x = a fan of Carla Peres) x likes to talk about x 's husband
- b. $\Box x$ (x = a fan of Carla Peres) x likes to about her, Carla Pere's, husband

Summarizing, in this section I have shown that BP 3rdP null possessors display all the properties that have been used as diagnosis of obligatory control. Hence, to the extent that obligatory controlled gaps fit a movement analysis, the discussion above supports the suggestion I am presenting in this chapter: BP 3rdP null possessors are NP-traces.

6.3.4 Null Possessors and Specificity

As well known, specificity induces a barrier for movement out of DPs.¹⁵ Thus, in BP a wh-phrase might escape a definite (50), but not a specific DP (51):

- (50) a. [de qual dos pacientes]_i você obturou [o dente t_i]

of which of.the patients you fill-3S the tooth

‘Which of the patient did you fill the tooth of’

- b. ? [de quem]_i que você viu [a irmã t_i]

of who that you saw-3Sg the sister

‘*Who did see the sister of’

- (51) a. ?? [de qual dos paciente]_i você obturou [aquele dente t_i]

of which of.the patients you fill-3Sg that tooth

‘* Which of the patients did you fill that tooth of’

¹⁵ For a discussion on specificity, see, among others, Chomsky (1973, 1977), Fiengo and Higginbotham (1981), Fodor and Sag (1982), Hintikka (1986), Enç (1991) and Diesing (1992). I will not offer or adopt any definition for this concept; rather, I am interested in exploring the syntactic effects of specificity on extraction.

- b. * [de quem]_i que você viu [aquele irmã t_i]
of who that you saw-3Sg that sister
 ‘* Who did you see that sister of’

The islandhood property of specific DPs is also observed in the semantic behavior of quantifiers. Quantifier phrases embedded within specific DPs cannot have a wide-scope reading. For example, Ticio (2003) notes that while (52a) is ambiguous, meaning either that *Ivan* saw a picture of a group (narrow scope of the quantifier) or that *Ivan* saw several pictures (wide scope), (52b) unambiguously means that *Ivan* saw a picture of a group.

- (52) a. Ivan vio la foto de todo el mundo (wide/narrow)
Ivan saw-3Sg the picture of everybody
 ‘Ivan saw the picture of everybody’
- b. Ivan vio esta foto de todo el mundo (*wide/narrow)
Ivan saw-3Sg this picture of everybody
 Ivan saw the picture of everybody’

If wide scope results from syntactic movement at LF (Quantifier Raising; May 1985), then the conclusion is that specific DPs, contrary to definite DPs, behave like islands, blocking overt and covert movement.¹⁶

¹⁶ Unsurprisingly, LF wh-movement is also blocked:

(i) * Who wants to see these pictures of what? (Uriagereka, 1993)

If this is right, our analysis for BP 3rdP null possessors predicts that these possessors are not licensed inside specific DPs. The data below confirm this prediction. A 3rdP null possessor is allowed inside a definite DP, but prohibited inside a specific one. In other words, BP 3rdP null possessors behave similarly to *wh*-traces and quantifier phrases with wide scope, being disallowed inside specific DPs.¹⁷

¹⁷ I am omitting from this discussion examples like (i), which is interpreted as involving a possessor relation between the entity *Zé do Caixão* and the relational noun *unhas* ‘nails’

- (i) O Zé do Caixão podia nos fazer o favor de cortar aquelas unhas
 the Zé do Caixão could us-cl do the favor of cut-Inf those nails
 ‘Zé do Caixão could do us the favor of cutting those nails’

Building on Authier (1988) and Vergnaud and Zubizarreta (1992), I will assume that these cases involve a deictic use of the relational nouns and, consequently, differ from the cases discussed in this chapter. Evidence for positing this differentiation comes from appositive adjectives. Appositive adjectives cannot co-occur with external possessor (cf. Kayne 1975, Authier 1988 and Vergnaud & Zubizarreta 1992); that’s why (ia), which contains a dative external possessor, is illicit.

- (i) * Pierre lui a lavé les mains sales
Pierre to.him washed-3Sg the hands dirty
 ‘Pierre washed his dirty hands’

These adjectives are also blocked in the BP structures we are studying in this chapter. Consider, for example, the paradigm in (ii), where BP and Spanish are contrasted in order to emphasize the different syntactic behavior of BP null possessors.

- (ii) a. * A Maria cortou o cabelo tingido
 the Maria cut-3Sg the hair painted
 b. María se cortó el pelo teñido
 the Maria Cl cut-3Sg the hair painted
 ‘Maria cut her painted hair/ had her painted hair cut’

Now, notice that an appositive adjective can occur in (i). This suggests that (iii) should not be grouped with the cases considered here.

- (iii) O Zé do Caixão podia nos fazer o favor de cortar aquelas unhas bizarras
 the Zé do Caixão could us-cl do the favor of cut-Inf those nails bizarre
 ‘Zé do Caixão could do us the favor of cutting those bizarre nails’

- (53) a. A Maria₁ cortou as [unhas *e*₁]
the Maria cut-3Sg the nails
 ‘Maria cut her nails’
- b. A Maria₁ encontrou [o irmão *e*₁].
the Maria met-3Sg the brother
 ‘Maria met her brother’
- (54) a. * A Maria₁ não penteia [aquele cabelo *e*₁]
the Maria not comb-3Sg that hair
 ‘Maria does not comb that hair of hers’
- b. * A Maria₁ encontrou [aquele irmão *e*₁]
the Maria met-3Sg that brother
 ‘Maria found that brother of hers’

Brugé (1996) proposes that demonstratives are base-generated in a functional category between the NP and the DP and that they might move cyclically to spec of DP, where they are spelled-out.¹⁸ This proposal provides a rationale for why BP 3rdP null possessors, as well as wh-traces, are prevented from occurring inside a specific DP

¹⁸ For Bruggé the functional projection under consideration is NumberP, and she suggests that the demonstrative movement to spec of DP is optional in some grammars. In Spanish, for instance, the demonstrative can precede or follow the noun. Thus, if in Romance nouns move to higher position inside the DP, then (ib) is evidence that demonstratives in Spanish might not move.

- (i) a. este/ese/aquel libro
this/that/that book
 b. el livro este/ese/aquel
the book this/that/that
 ‘This/that book’

containing a demonstrative. Being the specifier of a functional projection, a demonstrative interacts with movement within the DP domain, arguably creating a blocking effect for extraction of an NP argument.

Uriagereka (1995), investigating clitic placement in western Romance languages suggested that third person clitics are specific determiners and as such that they adjoin to the head of the sentential FP, the locus of specificity. If this is right, it is arguably the case the nominal FP is also a site for specific items. Hence, we can hypothesize that demonstratives are either base-generated in FP, or moved there during the course of the derivation. This suggests that demonstratives interfere with extraction out of the DP domain in the same way that reinforcers do: by blocking spec of FP. If DPs are phases as discussed in 4.2.3, it means that demonstratives and reinforcers block extraction because they occupy the position that nominal arguments would use as escape hatch from the phase otherwise.

Perhaps the hypothesis that FP is related to specificity can give substance to the assumption that reinforcers surface in spec of the nominal FP. The fact is that reinforcers mark an indefinite DP as specific. According to Enç (1991), specific DPs are restricted discursively in the sense that they are linked (perhaps in a inclusive way) to previously established discourse referents. Particularly important for our discussion, Enç, building on Hintikka (1986), also observes that an indefinite DP referring to an unfamiliar entity (i.e, an entity not previously mentioned in the domain of the discourse) is specific if it contains adjectives like *certain* and *specific*. (55), for instance, is acceptable even if the set of relevant tasks has not been previously introduced into the domain of discourse.

- (55) The teacher gave each child **a certain task** to work on during the afternoon.

Tavares (2001) shows that reinforcers are like these type of adjectives in that they also induce an indefinite unfamiliar nominal to be specific. In (56) the DP *uma atleta aí* ‘an athlete there’ is understood as referring to a specific athlete, even though it does refer to an entity that had already been introduced discursively.

- (56) A Cátia deve vencer uma atleta aí se quiser ser a primeira
the Catia need-3Sg win-inf a athlete there if wants be-inf the first
 do ranking (BP - Tavares, 2001)
of the ranking
 ‘Cátia needs to win over a certain athlete if she wants to be the first in the ranking’

Given this feature of reinforcers, it is rather natural that they surface in spec of FP, assuming, of course, that Uriagereka is correct in suggesting that FP encodes specificity.

As the hypothesized correlation between specificity and spec of FP predicts, specific adjectives also block extraction from inside nominals. (57), for example, illustrated that under the presence of this adjective in BP, wh-extraction is ruled out as well as the type of possessor raising we are investigating here. Thus, perhaps these adjectives are in competition for spec of FP.

- (57) a. * De quem₁ que você vai encontrar com [uma certa tia t_1]
of whom that you will-3Sg meet-inf with a certain aunt
 ‘* Whom will you meet a certain aunt of’
- b. * O João₁ encontrou [com uma certa tia e_1]
the João met-3Sg with a certain aunt
 ‘João met with a certain aunt of his’

At any rate, the facts above corroborate the movement analysis I am arguing for in this chapter.

6.3.5 Null Possessors inside Relative Clauses

The fact that in (58) the null possessor can refer back to *Maria* illustrates that in European Portuguese, Spanish, and Galician null possessors are pronominal categories, as opposed to traces. As such, they are able to occur inside a relative clause, taking a non-local DP as the antecedent.

- (58) a. Maria₁ bateu na [menina₂ que beijou [o $e_{1/2}$ namorado]] (EP)
Maria hit-3Sg in.the girl that kissed-3Sg the boyfriend
- b. María₁ pegó a la chica que besó al [$e_{1/2}$ novio] (Sp.)
Maria hit-3Sg to the girl that kissed-3Sg to.the boyfriend

- c. Maria bateu a rapaza que beixou [ó $e_{1/2}$ mozo] (Gal.)
Maria hit-3Sg the girl that kissed-3Sg the boyfriend
 ‘Maria hit the girl that kissed her boyfriend.’

Compare (58) with its Brazilian counterpart:

- (59) A Maria₁ bateu na [menina₂ que beijou [o namorado $e_{*1/2}$]] (BP)
a Maria hit-3Sg in.the girl that kissed-3Sg the boyfriend
 ‘Maria hit the girl that kissed her boyfriend’

In (59), the empty possessor cannot refer back to the DP *a Maria*. This suggests that it is not a null pronoun. It patterns rather as the wh-trace in (60):

- (60) * De quem que você viu a menina que beijou o namorado
of whom that you saw-3Sg the girl that kissed-3Sg the boyfriend
 ‘* Whom did you saw the girl that kissed the boyfriend of’

This is fully parallel to the behavior of null subjects discussed in chapter 4. In both cases, the 3rdP empty category is prohibited inside relative clauses. If a raising analysis of relative clauses (cf. 4.3.5) is adopted, this prohibition follows from the fact that movement out of the relative clause results in violation of the MLC.

The derivation of (59), repeated below as (61) unfolds as sketched in (62). The

possessor *a Maria* is first merged with the relational noun *namorado* ‘boyfriend’ where it gets the possessor theta-role, after which the CP in (62a) is built. This CP is taken as a complement of the determiner *a* ‘the’, and the determiner projects forming the complex DP represented in (62b). Next, the verb *bateu* ‘hit’ merges with (62b), as in (62c). This verb has an external $\bar{\text{A}}$ -role to be checked. Since the possessor phrase *a Maria* hasn’t checked its Case feature yet (cf. 6.2), at this step of the derivation it is still available for further computations. Therefore, it could in principle be copied and merged as the specifier of the matrix verb. Yet, this move is not possible, for it violates the MLC. The head of the relative clause (i.e. the NP *menina* ‘girl’) is closer to the matrix verb than the possessor phrase is. Hence, it prevents the movement of the possessor towards spec of VP, as shown in (38d).

(61) * *A Maria*_i *bateu* *na menina* *que beijou* [*o namorado e*₁].

the Maria hit-3Sg in.the girl that kissed-3Sg the boyfriend

‘Maria hit the girl that kissed the boyfriend’

(62) a. [CP [menina]_i [TP *t*₁ [T' [VP *t*₁ [V' beijou [DP [NP [a Maria]_{poss} namorado]]]]]]]

b. [DP a [CP [menina]_i [TP *t*₁ [T' [VP *t*₁ [V' beijou [DP o [NP [a Maria]_{poss}] o namorado]]]]]]]

c. [VP bateu [DP a [CP [menina]_i [TP *t*₁ [T' [VP *t*₁ [V' beijou [DP o [NP [a Maria]_{poss} namorado]]]]]]]]

-
- d. [VP [V' bateu [DP a [CP [menina]₁...[DP O[NP [a Maria]_{poss} namorado...]]]]]]]

In conclusion, as the analysis I am arguing for predicts, the possessors under consideration cannot occur inside relative clauses.¹⁹

6.4 Null Possessors inside Adjuncts

Adjuncts are also opaque domains for extraction. Hence, in accordance with the analysis I am arguing for, in BP and Finnish, the occurrence of null possessors inside adjuncts is unexpected. Yet, as (63) shows, it may occur:

- (63) a. A Maria₁ viajou com [a irmã e₁]
the Maria traveled-3Sg with the sister
 ‘Maria traveled with her sister’

¹⁹ Although I judge sentences like (i) to be marginal, for some of my informants they are acceptable.

- (i) [a Maria]₁ viu [o cara que [a filha e₁] beijou na festa]
the Maria saw-3Sg the guy that the daughter kissed at the party
 ‘Maria saw the guy that her daughter kissed at the party’

Obviously this is not amenable to a movement analysis, but I will not comment on the matter here, especially because it is not clear what this shows us. The speakers that accept (i) do not accept (37). Hence, it seems that, inside a relative clause, they allow a 3rdP null possessor inside a subject DP, but not inside an object DP. Moreover, they also reject sentences in which the antecedent of a null possessor is not a local or c-commanding DP. Therefore, the reasons for why their grammars allow (i) are not obvious. If these grammars could resort to a null possessive pronoun, we would expect them to generate (61) as well as sentences in which the antecedence relationship between a null possessor and a DP does not obey the MLC.

- b. A Maria₁ dormiu com [o cabelo *e*₁] molhado
the Maria slept -3Sg with the hair wet
 ‘Maria slept with her hair wet’

The impossibility of wh-extraction from the prepositional phrases above indicates that these phrases are adjuncts.²⁰

- (64) a. * De quem₁ que a Maria viajou com [a irmã *t*₁] ?
of whom that the Maria traveled-3Sg with a sister
 ‘* Whom did Maria traveled with the sister of’
- b. * De quem₁ a Maria odeia sair com [o cabelo *t*₁] molhado
of whom the Maria hates-Inf go.out with the hair wet
 ‘* Of whom does Maria hate to go out with the hair wet’

In chapter four, I analyzed occurrences of sentential null subjects inside adjuncts by suggesting that they are to be derived by sideward movement. The main idea behind this mechanism is that a category is able to undergo a lateral movement from inside a phrase that is in a posterior stage of the derivation, and will be adjoined to the main spine of the tree, becoming thus an adjunct (i.e. an island for extraction). That amounts to

²⁰ Notice that if movement does not occur, (63b) is perfectly fine. See, for instance, (i) which means that Maria hates to go out with Tatiana when Tatiana’s hair is wet.

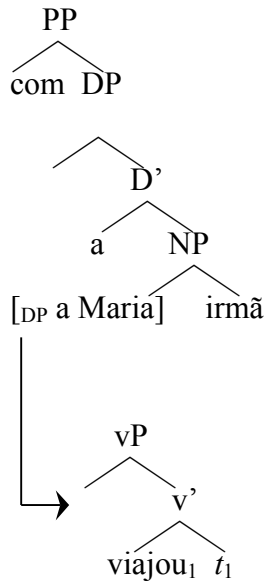
(i) A Maria odeia sair com [o cabelo da Tatiana] molhado
the Maria hate-3Sg go.out with the hair of Tatiana wet

saying that movement out of an adjunct depends on which step of the derivation it occurs. It succeeds only if it happens prior to the adjunction process.

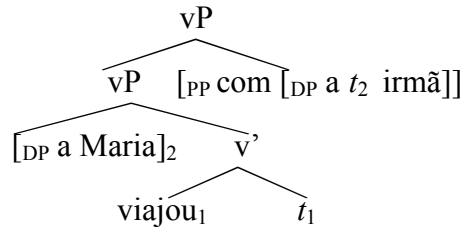
Bearing this in mind, consider again the contrast in (63) and (64). (63) involves A-movement into a theta-position, whereas (64) are attempts at A'-movement to the spec of the matrix CP. Thus, suppose that in these sentences the prepositional phrase is adjoined to $\bar{v}P$. In derivations of the sentences in (63), the possessor is raised to spec of $\bar{v}P$ before the merge of the prepositional phrase with vP . This is possible if movement between parallel phrase markers (sideward movement) is allowed. In (64), contrarily to what happens in (63), the possessor phrase tries to move to spec of CP after the prepositional phrase has been adjoined to vP . That is, the movement is from an island and arguably ruled out by the computational system. To see the difference between (63) and (64), compare the derivations in (65) (= (63a) and (66) (= 64a). In first relevant stage of (65), the prepositional phrase and the verb phrase are built as separate sub-structures and the possessor moves sideways from its original position inside the relational DP to spec of vP , where it checks the *sleeper* \square -role. After that, in stage 2, in accordance with the Extension Condition, the prepositional phrase adjoins to vP and, consequently, becomes an island for extraction. When T is merged with the vP (stage 3), the possessor moves to spec of TP, where it checks its Nominative Case feature.²¹

²¹ For space reasons, the representations of the DP structure are simplified.

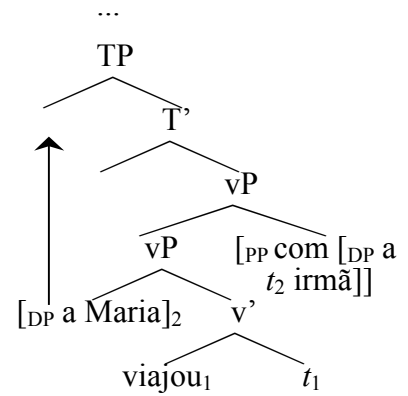
(65) Stage 1



Stage 2

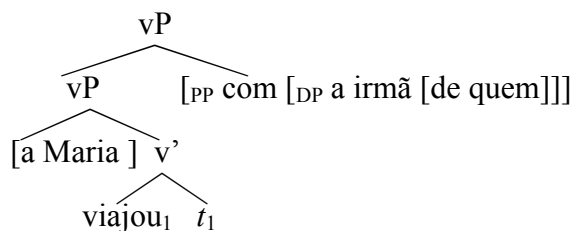


Stage 3

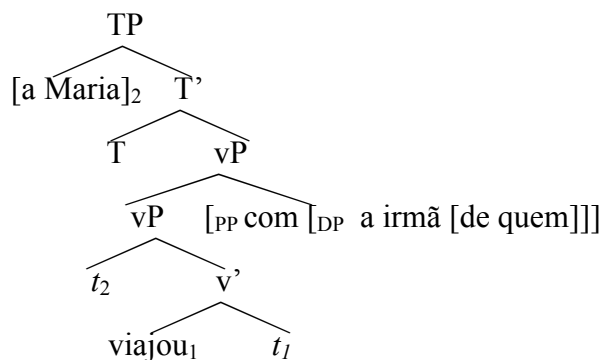


In the derivation of (64) (cf (66)) there is no parallel movement. The prepositional phrase is built and merged with matrix vP with the wh-possessor in situ (cf. Stage 1). After that, the matrix TP is assembled with the matrix subject, which is moved to spec of TP, as shown in stage 2. At the end of the derivation (stage 3), when the matrix C is inserted, the wh-possessor, which is still inside the prepositional phrase, tries to move to spec of CP. But, under the assumption that a phrase becomes an island after having been adjoined with a maximal projection, the computational system cannot perform the wh-movement illustrated in stage 3 of (65).

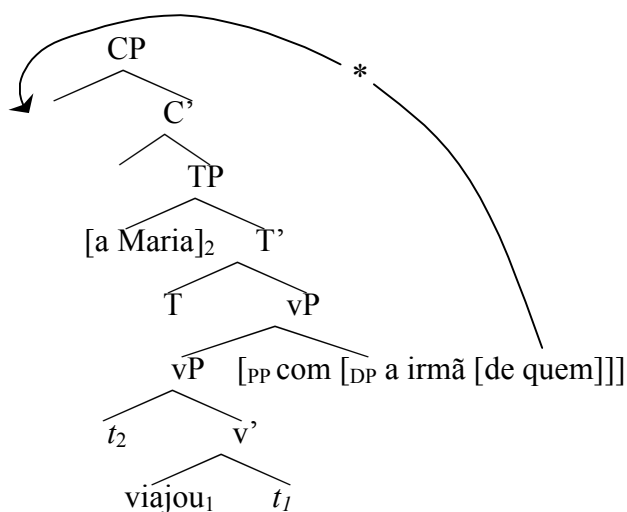
(66) Stage 1



Stage 2



Stage 3



In sum, one important outcome of the theoretical framework presented in chapter 2 is that it permits A-movement out of adjuncts by taking sideward movement to be performed by the computational system and by assuming that islands emerge derivationally, as a result of the adjunction process. In chapter 4, I showed this is of

particular relevance in the analysis of 3rdP null subjects in BP and Finnish and here I have suggested that it is also relevant in explaining BP 3rdP null possessors.

6.5 Null Possessors inside Coordinate Structures

Ross (1967) observed that in structures involving coordination, the conjoined nodes and the material contained by them are restricted from being moved:

- (67) a. * What sofa will he put the chair between some table and
 b. * What table will he put the chair between and some sofa
- (68) a. * The lute which Henry plays and sings madrigal is warped
 b. * The madrigals which Henry plays the lute and sings sound lousy

He captured this restriction by adding the following constraint to the Grammar:

- (69) *The Coordinate Structure Constraint* (Ross, 1967:161)

In a coordinate structure, no conjunct maybe be moved, nor may any element contained in a conjunct be moved out of that conjunct

However, as he noticed, (69) can voided if movement applies in an across the board (ATB) fashion, moving a single element from all the conjoined phrases at the same time.

- (70) a. Which lute did John play and Paul win
 b. Which film did the critics hate and the audience love

Interestingly, this restriction on movement also governs the licensing of BP 3rdP null possessors. As illustrated in (71) and (72), these null categories are not allowed inside coordinated DPs, unless they occur across the board.²²

- (71) a. * O Pedro₁ encontrou [[_{DP} a irmã do João] e [_{DP} a mãe *e_I*]]
 the Pedro met-3Sg the sister of.the João and the mother
 ‘Pedro met João’s sister and his mother’
 b. * A Maria₁ fez [[_{DP} o meu cabelo] e [_{DP} as unhas *e_I*]]
 the Maria did-3Sg the my hair and the nails
 ‘Maria did my hair and her nails’
- (72) a. O Pedro₁ encontrou [[_{DP} a irmã *e_I*] e [_{DP} a mãe *e_I*]]
 the Pedro met-3Sg the sister and the mother
 ‘Pedro met his sister and mother’

²² Some speakers accept (ia), even though they reject (71) and (ib). I have no explanation for this.

- (i) a. * O Pedro₁ encontrou [[_{DP} a irmã *e_I*] e [_{DP} a mãe do João]]
 the Pedro met-3Sg the sister and the mother of.the João
 ‘Pedro met his sister and João’s mother’
 b. * A Maria₁ fez [[_{DP} o cabelo *e_I*] e [_{DP} as minhas unhas]]
 the Maria did-3Sg the my hair and the nails
 ‘Maria did her hair and my nails’

- b. A Maria_i fez [[_{DP} o cabelo *e*₁] e [_{DP} as unhas *e*₁]].
the Maria did-3Sg the hair and the nails
 ‘Maria did her hair and nails’

Thus, if ATB is a requirement on movement out as originally proposed by Ross, then the contrast between (71) and (72) indicates that BP 3rd null possessors are formed by movement. However, this conclusion does not immediately grant the analysis we are suggesting here. After Ross the ATB phenomenon received many accounts (cf. Haïk 1985, Munn 1993, Goodall 1994, Nunes 1995, Hornstein 2001, Hornstein and Nunes 2002, Boskovic and Franks 2001, Citko 2002) and among the frameworks that assume movement, there is disagreement about which type of movement is in fact involved. For example, Munn argues that coordinate structures are Boolean phrases head by a conjunction (as in (73) where XP and YP are conjoined phrases, hierarchically organized as the specifier and the complement of *and* respectively) and that ATB involves movement of a null operator along the lines proposed by Chomsky (1986b) for parasitic gaps.

(73) [_{BP} XP [_{B'} and [YP]]]

It is easy to see that a null operator account is not amenable to the treatment I am offering for 3rdP null possessors in BP. In exchange for admitting that ATB involves null operators, I would be forced either to change, or weaken my analysis, and assume that BP

3rdP null possessors can either traces of NPs or null operators depending on the configuration.

It is unclear, however, that we need such a radical move. A null operator account for ATB is not free of problems to begin with. As observed in Hornstein and Nunes (2002), it accommodates extraction of DPs, but requires non-standard assumptions in accounting for extraction of other constituents, including the auxiliary in (70). Moreover, there are alternative analyses. For example, Nunes (1995), and later Hornstein and Nunes accept the Boolean structure in (73); but suggest subsuming ATB extractions under Nunes' analysis of parasitic gaps, proposing that this type of extraction also instantiates sideward movement application. To see the relevant details of their proposal, consider (74), which is the structure of (70a) in accordance with their proposal.

(74) [CP which lute [C' did [TP John did play which lute] [B' and [TP Paul did win which lute]]]]

(74) is derived by moving the auxiliary *did* and the wh-phrase *which lute* from one conjoined phrase to another. This derivation starts by assembling the second conjoined phrase, viz. the clause *Paul did win which lute*, which is then merged with *and*. Next, the first conjoined phrase is built as separate phrase marker, and *did* and *which lute* are copied and sideward moved to inside this phrase marker, forming the clause *John did play which lute*. To satisfy the feature of the complementizer, the auxiliary and the wh-phrase are finally moved into the CP domain.

This analysis of ATB, besides fitting the theoretical approach adopted in this thesis, allow us to explain the null possessor in (72) in accordance with the movement analysis I am arguing for. The relevant derivation of (72a), repeated here as (75), is the one shown in (76). The DP *o Pedro* is first merged with the noun *mãe* ‘mother’, where it checks the possessor $\bar{\alpha}$ -role assigned by this noun. At the next relevant step of the derivation (76c), the possessor phrase moves sideways, being merged with the noun *irmã* ‘sister’ and checking the possessor $\bar{\alpha}$ -role assigned by this noun too. When the verbal phrase is built the DP *o Pedro* moves to a third theta-position (spec of VP) (cf. (76f). Finally, when T is inserted into the derivation, *o Pedro* is raised to spec of TP, where it has its Case feature checked.

- (75) O Pedro₁ encontrou [[_{DP} a irmã *e₁*] e [_{DP} a mãe *e₁*]]
the Pedro met-3Sg the sister and the mother
 ‘Pedro met his sister and mother’

- (76) a. [_{DP} a [_{NP} [_{o Pedro}]_{poss} mãe]] $\bar{\alpha}$ (building the second
 conjunction)
 b. [_{BP} e [_{DP} a [_{NP} [_{o Pedro}]_{poss} mãe]]] $\bar{\alpha}$ (Merging the second
 conjunct with the conjunction)
 c. [_{DP} a [_{NP} [_{o Pedro}]_{poss3} mãe]] $\bar{\alpha}$ (sideward movement of
 the possessor)
 d. [_{BP} [_{DP} a [_{NP} [_{o Pedro}]_{poss} irmã]] [_{B'} e [_{DP} a [_{NP} *t* _{poss} mãe]]]] $\bar{\alpha}$

(merging the second conjunct with the BP)

- e. [VP encontrou [BP [DP a [NP [o Pedro]_{poss} irmã]] [B' e [DP a [NP [t_{poss} mãe]]]]]]

□ (merging BP with the verb)

- f. [VP [o Pedro]_{poss} [V' encontrou [BP [DP a [NP t_{poss} irmã]] [B' e [DP a [NP [t_{poss} mãe]]]]]]] □ (moving the possessor to spec of VP)

- g. [TP [o Pedro]_{poss} [T' [VP t_{poss} [V' encontrou [BP [DP a [NP t_{poss} irmã]] [B' e [DP a [NP [t_{poss} mãe]]]]]]]]] □ (moving the possessor to spec of TP)

To sum up, since sideward movement is already part of the framework adopted in this thesis, I adopt here Nunes and Hornstein's treatment of ATB and maintain a movement analysis for BP 3rdP null possessor.

However, let me observe that the present analysis does not provide an account for the parallelism requirement on ATB extractions, according to which movement from coordinated structures has to affect all the conjuncts. There still is no syntactic account for this requirement,²³ and Munn (1993) assumes it to be a semantic condition. For some as yet unclear reason, coordinate conjunctions have to be semantically similar with respect to the presence of variables. Nunes and Hornstein offer a minimalist version of Munn's suggestion by taking the parallelism requirement to be a bare output condition. I

²³ Citko (2002) argues that ATB are structures with multi-dominance. The shared constituent is merged simultaneously with the relevant element inside the conjuncts. (In (70a), for example, *which lute* is merged simultaneously with *play* and *win*.) Hence, when the given constituent is moved, a gap is concurrently created inside each conjunct. Note, however, that there is nothing syntactic in her system forcing multi-dominance on coordinate structures. Hence, structures involving single dominance and, consequently, a single gap (as (69)) are fine from a syntactic point of view.

will not discuss this issue any further; rather I will presuppose that an approach along the lines proposed above is correct.

6.6 Conclusions

In this chapter, I analyzed BP 3rdP null possessors as formed by movement. Presupposing that null possessors are possessive agreement morphemes (possessive Agr), I suggested that in the grammars under investigation possessive Agr was lost. Thus, null possessors are not licensed anymore. However, since nouns move to X, the movement of a possessor phrase to spec of XP, a genitive Case checking position, is optional; therefore, in this grammatical system, a possessive phrase can be sub-extracted, checking its feature against a sentential functional clause

The following arguments were presented as evidence of movement: (i) the null possessors under consideration have an anaphoric behavior, requiring a sentential antecedent; (ii) they require their antecedent to be closest c-commanding DP in accordance with MLC; (iii) they fail to occur inside specific DPs (and relative clauses) which are known to be island for extractions.

The occurrence of 3rdP null possessors inside adjuncts and in coordinate structures in an across-the-board fashion were taken to instances of gaps formed via sideward movement.

I **Appendix 3rdP Null Possessors in Finnish**

In chapter five, I introduced the idea of treating the possessive agreement markers as having an argument status. In particular, at 5.5, I considered Standard Finnish possessive agreement markers, and suggested that that in this grammar 1st and 2nd Person agreement morphemes enter the computational system as independent lexical items, being first merged in the possessor position, i.e. as an argument of the possessum. This analysis was motivated by the fact that these morphemes behave syntactically as clitics. However, having said that, the issue is about 3rdP possessive markers. As already discussed, these markers have an anaphoric behavior. Inside the possessive DP, the genitive possessive pronoun is obligatory inside the possessive DP (cf. (77)), unless the 3rdP possessive agreement marker finds its antecedent within the sentence in which it occurs (cf. (78)).

- (77) a. ***(hänen) kirjansa**
 his/her book-3
- b. ***(heidän) kirjansa**
 their book-3

- (78) a. Maija₁ pitää Kirjastansa_{1/*2}
 Maija-Nom like-3Sg book-Ela-3
 ‘Maija like her book’

b. he₁ pitävat kirjastansa_{1/*2}

they-Nom like-3rdPl book-Ela-3

‘They like their book’

This is quite similar to the behavior of 3rdP null possessors in BP, and we can actually treat the 3rdP possessive marker in parallel to the Finnish verbal inflection, given that this morpheme is morphologically weak, since there is only one morphological form for 3rd Singular and plural. Under the proposal of this dissertation, this means that this 3rdP possessive marker became \square -defective, being unable to instantiate number distinctions and, as a consequence, it may have been reanalyzed as part of the noun, losing its syntactic independence. However, as I have already suggested, in Finnish, similarly to what happens in BP, nouns adjoins to X, satisfy, thus, the nominal requirements of the head X.

This hypothetical analysis provide a rationale for why (77) is not generated in Standard Finnish grammars, and also suggests that (78) is formed by movement along the lines proposed in 5.2 for BP null possessors. In (78a) for instance, the DP *Maija* was first merged inside the possessive DP, then moved to spec of the matrix $\bar{y}P$, and after that to spec of TP, where it had its Case feature checked.

There are some pieces of evidence supporting a movement analysis for (78). First, as already shown, a 3rdP possessive agreement marker in these grammars is anaphoric, requiring the presence of suitable antecedent within the sentence in which it occurs. This is confirmed by the data in (79). In (79a), there is not possessive marker, and thus the

relational noun is interpreted as non-relational, and the sentence is acceptable. In (79b), which contains a possessive marker, the possessor is realized by genitive pronoun. (79c), also contains a 3rdP possessor marker, but it is not provided with an antecedent; thence the sentence is not grammatical.

- (79) a. Nytt silt, ett veli lytyi
show-3SG it-Abl that brother-Nom was.found-3Sg
 ‘It seems that the brother was found’
- b. Nytt silt, ett **hänen** veljens lytyi
show-3Sg it-Abl that his brother-Nom-3 was.found-3Sg
 ‘It seems that his brother was found’
- c. * Nytt silt, ett veljens lytyi
show-3Sg it-Abl that brother-Nom-3 was.found-3Sg
 ‘It seems that his brother was found’

(80) shows that the antecedence relationship between a possessive marker and its antecedent obeys the Minimal Link condition, the antecedent being the most local c-commanding DP.

- (80) a. * [Hänen₁ kärmeens]₂ puri ksivartta**an**₁
his/her snake-Nom-Poss.3sg bit-3Sg arm-Part-3
 ‘His snake bit his arm’

- b. * Maija₁ sanoi, ett kärm₂ puri veljens₁
Maija-Nom said-3Sg that snake-Nom bit-3Sg brother-3
 ‘Maija said that the snake bit her brother’

In addition to this, the possessive agreement under consideration displays other obligatory control properties. Split antecedents are not allowed (cf. (81)); under VP ellipsis, only a sloppy reading is available (82). Moreover, when the antecedent has the form *only-NP*, only a covariant interpretation is allowed, as shown in (83).^{24, 25}

- (81) Maija₁ lupasi Pekalle₂, ett hän₁ leikkaisi tukkansa*₁₊₂
Maija-Nom promised-3Sg Pekka-All that she cut-Cond-3Sg hair-3
 ‘Maija promised Pekka that she would cut her hair’

- (82) Isois₁ ei leikkaa kynsin₁, eik
grandfather-Nom not-3Sg cut-3Sg nails-Part-3Sg, not-inclusive.clitic
 isoitkn
grandmother-Nom-inclusive.Clitic
 ‘Grandpa does not cut his nails and grandma doesn’t either’
 (= Grandma does not cut her own nails either)

²⁴ Though some speakers allow an invariant interpretation, see Kayser (1998).

²⁵ I failed to test the *de se* reading.

- (83) Liisa uskoo, että [vain hän] kunnioittaa miestä
Liisa-Nom think-3Sg that only she-Nom respect-3Sg husband-Part-3
 ‘Liisa thinks that only she is an *x* such that *x* respects *x*’s husband’

In addition to that, it is worthy mentioning that an overt possessive genitive pronoun is always disjoint in reference from a local c-commanding DP.

- (84) a. Maija₁ hukkasi [hänen*_{1/2} kasettinsa]
Maija-Nom lost-3Sg her tape-3
 ‘Maija lost her tape’
- b. [Maijan₁ sisar]₂ hukkasi [hänen_{1/*2} kasettinsa]
Maija’s sister lost-3Sg her tape-3
 ‘Maija’s sister lost her tape’
- c. Maija₁ sanoi, että kärmä puri [hnen₁ ksivarttaan₁]
Maija-NOM said-3Sg that snake-NOM bit-3Sg her arm-Part-3
 ‘Maija said that a snake bit her arm’

This can be analyzed in the following way: in configurations that favor obligatory control, insertion of a pronoun is allowed to suppress movement only if the pronoun obviates in reference.²⁶ This accords to Hornstein’s (1999) economy principle of ‘Move First’, which asserts that pronominal insertion is an expensive operation that applies only

²⁶ Of course, this analysis poses a question about lack of obviation effects in BP.

when movement is unable to take place. For a discussion on the relation between control and ‘Move first’ see also San Martin and Hornstein (2001).²⁷

All in all, the data discussed above support a movement analysis for external possessors in Finnish. However, before concluding that this is the right analysis, the following facts have to be sorted out. First, as shown in (85), definite possessive DPs might have an external possessor, even though they block wh-extraction.

- (85) a. * Kenen₂ Jukka₁ tapasi tuon [_{t₂} velje(ns)]
 whose Jukka-Nom met-3Sg that-Acc brother-Acc-3
 ‘Whose did Jukka met that brother of’
- b. Jukka₁ tapasi [tuon veljens₁]
 Jukka-Nom met-3Sg that-Acc brother-Acc-3
 ‘Jukka met that brother of his’

Second, possessive DPs inside a relative clause are not allowed. This is rather unexpected given that null subject data suggest that relative clauses do allow A-extraction (cf. 4.5). It seems, then, that in this language A-extraction out of relative clause is allowed unless the constituent is inside a DP. That is, movement out of an island is fine, but movement out of an island within an island is not.

²⁷ Richards (1997) also proposes that disjoint reference follows from economy. Sorting out binding relations in Norwegian and Japanese, he suggested that disjoint reference results from the principle of structural economy, according to which, given a choice between two elements, the one with fewer specified features is preferred. This can be seen as reformulation of the Avoid Pronoun Principle as an economy principle.

- (86) a. * Jukka₁ näki [jtkn, jota tyttrens₁ suuteli]
Jukka-Nom saw-3Sg guy-Acc who-Part daughter-Nom-3 kissed-3Sg
 ‘Jukka saw the guy that his daughter kissed’
- b. * Jukka₁ li [jtk, joka suuteli tytrtn₁]
Jukka-Nom hit-3Sg guy-Part who-Nom kissed-3Sg daughter-Part-3
 ‘Jukka hit the guy that kissed his daughter’

I will not discuss these issues any further, rather I will leave them aside, awaiting more fine-grained research on Finnish DPs.

CHAPTER 7

CONCLUSION

7.1 A Summary of the Content

The presented research was driven by the following question:

- (1) What is the syntactic nature of clausal and nominal referential null subjects in BP and Finnish?

I have answered (1) by correlating the licensing of referential null subjects with rich verbal agreement morphology. Thus, since BP and Finnish are languages with poor possessive and verbal agreement morphology, I hypothesized that these grammars are non *pro*-drop. That amounts to saying that the null subjects under investigation are not null pronouns (*pro*). In fact, these gaps are formed by movement, rather than lexically empty categories.

As I have shown, 1stP null subjects are formed via movement to a topic position and deleted later, in accordance to a topic-deletion analysis. Embedded 3rdP null subjects

are formed via A-movement: a DP inserted as an argument of an embedded finite clause or possessive DP undergoes A-movement to a higher syntactic domain, in which it Checks its Case feature.

The evidence that the 3rdP null subjects under consideration are formed by movement is listed in (3):

- (3) a. They are anaphoric, requiring a syntactic antecedent, which is the closest c-commanding DP.
- b. They pass all the diagnostics used to characterize obligatory control as formed by category movement.
- c. They are allowed inside relative clauses only if the head of the relative clause does not intervene between them and their antecedents.
- d. They are not allowed inside paratactic configurations.
- e. Their antecedents control the value of the gender feature of a past participle form or a floating quantifier embedded under their c-command domain.

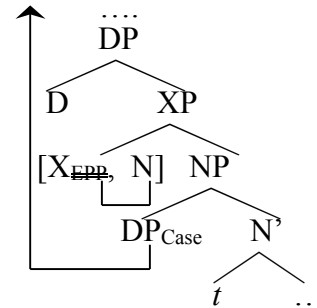
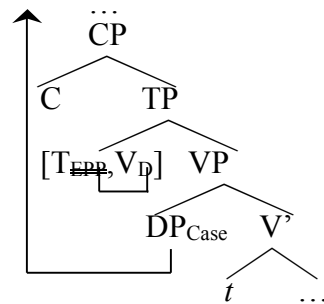
Nominal 3rdP null subjects (i.e.; null possessors) appear to have the same properties. They require an antecedent, which is the closest c-commanding NP; are not allowed inside relative clauses and display all the characteristics of obligatory controlled gaps. Moreover, inside coordinated DPs, they must occur across-the-board. Hence, it is arguably the case that in BP and Finnish, 3rdP null possessors are also residues of

movement.

Presupposing that in pro-drop languages *pro* is the verbal agreement morpheme (Agr) itself, I have suggested that in BP and Finnish 3rdP verbal agreement morphemes (Agr) underwent a degradation in $\bar{\lambda}$ -feature and, as a consequence, was reanalyzed as part of the verb. Nevertheless, it still contains a D-feature. Hence, assuming that an EPP T is checked by a D-feature, it plausible that in these grammars when V adjoins to T, the D feature of Agr checks the EPP features of T. Within DPs, a similar state of affairs is observed: the EPP feature X, the nominal counterpart of T, is checked via N-to-X movement. Thus, in these languages, the EPP feature of the functional categories responsible for checking the Case of subjects is satisfied by other means, rather than by projection of a specifier/subject. It is the result of this morphological change which gives rise to the unexpected, yet observed, A-movement out of a Case Domains. A DP merged as the external argument of a predicate inside a finite clausal or a nominal domain can move out of that domain without engaging into spec-head relationship with a Case-checking functional category (T or X) because The EPP of feature of the Case-checking category is checked by Agr. Thus, assuming that Case is checked in Spec-Head relation, in BP and Finnish, a DP can move out of a Case domain before checking its Case feature.

The schemes in (3) summarizes the proposed analysis:

- (3) a. A-movement out of clauses b. A-movement out of nominals



7.2 Some Theoretical Implications of This Research

At this point it is worth pointing out some broad implication of the research reported in this thesis. First, if $\bar{\alpha}$ -roles are the result of configurations, it is difficult to see how one could analyze the phenomenon depicted here. Moreover, if the Chain Condition is part of UG (Chomsky and Lasnik 1993), that would present some problems for the movement analysis I suggested. Finally, sideways movement ought to be applied by the computational system, making available A-movement out of adjunct clauses. To that extent, this research is evidence for a featural view of $\bar{\alpha}$ -roles and for sideways movement.

7.3 Possible Ramifications of the Proposed Analysis

Before finalizing this thesis, let me briefly show that the A-movement analysis suggested above is extendable to languages other than BP and Finnish.

Recently it has been observed that, in certain Balkan languages and Hebrew,

obligatory control is possible in subjunctive clauses (cf. Borer 1989, Varlokosta 1993, Kapetangianni and Seely, 2004 and Landau 2004). Using Landau's term, we might refer to this type of obligatory control as finite control. The sentences in (4) are examples of finite control.²⁸

- (4) a. Hem₁ kivu sě e_{1/*2} yelxu ha-bayta mukdam

they hoped-3Pl that go-3rdPlFut home early

'They hoped that they would go home earlier'

(Hebrew - Landau 2004)

- b. O Akrisio theli na kalesi tus filus sta
the-Nom Acrisio-Nom wants-3Sg na invites-3Sg the-Acc friends-Acc

tu sta genethlia tu

his-Gen to birthday-Acc his-Gen

'Acrisio wants to invite his friends to his birthday party'

(Greek - Kapetangianni and Seely 2004)

As the Greek data in (5) show, these constructions display all the properties of obligatory control: (i) the empty subject is anaphoric, being co-referent with a c-commanding DP (5a&b); (ii) split antecedents are not allowed (5c); (iii) under VP ellipsis only a sloppy reading is possible (5d); and (iv) a *de-se* interpretation is obligatory (5d). (the data in (5) were extracted from Kapetangianni and Seely 2004.)

²⁸ Na is Greek subjunctive marker.

- (5) a. [o Akrisio]₁ kseri $e_{1/*2}$ na horepsi
the-Nom Acrisio-Nom knows-3sg na dances-3Sg
 ‘Acrisio₁ knows (how) to dance’
- b. [o filos tu Akrisio₁]₂ kseri $e_{*1/2}$ na
the-Nom friend-Nom the-gen Acrisio-gen knows-3Sg na
 horevi
dances-3Sg
 ‘Acrisio’s friend knows how to dance’
- c. *[o Akrisio]₁ nomizi oti [i Maria]₂
the-Nom Acrisio-Nom thinks-3Sg that the-Nom Maria-Nom
 kseri e_{1+2} na voithisun o enas ton allo sta genethlia tu
knows-3Sg na help-3Pl each other to birthday-acc his-Gen
 ‘Acrisio₁ thinks that Mary₂ knows (how) to help each other at his birthday party’
- d. [o Akrisio]₁ kseri na e_1 horevi,
the-Nom Acrisio-Nom knows-3Sg na dances-3Sg
 to idhio ke o Ntanie
the same and the-Nom Daniel-Nom
 ‘Acrisio knows how to dance, so does Daniel’ (√Sloppy/*strict reading)

- e. [o Atichis]₁ kseri e₁ na ektimisi to metalio
the-Nom unfortunate-Nom knows-3Sg na appreciate-3Sg the-acc medal-acc
 ‘The Unfortunate knows to appreciate the medal’ (*de se* reading)

Landau observes that finite control is found in other grammars. His list includes Albanian, Romanian, Spanish and Kannada. Interestingly, as he points out, these are all bona-fide pro-drop languages, with the exception of Hebrew, which is arguably another partial pro-drop grammar. Hebrew allows referential null subjects only in past and future tense clauses and, like BP and Finnish, licenses referential 3rdP null subjects only within embedded clauses.²⁹

Putting the partial pro-drop nature of Hebrew aside for a moment, it is important to notice that the languages listed by Landau are similar to BP and Finnish in that they also have null expletives. Thus, if the licensing null expletives means that the EPP features of T is satisfied via V-to-T movement, we can in principle propose that the sentences (4) are derived by a mechanism similar to the one represented in (3a).

One might in fact suggest that Hebrew sentences like (4a) is derived by (3a). As in BP and Finnish, the verbal agreement in Hebrew has a D-feature, but it is not syntactically independent, being rather an affix to the verb. Thus, (4a) is derived as shown in (6). The pronoun *hem* is first inserted in the spec of the embedded VP, where it checks the external \square -role of the embedded verb. When the embedded T is inserted into the derivation, V adjoins to T, and Agr checks the EPP feature of T. Assuming that F is an active functional projection in Hebrew (cf. Rodrigues 2003 for independent evidence),

²⁹ It is worth mentioning however that not all speakers allow 3rdP referential null subjects within past-tense embedded clauses.

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