Apparent Hyper-raising in Brazilian Portuguese:

Agreement with Topics across a Finite CP

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Abstract: This paper argues that constructions that apparently involve hyper-raising with resumption in Brazilian Portuguese actually result from A-movement of an embedded topic. The paper accounts for the mixed A/A'-properties of the matrix subject of these constructions and provides independent evidence for Chomksy's (2001) version of the Phase Impenetrability Condition.

Key-words: hyper-raising, topics, A-movement, Phase Impenetrability Condition, Brazilian Portuguese

1. Introduction[*]

(Colloquial) Brazilian Portuguese (henceforth *BP*) sets itself apart from "Romance-type" null-subject languages with respect to both matrix and embedded clauses.[1] Similarly to German and Chinese (see Ross 1982, Huang 1989, and Cardinaletti 1990), BP displays referential null subjects in matrix clauses only as instances of topic-deletion (see e.g. Ferreira 2000, Modesto 2000, and Rodrigues 2004). The empty category in the subject position of constructions such as (1a), for instance, is taken to be a variable bound by a zero topic; thus, the presence of an intervening *wh*-element between the empty topic and the variable in subject position in (1b) yields a minimality effect.

(1) a. Fiz   um bolo.

   made-1PSG a   cake

   'I made a cake.'

   b. ?*O que fiz?

      what   did-1PSG

   'What did I do?'

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[1] For relevant discussion, see e.g. Galves (1993, 1998, 2001), Duarte (1995), Figueiredo Silva (1996), Kato (1999, 2000), Negrão (1999), Ferreira (2000, 2004, 2009), Modesto (2000), Barbosa, Duarte, and Kato (2001), Rodrigues (2002, 2004), and the collection of papers in Kato and Negrão (2000).

In finite embedded clauses, on the other hand, referential null subjects in BP show interpretive properties of obligatorily controlled PRO (see Ferreira 2000, 2004, 2009 and Rodrigues 2002, 2004). Take the sentence in (2) below, for example. In European Portuguese, a prototypical Romance-type null subject language, all the potential interpretations for the embedded null subject in (2) signaled by the indices are grammatical options. By contrast, in BP the embedded subject in (2) cannot be discourse-licensed and must be coreferential with the closest c-commanding DP, namely, *o pai do Pedro* 'John's father'.

(2) [[o João]$_i$ disse que [o pai d[o Pedro]$_j$]$_k$ acha que $\varnothing_{k/*i/*j/*l}$ vai ser promovido]

    the João said that the father of-the P.   thinks that   goes be promoted

    'João$_i$ said that [Pedro$_j$'s father]$_k$ thinks that he$_{k/*i/*j/l}$ is going to be promoted'

Ferreira (2000, 2004, 2009) and Rodrigues (2002, 2004) account for the restricted interpretation of embedded referential null subjects in BP in terms of Hornstein's (2001) analysis of obligatory control. Technical differences aside, Ferreira and Rodrigues assume that with the substantial weakening of its verbal morphology (see e.g Duarte 1995), BP is no longer able to license a *"referential"*[2] *pro* in subject position.[3] They

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[2] The qualification is necessary, for BP still allows null expletives, as well as null "arbitrary" third person subjects – both plural and singular (see e.g. Galves 1987/2001 and Nunes 1990) –, as respectively illustrated in (i) and (ii) below. It is beyond the scope of this paper to determine the nature of "arbitrary" null subjects in BP (see Rodrigues 2004 for relevant discussion), which are orthogonal to the issues to be

propose that what appears to be a null pronoun in constructions such as (2) is actually a

trace (a deleted copy) left by movement to a θ-position. In the case of (2), the null subject

discussed below. As for expletive constructions, we make the standard assumption that they involve an

expletive *pro* in [Spec,TP] (see fn. 12 below for further details).

(i) a. Tinha vários livros na mesa.

    had several books on-the table

    'There were several books on the table.'

  b. Choveu ontem.

    rained yesterday

    'It rained yesterday.'

(ii) a. Telefonaram para você.

    called-3PL to you

    'Someone called you.'

  b. No Brasil não usa mais saia.

    in-the Brazil not use-3SG more skirt

    'In Brazil people don't use skirts anymore.'

[3] The lack of licensing for "referential" *pro* also holds of null resumptives, explaining why null subjects in

BP are not licensed in strong islands that cannot be subject to an obligatory control analysis, as shown in (i)

with a relative clause (see Ferreira 2000, 2004, 2009 and Rodrigues 2002, 2004 for relevant discussion).

(i) Este é o autor que eu li o livro que *(ele) escreveu.

  this is the author that I read the book that he wrote

  'This is the author that I read the book that he wrote.'

is the trace left by *o pai do Pedro* 'John's father' when it moves to the [Spec,vP] of the next higher clause. Once movement is invoked, the relevance of c-command and minimality then becomes straightforward.

In this paper we assume Ferreira's and Rodrigues's general account of embedded referential null subjects in BP in terms of movement, focusing our discussion on "hyper-raising" constructions (impersonal constructions involving A-movement out of finite clauses; see Ura 1994) such as (3a) below. More specifically, we will investigate how sentences such as (3b) (see Duarte 2003, 2004 and Martins and Nunes 2005), which apparently involve hyper-raising associated with a resumptive pronoun, are to be derived in Chomsky's (2000, 2001, 2004, 2008) phase-based system.

(3) a. Os meninos **parecem** que **viajaram** ontem.

   the boys   **seem-3PL** that **traveled-3PL** yesterday

   b. Os meninos **parecem** que **eles viajaram** ontem.

   the boys   **seem-3PL** that **they traveled-3PL** yesterday

   'The boys seem to have traveled yesterday.'

The paper is organized as follows. In section 2, we review some arguments for an analysis of constructions such as (3a) in terms of hyper-raising and discuss how they can be derived in a phase-based system. In section 3, we discuss the mixed properties displayed by constructions such as (3b), whose matrix DP exhibits diagnostics for both topics and subjects. Section 4 shows that this complex behavior is related to the fact that topics may independently enter into an agreement relation with T in BP. This in turn

brings the question of what allows a matrix T to enter into a probe-goal relation with an embedded topic and we offer a solution in terms of Chomsky's (2001) Phase Impenetrability Condition. Section 5 concludes the paper.

2. Hyper-raising in Brazilian Portuguese and Phase-Based Computations

Ferreira (2000, 2004, 2009) presents two types of evidence to show that constructions such as (3a) in BP really involve moved subjects, rather than base-generated topics. First, the DP in question triggers agreement with the matrix predicate, as shown in (4) below. And second, elements that cannot be topicalized in BP such as the quantifier *alguém* 'someone' can appear in hyper-raising constructions, as shown in (5). Another example of the second type was provided by Martins and Nunes (2005), who point out that idiom chunks cannot be topicalized, but can be hyper-raised, as shown in (6).

(4) a. Eles **parecem** que **compraram** um carro novo.

   they **seem-3PL** that **bought-3PL** a car new

   'They seem to have bought a new car.'

 b. Eu **pareço** que **'tou** doente.

   I **seem-1SG** that **be-1SG** sick

   'I seem to be sick.'

(5) a. *Alguém, o   João me disse que está doente.

    someone the João me said   that is   sick

    'João told me that someone was sick.'

  b. Alguém parece que está doente.

    someone seems that is   sick

    'Someone seems to be sick.'

(6) a. A vaca foi   pro   brejo.

    the cow went to-the swamp

    Idiomatic reading: 'Things went bad.'

    Literal reading: 'The cow went to the swamp.'

  b. A vaca, o   João disse que foi   pro   brejo.

    the cow   the João said that went to-the swamp

    Idiomatic reading ('John said that things went bad.'): *

    Literal reading ('John said that the cow went to the swamp.'): OK

  c. A vaca parece que foi   pro   brejo.

    the cow seems that went to-the swamp

    Idiomatic reading ('It seems that things went bad.'): OK

    Literal reading ('It seems that the cow went to the swamp.'): OK

Assuming the Agree-based system developed in Chomsky (2000, 2001), Ferreira (2000, 2004, 2009) accounts for data such as (4)-(6) by proposing that finite Ts in BP are

ambiguous in being associated with either a complete or an incomplete set of ϕ-features.[4]

Under the view that structural Case assignment/valuation is a reflex of an agreement relation involving a probe with a complete ϕ-set (Chomsky 2000, 2001, 2004, 2008), Ferreira's proposal amounts to saying that finite T in BP is ambiguous between a Case-assigning and a non-Case-assigning head. If the Case-assigning version of T is selected, it assigns nominative to the subject DP, freezing it for further A-movement. This is exemplified in (7a) below, with *o João* being Case-marked in the embedded clause, yielding a standard impersonal construction. If the non-Case-assigning version of T is selected instead, the subject DP must then be Case-licensed by a higher probe with a complete ϕ-set. Ferreira argues that this is what goes on in the derivation of the

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[4] Ferreira (2000, 2004, 2009) correlates the weakening of verbal morphology in BP (Duarte 1995) with the emergence of the innovative ϕ-incomplete finite T, seeing the former as the trigger/diachronic source for the later. Martins and Nunes (2009) propose instead that ϕ-incomplete T came into being in BP as a by-product of the loss of the Romance-type *pro*-drop property through the process of language acquisition. Assuming with Dresher (1999) and Lightfoot (1999) that children are conservative incremental learners who do not reset parameters and delay decisions until they have come across unambiguous triggers/cues for parametric setting, Martins and Nunes suggest that the Romance-type *pro*-drop parameter is set at a stage when learners are exclusively dealing with unembedded structures. If so, once the negative value was assumed for the Romance-type pro-drop parameter by some children at some point of BP history, these innovative learners exposed to input sentences with embedded referential null subjects could only parse them as traces of A-movement (given UG constraints), hence incorporating hyper-raising in their grammars.

corresponding hyper-raising construction in (7b), with *o João* moving from the embedded

to the matrix [Spec,TP] and being licensed by the ϕ-complete matrix T.[5]

(7) a. Parece que o   João comprou um carro novo.

      seems that the João bought   a   car   new

      'It seems that João bought a new car.'

   b. O João parece que comprou um carro novo.

      the João seems that bought   a car   new

      'João seems to have bought a new car.'

Nunes (2007) implements Ferreira's proposal regarding the ambiguity of finite T in

BP with respect to ϕ-completeness in terms of the presence or absence of the feature

[person]. He observes that the verbal agreement paradigm of BP can be characterized as

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[5] A reviewer notes that ϕ-incomplete finite Ts are available in embedded clauses but barred from matrix clauses and asks whether this is a stipulation within the system. Nothing in fact needs to be stipulated to ensure this result. The asymmetry between matrix and embedded clauses is trivially derived from UG principles (see Ferreira 2000, 2004, 2009 for discussion). Although both ϕ-complete and ϕ-incomplete finite Ts are legitimate options for any given numeration, UG principles determine whether or not the choice and the structural locus of a ϕ-incomplete finite T give rise to a convergent derivation. If the matrix clause is associated with a ϕ-incomplete finite T, there is no source of Case assignment for the matrix subject and the derivation simply crashes. In other words, a ϕ-incomplete finite T will only yield a convergent derivation if it sits within an embedded clause, being no different from other types of ϕ-incomplete Ts, such as the infinitival T of standard raising constructions or the infinitival T of obligatory control constructions under a movement analysis.

simultaneously encoding person and number specifications only for first person singular. All the other cases involve either number specification with default value for person (third) or default values for both person and number (third singular), as sketched in (8).

(8) *Verbal agreement paradigm in (Colloquial) Brazilian Portuguese*

        cantar 'to sing': indicative present

eu 'I'	cant<u>o</u>	**P:1**; **N:SG**
você 'you (SG)'	canta	P:default; N:default (= 3SG)
ele 'he'	canta	P:default; N:default (= 3SG)
ela 'she'	canta	P:default; N:default (= 3SG)
a gente 'we'	canta	P:default; N:default (= 3SG)
vocês 'you (PL)'	canta<u>m</u>	P:default; **N:PL** (= 3PL)
eles 'they (MASC)'	canta<u>m</u>	P:default; **N:PL** (= 3PL)
elas 'they (FEM)'	canta<u>m</u>	P:default; **N:PL** (= 3PL)

Nunes proposes that ϕ-complete and ϕ-incomplete finite Ts in Ferreira's terms correspond to Ts specified with number and person features or a number feature only. In case a T with just a number feature is selected, the corresponding person specification will be added in the morphological component by redundancy rules. That is, if T has only a number feature and it is valued as singular in the syntactic component, it will later be associated with first person in the morphological component; if the number feature receives any other value in the syntactic component (default or plural), it will later be associated with a default value for person (third) in the morphological component.

Under this view, (7a) and (7b) are derived along the lines of (9).

(9) a. [$_{TP}$ *pro*$_{expl}$ T$_{[N:default;\ P:default]}$ parece que [$_{TP}$ [o João]$_{[Case:NOM]}$ T$_{[N:default;\ P:default]}$ ...]]

                                   seem   that   the João

   b. [$_{TP}$ [o João]$_{[Case:NOM]}$ T$_{[N:default;\ P:default]}$ parece que [$_{TP}$ *t* T$_{[N:default]}$ ...]]

       the João   seem   that

In (9a), both Ts have number and person features, that is, they are Case assigners. Thus, *o João* has its Case valued in the embedded clause and becomes inactive for further A-movement. By contrast, in (9b) the embedded T has only a number feature and, as such, it is unable to value the Case feature of *o João*. Therefore, the embedded subject is still active for purposes of agreement and A-movement and may be Case-licensed by the matrix T, which has both number and person features, yielding a hyper-raising construction. Observe that both Ts in (9b) later display third person singular morphology (cf. (7b)). The ambiguity involves the source of the person feature: whether it is part of the numeration and feeds the syntactic component, as is the case with the matrix T, or whether it is added in the morphological component by redundancy rules, as is the case with the embedded T.[6]

To summarize, the paradigm in (4)-(6) shows that BP exercises an option that is generally restricted to non-finite clauses in other languages, namely, it allows raising out of a finite embedded clause when its T is not a Case assigner (i.e. when it only has a

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[6] For further discussion, see Nunes (2009:87-91), who observes that this ambiguity of finite Ts in BP mimics the ambiguity found in certain forms of inflected and uninflected infinitivals in Portuguese.

number feature as it enters the numeration). If such movement targets a θ-position, we have a control-like structure as in (2); if it targets a nonthematic position, we get a hyper-raising construction as in (3a)/(4)/(5b)/(6c)/(7b).

The derivation of hyper-raising constructions in BP along the lines of (9b) raises the question of whether it is compatible with Chomsky's (2000, 2001, 2004, 2008) phase-based model. If CP is a strong phase and the embedded subject is not at the edge of CP, as represented in (10) (English words used for convenience), how can the matrix T agree with it?

(10) $[_{TP} T_{\phi complete} [_{VP}$ seem $[_{CP}$ that $[_{TP} DP T_{\phi incomplete} ...]]]]$

As suggested by Ferreira (2000:55), one may assume that if C selects a ϕ-incomplete T, it should not define a strong phase. If so, a probe-goal relation between the matrix T and the embedded subject in hyper-raising configurations such as (10) can be successfully established and movement from the embedded [Spec, TP] to the matrix [Spec, vP] in control-like configurations (cf. (2)) can also be appropriately licensed. This suggestion becomes even more plausible if one adopts Chomsky's (2008) proposal that ϕ-features are associated with C (and only indirectly with T). However, we will see in the following sections that this approach cannot be extended to superficially similar constructions such as (3b), repeated below in (11), which appear to involve hyper-raising and resumption.

(11) Os meninos **parecem** que **eles viajaram** ontem.

   the boys **seem-3PL** that **they traveled-3PL** yesterday

   'The boys seem to have traveled yesterday.'

3. Apparent Hyper-raising with Resumption in BP: The Puzzle

Given the general picture outlined in section 2, let us now consider in more detail colloquial BP sentences such as (12), with a "double subject" (see Duarte 2003, 2004 and Martins and Nunes 2005).

(12) a. O João parece que ele está doente.

    the João seems that he is sick

    'João seems to be sick.'

  b. Os meus pais parecem que eles vão viajar.

    the my parents seem that they go travel

    'It seems that my parents are going to travel.'

Constructions such as (12) present the following paradox. On the one hand, they differ from hyper-raising constructions in the sense that their matrix DP behaves like a

topic. Hence, they are systematically incompatible with idiom chunks, quantified expressions, and clefting, as respectively shown in (13)-(15).[7]

(13)　　A　vaca parece que (*ela) foi　pro　　brejo.

　　　　the cow seems　that　it　went to-the swamp

　　　　Idiomatic reading: 'It seems that things went bad.'

(14)　　Algum aluno　parecia que (*ele) ia　viajar.

　　　　some　　student seemed that　he　went travel

　　　　'It seemed that some student was going to travel'

(15)　　Eram　aqueles alunos　que　pareciam　que (*eles) iam　viajar

　　　　were　those　　students that seemed-3PL that　they went travel

　　　　'It was those students who seemed to be traveling.'

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[7] In this regard, these double subject constructions also differ from English "copy-raising" constructions such as (i) below, in that the latter is compatible with idiom chunks, quantified elements, and clefting, as illustrated in (ii). For a recent overview of the properties of copy raising constructions and an analysis in terms of movement and resumption, see Fujii 2007.

(i)　John seemed as if he was sick.

(ii)　a.　The cat looks like it's been let out of the bag.　(from Rogers 1971)

　　　b.　Someone seemed as if he was tired.

　　　c.　It was John who seemed as if he was tired.

On the other hand, the matrix DP in constructions such as (12) behaves like standard subjects and unlike topics in inducing Principle C effects with respect to epithets, as shown in (16), where the agreement on the matrix verb or lack thereof indicates whether we are dealing with an impersonal construction with a base-generated topic (cf. (16a)) or with a double subject construction (cf. (16b)).

(16) a. [esses senadores]$_i$ **parece** que [os idiotas]$_i$ vão ser reeleitos

           these senators **seem-3SG** that the idiots go be re-elected

     b. *[esses senadores]$_i$ **parecem** que [os idiotas]$_i$ vão ser reeleitos

           these senators **seem-3PL** that the idiots go be re-elected

     'As for these senators, it seems that the idiots will be reelected.'

The challenge before us is to account in a principled manner for this conflicting behavior of "double subject" constructions, with data such as (13)-(15) favoring an analysis of the matrix DP as a base-generated topic and data such as (16) pointing to the opposite direction.[8] At first sight, the answer seems to be rather trivial: constructions such as (12) would involve hyper-raising associated with resumption (understood either as pronunciation of the lower copy of the moved DP as a pronoun or as base-generation of a subject doubling structure, [DP pro], in the embedded clause) and different factors would exclude the resumptive pronoun in (13)-(15). For instance, one could assume that idiom

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[8] For a suggestion that these data could be analyzed in terms of movement of formal features in the sense of Chomsky 1995, see Martins and Nunes 2005.

chunks cannot be resumed by pronouns because they are not true R-expressions (hence the unacceptability of (13)) and that the ungrammaticality induced by the pronouns in (14) and (15) should be due to Montalbetti's (1984) Overt Pronoun Constraint, banning overt pronouns from being locally bound by quantified expressions.

This approach does not resist close scrutiny, though. First, sentences such as (17) in English (see fn. 7) show that the problem with (13) is not related to resumption *per se*.

(17)   The cat looks like it's been out of the bag.   (from Rogers 1971)

The acceptability of copy-raising constructions such as (17), where the pronoun resumes the idiom chunk in the matrix subject position, indicates that the explanation for the unacceptability of (13) should rather be subsumed under the explanation for the unacceptability of (6b), repeated below in (18), namely, that idiom chunks cannot be topicalized.

(18)   A   vaca, o   João disse que foi   pro   brejo.

the cow   the João said that went to-the swamp

Idiomatic reading ('John said that things went bad.'): *

Literal reading ('John said that the cow went to the swamp.'): OK

Second, as argued by Ferreira (2000, 2004, 2009), once Montalbetti's Constraint rests on the competition between *pro* and overt pronouns, it is vacuously satisfied in BP, because "referential" *pro* is no longer licensed in this language. Sentences analogous to

(14) and (15) with an overt pronoun locally bound by a quantified/clefted expression are indeed fully grammatical in BP, as illustrated in (19) and (20) below. Thus, the ungrammaticality of (14) and (15) cannot be ascribed to Montalbetti's Constraint.

(19)   [algum aluno]$_j$ me disse que ele$_j$ ia   viajar

        some   student me said   that he went travel

        'Some student told me that he was going to travel'

(20)   Foram [aqueles alunos]$_j$ que disseram que eles$_j$ iam   viajar

        were   those   students that said   that they went travel

        'It was those students who said that they were going to travel.'

On the theoretical side, apparent hyper-raising constructions such as (12) also raise the question of why the matrix DP triggers agreement with the matrix verb, as illustrated in (21) below, despite the fact that the matrix T cannot probe into its Spec, as it is outside its c-command domain. (21) further shows that the matrix DP and the associated pronoun need not be in a local relation.

(21)   Esses professores **parecem** que a   Maria gosta deles.

        these teachers   **seem-3PL** that the Maria likes of-them

        'It seems that Maria likes these teachers.'

We pursue an alternative approach in the next section.

4. Topics and Long-distance Agreement in Brazilian Portuguese

4.1. Topics and Hyper-raising in Brazilian Portuguese

We propose that the apparent paradox reviewed in section 3 is related to another salient property of BP grammar, namely, the pervasive use of subject-like topics, yielding "double subject" constructions, as illustrated in (22) below for matrix clauses and (23) for embedded clauses.[9]

(22)   a. Essa bolsa, as coisas somem   aqui dentro.   (Pontes 1987)

this   purse the things disappear here inside

'Things disappear inside this purse.'

b. O carro, o pneu furou

the car the tire got-flat

'The car has a flat tire.'

(23)   a. Eu acho que o carro, o pneu furou.

I   think that the car the tire got-flat

'I think that the car has a flat tire.'

_____

[9] See the seminal work of Pontes (1987), and Kato (1989, 1998, 1999, 2000), Britto (1997, 2000), Galves (1998, 2001), and Negrão (1999), among others, for discussion.

b. O João disse que esse autor, os   livros não são bons.

the João said that this author the books not are good

'João said that the books by this author are not good.'

That topics in BP may behave like regular subjects is independently shown by the fact that if there is no element in subject position, a topicalized locative or possessor may occupy this position and trigger verbal agreement, as illustrated in (24) and (25) (see references in fn. 9).

(24)   a. **Cabe**   muita coisa nessas gavetas.

          fit-3SG many thing in-these drawers

        b. Essas gavetas **cabem** muita coisa.

          these drawers **fit-3PL** many thing

          'Many things can fit in these drawers.'

(25)   a. **Amarelou**   as folhas daquelas plantas.

          turned-yellow-3SG the leaves of-those plants

        b. Aquelas plantas **amarelaram**   as   folhas.

          those   plants   **turned-yellow-3PL** the leaves

          'The leaves of those plants have turned yellow.'

Interestingly, the topic-subject in sentences such as (24b) and (25b) can also undergo hyper-raising, as illustrated in (26).

(26)   a. Essas gavetas parecem   que cabem muita coisa.

these drawers **seem-3PL** that **fit-3PL** many thing

'It seems that many things can fit in these drawers.'

b. Aquelas plantas parecem   que   amarelaram   as folhas.

those   plants   **seem-3PL that turned-yellow-3PL** the leaves

'The leaves of those plants seem to have turned yellow.'

Given the analysis we assumed in section 2, sentences such as (26) can be derived along the lines of (27) (with English words for convenience).
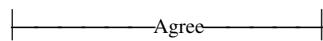
(27)   a. [$_{TP}$ T$_{[N:u]}$ [$_{vP}$ … DP$_{[+topic;\ 3PL;\ Case:u]}$ …]]
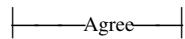
├──────Agree──────┤

b. [$_{TP}$ DP$_{[+topic;\ 3PL;\ Case:u]}$ [T$_{[N:PL]}$ [$_{vP}$ … t]]]

c. [$_{TopP}$ DP$_{[+topic;\ 3PL;\ Case:u]}$ [$_{TP}$ t [T$_{[N:PL]}$ [$_{vP}$ … t]]]]

d. [$_{TP}$ T$_{[N:u;\ P:u]}$ seem that [$_{TopP}$ DP$_{[+topic;\ 3PL;\ Case:u]}$ [$_{TP}$ t [T$_{[N:PL]}$ [$_{vP}$ … t]]]]]

├──────────Agree──────────┤

e. [$_{TP}$ DP$_{[+topic;\ 3PL;\ Case:NOM]}$ [$_{TP}$ T$_{[N:PL;\ P:default]}$ seem that [$_{TopP}$ t [$_{TP}$ t …]]]]

In (27a), T enters into an agreement relation with the topic DP and attracts it to its Spec to check the EPP. Since T has only a number feature, the DP still has its Case unvalued and can therefore enter into additional agreement relations, after moving to [Spec, TopP] in (27c). That happens when the matrix T is introduced in the step represented in (27d).

Given that the matrix T is φ-complete, it then values the Case-feature of the moved topic, as shown in (27e), and the derivation converges.

   Hyper-raising of an embedded topic may also apply to "double subject" constructions such as (22), the only difference being that the embedded topic is base-generated in this case. Take the sentence in (28), for instance, and let us consider the derivational step sketched in (29).

(28)   Aqueles carros parecem que o   pneu furou

          those   cars   seem   that the tire got-flat

          'Those cars seem to have a flat tire.'

(29)   [$_{TopP}$ DP$_{[+topic; 3PL; Case:u]}$ [$_{Top'}$ Top [$_{TP}$ DP$_{[Case:NOM]}$ [$_{T'}$ T$_{[N:default; P:default]}$ $\cdots$]]

In (29), the "inner" subject in [Spec,TP] has its Case-feature valued as nominative and the "outer" subject in [Spec,TopP] remains with its feature unvalued. If this is a matrix clause, the topic DP surfaces with default Case,[10] yielding standard "double subject" constructions such as (22). If (29) is embedded under a raising verb, but the numeration has a null expletive, the topic DP will again surface with default Case, yielding an impersonal construction with a "double subject" in the embedded clause as in (30a), represented in (30b) (with English words).

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[10] Cf. Schütze 2001 and Legate 2008 on default Case.

(30)   a. Parece que aqueles carros o   pneu furou

            seems that those   cars   the tire got-flat

            'It seems that those cars have a flat tire.'

         b. [$_{TP}$ *pro*$_{expl}$ seems that [$_{TopP}$ [those cars] [$_{TP}$ [the tire] got-flat]]]

However, if there is no null expletive in the numeration, the matrix T can agree with the embedded topic and attract it to its Spec to check the EPP, as illustrated in (31), yielding (28).

(31)   a. [$_{TP}$ T$_{[N:u; P:u]}$ seem that [$_{TopP}$ DP$_{[+topic; 3PL; Case:u]}$ [$_{TP}$ DP$_{Case:NOM}$ …]]]

            |⎯⎯⎯⎯⎯Agree⎯⎯⎯⎯⎯|

         b. [$_{TP}$ DP$_{[+topic; 3PL; Case:NOM]}$ T$_{[N:PL; P:default]}$ seem that [$_{TopP}$ *t* [$_{TP}$ DP$_{Case:NOM}$ …]]]

According to this proposal, the derivation of (3b), repeated below in (32), proceeds along the lines of (29)/(31), with the only difference with the derivation of (28) being that in (32) the "inner" subject is a pronoun associated with the topic. Crucially, the agreement between the matrix DP and the matrix T in (28) and (32) receives a standard account in terms of probe-goal configurations. At the derivational step where T agrees with the matrix DP, the latter sits in the [Spec, TopP] of the embedded clause (cf. (31a)) and is therefore in the c-command domain of the matrix T.

(32)   Os meninos parecem que eles viajaram   ontem.

the boys   seem-3PL that they traveled-3PL yesterday

'The boys seem to have traveled yesterday.'

Finally, the fact that the embedded pronoun associated with the matrix DP need not be local, as illustrated in (21), repeated below in (33), is just a reflex of the fact that in "double subject" constructions, the topic may be associated with a pronoun in any syntactic position, as exemplified in (34).[11]

(33)   Esses professores parecem que a   Maria gosta deles.

these teachers   seem-3PL that the Maria likes of-them

'It seems that Maria likes these teachers.'

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[11] The topic may also be associated with a null (resumptive) pronoun, as illustrated in the impersonal constructions in (ia), with an embedded topic associated with a null object pronoun inside a relative clause, and its apparent hyper-raising counterpart in (ib).

(i)   a. [$_{TP}$ *pro*$_{expl}$ parece [que [$_{TopP}$ [esses carros], [$_{TP}$ as   pessoas que compraram *pro*$_i$ se arrependeram]]]]

seem-3SG that   these cars   the people who bought   REFL repented

b. [$_{TP}$ [esses carros]$_i$ **parecem** [que [$_{TopP}$ t_i [$_{TP}$ as pessoas que compraram *pro*$_i$ se   arrependeram]]]]

these cars   **seem-3PL** that   the people who bought   REFL repented

'It seems that people who bought these cars regretted it.'

(34)   a. Esse problema, ele é muito difícil.

         this problem   it   is very hard

         'This problem is very hard.'

    b. Esse professor, eu vi   ele   no   cinema ontem.

       this teacher   I   saw him at-the cinema yesterday

       'I saw this teacher at the movie theater yesterday.'

    c. Esse professor, eu gosto muito dele

       this   teacher   I   like   much of-him

       'I like this teacher very much.'

4.2. Explaining the Mixed Properties of Apparent Hyper-raising Constructions

We now have all the ingredients to account for the mixed properties of the matrix DP of apparent hyper-raising constructions. Given that the matrix DP of these constructions is base-generated in [Spec, TopP] in the embedded clause, it should be semantically incompatible with idioms chunks, quantified expressions, and clefted elements; hence the unacceptability of the apparent hyper-raising version of the sentences in (13)-(15), repeated here as (35)-(37).

(35)   *A   vaca parece que ela foi   pro   brejo.

          the cow seems that it   went to-the swamp

         Idiomatic reading: 'It seems that things went bad.'

(36)   *Algum aluno   parecia que ele ia   viajar.

      some   student seemed that he went travel

      'It seemed that some student was going to travel'

(37)   *Eram aqueles alunos   que pareciam   que eles iam viajar.

      were   those   students that seemed-3PL that they went travel

      'It was those students who seemed to be traveling.'

On the other hand, the observed Principle C effect in sentences such as (38a) below arises because the landing site of the moved topic is an A-position (the specifier of the matrix TP). In turn, the counterpart without agreement in (39a) can be derived along the lines of (39b): an embedded ϕ-complete T licenses the embedded subject, a null expletive agrees with the matrix T and checks its EPP feature,[12] and *esses senadores* 'these senators' is base-generated in the matrix [Spec,TopP]. Given that in (39b) the epithet in the embedded subject position is not A-bound, Principle C is satisfied.[13]

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[12] Following Chomsky (2004:114), we assume that as a head, the expletive in (30) can probe its c-command domain and enter into an agreement relation with the T head, valuing T's ϕ-features (with default values) and having its own Case-feature valued as nominative.

[13] As shown in (39b), a null expletive can be an "inner" subject and this is not restricted to matrix clauses, as illustrated in (ia) below. We assume with Chomsky (2000) that the insertion of an expletive in a matrix or embedded clause depends on which subarray of the numeration the expletive belongs to. The apparent hyper-raising counterpart of (ia) given in (ib), for example, is derived if the matrix subarray has no expletive (cf. (26a)/(27)).

(38)   a.   *[esses senadores]$_i$ **parecem** que [os idiotas]$_i$ vão ser reeleitos

        these senators   **seem-3PL** that the idiots   go be re-elected

        'As for these senators, it seems that the idiots will be reelected.'

   b.   [$_{TP}$ [esses senadores]$_i$ T$_{\phi complete}$ parecem [$_{CP}$ que [$_{TopP}$ t_i

       [$_{TP}$ [os idiotas]$_i$ T$_{\phi complete}$ [$_{vP}$ vão ser releitos t]]]]]]

(39)   a.   [esses senadores]$_i$ **parece**   que [os idiotas]$_i$ vão ser reeleitos

        these senators   **seem-3SG** that the idiots   go be re-elected

        'As for these senators, it seems that the idiots will be reelected.'

   b.   [$_{TopP}$ [esses senadores]$_i$ [$_{TP}$ *pro*$_{expl}$ T$_{\phi complete}$ [$_{VP}$ parece [$_{CP}$ que

       [$_{TP}$ [os idiotas]$_i$ T$_{\phi complete}$ [$_{vP}$ vão ser releitos t]]]]]]

4.3. Apparent Hyper-raising and the Phase Impenetrability Condition

As seen in section 4.1, apparent hyper-raising constructions in BP result from the fact that in BP topics may independently agree with T, triggering verbal agreement, and check the EPP. The common feature with a true hyper-raising construction is that the matrix T probes into an embedded finite clause. The fundamental difference lies on the nature of

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(i)   a. [$_{TP}$ *pro*$_{expl}$ parece   [que [$_{TopP}$ [essas gavetas]$_i$ [$_{TP}$ *pro*$_{expl}$ cabe   muita coisa nelas$_i$]]]]

                seem-3SG that   these drawers   fit-3SG many thing in-them

   b. [$_{TP}$ [essas gavetas]$_i$ **parecem** [que [$_{TopP}$ t_i [$_{TP}$ *pro*$_{expl}$ cabe   muita coisa nelas$_i$]]]]

        these drawers **seem-3PL**   that   fit-3SG many thing in-them

     'It seems that many things can fit in these drawers.'

the embedded T. In true hyper-raising, the embedded T is ϕ-incomplete, its subject is still active for agreement purposes, and the embedded CP is not a strong phase as its head selects a ϕ-incomplete T (see section 2). By contrast, the embedded T of apparent hyper-raising constructions is ϕ-complete and its subject is, accordingly, inactive; however, the "outer" subject in [Spec,TopP] can enter into an agreement relation with a higher T. The question then is how the matrix T can agree with the embedded topic across a strong phase in the abstract configuration in (40) (Recall that if C selects a ϕ-complete T, it defines a strong phase; see section 2).

(40) $[_{TP} \ T_{\phi complete} \ \text{seem} \ [_{CP} \ \text{that} \ [_{TopP} \ DP \ [_{TP} \ DP \ T_{\phi complete} \ \dots \ ]]]]$

We would like to propose, extending a proposal by Fujii (2007), that such a probe-goal relation is indeed allowed under the definition of the Phase Impenetrability Condition explored in Chomsky (2001).[14] According to this definition (see fn. 14), Spell-Out is required to apply to the complement of the head of the CP phase only when the next strong phase head is introduced in the derivation. Given that neither TP nor the VP/vP associated with raising verbs qualify as strong phases, Spell-Out need not apply to the embedded TP in (40) before the matrix C (the next strong phase head) is added to the

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[14] Chomsky's (2001:14) Phase Impenetrability Condition:

(i)   The domain of H [the head of the strong phase HP; AMM & JN] is not accessible at ZP [the smallest strong phase dominating HP; AMM & JN]; only H and its edge are accessible to such operations.

derivation; hence, the embedded topic is still available for agreement with the matrix T at the stage depicted in (40).[15]

4.4. Some Consequences

Given that we are assuming that the common feature between true and apparent hyper-raising constructions is that the matrix T may probe into the domain of the embedded C (in compliance with Chomsky's (2001) version of the Phase Impenetrability Condition), our analysis predicts that if such probing is blocked for some reason, both types of

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[15] A reviewer asks if apparent hyper-raising constructions may also involve typical obligatory control predicates. (i) shows that this is not possible, arguably because the "inner" subject cannot have its Case licensed.

(i) *[[o   João]$_i$ T$_{\phi complete}$ [$_{vP}$ t_i v [$_{VP}$ tentou [$_{CP}$ C [$_{TopP}$ t_i [$_{TP}$ ele$_{[Case:u]}$ T$_{\phi incomplete}$ resolver o   problema]]]]]]

the João   tried   he   solve   the problem

'João tried to solve the problem'

For the sake of completeness, it should be pointed out that constructions such as (ii), which are superficially similar to apparent hyper-raising constructions, must be subject to a different analysis as they are acceptable only under a contrastive focus reading, which is absent in apparent hyper-raising constructions. Moreover, constructions such as (ii) under the focused reading are also acceptable in European Portuguese, which does not admit apparent hyper-raising constructions.

(ii) O   João tentou ele resolver o   problema.

the João tried   he solve   the problem

'João tried to solve the problem by himself.'

constructions should be ill formed. That this prediction is correct is illustrated by (41) and (42).

(41)   a. *Os meninos foram ditos   que fizeram a   tarefa.

         the boys   were said-MASC-PL that did   the homework

          'It was said that the boys did the homework.'

      b. [$_{TP}$ ▲ T$_{\phi complete}$ were said [$_{CP}$ that [$_{TP}$ DP$_{[Case:u]}$ T$_{\phi incomplete}$ ...]]]
          |———————————*———————————|

(42)   a. *Os meninos foram ditos   que eles fizeram a   tarefa.

         the boys   were said-MASC-PL that they did   the homework

          'It was said that the boys did the homework.'

      b. [$_{TP}$ ▲ T$_{\phi complete}$ were said [$_{CP}$ that [$_{TopP}$ DP$_{[Case:u]}$ [$_{TP}$ DP$_{[Case:NOM]}$ T$_{\phi complete}$ ...]]]]
          |———————————*———————————|

(41a) shows that passives do not allow true hyper-raising. Unsurprisingly, apparent hyper-raising is excluded as well, as seen in (42a).[16]

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[16] An interesting question that arises is why (41a) does not pattern like the acceptable hyper-raising construction (i) below.

Another type of confirming evidence, this time involving A'-relations, is illustrated by the contrast between the true and the apparent hyper-raising constructions in (43).

(i) Os   meninos parecem   que fizeram a   tarefa.

the boys   seem-3-PL that did   the homework

'It seems that the boys did the homework.'

Nunes (2009) proposes that if we assume with Chomsky (2008) that clausal ϕ-features are actually held by C, any probe-goal relation targeting the ϕ-features of an embedded subject should induce an A-over-A violation, as C determines the label of CP. This reasoning bars not only A-movement of the embedded subject in (41a) and the embedded topic in (42a), but also improper movement ([Spec,TP] to [Spec, CP] to [Spec, TP]) out of infinitival CPs in languages like English (an issue that was brought up by a reviewer). As for constructions such as (i), Nunes proposes that predicates that license hyper-raising assign inherent Case to their complement CP, rendering it inert for purposes of A-relations. Thus, if the CP in (i) is inert for A-purposes, the subject can undergo A-movement (if its Case is still unvalued) without inducing an A-over-A violation. Notice that the embedded clause of (41) can move to the matrix [Spec,TP], but the embedded clause of (i) cannot, as shown in (ii) below. For further evidence and discussion, see Nunes (2009).

(ii) a. [que os meninos fizeram a   tarefa]$_i$ foi dito t_i (por todos)

that the boys   did   the homework   was said   by all

'That the boys did homework was said (by everyone)'

b. *[que os meninos fizeram a   tarefa]$_i$ parece t_i

that the boys   did   the homework   seems

'It seems that the boys did the homework.'

(43)　　a.　Que　livro　os　meninos **parecem** que leram?

　　　　　　which book the boys　　**seem-3PL** that read-3PL

　　　　b.　*Que　livro os　meninos **parecem**　que **eles** leram?

　　　　　　which book the boys　　**seem-3PL** that **they** read-3PL

　　　　　'Which book does it seem that the boys read?

As discussed above, in a true hyper-raising construction the matrix DP moves from the embedded to the matrix [Spec, TP], but in an apparent hyper-raising construction the matrix DP moves from the embedded [Spec, TopP] to the matrix [Spec, TP]. Hence, movement of the *wh*-phrase in (43a) proceeds without any bumps, whereas its movement in (43b) crosses the trace left in [Spec, TopP], yielding a minimality violation equivalent to the one we find in "double subject" constructions involving a single clause, as illustrated in (44). Thus, the contrast between (43a) and (43b) provides additional evidence for our proposal that in apparent hyper-raising constructions, the matrix DP is generated in a topic position.

(44)　　*Que　livro os　meninos eles leram?

　　　　　which book the boys　　they read-3PL

　　　　　'Which book did the boys read?'

　　Let us finally consider the data in (45) and (46) below.

(45)   a. *Cê,   o   João me disse que 'tá doente.

        you$_{weak}$ the João me said   that   is sick

        'João told me that you are sick.'

     b. Cê   parece   que 'tá doente.

       you$_{weak}$ seem-3SG that is sick

       'You seem to be sick.'

(46)   Cê   parece   que cê   'tá doente.

     you$_{weak}$ seem-3SG that you$_{weak}$ is sick

     'You seem to be sick.'

Ferreira (2000, 2004, 2009) used the contrast in (45), with the weak pronoun *cê* (see Petersen 2008), as evidence that the matrix DP in (45b) is not a topic, but rather a hyper-raised subject, for *cê* cannot be topicalized, as shown in (45a). This being so, the well-formed hyper-raising construction with *cê* in (46) (see Martins and Nunes 2005:fn.20) seems to pose a problem for our analysis, for the matrix *cê* should have moved from an embedded topic position (the "outer" subject position). In other words, how is the apparent hyper-raising construction in (46) well formed, given that its impersonal counterpart in (47) is not?

(47)   *Parece   que cê,   cê   'tá doente.

      seem-3SG that you$_{weak}$ you$_{weak}$ is sick

     'It seems that you are sick.'

Ferreira's argument and our account of apparent hyper-raising constructions need not be contradictory, though. We would like to propose that *cê* cannot occupy a topic position not because it is incompatible with a topic feature, but because it is subject to placement restrictions due to its nature as a weak pronoun (see Cardinalleti and Starke 1999). Notice that if an appropriate host such as the complementizer-like head *que* in (48) is provided, *cê* can indeed surface in an A'-position.[17]

(48)   a. Cê   que fez isso?

    you$_{weak}$ that did this

    'Was it really you who did that?'

    b. Cê   que a   Maria contratou?

    you$_{weak}$ that the Maria hired

    'Is it really you that Maria hired?'

---

[17] The fact that *cê* cannot surface in object position, as illustrated in (i) below, has led researchers to propose that it is inherently specified as nominative (see Vitral 1996 and Ramos 1997). However, sentences such as (48b) show that *cê* is in fact not incompatible with accusative Case, indicating that the problem with (i) is that the weak pronoun does not have an appropriate host. See Petersen 2008 for relevant discussion.

(i)   Eu vi   você   /*cê   ontem

    I   saw you$_{strong}$/you$_{weak}$ yesterday

    'I saw you yesterday.'

Thus, although *cê* cannot surface in an "outer subject" position either in a matrix (cf. (45a)) or embedded clause (cf. (47)), this restriction can be circumvented if it moves to a position where it is licensed (cf. (i) in fn. 17 *vs.* (48b)). Given that [Spec, TP] is one such position, a convergent derivation for (46) involves movement of *cê* from the embedded "outer subject" position to the matrix [Spec, TP], as sketched in (49).

(49)   [TP cê$_i$ parece   [que [TopP t_i [TP cê   'tá doente]]]]

        you$_{weak}$ seem-3SG that   you$_{weak}$ is sick

As should be expected by now, the matrix clause in constructions such as (49) can still have an "outer subject", as long it is the strong form *você*, and not the weak form *cê*:

(50)   a.   *Você,   cê   parece que cê   'tá doente.*

             you$_{strong}$ you$_{weak}$ seem   that you$_{weak}$ is   sick

        b.   **Cê,   cê   parece que cê   'tá doente.*

             you$_{weak}$ you$_{weak}$ seem   that you$_{weak}$ is   sick

        'You seem to be sick.'

Confirming evidence for this proposal is provided by the pronoun *ele* (see Martins and Nunes 2005:fn. 20), which is ambiguous between a strong and a weak form. Thus, *ele* may be interpreted as [+human] or [-human] in contexts where weak pronouns are allowed, but only as [+human] in contexts where only strong pronouns are allowed (see Cardinaletti and Starke 1999 for discussion). As we saw above with *cê*, the "inner

subject" position ([Spec, TP]) allows weak pronouns, but not the "outer subject" position ([Spec, TopP]). This then explains the interpretive contrast below between *ele* in subject position, where it can refer to an inanimate object, and in topic position, where a [+human] interpretation is enforced.

(51)   a. Ele   é alto.

          pro-3SG.MASC is tall

          'He/it is tall'

        b. Ele,   a   Maria disse que é   alto.

          pro-3SG.MASC the Maria said   that is tall

          'Maria said that he/*it is tall'

Crucially, in apparent hyper-raising constructions such as (52), *ele* can be interpreted as referring to a building or a man, for example.

(52)   Ele   parece   que ele   foi fotografado ontem.

        pro-3SG.MASC seem-3SG that pro-3SG.MASC was photographed yesterday

        'It seems he/it was photographed yesterday'

According to our proposal, (51b) cannot be interpreted as non-human not because the weak pronoun is incompatible with being a topic, but because it has positioning restrictions banning its surfacing in [Spec, TopP]. However, this restriction is voided if

the pronoun moves from [Spec, TopP] to a suitable position. This is what happens in (52), where a weak pronoun can be licensed in the matrix subject position, as sketched in (53).[18]

(53)   [TP ele$_i$ parece [que [TopP t_i [TP ele foi fotografado ontem]]]]

Finally, like what we saw in (50), if another pronoun is added to (52), the interpretation now becomes restricted to humans, as shown in (54) below. Once the left most instance of *ele* in (54) is occupying the "outer subject" position, it must be a strong pronoun; hence it can only refer to a man.

(54)   Ele,   ele   parece que ele   foi
        pro-3SG.MASC pro-3SG.MASC seem-3SG that pro-3SG.MASC was
        fotografado   ontem.
        photographed yesterday
        'It seems he/*it was photographed yesterday'

---

[18] As expected, constructions parallel to (48) also allow the weak *ele*. That is, in sentences like (i) *ele* can refer to a man or a building, for example.

(i)   Ele   que foi fotografado   ontem?
       pron-3.SG.MASC. that was photographed yesterday
       'Was it really him/that that was photographed yesterday?

To summarize, once the matrix T can enter into a probe-goal relationship with an embedded topic, hyper-raising may rescue a weak pronoun trapped in an embedded topic position.

5. Conclusion

True hyper-raising structures arise when an embedded finite T fails to assign Case to its subject position, allowing the latter to enter into an agreement relation with the matrix T. Given that in BP topics can independently agree with T, a possibility arises that a matrix T agrees with an embedded topic. We have seen that this is what underlies the derivation of apparent hyper-raising constructions and accounts for the hybrid A/A' properties of their matrix subject. By requiring a matrix T to probe into the domain of an embedded C selecting a φ-complete T, apparent hyper-raising constructions provide independent evidence for the version of the Phase Impenetrability Condition proposed in Chomsky (2001), according to which Spell-Out must apply to the complement of a phase head only when a new phase head is merged.

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