Middle-field Syntax and Information Structure in Brazilian Portuguese

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Brazilian Portuguese is a language that makes prolific use of word-order permutations to indicate Information Structure processes (topicalization and focalization); in particular, two main areas of the clause (*left periphery* and *middle field*) can host dislocated elements with non-neutral interpretation in discourse. This dissertation aims to contribute to the understanding of the Syntax-Information Structure interface in natural languages by investigating the syntactic and informational properties of elements displaced to the middle field of Brazilian Portuguese, through a systematic comparison with its left periphery. I investigate the conditions regulating the distribution of different types of topics and foci, aiming to shed light on the question of how syntactic structures are mapped onto the Information Structure component of the grammar.

The investigation reveals a number of asymmetries between the left periphery and the middle field; most notably, the informational roles available in the latter are a proper subset of those available in the former. This observation allows us to address a number of factors that play a role in the licensing of different topics and foci in the language. I also show that the same structural position can license more than one informational role and that the same informational role can be licensed in more than one structural position (e.g., aboutness topic interpretation is possible in both the subject position and a left-peripheral topic position). Based on that observation, I argue for a contextual approach to Information Structure, where topics and foci are not tied to structurally-fixed positions in the clause, but are instead contextually licensed based on their relative position with respect to each other and other information-structure elements.

In doing so, I analyze the structural make-up of the middle field of Brazilian Portuguese. I argue that the language has (formally-driven) object shift to an independent projection above vP, to which middle-field topics adjoin. The comparison of syntactic and interpretive properties of shifted objects and middle-field topics is shown to have a number of consequences for different theoretical issues, including labeling and locality/phases, and provides evidence for the status of Information Structure as an independent component of the grammar.

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Tão seguro quanto o ar

Ser mais quente no verão

Da semente sai futuro

Nem que seja temporão

Na voz de Almir Sater

To my beloved niece Larissa

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Chapter 1

Introduction

1.1. Object of study and general objectives

Brazilian Portuguese is a language that makes prolific use of word-order permutations to indicate Information Structure processes such as *topicalization* and *focalization*. For instance, while a sentence in the canonical SVO order such as (1) is used in a neutral, all-new information context (for example as a response to the question *what happened?*), two main areas of the clause, which I will refer to as the *left periphery* and the *middle field*, can host elements with non-neutral interpretation in discourse. The sentences in (2B1) and (2B2) respectively illustrate cases where the left periphery and the middle field host a displaced PP, namely *do Chomsky* 'by Chomsky', which refers back to a salient referent in the question in (2A) and is interpreted as a topic.[1]

(1)   Eu li   dois livros do   Chomsky.
        I   read two books of-the Chomsky
        'I read two books by Chomsky.'

(2)   A: Quantos livros do Chomsky você leu pro curso de sintaxe?
              'How many books by Chomsky did you read for the syntax course?'
        B1:   *Do   Chomsky*TOP, eu li   *dois livros*F.   *Left periphery*
              of-the Chomsky   I   read two books
        B2:   Eu li,   *do   Chomsky*TOP, *dois livros*F.   *Middle field*
              I   read of-the Chomsky   two   books
              'I read *two books*F by *Chomsky*TOP.'

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[1] To the best of my knowledge, constructions like (2B2) in Brazilian Portuguese were first noticed by Avelar (2006).

This dissertation aims to contribute to the understanding of the Syntax-Information Structure interface in natural languages by investigating the syntactic and informational properties of elements displaced to the middle field of Brazilian Portuguese, through a systematic comparison with its left periphery. In particular, I will investigate the conditions regulating the appearance of different types of topics and foci in those two areas of the clause, as is schematized in (3) and (4).

(3)   *The left periphery of Brazilian Portuguese*
       [**TOPIC/FOCUS** [TP [vP]]]

(4)   *The middle field of Brazilian Portuguese*
       [TP [**TOPIC/FOCUS** [vP]]]

While studies of topicalization and focalization in the left periphery abound in the literature for other languages, the licensing conditions regulating the appearance of topics and foci in displaced sentence-internal positions (i.e., not in the left periphery) are still under-studied. This dissertation aims to help fill that void by paying special attention to the structural make-up of the middle field of Brazilian Portuguese and its consequences for Information Structure. In particular, I will investigate the distribution of elements with different informational roles in the language — namely, *aboutness topics*, *discourse-given topics*, and *contrastive topics*, as well as *new-information foci* and *contrastive foci* — and then tackle the question of how the syntactic properties of the middle field in Brazilian Portuguese constrain topicalization and focalization.

This investigation will reveal a number of asymmetries between the left periphery and the middle field (most notably, the informational roles available in the middle field are a proper subset of those available in the left periphery), which will allow us to identify a number of factors that play a role in the licensing of topics and foci that may not be apparent from the observation of the left periphery alone. The data presented in this dissertation will be analyzed with the goal of

shedding light on the overarching research question of *how syntactic structures are mapped onto the Information Structure component of the grammar*.

Before presenting in more detail the research questions that will be tackled in this dissertation regarding the mapping from Syntax to Information Structure, in the next section I will briefly present the necessary background for our discussion.

1.2. Background: Informational roles

In this section, I will briefly define the informational roles (i.e., types of topics and foci) that will be discussed in the following chapters with respect to their distribution and licensing conditions.

1.2.1. Topicalization

In this dissertation, I adopt (and provide further evidence for) a tripartite classification of topic types, in line with Frascarelli & Hinterhölzl (2007) and Bianchi & Frascarelli (2010), namely *aboutness(-shifting) topics*, (*discourse-)given topics*, and *contrastive topics*.

Let us start with the traditional *aboutness topics*. Reinhart (1981) defines the sentence topic as the entity which the sentence is *about*. In (5), for instance, if Mr. Morgan is to be understood as the sentence topic, it can be said that sentence (5) "is about Mr. Morgan". *Mr. Morgan* is thus interpreted in discourse "as the expression whose referent the sentence is about" (p. 57).

(5) Mr. Morgan is a careful researcher and a knowledgeable semiticist,
but his originality leaves something to be desired.

(Reinhart 1981: 54)

After Reinhart's (1981) work, a common test established in the literature for the identification of aboutness topics is the *tell me about X* test, which is illustrated by the Brazilian Portuguese example in (6), where speaker A prompts the use of aboutness topicalization by speaker B (wherever necessary, aboutness topics are indicated by the subscript AT). In (6B), topicalization of the DP/PP *(N)a feira renascentista* '(at) the renaissance fair' indicates that the sentence is about the renaissance fair, that is, the proposition 'I ate several traditional dishes (there)' is added to the conversational common ground as being about the renaissance fair.

(6)   A: Me conta alguma coisa sobre a feira renascentista que você foi ontem!
                'Tell me something about the renaissance fair you went to yesterday!'
       B: *(N)a feira renascentista*$_{AT}$, eu comi várias comidas típicas (lá).
                (in-)the fair renaissance   I   ate   several foods   typical (there)
                '*At the renaissance fair*$_{AT}$, I ate several traditional dishes (there).'

Frascarelli & Hinterhölzl (2007) and Bianchi & Frascarelli (2010) refine Reinhart's (1981) notion of aboutness topics to capture the fact that they can not only introduce the referent which the sentence is about, but also *shift* the conversation from being about one referent to being about another. The use of an *aboutness-shifting topic* is illustrated by the dialogue in (7), where speaker B shifts the sentence from being about Chomsky (as in (7A)) to being about Pinker.

(7)   A: O Pedro leu dez livros do Chomsky pra esse curso.
                'Peter read ten books by Chomsky for this course.'
       B: *Já do Pinker*$_{AT}$, ele não leu nenhum livro.
                JÁ of-the Pinker   he not read no   book
                'Now *by Pinker*$_{AT}$, he didn't read any book.'

Bianchi & Frascarelli (2010) state that "[aboutness] topics identify the unique entry under which the asserted proposition must be stored in the propositional [common ground]" (p. 63). Transposing that definition to Heim's (1982) famous "file card" metaphor of discourse referents,

we can then conceptualize of aboutness(-shifting) topics as giving the hearer the instruction to select a unique file card, in which the relevant proposition (denoted by the topic's comment) must be stored, as is illustrated in (8).

(8)   A: Você tem notícias do pessoal da faculdade?
            'Do you have any news about the people from college?'
        B: *O João*$_{AT}$ se mudou pra Europa. *Já a Maria*$_{AT}$ foi pro Canadá.
            '*John*$_{AT}$ moved to Europe. Now *Mary*$_{AT}$ went to Canada.
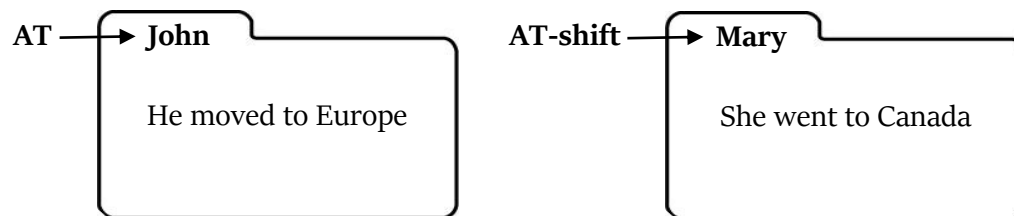
Discourse-given topics, in their turn, have the function of retrieving information that is already stored in the conversational common ground (i.e., given information; see Schwarzschild 1999), in order to indicate a strategy of topic continuity in discourse (see Givón 1983). As Bianchi & Frascarelli (2010) note, discourse-given topics do not provide "an instruction for the hearer", but rather "simply refer to the existing [common ground] content with a retrieval function" (p. 59). This is illustrated in (9), where the PPs *pra Maria* 'to Mary' and *na festa de Natal* 'at the Christmas party' in (9B) refer back to referents that were already part of the conversational common ground by having been introduced by speaker A (wherever necessary, discourse-given topics are indicated by the subscript G).

(9)   A: O que você deu pra Maria na festa de Natal?
            'What did you give to Mary at the Christmas party?'
        B: \[Pra Maria]$_G$ eu dei\ /dois livros$_F$/ \na   festa de Natal$_G$\.
            to-the Mary   I   gave two books in-the party of Christmas
            'I gave *two books*$_F$ *to Mary*$_G$ at the Christmas party$_G$.'

In Heim's (1982) "file card" metaphor, we can then conceptualize of discourse-given topics as simply reinforcing the file card that is currently selected, as to indicate that the conversation will continue in it. This is illustrated in the dialogue in (10). In (10A), the speaker indicates that the conversation is about Mary (so that Mary's file card is selected). In (10B), the speaker topicalizes *a Maria*, as to confirm the selection of that file card, to which the proposition *John never gives anything to her* should be added. That move by speaker B facilitates the continuation of the conversation within that same file card, indicating that the following proposition, *she does not care*, should also be stored under the entry *Mary*.

(10) A: Ontem foi aniversário da Maria. O João deu algum presente pra ela?
         'It was Mary's birthday yesterday. Did John give her any gifts?'
     B: *A Maria*G, o João nunca dá nada pra ela. Ela não liga.
         '*Mary*G, John never gives anything to her. She does not care.'
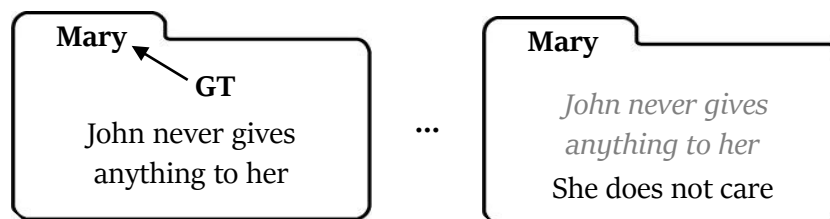
Finally, *contrastive topics*, as defined by Büring (2003, 2016), indicate a particular "strategy" towards answering a question. Rather than address the main *question under discussion* (in the sense of Roberts 1996) in a given conversation, the use of contrastive topicalization creates a family of *sub-questions* to the main question under discussion (creating a "discourse tree"). This is illustrated by the dialogue in (11) (wherever necessary, contrastive topics are indicated by the subscript CT). Rather than directly address the question asked by speaker A, speaker B proposes two sub-questions to it, namely the ones in (12), and addresses only (12a). Crucially, (11B) leaves

the alternative sub-question in (12b) *unresolved* (see Büring 2016; I take *unresolvedness* to be a crucial distinction between contrastive topicalization and aboutness topicalization).

(11)   A: What did the pop stars wear?
       B: The *female*CT pop stars wore *caftans*.   (Büring 2003: 525)

(12)   a.   What did the female pop stars wear?
       b.   What did the male pop stars wear?   (Büring 2003: 525)

In the "file card" metaphor, we can conceptualize of contrastive topics as "rejecting" the selection of a file card and selecting an alternative one.[2] This is illustrated in (13). While speaker A proposes the selection of John's file card, speaker B chooses to add the relevant proposition (*she went to Canada*) to Mary's file card instead. This move leaves the (sub-)question about John unresolved and only addresses and resolves the (sub-)question about Mary (resolution of the question about John may follow from implicatures raised by speaker's B choice to answer (13A) with (13B), a matter I leave aside in this dissertation).

(13)   A: Pra onde o João se mudou?
            'Where did John move to?'
       B: Bem, *a Maria*CT foi pro *Canadá*.
            'Well, *Mary*CT went to *Canada*.'

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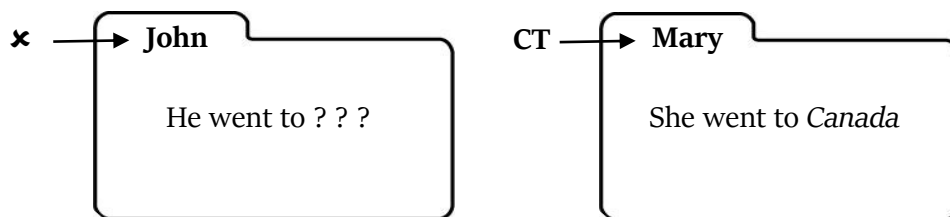
[2] Note that the feature *contrast* involves some sort of negation. What is "negated" in contrastive topicalization is not propositional content, but is rather at the level of the selection of the file card (in this respect, see Krifka's 2008 distinction between common ground *content* and common ground *management*).

In addition to indicating a sub-question strategy, contrastive topicalization also establishes an association between elements from two sets of alternatives. The first set of alternatives is the source of the topicalized element, whereas the second set of alternatives is the source of the focalized element. This is illustrated in (14). *Mary*, chosen from the set of potential friends (i.e., alternative topics), is associated with *a book*, chosen from the set of potential gifts (i.e., alternative foci).[3]

(14)　A:　What did John give his friends for Christmas?
　　　B:　He gave *Mary*CT *a book*F.
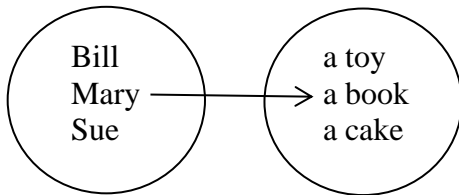
Having seen the three types of topics to be discussed in this dissertation, let us now move on to focalization.

1.2.2. Focalization

I adopt here a minimal distinction between two types of foci, made distinct by their informational import in discourse, namely *new-information focus* and *contrastive focus*.

New-information focalization is taken to be the discourse strategy that addresses an information-seeking question, be it explicit or implicit. The *new-information focus* in a sentence is the element which fills in a gap in the common ground content. Traditionally, new-information

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[3] I leave open the precise formulation of this association rule in Semantics, but see e.g. Büring (2003, 2016), Wagner (2012), and Constant (2012, 2014) for relevant discussion of interpretive properties of contrastive topicalization.

foci are identified by the *wh*-question test, the focus being the element in the answer that corresponds to the *wh*-expression in the question (i.e., question-answer congruence; see Paul 1880) and expresses the alternative chosen from the set of possible answers (see e.g. Rooth 1985 for relevant discussion). This is illustrated in (15) (wherever necessary, foci are indicated by the subscript F). The question in (15A) creates (or brings to the foreground) a gap in the conversational common ground, which the question itself seeks to resolve; as is schematized in the file card on the left-hand side below, the gap corresponds to the identity of the person who John gave a gift to. In its turn, the answer in (15B) fulfills that gap, by providing *Mary* as an answer to *who* in the question, as is schematized in the file card on the right-hand side (which is an updated version of the same file card).

(15)   A: Pra quem o João deu um presente?
            'Who did John give a gift to?'
        B: Ele deu um presente *pra Maria*F.
            'He gave a gift to *Mary*F.
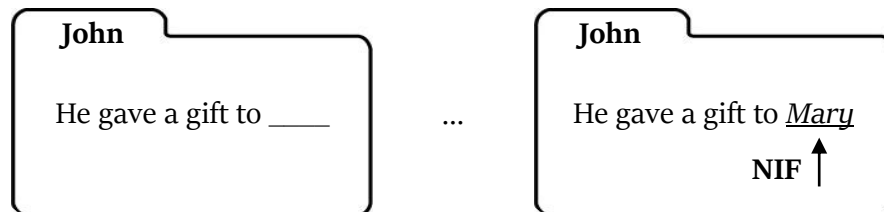
Contrastive focalization, on the other hand, involves an explicit opposition between possible alternatives. In the use of contrastive focalization discussed in this dissertation, namely contexts of correction, the *contrastive focus* is the prominent element in a sentence that negates a proposition by asserting an alternative one. This is illustrated in (16). Upon hearing sentence (16A), which speaker B (for whatever reason) judges is not true, speaker B negates (16A) by asserting (16B). The prominent element, *Anna*, is meant to "replace" *Mary* in the relevant file card,

as schematized below. More precisely, in the context of (16) the addition of the proposition *he gave a gift to Anna* to John's file card signals the addition of the proposition *he did not give a gift to Mary* to that same file card.

(16)   A: O João deu um presente pra Maria
                 'John gave a gift to Mary.'
        B: Não, ele deu um presente pra *Ana*_F.
                 'No, he gave a gift to *Anna*_F.
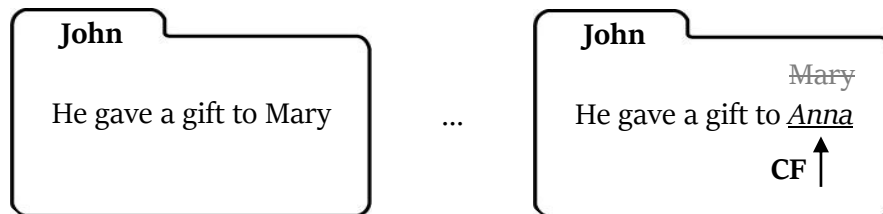
It is important to note that both new-information foci and contrastive foci are construed with respect to a corresponding presupposition/background (e.g., *John gave a gift to someone* for (15) and (16) above), which the speaker believes to be true and presupposes that the hearer also believes to be true. In this dissertation, I will assume this to hold for focalization in Brazilian Portuguese, while remaining agnostic about the precise implementation of focus in Semantics.

Having presented the informational roles that will be discussed in this dissertation with respect to their syntactic distribution and licensing conditions, I now turn to the main theoretical questions of the present work.

1.3. Research questions

In order for us to be able to address the overarching research question posed at the outset regarding the mapping of syntactic structures onto Information Structure, we need to tackle a number of issues, both empirical and theoretical, which I expose below.

1.3.1. Distribution and licensing conditions of topics and foci

The first question that needs to be addressed concerns the positions in which the different types of topics and foci described in Section 1.2 can appear in Brazilian Portuguese. Once the distribution of topics and foci is properly described, we can determine under what conditions each type of topic and focus is licensed in the language.

In order to tackle that question, I will compare the use of the middle field and the left periphery of the sentence in their ability to host different information-structure elements, paying special attention to the existence of any possible asymmetries between them (which will be shown to exist) — and, most importantly, what the observed asymmetries can tell us about the overarching research question. To do that, I will test whether each particular informational role can be licensed in the left periphery and/or the middle field, as well as in canonical positions, without dislocation to either the left periphery or the middle field — I take canonical positions to be the positions where each relevant element usually appears in all-new information contexts (i.e., broad-focus scenarios), as in the answer to the question *what happened?* (cf. sentence (1) above).

With respect to topicalization, based on the observed distribution of the different types of topics (i.e., aboutness, discourse-given, and contrastive), I will address the question of whether they have

different licensing conditions at the Syntax-Information Structure interface. In particular, I will evaluate whether the traditional *topic-comment articulation* of the clause is in fact applicable to all types of topics. If the answer turns out to be no (which I will argue is in fact the case), I will seek to determine what (structural and interpretive) factors regulate the licensing of topic types that do not need to conform to a bipartite topic-comment structure in other to be licensed.

With respect to focalization, I will mainly address the question of what factors condition dislocation of (new-information and contrastive) foci in the language. In particular, I will determine whether there is formally-driven focus movement in the language, in the sense that the movement of the relevant element formally licenses its focus interpretation at the interfaces. If the answer turns out to be no (which I will argue is in fact the case), I will seek to determine what other (interpretive) factors license dislocation of foci (and to what areas of the clause).

Once the distribution and licensing conditions of the different types of topics and foci are determined, we can then probe into their consequences for the theory of Information Structure.

1.3.2. The middle field at the Syntax-Information Structure interface

One of the goals of this dissertation is to use the sentential middle field of Brazilian Portuguese as a probe into the properties of topicalization and focalization that may not be readily available from the observation of the left periphery alone. As such, the primary questions regarding the syntax of the middle field are what its structural make-up is and how its independent syntactic properties constrain the licensing of topics and foci in that area of the clause.

In that respect, I will probe into the issue of what the area between the traditional TP and vP looks like in the language, in particular with respect to what projections (if any) make up the

extended domain of vP. I will thus investigate the conditions under which vP-internal elements may be dislocated to vP-external positions in the middle field, in order to determine their precise location in the structure. I will pay special attention to the distinction between formally-driven and informationally-driven operations that place elements in middle-field positions.

Once the structure of the Brazilian Portuguese middle field is determined, the next question is why some informational roles are available in that area of the clause and some are not (cf. the asymmetries with the left periphery alluded to above). In seeking to answer that question, I will compare the Brazilian Portuguese middle field with the German *Mittelfeld* with respect to one relevant asymmetry between the two languages, namely the availability of aboutness topic interpretation in the German *Mittelfeld* but not in the Brazilian Portuguese middle field — I will then address the question of whether the observed distinction can be derived in a principled way.

In their turn, informational roles that are available in the middle field open the door into the question posed above regarding how the structural make-up of the middle field and its syntactic properties constrain topicalization and focalization, in particular with respect to the relationship between topics and foci (which I will refer to as *Topic-Focus Association*). Any observed restrictions on middle-field Topic-Focus Association immediately raise the question of whether they also hold for the left periphery and how the two areas of the clause compare with each other in the relevant interface respects.
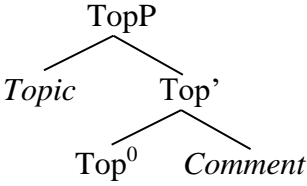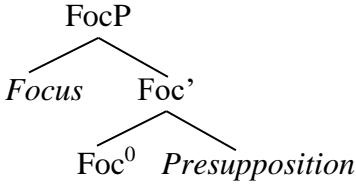
Finally, I will address the important question of what the consequences of the patterns observed in the middle field are for syntactic theory and for the theory of the Syntax-Information Structure interface, a matter which I will address mainly from the comparison of formally-driven and informationally-driven operations in the middle field.

1.3.3. The Syntax-Information Structure interface

The overarching question of how syntactic structures are mapped onto Information Structure is anchored in this dissertation with respect to the longstanding debate of whether topics and foci are licensed *rigidly* or *contextually*. In other words, the crucial question here is whether topics and foci must be realized in fixed topic- and focus-designated positions of the clause or whether they are licensed based on their relative position with respect to each other and other information-structure elements, regardless of absolute structural positions. In order to tackle this question in a concrete manner, I will evaluate how two prominent opposing approaches to the Syntax-Information Structure interface, namely *Cartography* (e.g., Rizzi 1997 et seq., Belletti 2004) and *Mapping* (e.g., Neeleman & van de Koot 2008, 2010), fare with respect to the restrictions observed in this dissertation on the distribution of topics and foci in Brazilian Portuguese.

The most prominent approach to the Syntax-Information Structure interface in the literature on Romance languages, namely the *cartographic approach*, is a rigid one, in that topic and focus interpretation is tied to absolute positions in the clause, namely the specifiers of topic- and focus-dedicated projections (TopP and FocP). In the spirit of Pollock's (1989) influential "split IP" analysis of the tense-agreement area of the clause, Rizzi (1997) proposes a "split CP" analysis of the sentential left periphery, as in (17). The traditional CP is split into a force-finiteness system with two complementizer projections (ForceP and FinP), in between which the discourse-related topic and focus projections are located. In this approach, it is assumed that the traditional topic-comment and focus-presupposition relations are mediated by fixed functional topic and focus heads in the clausal spine, as in (18), which license topics and foci via Spec-head agreement, in compliance with the *Topic and Focus Criteria* in (19).

(17)   [ForceP [TopP [FocP [TopP [FinP [IP]]]]]]   (Rizzi 1997: 297)

(18)   a.   TopP   b.   FocP
              _____   _____
            Topic   Top'   *Focus*   Foc'
                      _____   _____
                    Top^0 *Comment*   Foc^0 *Presupposition*
                                                                     (Rizzi 1997: 286–287)

(19)   *Topic and Focus Criteria* (Rizzi 1997: 287):

"[A] constituent endowed with topic or focus features must end up in a Spec/head configuration with Top or Foc, respectively; in other words, there are Topic and Focus Criteria, reminiscent of the Wh and Neg Criteria (Rizzi 1991, Haegeman 1995)."

In opposition to the cartographic approach is the contextual *mapping approach*. Neeleman & van de Koot (2008) argue that the licensing of topic and focus interpretation is not associated with fixed positions in the clausal spine (cf. (17) above); that is, the same informational role can be licensed in more than one structural position and the same structural position can license more than one informational role. In this approach, topic-comment and focus-presupposition relations are not directly encoded into the syntactic structure (in contrast to (18) above), but are instead established at the Information Structure component, from independently-built syntactic structures. As such, dislocation of elements that are interpreted as topics and foci is not formally-driven, in the sense that it must take place for topic and focus interpretations to be licensed, as in the cartographic approach (i.e., there is nothing like the *Topic and Focus Criteria* in (19)). Rather, independent dislocation operations result in particular discourse-related interpretations *at the interfaces*, as long as the resulting structures are legible as a well-formed topic-comment or a focus-presupposition relation.

A proper topic-comment configuration is one in which a topic is associated (via sisterhood) with a constituent that can be interpreted as its corresponding comment, whereas a proper focus-presupposition configuration is one in which a focus is associated (via sisterhood) with a constituent that can be interpreted as its corresponding presupposition. Regardless of its structural position, if a topic is in good standing with respect to its comment (in the manner just described), the syntactic structure can be mapped onto a topic-comment relation in Information Structure. Likewise, regardless of its structural position, if a focus is in good standing with respect to its presupposition, the syntactic structure can be mapped onto a focus-presupposition relation. As a consequence, the mapping approach in principle allows for more flexibility in the distribution of topics and foci — there is no one-to-one correspondence between structural positions and topic/focus interpretations.

In order to tease apart the two opposing approaches discussed above, the crucial question that will be addressed in this dissertation in the face of Brazilian Portuguese data is whether the licensing of topics and foci in this language is contingent on topics and foci being in fixed structural positions or not. In order to address that question, I will evaluate how the postulation of fixed topic and focus projections in both the left periphery and the middle field fares with respect to the distribution of topics and foci in the language. We will see that Brazilian Portuguese provides clear ways of answering the question of whether topics and foci are associated with fixed structural positions, which means that it provides a rather conclusive test case for teasing apart the two approaches to topicalization and focalization noted above.

Additionally, since clausal topic and focus heads such as the ones seen in (18) above are exclusive of the cartographic approach, evidence for their morpho-syntactic reality would favor

that approach, whereas the lack of evidence would favor its mapping competitor; I will tackle this issue as well.

I should make it clear to the reader that the main question in this debate is whether there is a one-to-one correspondence between syntactic structures and topic-comment/focus-presupposition relations. If yes, a rigid approach is to be preferred; if not, a contextual approach is to be preferred. Whether the cartographic and the mapping approach discussed above are the best instantiations of rigid and contextual approaches more generally is a secondary question; these two approaches will be compared here for concreteness' sake. (Special attention will be paid to the cartographic approach, given that it is the dominant view in the literature on Romance languages.)

1.4. Dissertation outline

In Chapter 2, *Informational asymmetries between the left periphery and the middle field*, I will mainly address the research questions presented in Section 1.3.1 above regarding the distribution and licensing conditions of topics and foci in Brazilian Portuguese. For each type of topic and focus, I will examine whether it can appear in the left periphery, the middle field, and/or in canonical positions, through the comparison of minimal pairs in informationally-controlled environments. With respect to topics, I will also investigate multiple-topic constructions, in order to assess the possibility of topic reiteration (of each type) and the existence of a topic hierarchy (among the different types). With respect to foci, in order to assess the existence of formally-driven focus movement in the language, I will test whether cases can be found where failing to dislocate a focus leads to ungrammaticality and/or infelicity, and whether dislocation of foci is contingent on interpretive effects other than focalization itself (the answer will be yes, as a result of which I

will proceed to identify the independent semantic and pragmatic effects involved in the dislocation of foci).

Based on the observed distribution of topics, I will discuss how each type of topic fares with respect to the traditional topic-comment articulation of the clause (for topics that are not subject to it, I will discuss what other interpretive factors are at stake in their licensing). Based on the observed distribution of foci, I will discuss how foci fare with respect to the traditional focus-presupposition articulation of the clause.

In Chapter 3, *The structural make-up of the middle field*, I will mainly tackle the issues presented in Section 1.3.2 above regarding the syntactic properties of the Brazilian Portuguese middle field. I will first identify the reasons why vP-internal elements may be dislocated to middle-field vP-external positions. In particular, I will tease apart elements that reach the middle field for formal reasons (an operation I will refer to as "object shift") from elements that reach that area of the clause for interpretive reasons. The goal of this discussion is to provide an analysis of the structural make-up of the extended domain of vP (i.e., I will identify which projections are located between the traditional TP and vP) and to identify the precise location of different middle-field elements. The proposed analysis will be shown to have consequences for the determination of both the phasal status of (the extended) vP (in particular, for teasing apart rigid and contextual approaches to phasehood) and the role of labeling at the Syntax-Information Structure interface.

By identifying the precise location of middle-field topics in Brazilian Portuguese, I will be able to address the German-Brazilian Portuguese asymmetry noted in Section 1.3.2 above regarding the availability of aboutness topic interpretation in the middle field of each language. In particular, I will propose a diagnostic to determine where exactly in the clausal structure we can draw the line

for the availability or unavailability of aboutness topic interpretation for a given element, based on the relative positioning of the relevant element with respect to sentential adverbs.

I will also discuss how the phasehood of (the extended) vP constrains the relationship between topics and foci (i.e., Topic-Focus Association) in that area of the clause, in particular with respect to a previously-unobserved locality constraint whereby a middle-field topic and its associated focus must be in the same spell-out domain (I will also address how this constraint fares with respect to the left periphery and suggest a unified account). The discussion of this locality constraint will be shown to have important consequences for the theory of the Syntax-Information Structure interface, in that it provides evidence for Information Structure as an independent component of the grammar (in particular, I will show that the informational status of an element, topic or focus, can be dissociated from its position in LF/Semantics).

In Chapter 4, *The mapping from Syntax to Information Structure*, I will finally tackle the question of how topicalization and focalization are best mapped from Syntax to the Information Structure component of the grammar, in light of the issues discussed in Section 1.3.3 above. I will first address the question of how the postulation of cartographic topic and focus projections fares with respect to the distribution of topics and foci in Brazilian Portuguese, then at the end I will address the question of how the observed patterns can be captured by the mapping approach.

In order to do that, I will first assess whether there is empirical evidence for the postulation of topic and focus heads such as Top^0 and Foc^0 in the clausal spine of Brazilian Portuguese. Next, I will evaluate how the postulation of cartographic topic and focus projections in the middle field of the language fares with respect to the distribution of topics and foci in that area of the clause, with special attention paid to the phase-based locality constraint discussed in Chapter 3.

Finally, in order to assess whether a particular informational role is tied to a fixed position in the clause or not, I will carefully address the well-known close-knit relationship between subjecthood and topichood, in particular with respect to the possibility of interpreting sentential subjects (i.e., elements located in the canonical subject position) as aboutness topics. In light of the cartographic Topic Criterion, whereby topics must be in the specifier of topic-dedicated projections, I will assess whether subjects that are independently shown to remain in Spec,TP can have an aboutness topic interpretation in that position (i.e., without dislocation to a left-peripheral topic position) — in doing so, I will also analyze the structure of locative inversion and topic-drop constructions. The results of this investigation will allow us to evaluate whether informational roles and structural positions can be dissociated from one another; in other words, the (im)possibility of an aboutness topic interpretation for elements located in Spec,TP will provide us with a decisive test for teasing apart the two approaches to the Syntax-Information Structure interface (*rigid* and *contextual*).

Finally, Chapter 5 is the *Conclusion*.

<div align="right">

Chapter 2

</div>

Informational asymmetries between the left periphery and the middle field

The main goal of this chapter is to characterize the use of the middle field of Brazilian Portuguese for Information Structure processes, which will be done through a systematic comparison of the middle field with the left periphery of the sentence regarding the distribution of topics and foci. Special attention will be paid to the asymmetries which will be shown to exist between the use of the left periphery and the use of the middle field of the sentence in the possibility of hosting dislocated (aboutness, discourse-given, and contrastive) topics and (new-information and contrastive) foci. I will show that structural and interpretive requirements conspire to make the middle field considerably more restricted than the left periphery in the relevant respects. More generally, this comparison of the left periphery and the middle field will be shown to be a rewarding enterprise that can help us gain a deeper understanding of the interface between Syntax and Information Structure in natural languages.

The chapter is organized as follows. In Section 2.1, I discuss the distribution of topics and show that while the left periphery can host all three types of topics (aboutness, discourse-given, and contrastive), the middle field is restricted to discourse-given and contrastive topics. In this section, I also address the questions of whether topics may reiterate and whether a hierarchy exists across different topic types. In Section 2.2, I discuss the distribution of foci and argue that focalization in situ is the default option in Brazilian Portuguese, with focalization in the left periphery possible only under special interpretive conditions while focalization in the middle field is completely ruled out. In Section 2.3, I discuss the consequences of the data observed in Sections

2.1 and 2.2 for the licensing of topics and foci at the Syntax-Information Structure interface. I argue that the data provide further evidence for a tripartite differentiation of topic types — each topic type being subject to a different set of well-formedness requirements. Focalization in Brazilian Portuguese will be argued to pose a problem for the view that focalization is licensed through a bipartite *Focus-Presupposition* articulation of the clause. Finally, Section 2.4 concludes the chapter.

2.1. Topicalization

In this section, I will discuss the distribution of topics in Brazilian Portuguese, by tackling the question of which types of topics may appear (or not) in the left periphery, in the middle field, and in canonical positions (i.e., without involving any topic-related dislocation). I will argue that topic interpretation of any kind (aboutness, discourse-given, and contrastive) is in principle possible in canonical positions, that is, without additional dislocation of the relevant element to a topic position, as long as the canonical order meets the well-formedness requirements of the topic in question that will be discussed in this chapter; otherwise, dislocation of the topic must take place. The conclusion will be that the left periphery may host all three types of topics, whereas the middle field is restricted to discourse-given and contrastive topics. I will also address the possibility of topic reiteration and assess the possibility of the existence of a topic hierarchy in Brazilian Portuguese, taking Bianchi & Frascarelli's (2010) work as a baseline. I will argue that their observations for Italian, German, and English in the relevant respects do not fully carry over to Brazilian Portuguese, in that in this language both discourse-given and contrastive topics may reiterate (with only aboutness topics being unique); additionally, no hierarchy is observed in

Brazilian Portuguese between discourse-given and contrastive topics — they may appear in either order with respect to each other, as long as they do not precede the aboutness topic (which must be the highest one in the structure).

2.1.1. Aboutness topics

In this section, I will discuss aboutness topics. I will show that aboutness topicalization is restricted to elements located in the left periphery of the sentence or in sentence-initial position. In other words, aboutness topicalization is excluded in the sentential middle field (a restriction that will be discussed in Section 2.3).

Let us first observe the scenario in (1). Sentence (1A) is the traditional "tell me about X" test (Reinhart 1981) for aboutness topics, and requests a comment on the relevant topic, namely the renaissance fair.[1] While (1B1), with a topic in the left periphery, is perfectly acceptable, the middle-field counterpart in (1B2) is pragmatically odd. The reply in (1B2) takes the eating event (more precisely, the subject and the verb) as being part of the common ground, which was not established in the question in (1A). Sentence (1B2) could only become acceptable by forcing accommodation of the common ground to include the subject and the verb, a strategy that is put aside here.[2]

---

[1] Aboutness topics will be indicated by the subscript AT in the relevant examples.

[2] Dealing with pragmatic accommodation would drive us away from the goals of this dissertation, which is to analyze the interface between Syntax and Information Structure in the relevant constructions (although relevant for the thorough understanding of a speaker's pragmatic/discursive competence, I take accommodation to be an independent issue, orthogonal to my current purposes). The judgments of grammaticality and pragmatic adequacy given throughout the dissertation are thus meant to be interpreted under the indicated reading without any sort of accommodation.

(1)   A: Me conta alguma coisa sobre a feira renascentista que você foi ontem!
            'Tell me something about the renaissance fair you went to yesterday!'
      B1:   *(N)a*   *feira renascentista*$_{AT}$, eu comi várias   comidas típicas (lá).
            (in-)the fair renaissance   I   ate   several foods   typical (there)
            '*At the renaissance fair*$_{AT}$, I ate several traditional dishes.'
      B2:   #Eu comi, *na*   *feira renascentista*$_{AT}$, várias   comidas típicas (lá).
            I   ate   in-the fair   renaissance   several foods   typical (there)
            '*At the renaissance fair*$_{AT}$, I ate several traditional dishes.'

A note should however be made regarding the traditional "tell me about X" test. While this test is useful to elicit aboutness topics, it brings in a potential confound in that the relevant topic is resumed from the previous discourse, that is, it can also be interpreted as a given topic, in a strategy of topic continuity. To unambiguously elicit an aboutness topic, a better strategy is then to introduce a (non-contrastive) discourse-new topic, which can be evidenced by the use of aboutness-shifting particles. One such particle in Brazilian Portuguese is *já* lit.'already' (see Miranda and Silva 2015), which can be used to corroborate the claim that middle-field topics cannot have aboutness interpretation. Observe the scenario in (2). The replies in the B sentences shift the conversation from being about *o Pedro* to being about *o João*, which is possible both when the subject stays in its canonical pre-verbal position, as in (2B1), and when the subject is dislocated to the left periphery (and resumed by a pronoun), as in (2B2). Note that *o João* in (2B1–B2) is not a contrastive topic in the sense of Büring (2003, 2016), as the relevant (implicit) alternative question under discussion about *o Pedro* is fully resolved in this scenario (that is, nothing is left unresolved about *o Pedro*).[3]

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[3] Furthermore, as will be shown in Section 2.1.3, *já* is incompatible with *bona fide* Büring-style contrastive topics.

(2)   A: O Pedro leu dez livros do Chomsky pra esse curso.
              'Peter read ten books by Chomsky for this course.'

        B1:   *Já o João*$_{AT}$ não leu   nenhum.
              JÁ the John   not read none
              'Now *John*$_{AT}$ didn't read any.'

        B2:   *Já o João*$_{AT}$, ele não leu nenhum.
              JÁ the John   he not read none
              'Now *John*$_{AT}$, he didn't read any.'

Now let us observe the behavior of *já* in object topicalization. When the aboutness-shifting object is fronted in (3B1), the sentence is perfectly well-formed, but when it stays in situ in (3B2), the sentence is ruled out. Sentence (3B3) shows that *já* cannot license the topic at a distance, suggesting that *já* and the topic must form a constituent (in other words, *já* is not a sentence-initial/left-peripheral head akin to Japanese question particle *no*).[4] Importantly, if dislocation to a topic position sufficed to license the aboutness-shifting particle, one would expect that dislocation to the middle field would produce a grammatical result. This prediction is however not borne out, as can be seen by the fact that the presence of *já* in (4B4) renders the sentence ungrammatical (an adnominal PP is used as a topic here to overtly show the attempted dislocation; cf. the well-formedness of (4B1)). The paradigms in (2)–(4) thus show that aboutness(-shifting) topics are restricted to sentence-initial positions.[5]

(3)   A: O Pedro teve que ler o Programa Minimalista pra esse curso.
              'Peter had to read the Minimalist Program for this course.'

        B1:   *Já o Barriers*$_{AT}$, ele não teve que ler.
              JÁ the Barriers   he not had that to.read

        B2:   **Ele não teve que ler   já o Barriers*$_{AT}$.
              he   not had that to.read JÁ the Barriers

        B3:   **Já ele não teve que ler   o Barriers*$_{AT}$.
              JÁ he not had that to.read the Barriers
              'Now *Barriers*$_{AT}$, he didn't have to read (it).'

---

[4] Sentences (3B2–B3) are grammatical in the absence of *já*, but are interpreted without an aboutness-shifting move.

[5] Note that the subject and the verb are part of the common ground in (4B4), therefore the issue of pragmatic accommodation does not arise here (cf. sentence (1B2)).

(4) A: O Pedro leu dez livros do Chomsky pra esse curso.
         'Peter read ten books by Chomsky for this course.'
     B1: *Já do   Pinker*~AT~, ele não leu   nenhum livro.
          JÁ of-the Pinker   he not read no   book
     B2: **Ele não leu   nenhum livro *já do   Pinker*~AT~.
          he   not read no   book JÁ of-the Pinker
     B3: **Já* ele não leu   nenhum livro *do   Pinker*~AT~.
          JÁ he not read no   book of-the Pinker
     B4: **Ele não leu, *já do   Pinker*~AT~, nenhum livro.
          he   not read JÁ of-the Pinker   no   book
     B5: **Já* ele não leu, *do   Pinker*~AT~, nenhum livro.
          JÁ he not read of-the Pinker   no   book
          'Now *by Pinker*~AT~, he didn't read any book.'

Importantly, claiming that aboutness(-shifting) topics are restricted to sentence-initial positions does not amount to saying that they must be in a *dislocated* position in the CP domain. As was already illustrated above in (2B1), a sentential subject may be interpreted as an aboutness topic (and thus license the aboutness-shifting particle *já*) while remaining in its canonical position (Spec,TP, as usually assumed for BP).[6] It suffices that the *já*-marked aboutness-shifting subject be sentence-initial, that is, that there be no intervening elements between the topic/subject and the left periphery of the sentence.[7] This condition is illustrated by the paradigm in (5), especially by the ungrammaticality of (5B1). In the presence of a *wh*-element dislocated to the CP domain, the *já*-marked aboutness-shifting subject must be realized in a higher position and be resumed by a pronoun, as in (5B3). If the *wh*-element is realized in situ, as in (5B4), no issue arises and the aboutness subject may remain in its canonical position.[8]

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[6] At an impressionistic level, no intonational break seems to be required after the topic/subject in (2B1), as opposed to (2B2); in fact, (2B1) is preferred without an intonational break.

[7] I will analyze these constructions in detail in Chapter 4 and independently motivate my current claim that subjects may have aboutness topic interpretation in Spec,TP. That subjects can be interpreted as aboutness topics in Brazilian Portuguese is in fact well documented in the literature (see a.o. Pontes 1987, Kato 1989, Duarte 1995, Bastos-Gee 2011, Avelar & Galves 2011, and Nunes 2016).

[8] On *wh*-in situ questions in Brazilian Portuguese, see e.g. DeRoma (2011), Kato (2013), Figueiredo Silva & Grolla (2016), and references therein.

(5) A: O Pedro leu dez livros do Chomsky pra esse curso.
    'Peter read ten books by Chomsky for this course.'
  B1: *O que *já o João*AT leu?
    what JÁ the John read
  B2: ?**Já o João*AT, o que leu?
    JÁ the John what read
  B3: *Já o João*AT, o que ele leu?
    JÁ the John what he read
  B4: *Já o João*AT leu o quê?
    JÁ the John read what
    'What did *John*AT read?'

In sum, the data above show that aboutness(-shifting) topicalization in Brazilian Portuguese in principle does not necessarily require dislocation to a position in the left periphery; it simply requires that the relevant topic be structurally high enough (c-commanding a full proposition, as will be discussed in Section 2.3.1). The result is that aboutness topics are ruled out in the sentential middle field. In that fashion, the left periphery can host a *strictly hanging topic* (that is, a nominal that is base-generated in a topic position and is not associated with any syntactic position within the comment).[9] Note in (6B1a–B1b) that the NP *fruta* 'fruit' is not part of the event structure of the verb *gostar* 'to like'; while this kind of topic is allowed in the left periphery, as in (6B1a), it is completely ruled out in the middle field, as in (6B1b). Having aboutness interpretation, the strictly hanging topic allows for topic shifting and expectedly licenses the particle *já* in the left periphery, as is illustrated in the continuation in (6B2a), with its middle-field counterpart in (6B2b) being ungrammatical.

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[9] I use the term *strictly hanging topic* to describe a construal where the topic is not connected to any position within the comment (see e.g. Bastos-Gee 2011 and references therein). This is thus different from Benincà's (2001) hanging topics, which may be associated with a comment-internal position and therefore can be resumed by a clitic or strong pronoun. Thus, while *strictly hanging topics* entail base-generation in the topic position, *connected* topics may be construed either by movement or base-generation.

(6)   A: Você gosta de fruta?
           'Do you like fruits?'
      B1a: *Fruta*~AT~, eu gosto de maçã.
           fruit   I   like   of apple
      B1b: *Eu gosto, *fruta*~AT~, de maçã.
           I   like   fruit   of apple
           'As for fruits~AT~, I like apples.'
      B2a: *Já verdura*~AT~, eu gosto de alface.
           JÁ greens   I   like   of lettuce
      B2b: *Eu gosto, *já verdura*~AT~, de alface.
           I   like   JÁ greens   of lettuce
           'Now, as for *greens*~AT~, I like lettuce.'

Before concluding this section, I must point out that the ungrammaticality of (6B1b) and (6B2b) just by itself does not suffice to show that aboutness interpretation is ruled out for middle-field topics. Sentences (6B1b–B2b) are independently excluded by a constraint that prevents nominal phrases from appearing in the middle field.[10] Now, let us eliminate that confound by observing the dialogue in (7). The replies in (7B1a) and (7B2a) show that PPs (as contentful and complex as locative phrases) can also be employed as aboutness topics. More precisely, nouns buried within complex prepositional phrases can also serve as topics and be commented on, with the contrasts between the left periphery and the middle field patterning as expected, given the above discussion.

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[10] This constraint is likely due to Case-licensing, there being no Case available for the nominal in the middle field, since default Case is not an option in that area of the clause (for relevant discussion, see e.g. Schütze 2001, and Kato 2012 for Brazilian Portuguese). Note that, while a Case-marking preposition is obligatory for argumental and adnominal topics in the middle field, its is optional for elements that do not require external Case-licensing, such as adverbial nominals (see Larson 1985, Bošković 2006), as in (i) below.

(i)   A: O João comprou muita coisa mês passado?
           'Did John buy a lot of things last month?'
      B1: (*No*)   *mês   passado*~TOP~, ele comprou *só   um livro*~F~.
           (in-the) month   past   he bought   only one book
      B2: Ele comprou, (*no*)   *mês   passado*~TOP~, *só   um livro*~F~.
           he bought   (in-the) month   past   only one book
           'He bought *only one book*~F~ *last month*~TOP~.'

(7)   A: Me conta alguma coisa sobre o Empire State!
              'Tell me something about the Empire State Building!'
        B1a: *Em cima do   Empire State*$_{AT}$, tem um mirante   muito legal.
              on top of-the Empire State   has a   observatory very nice
        B1b: #Tem, *em cima do   Empire State*$_{AT}$, um mirante   muito legal.
              has   on top of-the Empire State   a   observatory very   nice
              'On top of the *Empire State Building*$_{AT}$, there is a very nice observatory.'
        B2a: *Já em cima da   Freedom Tower*$_{AT}$, tem uma antena gigante.
              JÁ on top of-the Freedom Tower   has a   antenna giant
        B2b: *Tem, *já em cima da   Freedom Tower*$_{AT}$, uma antena gigante.
              has   JÁ on top of-the Freedom Tower   a   antenna giant
              'Now, *on top of the Freedom Tower*$_{AT}$, there is a giant antenna.'

The infelicity of (7B1b) and the ungrammaticality of (7B2b) above again show that aboutness topicalization is ruled out in the middle field of Brazilian Portuguese, being restricted to the left periphery. That is not the case, however, with discourse-given and contrastive topics, which are more permissive, as we will see next.

2.1.2. Discourse-given topics

In this section, I will show that discourse-given topics do not have to be obligatorily dislocated, that is, they may appear in their canonical positions, regardless of their relative position with respect to the focus of the sentence. When dislocation of given topics does occur, to either the left periphery or the middle field, it must obey the requirement that the given topic be realized in a position higher than the focus.

Discourse-given topics are necessarily non-accented and may integrate a larger string together with other non-prominent elements of the clause — in the examples below and wherever necessary throughout the dissertation, I represent deaccented strings with backslashes \…\ and accented strings with forward slashes /…/, glossing over the internal prosodic constituency of such strings.

Let us start by observing the paradigm in (8), where the positions of the indirect object *pra Maria* 'to Mary' and the adverbial PP *na festa de Natal* 'at the Christmas party' (both discourse-given) are manipulated.[11] First, sentence (8B1) shows that both topics may appear in their canonical positions, which in this case follow the focalized direct object. Alternatively, one of the given topics may be dislocated to the left periphery (LP), as in (8B2a–b), or to the middle field (MF), as in (8B3a–b). The left periphery and the middle field may even be employed simultaneously (each hosting a different given topic), as in (8B4a–b). Additionally, both areas of the clause may host multiple given topics, as is shown by (8B5a–b) and (8B6a–b).

(8)   A: O que você deu pra Maria na festa de Natal?
            'What did you give to Mary at the Christmas party?'

B1: \Eu dei\ /dois livros$_F$/ \pra Maria$_G$ na festa de Natal$_G$\.   canonical
     I gave two books to-the Mary in-the party of Christmas

B2a: \[Pra Maria]$_G$ eu dei\ /dois livros$_F$/ \na festa de Natal$_G$\.   LP
     to-the Mary I gave two books in-the party of Christmas

B2b: \[Na festa de Natal]$_G$ eu dei\ /dois livros$_F$/ \pra Maria$_G$\.   LP
     in-the party of Christmas I gave two books to-the Mary

B3a: \Eu dei [pra Maria]$_G$\ /dois livros$_F$/ \na festa de Natal$_G$\.   MF
     I gave to-the Mary two books in-the party of Christmas

B3b: \Eu dei [na festa de Natal]$_G$\ /dois livros$_F$/ \pra Maria$_G$\.   MF
     I gave in-the party of Christmas two books to-the Mary

B4a: \[Na festa de Natal]$_G$ eu dei [pra Maria]$_G$\ /dois livros$_F$/.   LP+MF
     in-the party of Christmas I gave to-the Mary two books

B4b: \[Pra Maria]$_G$ eu dei [na festa de Natal]$_G$\ /dois livros$_F$/.   LP+MF
     to-the Mary I gave in-the party of Christmas two books

B5a: \[Na festa de Natal]$_G$ [pra Maria]$_G$ eu dei\ /dois livros$_F$/.   LP+LP
     in-the party of Christmas to-the Mary I gave two books

B5b: \[Pra Maria]$_G$ [na festa de Natal]$_G$ eu dei\ /dois livros$_F$/.   LP+LP
     to-the Mary in-the party of Christmas I gave two books

B6a: \Eu dei [na festa de Natal]$_G$ [pra Maria$_G$]\ /dois livros$_F$/.   MF+MF
     I gave in-the party of Christmas to-the Mary two books

B6b: \Eu dei [pra Maria$_G$] [na festa de Natal]$_G$\ /dois livros$_F$/.   MF+MF
     I gave to-the Mary in-the party of Christmas two books
     'I gave two books$_F$ to Mary$_G$ at the Christmas party$_G$.'

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[11] Given topics will be indicated by the subscript G in the relevant examples, and foci by the subscript F.

Although all the possibilities in (8B1–B6) are truth-conditionally identical and information-structurally very similar, they are not one hundred percent interchangeable. Describing the fine-grained nuances among the sentences in (8B1–B6) is however beyond the scope of this dissertation. At first sight, these nuances seem to be related to *topic accessibility* in actual conversation, but discussing these issues would take us too far away from our current concerns. For the sake of illustration, I will simply point out that dislocation of a discourse-given topic seems to be a useful device to signal the speaker's intention to keep the topic active in the conversation. Let us look at (8B2a), repeated below in (9B1). The speaker who utters (9B1) may naturally follow it with (9B2), which continues the conversation with another comment on Maria — that is, (9B1) in the first place chooses to continue the question in (9A) by keeping Maria as the conversational topic (rather than the perhaps equally given Christmas party, for instance). *Mutatis mutandis*, similar remarks apply to the whole paradigm in (8B1–B6) (it is important to stress that these variations are based on conversational preferences rather than on hard grammatical constraints).

(9)   A: O que você deu pra Maria na festa de Natal?
             'What did you give to Mary at the Christmas party?'
       B1:   \[Pra Maria]G eu dei\ /dois livrosF/ \na   festa de NatalG\...
             to-the Mary   I   gave two   books   in-the party of Christmas
             'I gave two booksF to MaryG at the Christmas partyG…'
       B2:   …Eu gosto muito dela,   eu queria dar   algo   legal de presente pra ela.
               I   like   much of-her I   wanted to.give something nice of gift   to her
             '…I like her a lot, I wanted to give her something nice as a gift.'

Even though the choice to dislocate a discourse-given topic or not seems to be a matter of topic continuity and accessibility in actual conversation, it is not without syntactic consequences. Once a given topic is dislocated, it must necessarily be realized in a position higher than the sentential focus. In the paradigm in (8) above, the direct object was focalized. Let us compare that paradigm with the sentences in (10), where the subject is focalized instead. While the direct object follows

both the left periphery and the middle field, the subject follows the former but precedes the latter in Brazilian Portuguese. Therefore, while given topics may be dislocated to either area of the clause (left periphery and middle field alike) in (8), they are restricted to dislocation to the left periphery in (10), as the contrast between the ill-formed (10B2)–(10B4) and the well-formed (10B5) shows (again, the position of the focus being immaterial for the canonical order option in (10B1)). Note additionally that the sentences in (10B4), where two topics are illicitly dislocated to a position under the focus, are judged worse than the sentences in (10B2–B3), where there is only one such dislocation.

(10) A: Quem deu um presente pra Maria na festa de Natal?
           'Who gave a gift to Mary at the Christmas party?'
      B1: /O João_F/ \deu um presente [pra   Maria_G] [na   festa de Natal_G]\.
           the John   gave a   gift   to-the Mary   in-the party of Christmas
      B2a: ??/O João_F/ \deu [pra   Maria_G] um presente [na   festa de Natal_G]\.
           the John   gave to-the Mary   a   gift   in-the party of Christmas
      B2b: ??/O João_F/ \deu [na   festa de Natal_G]   um presente [pra   Maria_G]\.
           the John   gave in-the party of Christmas a   gift   to-the Mary
      B3a. ??\Pra Maria_G\, /o João_F/ \deu na   [festa de Natal_G]   um presente\.
           to-the Mary   the John   gave in-the party of Christmas a   gift
      B3b. ??\[Na festa de Natal_G]\, /o João_F/ \deu [pra   Maria_G] um presente\.
           in-the party of Christmas the John   gave to-the Mary   a   gift
      B4a: */O João_F/ \deu [pra   Maria_G] [na   festa de Natal_G]   um presente\.
           the John   gave to-the Mary   in-the party of Christmas a   gift
      B4b: */O João_F/ \deu [na   festa de Natal_G]   [pra   Maria_G] um presente\.
           the John   gave in-the party of Christmas to-the Mary   a   gift
      B5a: \Pra Maria_G\, /o João_F/ \deu um presente na   festa de Natal_G\.
           to-the Mary   the John   gave a   gift   in-the party of Christmas
      B5b: \[Na festa de Natal_G]\, /o João_F/ \deu um presente [pra   Maria_G]\.
           in-the party of Christmas the John   gave a   gift   to-the Mary
           'John_F gave a gift to Mary_G at the Christmas party_G.'

    The constraint just discussed suggests that the choice to dislocate the given topic may also be driven by the effect of removing it from the domain of the focus. In actual conversation, the removal of given elements from under the focus facilitates the identification of the focus — which

again is a discourse choice/preference rather than a hard constraint in Brazilian Portuguese.[12] Again without going into details on those matters, I will point out that the requirement that a dislocated given topic be realized higher than the sentential focus accounts for the unacceptability of sentence (1B2) from the previous section, repeated below as (11B2). Sentence (11B2) was argued not to allow aboutness interpretation of the middle-field topic. However, the topic could be interpreted as discourse-given if the subject and the verb were accommodated into the common-ground.

(11) A: Me conta alguma coisa sobre a feira renascentista que você foi ontem!   = (1)
          'Tell me something about the renaissance fair you went to yesterday!'
      B1: *(N)a*   *feira renascentista*_{AT}, eu comi várias   comidas típicas (lá).
          (in-)the fair renaissance   I   ate   several foods   typical (there)
          'At the renaissance fair, I ate several traditional dishes.'
      B2: #Eu comi, *na*   *feira renascentista*_{AT}, várias   comidas típicas (lá).
          I   ate   in-the fair   renaissance   several foods   typical (there)
          '*At the renaissance fair*_{AT}, I ate several traditional dishes.'

The realization of the given topic *na feira renascentista* 'at the renaissance fair' in the middle field in (11B2) makes the direct object the only possible focus (given the requirement discussed above), automatically making the subject and the verb part of the common ground. When these are already established in previous discourse, no accommodation is necessary, as is shown in (12).

(12) A: Ouvi dizer que você foi na feira renascentista ontem. Você comeu muita coisa?
          'I heard that you went to the renaissance fair yesterday. Did you eat a lot of stuff?'
      B1: \Eu comi\ /várias comidas típicas_F/ \na   feira renascentista_G\.
          I   ate   several foods   typical   in-the fair   renaissance
      B2: \[Na   feira renascentista_G] eu comi\ /várias   comidas típicas/.
          (in-)the fair renaissance   I   ate   several foods   typical
      B3: \Eu comi [na   feira renascentista_G]\ /várias comidas típicas_F/.
          I   ate   in-the fair   renaissance   several foods   typical
          'At the renaissance fair, I ate several traditional dishes.'

₁₂ The given-before-new preference in discourse is observed in several languages and discussed by a number of authors. See for example Bresnan et. al (2007), Krifka (2003), Kučerovà (2012), and Lacerda (2017). I will return to this issue in Section 2.3.3.

Before concluding this section, a cautionary note regarding discourse-given elements is in order. It goes without saying that in actual conversation, especially in answers to immediately preceding questions, discourse-given material is often omitted, in order to avoid unnecessary repetition. For instance, in response to the question in (13A), the short answers in (13B1–B2) are more natural than a full sentence. Crucially in this case, the omitted discourse given elements are still accessible in the conversation (that is, they are still in the speaker's short-term memory). Now compare (13) with the scenario in (14), where the response to the question in (14A) is given hours after the question is asked. In this case, the full sentence in (14B3) is more natural than the fragment answer in (14B2). In (14B2), although the omitted material is discourse-given (i.e., old information), it may no longer be active in speaker A's (short-term) memory hours after the original dialogue took place; the answer in (14B3), conversely, does not force such an abrupt memory recall.

(13)   A: O que você deu pra Maria na festa de Natal?
             'What did you give to Mary at the Christmas party?'
       B1: Dois livros.
             two   books
             'Two books.'
       B2: Eu dei   dois livros.
             I   gave two books
             'I gave [her] two books.'

(14) A: Eu estava no exterior durante as festas de fim de ano.
Você consegue descobrir o que o João deu pra Maria na festa de Natal?
'I was abroad during the holiday season.
Can you find out what John gave to Mary at the Christmas party?'

B1: Vou descobrir.
'I will find out.'

Hours later, speaker B comes back to speaker A and says:

B2: #Dois livros.
two books
'Two books.'

B3: \O João$_G$ deu\ /dois livros$_F$/ \pra Maria$_G$ na festa de Natal$_G$\.
the John gave two books to-the Mary in-the party of Christmas
'John$_G$ gave two books$_F$ to Mary$_G$ at the Christmas party$_G$.'

Throughout the dissertation, I will however continue to use full sentences as a means to probe into the syntactic and informational properties of the relevant constructions, and any questions or statements presented before them are used solely with the purpose of contextualization and to highlight the information-structural configuration with which the analyzed sentence should be judged. (The reader may of course bear in mind the fine distinction between discourse givenness and accessibility of topics in actual conversation.)

To summarize, in this section we saw that discourse-given topics may be dislocated both to the left periphery and to the middle field, which can both host multiple given topics and even be employed simultaneously. Dislocation of discourse-given elements is not obligatory, that is, given topics may be realized in their canonical positions. When dislocation takes place, it reinforces the accessibility of the relevant constituents for topic continuity and is licensed as long as the (dislocated) given topic is realized in a position higher than the sentential focus.

In the next section, I will address the distribution of contrastive topics.

2.1.3. Contrastive topics

Like given topics, contrastive topics in Brazilian Portuguese may appear in both the left periphery and the middle field, as well as in their canonical positions. Recall from the Introduction that the primary function of contrastive topics is to indicate a "strategy" (towards answering a question), as was argued by Büring (2003, 2016). Rather than address the main *question under discussion* in a given discourse, contrastive topicalization proposes a family of sub-questions to it (creating a "discourse tree") and addresses one of such sub-questions, crucially leaving the other (implicit or explicit) sub-questions unresolved. Observe the dialogue in (15).[13] Instead of fully resolving the question asked by speaker A, speaker B proposes two sub-questions to it, namely the ones in (16), and addresses (16a) while leaving (16b) unresolved (unresolvedness being a crucial distinction between contrastive topicalization and aboutness topicalization).

(15) A: What did the pop stars wear?
    B: The *female*$_{CT}$ pop stars wore *caftans*$_F$. (Büring 2003: 525)

(16) a. What did the female pop stars wear?
    b. What did the male pop stars wear? (Büring 2003: 525)

Now observe the dialogue in (17). Instead of fully addressing speaker A's question under discussion, speaker B breaks it down into a family of sub-questions (for example, the ones in (18)), then answers one such sub-question (namely the one where Chomsky is contrasted to other relevant authors) and leaves the other sub-questions unresolved. The answers in (17B1–B2) create the implicature that speaker B read more books other than Chomsky's for the syntax course (but for some reason chooses not to address those). Importantly, dislocation of *do Chomsky* 'by

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[13] Contrastive topics will be indicated by the subscript CT in the relevant examples.

Chomsky' to both the left periphery, as in (17B1), and the middle field, as in (17B2), allows such discourse move — provided that both the contrastive topic and its associated focus *três livros* 'three books' are realized with a rising intonation (each accented independently).

(17) A: Quantos livros você leu pro curso de sintaxe?
    'How many books did you read for the syntax course?'
  B1: Bem, /*do Chomsky*$_{CT}$/, \eu li\ /*três livros*$_F$/.
    well of-the Chomsky I read three books
  B2: Bem, \eu li\, /*do Chomsky*$_{CT}$/, /*três livros*$_F$/.
    well I read of-the Chomsky three books
    'Well, I read *three books*$_F$ *by Chomsky*$_{CT}$.'

(18) Q: 'How many books did you read for the syntax course?'
    Sub-Q1: How many books *by Chomsky* did you read for the syntax course?
    Sub-Q2: How many books *by Kayne* did you read for the syntax course?
    Sub-Q3: How many books *by Pinker* did you read for the syntax course?
    Sub-Q4: …

While (17) above illustrates a "vertical" contrastive topicalization move, the dialogue in (19), with a ditransitive construction, illustrates a "horizontal" contrastive topicalization move. Instead of answering the question posed in (19A), speaker B answers one of its *sisters* (namely Sub-Q2 in the purported discourse tree in (20)), while proposing the dominating question in (20Q) and leaving (19A)/(20Sub-Q1) unresolved.[14]

(19) A: Quantos livros você recomendou pro João?
    'How many books did you recommend to John?'
  B1: Bem, /*pra Maria*$_{CT}$/, eu recomendei /*três livros*$_F$/.
    well to-the Mary   I recommended three books
  B2: Bem, eu recomendei, /*pra Maria*$_{CT}$/, /*três livros*$_F$/.
    well I recommended to-the Mary three books
    'Well, I recommended *three books*$_F$ *to Mary*$_{CT}$.'

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[14] I assume in (19B2) that the indirect object is dislocated to the middle field from its original position, the neutral order of verbal complements in Brazilian Portuguese being DO–IO (see e.g. Scher 1996, Armelin 2011, Cépeda & Cyrino 2020). Ditransitive constructions will be analyzed in more detail in Chapter 3.

(20) Q: How many books did you recommend to your friends?
        Sub-Q1: How many books did you recommend *to John*?
        Sub-Q2: How many books did you recommend *to Mary*?
        Sub-Q3: …

Further evidence that the middle field of Brazilian Portuguese can be used for contrastive topicalization but not for aboutness topicalization comes from the discourse particle *já*. Recall from Section 2.1.1 that the discourse particle *já* shifts the conversation from one aboutness topic to another. That this shifting move is not due to contrast is evidenced by the pragmatic oddness of (21B1) in the scenario created by (21A). The question in (21A) does not present an alternative to Chomsky, and the use of *já* in (21B1) does not license the creation of the relevant set of alternatives. In other words, *já* cannot be used to introduce a contrastive topic (note the sub-question strategy in this scenario). If middle-field topics can never have aboutness interpretation, the prediction is that the use of *já* in the middle field should render the sentence ungrammatical, a prediction that is borne out, as is shown in (21B2) (as well as (4B3) above). Importantly, although (21B1) would be acceptable in an aboutness-shifting context, (21B2) cannot be salvaged. Note additionally that even when an alternative to Chomsky is presented in the question, as in (22A), an aboutness-shifting strategy is ruled out if the question is not resolved, as in (22B1) (compare it to the felicitous (22B2)). That is a crucial difference between the conversational import of aboutness-shifting topicalization and contrastive topicalization (compare (21)–(22) with (17) above). Important for the purposes of this dissertation is the claim that sentences like (17B2) and (19B2) above, whose syntax will be analyzed in detail in Chapter 3, are instantiations of contrastive topicalization (in Büring's 2003, 2016 sense).

(21)   A: Quantos livros você leu pro curso de sintaxe?
          'How many books did you read for the syntax course?'
     B1:   (#Já) *do   Chomsky*_{CT}, eu li   *três livros*_F.
          (#JÁ) of-the Chomsky   I   read three books
     B2:   Eu li,   (*já)   *do   Chomsky*_{CT}, *três livros*_F.
          I   read (*JÁ) of-the Chomsky   three books
          'I read *three books*_F *by Chomsky*_{CT}.'

(22)   A: Quantos livros do Pinker você leu pro curso de sintaxe?
          'How many books by Pinker did you read for the syntax course?'
     B1:   *#Já   do   Chomsky*_{AT}, eu li   *três livros*_F.
          #JÁ   of-the Chomsky   I   read three books
          'I read three books_F *by Chomsky*_{AT}.'
     B2:   Só   um. *Já do   Chomsky*_{AT}, eu li   *três livros*_F.
          only one JÁ of-the Chomsky   I   read three books
          'Only one. (Now) I read three books_F *by Chomsky*_{AT}.'

Note additionally in (23) that both left-peripheral and middle-field topics are compatible with the particle *só* lit. 'only', when it is used with a meaning akin to English *alone*. What *só* does in (23B1–B2) is precisely to single out the sub-question being addressed (namely the one regarding Chomsky), in opposition to alternative sub-questions, indicating a clear contrastive topicalization strategy where it is implied that speaker B may have read other books by other authors (but the matter is crucially left unresolved).

(23)   A: Quantos livros você leu pro curso de sintaxe?
          'How many books did you read for the syntax course?'
     B1:   Bem, /*só do   Chomsky*_{CT}/, \eu li\ /*três livros*_F/.
          well only of-the Chomsky   I   read three books
     B2:   Bem, \eu li\, /*só do   Chomsky*_{CT}/, /*três livros*_F/.
          well I   read only of-the Chomsky   three books
          'Well, I read *three books*_F *by Chomsky alone*_{CT}.'

I will conclude this section by briefly showing that elements with contrastive topic interpretation may also occur in what appears to be their canonical positions. Like in Büring's (2003, 2016) examples, a subject may be interpreted as a contrastive topic (while the direct object

is focalized) in a canonical SVO order, as in (24). Similarly, a direct object may be interpreted as a contrastive topic (while the indirect object is focalized) in a canonical DO–IO order, as in (25).

(24)   A: O que as pessoas comeram na festa?
            'What did people eat at the party?'
       B: Bem, /o João_{CT}/ \comeu\ /pizza_F/.
            well   the John   ate   pizza
            'Well, *John*_{CT} ate *pizza*_F.'

(25)   A: O João recomendou os livros do Chomsky pra quem?
            'Who did John recommend Chomsky's books to?'
       B: Bem, ele recomendou   /o Barriers_{CT}/ /pra   Maria_F/.
            well he recommended the Barriers   to-the Mary
            'Well, he recommended *Barriers*_{CT} *to Mary*_F.'

Examples of this sort will be discussed in more detail in Section 2.3, where the conditions on the relative positioning of contrastive topics and (their associated) foci will be discussed.

2.1.4. Multiple-topic constructions

As is the case in other Romance languages, sentences with multiple topics are possible in Brazilian Portuguese. However, it is not the case that topics can reiterate freely. Contra Rizzi (1997), Frascarelli & Hinterhölzl (2007) and Bianchi & Frascarelli (2010) have proposed a fine-grained typology of topics (based on Italian, German, and English), whereby the possibility of topic reiteration is contingent on the topic type. Additionally, they have proposed that different kinds of topics are subject to a so-called topic hierarchy — that is, different kinds of topics reach different heights in the clausal spine. Since I also assume the three types of topics discussed in those works (in particular Bianchi & Frascarelli 2010), I will take their observations as a point of departure in order to present the Brazilian Portuguese data.

2.1.4.1. Topic reiteration

Bianchi & Frascarelli (2010) argue that there can be at most one aboutness-shifting topic per clause. (The authors argue that this restriction is due to the role of aboutness topics in the common ground management, in identifying "the unique entry under which the asserted proposition must be stored in the propositional [common ground]" (p.63).) Thus, the English sentence in (26a), where the two nominals are topicalized independently, is ungrammatical, whereas (26b) (from Krifka 2008), where the two nominals are coordinated into a single constituent which in its turn is topicalized, is well-formed.

(26)   a.   *[(As for) Jack, (as for) Jill, he married her last year.]
         b.   As for Jack and Jill, they married last year.

                                                    (Bianchi & Frascarelli 2010: 63)

Contrastive topics are also argued by the authors to be unique. (They claim that contrastive topics "mark the position with respect to which the alternative sub-questions differ; the varying position is characteristically unique." (p.63)) The contrast between (27d) and (27e), in Italian, is thus provided to show that point: Whereas (27d) includes a single contrastive topic in each of the coordinated sentences, (27e) includes two contrastive topics per sentence and is ruled for that reason, according to the authors.[15]

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[15] It is not clear to me whether the topics in (27d) are *bona fide* contrastive topics in Büring's (2003, 2016) sense. Note that the answer in (27d) fully resolves the question in (27a).

(27) a. *Chi a preparato la cena?*
'Who prepared for the dinner?'
b. → Who prepared the pasta?
c. → Who prepared the fish?
d. [C-top La pasta] l' ha cucinata Leo,
 the pasta it.CL have.3SG cooked Leo,
 (e) [C-top al pesce] ci ha pensato Mario.
 (and) to.the fish to-it.CL have.3SG thought Mario
 'Leo cooked the pasta, and Mario prepared the fish.'
e. *[C-top Leo] [C-top la pasta] l' ha cucinata,
 Leo the pasta it.CL have.3SG cooked
 (e) [C-top Mario] [C-top al pesce] ci ha pensato.
 (and) Mario to.the fish to-it.CL have.3SG thought
(Bianchi & Frascarelli 2010: 64)

Contrarily to aboutness-shifting and contrastive topics, discourse-given topics are argued by Bianchi & Frascarelli (2010) to be reiterative. (Unlike the two other types of topics, given topics do not affect the conversational dynamics, they "simply involve the retrieval of information already present in the [common ground] content." (p.64)). The corpus excerpt in (28a) attests that sentences like (28b) are thus possible, as Italian allows for multiple given topics in its left periphery.

(28) a. il problema secondo me di questo autoapprendimento è stato affrontare la grammatica proprio no quindi lì ti trovi davanti ad argomenti nuovi nei quali avresti bisogno appunto di qualcuno […] invece *l'autoapprendimento questo* non– non me l'ha dato ecco.
'In my opinion the problem of this self-learning course was the grammar part – you deal with new topics for which you would exactly need someone […] on the contrary, *self-learning could not give it to me*, that's it.'
b. l'autoapprendimento questo non me l' ha dato.
 self-learning this not to-me it.CL have.3SG give.PART
 'Self-learning did not give this to me.'
(Bianchi & Frascarelli 2010: 59)

Let us now observe the possibility of topic reiteration in Brazilian Portuguese, starting with aboutness-shifting topics. Bastos-Gee (2011) already pointed out that sentences with multiple

aboutness topics are ruled out in the language. As is seen in (29), the simultaneous topicalization

of both the direct object and the indirect object leads to ungrammaticality (needless to say, both

objects can independently be topicalized on their own). Expectedly, an aboutness-shifting

operation indicated by the particle *já* is restricted to a single element in the left periphery, as is

shown by the ungrammaticality of (30B1–B2), which are in fact judged worse than the sentences

in (29).[16]

(29)   a.   *O livro, a   Maria, (foi) o João (que) comprou ele pra ela.
              the book the Mary (was) the John (that) bought   it for her
              'As for the book, as for Mary, (it was) John (who) bought it for her.'
    b.   *A Maria, o   livro, (foi) o João (que) comprou ele pra ela.
              the Mary the book (was) the John (that) bought   it for her
              'As for Mary, as for the book, (it was) John (who) bought it for her.'
                                                      (Bastos-Gee 2011: 19)

(30)   A: O Paulo comprou o caderno pra Ana.
             'Paul bought the notebook to Ana.'
    B1:   *Já o   livro$_{AT}$, já a Maria$_{AT}$, o João comprou ele pra ela.
             JÁ the book   JÁ the Mary   the John bought   it   for her
             '*The book$_{AT}$, Mary$_{AT}$, John bought it for her.'
    B2:   *Já a Maria$_{AT}$, já o livro$_{AT}$, o João comprou ele pra ela.
             JÁ the Mary   JÁ the book   the John bought   it   for her
             'Now *Mary$_{AT}$, now *the book$_{AT}$, John bought it for her.'

It is important to point out that the ungrammaticality of sentences with multiple aboutness

topics persists even when the multiple topics are separated into multiple (embedded) clauses. For

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[16] Note that if *já o João* in (2B1), repeated below in (iB1), were not an aboutness topic while located in what I claim
is the subject position, and had instead a different informational role, it should in principle be able to co-occur with
another *já*-marked element, contrary to fact. I will return to these structures in Chapter 4.
(i)   A: O Pedro leu dez livros do Chomsky pra esse curso.   = (2B1)
             'Peter read ten books by Chomsky for this course.'
    B1:   *Já o João$_{AT}$ não leu   nenhum.
            JÁ the John   not read   none
            'Now *John$_{AT}$ didn't read any.'
    B2:   *Já o João$_{AT}$, ele não leu   nenhum.
            JÁ the John   he not read   none
            'Now *John$_{AT}$, he didn't read any.'

control, first observe in (31) that both relevant elements (i.e., direct and indirect objects) can be topicalized in either the matrix or the embedded CPs. However, when aboutness topicalization takes place in both clauses simultaneously, as in (32B1–B2), the sentences are ruled out.

(31)   a.   *O livro*_{AT},   o   Pedro disse que o   João comprou ele pra   Maria.
the book   the Peter said   that the John bought   it   for-the Mary
'*The book*_{AT}, Peter said that John bought it for Mary.'
  b.   *A   Maria*_{AT},   o   Pedro disse que o   João comprou o   livro pra ela.
the Mary   the Peter said   that the John bought   the book for   her
'*Mary*_{AT}, Peter said that John bought the book for her.'
  c.   O   Pedro disse que, *a   Maria*_{AT}, o   João comprou o   livro pra ela.
the Peter said   that   the Mary   the John bought   the book for   her
'Peter said that, *Mary*_{AT}, John bought the book for her.'
  d.   O   Pedro disse que, *o   livro*_{AT},   o   João comprou ele pra   Maria.
the Peter said   that   the book   the John bought   it   for-the Mary
'Peter said that, *the book*_{AT}, John bought it for Mary.'

(32)   A: O Paulo comprou o caderno pra Ana.
'Paul bought the notebook for Ana.'
  B1:   *O   livro*_{AT}, o   Pedro disse que, *a   Maria*_{AT}, o   João   comprou ele pra ela.
the book   the Peter said   that   the Mary   the John   bought   it   for   her
'*The book*_{AT}, Peter said that, *Mary*_{AT}, John bought it for her.'
  B2:   *A   Maria*_{AT}, o   Pedro disse que, *o   livro*_{AT},   o   João   comprou ele pra ela.
the Mary   the Peter said   that   the book   the John   bought   it   for   her
'*Mary*_{AT}, Peter said that, *the book*_{AT}, John bought it for her.'

The status of (32B1–B2) may be made worse due to an intervention effect, as both the matrix and the embedded topics originate in the embedded clause (that is, the topic dislocated to the matrix CP must cross the topic in the embedded CP). However, even when the matrix aboutness topic originates in the matrix clause and therefore does not cross another topic, as in (33B), its co-occurrence with another aboutness topic in the embedded CP is still degraded.

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(33)　A:　O Pedro disse pra Cristina que o Paulo comprou o caderno pra Maria.
　　　　　 'Peter said to Christine that Paul bought the notebook for Mary.'
　　　B:　??*A　Carol*$_{AT}$, o　Pedro disse pra ela que, *o　livro*$_{AT}$, o　Paulo comprou ele
　　　　　 the　Carol　　the Peter said to her that　the book　　the John　bought　it
　　　　　 pra　　Ana.
　　　　　 for-the Anna
　　　　　 '*Carol*$_{AT}$, Peter said to her that, *the book*$_{AT}$, John bought it for Anna.'

At any rate, what the ungrammaticality of (32B1–B2) and (33B) thus shows is that the ban on multiple aboutness topics in (29) is not due to a "congested" left periphery (that is, the lack of multiple positions for aboutness topics in the CP domain of BP), but rather is due to something more general: The comment of an aboutness topic cannot include another aboutness topic — in other words, aboutness topicalization is restricted to one topic per utterance. Additional evidence for this claim comes from the paradigm in (34)–(36). Recall from Section 2.1.1 that subjects can be aboutness topics in their canonical position (i.e., without dislocation to the left periphery), as in (34). Considering that direct objects can easily be topicalized in a dislocated position in the left periphery, as in (35), let us then see what happens when both a dislocated direct object and a subject in its canonical position are to be interpreted as aboutness(-shifting) topics, as in (36). The "congested CP" hypothesis would predict (36B1–B2) to be well-formed, since only the direct object occupies a left-peripheral position, whereas the "single aboutness topic" hypothesis would predict (36B1–B2) to be unacceptable. In accordance with (32)–(33), sentences (36B1–B2) are ungrammatical.[17] These results thus favor the latter hypothesis, namely the uniqueness of aboutness topics, in line with Bianchi & Frascarelli's (2010) findings.[18]

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[17] Sentence (36B1) should be judged cautiously, given that the subject could be accommodated into another information-structural role, ameliorating the sentence. Crucially, sentence (36B2), where the particle *já* indicates that the relevant elements are unambiguously aboutness-shifting topics, is completely ruled out.

[18] I refer the reader to that work for an analysis of the root restrictions imposed on aboutness topicalization.

(34) A: O Paulo comprou um presente pra Ana.
         'Paul bought a gift for Anne.'
      B: (*Já*) *o   João*_{AT} comprou um presente pra   Maria.
         (JÁ) the John   bought   a   gift   for-the Mary
         'Now *John*_{AT} bought a gift for Mary.'

(35) A: O Paulo comprou o caderno pra Ana.
         'Paul bought the notebook for Anne.'
      B: (*Já*) *o   livro*_{AT}, o   Paulo comprou ele pra   Maria.
         (JÁ) the book   the Paul bought   it for-the Mary
         'Now *the book*_{AT}, Paul bought it for Mary.'

(36) A: O Paulo comprou o caderno pra Ana.
         'Paul bought the notebook for Anne.'
      B1: **O   livro*_{AT}, *o   João*_{AT} comprou ele pra   Maria.
         the book   the John   bought   it   for-the Mary
         'The book_{AT}, *John*_{AT} bought it for Mary.'
      B2: **Já o   livro*_{AT}, *já o   João*_{AT} comprou ele pra   Maria.
         JÁ   the book   JÁ the John   bought   it for-the Mary
         'Now *the book*_{AT}, now *John*_{AT} bought it for Mary.'

Unlike aboutness topics, discourse-given topics in Brazilian Portuguese can reiterate in dislocated positions, as was already shown in the paradigm in (8) above, the relevant parts of which are repeated below in (37). The Brazilian Portuguese facts are again in line with the facts observed by Bianchi & Frascarelli (2010).

(37) A: O que você deu pra Maria na festa de Natal?   = (8)
         'What did you give to Mary at the Christmas party?'
      B4a: \[Na   festa de Natal]_G   eu dei [pra   Maria]_G\ /dois livros_F/.   LP+MF
         in-the party of Christmas I   gave to-the Mary   two   books
      B4b: \[Pra Maria]_G eu dei [na   festa de Natal]_G\   /dois livros_F/.   LP+MF
         to-the Mary   I   gave in-the party of Christmas two   books
      B5a: \[Na   festa de Natal]_G   [pra   Maria]_G eu dei\ /dois livros_F/.   LP+LP
         in-the party of Christmas to-the Mary   I   gave two   books
      B5b: \[Pra Maria]_G [na   festa de Natal]_G   eu dei\ /dois livros_F/.   LP+LP
         to-the Mary   in-the party of Christmas I   gave two   books
      B6a: \Eu dei [na   festa de Natal]_G   [pra   Maria_G]\ /dois livros_F/.   MF+MF
         I   gave in-the party of Christmas to-the Mary   two   books
      B6b: \Eu dei [pra   Maria_G] [na   festa de Natal]_G\   /dois livros_F/.   MF+MF
         I   gave to-the Mary   in-the party of Christmas two   books
         'I gave two books_F to Mary_G at the Christmas party_G.'

Contrastive topics in Brazilian Portuguese, however, behave differently from what Bianchi &

Frascarelli (2010) observe in Italian. Contrary to their findings regarding Italian, contrastive topics

in Brazilian Portuguese can reiterate.[19] Let us observe (38), where the B answers address a question

sister to A (that is, the B answers propose an implicit super-question to A). The two contrastive

topics *do Chomsky* 'by Chomsky' and *na edição original* 'in the original edition' can appear, in

either order, both in the left periphery (38B1–B2), both in the middle field (38B3–B4), or one in

the left periphery and the other in the middle field (38B5–B6). In the paradigm in (39), where the

B answers address a sub-question of A (that is, the B answers propose implicit sister questions to

A, in a horizontal move in the discourse tree), the results of (38) are replicated.

(38) *Context*:
      While João, a Brazilian grad student, read some linguistics books in their original
      editions in English, he mostly read books translated into Portuguese.
A: O João leu quais livros do Pinker em edições traduzidas?
      'John read which books by Pinker in translated editions?'
B1:   Bem, *do   Chomsky*$_{CT}$, *na   edição original*$_{CT}$, ele leu *só   o   Barriers*$_F$.
      well of-the Chomsky   in-the edition original   he read only the Barriers
B2:   Bem, *na   edição original*$_{CT}$, *do   Chomsky*$_{CT}$, ele leu *só   o   Barriers*$_F$.
      well in-the edition original   of-the Chomsky   he read only the Barriers
B3:   Bem, ele leu, *do   Chomsky*$_{CT}$, *na   edição original*$_{CT}$, *só   o   Barriers*$_F$.
      well he read of-the Chomsky   in-the edition original   only the Barriers
B4:   Bem, ele leu, *na   edição original*$_{CT}$, *do   Chomsky*$_{CT}$, *só   o   Barriers*$_F$.
      well he read in-the edition original   of-the Chomsky   only the Barriers
B5:   Bem, *do   Chomsky*$_{CT}$, ele leu, *na   edição original*$_{CT}$, *só   o   Barriers*$_F$.
      well of-the Chomsky   he read in-the edition original   only the Barriers
B6:   Bem, *na   edição original*$_{CT}$, ele leu, *do   Chomsky*$_{CT}$, *só   o   Barriers*$_F$.
      well in-the edition original   he read of-the Chomsky   only the Barriers
      'Well, he read *only Barriers*$_F$ *by Chomsky*$_{CT}$ *in the original edition*$_{CT}$.'

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[19] Bianchi & Frascarelli (2010) admit in a footnote (p. 64), that multiple contrastive topics may in fact be "marginally possible" in languages that allow multiple *wh*-questions like 'who gave what to whom?'. While Brazilian Portuguese does allow questions of this type, I will remain agnostic as to whether the correlation between multiple *wh*-questions and multiple contrastive topics is valid or not. It is important to stress, however, that reiteration of contrastive topics in Brazilian Portuguese is perfectly acceptable, not just "marginally possible".

(39)   *Context*:
   João is a linguistics student and often recommends different books to his friends from other majors.
 A: O João recomendou livros de linguística pros amigos dele?
   'Did John recommend linguistics books to his friends?'
 B1: Bem, *do Chomsky*CT, *pra Maria*CT, ele recomendou *só o Barriers*F.
   well of-the Chomsky to-the Mary he recommended only the Barriers
 B2: Bem, *pra Maria*CT, *do Chomsky*CT, ele recomendou *só o Barriers*F.
   well to-the Mary of-the Chomsky he recommended only the Barriers
 B3: Bem, ele recomendou, *do Chomsky*CT, *pra Maria*CT, *só o Barriers*F.
   well he recommended of-the Chomsky to-the Mary only the Barriers
 B4: Bem, ele recomendou, *pra Maria*CT, *do Chomsky*CT, *só o Barriers*F.
   well he recommended to-the Mary of-the Chomsky only the Barriers
 B5: Bem, *do Chomsky*CT, ele recomendou, *pra Maria*CT, *só o Barriers*F.
   well of-the Chomsky he recommended to-the Mary only the Barriers
 B6: Bem, *pra Maria*CT, ele recomendou, *do Chomsky*CT, *só o Barriers*F.
   well to-the Mary he recommended of-the Chomsky only the Barriers
   'John recommended *only Barriers*F *by Chomsky*CT *to Mary*CT.'

With respect to the possibility of topic reiteration in Brazilian Portuguese, the data above make a distinction between aboutness topics, on one hand, and discourse-given and contrastive topics on the other, the former being unique and the latter being able to reiterate. Next, I will discuss the interaction among different kinds of topics in multiple-topic constructions, in order to assess the existence of any hierarchy requirements among them.

2.1.4.2. Topic hierarchy

Bianchi & Frascarelli (2010) adopt and refine the topic hierarchy proposed by Frascarelli & Hinterhölzl (2007) (for Italian and German), seen in (40), whereby aboutness topics precede contrastive topics, which in turn precede (potentially reiterative) given topics. The contrast between (41a) (from Reinhart 1976) and (41b) shows that the aboutness topic *Rosa* may precede

but not follow the contrastive topic *my next book*.[20] Sentence (42b), extracted from the attested corpus excerpt in (42a), illustrates the requirement that aboutness topics precede given topics (the opposite is unattested and assumed to be impossible). Finally, the naturalistic sentence in (43) illustrates a case where a contrastive topic (*io* 'I') precedes a given topic (*questa attività particolare* 'that particular activity') (with the opposite order also assumed to be impossible).

(40)   **Topic hierarchy** (Frascarelli & Hinterhölzl 2007, Bianchi & Frascarelli 2010)
        Aboutness-shifting topic > Contrastive topic > Given topic(s)

(41)   a.   (As for) Rosa, my next book I will dedicate to her.
        b.   *My next book, Rosa, I will dedicate to her.
                                                    (Bianchi & Frascarelli 2010: 62)

(42)   a.   Era tutto molto nuovo nel senso che comunque la lingua *inglese* attraverso i programmi sul computer diciamo non l'avevo mai– [...] comunque l'*inglese* risultava anche facendolo da solo più interessante [...] io, *inglese* non– premetto non *l'*avevo mai fatto.
            'Everything was totally new to me in the sense that I had never studied English through computer programs […] and through self-learning English appeared more interesting to me […] *I must say that I had never studied English before*.'
        b.   [A-top *io*] [G-top *inglese*] non l'   avevo   mai   fatto.
                I   English not it.CL had.1SG never do.PART
            'I had never studied English before.'
                                                    (Bianchi & Frascarelli 2010: 61)

(43)   *Io* francamente *questa attività particolare* non me   la   ricordo.
        I frankly   this   activity particular   not to.me(CL) it(CL) remember.1SG
        'Frankly, I don't remember that particular activity.'
                                                    (Frascarelli & Hinterhölzl 2007: 96)

What is observed in Brazilian Portuguese is, however, not a tri-level topic hierarchy, but a cut between aboutness topics, on one hand, and given and contrastive topics on the other hand —

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[20] Note in (41) that *Rosa* is resumed by the pronoun *her*, whereas *my next book* is not resumed. The authors associate the presence of resumption with aboutness topicalization and the lack of resumption with contrastive topicalization in English (pp. 61–62).

which is different from what was observed in Italian, German, and English by Frascarelli & Hinterhölzl (2007) and Bianchi & Frascarelli (2010). Let us then turn to the patterns found in Brazilian Portuguese, starting with the interaction between given and contrastive topics. The paradigm in (44) shows that given and contrastive topics can indeed co-occur. They can appear, in either order, with both in the left periphery (44B1–B2), both in the middle field (44B3–B4), or one in the left periphery and the other in the middle field (44B5–B6). There is therefore no absolute hierarchy between them (it suffices that given and contrastive topics, when dislocated out of their canonical positions, be higher than the focus, as will be discussed in Section 2.3).

(44) A: Quantos livros do Pinker a Maria doou pro departamento?
      'How many books by Pinker did Mary donate to the department?'

  B1: /*Do Chomsky*$_{CT}$/, \pro departamento$_{G}$ ela doou\ /*dez livros*$_{F}$/. LP$_{CT}$+LP$_{G}$
      of-the Chomsky   to-the department   she donated ten books

  B2: \Pro departamento$_{G}$\, /*do Chomsky*$_{CT}$/, \ela doou\ /*dez livros*$_{F}$/. LP$_{G}$+LP$_{CT}$
      to-the department   of-the Chomsky   she donated ten books

  B3: \Ela doou\, /*do Chomsky*$_{CT}$/, \pro departamento$_{G}$\ /*dez livros*$_{F}$/. MF$_{CT}$+MF$_{G}$
      she donated of-the Chomsky   to-the department   ten books

  B4: \Ela doou pro departamento$_{G}$\, /*do Chomsky*$_{CT}$/, /*dez livros*$_{F}$/. MF$_{G}$+MF$_{CT}$
      she donated to-the department   of-the Chomsky   ten books

  B5: /*Do Chomsky*$_{CT}$/, \ela doou pro departamento$_{G}$\ /*dez livros*$_{F}$/. LP$_{CT}$+MF$_{G}$
      of-the Chomsky   she donated to-the department   ten books

  B6: \Pro departamento$_{G}$ ela doou\, /*do Chomsky*$_{CT}$/, /*dez livros*$_{F}$/. LP$_{G}$+MF$_{CT}$
      to-the department   she donated of-the Chomsky   ten books
      'She donated *ten books*$_{F}$ *by Chomsky*$_{CT}$ to the department$_{G}$.'

When given and contrastive topics are compared to aboutness topics, a significant contrast now emerges. The (unique) aboutness topic must obligatorily precede any discourse-given and contrastive topics. Let us start by observing the interaction between aboutness and given topics in (45).[21] The given topic *pro departamento* 'to the department' may either stay in its canonical position, as in (45B1), or be dislocated (past the direct object) into the middle field, as in (45B2),

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[21] In all relevant examples below, the particle *já* is used to force an aboutness-shifting interpretation on the relevant topics, in order to prevent accommodation into another information-structural role.

both positions being lower than the aboutness topic, namely *(já) o João* in subject position. If the given topic is to be dislocated higher than the subject position, as in (45B3), the aboutness topic must be also dislocated to a position higher than the given topic and then be obligatorily resumed by a pronoun in subject position. If the aboutness topic remains lower than the given topic dislocated to the CP, as in (45B4), the sentence becomes ungrammatical.

(45)   A: A Maria doou cinco livros pro departamento.
            'Mary donated five books to the department.'
     B1:   /*Já o João*$_{AT}$/ \doou\ /*dez livros*$_F$/ \pro departamento$_G$\.
          JÁ the John   donated ten books   to-the department
     B2:   /*Já o João*$_{AT}$/ \doou pro departamento$_G$\ /*dez livros*$_F$/.
          JÁ the John   donated to-the department   ten books
     B3:   /*Já o João*$_{AT}$/, \pro departamento$_G$ *(ele) doou\ /*dez livros*$_F$/.
          JÁ the John   to-the department   *(he) donated ten books
     B4:   *\Pro departamento$_G$\, /*já o João*$_{AT}$/ (ele) \doou\ /*dez livros*$_F$/.
          to-the department   JÁ the John   (he) donated ten books
          'Now *John*$_{AT}$ donated *ten books*$_F$ to the department$_G$.'

The sentences in (46B1–B4), where the relevant aboutness topic is the direct object, replicate the results of (45B1–B4). As an aboutness topic, the direct object *(já) o Barriers* must necessarily be dislocated to a sentence-initial position. Again, the given topic (*pra ela* 'to her', in this case) may appear in any position lower than the aboutness topic. When that is not case, as in (46B4), the sentence is ruled out.[22]

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[22] A note should be added regarding sentence (46B3). Although grammatical, its discourse licensing may seem unjustified in the context of (46) alone. As was discussed in Section 2.1.2, a given topic dislocated to the CP acquires high topic prominence. Sentence (46B3) may seem more natural in this context as setting the stage for a continuation such as (i) below, where another indirect object is topicalized.
(i)   E   pra   Carol também, ele explicou   mal.
    and to-the Carol too   he explained badly
    'And also to Carol, he explained (it) badly.'

(46) A: O João explicou o Programa Minimalista muito bem pra Maria.
      'John explained *The Minimimalist Program* to Mary very well.'
      B1: /*Já o* Barriers_AT/, \o João explicou\ /muito mal/ \pra ela_G\.
           JÁ the Barriers   the John explained very badly to her
      B2: /*Já o* Barriers_AT/, \o João explicou pra ela_G\ /muito mal/.
           JÁ the Barriers   the John explained to her very badly
      B3: /*Já o* Barriers_AT/, \pra ela_G o João explicou\ /muito mal/.
           JÁ the Barriers   to her the John explained very badly
      B4: */Pra ela_G\, /*já o* Barriers_AT/, \o João explicou\ /muito mal/.
           to her JÁ the Barriers   the John explained very badly
           'Now *Barriers*_AT, John explained it to her_G very badly.'

Similar results obtain in the interaction between aboutness topics and contrastive topics. In the paradigm in (47), the contrastive topic *do Chomsky* 'by Chomsky' may appear in any position lower than the aboutness topic *(já) o João* ― with the exception of (47B1), which is ruled independently, but is included for completeness.[23] Thus, the contrastive topic may appear either in the middle field (47B2) or in the left periphery, as long as it follows (47B3) rather than precedes (47B4) the aboutness topic.

(47) A: A Maria leu cinco livros do Pinker.
          'Mary read five books by Pinker.'
      B1: */*Já o* João_AT/ \leu\ /*dez livros*_F/ /do Chomsky_CT/.
           JÁ the John   read ten books of-the Chomsky
      B2: /*Já o* João_AT/ \leu\, /do Chomsky_CT/, /*dez livros*_F/.
           JÁ the John   read of-the Chomsky   ten books
      B3: /*Já o* João_AT/, /do Chomsky_CT/, \ele leu\ /*dez livros*_F/.
           JÁ the John   of-the Chomsky   he read ten books
      B4: */Do Chomsky_CT/, /*já o* João_AT/ \leu\ /*dez livros*_F/.
           of-the Chomsky   JÁ the John   read ten books
           'Now *John*_AT read *ten books*_F *by Chomsky*_CT.'

To recap, we have just seen that discourse-given and contrastive topics may either precede or follow each other, but both must follow aboutness topics. Therefore, any sentence where all three

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[23] Sentence (47B1) is independently ruled out with the indicated information structure, due to the contrastive topic illicitly following the focus in this scenario, a constraint that will be discussed in Section 2.3.2.1. If *dez livros do Chomsky* 'ten books by Chomsky' as a whole is interpreted as a focus in (47B1), the sentence becomes acceptable.

types of topics occur simultaneously should in principle be acceptable as long as the (unique) aboutness topic is the highest one — bearing in mind the complex discourse situations necessary to license sentences with three or more (potentially dislocated) topics of different types. The non-exhaustive paradigm in (48) shows some possible and impossible configurations.

(48)   A: A Maria doou cinco livros do Pinker pro departamento.
              'Mary donated five books by Pinker to the department.'
      B1:   /*Já o João*$_{AT}$/ \doou\, /*do Chomsky*$_{CT}$/, /*dez livros*$_F$/ \pro departamento$_G$\.
             JÁ the John   donated of-the Chomsky   ten books to-the department
      B2:   /*Já o João*$_{AT}$/, /*do Chomsky*$_{CT}$/, \ele doou\ /*dez livros*$_F$/ \pro departamento$_G$\.
             JÁ the John   of-the Chomsky   he donated ten books to-the department
      B3:   /*Já o João*$_{AT}$/ \doou pro departamento$_G$\, /*do Chomsky*$_{CT}$/, /*dez livros*$_F$/.
             JÁ the John   donated to-the department   of-the Chomsky   ten books
      B4:   /*Já o João*$_{AT}$/ \doou\, /*do Chomsky*$_{CT}$/, \pro departamento$_G$\, /*dez livros*$_F$/.
             JÁ the John   donated of-the Chomsky   to-the department   ten books
      B5:   ?/*Já o João*$_{AT}$/, /*do Chomsky*$_{CT}$/, \pro departamento$_G$ ele doou\ /*dez livros*$_F$/.
             JÁ the John   of-the Chomsky   to-the department   he donated ten books
      B6:   *\Pro departamento$_G$\, /*já o João*$_{AT}$/ \doou\, /*do Chomsky*$_{CT}$/, /*dez livros*$_F$/.
             to-the department   JÁ the John   donated of-the Chomsky   ten books
      B7:   */*Do Chomsky*$_{CT}$/, /*já o João*$_{AT}$/ \doou\ /*dez livros*$_F$/ \pro departamento$_G$\.
             of-the Chomsky   JÁ the John   donated ten books to-the department
      B8:   */*Do Chomsky*$_{CT}$/, /*já o João*$_{AT}$/ \doou pro departamento$_G$\ /*dez livros*$_F$/.
             of-the Chomsky   JÁ the John   donated to-the department   ten books
             'Now *John*$_{AT}$ donated *ten books*$_F$ *by Chomsky*$_{CT}$ to the department$_G$.'

The paradigm in (48) provides additional evidence for the claim that the topic hierarchy proposed by Bianchi & Frascarelli (2010) does not fully carry over to Brazilian Portuguese. Although the aboutness topic does have to be the highest one in the structure, no ordering requirement is observed between (potentially reiterative) discourse-given and contrastive topics.

2.1.5. Interim summary: Topicalization

In Brazilian Portuguese, all aboutness(-shifting) topics can appear in a dislocated position in the left periphery. If the aboutness topic is the sentential subject, dislocation becomes optional, that is, the subject topic may stay in its canonical (preverbal) position (Spec,TP). Aboutness topics other than the subject (that is, postverbal elements) cannot stay in their canonical positions nor be dislocated to the middle field; they must appear in the left periphery. All discourse-given and contrastive topics can stay in their canonical positions or be dislocated to an available higher position (*modulo* the licensing conditions to be discussed in Section 2.3).

(49)   *Topic distribution*

	Canonical position	*Left periphery*	*Middle field*
Aboutness topic			
Subjects	✓	✓	✗
Non-subjects	✗	✓	✗
Given topic	✓	✓	✓
Contrastive topic	✓	✓	✓

While aboutness topics are unique, given and contrastive topics may reiterate.

(50)   *Topic reiteration*

Aboutness topic	Unique	e.g. (29)
Given topic	Reiteration possible	e.g. (37)
Contrastive topic	Reiteration possible	e.g. (38)

In multiple-topic constructions, aboutness topics must precede other types of topics. Given and contrastive topics may appear in either order with respect to each other.

(51)   ***Topic hierarchy:*** *Aboutness topic > Given topic / Contrastive topic*

Given topic > Contrastive topic	possible	e.g. (44)
Contrastive topic > Given topic	possible	e.g. (44)
Aboutness topic > Given topic	possible	e.g. (45)
Aboutness topic > Contrastive topic	possible	e.g. (47)
Given topic > Aboutness topic	impossible	e.g. (45)
Contrastive topic > Aboutness topic	impossible	e.g. (47)

We may now move on to the distribution of foci in Brazilian Portuguese.

2.2. Focalization

In this section, I will discuss the distribution of focalized elements in Brazilian Portuguese. I will first show that focalization in situ (i.e. in canonical position), solely marked by prosody, is a possibility in the language (in fact, it is often the preferred option), as was shown to be the case in European Portuguese (see. e.g. Costa 2000). Then, I will show that dislocation of foci to the left periphery is possible, but I will argue that it requires additional semantic or pragmatic effects, focus interpretation alone not being enough. Finally, I will show that, despite initial appearances, focalized elements cannot be dislocated to the middle field.

2.2.1. Focalization in situ

In Brazilian Portuguese, sentences in canonical order may host focus on any of its sub-constituents, that is, the focalization of any sentential element is possible in its canonical position,

without any additional dislocation, being marked solely by prosody.[24] In fact, marking the focus in the prosody alone (in the canonical order) is the preferred option for new-information scenarios, as was shown by Quarezemin (2009) in a multiple-choice experiment. The author's experiment additionally showed that focus in situ is also an option in contrastive scenarios (with cleft constructions being preferred in this case; I leave cleft constructions aside here).

The traditional "what happened" test in (52A) elicits an all-new sentence in (52B1), which in its turn must have all elements in their canonical order (in this case, subject > verb > direct object > indirect object > adverbial PP) — any deviations from that order, such as (52B2–B4), are pragmatically odd in a broad-focus scenario. From the basic order in (10B1), we can then probe into the focalization of the relevant phrasal subparts in (53)–(56). Note that the B answers may have either new-information focus interpretation, as responses to the A1 questions, or contrastive focus interpretation, as corrections to the A2 statements.

(52)   A: O que aconteceu?
            'What happened?'
       B1: O   João deu   um livro pra   Maria no   Natal.
            the John gave a   book to-the Mary in-the Christmas
       B2: #Um livro, o João deu   pra   Maria no   Natal.
            a   book the John gave to-the Mary in-the Christmas
       B3: #Pra   Maria, o João deu   um livro no   Natal.
            to-the   Mary the John gave a   book in-the Christmas
       B4: #O João deu pra   Maria um livro no   Natal.
            the John gave to-the Mary a   book in-the Christmas
            'John gave a book to Mary on Christmas.'

(53) A1: Quem deu um livro pra Maria no Natal?
        'Who gave a book to Mary on Christmas?'
    A2: O Pedro deu um livro pra Maria no Natal.
        'Peter gave a book to Mary on Christmas.'
    B: *O João*$_F$ deu um livro pra Maria no Natal.
        the John gave a book to-the Mary in-the Christmas
        '*John*$_F$ gave a book to Mary on Christmas.'

(54) A1: O que o João deu pra Maria no Natal?
        'What did John give to Mary on Christmas?'
    A2: O João deu um celular pra Maria no Natal.
        'John gave a cell phone to Mary on Christmas.'
    B: O João deu *um livro*$_F$ pra Maria no Natal.
        the John gave a book to-the Mary in-the Christmas
        'John gave *a book*$_F$ to Mary on Christmas.'

(55) A1: Pra quem o João deu um livro no Natal?
        'Who did John give a book to on Christmas?'
    A2: O João deu um livro pra Carol no Natal.
        'John gave a book to Carol on Christmas.'
    B: O João deu um livro *pra Maria*$_F$ no Natal.
        the John gave a book to-the Mary in-the Christmas
        'John gave a book *to Mary*$_F$ on Christmas.'

(56) A1: Quando o João deu um livro pra Maria?
        'When did John give a book to Mary?'
    A2: O João de um livro pra Maria no aniversário dela.'
        'John gave a book to Mary on her birthday.'
    B: O João deu um livro pra Maria *no Natal*$_F$.
        the John gave a book to-the Mary in-the Christmas
        'John gave a book to Mary *on Christmas*$_F$.'

Interestingly, direct objects in Brazilian Portuguese have two possible canonical positions. In broad-focus sentences, direct objects may either precede or follow low (vP) adverbs.[25] Thus, in (57B), the direct object *uma história* 'a story' may appear either to the left or to the right of *direito* 'properly' (lit. 'right'), with neutral informational import in either position. Expectedly, as is

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[25] I will discuss this issue in detail in Chapter 3.

shown in (58), the direct object may be focalized in either position, which was already observed

by Quarezemin (2009: 117).

(57)   A: O que aconteceu?
             'What happened?'
       B: O João não explicou {uma história} direito {uma história} pra Maria.
             the John not explained {a   story}   right   {a   story}   to-the Maria
             'John didn't properly explain a story to Mary.'

(58)   A1: Que livro o João não explicou direito pra Maria?
             'Which book did John not properly explain to Mary?'
       A2: O João não explicou {o Aspects} direito {o Aspects} pra Maria.
             'John didn't properly explain Aspects to Mary.'
       B: O João não explicou {*o Barriers*$_F$} direito {*o Barriers*$_F$} pra ela.
             the John not explained {the Barriers}   right   {the Barriers}   to   her
             'John didn't properly explain *Barriers*$_F$ to her.'

I will conclude this section by briefly addressing and refuting the possibility that focalization

in situ in the examples above (in particular the cases of contrastive focalization) may be due to a

parallelism requirement/preference, whereby the corrective element (e.g. *no Natal* in (56B)) would

appear in the same position as the corrected element of the antecedent sentence (e.g. *no aniversário

dela* in (56A2)). That contrastive focalization is possible in situ regardless of any purported

parallelism requirement can be shown by examples where contrastive foci appear in situ even in

the absence of an antecedent of the kind we have seen in the relevant examples above. This is

shown by the examples in (59) and (60), which illustrate situations where somebody reacts to what

they see (rather than hear) on TV. In both cases, the contrastive focus is realized in its canonical

(i.e., non-dislocated) position.

(59)   *Context*: Watching soccer and seeing a player miss an easy shot.
        Você tem que chutar a   bola *dentro do   gol*$_F$!
        you   have that kick   the ball   inside of-the goal
        'You have to kick the ball *inside the goal*$_F$!'

58

(60)   *Context*: Watching a baking show and seeing a competitor pour soy milk into a bowl.
        É melhor usar   *leite de vaca*F nesse   tipo de pão.
        is better   to.use milk of   cow   in-this type of bread
        'It is better to use *cow milk*F in this type of bread.'

Having thus shown that focalization in situ (i.e., in canonical positions) is possible in Brazilian

Portuguese, let us now probe into the question of whether foci can be dislocated in the language.

2.2.2. Foci in the left periphery: Focus movement vs. Movement of focus

I will show now that focalized elements can be dislocated to the left periphery of Brazilian

Portuguese. However, I will make a subtle but crucial distinction between *focus movement* and

movement of focus. Focus movement is traditionally assumed to be (formally) driven by focus,

which I will argue is not the case with the kinds of dislocations that will be discussed in this section.

Movement of focus, conversely, is an independent semantic- or pragmatic-driven operation that

happens to target (or operate on) focalized elements — as we will see, many semantic and

pragmatic effects that license movement of focus may also operate on topical elements. In other

words, focalization is independent of dislocation in the language (i.e., focalization does not require

dislocation) ― whence the possibility of focalization in situ (more precisely, in canonical

positions), which is often preferred, as was discussed in the previous section.

One could argue for the existence of focus-driven movement in BP based on examples like the

ones in (61), which show that focalized elements may appear in the left periphery of the sentence.

Based on island and stress shift tests, Santos (2003) shows that these examples are derived by

movement of the focalized direct object to the CP domain (see also Nunes & Santos 2009 for

additional arguments). First, she shows that the relevant DPs cannot be moved out of islands, as

illustrated in (62) with an *only*-DP. Having identified the empty categories in (61) as traces, the author further argues that traces, but not *pro*, allow for stress shift to occur on a stress-final verb followed by a stress-initial adverb, in order to prevent the stress clash caused by two successive stressed syllables in the same phonological phrase. Thus, the verb-adverb sequence in (61) may be pronounced as either (63a) or (63b) (where capital letters indicate stressed syllables).

(61) a. Só   o   comprimido$_i$ o   João tomou t$_i$ hoje.
          only the pill   the John took   today
          'Only the pill did John take today.'
      b. Nem   o   comprimido$_i$ o   João tomou t$_i$ hoje.
          not.even the pill   the John took   today
          'Not even the pill did John take today.'

(adapted from Santos 2003: 108)

(62) *Só o   bolo a   Maria passou mal [$_{island}$ depois de comer __ hoje].
       only the cake the Maria felt   badly   after   of eat   today
      'Only the cake, Maria felt sick after eating (it) today.'

(Santos 2003: 106)

(63) a. ...toMOU t$_i$ HOje.
          took   today
      b. ...TOmou t$_i$ HOje.   *trace*: stress shift possible
          took   today

Conversely, if the relevant empty category cannot be created by movement, like the empty direct object within the island in (64) (which is associated with a topic in the matrix clause), an object *pro* must be resorted to, which in turn does not allow for stress shift to occur.[26] The embedded verb-adverb sequence in (64) may therefore be pronounced as (65a) but not as (65b). Santos (2003) thus concludes that the possibility of stress shift in the relevant contexts can be used as a diagnostic of the nature of the empty categories in question (trace of a moved element or *pro*).

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[26] On null objects in Brazilian Portuguese, see e.g. Ferreira (2000), Nunes (2011).

(64) Esse casaco_i, o João chamou a atenção [_{island} depois que ele vestiu *pro_i* hoje].
     this coat   the John called   the attention   after   that he put.on   today
     'This coat, João called the attention after he put (it) on today.'

<div align="right">(Santos 2003: 108)</div>

(65)   a.   ...vesTIU *pro* HOje.
           put.on   today
     b.   *...VEStiu *pro* HOje.   *pro*: stress shift impossible
           put.on   today

What we have then is that the DPs fronted in (61) are both focalized and dislocated by movement. Although I do not dispute that observation, my position is that those are two separate, independent operations, the relevant fronting not being driven by focus. In other words, there is no focus-driven movement in Brazilian Portuguese; rather, fronting of a focalized element (which we may then more appropriately call *movement of focus*) takes place for independent interpretive reasons (semantic or pragmatic) that may operate on or co-occur with focalized elements.

In order to demonstrate that the fronting of focalized elements such as the ones in (61) above is not due to mere focalization, I must first point out that in the absence of any other semantic or pragmatic effects, focalization alone does not license fronting in Brazilian Portuguese. In fact, both the answer to a simple information-seeking question and a simple corrective statement are better off with the focus left in its canonical position, shown in (66) and (67), respectively.

(66)   A: No fim, o que o João comprou?
          'What did John buy in the end?'
     B1: Ele acabou   comprando *um carro*_F, no   fim das   contas
          he ended.up buying   a   car   in-the end of-the counts
     B2: #*Um carro*_F ele acabou   comprando, no   fim das   contas.
          a   car   he ended.up buying   in-the end of-the counts
          'He ended up buying *a car*_F, after all.'

(67)   A: O João comprou uma motocicleta.
            'John bought a motorcycle.'
       B1: (Não, não.) Ele acabou   comprando *um carro*F.
            no   no   he ended.up buying   a   car
       B2: (Não, não.) #Um *carro*F ele acabou   comprando.
            no   no   a   car   he ended.up buying
            '(No, no.) He ended up buying *a car*F.'

Let us now probe into the question of what semantic and/or pragmatic conditions may allow movement of focus in examples like (61). One important distinction between (61), where movement of focus is allowed, and (66)–(67), where it is not, is that the sentences in (61) both include so-called focus-sensitive particles: While (61a) includes the exhaustivity operator *só* 'only', (61b) includes the (negative polarity) scalar particle *nem* 'not even'. As we will see below, neither exhaustivity nor scalarity are exclusive of focalization contexts (that is, they may also operate on topical elements).

Interestingly, exhaustivity was argued to be the actual driving force of movement in the operation that has been traditionally analyzed as focus movement in Hungarian. Having previously argued for feature-driven focus movement in her earlier work (Horvath 1986, 1995), Horvath (2010) reanalyzes the phenomenon in Hungarian as being triggered by exhaustivity, a semantics-driven rather than discourse-driven operation. In her own words, "[s]o-called focus movement (as instantiated in Hungarian) is actually EI-Op(erator) [*Exhaustive Identification* Operator; RL] movement." (p. 1358). Horvath (2010) shows that whereas exhaustive foci must be fronted, non-exhaustive foci must appear in situ, as is shown by the contrast between (68A) and (69A) below. That fronting of *Jánost* (the answer to *who* in the question) in (68A) indicates an exhaustive answer is shown by speaker B's reply. In order for speaker B to add *Marit* to the list of people that they called up, speaker B must deny speaker A's answer (more precisely, challenge its exhaustivity).

Speaker B cannot felicitously reply as in (68B'), by agreeing that they only called up *Jánost* and asserting that they also called up *Marit*, as that would be a contradiction.

(68) Q: 'Who did they call up?'
     Speaker A: [JÁNOST] hívták   fel.
                  John-ACC   called-3PL up
                  'They called up JOHN.'
     Speaker B: Nem igaz. MARIT   is   felhívták.
                  not   true Mary-ACC also up-called-3PL
                  'Not true. They also called up MARY.'
     Compare:
           B': #Igen. És (felhívták)   MARIT   is.
                  yes   and up-called-3PL Mary-ACC also
                  'Yes. And (they called up) MARY too.'
                                        (Horvath 2010: 1359)

Conversely, in (69A) the answer to *where* in the question, namely *az interneten* 'on the internet', is given as an example of a place where the train schedule can be found. Being non-exhaustive (additionally shown by the possibility of adding another answer, *vagy telefonon is* 'or also by phone'), the focus must now stay in situ.

(69) Q: Hol   tudhatnám   meg   a vonatok menetrendjét?
          where know-can-COND-1SG PERF.PRT the trains'   schedule-POSS-ACC
          'Where could I find out about the train schedule?'
     A: Megtudhatod   (például)   AZ INTERNETEN
          PERF.PRT.-know-can-2SG for example the internet-on
          (vagy TELEFONON is).
          or   phone-on   also
          'You could find out about it (for example) on the internet (or also by phone).'
                                          (Horvath 2010: 1356)

We can then extend Horvath's analysis of focus fronting in Hungarian to sentences like (61a) in Brazilian Portuguese, with the proviso that while movement of exhaustive foci in Hungarian is obligatory, it is optional in Brazilian Portuguese — it suffices for the current discussion that the

existence of an additional independent semantic operation (such as exhaustivity) may be enough to license movement of focus in this language.

That exhaustivity is independent of focalization is shown by the fact that the particle *só* 'only' can also be used with topical elements (that is, the presence of an exhaustive particle by no means entails focalization). Recall from Section 2.1.3 that *só* can also be used with contrastive topics, as a means to single out the relevant (contrasted) sub-question, as is shown in (70), repeated from (23) above. Additionally, as is well-known, exhaustive particles may also be part of discourse-given content, as in (71).

(70)   A: Quantos livros você leu pro curso de sintaxe?   = (23)
            'How many books did you read for the syntax course?'
     B1: Bem, /só do Chomsky$_{CT}$/, \eu li\ /três livros$_F$/.
            well only of-the Chomsky I read three books
     B2: Bem, \eu li\, /só do Chomsky$_{CT}$/, /três livros$_F$/.
            well I read only of-the Chomsky three books
            'Well, I read *three books$_F$ by Chomsky alone$_{CT}$.*'

(71)   A: Quem leu só um livro pro curso de sintaxe?
            'Who read only one book for the syntax course?'
     B: /O João$_F$/ \leu só um livro pro curso de sintaxe\.
            the John read only one book for-the course of syntax
            '*John$_F$ read only one book for the syntax course.*'

Similar remarks apply to the use of scalar particles. The felicity of the focus fronting in (61b) is licensed by the additional interpretive effect that arises from the presence of the scalar particle *nem* 'not even'. Note that on the other side of that scale, the particle *até* 'even' can also license a fronted focus, as is shown in (72B1) (again with focus in situ also being a possibility in (72B2)). For independent reasons, negative elements resist topicalization (due to being non-referential), as is well-known, therefore we may not expect *nem* to occur with topics. Incidentally, though, the

positive particle *até* is perfectly well formed with topics, as in (73B), and within discourse-given content, as in (74).

(72) A: O Pedrinho come de tudo?
          'Does little Pete eat everything?'
      B1: *Até   pedra*_F esse menino quer   comer.
          even rock   this   boy   wants to.eat
      B2: Esse menino quer   comer *até   pedra*_F.
          this boy   wants to.eat even rock
          'This boy wants to eat *even rocks*_F!'

(73) A: Você leu muita coisa difícil na faculdade esse semestre?
          'Did you read a lot of difficult stuff in college this semester?'
      B: *Até   de física   quântica*_{TOP}, eu tive que ler   *mais de dez livros*_F.
          even of physics quantic   I   had that to.read more of ten   books
          'I had to read *more than ten books*_F *even on quantum physics*_{TOP}.'

(74) A: Quem gosta até de beterraba?
          'Who likes even beets?'
      B: *O Pedrinho*_F \gosta até   de beterraba\.
          the little.Peter likes   even of beet
          '*Little Peter*_F likes even beets!'

We have thus seen that the sentences in (61), repeated below in (75), involve two independent semantic operations (exhaustivity and scalarity), neither of which are exclusive of focalization contexts — that is, those are interpretive effects that take place *in addition to* and *independently of* focalization, and may in turn license movement of focus. In addition to those semantic effects, both (61a)/(75a) and (61b)/(75b) may also involve a pragmatic effect, namely a speaker-oriented evaluation in discourse. One can easily imagine a scenario where John not taking his medication properly is against expectations and is a cause of concern for the speaker. Both (61a)/(75a) and (61b)/(75b) can then be used as exclamatives to convey the speaker's evaluation that the proposition (i.e., John taking only or not even the pill) is surprising or disappointing.

(75) a. Só o comprimido$_i$ o João tomou t$_i$ hoje.   = (61)
          only the pill   the John took   today
          'Only the pill did John take today.'
      b. Nem   o comprimido$_i$ o João tomou t$_i$ hoje.
          not.even the pill   the John took   today
          'Not even the pill did John take today.'

(adapted from Santos 2003: 108)

Indeed, such speaker-oriented evaluation licenses movement of focus in the scenario depicted in (77), which contrasts with (76). Rather than simply provide new information, like (76B1) is intended to do, (77B1) additionally expresses surprise, which seems to signal a presupposition failure on the part of speaker A — John was expected to buy something at the market, but contrary to reasonable expectations, he did not buy anything.

(76) A: No fim, o que o João comprou?
          'What did John buy in the end?'
      B1: #*Nada*$_F$ ele comprou.
          nothing he bought
          '*Nothing*$_F$ did he buy.'
      B2: Ele não comprou *nada*$_F$.
          he   not bought   nothing
          'He didn't buy *anything*$_F$.'

(77) A: Você disse que o João foi no mercado hoje cedo. O que ele comprou?
          'You said that John went to the market this morning. What did he buy?'
      B1: [*Nada* (*de* *nada*)]$_F$ ele comprou! Saiu de   casa   à toa.
          nothing (of   nothing) he bought   left from house in vain
          '*Nothing (at all)*$_F$ did he buy! He left the house in vain.'
      B2: Ele não comprou [*nada* (*de nada*)]$_F$! Saiu de   casa   à toa.
          he   not bought   nothing (of nothing) left from house in vain
          'He didn't buy *anything (at all)*$_F$! He left the house in vain.'

Similar to the semantic effects discussed above, the pragmatic effect of speaker-oriented evaluation can also occur with topics. Observe the scenario in (78), where what is at stake in the question in (78A) is which grades (good or bad) the professor gives to students. In the possible replies in (78B1) and (78B2), speaker B selects as topics students who are very unlikely to get a

good grade (the worst student in the class and one who did nothing in the course). The result is that the topic-comment structures in (78B1)–(78B2) are presented as surprising — strongly implying that it is extremely easy to get a good grade in Professor Mário Silva's class.

(78) A: O Professor Mário Silva costuma dar notas boas pros alunos?
          'Does Professor Mário Silva usually give good grades to students?'
      B1: [*Pro PIOR aluno da   sala*]$_{TOP}$, ele dá   [*pelo   menos nota   8*]$_F$!
          to-the worst student of-the class   he gives for-the least   grade 8
          '*To the worst student in the class*$_{TOP}$, he gives *at least an 8*$_F$!'
      B2: [*EU   que não fiz NADA*]$_{TOP}$, ele deu   [*nota 9*]$_F$ pra mim.
          I   that not did nothing   he gave grade 9   to   me
          'He gave *grade 9*$_F$ to me, *(I) who did nothing*$_{TOP}$.'

Another discourse-oriented effect that makes movement of focus possible is D-linking. Compare the status of the B answers in the contexts (79)–(80) below. Sentence (79A) is a simple information-seeking question; the answer in (79B) is thus better off with the new-information focus left in its canonical position. In (80), however, it is part of the common ground (as established by (80A)) that John was expected to buy a book. Now the new-information focus *um livro do Chomsky* 'a book by Chomsky' can be felicitously fronted in (80B1), as the focalized part *do Chomsky* 'by Chomsky' is contained in a D-linked DP (again, fronting is not mandatory, as (80B2) is also possible). Interestingly, what D-linking does is precisely make the focus more topical — given the asymmetries in the distribution of topics and foci discussed in this chapter, it is no surprise that D-linked foci should be able to be fronted.[27]

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[27] It is not immediately obvious that examples like (80B1) should be classified as movement of focus in the sense discussed in this section. The question boils down to whether the sentential focus in (80B1) is the entire direct object *um livro do Chomsky* (the actual moving element) or only the newly-introduced, non-D-linked part *do Chomsky* (which is pied-piped). Information-Structure-wise, it seems that the former is the case, as the contrast in (i) below shows: The question asks for an entity (DP) not a property (PP).

(79)　A:　No fim, o que o João comprou?
　　　　　'What did John buy in the end?'
　　　B1:　#*Um livro do　　Chomsky*_F ele comprou.
　　　　　a　　book of-the Chomsky　he　bought
　　　B2:　Ele　comprou *um livro do　　Chomsky*_F.
　　　　　he　bought　a　book of-the Chomsky
　　　　　'He bought *a book by Chomsky*_F.'

(80)　A:　Eu sei que o João foi na livraria hoje cedo. Qual livro ele comprou?
　　　　　'I know John went to the bookstore this morning. Which book did he buy?'
　　　B1:　[Um　livro /*do*　　*Chomsky*/]_F ele comprou.
　　　　　a　　book of-the Chomsky　　he bought
　　　B2:　Ele　comprou　[um livro /*do*　　*Chomsky*/]_F.
　　　　　he　bought　a　　book of-the Chomsky
　　　　　'He bought a book *by Chomsky*_F.'

　　The discussion above provides evidence for the distinction proposed in this section between

focus(-driven) movement, which I maintain is not possible in Brazilian Portuguese, and *movement*

of focus, which I argued is possible only in the presence of additional semantic and/or pragmatic

effects that may happen to target the focalized element. I will now conclude this section by

addressing one case where it seems that the focus can move without any additional effects of the

sort discussed above. I will rule it out as being only apparent.

　　Let us first go back to (67) above, repeated below in (81). Note that the strategy at stake here

is correction (John bought a car rather than a motorcycle), indicating that the focus is contrastive

(which is better off in its canonical position in this context). Now contrast (81B2) with (82B). With

the stressing of the verb *comprou* 'bought', the contrastive element *um carro* 'a car' can now be

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(i)　　　A:　Eu sei que o João foi na livraria hoje cedo. Qual livro ele comprou?
　　　　　　'I know John went to the bookstore this morning. Which book did he buy?'
　　　　B1:　Um　livro　do　　Chomsky.
　　　　　　a　　book　of-the Chomsky
　　　　　　'A book by Chomsky.'
　　　　B2:　#Do　Chomsky.
　　　　　　of-the Chomsky
　　　　　　'By Chomsky.'

fronted, despite the fact that no exhaustivity, scalarity, speaker evaluation, D-linking, or anything

of that sort is involved.

(81) A: O João comprou uma motocicleta.   = (67)
          'John bought a motorcycle.'
      B1: (Não, não.) Ele acabou   comprando *um carro*$_F$.
          no   no   he ended.up buying   a   car
      B2: (Não, não.) #*Um carro*$_F$ ele acabou   comprando.
          no   no   a   car   he ended.up buying
          '(No, no.) He ended up buying *a car*.'

(82) A: O João comprou uma motocicleta.
          'John bought a motorcycle.'
      B: Olha, /*um carro*/ \ele\ /*comprou*/.
          look a   car   he   bought
          'Look, *a car* he *did* buy.'

The obligatory stressing of the verb in (82B) is particularly revealing in bringing the relevant

confound to light. Rather than involve contrastive focalization, (82B) involves a change of strategy

on the part of speaker B, namely that speaker B chooses to present *um carro* as a contrastive *topic*

instead, in turn making (the polarity of) the verb the relevant focus (whence the stress).

Interestingly, note that the example is better translated as '*a car* he *did* buy' rather than '*a car* he

bought' (with *did* being inserted precisely to realize the polarity focus, which is realized in I^0,

otherwise non-overt in English). Sentence (82B) is therefore better analyzed as (83B1): As a

contrastive topic, *um carro* is, expectedly, able to be fronted in the absence of additional

interpretive effects. In fact, movement of the contrastive topic is obligatory here, as the

ungrammaticality of (83B2) shows, since the contrastive topic must precede the relevant focus

(i.e., the verb) in this context — this ordering constraint will be discussed in Section 2.3.2.1 below;

sentence (83B2) is ruled out with the indicated information-structural and intonational pattern.

Crucially, if *um carro* were a focus in (83B2), it should have no problem staying in situ, as we have seen foci can do (see e.g. (81B1) above).

(83) A: O João comprou uma motocicleta.
'John bought a motorcycle.'
B1: Olha, /*um carro*CT/ \ele\ /*comprou*F/.
look a car he bought
B2: *Olha, ele /*comprou*F/ /*um carro*CT/.
look he bought a car
'Look, *a car*CT he *did*F buy.'

It is not my goal here to investigate the many and varied semantic and pragmatic effects associated with movement of focus in Brazilian Portuguese.[28] The point that I intended to make in this section is simply that sentences like the ones in (61) above, where foci do appear dislocated to the left periphery, should not be taken *prima facie* as indicative of focus(-driven) movement. Upon closer scrutiny, we have seen that sentences with fronted foci must always involve additional semantic and/or pragmatic effects that may in their turn license dislocation. As we saw, none of such effects are exclusive of focalization contexts, as they may also occur with topical and discourse-given elements. This leads us to the conclusion that focalization is not achieved by movement in Brazilian Portuguese, but rather may *co-exist* with movement (which is licensed independently), there being no focus-driven movement in the language — as is evidenced by sentences where (new-information or contrastive) focus is the only relevant interpretive effect at stake; such sentences are better off with the foci left in their canonical positions (being solely marked in the prosodic component).

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[28] See Costa & Martins (2011) for some conditions on focus fronting in European Portuguese, a language that has also been argued to allow focus in canonical positions and disallow (traditional) focus movement (see e.g. Costa 2000).

Having seen that foci may (in some well-defined cases) but do not have to move to the left periphery of the clause in Brazilian Portuguese, let us now probe into the possibility of dislocating foci to the sentential middle field.

2.2.3. Foci in the middle field (or the lack thereof)

In Section 2.1 above, we saw that indirect objects may be dislocated to the middle field when they are interpreted as (given or contrastive) topics (the canonical order being DO–IO), as is shown in (84) (see (8) and (19) above for given and contrastive topic interpretation, respectively). The question that arises now is whether focus interpretation is also possible in the same dislocated position. At first sight, it seems that this is the case. As (85B1) shows, the indirect object can in fact be focalized (be it new information or contrastive) before the direct object, as well as after it, as in (85B2), suggesting that focus movement to the middle field is possible in Brazilian Portuguese.

(84) Eu recomendei *pra Maria*$_{TOP}$ *três livros*$_F$.
      I   recommended to-the Mary   three books
      'I recommended *three books*$_F$ to *Mary*$_{TOP}$.'

(85) A1: Pra quem você deu o Programa Minimalista?
           'Who did you give The Minimalist Program to?'
      A2: Você deu o Programa Minimalista pra Soraya.
           'You gave The Minimalist Program to Soraya.'
      B1: Eu dei   *pra Maria*$_F$ o Programa Minimalista$_G$.
           I   gave to-the Mary   the Program   Minimalist
      B2: Eu dei o Programa Minimalista$_G$ *pra Maria*$_F$.
           I   gave the Program   Minimalist   to   Mary
           'I gave the Minimalist Program$_G$ *to Mary*$_F$.'

I will, however, argue now that the paradigm in (85) is actually misleading and that there is no focus movement (or movement of focus, for that matter) to the middle field. Interestingly, Quarezemin (2009) judges sentence (86), which apparently has the same structure as (85B1), as degraded (a judgment that I agree with), which now suggests that focalization of a postverbal indirect object is impossible if it precedes the direct object. The contrast between (85B1) and (86) thus creates a paradox regarding the question of whether middle-field focalization is possible in Brazilian Portuguese.

(86)   ??O João deu *para a   Maria*$_F$ um presente.
         [the John gave to   the Mary   a   gift]
         ['John gave Mary a gift.']

(Quarezemin 2009: 117)

What (85B1) and (86) do differ in is the nature of the direct object. This then leads us to hypothesize that the reason behind the contrast is a different issue ─ not whether the focalized indirect object may *precede* a non-focal direct object, but whether a non-focal direct object may *follow* a focalized indirect object. Thus, I will argue that despite appearing to involve (focus) movement of the indirect object past the direct object, (85B1) is actually derived via dislocation of the direct object to a right-peripheral topic position, where it is necessarily backgrounded and deaccented, with the focalized indirect object remaining in its canonical position (which we have already seen is possible; see e.g. (55) above).

The above analysis then predicts that if right dislocation of the direct object fails (for whatever reason), the indirect object cannot be focalized in the IO–DO order. First, observe that in Quarezemin's (86) the direct object is an indefinite DP, which tends to indicate new information and is for that reason harder to be backgrounded in a right-dislocated position. Similarly in (87) and (88), the direct objects are a negative quantifier and a bare universal quantifier, respectively,

which again may precede but not follow the focalized indirect object. As is standardly assumed, (non-referential) negative quantifiers and bare universal quantifiers cannot be topicalized (see e.g. Reinhart 1981, Rizzi 1997). Therefore, (87B2) and (88B2) are correctly predicted by the proposed analysis to be ill-formed.

(87) A: Pra quem você não deu nenhum livro?
     'Who did you give no books to?'
  B1: Eu não dei nenhum livro *pra Maria*_F.
     I not gave no book to Mary
  B2: ??Eu não dei *pra Maria*_F nenhum livro.
     I not gave to Mary no book
     'I gave no books *to Mary*_F.'

(88) A: Pra quem você deu tudo?
     'Who did you give everything to?'
  B1: Eu dei tudo *pra Maria*_F.
     I gave everything to Mary
  B2: ??Eu dei *pra Maria*_F tudo.
     I gave to Mary everything
     'I gave everything *to Mary*_F.'

Given that topic movement to the middle field is allowed (unlike focus movement), an indirect object dislocated to that position is predicted to be able to bind into the direct object if it is interpreted as a topic. This is corroborated by (89B1), where the quantifier *cada* 'each' can bind (and distribute over) the possessive pronoun *sua* 'his/her(fem)' (note that the appropriate binding configuration is only achieved if the indirect object moves past the direct object, the base order in (89B2) being ruled out).[29],[30] On the other hand, when the dislocated indirect object is (intended to be) interpreted as a focus, as in (90B), the sentence is ungrammatical, which shows that the dative

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[29] Given their semantics, distributive quantifiers are compatible with contrastive topicalization. Intuitively, when *cada* (like English *each*) distributes over students, the question under discussion about the group of students becomes a family of sub-questions about each student, with each student being the contrastive topic in its own sub-question.
[30] Note that the possessive pronoun *seu* 'his/her(masc)' and *sua* 'his/her(fem)' in general can only refer to third person in spoken language when they are bound; otherwise they must refer to second person.

argument is not moving to the middle field here, hence it fails to c-command and bind the possessive pronoun. The alternative derivation where the indirect object is focalized in situ and the direct object is right-dislocated (which I argue derives (85B1)) is ruled out because in this derivation the direct object is generated higher than the indirect object and further moves to an even higher position, disallowing the binding of the pronoun and failing to meet the distributive requirement of the quantifier.[31]

(89)   A: O que o professor devolveu pros alunos?
            'What did the teacher give back to the students?'
       B1: O professor devolveu, [*pra cada aluno$_i$*]$_{CT}$, [*a sua$_i$ melhor prova*]$_F$.
            the teacher gave.back to   each student   the his best   exam
            'The teacher gave back *to each student*$_{CT}$ *their best exam*$_F$.'
       B2: *O professor devolveu *a   sua$_i$ melhor prova pra cada aluno$_i$*.
            the teacher   gave.back the his best   exam to   each student
            'The teacher gave back to each student their best exam.'

(90)   A: Pra quais alunos o professor devolveu a sua melhor prova?
            'To which students did the teacher give back their best exam?'
       B: *O professor devolveu *pra cada aluno$_i$ a   sua$_i$ melhor prova*.
           the teacher   gave.back to   each student the his best   exam
           'The teacher gave back *to each student*$_F$ their best exam.'

To further corroborate the point made above, let us look at (91), where the quantifier appears in the direct object and the possessive pronoun appears in the indirect object. A new contrast arises (cf. (89B2)): While the base order in (91B1) is expectedly well-formed, the reversed order in (91B2) is ruled out. If focus movement to the middle field were available for the indirect object in (91B2), the sentence would be incorrectly predicted to be grammatical, as focus and topic movement do allow for the reconstruction of the pronoun (as is shown in (92)–(93)), which would

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[31] Jairo Nunes (p.c.) points out that the analysis of (90B) involving movement of the indirect object may be independently ruled out by a weak cross-over effect, which may be induced by foci but not by topics. The ungrammaticality of (90B) should thus be taken in consideration (as an argument of compatibility) in conjunction with other data in this section to which an alternative WCO-based analysis would not apply. Importantly, weak-crossover effects are not at stake in (90B) under the right-dislocation analysis defended here.

create the appropriate binding configuration, contrary to fact. Conversely, the right dislocation

analysis gives the right result for (91B2). According to this analysis, even though the direct object

is always higher than the indirect object and should thus be able to bind into it, the direct object

resists right-dislocation, this being a position reserved for backgrounded/given topics, with which

the distributive quantifier is not compatible (see the contrast between (94B) and (95B)).

(91)   A: Pra quem você entregou cada cachorro?
           'To whom did you give back each dog?'
      B1: Eu entreguei cada cachorro$_i$ *pro*   *seu$_i$ (próprio) dono*.
           I   delivered each dog   to-the its (own)   owner
      B2: *Eu entreguei *pro*   *seu$_i$ (próprio) dono* cada cachorro$_i$.
           I   delivered to-the its (own)   owner each dog
           'I gave each dog back *to its (own) owner$_F$*.'

(92)   *Nem*   *o*   *seu$_i$ pior*   *aluno$_F$* um bom professor$_i$ quer reprovar t$_F$.
       not.even the his   worst student a   good teacher   wants to.fail
       'A good teacher doesn't want to fail *even his worst student$_F$*.'

(93)   *Do*   *seu$_i$ (próprio) partido$_{CT}$*, cada$_i$ senador contratou *só*   *duas pessoas$_F$* t$_{CT}$.
       of-the his (own)   party   each senator hired   only two people
       'Each senator hired *only two people$_F$ of his (own) party$_{CT}$*.'

(94)   A: Quantos livros os alunos leram?
           'How many books did the students read?'
      B: Leram /*cinco livros$_F$*/ (cada um), \os alunos$_G$\.
          read   five   books (each one) the students
          'The students$_G$ read *five books$_F$* (each).'

(95)   A: Quantos livros cada aluno leu?
           'How many books did each student read?'
      B: ??Leu /*cinco livros$_F$*/, \cada aluno$_G$\.
          read five   books   each student
          'Each student$_G$ read *five books$_F$*.'

The data presented above strongly advocate for the absence of focus dislocation to the middle

field of Brazilian Portuguese, given the impossibility of focalizing the indirect object in that area

of the clause. At this moment, I must address the fact that the direct object can be focalized in a

vP-external position, higher than low adverbs (such as manner), as was shown in (58) above, repeated below in (96). At first sight, sentence (58B)/ (96B) could be taken as evidence for focus movement to that position.

(96) A1: Que livro o João não explicou direito pra Maria?   = (58)
          'Which book did John not properly explain to Mary?'
      A2: O João não explicou {o Aspects} direito {o Aspects} pra Maria.
          'John didn't properly explain Aspects to Mary.'
      B: O João não explicou {*o Barriers*F} direito {*o Barriers*F} pra ela.
          the John not explained {the Barriers} right   {the Barriers} to her
          'John didn't properly explain *Barriers*F to her.'

Recall from the discussion of (58) above that both positions where the direct object may appear are canonical, that is, informationally neutral in that both word orders in question are compatible with all-new interpretation, as was shown in (57). In other words, the positioning of the direct object higher than the adverb in (58B)/(96B) is independent of its informational status. In that position, the direct object may also be topical, like *o Barriers* in (97B), or neutral, like *tudo* in (98B) (note that *tudo* is a bare quantifier and thus cannot be a topic, while *muito bem* 'very well' is the focus of the sentence). I thus conclude that the possibility of focalizing the direct object in a vP-external position does not provide evidence for focus movement to the middle field.

(97) A: Pra quem o João não explicou o Barriers direito?
          'Who did John not properly explain Barriers to?'
      B: O João não explicou {o Barriers*TOP*} direito {o Barriers*TOP*} *pra Maria*F.
          the John not explained {the Barriers}   right   {the Barriers}   to Mary
          'John didn't properly explain *Barriers*TOP *to Mary*F.'

(98) A: Como o João explica as coisas pra Maria?
          'How does John explain things to Mary?'
      B: O João explica {tudo}   /*muito bem*F/ {(?)tudo}   pra ela.
          the John explain everything very   well   {(?)everything} to her
          'John explains everything to her *very well*F.'

In fact, elements that cannot have neutral interpretation in a middle-field vP-external position produce completely degraded results when dislocated to the middle field with focus interpretation. Observe (99). The adnominal PP *do Chomsky* 'by Chomsky' (a subpart of the direct object) can be focalized in situ, as in (99B1), but leads to ungrammaticality if focalized in the middle field, as in (99B2) — compare (99B2) with the acceptable (100B), where the relevant PP is focalized in the left periphery (the context in (100) is slightly modified to include an additional pragmatic effect, which we saw is required for the fronting of foci in Brazilian Portuguese). Importantly, recall from many examples in Section 2.1 above that such PPs are perfectly well placed in the middle field with discourse-given or contrastive topic interpretation, in a sharp contrast with focalization.

(99) A1: De que autor o João resenhou um livro ontem?
            'John reviewed a book by which author yesterday?'
      A2: O João resenhou um livro do Pinker ontem.
            'John reviewed a book by Pinker yesterday.'
      B1: O   João resenhou um livro *do   Chomsky*$_F$ ontem.
            the John reviewed a   book of-the Chomsky yesterday
      B2: *O João resenhou *do   Chomsky*$_F$ um livro ontem.
            the John reviewed of-the Chomsky a   book   yesterday
            'John reviewed a book *by Chomsky*$_F$ yesterday.'

(100) A: O João leu os livros de todos os autores pro curso de sintaxe?
            'Did John read the books by all authors for the syntax course?'
      B: *Nem   do   Chomsky*$_F$ o   João leu   os livros!
            not.even of-the Chomsky the John read the books
            'John didn't *even* read the books *by Chomsky*$_F$!'

Additional evidence for the lack of focus movement to the middle field of Brazilian Portuguese is provided by the lack of *wh*-movement to that area of the clause. *Wh*-movement has been argued to be akin to focus movement and to compete for the same positions in the clause, therefore being incompatible with each other, as can be seen in Rizzi's (1997) Italian examples in (101), whose

judgments carry over to Brazilian Portuguese (on the incompatibility of focus and *wh*-elements in Brazilian Portuguese, see Lacerda 2012, 2016). Considering that the language allows for both *wh*-movement (to the left periphery) and *wh-* in situ, as seen in (102a–c), one could hypothesize that *wh*-in situ actually involves movement to a postverbal focus position (see in fact Kato 2013 for a proposal along those lines). However, just like (99B2), (102d) is ungrammatical, contrasting with (102a–c).[32] On a par with (102) are the examples in (103). Even though preposition stranding is allowed in the language under some circumstances (see (103a–b)), attempting to strand a preposition under a purported *wh*-movement to a postverbal position produces a completely ill-formed sentence like (103d). The paradigms in (102) and (103) thus show that *wh*-movement to the middle field of Brazilian Portuguese is impossible, which is expected if the middle field does not include a focus position.

(101) a. *A GIANNI che cosa hai   detto (, non a Piero)?
          [to Gianni   what   have.2SG said   not to Piero]
          'TO GIANNI what did you tell (, not to Piero)?'
      b. *Che cosa A GIANNI hai   detto (, non a Piero)?
          [what   to Gianni   have.2SG said   not to Piero]
          'What TO GIANNI did you tell (, not to Piero)?'

                                                                      (Rizzi 1997: 291)

(102) a. *De que   autor* o João resenhou um livro ontem?
          of which author the John reviewed a   book yesterday
      b. Um livro *de que   autor* o João resenhou   ontem?
          a   book by which author the John   reviewed   yesterday
      c. O João resenhou um   livro *de que   autor* ontem?
          the John reviewed a   book of which author yesterday
      d. *O João resenhou *de que   autor* um   livro ontem?   (Jairo Nunes, p.c.)
          the John reviewed of which author um   book yesterday
          'John reviewed a book *by which author* yesterday?'

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(103) a. Dentro de *que* *caixa* a Maria pôs o livro?
inside of which box the Mary put the book
b. *Que* *caixa* a Maria pôs o livro dentro?
which box the Mary put the book inside
c. A Maria pôs o livro dentro de *que* *caixa*?
the Mary put the book inside of which box
d. *A Maria pôs *que* *caixa* o livro dentro?
the Mary put which box the book inside
'Which box did Mary put the book inside?'

Lastly, we need to address the question of whether the presence of additional interpretive effects (of the kind discussed in the previous section for the left periphery) may salvage movement of focus to the middle field. The paradigms in (104)–(107) show that the answer to that question is no. The relevant foci include the exhaustive particle *só* 'only' in (104)–(105) and the scalar particle *até* 'even' in (106)–(107), each case illustrated with both an indirect object and an adnominal PP as the focus. As the contrasts below consistently show, such semantic effects may license foci in the left periphery (B2 sentences), but their middle-field counterparts in the B3 sentences are all ruled out. Note that the B3 sentences are not simply pragmatically infelicitous, but ungrammatical.

(104) A: Pra quem o professor não deu nenhum livro esse semestre?
'Who did the professor not give any book to this semester?'
B1: Ele não deu nenhum livro *só* *pro* *João*F esse semestre.
he not gave no book only to-the John this semester
B2: *Só* *pro* *João*F ele não deu nenhum livro esse semestre.
only to-the John he not gave no book this semester
B3: *Ele não deu *só* *pro* *João*F nenhum livro esse semestre.
he not gave only to-the John no book this semester
'He didn't give any book *only to John*F this semester.'

(105) A: O João leu todos os livros de todos os autores esse semestre?
       'Did John read all the books by all authors this semester?'
    B1: Ele leu todos os livros *só do Chomsky*_F esse semestre.
        he read all   the books only of-the Chomsky this semester
    B2: *Só do Chomsky*_F ele leu todos os livros esse semestre.
        only of-the Chomsky he read all   the books this semester
    B3: *Ele leu *só do Chomsky*_F todos os livros esse semestre.
        he read only of-the Chomsky all   the books this semester
        'He read all the books *only by Chomsky*_F this semester.'

(106) A: Pra quem o professor deu nota boa esse semestre?
       'Who did the professor give a good grade to this semester?'
    B1: Ele deu nota boa *até pro João*_F esse semestre.
        he gave grade good even to-the John   this semester
    B2: *Até pro João*_F ele deu nota boa esse semestre.
        even to-the John   he gave grade good this semester
    B3: *Ele deu *até pro João*_F nota boa esse semestre.
        he   gave even to-the John   grade good this semester
        'He gave a good grade *even to John*_F this semester.'

(107) A: O professor comentou o artigo de algum aluno na última aula?
       'Did the professor comment on the article of any student in the last class?'
    B1: Ele comentou o artigo *até do João*_F na última aula.
        he commented the article even of-the John in-the last   class
    B2: *Até do João*_F ele comentou o artigo na última aula.
        even of-the John he commented the article in-the last   class
    B3: *Ele comentou *até do João*_F o artigo na última aula.
        he   commented even of-the John the article in-the last   class
        'He commented *even* on *John's*_F article in the last class.'

To sum up, we have seen in this section that under no condition is the dislocation of foci licensed in the middle field of Brazilian Portuguese. Unlike the left periphery, which may host fronted foci under special semantic and pragmatic circumstances, moving a focus to a medial position leads to straight-up ungrammaticality. We have also seen that apparent cases of focalization in the middle field are indeed only apparent, and are actually amenable to alternative derivations that do not involve focus movement (or movement of focus).

2.2.4. Interim summary: Focalization

Brazilian Portuguese allows for focalization to take place in canonical positions, being marked solely by prosody. When focalization is the only interpretive effect at stake, movement of foci to the left periphery is pragmatically odd. Foci in the left periphery become felicitous when additional semantic and/or pragmatic effects are present (which are as varied as exhaustivity, scalarity, speaker-oriented evaluation, and D-linking, none of which is exclusive of focalization), those effects also being possible in canonical positions. Unlike the left periphery, the middle field of Brazilian Portuguese does not accept any dislocated foci at all.

(108) *Focus distribution*

	Canonical position	Left periphery	Middle field
New-information focus	✓	✗	✗
Contrastive focus	✓	✗	✗
Focus + additional effects	✓	✓	✗

I will now proceed to discuss how the Brazilian Portuguese data discussed above may shed light on the licensing of topics and foci at the Syntax-Information Structure interface.

2.3. Licensing at the Syntax-Information Structure interface

In this section, I will use the distribution of topics and foci in Brazilian Portuguese as a probe into their interpretive requirements, in an initial assessment of their licensing conditions at the interface between Syntax and Information Structure. I will show that middle-field topics do not conform to the traditional *Topic-Comment Articulation*, which is standardly assumed for left-peripheral topics.

Considering that aboutness interpretation is only possible in the left periphery of the sentence, I will then restrict the traditional *Topic-Comment Articulation* to aboutness topics. Unlike aboutness topics, contrastive and discourse-given topics will both be argued to be licensed according to their position relative to the sentential focus (albeit for different reasons), which enables the sentential middle field to serve as a landing site for contrastive and given topics if the sentential focus is structurally lower than the middle field. Given the prominent use of the middle field for contrastive topicalization, I will pay special attention to the licensing of contrastive topics, that is, the *(Contrastive) Topic-Focus Association*. Since foci cannot be dislocated to the middle field, as discussed in Section 2.2.3, their licensing conditions will be discussed briefly at the end of this section (where I will argue that the distribution of foci in Brazilian Portuguese poses a problem for the traditional *Focus-Presupposition* articulation of the clause, which I will argue is not a necessity for the licensing of focus interpretation in this language).

2.3.1. Aboutness topics and the Topic-Comment Articulation

As standardly assumed, aboutness(-shifting) topics operate over whole sentences. As can be seen in (109), taken from Bianchi & Frascarelli (2010), aboutness topics are insensitive to the illocutionary force of their associated comments (that is, they can equally operate on declarative, imperative, and interrogative sentences), thus being "syntactically external" to it (p.78).[33] That

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[33] Following Krifka (2001), Bianchi & Frascarelli (2010) argue that aboutness topics constitute a speech act on their own, thus being conjoined to the speech act of the comment. In this dissertation, I remain agnostic to the precise semantic nature (or "size") of the comment of aboutness topics and neutrally refer to it as *sentence* (this constituent being no smaller than a full proposition). However, the fact that aboutness topics may follow speaker-oriented adverbs may cast doubt on the proposal that aboutness topics are independent speech acts (note that the adverb *francamente* 'frankly' in (iB) below qualifies the assertion in the comment, thus being part of the same speech act as the comment).

being the case, aboutness topicalization must then often involve the dislocation (either by movement or base-generation) of the topicalized constituent to a privileged left-peripheral position, where it can overtly precede its comment. This requirement can be seen in (110), repeated from (3) above, where the direct object can only work as an aboutness-shifting topic in the left periphery.

(109) a. This book, leave it on the table!   (imperative)
      b. Those petunias, did John plant them?   (interrogative)
      c. Those petunias, when did John plant them?

                                                     (Bianchi & Frascarelli 2010: 77)

(110) A: O Pedro teve que ler o Programa Minimalista pra esse curso.
          'Peter had to read the Minimalist Program for this course.'
      B1: *Já o* Barriers$_{AT}$, ele não teve que ler.
          JÁ the Barriers   he not had that to.read
      B2: *Ele não teve que ler   *já o* Barriers$_{AT}$.
          he   not had that to.read JÁ the Barriers
      B3: **Já* ele não teve que ler   o Barriers$_{AT}$.
          JÁ he not had that to.read the Barriers
          'Now *Barriers*$_{AT}$, he didn't have to read (it).'

A fact that is much discussed in the literature is the strong tendency of subjects (in subject-initial languages such as Romance) to become aboutness topics, given their privileged position at the beginning of the sentence — Reinhart (1981: 62) in fact describes subjects as "unmarked topics". One of the consequences of the topicality of (overt) subjects is their ability to serve as antecedents to null subjects in *pro*-drop languages, such as Italian. As was observed by Calabrese (1986), the empty pronoun in a sentence like (111c) can refer back to the old man but not the boy

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(i) A: Eu amo matemática!
      'I love math!'
   B: Francamente, *já eu*$_{AT}$ não entendo   nada   (de matemática).
      frankly   JÁ I   not understand nothing (of math)
      'Franky, *I*$_{AT}$ don't understand anything (about math).'

if uttered after (111a), and the other way around if uttered after (111b) (the sentences in (111) are taken from Rizzi 2010; see e.g. Frascarelli 2007 for an analysis).

(111) a. Un vecchio ha insultato un ragazzo.
           'An old man insulted a boy.'
       b. Un ragazzo è stato insultato da un vecchio.
           'A boy was insulted by an old man.'
       c. Poi, *pro* se n'è andato.
           'Then __ left'   (Rizzi 2010: 26)

The privileged position of subjects also has an additional consequence, which can now be seen in Brazilian Portuguese, which is not a traditional *pro*-drop language: Left dislocation (and consequently resumption) of subjects interpreted as aboutness topics is generally optional. As we saw in (2) above, repeated below in (112), the *já*-marked subject is licensed either in its canonical position or in a left-dislocated position. Given that the constituent following the canonical-position subject in (2B1)/(112B1) is arguably already of a big-enough size to function as a comment, the subject can have aboutness interpretation without further dislocation — given the widely assumed predicate-internal subject hypothesis, the comment in (2B1)/(112B1) includes a trace/copy of the subject itself, therefore being a fully-saturated proposition. Dislocation of the subject in (2B2)/(112B2), being available in the syntax, is thus not mandatory.[34]

(112) A: O Pedro leu dez livros do Chomsky pra esse curso.   = (2)
            'Peter read ten books by Chomsky for this course.'
       B1: *Já o João*$_{AT}$ não leu nenhum.
            JÁ the John   not read none
            'Now John$_{AT}$ didn't read any.'
       B2: *Já o João*$_{AT}$, ele não leu nenhum.
            JÁ the John   he not read none
            'Now John$_{AT}$, he didn't read any.'

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[34] I will return to the issue of topics in subject position in Chapter 4.

Interestingly, left dislocation of the aboutness-topic subject becomes obligatory if any element that is part of the propositional content of the comment moves higher than the subject position. As was seen in (5) above, repeated below in (113), the subject must be dislocated and resumed by a pronoun if the interrogative direct object is fronted, as in (113B3). If the *wh*-expression is left in situ, as in (113B4), the subject may stay in its canonical position (with left dislocation also being a possibility). Sentence (113B1) is therefore ruled out because the material following the aboutness topic is not a full sentence, whereas (113B2) violates the requirement that the subject position be filled in Brazilian Portuguese. On the other hand, sentences (113B3–B4) fully comply with the *Topic-Comment Articulation* requirements and are thus acceptable. Additionally, (113B4) can be taken as evidence against the covert movement of the *wh*-expression *qua* a focalized expression (that is, for Information Structure purposes). If the *wh*-expression moved covertly to a left-peripheral position in the acceptable (113B4), in the relevant respect (113B4) would just like (113B1), which is however ungrammatical. In turn, if the topic also moved covertly to a position higher than the *wh*-expression in (113B4), (113B4) would be just like (113B2), which is also ungrammatical. The grammaticality of (113B4) therefore shows that the *wh*-expression in situ does not undergo covert movement to the left periphery.[35]

(113) A: O Pedro leu dez livros do Chomsky pra esse curso.   = (5)
           'Peter read ten books by Chomsky for this course.'
       B1: *O que *já o João*AT* leu?
           what   JÁ the John   read
       B2: ?**Já o João*AT*, o que leu?
           JÁ   the John   what read
       B3: *Já o João*AT*, o que ele leu?
           JÁ the John   what he read
       B4: *Já o João*AT* leu   o quê?
           JÁ the John   read   what
           'What did *John*AT read?'

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[35] I will return to the issue of *wh*-questions in Chapter 3.

In sum, the traditional *Topic-Comment Articulation* requires that aboutness topics operate over a big-enough semantic constituent (no smaller than a fully-saturated proposition), and the left periphery of Brazilian Portuguese, like that of other languages, may be resorted to in order to make that happen. The discussion above implicitly explains why aboutness topicalization should never be possible in the sentential middle field, as was illustrated in (4B4) above, repeated below in (114B): The material c-commanded by a middle-field topic is not big enough to function as a proper comment.

(114)   A: O Pedro leu dez livros do Chomsky pra esse curso.
             'Peter read ten books by Chomsky for this course.'
        B1: *Já do   Pinker*AT, ele não leu   nenhum livro.   = (4B1)
             JÁ of-the Pinker   he not read no   book
        B2: *Ele não leu, *já do   Pinker*AT, nenhum livro.   = (4B4)
             he   not read JÁ of-the Pinker   no   book
             'Now *by Pinker*AT, he didn't read any book.'"

This raises the question of why middle-field topicalization is possible at all, if it is true that topics need comments. As will be argued in the next section, the two types of topics allowed in the middle field of Brazilian Portuguese (namely, contrastive and discourse-given) are not subject to the traditional *Topic-Comment Articulation* (i.e., they do not need comments) and are instead licensed with respect to their position relative to the sentential focus.

2.3.2. Contrastive topics and the Contrastive Topic-Focus Association

In the conclusion of his paper on contrastive topicalization, Büring (2003) states the following:

"It is of course possible that additional concepts like Topic-Comment or Rheme-Theme have a role to play in the explanation of other phenomena, but for those discussed here, I submit, they are irrelevant […]." (Büring 2003: 538–539)

For Büring (2003, 2016), contrastive topicalization is not achieved through a specific bipartite articulation of the sentence (such as *topic-comment*), but rather through the interaction of two elements independently marked as contrastive topic and focus. Wagner (2012) has a similar view in that respect, although a rather different analysis, where two independently marked foci create the effect of contrastive topicalization (with the highest focus being interpreted as a contrastive topic).[36] With those authors, I will assume that contrastive topicalization is not subject to the traditional Topic-Comment Articulation. I then need to address the interaction between (more precisely, the relative distribution of) the two independent elements, namely the contrastive topic and its associated focus, in light of Brazilian Portuguese data. In this section, I will discuss some discourse conditions on the relative ordering between contrastive topics and foci and the licensing of dislocation of contrastive topics. I will informally refer to the set of structural, prosodic, and interpretive requirements behind the well-formedness of contrastive topicalization as *Contrastive Topic-Focus Association* (CTFA).[37]

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[36] Given that contrastive topics and foci independently have rather different distributional and syntactic properties in Brazilian Portuguese, as was shown above (Sections 2.1.3 and 2.2, respectively), we cannot assume that they are both foci as in Wagner's (2012) analysis; I therefore assume an analysis along the lines of Büring (2003, 2016).

[37] I use the term *association*, rather than *articulation*, to allude to two facts about contrastive topicalization: (i) it is not a property of the sentence (i.e., it is not a bipartite division of the sentence), but rather (ii) what matters for it is the relationship between two syntactic constituents that are associated in Semantics to establish a function between two different sets of alternatives.

2.3.2.1. An ordering requirement between contrastive topics and foci

In discussing the licensing of the rise-fall-rise (RFR) intonational pattern, associated with contrastive topics in English, Büring (2016) points out the contrast between (115B) and (116B). The question in (115A) creates salient and relevant alternatives to *the cat*, making the RFR contour felicitous in (115B). On the other hand, the question in (116A) does not create such alternatives; the answer in (116B) entails the single proposition of the question, not making room for unresolved alternatives (i.e., alternatives which speaker B cannot "safely claim"; see Constant 2012, 2014). The RFR contour is therefore impossible on *the cat* in (116B).

(115)   A: Did you feed the animals?
        B: I fed the CAT$_{RFR}$.   (Büring 2016: 75)

(116)   A: Did you feed the cat?
        B: #I fed the CAT$_{RFR}$.   (Büring 2016: 75)

There is, however, a way to salvage (116B), which has gone unnoticed in Büring (2016). If the potential contrastive topic is fronted, as in (117B), the RFR contour is possible and the sentence now becomes felicitous. Therefore, the RFR contour in (117B) is somehow able to create the relevant set of alternatives that is lacking in the context, that is, (117B) implies that there are other animals about which speaker B cannot safely claim to have fed them. We may then (tentatively) conclude that it is precisely the fact that the contrastive topic precedes the focus (in this case, the polarity focus realized on *did*) that grants the topic the ability to establish alternatives in discourse.[38] However this CTFA effect is to be deduced, it carries over to Brazilian Portuguese. The examples in (118)–(120) replicate the pattern of (115)–(117).

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[38] This makes sense from a functional perspective. The set of alternatives indicated by the focus is dependent on the set of alternatives indicated by the contrastive topic (as was discussed in the Introduction), meaning that the set of

(117) A: Did you feed the cat?
      B: The CAT$_{RFR}$, I did (feed).

(118) A: Você deu comida pros animais?
         'Did you give food to the animals?'
      B: Eu /*dei*$_F$/ comida /*pro   gato*$_{CT}$/.
         I   gave   food   to-the cat
         'I *did*$_F$ give food *to the cat*$_{CT}$.'

(119) A: Você deu comida pro gato?
         'Did you give food to the cat?'
      B: #Eu /*dei*$_F$/ comida /*pro   gato*$_{CT}$/.
         I   gave   food   to-the cat
         '#I *did*$_F$ give food *to the cat*$_{CT}$.'

(120) A: Você deu comida pro gato?
         'Did you feed the cat?'
      B: /*Pro   gato*$_{CT}$/ eu /*dei*$_F$/ comida.
         to-the cat   I   gave   food
         '*To the cat*$_{CT}$ I *did*$_F$ give food.'

One crucial component of (118) is that speaker B takes for granted that speaker A is aware that the cat is one of the relevant animals, even though this was not explicitly mentioned. Compare the dialogues in (121) and (122). In (121), even though speaker A establishes the existence of a potential set of books (of which *Barriers* could in principle be a member), let us assume *Barriers* is not known by speaker A to be member of that set (in fact, what speaker A is asking for is precisely the list of members of that set). If that is the case, *Barriers* cannot be used as a contrastive topic by speaker B. When speaker A already knows *Barriers* is a potential member of the relevant set of books (which is reasonable to expect given the question in (122A)), speaker B may choose

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topics must be computed before the set of foci, which may explain on functional grounds the requirement that the contrastive topic must precede the focus in order to introduce the topic-focus relationship. In the Semantics, that could be translated into some sort of a binding relation, with the ordering requirement following from (asymmetric) c-command. I will however not commit to a particular semantic implementation of the Contrastive Topic-Focus Association and refer the reader to the works cited here for possible analyses.

a partial answer strategy, that is, *Barriers* was already established as a potential alternative in the set of topics and may therefore be contrastively topicalized.

(121) A: Que livros você leu esse ano?
   'Which books did you read this year?'
  B: #Eu /*não li*$_F$/ /*o Barriers*$_{CT}$/.
   I not read the Barriers
   'I *didn't read*$_F$ *Barriers*$_{CT}$.'

(122) A: Que livros do Chomsky você leu pro curso de sintaxe?
   'Which books by Chomsky did you read for the syntax course?'
  B: Eu /*não li*$_F$/ /*o Barriers*$_{CT}$/.
   I not read the Barriers
   'I *didn't read*$_F$ *Barriers*$_{CT}$.'

In (123B1–B3), the relevant contrastive topic, namely *do Chomsky* 'by Chomsky', also introduces alternatives that were not established in the previous discourse and must therefore precede the focus. Unsurprisingly, both the left periphery and the middle field may host the dislocated topic, as both areas are structurally higher than the focalized direct object. If alternatives to *Chomsky* are present in the question, as is the case in (124), the contrastive topic may stay in its canonical position, lower than the focus (with dislocation also being an option).[39]

(123) A: Quantos livros você leu pro curso de sintaxe?
   'How many books did you read for the syntax course?'
  B1: Bem, /*do* *Chomsky*$_{CT}$/, \eu li\ /*três livros*$_F$/.
   well of-the Chomsky I read three books
  B2: Bem, \eu li\, /*do* *Chomsky*$_{CT}$/ /*três livros*$_F$/.
   well I read of-the Chomsky three books
  B3: #Bem, \eu li\ /*três livros*$_F$/ /*do Chomsky*$_{CT}$/.
   well I read three books of-the Chomsky
   'Well, I read *three books*$_F$ *by Chomsky*$_{CT}$.'

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[39] Although, *do Chomsky* in (124B) can have its own intonational contour as a contrastive topic, it seems to be slightly less accented than in the cases where it is dislocated and introduces alternatives by itself (cf. (123B1–B2)). The (slight) "deaccenting" presumably comes from the fact that a post-focal contrastive topic must necessarily be discourse-given (and in this case is also second-occurrence), which is thus reflected in the prosodic component. I thank Michael Wagner (p.c.) for discussion on this matter.

(124) A: Quantos livros do Pinker e quantos livros do Chomsky você leu?
        'How many books by Pinker and how many books by Chomsky did you read?'
       B: Bem, eu li   /três livros_F/ /do   Chomsky_CT/.
           well I   read three books   of-the Chomsky
           'Well, I read *three books_F by Chomsky_CT*.'

To conclude the current argument, let us observe the interesting paradigm in (125). Here, the

B answers newly introduce *Barriers* as a contrastive topic. The canonical order in (125B1) already

places the contrastive topic higher than the focus and is thus felicitous. Now note that the focus

includes a focus-sensitive particle (namely the exhaustive operator *só* 'only'), thus qualifying for

fronting, as discussed in Section 2.2.2 above. If movement of the focus takes place, as in (125B2),

the relevant CTFA requirement is disrupted and the sentence is correctly ruled out as infelicitous.

CTFA can be repaired if the contrastive topic also moves to a position higher than the focus, as in

(125B3) (with movement of the topic to a position lower than the focus producing an even worse

result, as in (125B4)).

(125) A: Quantas vezes o João leu os livros pro curso de sintaxe?
        'How many times did John read the books for the syntax course?'
       B1: Bem, ele leu /o   Barriers_CT/ /só uma vez_F/.
           well he read the Barriers   only one time
       B2: *Bem, /só uma vez_F/ \ele leu\ /o Barriers/_CT t_F
           well   only one time he read the Barriers
       B3: Bem, /o Barriers_CT/, /só uma vez_F/ \ele leu\ t_CT t_F.
           well the Barriers   only one time he read
       B4: *Bem, /só uma vez_F/ /o Barriers_CT/, \ele leu\ t_CT t_F.
           well   only one time the Barriers   he read
           'Well, he read *Barriers_CT only once_F*.'

The ill-formedness of (125B2) additionally shows that the contrastive topic and the focus are

interpreted as such in their surface positions in these examples, that is, the focus (*qua focus*) does

not reconstruct to under the topic, and the topic (*qua topic*) does not covertly move to a high left-

peripheral position — if either operation were to take place, CTFA would be repaired and the

sentence would be predicted to be acceptable, contrary to fact. In this sense, CTFA enforces the construction of a transparent (i.e., isomorphic) configuration for the interfaces.[40]

The discussion above suggests that dislocation is an effective means to rearrange the relative positioning of contrastive topics and their associated foci, in cases where the canonical order does not meet all the interpretive and/or structural requirements imposed by CTFA. In the next section, I will probe further into the issue of dislocation of contrastive topics, as a means to compare and contrast the left periphery and the middle field of Brazilian Portuguese.

2.3.2.2. Licensing dislocation of contrastive topics

In the previous section, we saw that dislocation may be resorted to in order to repair a canonical-order configuration that does not meet CTFA well-formedness requirements. A question that follows is then why dislocation of contrastive topics is allowed at all in cases where the canonical order is already grammatical and felicitous, as is illustrated by (126B1–B2), where the newly-introduced contrastive topic (the direct object) is higher than its associated focus (the indirect object) both in its canonical position and in a dislocated left-peripheral position. Similarly, recall from (124B), repeated below in (127B1), that the already-introduced contrastive topic *do Chomsky* may stay lower than the focus. However, dislocation of the contrastive topic is also possible in this context, as in (127B2–B3).

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[40] I will discuss some well-defined exceptions to this general tendency in Chapter 3.

(126) A: Pra quem você deu o livro do Pinker?
        'Who did you give Pinker's book to?'
     B1: Bem, eu dei /o livro do   Chomsky/_CT /pro   João_F/.
        well I   gave the book of-the Chomsky   to-the John
     B2: Bem, /o livro do   Chomsky_CT/, eu dei /pro João_F/.
        well the book of-the Chomsky   I   gave to-the John
        'I gave *Chomsky's book_CT to John_F.*'

(127) A: Quantos livros do Pinker e quantos livros do Chomsky você leu?
        'How many books by Pinker and how many books by Chomsky did you read?'
     B1: Bem, eu li   /três livros_F/ /do   Chomsky_CT/.
        well I   read three books   of-the Chomsky
     B2: Bem, /do   Chomsky_CT/, \eu li\   /três livros_F/.
        well of-the Chomsky   I   read three books
     B3: Bem, \eu li\,   /do   Chomsky_CT/, /três livros_F/.
        well I   read of-the Chomsky   three books
        'Well, I read *three books_F by Chomsky_CT.*'   cf. (123)–(124)

What we have so far is that dislocation of a contrastive topic to a position higher than the focus

is obligatory for a newly-introduced contrastive topic whose canonical position is lower than that

of the focus. If the contrastive topic is already higher than the focus, further dislocation becomes

optional. We could then conclude that dislocation is optional in case the canonical order already

satisfies CTFA. However, this is not without complications. Recall from the animal-feeding

examples above, in particular (118), that the contrastive topic *pro gato* 'to the cat' could stay in its

canonical position, under the focalized verb (i.e., polarity focus), if the cat was already given as

part of a salient set of animals. Now observe (128), where the context is the same as (118).

Interestingly, the contrastive topic (which is fine in its canonical position; cf. (128B1)/(118B))

cannot be dislocated to a position still lower than the focus, such as the middle field, as in (128B2).

That serves to show that dislocation of contrastive topics is not entirely optional; although not

always required, if it does take place, it must target a position higher than the focus (even if the

contrastive topic may be licensed lower than the focus in its canonical position).

(128) A: Você deu comida pros animais?
      'Did you give food to the animals?'
   B1: Eu /*dei*_F/ comida /*pro gato*_{CT}/.
      I   gave food   to-the cat
   B2: *Eu /*dei*_F/ /*pro gato*_{CT}/ comida.
      I   gave to-the cat   food
   B3: /*Pro gato*_{CT}/ eu /*dei*_F/ comida.
      to-the cat   I   gave food
      'I *did*_F give food *to the cat*_{CT}.'

We can then use the above requirement (i.e., that a dislocated contrastive topic must be in a position higher than the focus) as a tool to compare and contrast the use of the left periphery and the middle field for contrastive topicalization. In the examples in (129)–(132), different parts of the sentence are focalized — the direct object in (129), the whole verbal predicate in (130), the polarity of the verb in (131), and the subject in (132). Unsurprisingly, given its privileged position at the left periphery, the contrastive topics in the B1 examples can be associated with any element focalized within the sentence (i.e., all B1 examples are felicitous). On the other hand, the middle field topic is "picky" with respect to the position of its associated focus. While the contrastive topic can be associated with a focalized direct object in (129B2), focalization of the verbal predicate in (130B2), the polarity in (131B2), and the subject in (132B2) leads to unacceptability — similarly to what was pointed out above regarding (125B2), the ill-formedness of (130B2)–(132B2) shows that no covert operation (such as raising of the topic or reconstruction of the focus) could take place to build the necessary CTFA configuration, again showing that the contrastive topic and the focus are interpreted as such in their surface positions (as is generally the case).

(129) A: Quantos livros você leu pro curso de linguística?
           'How many books did you read for the linguistics course?'
       B1: Olha, *do   Chomsky*$_{CT}$, eu li   *só   dois livros*$_F$.
           look of-the Chomsky   I   read only two   books
       B2: Olha, eu li,   *do   Chomsky*$_{CT}$, *só   dois livros*$_F$.
           look I   read of-the Chomsky   only two   books
           'Look, I read *only two books*$_F$ by *Chomsky*$_{CT}$.'

(130) A: Você já leu muitos livros de linguística?
           'Have you already read many linguistics books?'
       B1: Olha, *do   Chomsky*$_{CT}$, eu *já   assisti várias palestras*$_F$
           look of-the Chomsky   I   already watched several lectures
           (...mas nunca li   nenhum livro dele).
           (...but never read no   book of-him)
       B2: *Olha, eu *já   assisti*$_F$, *do   Chomsky*$_{CT}$, *várias palestras*$_F$
           look I   already watched of-the Chomsky   several lectures
           (...mas nunca li   nenhum livro dele).
           (...but never read no   book of-him)
           'I have *already seen several lectures*$_F$ by *Chomsky*$_{CT}$
           (…but never read any of his books).'

(131) A: Você resenhou os livros que você leu pro curso de linguística?
           'Did you review the books that you read for the linguistics course?'
       B1: Olha, *do   Chomsky*$_{CT}$, eu *resenhei*$_F$ os livros.
           look, of-the Chomsky   I   reviewed the books.
       B2: *Olha, eu *resenhei*$_F$, *do   Chomsky*$_{CT}$, os livros.
           look, I   reviewed of-the Chomsky   the books.
           'Look, I *did*$_F$ review the books *by Chomsky*$_{CT}$.'

(132) A: Quem resenhou os livros pro curso de linguística?
           '*Who* reviewed the books for the linguistics course?'
       B1: Olha, *do   Chomsky*$_{CT}$, *eu*$_F$ resenhei os livros.
           look   of-the Chomsky   I   reviewed the books.
       B2: *Olha, *eu*$_F$ resenhei, *do   Chomsky*$_{CT}$, os livros.
           look   I   reviewed of-the Chomsky   the books.
           '*I*$_F$ reviewed all the books *by Chomsky*$_{CT}$.'

As a consequence of the focus having to be lower than the middle-field contrastive topic, the

material preceding the topic in the B2 sentences in (129)–(132) must be part of the common

ground. In line with that is the distribution of completive information, that is, information that is

new but not prominent (in the sense of Butt and King 1996), as in (133). Note that the adverbial

essa semana 'this week' is not part of the question (it is not established in the common ground and is not at-issue); it is introduced as new information in the replies in the B sentences, although it is less prominent and relevant than the actual focus, *cinco livros* 'five books'. The adverbial is thus preferred in a position lower than the topic, rather than above it, causing (133B2b) to be the odd one out in the paradigm.[41]

(133) A: Quantos livros você resenhou pro curso de linguística?
'How many books did you review for the literature course?'
B1a: *Do   Chomsky*$_{CT}$, eu resenhei essa semana$_{CInf}$ *cinco livros*$_F$.
of-the Chomsky   I reviewed this week   five   books
B1b: *Do   Chomsky*$_{CT}$, eu resenhei *cinco livros*$_F$ essa semana$_{CInf}$.
of-the Chomsky   I reviewed five books this week
B2a: Eu resenhei, *do   Chomsky*$_{CT}$, *cinco livros*$_F$ essa semana$_{CInf}$.
I reviewed of-the Chomsky   five books this week
B2b: #Eu resenhei essa semana$_{CInf}$, *do   Chomsky*$_{CT}$, *cinco livros*$_F$.
I   reviewed this week   of-the Chomsky   five books
'I reviewed *five books*$_F$ *by Chomsky*$_{CT}$ this week$_{CInf}$.'

The discussion above highlights how the use of the sentential middle field is a lot more restricted than the left periphery. In the left periphery, a contrastive topic precedes the whole sentence, in principle granting the ability to any sentential element to be its associated focus. The choice of focus is thus, in a sense, free to the speaker. In middle-field topicalization, conversely, the requirement that the focus must follow the topic causes a chain reaction, imposing restrictions on the informational role of other elements of the sentence. The material preceding the contrastive topic must be previously established in the discourse or (forcefully) accommodated into the

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[41] The relevant contrast is subtle, arguably due to the fact that completive information, being non-prominent, can be more easily accommodated into the common ground than prominent new information, especially if (133B2b) is judged after (133B1a)–(133B2a). Isolating the middle-field test creates a sharper contrast, as in (i).
(i) A: Qual filme você recomendou pros seus amigos?
'Which movie did you recommend to your friends?'
B: Eu recomendei   {#na   sexta-feira}, *pro   João*$_{CT}$, *o   Avengers*$_F$ {na   sexta-feira}.
I   recommended {#in-the Friday}   to-the John   the Avengers {in-the Friday}
'I recommended *Avengers*$_F$ *to John*$_{CT}$ on Friday.'

common ground, whereas completive information is better off following the topic. The use of the middle field thus seems to demand more engagement on the part of the speakers, that is, the middle field faces much stricter felicity conditions than the left periphery.

In Section 2.3.2.1 above, we saw that contrastive topics must precede their associated foci when they are newly-introduced — that is, when the use of a contrastive topic itself is what places the topic in a relevant set of alternatives in discourse — and that contrastive topics may stay in their canonical positions lower than the foci when the relevant set of alternatives was previously established and made salient in the discourse. In this section, however, we saw that even in the latter case contrastive topics lose their ability to stay lower than the focus when they are dislocated. This property, as will be discussed in the next section, is shared with discourse-given topics.

2.3.3. Discourse-given topics and the Given-before-new effect

While contrastive topics bear a direct semantic relationship with their associated foci (that is, a semantic operation binds or links an element from a set of alternative topics to an element from a set of alternative foci), this is not the case with discourse-given topics. As we saw in Section 2.1.2 above, unlike contrastive topics, discourse-given topics can always stay in their canonical positions, even if lower than the focus. However, like contrastive topics, once discourse-given topics are dislocated they must be realized in a position higher than the focus, as is shown in (134), repeated from (10) above. The question then becomes why discourse-given topics share the latter distributional requirement with contrastive topics, given that they have a different relationship with foci (crucially, one that does not depend on a specific semantic operation).

(134) A: Quem deu um presente pra Maria na festa de natal?   = (10)
           ''Who gave a gift to Mary at the Christmas party?'
       B1: /O João_F/ \deu um presente [pra   Maria_G] [na   festa de Natal_G]\.
            the John   gave a   gift   to-the Mary   in-the party of Christmas
       B2a: ??/O João_F/ \deu [pra   Maria_G] um presente [na   festa de Natal_G]\.
            the John   gave to-the Mary   a gift   in-the party of Christmas
       B2b: ??/O João_F/ \deu [na   festa de Natal_G]   um presente [pra   Maria_G]\.
            the John   gave in-the party of Christmas a   gift   to-the Mary
       B3a: */O João_F/ \deu [pra   Maria_G] [na   festa de Natal_G]   um presente\.
            the John   gave to-the Mary   in-the party of Christmas a   gift
       B3b: */O João_F/ \deu [na   festa de Natal_G]   [pra   Maria_G] um presente\.
            the John   gave in-the party of Christmas to-the Mary   a   gift
       B4a: \Pra   Maria_G\, /o João_F/ \deu um presente na   festa de Natal_G\.
            to-the Mary   the John   gave a gift   in-the party of Christmas
       B4b: \[Na   festa de Natal_G]\, /o João_F/ \deu um presente [pra   Maria_G]\.
            in-the party of Christmas the John   gave a gift   to-the Mary
            '*John_F* gave a gift to Mary_G at the Christmas party_G.'

I will suggest that contrasts such as the ones seen in (134) are the result of an interface effect

known in the literature as "given-before-new". This effect, observed in the form of either a

preference or a requirement, has been observed in a number of languages and discussed by a

number of authors and states what the name itself suggests: Discourse-given elements are better

off (preferably or mandatorily, to be distinguished below) when they precede, rather than follow,

discourse-new and focal elements. Let us see how this interface effect may manifest itself.

Let us start by looking at the case of Slavic languages, where the given-before-new effect is a

hard constraint — an observation that traces back at least to the Prague School (see e.g. Mathesius

[1929] 1983, Firbas 1964) and has been addressed by a number of authors (e.g. Baylin 1995,

Stjepanović 1999, 2003, Kučerovà 2012). In these languages, discourse-given elements must

mandatorily precede discourse-new material (that is, new-information foci consistently appear

last).[42] Observe for instance the Czech data from Kučerovà (2012) in (135) and (136) below. In

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[42] Note that the given-before-new effect does not apply to contrastive foci in Slavic languages, where contrastive foci
must move to a preverbal position and often appear sentence-initially (see e.g Stjepanović 1999). Note additionally
that Stjepanović (2003) presents binding evidence that even last-position new-information foci in Serbo-Croatian may

the B answers in (135), only the direct object is new information. The canonical position of the direct object is where it appears in (135B1), which is a final position and thus allows for its focalization. In compliance with the given-before-new requirement, any order where the new information *knížku* 'a book' precedes discourse-given material is ruled out, as in (135B2–B4).

(135) A: What did Mary give to Paul?
       B1: Marie   dala Pavlovi   *knížku.*   *Czech*
            Marie.NOM gave Pavel.DAT book.ACC
            'Marie gave Pavel a book.'
       B2: #Marie   dala *knížku*   Pavlovi.
            Marie.NOM gave book.ACC Pavel.DAT
       B3. #Marie   *knížku*   dala Pavlovi.
            Marie.NOM book.ACC gave Pavel.DAT
       B4: *#Knížku*   Marie   dala Pavlovi.
            book.ACC Marie.NOM gave Pavel.DAT   Kučerovà (2012: 10)

Now compare the paradigm in in (135) with (136), where only the subject is focalized in the B answers. With the canonical order being S–V–IO–DO, now all given elements (including the verb) must precede the subject, with the subject-final option in (136B1) being the only acceptable one in the paradigm.[43]

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be (semantically) interpreted in higher positions, which shows that the given-before-new requirement is a surface constraint in that language — the reader should bear in mind that the given-before-new effect is a matter of Information Structure rather than LF/Semantics. I will return to the dissociation between Information Structure and other components of the grammar in Chapter 3.

[43] In Kučerovà's (2012) analysis, all given elements must scramble to a higher position, above a postulated Given operator which creates a given-new partition in the sentence. In this case, the given-before-new effect is derived from an operation applying to given elements. For a different view, namely that the effect is derived from an operation applying to the new-information focus, see Stjepanović (2003). Stjepanović derives the final positioning of the focus from the Nuclear Stress Rule, which in turn allows for the pronunciation of the lower copy of the focus in final position. In Brazilian Portuguese, I will argue below, the given-before-new effect is derived from an operation (namely, dislocation) targeting discourse-given topics.

(136) A: Who gave the book to Paul?
       B1: Pavlovi   knížku   dala *Marie*.   *Czech*
            Pavel.DAT book.ACC gave Marie.NOM
            'Marie gave the book to Pavel.'
       B2: #Pavlovi dala *Marie*   knížku.
            Pavel.DAT gave Marie.NOM book.ACC
       B3: #dala *Marie*   Pavlovi   knížku.
            gave Marie.NOM Pavel.DAT book.ACC
       B4: #*Marie*   dala Pavlovi   knížku.
            Marie.NOM gave Pavel.DAT book.ACC   Kučerovà (2012: 11)

In other languages, the given-before-new effect may be manifested as a preference rather than a requirement.[44] In English, for instance, the effect is often observed in the so-called dative alternation, as illustrated in (137). Many authors (e.g. Krifka 2003, Bresnan et al. 2007, Lacerda 2017) have shown that the choice between the prepositional dative construction and the double object construction is conditioned (among other factors) by the informational status of the verbal complements, that is, prepositional datives are preferred when themes are more topical than recipients, while double objects are preferred when recipients are more topical than themes. Bresnan et al. (2007) argue that discourse givenness is a strong predictor of the dative alternation, but this is not an absolute requirement — in fact, the alternation is probabilistically conditioned by a constellation of factors related to both form and meaning (which tend to co-occur and operate together in what is known as "harmonic alignment"), such as discourse givenness, animacy, definiteness, pronominality, and phonological length.

(137) a.   John gave his book to Mary.   *Prepositional dative construction*
       b.   John gave Mary his book.   *Double object construction*

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[44] It would be interesting to derive in a principled way the distinction between languages where given-before-new is a requirement and languages where it is a preference. I leave the matter for future work.

As is clear from examples (134B1), (134B4a) and (134B4b) above, discourse-given elements may follow new information in Brazilian Portuguese, therefore the given-before-new effect cannot be stated as a hard requirement in the Slavic fashion. Still, it seems reasonable to analyze the unacceptability of examples (134B2a)–(134B3b) as following from it. What we need then is a rationale to make a distinction between cases where discourse-given topics stay in situ and the cases where they are dislocated (and thus subject to the ordering constraint).

I would like to suggest that what makes discourse-given topics subject to the given-before-new effect is precisely the informational prominence that they acquire upon dislocation. Importantly, note that given topics in situ are usually deaccented and also prone to deletion, as was pointed out in the discussion of example (13) above, repeated below in (138). In other words, discourse-given topics in situ have minimal informational import, therefore it is reasonable to assume that they do not clash with the identification of the sentential focus.[45]

(138) A: O que você deu pra Maria na festa de Natal?   = (13)
            'What did you give to Mary at the Christmas party?'
       B1: Dois livros.
            two   books
            'Two books.'
       B2: Eu dei   dois livros.
            I   gave two books
            'I gave [her] two books.'

Dislocation, however, increases the informational import of discourse-given topics, as they acquire prominence and increased accessibility in actual conversation, as was discussed in Section

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[45] One may even wonder if discourse-given topics in situ are actually *topical*, rather than simply *given*. Since this issue affects one's definition of topics rather than the facts, I will continue to label them as topics, as is common practice. To give an argument to that effect, note that while dislocated given topics are more prominent than given topics in situ, given topics in situ are more prominent than their deleted counterparts. Choosing to pronounce rather than delete a given topic can thus be seen as a discourse strategy with respect to a prominence scale: Dislocated > non-deaccented in situ > deaccented in situ > deleted.

2.1.2 above. With dislocation thus being used to indicate a (different) communicative strategy on the part of the speaker, it follows that dislocated given topics must be computed for the given-before-new effect, which is so commonly seen in topic-focus interactions across languages.[46]

This rationale can also be extended to contrastive topics. Recall from Section 2.3.2.1 above that the condition for contrastive topics to be able to follow foci is precisely that the contrastive topics be previously established in discourse — more precisely, their membership in a relevant set of alternatives. In other words, in order for the Contrastive Topic-Focus Association to be met in the F–CT order, the contrastive topic must be marked as given: *F–CT$_{NEW}$ / ✓F–CT$_{GIVEN}$. With dislocation affecting the informational status of the relevant topic (CT$_{GIVEN}$) in the manner described above, it expectedly becomes subject to the given-before-new effect.

2.3.4. Foci and the Focus-Presupposition Articulation

Unlike topics, foci have a much more restricted distribution in Brazilian Portuguese. As was discussed in Section 2.2 above, focalized elements may stay in their canonical positions and also be dislocated, but when dislocated they can only appear in the left periphery of the sentence and only in the presence of additional interpretive effects; they are completely barred from the middle field. In this section, I will briefly discuss how these observations may shed light on our understanding of the structural licensing of focalization — in particular, I will argue that the Brazilian Portuguese data pose a problem for the view that focalization is licensed through a

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[46] One could argue that what makes discourse-given topics subject to the given-before-new effect is the increased prosodic prominence they gain upon dislocation, rather than their increased informational import. While this may be a reasonable alternative analysis for given topics, this rationale does not extend to contrastive topics, which are already prosodically prominent in their base positions, even when following the focus. As we have seen, dislocated given and contrastive topics are subject to the given-before-new effect in a similar fashion. A uniform analysis should therefore be preferred.

bipartite articulation of the clause (i.e., the *Focus-Presupposition* articulation) and therefore favors analyses whereby foci are semantically computed in their sentence-internal positions (as in e.g. Rooth 1985; I will though remain agnostic about what a semantic analysis of focalization should look like).

Recall from the Introduction that one particular view on focalization (see e.g. Rizzi 1997) assumes that foci are licensed at the Syntax-Information Structure interface in a Focus-Presupposition configuration, as in (139), whereby the focalized element is articulated (via precedence and/or c-command) with the presupposed content. Traditional focus movement, most commonly observed when involving the left periphery of the clause, seems to conform with this articulation; after all, focus movement to the left periphery creates an overt and transparent template of the configuration in (139). The availability of such constructions in Brazilian Portuguese, as in (140), at first sight seems to pose no problem for this approach.

(139)   *Focus-Presuppostion articulation*
         $Focus_i$ [$_{Presupposition}$ t_i]

(140) a.   Só   o   comprimido$_i$ o   João tomou t_i hoje.   = (61)
             only the pill   the John took   today
             'Only the pill did John take today.'
       b.   Nem   o   comprimido$_i$ o   João tomou t_i hoje.
             not.even the pill   the John took   today
             'Not even the pill did John take today.'

                                                                        (adapted from Santos 2003: 108)

Upon closer scrutiny, however, problems start to appear. As we saw in Section 2.2.2, both new-information and contrastive foci in Brazilian Portuguese are only licensed in a fronted position when additional semantic and/or pragmatic effects are involved, which challenges the idea that fronting takes place due to mere focalization — and arguably to comply with the Focus-

Presupposition articulation. This of course does not mean that foci are not interpreted with respect to a presupposition, but simply casts doubt on the idea that this relationship (between a focus and its presupposition) must be achieved by a specific bipartite articulation of the clause (syntactically so). To add to that problem, we have also observed that while fronting of foci is subject to special interpretive conditions in Brazilian Portuguese, there is no situation where a focus cannot stay in situ (which is in fact the only option in pure-focus scenarios, as in (141)–(142)).[47] If the Focus-Presupposition articulation seen in (139) above were an interface necessity, we should expect focalization in situ to be the exception, not the rule. This is at odds with the facts.

(141) A: No fim, o que o João comprou?   = (66)
            'What did John buy in the end?'
       B1: Ele acabou   comprando *um carro*_F, no   fim das   contas
            he   ended.up buying   a   car   in-the end of-the counts
       B2: #*Um carro*_F ele acabou   comprando, no   fim das   contas.
            a   car   he ended.up buying   in-the end of-the counts
            'He ended up buying *a car*_F, after all.'

(142) A: O João comprou uma motocicleta.   = (67)
            'John bought a motorcycle.'
       B1: (Não, não.) Ele acabou   comprando *um carro*_F.
            no   no   he   ended.up buying   a   car
       B2: (Não, não.) #Um *carro*_F ele acabou   comprando.
            no   no   a   car   he ended.up buying
            '(No, no.) He ended up buying *a car*_F.'

The hypothesis that the articulation in (139) cannot be an interface necessity is corroborated by the observation that foci are interpreted as such (*qua* foci) in their surface positions (see the discussion around examples (125) and (130)–(132) above). In other words, focalization in situ does not involve covert movement to the left periphery (as was argued by Costa 2000 to be the

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[47] I am of course excluding specific focus constructions such as clefts (where dislocation of foci is arguably due to the additional elements introduced in the structure), which abound in Brazilian Portuguese but are put aside in this dissertation; see e.g. Kato & Mioto (2011, 2016), Mioto (2012), Resenes (2014).

case in European Portuguese), at least not for information-structural reasons (in particular, to comply with the Focus-Presupposition articulation). In other words, with respect to Information Structure, the locus of interpretation of foci is immaterial to the Focus-Presupposition articulation.

Again, this does not mean that foci are interpreted without regards to a presupposition. The ban on moving foci to the middle field of Brazilian Portuguese, which we saw in Section 2.2.3, in fact seems to depend on the presupposition. If a focus is interpreted with respect to a presupposition (which I do not challenge), moving the focus around still inside the presupposition (as schematized in (143)) does not change the Focus-Presupposition configuration. If movement of foci must be licensed by an interpretive output, only completely removing the focus from within the presupposition affects their (configurational) relationship. This new configuration, coupled with accessibility to the CP (the discourse domain), may in turn explain the additional interpretive effects that may (in fact, must) arise when foci are fronted in Brazilian Portuguese.[48]

(143)   *[$_{\text{Presupposition}}$ Focus$_i$ t$_i$]

The Brazilian Portuguese data therefore pose a significant problem to the idea that foci must be licensed in a bipartite articulation of the clause whereby a focus must precede and/or c-command a presupposition, that is, the relationship between the focus and the presupposition does not have to be transparently created in the Syntax in the manner of (139) above — for the Information Structure component, it may suffice that once the (perhaps unique) focus is identified,

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[48] This rationale does not rule out the possibility that other languages may allow repositioning of the focus internally to the presupposition, since dislocation of foci may be triggered for a variety of reasons. In Slavic languages, for instance, while new-information foci must appear in final position (arguably in situ), contrastive foci must move to a preverbal (often initial) position (see e.g Stjepanović 1999), suggesting that the repositioning of the focus is driven by an independent feature *contrast* (see Neeleman et al. 2009 for a proposal along those lines). In Brazilian Portuguese, no independent factor ever imposes repositioning of the focus (which can always stay in situ), and middle-field focalization is systematically bad. Importantly, contrary to Belletti (2004) and much derived work on Romance postverbal focalization, the elements tested in this dissertation have no other (formal or interpretive) reason to be in or pass through the middle field of the clause and, again, focalization is ruled out in that area of the clause.

everything else is interpreted as presupposition (by default). I will not decide here on what a *semantic* theory of focus should look like (the reader is referred to abundant literature on the topic — or, should I say, *focus*). The discussion in this section simply intends to make the case that a theory of focalization at the Syntax-Information Structure interface should not overlook the fact that in some languages (Brazilian Portuguese included) focalization may not involve any overt or covert movement at all, as well as the fact that even in a language where dislocation of foci is in principle available (although not formally-driven), it is subject to additional interpretive requirements and is restricted to the left periphery of the clause. I will return to these issues when discussing the syntactic implementation of Information Structure-related phenomena in Chapter 3 and Chapter 4.

2.4. Conclusion

In this chapter, I have shown that a number of informational asymmetries exist between the left periphery and the middle field of the sentence in Brazilian Portuguese. The language proves itself to be rich in word-order permutations related to Information Structure in allowing for two areas of the clause to host elements with non-neutral interpretation. Still, from the observation of the distribution of topics and foci in these two areas of the clause, an interesting picture emerges, which is represented in (144): The informational functions of the middle field are a proper subset of those of the left periphery.

(144) *Informational licensing per area of the clause*

New-information focus[1]
Contrastive focus[1]
Aboutness topic[2]   *Left periphery*
Discourse-given topic[3]
Contrastive topic[3]   *Middle field*
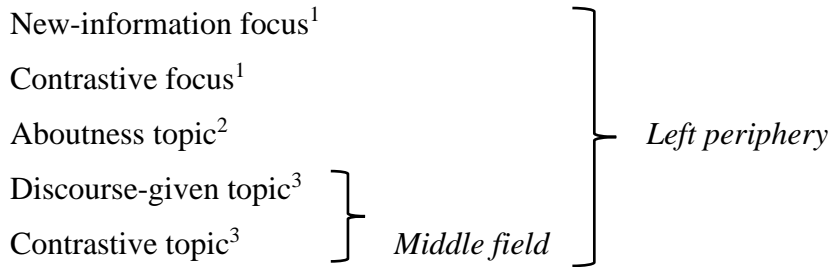
[1] With additional interpretive effects
[2] Preceding all propositional material
[3] Preceding the sentential focus

When it comes to the licensing of topics and foci in canonical positions, a different picture emerges, as seen in (145). In principle, all informational roles can be licensed in canonical positions, bearing in mind that factors relative to the interpretation of aboutness and contrastive topics may independently constrain licensing in situ of some elements.

(145) *Informational licensing in canonical positions*

New-information focus			*possible*
Contrastive focus			*possible*
Aboutness topic			
	Sentence-initial subject		*possible*
	Sentence-internal element		*not possible*
Discourse-given topic			*possible*
Contrastive topic			
	Given	above focus	*possible*
		under focus	*possible*
	New	above focus	*possible*
		under focus	*not possible*

What these results show is that rather than be associated with specific, absolute positions in the clause, each informational role has a specific, intricate set of well-formedness conditions that must be met in the mapping from Syntax to Information Structure. Importantly, these well-formedness conditions are evaluated in relative terms; the distribution of each information-structure element is constrained by other information-structure elements it may depend on and interact with. The subset-superset relationship between the middle field and the left periphery is particularly revealing in favor of a view of the Syntax-Information Structure interface that is based on the relative structural height of the relevant elements rather than their absolute positions: Elements in the left periphery c-command everything that elements in the middle field do, while the opposite is not the case — in a clear subset-superset relationship, as in (146). Thus, as shown in (144) above, elements in the left periphery can have all the informational functions that are available in the middle field, while the opposite is not the case (we can then hypothesize that this should hold in every language).

(146) ([Left periphery [… ([middle field […]])]])
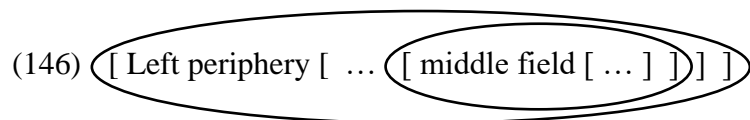
As we saw in this chapter, some conditions imposed on topics and foci can be met in canonical positions, others in the middle field, and others in the left periphery. Some conditions must be met in situ while others must be met with dislocation (which in turn adds its own constraints). This state of affairs strongly advocates for a decomposition of notions such as topic and focus, which the above results clearly show are not syntactic or informational primitives. Coarse generalizations that fail to account for that fact are doomed to be short-lived. Once all primitives and licensing conditions are identified, the results will be expectedly deterministic. I have barely scratched the surface here, but I hope to have demonstrated that much to be true.

Chapter 3

The structural make-up of the middle field

Having discussed matters concerning the distribution of topics and foci in Brazilian Portuguese in Chapter 2, in this chapter I will probe deeper into the structural make-up of the sentential middle field of the language. In particular, I will investigate the realization of elements at the edge of the vP domain, in order to shed light on the question of what the region of the clause between the traditional TP and vP looks like in Brazilian Portuguese. The analysis of the syntactic restrictions imposed on middle-field elements will then lead us to a discussion of their consequences for the theory of the mapping from Syntax to Information Structure.

The chapter is organized as follows. In Section 3.1, I will investigate the structural make-up of the edge of the verbal domain in Brazilian Portuguese. In Section 3.1.1, I will investigate an operation which I will refer to as "object shift", whereby the highest internal argument of the verb moves to a unique vP-external A-position. In Section 3.1.2, I will discuss middle-field topicalization and argue that middle-field topics are restricted to the edge of vP, a position that is too low to have aboutness topic interpretation. In Section 3.2, I will investigate the syntactic constraints on middle-field Topic-Focus Association. In Section 3.2.1, I will discuss a surprising phase-based locality constraint on Topic-Focus Association, which will be taken to validate the proposed structural make-up of the Brazilian Portuguese middle field. In Section 3.2.2, I will explore the consequences of the observed locality constraint for the theory of Information Structure and I will argue that the observed consequences provide evidence for the independent status of Information Structure in the grammar. Finally, Section 3.3 concludes the chapter.

3.1. The edge of vP in Brazilian Portuguese

Considering that Brazilian Portuguese is an SVO language where the verb obligatorily moves to the TP domain (see e.g. Tescari Neto 2013), the appearance of topics between the verb and the direct object, as in (1B2) and (2B2), raises the question of where exactly in the clausal spine middle-field topics are located in this language. More precisely, the question that will be addressed in this section is what the region of the clause between the traditional TP and vP looks like in Brazilian Portuguese (cf. (3)). The investigation of the structural properties of the middle field of the clause will then help us shed light on the distributional patterns of topics and foci in middle-field postverbal positions that were discussed in Chapter 2.

(1)   A: Quantos livros você leu pro curso de sintaxe?
              'How many books did you read for the syntax course?'
        B1:   Eu li   *dois livros do   Chomsky*$_F$.
              I   read two   books   of-the Chomsky
              'I read *two books by Chomsky*$_F$.'
        B2:   Eu li,   *do   Chomsky*$_{CT}$, *dois livros*$_F$.
              I   read of-the   Chomsky   two   books
              'I read *two books*$_F$ *by Chomsky*$_{CT}$.'

(2)   A: Quantos livros você deu pra Maria?
              'How many books did you give to Mary?'
        B1:   Eu dei   *dois livros*$_F$ *pra   Maria*$_G$.
              I   gave two   books   to-the Mary
        B2:   Eu dei,   *pra   Maria*$_G$, *dois livros*$_F$.
              I   gave to-the   Mary   two   books
              'I gave *Mary*$_G$ *two books*$_F$.'

(3)   [$_{TP}$ [??? [$_{vP}$ [$_{VP}$]]]]

In investigating the middle field of Brazilian Portuguese, I will argue in Section 3.1.1 that Brazilian Portuguese has a vP-external "object shift" position, made available by an independent projection whose specifier can host the highest internal argument of the verb (XP in (4); the label

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XP is used for ease of exposition). In Section 3.1.2, I will argue that middle-field topics are located immediately above the object shift position, as in (5), a position that is too low to allow for aboutness topic interpretation. In Section 3.2.1, I will argue that Topic-Focus Association is subject to a phase-based locality constraint whereby middle-field topics and their associated foci must be in the same spell-out domain, which I will argue can be accounted for if middle-field topics are adjoined to XP, as in (5), and XP is a phase. Finally, in Section 3.2.2, I will take advantage of the observed locality constraint and explore its consequences for the mapping from Syntax to Information Structure.

(4) $[_{TP}$ $[_{XP}$ *object shift* $[_{X'}$ $\mathbf{X^0}$ $[_{vP}$ $[_{VP}$ $]$ $]$ $]$ $]$ $]$

(5) $[_{TP}$ $[_{XP}$ *middle-field topics* $[_{XP}$ *object shift* $[_{X'}$ $\mathbf{X^0}$ $[_{vP}$ $[_{VP}$ $]$ $]$ $]$ $]$ $]$ $]$

The restrictions observed in this chapter on the distribution of topics and foci in postverbal (middle-field) positions will then ultimately help us address the question of how to best analyze the mapping from Syntax to Information Structure in Brazilian Portuguese.

3.1.1. Extended vP: Object shift

To start our discussion of the middle field of Brazilian Portuguese, I will argue for the existence of a vP-external position to which verbal objects can move. I will (informally) refer to movement to this position as "object shift", but crucially without implying that it has the same properties ascribed to object shift in other languages (see e.g. Holmberg 1986, Lasnik & Saito 1991, Diesing

1996, Bošković 1997).[1] I will argue that object shift in Brazilian Portuguese is not semantically or informationally motivated; rather, object shift is akin to subject movement in relevant respects and is thus best analyzed as an instance of A-movement.[2] Object shift will be shown to target the highest *internal argument* of the verb, much like subject movement targets the highest (of all) arguments of the verb.

3.1.1.1. Object shift at the edge of vP

As we saw in Chapter 2, a direct object may surface either before or after a manner adverb in a broad-focus sentence (in all-new information scenarios). In (6B), for instance, *uma história* 'a story' can either precede or follow *direito* 'properly' (lit. 'right'). Given the standard assumption that manner adverbs take scope over the event denoted by the verb and are base-generated in a structurally low position, I adopt the minimal structure in (7) for the vP of Brazilian Portuguese, where the manner adverb is adjoined to vP. Importantly, I also assume that direct objects are base-generated higher than indirect objects in the language (see e.g. Scher 1996, Armelin 2011, Cépeda & Cyrino 2020), although the internal arrangement of the VP is immaterial for current purposes. With those reasonable assumptions, we can then conclude that the direct object can move to a vP-external position in (6B).[3]

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[1] I use the term "object shift" in this dissertation for ease of exposition, as the position in question usually hosts direct objects (although it is not limited to them).

[2] What I refer to as "object shift" in Brazilian Portuguese is in fact similar to what Lasnik & Saito (1991) and Bošković (1997), among others, argue is object shift in English, which is a different operation from the one discussed by Holmberg (1986) and Diesing (1996) for other Germanic languages. As we will see below, object shift in Brazilian Portuguese is not semantically motivated and targets a relatively low position in the clause (lower than sentential adverbs).

[3] I will not go into the issue of the optionality observed in (6B). What is crucial here is that, with the adverb being adjoined at least as low as at the vP, the fact that the object can precede it in (6B) shows that the object can (at least optionally) surface in a vP-external position even when it follows the verb.

(6)   A: O que aconteceu?
           'What happened?'
        B: O João não explicou {uma história} direito {uma história} pra Maria.
            the John not explained {a   story}   right   {a   story}   to-the Maria
            'John didn't explain a story to Mary properly.'

(7)   [$_{vP}$ *manner adverb* [$_{vP}$ *agent* [$_{v'}$ v^0 [$_{VP}$ *theme* [$_{V'}$ V^0 *goal*]]]]]

Further evidence that the direct object can optionally leave the vP comes from its relative positioning with respect to the floating quantifier *cada um* 'each one', as in (8). Lacerda (2012, 2016) argues that *cada um*, when following the direct object in what resembles the so-called "binominal each" construction in English (in the sense of Safir & Stowell 1988, Stowell 2013), marks the edge of vP. More precisely, given that *cada um* in sentences like (8) is related to the subject (and is thus base-generated in the external argument position), the lowest possible position where it can be stranded (in a Sportiche 1988-style analysis) is Spec,vP. The fact that *dois presentes* precedes *cada um* in (8a) therefore shows that *dois presentes* is located in a vP-external position (to be determined more precisely below); as was the case in (6B) with respect to the manner adverb, the direct object here may appear on either side of the floating quantifier; like (8a), (8b) is equally well-formed and felicitous in an all-new context. Based on these observations, we can then assume the structure of the middle field/extended verbal domain represented in (9), which includes an additional projection XP (to be further motivated below), whose specifier can host shifted objects (the exact category of XP being immaterial here).[4]

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[4] Sentence (8b), where the direct object follows the floating quantifier is thus potentially ambiguous between structures (ia), where *cada um* floats in Spec,vP, and (ib), where *cada um* floats in a higher position (see Bošković 2004 on the latter).

(i)   a.   [$_{TP}$ Os alunos deram [$_{vP}$ cada um [$_{vP}$ dois presentes pro professor]]]
         b.   [$_{TP}$ Os alunos deram [$_{YP}$ cada um [$_{XP}$ dois presentes [$_{vP}$ [$_{vP}$ pro professor]]]]]

(8) a. Os alunos deram dois presentes cada um pro professor.
         the students gave two gifts   each one to-the professor
     b. Os alunos deram cada um dois presentes pro professor.
         the students gave each one two gifts   to-the professor
         'The students gave two gifts each to the teacher.'

(9) *subject verb* [$_\text{XP}$ {*DO*} [$_\text{vP}$ (*manner adverb*) [$_\text{vP}$ (*each*) [$_\text{vP}$ {*DO*} *IO*]]]]

Another possibility of object shift in Brazilian Portuguese could be that it involves vP-adjunction. Evidence that object shift in Brazilian Portuguese involves an independent projection above vP, such as XP in (9), rather than adjunction to vP comes from the fact that this position is unique and is also "picky", in that it displays a superiority effect by only being able to host the *highest* internal argument of the verb, which in turn suggests that some kind of probing is involved. First, recall from Chapter 2 that an indirect object cannot precede a direct object in an all-new sentence (the base order being DO–IO), as the contrast between (10B1) and (10B2) shows. Now note in (11) that unlike the direct object in (6B) above, the indirect object in (11B) cannot precede the manner adverb in an all-new sentence; (11B) can only become acceptable if *pra Maria* 'to Mary' is topical.[5] Now let us observe (12). While (12a), where only the direct object is object-shifted, is perfectly grammatical, (12b), where both objects are moved outside of vP in the DO–IO order, is ruled out. In light of these restrictions, I conclude that object shift is best analyzed as involving a single specifier, namely Spec,XP in (9), rather than adjunction to vP, which could in principle be reiterative and non-selective.[6]

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[5] Note that an alternative derivation of (11B) where the direct object is right-dislocated is also ruled out, as right-dislocation is restricted to discourse-given elements.

[6] One might rightfully wonder why X^0 does not attract the external argument. This issue is not exclusive of the current analysis; rather, it is a perennial question in the discussion of object movement to the middle field (see e.g. the discussion on AgrOP in Chomsky 1993, 1995). While I will not attempt to resolve the issue here, I would like to suggest that probing by X^0 may be subject to antilocality. In particular, under Bošković's (2016) deduction of antilocality from Chomsky's (2013) labeling framework, movement of the external argument from Spec,vP to Spec,XP would be ruled out for not crossing a full maximal projection (the merger of the external argument and vP resulting in an unlabeled object, indicated by "?" in (i) below, which does not count as a maximal projection). If probing by X^0 must also cross a properly labeled maximal projection, it should then be able to probe past the external

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(10) A: O que aconteceu?
          'What happened?'
      B1: O   João deu   um livro pra   Maria no   Natal.
          the John gave a   book to-the Mary in-the Christmas
      B2: #O João deu   pra   Maria um livro no   Natal.
          the John gave to-the Mary a   book in-the Christmas
          'John gave a book to Mary on Christmas.'

(11) A: O que aconteceu?
          'What happened?'
      B: #O João não explicou   pra   Maria direito uma história.
          the John not explained to-the Mary right   a   story
          'John didn't explain a story to Mary properly.'

(12) a. Os alunos   deram dois livros cada um pro   professor.
          the students gave two books each one to-the professor
      b. *Os alunos   deram dois livros pro   professor cada um.
          the students gave   two books to-the professor each one
          'The students gave two books each to the professor.'

<div align="right">(Lacerda 2012: 63)</div>

If the object shift position attracts the highest internal argument of the verb, as was suggested

above, the prediction is that in the absence of a direct object, an oblique argument may fill that

position. This prediction is borne out. As is shown in (13) and (14), the complement PP can either

precede or follow the manner adverb and the floating quantifier *cada um* 'each one'.

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argument, essentially because it is too close to it, and attract the highest internal argument inside VP. Another question that the structure in (i) raises is why movement of the internal argument to Spec,XP across the external argument in Spec,vP does not violate Relativized Minimality (or Attract Closest), as represented in (ii) below. One possibility is that the external argument does not count as an intervener here because it is not a candidate for movement to Spec,XP, as discussed above. Another possibility is that, because the external argument also moves to Spec,TP later in the derivation, its trace in Spec,vP does not count as an intervener (it is well known that traces do not count as interveners, see Chomsky (1995); Bošković (2011) argues that this is so because PF-deletion of the lower copy there rescues the intervention violation). I will leave these remarks as a speculation for future work.

(i) X^0 [$_?$ EA [$_{vP}$ v^0 [$_{VP}$ IA]]]
(ii)   [$_{TP}$ EA [$_{T'}$ T^0 [$_{XP}$ IA [$_{X'}$ X^0 [$_{vP}$ <EA> [$_{vP}$ v^0 [$_{VP}$ <IA>]]]]]]]]
                                 |_____?_____|

(13) a. O RH se mudou pro quarto andar completamente (no ano passado).
the HR self moved to-the fourth floor completely (in-the year past)

b. O RH se mudou completamente pro quarto andar (no ano passado).
the HR self moved completely to-the fourth floor (in-the year past)
'Human Resources completely moved to the fourth floor (last year).'

(14) a. Os participantes apostaram em dois cavalos (até agora) cada um.
the participants bet in two horses (until now) each one

b. Os participantes apostaram (até agora) cada um em dois cavalos.
the participants bet (until now) each one in two horses
'The participants bet on two horses each (so far).'

It is important to emphasize that unlike object shift as traditionally observed in Scandinavian and Germanic languages, "object shift" in Brazilian Portuguese is not motivated by interpretation (semantic or information-structural). In all relevant examples above, the relevant object can have neutral informational status in either position, preceding or following elements marking the edge of vP.[7] As such, as was discussed in Chapter 2, objects can have either focus or topic interpretation in either position as well, insofar as these two informational roles can be licensed in canonical positions — while the object is focal in (15), it is topical in (16).[8] Additional evidence for the multivalent informational capacity of both object positions comes from (17), where the shifted object has the status of completive information (i.e., information that is new but not prominent, a notion I adopt from Butt and King 1996). While the question in (17A) prompts for a focus on the

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[7] For discussion that this is not the case in Scandinavian and Germanic, see e.g. Diesing 1996.

[8] It is also important to note that object shift in Brazilian Portuguese is restricted to a single object, namely the highest one, differently from what is observed in Scandinavian and Germanic, even though a superiority-like effect is also observed in these languages. Observe for instance the Icelandic paradigm in (i) below (from Collins and Thráinsson 1993; see Vikner 2006 for an overview). With the base order being IO–DO in Icelandic, as in (ia), movement of the DO across the IO is ruled out in (ib). However, when the IO undergoes object shift, the DO is also allowed to undergo object shift, as in (ic) (see also Holmberg 1986, Diesing 1996 for relevant discussion).

(i) a. Ég lána$_v$ ekki t$_v$ Maríu bækurnar.
I lend not Maria.DAT books-the.ACC

b. *Ég lána$_v$ bækurnar$_i$ ekki t$_v$ Maríu t$_i$.
I lend books-the.ACC not Maria.DAT

c. Ég lána$_v$ Maríu$_j$ bækurnar$_i$ ekki t$_v$ t$_j$ t$_i$.
I lend Maria.DAT books-the.ACC not
(Collins and Thráinsson 1993: 149, 154, 143, 154, apud Vikner 2006: 400)

temporal adjunct in (17B), the answer includes additional information about what the boys ate for lunch. Like in previous cases, the (now completive information) object can surface in either position.

(15) A: Que livro o João não explicou direito pra Maria?
         'Which book did John not explain to Mary well?'
      B: O João não explicou {*o   Barriers*F} direito {*o   Barriers*F} pra ela.
         the John not explained {the Barriers} right   {the Barriers} to   her
         'John didn't explain *Barriers*F to her well.'

(16) A: Pra quem o João não explicou o Barriers direito?
         'Who did John not properly explain Barriers to?'
      B: O João não explicou {o   Barriers_TOP} direito {o   Barriers_TOP} *pra Maria*F.
         the John not explained {the Barriers}   right   {the Barriers}   to   Mary
         'John didn't properly explain *Barriers*TOP to Mary_F.'

(17) A: Que horas os meninos almoçaram?
         'What time did the boys have lunch?'
      B: Eles comeram {uma empada} cada um {uma empada}   *às duas horas*F.
         they ate   {an empanada} each one {an empanada} at   two hours
         'They ate an empanada each *at two o'clock*F.'

We have seen above that object shift in Brazilian Portuguese is not motivated by Information Structure, as the relevant object can in principle have any informational status in either position (preceding or following vP-edge elements). Note additionally that definiteness too does not play a role in object shift in this language, as it does in Scandinavian and Germanic object shift (in the sense of Diesing 1996; see that work for a proper description of the role of definiteness in the languages analyzed there). While in e.g. (6) and (8) above the relevant objects are indefinite, they are definite in e.g. (15) and (16), which would also be acceptable in an all-new context. Likewise, the referential status of the object is also immaterial to object shift in Brazilian Portuguese; as is shown in (18), the quantificational and non-referential direct object *nenhum livro* 'no book' can appear in either position.

(18) a. O professor não explicou   nenhum livro direito pros alunos.
          the professor not explained no   book   right   to-the students
     b. O professor não explicou   direito nenhum livro pros alunos.
          the professor not explained right   no   book   to-the students
          'The professor didn't explain any book to the students properly.'

Based on the observations above, we can therefore conclude that, like Information Structure, Semantics also does not in principle play a role in triggering or preventing object shift in Brazilian Portuguese. Importantly, the claim that neither Information Structure nor Semantics *a priori* triggers or prevents object shift does not amount to saying that object shift has no consequences for interpretation; as we will see below, the position of the object can affect semantic relations that depend on the relative positioning of two elements, such as binding and quantifier scope. Likewise, topic and focus interactions may independently favor some structures over others (in particular, in Section 3.2.1, we will see a locality restriction on middle-field topicalization that in fact requires object shift). The claim that I am making in this section is simply that object shift in Brazilian Portuguese is not (formally) triggered or blocked by a particular semantic or information-structural property/feature that can be singled out, to the extent that I could test it in this work. In the next section, I will argue that object shift can be likened to subject movement and thus can be analyzed as an instance of A-movement.

3.1.1.2. Object shift and subject movement

Like I argued is the case with object shift, subject movement in Brazilian Portuguese is also standardly assumed not to be semantically or informationally motivated — rather, it is assumed to be an instance of (formally-driven) A-movement (see e.g. Nunes 2010 for arguments to that effect).

In order to further argue that object shift should be likened to subject movement in Brazilian Portuguese (*mutatis mutandis*), I will now argue that shifted objects pattern with subjects with respect to the possibility of reconstruction regarding two semantic relationships, namely pronoun binding (i.e., variable binding) and distributivity (i.e., quantifier scope).

Let us first look at the possibility of reconstruction of subject movement for pronoun binding. As (19a) shows, a subject quantifier can bind a possessive pronoun in the direct object.[9] The converse is however ruled out in (19b); an object quantifier cannot bind a possessive pronoun in the subject. Considering that Spec,vP is lower than Spec,XP, which is a possible position for the direct object (see (9) above), binding should be possible if reconstruction of the subject were available — (19b) additionally shows that covert quantifier raising above the subject is also unavailable here. The contrast between (19a) and (19b) therefore shows that subject movement does not reconstruct for pronoun binding in Brazilian Portuguese.

(19) a. Cada autor$_i$ publicou   seu$_i$ melhor livro.
          each author published his best   book
          'Each author$_i$ published their$_i$ best book.'
      b. *[Seu$_i$ pior livro]$_k$ envergonhou cada$_i$ autor t$_k$.
          his   worst book   shamed   each   author
          'Their$_i$ worst book shamed each author$_i$.'

Object shift patterns in the same fashion. Similarly to the subject case above, the quantified direct object in (20a) can bind the pronoun in the adjunct PP, whereas the reverse relation is not possible in (20b).[10] This state of affairs shows that the vP-external direct object cannot reconstruct to its base position for pronoun binding purposes, for in that position the pronoun should be able to be bound by the quantifier in the adjunct PP. The latter is shown by the grammaticality of (21),

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[9] Interestingly, in spoken Brazilian Portuguese, the pronoun *seu* can only refer to third person when bound. Otherwise, it refers to second person. This quirk makes it an ideal test case for binding in the language.
[10] In fact, structures like (20a) were used by Lasnik and Saito (1991) to argue for object shift in English.

where the direct object with the pronoun is overtly realized lower than the adjunct PP and binding

of the pronoun by the quantifier is possible.

(20)   a.   Eu comprei cada livro$_i$ no   seu$_i$ lançamento.
             I   bought each book in-the its   launch
             'I bought each book$_i$ on its$_i$ launch.'
       b.   *Eu encontrei [seu$_i$ índice]$_k$ em cada livro$_i$ t$_k$.
             I   found   its index   in each book
             'I found its$_i$ index in each book$_i$.'

(21)   Eu identifiquei em cada artigo$_i$ seu$_i$ melhor argumento.
       I   identified   in   each article its   best   argument
       'I identified in each article$_i$ its$_i$ best argument.'

Recall from the discussion of (8) above, repeated below in (22), that the quantifier *cada um*

'each one' can float in a position as low as Spec,vP and that when the direct object precedes *cada*

um, it has undergone object shift (Lacerda 2016). If object shift is akin to subject movement and

thus cannot reconstruct for pronoun binding purposes, the prediction is that a pronoun in the direct

object can be bound by the floating quantifier in the FQ–DO order but not in the DO–FQ order.

Again, this prediction is borne out, as the contrast in (23) shows.

(22)   a.   Os alunos   deram dois presentes cada um   pro   professor.   = (8)
             the students gave   two gifts   each one to-the professor
       b.   Os alunos   deram cada um dois presentes pro   professor.
             the students gave   each one two gifts   to-the professor
             'The students gave two gifts each to the teacher.'

(23)   a.   Os autores publicaram cada um$_i$ seu$_i$ melhor livro.
             the authors published   each one his best   book
       b.   *Os autores publicaram [seu$_i$ melhor livro]$_k$ cada um$_i$ t$_k$.
             the   authors published   his   best   book each one
             'The authors each$_i$ published their$_i$ best book.'

The ungrammaticality of (23b) may seem surprising given the acceptability of (8a)/(22a)

above, where the floating quantifier can take wide scope and distribute over the direct object even

in the DO–FQ order. This contrast shows that pronoun binding and distributivity are computed in different ways (a matter I will put aside here). Regardless of how it is to be accounted for, what is relevant here is that this contrast shows that object shift again patterns with subject movement in the relevant respect. As can be seen in (24), a cardinal in subject position can also be distributed over by a quantifier realized in a lower position (in contrast to (19b), where pronoun binding is at stake).

(24)   Dois alunos   leram cada livro.
        two students read   each book
        'Two students read each book.'

A'-movement, on the other hand, produces opposite results from what we have just seen above. In (25), the direct object is topicalized in the left periphery of the sentence, and despite preceding the quantified subject, it allows for the binding of the pronoun. Interestingly, the quantifier cannot fulfill its strong distributivity requirement just by binding the pronoun, which in turn forces the presence of another expression over which *cada um* can distribute, such as *num ano diferente* 'in a different year'. In sum, A-movement may reconstruct for distributivity, but not for pronoun binding, whereas A'-movement may reconstruct for pronoun binding, but not for distributivity.

(25)   [Seu$_i$ pior   livro]$_k$, cada autor$_i$ publicou t$_k$ *(num ano diferente).
        his   worst book   each autor published   *(in-a year different)
        'Their$_i$ worst book, each author$_i$ published in a different year.'

In addition to the observations made earlier in this section that object shift in Brazilian Portuguese is not semantically or informationally motivated, the contrasts between variable binding and quantifier scope (as seen in pronoun binding and distributivity, respectively) therefore provide further evidence that object shift in this language can be likened to subject movement

(*mutatis mutandis*), which involves a unique A-position in the clausal spine. Furthermore, in line with the observations that the object shift position is unique and also displays a superiority effect (again, like the subject position), I now reinforce my claim that object shift is best analyzed as involving a separate projection, rather than vP-adjunction, given that it targets an A-position — one would naturally expect any purported vP-adjoined position higher than both the base position of the external argument and vP adverbs to be an A'-position. I therefore maintain that the basic structure of the middle field/extended domain of vP in Brazilian Portuguese is as was represented in (9) above, repeated below in (26).

(26)   *subject verb* [$_{XP}$ {*DO*} [$_{vP}$ (*manner adverb*) [$_{vP}$ (*each*) [$_{VP}$ {*DO*} *IO*]]]]   = (9)

To conclude this section, I will briefly (and somewhat tentatively) discuss the consequences that the analysis of object shift proposed above may have for the analysis of postverbal subjects in Brazilian Portuguese. The vP-external projection XP in (9)/(26) was argued to attract the highest internal argument of the verb, which we saw can be the direct object in simple transitive and ditransitive sentences or an oblique argument in the absence of a direct object. This analysis in fact leaves room for subjects to be able to occupy Spec,XP in constructions where subjects are base-generated as the highest internal argument of the verb and do not move to Spec,TP. This prediction seems to be borne out. As is shown in (27), the subject of a passive sentence, for instance, can also occupy a postverbal VP-external position.

(27)   Foram devolvidos [$_{XP}$ os livros$_k$ [$_{VP}$ (ontem) [$_{VP}$ cada um$_i$ t$_k$ pro   seu$_i$ autor]]].
        were returned   the books   (yesterday) each one   to-the its   author
        'Each of the books$_i$ was returned to its$_i$ author (yesterday).'

If movement of the postverbal passive subject *os livros* 'the books' in (27) is akin to object shift, we should expect it to be subject to the same superiority effect observed between direct objects and indirect objects in (11) above, repeated below in (28), where the indirect object cannot be object-shifted past the direct object. This is in fact the case, as the paradigm in (29) shows (negative quantifiers are used as internal arguments here to rule out topicalization). While the subject/theme *nenhum livro* 'no book' can either follow or precede the manner adverbial *de forma errada* 'in a wrong way', as in (29a) and (29b) respectively, the indirect object *pra nenhum aluno* 'to no student' cannot move past it into the middle field, regardless of whether it follows or precedes the adverbial, as in (29c) and (29d) respectively.

(28) A: O que aconteceu?   = (11)
           'What happened?'
      B: #O João não explicou   pra   Maria direito uma história.
           the John not explained to-the Mary right   a   story
           'John didn't explain a story to Mary properly.'

(29) a.   Não foi explicado de forma errada nenhum livro pra nenhum aluno.
           not was explained of way   wrong no   book to no   student
      b.   Não foi explicado nenhum livro de forma errada pra nenhum aluno.
           not was explained no   book of way   wrong to no   student
      c.   *Não foi explicado de forma errada pra nenhum aluno   nenhum livro.
           not was explained of way   wrong to no   student no   book
      d.   *Não foi explicado pra nenhum aluno   de forma errada nenhum livro.
           not was explained to no   student of way   wrong no   book
           'No book was explained to any student in a wrong way.'

The data in (27) and (29) therefore suggest that postverbal subjects (i.e., subjects that do not move to Spec,TP) may occupy the same structural position occupied by shifted objects in transitive sentences. If the licensing of postverbal subjects in Brazilian Portuguese is contingent on the same functional head as object shift (namely X^0 in (9)/(26) above), this might in turn explain the categorical absence of VSO order in the language (see e.g. Nascimento 1984, Duarte 1993, Kato

2000, Lacerda 2016), given that typically object shift positions cannot attract/license external arguments (and have properly been labeled "object" positions; cf. e.g. Chomsky's 1993, 1995 AgrOP; see also footnote 6 above), with movement from Spec,vP to Spec,XP presumably being ruled out. In fact, based on locative inversion and quantifier floating constructions, Lacerda (2016) argues that VSO order is ruled out in Brazilian Portuguese because the external argument and the internal argument can't be both licensed by the single Case-assigning head (or head complex) available in the postverbal area (v^0 in that work, which could now be reanalyzed as X^0), especially if nominative Case is not available in a postverbal position (i.e., if nominative Case assignment is contingent on movement to Spec,TP, as in Bošković 2007).[11] In this sense, a conspiracy of factors thus make it impossible to leave both the subject and the object in situ to derive the VS order.[12] Evidently, these are not trivial questions, and I will leave a detailed discussion of these matters for future work.

In sum, in this section I argued for the existence of an "object shift" position in the middle field of Brazilian Portuguese (which I referred to as Spec,XP, located immediately above vP), which can host the highest internal argument of the verb. Movement to the object shift position was further argued to be akin to subject movement, in that it is not semantically or informationally motivated and behaves like A-movement for reconstruction. In the next section, I will address middle-field topicalization.

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[11] If postverbal subjects are assigned nominative by T^0, it is not out of question that they may occupy a position higher than Spec,XP in the TP domain — this alternative would however not immediately rule out VSO order. In fact, following a suggestion made by Avelar (2009), Lacerda (2016) argues that the postverbal subject in locative inversion constructions is actually assigned (inherent) partitive Case, which would require the subject to remain in the vP domain, where it receives its theta-role (we could then postulate that the head complex v^0+X^0 is responsible for Case). I will return to locative inversion constructions in Chapter 4.

[12] For relevant discussion on these matters, see also Alexiadou & Anagnostopoulou (2001, 2007), who argue that "by Spell–Out, vP can contain only one argument with a structural Case feature", a restriction they refer to as "the subject-in-situ generalization" (Alexiadou & Anagnostopoulou 2007: 31).

3.1.2. Extended vP: Topicalization

In this section, I will argue that middle-field topicalization in Brazilian Portuguese takes place right above the object shift position. Before discussing Brazilian Portuguese, though, I will briefly present the properties of a topic position in the German *Mittelfeld*, which Frey (2004) argues is located immediately above sentential adverbs. The precise location of "medial" topics in German and Brazilian Portuguese will then be argued to derive an important difference between the German *Mittelfeld* topics discussed by Frey (2004) and the Brazilian Portuguese middle-field topics discussed in this dissertation, namely that aboutness interpretation is possible for the former but ruled out for the latter — aboutness interpretation, in the sense of Reinhart (1981), thus being a matter of structural height.

3.1.2.1. German Mittelfeld topics

Before discussing the syntactic properties of middle-field topicalization in Brazilian Portuguese, I will briefly present in this section the properties of a topic position in the German *Mittelfeld*, which Frey (2004) argues is located above sentential adverbs. As we will later see in Sections 3.1.2.2 and 3.1.2.3, the Brazilian Portuguese middle-field topics discussed in this dissertation differ in significant ways from their German "counterparts". (Importantly, the reader should bear in mind that there is no uniform notion of *Mittelfeld* or *middle field*, which in fact have no status in the grammar; I use these terms solely for ease of exposition, as a heuristic method to probe into the precise location of the topics being analyzed.)

Let us then look at the German data. In addition to being licensed in a left-peripheral position in the German *Vorfeld* (i.e., prefield), as in (30), Frey (2004) argues that aboutness topics can also be licensed in a *Mittelfeld* position located between the complementizer (or finite verb) and sentential adverbs — non-topical elements cannot occupy that position but may be realized lower than sentential adverbs. As is shown in (31), the subject topic *Maria* may precede but not follow a sentential adverb such as *wahrscheinlich* 'probably' (assumed to be adjoined to TP); similarly in (32), the object topic *den Paul* may precede but not follow *erfreulicherweise* 'fortunately'. Opposite results obtain with the non-topical expression *mindestens zwei* 'at least two' in (33).[13]

(30) a. Ich erzähle dir etwas über Paul.
         I   tell   you something about Paul
     b. *Den Paul* wird nächstes Jahr eine vornehme Dame heiraten.
         the.ACC Paul will next   year a   fine   lady marry
         ['Paul, a fine lady will marry [him] next year.']

                                                                    (Frey 2004: 176)

(31) a. Ich erzähle dir etwas über Maria.
         I   tell   you something about Mary
     b. Nächstes Jahr wird *Maria* wahrscheinlich nach London gehen.
         next   year will Mary   probably   to   London go
     c. #Nächstes Jahr wird wahrscheinlich *Maria* nach London gehen.
         next   year will probably   Mary   to   London go
         'Next year Mary will probably go to London.'

                                                                    (Frey 2004: 158)

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[13] In fact, what Frey (2004) analyzes as a topic position in German may be the same position that is analyzed by Diesing (1996) as an object shift position. In particular, Diesing argues that "familiar" definite DPs must precede sentential adverbs, as in (ia) below, while they are "marked" in a lower position, as in (ib) — the author notes that (ib) becomes acceptable if *die Katze* 'the cat' is interpreted as a (contrastive) focus. Since I am restricting the current discussion to elements interpreted as topics in the position preceding sentential adverbs, I will not directly compare Frey's and Diesing's analyses and I refer the reader to Diesing's work for other interpretive properties of what she calls German object shift.
(i)   a. …weil ich *die Katze* selten   streichle.
             since I   the cat   seldom pet
     b. *? …weil ich selten   *die Katze* streichle.
             since I   seldom   the cat   pet
         '…since I seldom pet the cat.'   (Diesing 1996: 72)

(32) a. Ich erzähle dir etwas über Paul.
      I   tell   you something about Paul
   b. Bald wird *den* *Paul* erfreulicherweise eine vornehme Dame heiraten.
      soon will the.ACC Paul fortunately   a   fine   lady marry
   c. #Bald wird erfreulicherweise *den* *Paul* eine vornehme Dame heiraten.
      soon will fortunately   the.ACC Paul a   fine   lady marry
      ['Soon a fine lady will fortunately marry Paul.']

(Frey 2004: 158)

(33) a. Während des Vortrags haben leider   *mindestens zwei* geschlafen.
      during the lecture   have unfortunately at least   two   slept
   b. *Während des Vortrags haben *mindestens zwei* leider   geschlafen.
      during   the lecture   have at least   two   unfortunately slept
      ['At least two have unfortunately slept during the lecture.']

(Frey 2004: 159)

Crucially, Frey (2004) argues that the topics in (31) and (32) have aboutness interpretation.

Sentence (31), for instance, is described as representing a topic-comment structure about Maria,

in that "[t]he given context demands that the information of the following sentence should be

stored under the entry *Maria*" (Frey 2004: 158). Given that they are located higher than sentential

adverbs, it naturally follows that German *Mittelfeld* topics can have aboutness interpretation —

since sentential adverbs must take scope over a full proposition (see Frey 2003 for German), topics

that precede sentential adverbs can also take scope over a full proposition, meeting the requirement

for aboutness interpretation (see Reinhart 1981). As such, *Mittelfeld* topics allow the presence of

topic-related particles, such as *jedenfalls* 'at any rate', which is licensed in the position preceding

sentential adverbs in (34a) and (35a) but not in a lower position, as in (34b) and (35b).

(34) a. weil [*Peter jedenfalls*] zum Glück morgen   mithelfen wird
      since Peter at any rate   luckily tomorrow help   will
   b. *weil zum Glück [*Peter jedenfalls*] morgen   mithelfen wird
      since luckily   Peter at any rate   tomorrow help   will
      ['Since Peter at any rate will luckily help tomorrow']

(Frey 2004: 162)

(35) a.   Eva wird [*dem   Peter jedenfalls*] zum Glück die Unterlagen geben.
            Eva will   the.DAT Peter at any rate luckily   the documents give

      b.   *Eva wird zum Glück [*dem   Peter jedenfalls*] die Unterlagen geben.
            Eva   will luckily   the.DAT Peter at any rate the documents give
            ['Eva will luckily give the documents to Peter at any rate.']

<div align="right">(Frey 2004: 162)</div>

Further evidence that the *Mittelfeld* position in question can host aboutness topics comes from its ability to license cataphoric pronouns in German, which Frey (2004) assumes with Reinhart (1981) must relate to a topic (importantly, recall that the notion of topic put forth in Reinhart 1981 is that of aboutness). In (36a–b), the pronoun *er* 'he' can co-refer with the subject *Paul* if Paul precedes *wahrscheinlich* 'probably', but not if Paul follows *wahrscheinlich*; similarly in (36c–d), the possessive pronoun *sein* 'his' may refer to the object *dem Hans* if *dem Hans* precedes *glücklicherweise* 'fortunately', but not if *dem Hans* follows *glücklicherweise*.

(36) a.   Weil *er*$_i$ gut   trainiert hat, wird *Paul*$_i$ wahrscheinlich morgen   spielen.
            since he well trained has will Paul probably   tomorrow play

      b.   *Weil *er*$_i$ gut   trainiert hat, wird wahrscheinlich *Paul*$_i$ morgen   spielen.
            since he well trained has will probably   Paul tomorrow play
            ['Since he has trained well, Paul will probably play tomorrow.']

      c.   *Sein*$_i$ Vater wird *dem*   *Hans*$_i$ glücklicherweise bei dem Vorhaben helfen.
            his   father will the.DAT Hans fortunately   with the   project   help

      d.   **Sein*$_i$ Vater wird glücklicherweise *dem*   *Hans*$_i$ bei dem Vorhaben helfen.
            his   father will fortunately   the.DAT Hans with the   project   help
            ['His father will fortunately help Hans with the project.']

<div align="right">(Frey 2004: 159)</div>

We have thus seen that in addition to the sentence-initial position in German (*Vorfeld*), aboutness topics can also be realized in a lower position in the *Mittelfeld*, which is located above sentential adverbs. In the next section, I will probe into the precise location of middle-field topics in Brazilian Portuguese and argue that they are located in a lower position, which in turn prevents them from having an aboutness interpretation.

3.1.2.2. Brazilian Portuguese middle-field topics

I will now argue that middle-field topics in Brazilian Portuguese are lower than in German; thus, unlike German, middle-field topics in Brazilian Portuguese are lower than sentential adverbs — in fact, lower than the entire auxiliary system of (split) TP. With Brazilian Portuguese standardly assumed to be a split-TP language with verb movement targeting a low position in the TP system (see e.g. Tescari Neto 2013), we can readily observe that middle-field topics cannot precede the verb, as the contrast in (37) shows (negation is used to ensure that the topic is not in the left periphery). In fact, if middle-field topics occupy any position at all in the auxiliary system, the results are degraded; as (38) shows, the only good position for a topic in the middle field is following all auxiliaries and the lexical verb, not just following the inflected verb.

(37) a. O João não [TP leu, [XP *do   Chomsky*TOP, [XP *só   dois livros*F tTOP]]].
          the John not   read   of-the Chomsky   only two   books
      b. *O João não, *do   Chomsky*TOP, [TP leu [XP *só   dois livros*F tTOP]].
          the John not   of-the Chomsky   read   only two   books
          'John didn't read *only two books*F *by Chomsky*TOP.'

(38) A: Quantos livros o João vai estar lendo pro curso de linguística?
          'How many books is John going to be reading for the linguistics course?'
      B1: O João vai estar lendo, *do   Chomsky*TOP, *só   dois livros*F.
          the John will be   reading of-the Chomsky   only two   books
      B2: ??O João vai estar, *do   Chomsky*TOP, lendo *só   dois livros*F.
          the John will be   of-the Chomsky   reading only two   books
      B3: ??O João vai, *do   Chomsky*TOP, estar lendo *só   dois livros*F.
          the John will of-the Chomsky   be   reading only two   books
          'John will be reading *only two books*F *by Chomsky.*'

In a similar fashion, the topic *do Chomsky* in (39) may follow the verb in (39B2), but resists placement immediately before the verb in (39B3), before the negation in (39B4), in-between the

sentential adverbs in (39B5), and preceding both sentential adverbs in (39B6). Now suppose the topic in question is associated with a focalized verb, in which case the topic must precede the verb (see Chapter 2). As (40) shows, this information-structural necessity is not enough to license a middle-field topic in the TP area; while the left-peripheral topic in (40B1) can be associated with the focalized verb, the middle-field counterpart in (40B2) is excluded.

(39)　A:　Quantos livros do Chomsky o João leu pro curso de sintaxe?
　　　　　'How many books by Chomsky did John read for the syntax course?'
　　　B1:　Ele sem dúvida infelizmente não leu [/*nenhum livro*F/ \do Chomsky\].
　　　　　he w/o doubt unfortunately not read no book of-the Chomsky
　　　B2:　Ele sem dúvida infelizmente não leu, /*do Chomsky*TOP/, /*nenhum livro*F/.
　　　　　he w/o doubt unfortunately not read of-the Chomsky no book
　　　B3:　*Ele sem dúvida infelizmente não /*do Chomsky*TOP/, \leu\ /*nenhum livro*F/.
　　　　　he w/o doubt unfortunately not of-the Chomsky read no book
　　　B4:　?*Ele sem dúvida infelizmente, /*do Chomsky*TOP/, \não leu\ /*nenhum livro*F/.
　　　　　he w/o doubt unfortunately of-the Chomsky not read no book
　　　B5:　?*Ele sem dúvida, /*do Chomsky*TOP/, \infelizmente não leu\ /*nenhum livro*F/.
　　　　　he w/o doubt of-the Chomsky unfortunately not read no book
　　　B6:　?*Ele, /*do Chomsky*TOP/, \sem dúvida infelizmente não leu\ /*nenhum livro*F/.
　　　　　he of-the Chomsky w/o doubt unfortunately not read no book
　　　　　'He undoubtfully unfortunately did not read *any book*F *by Chomsky*TOP.'

(40)　A:　O João já revisou livro do Chomsky?
　　　　　'Has John already revised books by Chomsky?'
　　　B1:　*Do Chomsky*TOP, ele já *formatou*F livro.
　　　　　of-the Chomsky he already formatted book
　　　B2:　*Ele já, *do Chomsky*TOP, *formatou*F livro.
　　　　　he already of-the Chomsky formatted book
　　　　　'He has already *formatted*F books *by Chomsky*TOP.'

Despite following all elements of the TP domain, it is important to emphasize that middle-field topics in Brazilian Portuguese are still vP-external. Recall that middle-field topics must necessarily precede shifted objects, which were argued in Section 3.1.1.1 to be in a vP-external position (Spec,XP in (41) below) — I will henceforth assume that middle-field topics are adjoined to XP in (41). Further evidence that both middle-field topics and shifted objects are vP-external comes

from vP ellipsis, as in (42). Note that the ellipsis of vP, which contains both the indirect object *pra ela* 'to her' and the vP-adjoined adverbial PP *no Natal* 'on Christmas', spares both the topic *do Chomsky* 'of Chomsky' and the direct object *cinco livros* 'five books'. As a consequence of its vP-external position, middle-field topicalization provides additional evidence that all lexical verbs, inflected or not, must move to a vP-external position in Brazilian Portuguese. As (43) shows, even passive verbs are better off preceding middle-field topics — recall from (27) above that the passive verb was already shown to precede the object shift position.

(41)   [TP *subject verb* [XP *topic* [XP {*DO*} [X' X^0 [vP [vP {*DO*} *IO*]]]]]]

(42)   A: A Maria adora ganhar livros de linguística.
              O João deu dois livros do Pinker e três livros do Chomsky pra ela no Natal.
              'Mary loves receiving linguistics books.
              John gave two books by Pinker and three books by Chomsky to her on Christmas.'
        B: E   eu dei,   *do*   *Chomsky*TOP, *cinco livros*F <pra ela no   Natal>.
              and I   gave, of-the Chomsky,   five   books   <to her in-the Christmas>
              'And I gave *five books*F *by Chomsky*TOP <to her on Christmas>.'

(43)   a.   Foram suspensos, *de delegações importantes*TOP, só   cinco atletasF.
              were   suspended of delegations important   only five   athletes
        b.   ??Foram, *de delegações importantes*TOP, suspensos só   cinco atletasF.
              were   of delegations important   suspended only five   athletes
              'Only five athletesF *of important delegations*TOP were suspended.'

Based on the restrictions discussed above, we can conclude that middle-field topics in Brazilian Portuguese are located in a lower position than the German *Mittelfeld* topics discussed by Frey (2004) (see Section 3.1.2.1 above), which can be realized in a position above sentential adverbs (in contrast to Brazilian Portuguese middle-field topics). Next, I will argue that this structural difference between the two languages derives the fact that aboutness interpretation is possible for German *Mittelfeld* topics but not for Brazilian Portuguese middle-field topics.

3.1.2.3. Aboutness interpretation and structural height

I will now argue that the different location of middle-field topics in German and Brazilian Portuguese accounts for an important contrast in the Information Structure of the two languages: While the German *Mittelfeld* topics discussed by Frey (2004) can have aboutness interpretation, the Brazilian Portuguese middle-field topics discussed in this dissertation cannot. Recall from Section 3.1.2.1 above that elements preceding sentential adverbs in German allow for that interpretation in Information Structure, as in the context in (44), repeated from (32) above. As such, topics in that position allow topic-marking particles, such as *jedenfalls* 'at any rate' in (45), repeated from (35) above. In Brazilian Portuguese, on the other hand, middle-field topics located in a postverbal position cannot be used in aboutness-inducing contexts and resist the aboutness-shifting particle *já* 'lit. already', as is shown in (46) and was discussed in Chapter 2.[14]

(44)   a.   Ich erzähle dir etwas   über Paul.   = (32)
               I   tell you something about Paul
        b.   Bald wird *den*   *Paul* erfreulicherweise eine vornehme Dame heiraten.
               soon will the.ACC Paul fortunately   a   fine   lady   marry
        c.   #Bald wird erfreulicherweise *den*   *Paul* eine vornehme Dame heiraten.
               soon will fortunately   the.ACC Paul a   fine   lady   marry
               ['Soon a fine lady will fortunately marry Paul.']
                                                (Frey 2004: 158)

(45)   a.   Eva wird [*dem*   *Peter jedenfalls*] zum Glück die Unterlagen geben.   = (35)
               Eva will the.DAT Peter at any rate luckily   the documents give
        b.   *Eva wird zum Glück [*dem*   *Peter jedenfalls*] die Unterlagen geben.
               Eva   will luckily   the.DAT Peter at any rate the documents give
               ['Eva will luckily give the documents to Peter at any rate.']
                                                  (Frey 2004: 162)

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[14] I will return to the issue of *já*-marked topics in Chapter 4.

(46) A: Me conta alguma coisa sobre o Empire State!
          'Tell me something about the Empire State Building!'
      B1a: *Em cima do   Empire State*_{AT}, tem um mirante   muito legal.
           on top of-the Empire State   has a   observatory very nice
      B1b: #Tem, *em cima do   Empire State*_{AT}, um mirante   muito legal.
           has   on top of-the Empire State   a observatory very   nice
           'On top of the Empire State Building_{AT}, there is a very nice observatory.'
      B2a: *Já em cima da   Freedom Tower*_{AT}, tem uma antena gigante.
           JÁ on top of-the Freedom Tower   has a   antenna giant
      B2b: *Tem, *já em cima da   Freedom Tower*_{AT}, uma antena gigante.
           has JÁ on top of-the Freedom Tower   a   antenna giant
           'Now, *on top of the Freedom Tower*_{AT}, there is a giant antenna.'

The contrasts between German and Brazilian Portuguese regarding the availability of aboutness topics in their so-called middle fields straightforwardly follow from the well-known observation that aboutness topics must take scope over a full sentence (this constituent being no smaller than a fully-saturated proposition; see Reinhart 1981, Bianchi & Frascarelli 2010, Frey 2004, among many others). Crucially, the German *Mittelfeld* topics described by Frey (2004) must precede (the base position of) sentential adverbs, which must also take scope over a full proposition (Frey 2003). The Brazilian Portuguese middle-field topics described here, on the other hand, are located lower than sentential adverbs; in fact, lower than the whole auxiliary system. Therefore, the portion of the clause under the scope of middle-field topics in this language does not qualify as a proper comment (see Chapter 2), which rules out a topic-comment configuration in that area of the clause.[15]

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[15] A similar restriction has been observed to hold in Chinese sentence-internal topics, as discussed by Paul (2015) (see also Paul 2002, 2005). The author claims that topics located lower than the subject position "[do] not indicate an 'aboutness' relation" and are best analyzed as frame-setting topics, which "[set] the frame within which the main predication holds" (p.239). This is the informational role ascribed to *bái mǐ diéyǒng* '100 meters butterfly' in (i) below, for instance. I thank Waltraud Paul (p.c.) for bringing the Chinese data to my attention.
(i)   Tā   *bái mǐ   diéyǒng*_{TOP} yóu-le   ge dìyī .
       3SG 100 meter butterfly   swim-PERF CL first
       'He won the first place in the 100 meters butterfly.'   (Paul 2015: 237)

We have seen in this section that middle-field topics in Brazilian Portuguese precede the object shift position and follow all elements in the auxiliary system of the TP field. While the German *Mittelfeld* topics discussed in Section 3.1.2.1 are located in a position that is high enough to allow aboutness interpretation, the structurally low position of middle-field topics in Brazilian Portuguese prevents them from having such informational role. In conclusion, I have argued that the availability of aboutness interpretation for a given topic is a matter of structural height. In other words, if a topic is high enough to take scope over a full proposition, aboutness interpretation is in principle possible; otherwise, aboutness interpretation is ruled out (importantly, other topic roles that do not depend on a topic-comment articulation of the clause may be available).

The observation that *Mittelfeld* topics in German can have aboutness interpretation in fact leaves room for elements in Brazilian Portuguese that are higher than sentential adverbs to also have that interpretation. As we saw above, middle-field topics in this language are in too low a position, so we must look elsewhere. Fortunately, though, Brazilian Portuguese has an element that independently reaches a high-enough position: Good old subjects in Spec,TP. Later on in Chapter 4, I will return to this issue and argue that elements independently located in the subject position can function as aboutness topics — providing further evidence for the hypothesis that aboutness topic interpretation is a matter of structural height (as formulated here — the relevant element needs to be higher than the position of sentential adverbs).

3.2. Topic-Focus Association in the middle field

Having identified the precise (vP-external) location of shifted objects and middle-field topics in Brazilian Portuguese in the previous section, I will now tackle the question of how these elements

interact at the Syntax-Information Structure interface, in particular with respect to the proper licensing of Topic-Focus Association. In particular, I will argue that middle-field Topic-Focus Association is subject to an unexpected locality constraint, in that a middle-field topic and its associated focus must be in the same spell-out domain — a constraint which in turn provides evidence for the analysis proposed here where middle-field topics are adjoined to the (vP-external) object-shift projection XP. The analysis of the proposed locality constraint will then lead us to a discussion of its consequences for the theory of Information Structure, where I will argue that the restrictions observed on middle-field Topic-Focus Association ultimately suggest the independent status of Information Structure in the architecture of the grammar.

3.2.1. A locality constraint on middle-field topicalization

In this section, I will investigate the syntactic and interpretive relationship between the object shift position and the middle-field topic position, which I maintain are respectively the specifier and the adjunct of XP, the projection that closes off the verbal domain in Brazilian Portuguese. I will discuss a puzzling locality constraint, namely that a middle-field topic can only be associated with a focus in the object shift position, any lower elements being ruled out. As we saw in Section 3.1.1, object shift is not informationally motivated; I will therefore argue that only elements that can independently reach Spec,XP can be the focus associated with a topic adjoined to XP. In order to account for that restriction, I will propose that middle-field topics and their associated foci must be in the same spell-out domain. With the (independently motivated) assumption that XP is a phase, the unexpected locality constraint can then be accounted for. I will finally argue that the

locality constraint observed in middle-field Topic-Focus Association can be extended to the left periphery, where the constraint is observed covertly.

3.2.1.1. Middle-field topics and object shift

In this section, I will show that middle-field topicalization is subject to an interesting locality constraint, namely that middle-field topics adjoined to XP can only be associated with a focus in the object shift position (Spec,XP). First, a disclaimer: Given that contrastive topics are more explicitly related to foci than discourse-given topics (given the very semantic nature of contrastive topicalization), I will present the constraint as operating on middle-field *Contrastive Topic-Focus Association* (CTFA); the reader should bear in mind, though, that the relevant observations carry over to discourse-given topics, *mutatis mutandis*.

Let us observe the crucial paradigm in (47). In the answers in (47B1–B4), the topic *do Chomsky* 'by Chomsky' is contrastively topicalized as an alternative to *do Pinker* 'by Pinker' in the question in (47A), leaving the question about Pinker unresolved and proposing a new alternative question about Chomsky, which is in turn resolved. When the topic is realized in the left periphery and the focus (namely, the indirect object *pra Ana* 'to Anna') is realized in situ, the sentence is grammatical, as (47B1) shows. This shows that the CTFA between *do Chomsky* and *pra Ana* is well-formed here. The acceptable sentence (47A) crucially contrasts with (47B2), which is unacceptable.[16] Considering that the PP *do Chomsky* is otherwise an acceptable middle-field topic (cf. (48B)) and that the indirect object can independently be focalized in its canonical position (cf.

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[16] I use two question marks rather than an asterisk to indicate a contrast between (47B2) and (47B3)–(47B4). As will become clear in a moment, (47B2) involves an information-structural violation (namely, ill-formed CTFA), whereas (47B3)–(47B4) involve an illicit overt movement, which can be argued to cause a stronger violation.

(47A)), the unacceptability of (47B2) is rather puzzling. The well-formedness of (48B) below, where the direct object is focalized instead, suggests that the focus must be close enough to the middle-field contrastive topic (i.e., middle-field CTFA must be local, in a way to be defined in the next section). However, attempting to bring the focalized indirect object closer to the topic in (47B3) leads to utter ungrammaticality. This result is in fact in line with two claims made so far: First, that the indirect object cannot undergo object shift past the direct object (see (11) above), and second, that there is no focus-driven movement to the middle field, as is shown in (49)–(50) and was discussed in Chapter 2 — note that moving the focalized indirect object to the middle field is enough to ruin even the otherwise acceptable (47B1), as in (47B4).

(47) A: Pra quem você recomendou livros do Pinker ontem?
      'Who did you recommend books by Pinker to yesterday?'

B1: /Do   Chomsky$_{CT}$/, \eu recomendei   livros\ /pra Ana$_F$/ (ontem).
    of-the Chomsky   I   recommended books to-the Ana   (yesterday)

B2: ??Eu recomendei, /do   Chomsky$_{CT}$/, \livros\ /pra Ana$_F$/ (ontem).
    I   recommended of-the Chomsky   books to-the Ana   (yesterday)

B3: *Eu recomendei, /do   Chomsky$_{CT}$/, /pra Ana$_F$/ \livros\ (ontem).
    I   recommended of-the Chomsky   to-the Ana books (yesterday)

B4: */Do Chomsky$_{CT}$/, \eu recomendei\ /pra Ana$_F$/ \livros\ (ontem).
    of-the Chomsky   I   recommended to-the Ana books (yesterday)
    'I recommended books *by Chomsky$_{CT}$ to Ana$_F$* (yesterday).'

(48) A: Você recomendou quantos livros do Pinker pra Ana ontem?
      'How many books by Pinker did you recommend to Anna yesterday?'

B: \Eu recomendei\, /do   Chomsky$_{CT}$/, /dois livros$_F$/ \pra Ana\ (ontem).
   I   recommended of-the Chomsky   two books to-the Anna (yesterday)
   'I recommended *two books$_F$ by Chomsky$_{CT}$* to Anna (yesterday).'

(49) A: Pra quem os professores deram dois livros cada um?
      'To whom did the teachers give two books each?'

B1: ??Eles deram *só   pra   Ana$_F$* dois livros cada um (até   agora).
    they   gave   only to-the Anna two books each one (until now)

B2: Eles deram dois livros cada um *só   pra   Ana$_F$* (até   agora).
    they gave   two books each one only to-the Anna   (until now)
    'They gave two books each *only to Anna$_F$* (so far).'

(50)　A:　De que autor os alunos leram cada um dois livros?
　　　　　　'The students read two books by which author?'
　　　B1:　*Eles leram *do*　　*Chomsky*F cada um dois livros (até　agora).
　　　　　　they　read　of-the Chomsky　each one two　books　(until now)
　　　B2:　Eles leram cada um dois livros *do*　　*Chomsky*F (até　agora).
　　　　　　they　read　each one two　books　of-the Chomsky (until now)
　　　　　　'They each read two books *by Chomsky*F (so far).'

The contrasts in (47)–(48) above therefore suggest that only the element that can independently reach the object shift position can be the focus associated with a middle-field contrastive topic. As (47A) shows, there is nothing in principle wrong with associating a focalized indirect object with a contrastive topic. Considering our discussion in Section 3.1.1 of the superiority effect observed in object shift, the prediction of the analysis proposed here is that an oblique argument can be the focus associated with a middle-field contrastive topic in the absence of a direct object — as we saw, under those circumstances, an oblique argument can reach the object shift position. This prediction is in fact borne out, as is shown in (51B), which sharply contrasts with sentences (47B2–B3) above, where an indirect object could not be focalized in the presence of a direct object.

(51)　A:　Em quantos alvos os atletas atiraram no campeonato de tiro?
　　　　　　'How many targets did the athletes shoot at in the shooting championship?'
　　　B:　Bem, os atletas atiraram, *na*　　*prova final*CT, *só*　*em dois alvos*F cada um.
　　　　　　well　the athletes shot　　in-the round final　only in　two　targets each one
　　　　　　'Well, the athletes each shot *at only two targets*F *in the final round*CT.'

In a similar fashion to (51B), postverbal subjects of passive and unaccusative structures can also independently leave the VP, as was argued in Section 3.1.1 above (see (27)). That property therefore renders the subject *só cinco atletas* 'only five athletes' in (52B) a suitable focus for the contrastive topic *de delegações importantes* 'of important delegations' (see (43a) above for a passive construction).

(52) A: Quantos atletas já chegaram na Vila Olímpica?
          'How many athletes have already arrived at the Olympic Village?'
      B: Bem, já   chegaram, *de delegações importantes*CT, *só   cinco atletas*F
          well already arrived   of delegations important   only five   athletes
          (até   agora).
          (until now)
          'Well, *only five athletes*F *of important delegations*CT have already arrived (so far).'

At this point, it is important to point out that the locality restriction observed above with regards to (47B2–B3) only holds for topics located in the XP-adjoined position. When the element in the object shift position (Spec,XP) is interpreted as a topic, it can be associated with a focalized indirect object, as in (53B1). Like the left-peripheral topic in (47B1) above, the left-peripheral direct object topic in (53B2) is also well-formed. Putting left-peripheral topics aside for the time being, the difference in behavior between shifted objects in Spec,XP and elements adjoined to XP can be argued to be due to their different status at the Syntax-Information Structure interface.[17] In particular, recall from Section 3.1.1 that object shift is not semantically or informationally motivated (that is, licensing in Spec,XP is independent of interpretation); in this sense, Spec,XP can be seen as an *informationally unmarked position*, in that it allows for neutral interpretation — the shifted object can be realized in Spec,XP in broad-focus sentences, in an answer to a 'what happened' question, as in (54B). Importantly, the direct object in (53B1) behaves like other elements in unmarked positions (in this sense) in the relevant respect; note in (55B) that a contrastive topic in subject position is also allowed to be associated with a focalized indirect object (recall that movement to subject position is also independent of interpretation). Unlike shifted objects, elements adjoined to XP are not licensed in neutral contexts, that is, in an answer to a *what happened* question — adjunction to XP needs special licensing/interpretation at the Information

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[17] I will propose a unified analysis of left-peripheral and middle-field topics in Section 3.2.1.3.

Structure interface. In this sense, the XP-adjoined position can be seen as an *informationally marked position*. Below, I will use the terms *marked* and *unmarked* in the sense described above.

(53) A: Pra quem você recomendou livros do Chomsky ontem?
          'Who did you recommend books by Chomsky to yesterday?'
      B1: Bem, eu recomendei /o BarriersCT/ /pra AnaF/ (ontem).
          well I recommended the Barriers to-the Ana yesterday
      B2: Bem, /o BarriersCT/, \eu recomendei\ /pra AnaF/ (ontem).
          well the Barriers   I recommended to-the Ana (yesterday)
          'Well, I recommended *BarriersCT to AnnaF* (yesterday).'

(54) A: O que aconteceu?   = (6)
          'What happened?'
      B: O João não explicou {uma história} direito {uma história} pra Maria.
          the John not explained {a story} right {a story} to-the Maria
          'John didn't explain a story to Mary properly.'

(55) A: Pra quem a Maria recomendou livros ontem?
          'Who did Mary recommend books to yesterday?'
      B: Bem, /o JoãoCT/ recomendou livros /pra AnaF/ (ontem).
          well the John   recommended books to-the Ana yesterday
          'Well, *JohnCT* recommended books *to AnnaF* (yesterday).'

In proposing an account for the locality constraint discussed above in the following section, I will rely on the distinction between Spec,XP being an informationally unmarked position and XP-adjoined being a marked position. The proposed markedness distinction is in fact just one of the syntactic and informational properties that distinguish the two positions. First, as discussed above, Spec,XP and the XP-adjoined position differ regarding their interpretation in the informational component. Second, while object shift does not change the base order of arguments (only the highest internal argument can reach Spec,XP, making object shift order-preserving in that it preserves the canonical order among the arguments), adjunction to XP can change the base order of arguments, thus producing a non-canonical, hence marked, word order; as (56B2) shows, an indirect object can be topicalized in the middle field, changing the linear order from the

base/canonical DO–IO to the derived/non-canonical IO–DO. Third, while Spec,XP is an exclusively argumental position (it can only host arguments, more precisely, the single highest internal argument of the verb), the XP-adjoined position can indiscriminately host multiple elements, that is, a multitude of objects including arguments (cf. (56B2)), adnominal adjuncts (cf. (52B)), and adverbial adjuncts (cf. (51B)) (the A/A' distinction may be relevant here). Fourth (somewhat speculatively), under Chomsky's (2013, 2015) labeling algorithm, the shifted object in Spec,XP arguably enters into Spec-head agreement with X^0, thus allowing for the projection of XP under feature sharing (as a case of labeling under feature sharing), as in (57a). Adjunction to XP, on the other hand, produces an unlabeled object in syntax, as in (57b) (see e.g. Hornstein and Nunes 2008, Hunter 2010, and Bošković 2015 for proposals regarding lack of labeling with adjunction); the suggestion is then that in this case, the interfaces must read the XP-adjunct as being in a marked position and assign a special interpretation to it (topic, in this case), which arguably allows for the proper labeling of the object marked as "?" (I will return to the issue of labeling in Section 3.2.1.3).

(56)   A: Quantos livros você deu pra Maria?   = (2)
            'How many books did you give to Mary?'
       B1: Eu dei *dois livros*F *pra   Maria*G.
            I   gave two books to-the Mary
       B2: Eu dei, *pra   Maria*G, *dois livros*F.
            I   gave to-the Mary   two books
            'I gave *Mary*G *two books*F.'

(57)   a.   [XP *shifted object* [X' X^0 [vP [VP]]]]

       b.   [? *topic* [XP *shifted object* [X' X^0 [vP [VP]]]]]

Whatever the criterion ultimately is that Information Structure relies on to differentiate "unmarked" from "marked" positions, it is clear that Spec,XP and the XP-adjoined position do not

have the same status at the Syntax-Information Structure interface (i.e., neither in Syntax nor in Information Structure). At any rate, for the relevant distinction between Spec,XP and the XP-adjoined position, I will use the terms *unmarked* and *marked* to reflect the possibility of an element having neutral interpretation (i.e., to be able to be part of an answer to a *what happened* question), a distinction which we have seen is also associated with a number of other differences.

At first sight, the restriction that only the shifted object can be the focus associated with an XP-adjoined middle-field topic is rather surprising. In the specific case of the crucial paradigm in (47), recall that *do Chomsky* is otherwise an acceptable topic in the middle-field XP-adjoined position (see e.g. (48B)) and that *pra Ana* is otherwise an acceptable focus in its canonical (i.e., unmarked) position (see e.g. (49B2)); the fact that ungrammaticality ensues when they are put together in (47B2) and (47B3) therefore shows that it is precisely their Topic-Focus Association that is disrupted (which in turn I take to provide evidence for the reality of Topic-Focus Association in the grammar). In the next section, I will argue that the restrictions observed in this section follow from a phase-based restriction imposed on middle-field Topic-Focus Association.

3.2.1.2. The phase-boundedness of middle-field Topic-Focus Association

In order to account for the restrictions on middle-field topicalization discussed in the previous section, I will argue that the locality constraint stated in (58) is operative in Brazilian Portuguese. In other words, middle-field Topic-Focus Association is phase-bounded.

(58)   *Middle-field Topic-Focus Association*
        A topic adjoined to XP must be associated with a focus in the same spell-out domain.

Let us consider (58) in more detail. Contra Chomsky's (2000, 2001) rigid approach to phasehood, whereby vP and CP are always phases, several authors have proposed contextual approaches to phasehood, whereby the phasal status of a given element depends on the particular syntactic context where that element is (much like barrierhood was contextually-determined in Chomsky 1986a; see e.g. Bobaljik and Wurmbrand 2005; Bošković 2005, 2012, 2013, 2014; Gallego and Uriagereka 2007, Den Dikken 2007, Takahashi 2010, 2011, Despić 2011). In particular, Bošković (2012, 2013, 2014) proposed that phases are contextually-determined by lexical domains; more precisely, based on a number of extraction and ellipsis tests, the author argues that the highest projection in the extended domain of a lexical category is a phase (see also Wurmbrand 2013 for another argument to that effect). Under Bošković's (2012, 2013, 2014) version of a contextual approach to phasehood, we can then assume that XP (the "object shift" projection) in (59), repeated from (41) above, is a phase, by virtue of being the highest projection in the extended domain of the verb — recall that I have argued in Section 3.1.2 that topicalization closes off the verbal domain in Brazilian Portuguese.

(59) $[_{TP}$ *subject verb* $[_{XP}$ *topic* $[_{XP}$ {*DO*} $[_{X'}$ X^0 $[_{vP}$ $[_{VP}$ {*DO*} *IO*]]]]]]   = (41)

In fact, Bošković (2014) additionally argues that only phases and complements of phases can undergo ellipsis. If XP is a phase in Brazilian Portuguese, we should then expect both the vP and the XP in (41)/(59) to be elidable. This prediction is borne out. We have already seen that ellipsis of vP (to the exclusion of the shifted object) is possible in (42B) above, repeated below in (60B). Ellipsis of the phase XP itself can be seen in cases of so-called V-stranding VP-ellipsis, as in (61B). Importantly, note that in order for *cada livro* 'each book' to bind the possessive pronoun *seu* 'its'

in the adjunct PP (cf. (20) above), *cada livro* must be outside the vP (i.e., in Spec,XP); this then shows that the entire XP is elided in (61B) (not just the vP).

(60) A: A Maria adora ganhar livros de linguística.   = (42)
          O João deu dois livros do Pinker e três livros do Chomsky pra ela no Natal.
          'Mary loves receiving linguistics books.
          John gave two books by Pinker and three books by Chomsky to her on Christmas.'
      B: E eu dei, *do*   *Chomsky*TOP, *cinco livros*F <pra ela no   Natal>.
          and I gave, of-the Chomsky,   five books <to her in-the Christmas>
          'And I gave *five books*F *by Chomsky*TOP <to her on Christmas>.'

(61) A: O João comprou cada livro$_i$ no   seu$_i$ lançamento.
          the John bought   each book in-the its launch
          'John bought each book on its launch.'
      B: Eu também comprei <cada livro$_i$ no   seu$_i$ lançamento>.
          I   also   bought <each book in-the its launch>
          'I did too.'

With the phasehood of XP having been independently motivated, let us now see how it affects the locality constraint in question regarding (47)–(48) above (namely, that in Brazilian Portuguese a middle-field topic adjoined to XP must be associated with a focus in the same spell-out domain). By being a phase head, X^0 triggers the spell-out of the vP in (62). Being at the edge of the XP phase, the (contrastive) topic in (62) is thus part of the higher spell-out domain. When the higher spell-out domain including the topic is sent to the interfaces later in the derivation, only the direct object (more precisely, the shifted object in Spec,XP) is still accessible as a focus. With middle-field Topic-Focus Association being locally-constrained in the manner of (58) (i.e., phase-bounded), the topic cannot identify a focus in a lower position that has already been spelled out. There being no focus-driven movement to the edge of vP, as was argued in Chapter 2, it follows that in a ditransitive construction only the direct object (which we have seen can independently escape the vP) is a suitable associated focus for the middle-field topic, which is indeed the case.

(62) $[_{XP}$ *topic* $[_{XP}$ *focus-DO* $[_{X'}$ X^0 ~~$[_{vP}$ $[_{vP}$ *IO*~~$]$ $]$ $]$ $]$ $]$
        |_____| CTFA: ✓
        |_____**✗**_____| CTFA: ✗

The phase-based analysis proposed above thus accounts for the contrasts presented at the outset of section 3.2.1.1 with respect to (47) and (48) above, where an indirect object cannot be the focus associated with a middle-field contrastive topic in the presence of a direct object, since in those cases the indirect object is in a lower spell-out domain than the topic, the direct object being the only accessible element. Independent evidence that this analysis is on the right track comes from (circumstantial) adverbials located at the edge of vP — in particular the conditions regulating the possibility of topicalizing or focalizing vP-adjoined adverbials in middle-field topicalization structures.

As a baseline, let us first observe (63B1–B2), where the locality constraint is not at stake. When the direct object *o livro do Chomsky* 'Chomsky's book' works as a contrastive topic (in Spec,XP), it can be associated with the focalized adverbial *esse mês* 'this month' (just like the direct object in (53B1) above can be associated with a focalized indirect object). Note that from the object shift position in (63B1–B2) the object c-commands and precedes the adverbial, as is represented in (64), satisfying the informational requirement that a newly-introduced contrastive topic must be higher than its associated focus (see Chapter 2). Crucially, by being in Spec,XP, the direct object is not in a *marked* position but in an *unmarked* position (in the sense discussed in Section 3.2.1.1) and as such it is not subject to the exceptional locality constraint imposed on middle-field topics adjoined to XP (which are in a marked position), as discussed above.[18]

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[18] In the next section, I will suggest a labeling-based analysis of why Spec,XP and the XP-adjoined position should differ with respect to the relevant locality constraint.

(63) A: Quando você recomendou o livro do Pinker / livros de linguística pra Maria?
         'When did you recommend Pinker's book / books of linguistics to Mary?'
      B1: Eu recomendei   [o livro /*do   Chomsky*/]_{CT} *esse mês*_F pra ela.
         I   recommended the book of-the Chomsky   this month to   her
      B2: Eu recomendei   [o livro /*do   Chomsky*/]_{CT} pra ela *esse mês*_F.
         I   recommended the book of-the Chomsky   to her this   month
         'I recommended *Chomsky's book*_{CT} to her *this month*_F.'

(64) [_{XP} *topic-DO* [_{X'} X^0 [_{vP} *focus-adverbial* [_{vP} [_{vP} *IO*]]]]]

The direct object in (63B1–B2) behaves (in the relevant respect) like other elements in their canonical/unmarked positions. As (65) shows, when it is interpreted as a contrastive topic, a subject in Spec,TP can also be associated with the focalized adverbial in question.

(65) A: Quando você recomendou livros pra Maria?
         'When did you recommend books to Mary?'
      B1: *O João*_{CT} recomendou   livros *esse mês*_F pra ela.
         the John   recommended books this month to   her
      B2: *O João*_{CT} recomendou   livros pra ela *esse mês*_F.
         the John   recommended books to   her this month
         '*John*_{CT} recommended books to her this *month*_F.'

Now let us see how a middle-field topic adjoined to XP interacts with a focalized vP-adjoined adverbial. Let us start by identifying what predictions the proposed phase-based analysis would make given the structure in (66). Let us assume the topic in (66) is an indirect object. Since, as discussed above, indirect objects cannot occupy Spec,XP in the presence of a direct object, the indirect object in (66) must then be adjoined to XP. As (66b) shows, when the phase head X^0 triggers spell-out of its complement vP, the adverb is sent to the interfaces. Later in the derivation when the topic-IO is spelled out, it can no longer identify the adverbial as a potential focus, and the structure should then be ruled out. This prediction is borne out, as is shown in (67). While the contrastive topic *pra Maria* 'to Mary' can be associated with the focalized adverbial when it is in the left periphery, as in (67B1), the middle-field counterparts in (67B2–B3) are ungrammatical.

(66) a. [$_{XP}$ *topic-IO* [$_{XP}$ *{DO}* [$_{X'}$ X^0 [$_{vP}$ *focus-adverbial* [$_{vP}$ [$_{vP}$ *{DO}* <IO>]]]]]]

   b. [$_{XP}$ *topic-IO* [$_{XP}$ *{DO}* [$_{X'}$ X^0 ~~[$_{vP}$ *focus-adverbial* [$_{vP}$ [$_{vP}$ {DO} <IO>]]~~]]]
       |_____✘_____| CTFA: ✘

(67) A: Quando você recomendou livros do Chomsky pro João / pros seus alunos?
          'When did you recommend books by Chomsky to John / to your students?'
      B1: /Pra Maria$_{CT}$/, \eu recomendei livros do   Chomsky\ /esse mês$_F$/.
           to-the Mary   I recommended books of-the Chomsky this month
      B2: *Eu recomendei, /pra Maria$_{CT}$/, /esse mês$_F$/ \livros do   Chomsky\.
           I   recommended to-the Mary   this month books of-the Chomsky
      B3: *Eu recomendei, /pra Maria$_{CT}$/, \livros do   Chomsky\ /esse mês$_F$/.
           I   recommended to-the Mary   books of-the Chomsky thismonth
           'I recommended books by Chomsky *to Mary$_{CT}$ this month$_F$*.'

An alternative structure where the adverbial in question is adjoined to XP, as in (68), is also problematic. Although the structure in (68) would comply with the locality constraint proposed above in (58), note that the adverbial cannot be interpreted as a focus in the XP-adjoined position, given that focus movement to the middle field of Brazilian Portuguese is completely excluded, as discussed in Chapter 2. Contrary to focus, topic interpretation of XP-adjoined elements is possible; the adverbial can then be adjoined to XP with topic interpretation, as (69) shows (note that *esse mês* can either precede or follow another middle-field topic).[19]

(68) [$_{XP}$ *topic-IO* [$_{XP}$ *focus-adverbial* [$_{XP}$ *{DO}* [$_{X'}$ X^0 [$_{vP}$ *<adverbial>* [$_{vP}$ [$_{vP}$ *{DO}* *<IO>*]]]]]]]]

(69) A: Quantos livros os professores recomendaram pra Maria esse mês?
          'How many books did the teachers recommend to Mary this month?'
      B1: Eles recomendaram, *esse mês$_{TOP}$, pra Maria$_{TOP}$*, dois livros$_F$ cada um.
           they recommended   this month to-the Mary   two books   each one
      B2: Eles recomendaram, *pra Maria$_{TOP}$, esse mês$_{TOP}$*, dois livros$_F$ cada um.
           they recommended   to-the Mary   this month two books   each one
           'They recommended *two books$_F$* each *to Mary$_{TOP}$ this month$_{TOP}$*.'

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[19] In (69B1–B2), both topics can associate with the focus, which is immaterial for the current argument.

To end our discussion on the status of vP adverbials with respect to the locality constraint on middle-field topicalization, let us observe (70). Given that (circumstantial) adverbials can be topicalized in the middle field, as we saw in (69) above, the final question is then what can be their associated foci. If the analysis proposed here is correct, adverbials should face the same restriction we first saw at the outset of this section in (47); that is, adverbials topicalized in the middle field should not be able to be associated with a focalized indirect object in the presence of a direct object. This prediction is also borne out. While the direct object can be focalized in (69B1–B2) above, the indirect object in (70B1–B2) below cannot, as represented in (71) — as before, if the topic is in the left periphery, (Contrastive) Topic-Focus Association is well-formed, as in (70B3).

(70) A: Pra quem você já deu presente nesse fim de ano?
          'Who have you already given a gift to this holiday season?'
      B1: ??Eu dei, /esse mês_CT/, \presente\ (até agora) /só   pra   Maria_F/.
          I   gave this month   gift   (until now) only to-the Mary
      B2: *Eu dei, /esse mês_CT/, /só   pra   Maria_F/ \presente\ (até agora).
          I   gave this month   only to-the Mary   gift   (until now)
      B3: /Esse mês_CT/, \eu dei presente\ (até agora) /só   pra   Maria_F/.
          this month   I   gave gift   (until now) only to-the Mary
          'I gave a gift *only to Mary_F this month_CT*.'

(71) [_XP *topic-adverbial* [_XP *{DO}* [_X' X⁰ [_vP [_vP [_vP *{DO} focus IO*]]]]]]
       |_____✗_____| CTFA: ✗

Interestingly, as was the case with direct objects (see (63B1–B2)) and subjects (see (65B1–B2)), when the adverbial is in its canonical (vP-adjoined) position, as in (72B), it does not face the locality constraint and can therefore be associated with a focalized indirect object. As the structure in (73) shows, *esse mês* is adjoined to vP and thus does not face the locality constraint otherwise imposed on middle-field topics adjoined to XP.

(72)   A: Pra quem você já deu presente nesse fim de ano?
               'Who have you already given a gift to this holiday season?'
        B: Eu dei presente /*esse mês*$_{CT}$/ (até   agora) /*só pra Maria*$_F$/.
               I   gave gift   this   month   (until now)   only to-the Mary
               'I gave a gift only *to Mary*$_F$ *this month*$_{CT}$.'

(73)   [$_{TP}$ eu dei [$_{XP}$ presente [$_{vP}$ esse mês [$_{vP}$ (até agora) [$_{vP}$ [$_{VP}$ só pra Maria]]]]]]

Now, I would like to make the case that the locality constraint discussed above cannot be reduced to a mere superficial (i.e., linear) adjacency requirement. Recall that in the example (67B2) above, repeated below in (74B), the middle-field topic is adjacent to the focalized adverbial, and still the sentence is ruled out. Furthermore, in a possible derivation where the direct object does not undergo object shift, as in (75), the focus is not only linearly adjacent to the topic, but is also the closest element (minus the clausal spine itself) — to no avail. A similar situation is seen in the also ungrammatical (76B1), where the topic *do Chomsky* is linearly adjacent to the focus *pra Ana*; as the structure in (77) shows, the elements intervening between the topic (adjoined to XP) and the focus (within VP) are all empty categories (namely *ec-DO* and *ec-SUBJ*), and yet the sentence is ruled out (again, the left-peripheral counterpart in (76B2) is well-formed).

(74)   A: Quando você recomendou livros do Chomsky pro João / pros seus alunos?   cf. (67)
               'When did you recommend books by Chomsky to John / to your students?'
        B: *Eu recomendei, /*pra Maria*$_{CT}$/, /*esse mês*$_F$/ \livros do   Chomsky\.
               I   recommended to-the Mary   this   month books of-the Chomsky
               'I recommended books by Chomsky *to Mary*$_{CT}$ *this month*$_F$.'

(75)   [$_{XP}$ *topic-IO* [$_{XP}$ [$_{X'}$ X^0 [$_{vP}$ *focus-adverbial* [$_{vP}$ [$_{VP}$ *DO*]]]]]]

(76)   A: Pra quem a Maria doou livros do Pinker?
               'Who did Mary donate books by Pinker to?'
      B1:   *Livros, a Maria doou,   /do   Chomsky$_{CT}$/, /*pra Ana*$_F$/.
               books   the Mary donated of-the Chomsky   to-the Ana
      B2:   Livros, /do   Chomsky$_{CT}$/, a Maria doou   *pra Ana*$_F$.
               books   of-the Chomsky   the Mary   donated to-the Ana
               'Mary donated books *by Chomsky*$_{CT}$ *to Ana*$_F$.'

(77)   [$_{XP}$ *topic-PP* [$_{XP}$ {*ec-DO*} [$_{X'}$ X^0 [$_{vP}$ *ec-SUBJ* [$_{VP}$ {*ec-DO*} *focus-IO*]]]]]

In (74B) and (76B1) above, adjacency between the relevant topics and foci is respected, but the proposed phase-based restriction is not; those cases are ungrammatical. Now let us see the other side of the coin, namely a case where adjacency is not respected, but the phase-based restriction is; the relevant example is given in (78B). As predicted by the proposed analysis, (78B) is acceptable. In (78B), represented in (79), the discourse-given topic *pro departamento* 'to the department' may surface between the contrastive topic *do Chomsky* 'by Chomsky' and its associated focus *só dois livros* 'only two books'.

(78)   A: Quantos livros do Pinker a Maria doou pro departamento?
               'How many books by Pinker did Mary donate to the department?'
        B: \Ela doou\, /do   Chomsky$_{CT}$/, \pro departamento$_G$\ /só   dois livros$_F$/.
               she   donated of-the Chomsky   to-the department   only   two   books
               'She donated *only two books$_F$ by Chomsky$_{CT}$* to the department$_{GT}$.'

(79)   [$_{XP}$ *do Chomsky$_{CT}$* [$_{XP}$ pro departamento$_G$ [$_{XP}$ *só dois livros$_F$* [$_{X'}$ [$_{vP}$]]]]]
               |_____| CTFA: ✓

Crucially, the focalized direct object in (78B) is still accessible to the contrastive topic (although it is not adjacent to it) — by being able to undergo object shift to Spec,XP, *só dois livros* can be realized in the same spell-out domain as *do Chomsky*, in the manner discussed above, and the sentence is therefore acceptable. Importantly, note that the given topic *pro departamento* does not interfere with the association between the contrastive topic *do Chomsky* and the focus *só dois livros* (recall that *pro departamento* cannot be interpreted as focus in that position, adjunction to XP leading to topic interpretation). Needless to say, the focus is also accessible to the given topic. I therefore conclude that the restrictions on middle-field topicalization discussed in this section are due to a structural locality constraint, namely that a middle-field (contrastive) topic (i.e., an

element adjoined to XP) and its associated focus must be in the same spell-out domain, in the manner discussed above.

As with any issue of structural locality, the locality constraint imposed on middle-field (Contrastive) Topic-Focus Association in Brazilian Portuguese should ultimately be deduced from independent principles. While a deduction will be suggested in the next section (which will also explain why only middle-field topics appear to be subject to CTFA), I will conclude this section by pointing out that middle-field topics are in general more locally-constrained than traditional left-peripheral topics, a property that has been widely reported in many languages but is still poorly understood. First, note that unlike left-peripheral topics, middle-field topics are clause-bounded, as is shown in (80). While the topic *com capa dura* 'with a hard cover' can move to both the embedded and the matrix left peripheries, as in (80a) and (80b) respectively, it can only move to the embedded middle field, as in (80c), movement to the matrix middle field being ruled out in (80d).

(80) a. A Maria disse pra mim que, c*om capa dura*$_i$, ela comprou só dois livros t$_i$.
          the Mary said to me that with cover hard she bought only two books
      b. *Com capa dura*$_i$, a Maria disse pra mim que ela comprou só dois livros t$_i$.
          with cover hard the Mary said to me that she bought only two books
      c. A Maria disse pra mim que ela comprou, *com capa dura*$_i$, só dois livros t$_i$.
          the Mary said to me that she bought with cover hard only two books
      d. *A Maria disse, *com capa dura*$_i$, pra mim que ela comprou só dois livros t$_i$.
          the Mary   said with cover hard to me that she bought only two books
          'Mary said to me that he bought only two books *with a hard cover*$_{TOP}$.'

The clause-boundedness of movement targeting sentence-internal positions is also observed in Germanic scrambling and topicalization, as is well-known. As is shown by the examples from Frey (2004) in (81), a topic in German may move to the matrix left periphery, as in (81a), but not to the matrix middle field, as in (81b), similarly to what happens in Brazilian Portuguese.

(81) a. *Dem   Paul*ᵢ glaubt   anscheinend jeder,   dass man tᵢ den   Preis
          the.DAT Paul believes apparently   everyone that they   the   prize
          zuerkennen wird.
          award   will
     b. *dass *dem   Paul*ᵢ anscheinend jeder   glaubt, dass man tᵢ
          that   the.DAT Paul apparently   everyone believes that they
          den Preis zuerkennen wird.
          the   prize award   will
          ['(That) to Paul, everyone apparently believes that they will award the prize.']
                                                                        (Frey 2004: 181)

The same restriction is found with Chinese sentence-internal topics. As was argued by Paul

(2015), sentence-internal topics in that language occupy a position lower than Spec,TP (see also

Kuo 2009) and, unlike their left-peripheral counterparts, are also clause-bounded. As is shown in

(82), the topic *zhè běn shū* 'this book' can be moved to the matrix left periphery, as in (82a), but

not to the matrix middle field, as in (82b); movement to the middle field must be clause-internal,

as in (82c).

(82) a. *Zhè běn shū*ᵢ   wǒ rènwéi [TP tā   yǐjīng   kàn-wán-le   tᵢ].
          this CL book 1SG think   3SG already see-finish-PERF
          'This book, I think that he has already finished reading [it].'
     b. *Wǒ *zhè běn shū*ᵢ rènwéi [TP tā   yǐjīng   kàn-wán-le   tᵢ].
          1SG this CL book think   3SG already see-finish-PERF
     c. Wǒ rènwéi [TP tā   *zhè běn shū*ᵢ yǐjīng   kàn-wán-le   tᵢ].
          1SG think   3SG this CL book already see-finish-PERF
          'I think that he has already finished reading this book.'
                                                                        (Paul 2015: 240)

We have therefore seen that, when compared to left-peripheral topics, middle-field topics are

systematically more locally constrained, not only in Brazilian Portuguese, but also in other

languages — in addition to being more constrained in the range of topic interpretations available,

as was discussed in Section 3.1.2 and in Chapter 2. In line with the clause-boundedness restrictions,

the phase-based constraint proposed here to account for the locality restrictions observed in

(Contrastive) Topic-Focus Association in Brazilian Portuguese adds to the pile of asymmetries between the left periphery and the middle field.

In conclusion, I have argued that the complex, previously unobserved restrictions on middle-field Topic-Focus Association in Brazilian Portuguese discussed in this section can be accounted for with two ingredients: (i) an "object shift" projection, whose specifier hosts shifted objects and to which middle-field topics can adjoin, and (ii) a phase-based locality constraint whereby middle-field topics (i.e., topics adjoined to XP) and their associated focus must be in the same spell-out domain. With focus-driven movement not being available into the middle field (Spec,XP and XP-adjoined alike), the result is that only elements that can independently reach Spec,XP (via object shift) can qualify as an associated focus for middle-field topics. In the presence of a middle-field topic, then, the shifted object must necessarily be focalized, in order for the Topic-Focus Association to be well-formed.

In the next section, I will address one difference between the left periphery and the middle field (namely that only the latter seems to be subject to the locality constraint discussed above) and I will explore the possibility of a unification of Topic-Focus Association in a way that it would hold for both the left periphery and the middle field, whereby a topic in a marked position and its associated focus must always be in the same spell-out domain (in fact, I will also make a suggestion that deduces the apparent difference between unmarked and marked topics in this respect, when this distinction would not be needed). If this is the case, this particular contrast between left-peripheral and middle-field topics with respect to the locality constraint noted above may be only apparent.

3.2.1.3. A unified analysis of left-peripheral and middle-field topics

In the previous sections, we saw that middle-field topics that are adjoined to XP in Brazilian Portuguese are subject to a puzzling, previously unobserved locality constraint requiring that the topic must be in the same spell-out domain as its associated focus, as was illustrated in the paradigm in (47) above, repeated below in (83) (cf. (83B2–B3)). As we also saw, it is often the case that left-peripheral topics can be associated with foci that are not accessible to their middle-field counterparts in the relevant respect, that is, that are not in the same spell-out domain, as shown in (83B1).

(83)   A: Pra quem você recomendou livros do Pinker ontem?   = (47)
            'Who did you recommend books by Pinker to yesterday?'
       B1: /*Do*   *Chomsky*$_{CT}$/, \eu recomendei   livros\ /*pra Ana*$_F$/ (ontem).
            of-the Chomsky   I   recommended books to-the Ana   (yesterday)
       B2: ??Eu recomendei, /*do*   *Chomsky*$_{CT}$/, \livros\ /*pra Ana*$_F$/ (ontem).
            I   recommended of-the Chomsky   books to-the Ana   (yesterday)
       B3: *Eu recomendei, /*do*   *Chomsky*$_{CT}$/, /*pra Ana*$_F$/ \livros\ (ontem).
            I   recommended of-the Chomsky   to-the Ana books   (yesterday)
       B4: */*Do* *Chomsky*$_{CT}$/, \eu recomendei\ /*pra Ana*$_F$/ \livros\ (ontem).
            of-the Chomsky   I   recommended to-the Ana books   (yesterday)
            'I recommended books *by Chomsky*$_{CT}$ *to Ana*$_F$ (yesterday).'

Despite the contrasts above, in this section I will suggest that rather than simply be a quirk of middle-field topicalization, the locality restrictions discussed in the previous sections may in fact be a general property of Topic-Focus Association (of contrastive and discourse-given topics) that holds also for the left periphery but is obscured there for independent reasons. In other words, I will consider the possibility that Topic-Focus Association is always phase-bounded in the sense discussed earlier with topics in marked positions (see also a suggestion regarding topics in unmarked positions made below). That a unified analysis of Topic-Focus Association here is

desirable is also suggested by the fact that the semantic and pragmatic relationship between a topic and its associated focus is the same for both left-peripheral and middle-field topics. Observe for instance the scenario in (84). The answers in (84B1) and (84B2) are equivalent (both are equally grammatical and felicitous in this context); in both cases, by selecting Chomsky from the topic set, the set of possible books in the focus set is restricted to books written by Chomsky.

(84)   A: Quantos livros você leu pro curso de sintaxe?
            'How many books did you read for the syntax course?'
        B1:   Bem, /do   Chomsky$_{CT}$/, \eu li\   /três livros$_F$/.
            well of-the Chomsky   I   read three books
        B2:   Bem, \eu li\,   /do   Chomsky$_{CT}$/, /três livros$_F$/.
            well I   read of-the Chomsky   three books
            'Well, I read *three books$_F$ by Chomsky$_{CT}$*.'

In order to pursue a unified analysis of Topic-Focus Association, I will consider the hypothesis in (85), which is a slightly revised version of the previous rule stated in (58) above that allows for the relevant association to be satisfied either through the focalized element itself or a focus operator. I will then suggest that it is the latter mechanism that left-peripheral topics are able to take advantage of, association with a focus operator being unavailable for middle-field topics for independent reasons.

(85)   *Topic-Focus Association* (for topics in marked positions)
        A topic must be associated with a focus or focus operator in the same spell-out domain.

The suggestion made here is that overt foci in Brazilian Portuguese are licensed by a covert focus operator in the left periphery. A very similar proposal has actually already been made: The above suggestion in fact simply extends to focalization the analysis that was proposed by DeRoma (2011) for *wh*-in situ in Brazilian Portuguese. Based on the observation that *wh*-in situ is possible

within islands, as in (86A), the author argues that *wh*-expressions do not undergo covert movement to the (matrix) CP (note from the answer in (86B) that *como* 'how' is interpreted in the embedded clause in (86A)). Rather, *wh*-expressions in situ are *unselectively bound* by a covert operator in the matrix CP. With *wh*-elements standing for a narrow focus, we can then adopt DeRoma's (2011) analysis of *wh*-in situ and extend it to focalization. As in DeRoma's (2011) analysis, unselective binding allows for foci to be licensed by the covert operator across phase boundaries and even across clausal boundaries and islands, as is schematized in (87a–c). Since foci are always interpreted with respect to a presupposition, we can then assume that OP-FOC in (87) delimits the presupposition of each focus, even though the focus itself may be interpreted as such in its overt position (see Chapter 2).

(86) A: O   Pedro saiu depois que   a   Maria consertou o   carro *como*?
          the Pedro left   after   that the Maria fixed   the car   how
          'Peter left after Mary fixed the car in what way?'
      B: Ela substituiu a   parte com defeito.
          she replaced   the part   with damage
          'She replaced the damaged part.'   (DeRoma 2011: 45)

(87) a. [CP OP-FOCi [TP … FOCUSi]]

      b. [CP OP-FOCi [TP … [CP … FOCUSi]]]

      c. [CP OP-FOCi [TP … [Island … FOCUSi]]]

With respect to covert focus operators, Wagner (2012) provides a number of arguments for their existence and that they can be dissociated from the overt foci that they license. In particular, Wagner (2012) argues that an overt focus and its corresponding covert operator may take scope in different positions with respect to other scope-bearing elements, as is illustrated by the German sentence in (88). While the author argues that the operator associated with *alle Politiker* 'all

politicians' must take wide scope over the operator associated with *nicht* 'not' in Information

Structure, he shows that the actual focus *nicht* must take wide scope over *alle Politiker*.[20]

(88) /ALLE Politiker   sind NICHT\ corrupt.
      all   politicians are   not   corrupt
      'Not all politicians are corrupt.'
      all > not; *not > all*   (Wagner 2012: 36)

Let us now see how the adoption of focus operators, as in in (87), can help us unify Topic-

Focus Association in the left periphery and in the middle field of Brazilian Portuguese. Let us start

with left-peripheral (contrastive or discourse-given) topicalization, as in (84B1) above, repeated

below in (89B1). As is represented in (90)–(91), under the current analysis the overt topic in the

left periphery can be locally associated with the covert focus operator, which is located in the same

spell-out domain as the topic.

(89) A: Quantos livros você leu pro curso de sintaxe?   = (84)
           'How many books did you read for the syntax course?'
      B1: Bem, /do   Chomsky_CT/, \eu li\   /três livros_F/.
           well of-the Chomsky   I   read three books
      B2: Bem, \eu li\,   /do   Chomsky_CT/, /três livros_F/.
           well I   read of-the Chomsky   three books
           'Well, I read *three books*_F *by Chomsky*_CT.'

(90) *Left-peripheral Topic-Focus Association*

      [$_{CP}$ **TOPIC** [**OP-FOC**$_i$ [$_{TP}$ … FOCUS$_i$]]]

(91) [$_{CP}$ **DO CHOMSKY** [**OP-FOC**$_i$ [$_{TP}$ eu li TRÊS LIVROS$_i$]]]   cf. (89B1)

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[20] Wagner (2012) argues that when two focus operators interact, a contrastive topicalization reading occurs, where the element associated with the higher focus operator (*alle Politiker* in (88)) functions as a contrastive topic and the element associated with the lower focus operator (*nicht* in (88)) functions as a focus. Importantly, what defines the scope of focus operators according to the author is "the presuppositions that they introduce and the scales they operate on" (p.37), an idea that I adopt here.

The focus operator, in its turn, can license a focus at a distance (i.e., across phases) via unselective binding, which allows for left-peripheral topics to be associated with a focus that is not overtly in the same spell-out domain, as is illustrated in (92B), where the actual focus is realized inside an island. In this case, then, the lack of locality in the relevant Topic-Focus Association is only apparent, a by-product of the (potentially long-distance) nature of the relationship between the covert focus operator and the actual overt focus.

(92) A: O João disse pro   Carlos que ele conhece um cara que veio de   onde?
          the John said to-the Carl   that he knows a   guy that came from where
          'John said to Carl that he knows a guy that came from where?'
      B: Olha, *pra   Maria*_{CT} ele disse que conhece um cara que veio *da   Espanha*_F.
          look to-the Mary   he said   that knows a   guy that came from-the Spain
          'Look, *to Mary*_{CT} he said that he knows a guy that came *from Spain*_F.'

I suggest that in cases of middle-field (contrastive or discourse-given) topicalization, on the other hand, as in (84B2)/(89B2) above, represented in (93)–(94), the overt topic adjoined to XP can only be associated with the actual overt focus in its spell-out domain. With the reasonable assumption that focus operators can be generated in the left periphery but not in the middle field, it follows that middle-field topics cannot be associated with a focus operator, and as a consequence the locality constraint on Topic-Focus Association has to be observed with the actual focalized element, as was discussed in Section 3.2.1.2.

(93) *Middle-field Topic-Focus Association*
      [$_{CP}$ OP-FOC$_i$ [$_{TP}$ … [$_{XP}$ **TOPIC** [$_{XP}$ **FOCUS**$_i$ [$_{X'}$ X^0 [$_{vP}$]]]]]]

(94) [$_{CP}$ OP-FOC$_i$ [$_{TP}$ eu li [$_{XP}$ **DO CHOMSKY** [$_{XP}$ **TRÊS LIVROS**$_i$ [$_{X'}$ X^0 [$_{vP}$]]]]]]   cf. (89B2)

Recall from Section 3.2.1.2 that topics in unmarked/canonical positions are not subject to the locality constraint in question unlike topics in the middle field (and the left periphery under the

unified analysis suggested in this section), and as such can be associated with a focus across phase boundaries. This is illustrated in (95B1–B2) below, where the indirect object of the matrix clause *pra Maria* 'to Mary', interpreted as a topic, is associated with the embedded PP *pro Japão* 'to Japan', interpreted as focus. Note in (96) that the indirect object of the matrix clause *pro Carlos* 'to Carl' can either precede or follow the manner adverb *calmamente* 'calmly' in all-new information scenarios in structures with clausal complements, which shows that both positions of the indirect object *pra Maria* are unmarked (in the sense discussed in Section 3.2.1.1) in the examples in (95B1–B2).

(95)   A: Pra onde o João disse pro Carlos que ele vai no fim do ano?
           'Where did John tell Carl that he is going at the end of the year?'
       B1: Bem, ele disse /*pra Maria*$_{CT}$/ claramente que ele vai   *pro   Japão*$_F$.
            well he said to-the Mary   clearly   that he goes to-the Japan
       B2: Bem, ele disse claramente /*pra Maria*$_{CT}$/ que ele vai pro   *Japão*$_F$.
            well he said clearly   to-the Mary   that he goes to-the Japan
           'Well, he said *to Mary*$_{CT}$ clearly that he is going *to Japan*$_F$.'

(96)   a.   O João disse pro   Carlos calmamente que a   conta estava vencida.
            the John said to-the Carl   calmly   that the bill was   due
       b.   O João disse calmamente pro   Carlos que a   conta estava vencida.
            the John said calmly   to-the Carl that the bill was   due
           'John calmly said to Carl that the bill was due.'

What the relevant contrasts observed above between topics in unmarked positions (see e.g. (95)) and topics in marked positions (see e.g. (83)) seem to suggest is that licensing of a topic in a marked position at the Information Structure component is *conditioned by its association with a focus* in the manner discussed in this section — interestingly, in discussing the distribution of topics and foci in Dutch, Neeleman & van de Koot (2008: 144, fn.6) claim (without elaborating) that "there is a strong preference for topic movement to land in the vicinity of the focus". With that in mind, I would like to reinforce the suggestion made in Section 3.2.1.1 that the

unmarked/marked status of a given structural position is read off syntax through the presence/ absence of labeling, as in (97) below, for instance. In (97a), the shifted object in Spec,XP undergoes feature sharing with X^0 and thus allows for XP to project under feature-sharing labeling (recall from Section 3.1.1 that object shift is not informationally triggered). On the other hand, as discussed above, the element adjoined to XP in (97b) does not undergo feature sharing with X^0, which in turn prevents labeling. Upon receiving the unlabeled object "?", the interface must then assign a special interpretation to the element adjoined to XP (topic, in this case) in order to license it. We can then conjecture that the successful association of the topic with the focus (in the manner discussed in this section) allows for the ?-marked object to be labeled (this can thus be seen as a case of "strengthening" for labeling, as in Chomsky 2015).[21]

(97) a. $[_{\textbf{XP}}$ *topic* $[_{\text{X'}} X^0 [_{\text{vP}} [_{\text{VP}} \dots$ *focus* $]]]]$ *labeled position: unmarked*

  b. $[_? $ *topic* $[_{\text{XP}}$ *focus* $[_{\text{X'}} X^0 [_{\text{vP}} [_{\text{VP}} \ ]]]]$ *unlabeled position: marked*
      |___|___|___| $? \rightarrow$ XP

Under the suggestion made in this section that even topics in the left periphery are subject to the Topic-Focus Association rule in (85), the labeling-based analysis suggested above can be extended to left-peripheral topics as well (which could be adjoined to FinP). While in Rizzi's (1997) cartographic approach topicalization involves Spec-head agreement with a topic head, which should suffice for labeling, in Chapter 4 I will crucially argue against that approach. Since under the current analysis there is no Rizzi-style topicalization (i.e., to Spec,TopP) that would involve feature sharing with a topic head, the labeling issue of the sort suggested above would in

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[21] I will return to this issue in Chapter 4 when I discuss the problems posed by the Brazilian Portuguese middle field for the cartographic approach to Information Structure.

fact arise in left-peripheral topicalization too, and can be resolved in the same manner under the current analysis.

To conclude, under the unified analysis proposed in this section for Topic-Focus Association (of contrastive and discourse-given topics), the asymmetry between the left periphery and the middle field with respect to the relevant locality constraint is only apparent, that is, Topic-Focus Association with topics in marked positions is always phase-bounded. Putting this possible unification discussed above aside in the next section, I will make use of the phase-based restrictions observed in the middle field as a probe into Information Structure and I will show that the close-knit relationship between middle-field topics (adjoined to XP) and shifted objects (in Spec,XP) can shed light on the role of focalization and topicalization *qua* information-structural notions. In particular, I will argue that the identification of topics and foci by the Information Structure component can be dissociated from the positions where topicalized and focalized elements are interpreted in LF/Semantics. If correct, this dissociation can be argued to provide evidence for the independent status of Information Structure in the grammar.

3.2.2. Consequences of the locality constraint for Information Structure

Having demonstrated the existence of a locality constraint imposed on middle-field Topic-Focus Association in Section 3.2.1, I will now discuss some of its consequences for the theory of the Syntax-Information Structure interface. In particular, I will argue that the locality constraint in question, as observed in middle-field topicalization, can shed light on the status of topicalization and focalization as independent information-structural notions, in particular in that topic and focus interpretation can be dissociated from the positions where the relevant elements are interpreted in

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LF/Semantics (scope-wise), suggesting two separate interpretive components. Before going into that discussion, let us briefly recap how the locality constraint is manifested in middle-field Topic-Focus Association.

In Section 3.2.1, we saw that only the element that can independently occupy the object shift position is suited to be the focus associated with a middle-field topic, as a consequence of a phase-based locality constraint imposed on (middle-field) Topic-Focus Association. In other words, constructions involving middle-field topicalization were shown to be very "picky" in the identification of the focus. We had already seen some restrictions of that nature in Chapter 2; in particular, I argued that middle-field topics cannot be associated with a focus in a higher position, as in (98) below for instance, where the focus in question is the subject. As a consequence of the given-before-new effect, a dislocated topic must be higher than its associated focus (i.e., the topic can only look down for a focus). As a consequence of the locality constraint on middle-field topicalization, a middle-field topic cannot look for a focus inside of the vP spell-out domain. The result of this conspiracy is that, in the end, only the element in Spec,XP serves as a potential focus. From an interface perspective, Spec,XP independently ends up being the sole position (in middle-field topicalization structures) where a focus can be identified for the purposes of satisfying the (Contrastive) Topic-Focus Association at the Information Structure component.

(98) A: Quem resenhou os livros pro curso de linguística?
          'Who reviewed the books for the linguistics course?'
      B1: Olha, *do   Chomsky*$_{CT}$, *eu*$_F$ resenhei os livros.
          look   of-the Chomsky   I   reviewed the books.
      B2: *Olha, *eu*$_F$ resenhei, *do   Chomsky*$_{CT}$, os livros.
          look I   reviewed of-the Chomsky   the books.
          '*I*$_F$ reviewed all the books *by Chomsky*$_{CT}$.'

I will use the identification of topics and foci in Information Structure (i.e., locating the element that is interpreted as a topic or focus for Information Structure purposes) as a *tool* to dissociate the informational status of an element from other semantic and syntactic properties of the topicalized/focalized element. More precisely, I will argue that an element can be interpreted as a topic/focus in one position and at the same time satisfy other semantic and/or syntactic requirements in another position (provided all formal and interpretive requirements are satisfied at the end of the day, evidently). Importantly, by dissociating informational roles from the positions where topics and foci are interpreted in LF/Semantics, it can be argued that topic and focus (also) exist as independent information-structural notions — and, ultimately, that Information Structure is an independent interpretive component of the grammar.

I will investigate three empirical domains: Quantifier raising, negative concord, and *wh*-questions. In particular, I will argue that an element α can be identified as a focus in Spec,XP and at the same time (i) take scope in a higher position, if α is a quantifier, (ii) take scope in a higher position, if α is a negative concord item, and also (iii) undergo *wh*-movement to a higher position, if α is a *wh*-expression. Next, I will address topicalization and I will argue that an element β can be identified as a topic in the XP-adjoined position and at the same time take scope in a higher position, if β is a quantifier. The discussion will then suggest that that there cannot be a rigid one-to-one correspondence between Information Structure and LF/Semantics.

3.2.2.1. Quantifier raising of foci

In this section, I will assess the covert height of focalized quantified expressions and negative concord items (NCIs) in order to argue that foci can be interpreted *qua* foci in one (overt) position

while at the same time being interpreted (scope-wise) as a quantifier/NCI in another higher (covert) position. I will first analyze quantifier raising and the possibility of inverse scope triggered by focus, then move onto the licensing of negative concord items.

While Brazilian Portuguese usually favors surface scope of quantified expressions, focalization can be used to trigger quantifier raising and as a consequence allow inverse scope readings. Sentence (99a) is potentially ambiguous: If it is read with a flat intonation or with emphatic stress on the verb, as in (99b), it gives rise to an isomorphic reading, where *forget* takes scope over *two* (i.e., John had to read two books, but he forgot to do so); on the other hand, if (99a) is read with emphatic stress on the direct object, as in (99c), it gives rise to an inverse scope reading, where *two* takes scope over *forget* (i.e., there are two books such that John forgot to read them). This pattern is replicated in (100), where the quantified direct object interacts in the same fashion with negation. As a consequence of its wide scope in (100b), the focalized quantified expression may acquire a specific interpretation, as is seen in (101a) (note additionally that this interpretive effect licenses *movement of focus*, in the sense discussed in Chapter 2, as in (101b), which is semantically equivalent to (101a)). On the face of these observations, we can then say that focalized quantifiers in Brazilian Portuguese must be interpreted in a higher position (via quantifier raising).

(99) a. O João esqueceu de ler   dois livros.   ambiguous
          the John forgot   of to.read two books
      b. O João /esqueceu/ \de ler   dois livros\.   *forget* > 2
          the John forgot   of to.read two books
      c. O João esqueceu de ler   /dois livros/.   2 > *forget*
          the John forgot   of to.read two books
          'John forgot to read two books.'

(100) a. O João não leu   dois livros.   (flat intonation or focus on *não*)
           the John not read two   books   NEG > 2; *2 > NEG
       b. O João não leu   *dois livros*F.   (focus on *dois livros*)
           the John not read two   books   *NEG > 2; 2 > NEG
           'John didn't read two books.'

(101) a. O João não leu   *dois livros*F: *Emma* e   *Orgulho e   Preconceito.*
           the John not read two   books   Emma and Pride   and Prejudice
       b. *Dois livros*F o João não leu: *Emma* e   *Orgulho e   Preconceito.*
           two   books   the John not read Emma and Pride   and Prejudice
           'John didn't read *two books*F: *Emma* and *Pride and Prejudice*'

One question that the data in (99c), (100b), and (101a) leave open is whether the quantified

expression is interpreted as a focus for Information Structure purposes in the (covert) raised

position or in the surface position. As it turns out, structures involving middle-field topicalization

on the other hand can shed light on that question, given that there is plenty of evidence that the

focus must be identified as the element sitting in Spec,XP, as we saw in the previous section. The

question then becomes whether the focus in Spec,XP associated with a middle-field topic can

undergo quantifier raising in the same manner as the relevant quantified expressions above. If that

happens to be the case, we will then have found evidence that focus identification and quantifier

scope can make reference to two different positions in the structure (i.e., dissociating the semantic

interpretation from the informational interpretation of the focalized element). As we will see next,

quantifier raising of the focus associated with a middle-field topic in Brazilian Portuguese is not

only possible, but in fact obligatory (which follows from the fact that the relevant object is the

only element that can be identified as a focus, focus thus obligatorily triggering quantifier raising).

Observe (102). As a sentence with all of its elements in their canonical positions, (102) is

potentially ambiguous scope-wise, like (99a) above. Thus, the quantified expression *duas pessoas*

dos Democratas 'two people of the Democrats' can have either wide or narrow scope with respect

to the matrix verb *negou* 'denied'. Sentence (102) is thus compatible with both scenarios described

below. Scenario 1, where there are two (specific) people of the Democrats that President Obama denied to have hired, evokes the scopal relation 2>*deny*. Conversely, in Scenario 2, where the negation falls over the number of Democrats hired by the president, the scopal relation evoked is *deny*>2.

(102) O   presidente negou ter   contratado duas pessoas dos   Democratas.
       the president   denied to.have hired   two   people of-the Democrats
       'The president denied to have hired two people of the Democrats.'
       $2 > deny$; $deny > 2$

(103) **Scenario 1:** President Obama says, "I hired many people of the Republican Party and many people of the Democratic Party. But I did not hire John, Peter, and Mary of the Republican Party, and Bill and Sue of the Democratic Party."

(104) **Scenario 2:** The president must fill the positions for the Office of Human Rights. For that office, it is the law that the president cannot hire more than one person of his own party. One senator believes that Obama did not meet his obligation, and says, "Obama should be prosecuted. He hired two Republicans, which conforms to the law, but he also hired two people of the Democrats, which is illegal." The president then replies, "I did not hire two people of the Democrats!"

Now let us examine whether the scopal relations are affected when topicalization takes place. In (105), where *dos Democratas* is a left-peripheral topic, nothing changes in the scopal possibilities between the matrix verb *negou* and the embedded quantifier *duas pessoas* (as expected, since any element in the sentence can be focalized). Like (102), (105) is ambiguous and thus compatible with both Scenario 1 and Scenario 2 above. (It is important to note that each interpretation is associated with a different intonational contour, in the same manner as (102); while surface scope is achieved by a less marked intonation, inverse scope is achieved with a rising intonation on the quantifier).

(105) *Dos   Democratas*TOP, o presidente negou ter   contratado duas pessoas.
        of-the Democrats   the president denied to.have hired   two   people
        'The president denied to have hired two people *of the Democrats*TOP.'
        2 > deny; *deny > 2*

On the other hand, when topicalization takes place in the middle field, as in (106), the sentence crucially becomes infelicitous in Scenario 2, although still compatible with Scenario 1. In other words, the embedded object quantifier *duas pessoas* must take wide scope over the matrix lexical verb *negou* (the sentence therefore only allows for one of the two intonations alluded to above, namely the one where the quantifier receives a rising intonation). In this case, dissociation of the informational interpretation of *duas pessoas* (identified as a focus in Spec,XP of the embedded clause) from its semantic interpretation (taking quantificational scope above the matrix verb) becomes obligatory.

(106) O   presidente negou ter   contratado, *dos   Democratas*TOP, *duas pessoas*F.
        the president denied to.have hired   of-the Democrats   two   people
        'The president denied to have hired *two people*F of the Democrats*TOP.'
        2 > deny; **deny > 2*

Further evidence that a focus identified in the object shift position is semantically interpreted in a higher position comes from negative concord. As is well-known, a negative concord item (NCI) must be licensed by a c-commanding negation, which in turn overtly marks the scope of the NCI — the standard analysis being that NCIs must (covertly) move to (the specifier of) the negation (e.g. as in the *Neg Criterion* proposed by Haegeman and Zanuttini 1991; see also Zeijlstra 2004, and Giannakidou 2006 for an overview). With that in mind, we can use the overt position of the sentential negation to track the covert height of an NCI that is focalized in the presence of a middle-field topic. Let us first observe (107). In (107a), the negation in the matrix clause is able

to license the NCI *nenhum livro* 'no book' in the embedded (restructuring) clause. With the NCI

being necessarily interpreted at the position of the negation, the only possible reading for (107a)

is that in which the NCI takes scope over *forget* (i.e., no book x was such that John forgot to give

x to Mary). As in the examples discussed above, focalizing the NCI in (107b) forces the inverse

scope reading, which is compatible with the overt position of the negation preceding *forget*.

(107) a. O João <u>não</u> esqueceu de dar   nenhum livro pra   Maria.
           the John not forgot   of to.give no   book to-the Mary
       b. O João <u>não</u> esqueceu de dar,   *pra Maria*_{TOP}, *nenhum livro*_F.
           the John not forgot   of to.give to-the Mary   no   book
           'John didn't forget to give any book to Mary.'

A different situation arises in (108), however. In the grammatical (108a), negation is located

in the embedded clause (imagine a scenario where John was supposed to not give Mary any books,

say, because she already has too many books). Sentence (108b), on the other hand, is

ungrammatical. Here, the obligatory focalization of the NCI in (108b) forces it to take wide scope

over *forget*¸ as before. However, the negation is located lower than *forget*, which creates a semantic

paradox and correctly rules out the sentence. Therefore, I take the contrast between (107b) and

(108b) to show that the relevant NCI, although necessarily being identified as a focus (in

Information Structure) in its surface position, must be semantically licensed and interpreted as an

NCI in a higher position — which is possible in the well-formed (107b) but is not in the

ungrammatical (108b). (As usual, left-peripheral topicalization allows for any position of the

sentence to bear focus; thus, both (109a) and (109b) are possible.)

(108) a. O João esqueceu de <u>não</u> dar   nenhum livro pra   Maria.
           the John forgot   of not to.give no   book to-the Mary
       b. *O João esqueceu de <u>não</u> dar,   *pra Maria*_{TOP}, *nenhum livro*_F.
           the John forgot   of not to.give to-the Mary   no   book
           'John forgot not to give any book to Mary.'

(109) a. *Pra Maria*TOP, o João <u>não</u> esqueceu de dar *nenhum livro*F.
to-the Mary   the John not forgot   of to.give no   book
'To MaryTOP, John didn't forget to give *any book*F.'

      b. *Pra Maria*TOP, o João *esqueceu*F de <u>não</u> dar   nenhum livro.
to-the Mary   the John forgot   of not to.give no   book
'To MaryTOP, John *forgot*F not to give any book.'

By looking at the scope of raised quantifiers and negative concord items, we have seen that the covert height of a given element α may not necessarily match the (overt) position where it must be identified as a focus in Information Structure. In other words, an element α can be identified as a focus in one structural position while at the same time being interpreted as a quantifier/NCI in another structural position. This observation therefore lends support for the idea that Information Structure can be dissociated from LF/Semantics.

In the next section, I will show additionally that an element can be interpreted as a focus in one position while at the same being overtly realized (i.e., pronounced) in another position.

3.2.2.2. Wh-movement of foci

Let us now briefly look at *wh*-questions, in order to assess the possibility of an element α being interpreted as a focus in one position (such as Spec,XP) while at the same being overtly realized (i.e., pronounced) in another (higher) position. In the relevant examples in the previous section, the element identified as a focus was semantically interpreted in a higher *covert* position. Now, we will see a well-defined case where the focus associated with a middle-field topic can be *overtly* realized in a higher position. First, recall from the outset of this section (and the discussion in Chapter 2) that a middle-field topic in Brazilian Portuguese (as a derived topic subject to the given-before-new effect) cannot be associated with a higher focus, as in (110B2) below, repeated from

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(98B2) above. Now observe (111). When the relevant focus is an interrogative *wh*-expression, the focus surprisingly becomes able to precede the middle-field topic, as in (111B1). This apparent exception to the generalization is in fact predicted to be allowed given the analysis put forth in this section: The position that counts for the purposes of Contrastive Topic-Focus Association, with the topic being in the middle field, is the object shift position, Spec,XP, where the *wh*-expression leaves a copy/trace in (111B1). In other words, given that the direct object can be identified as the relevant focus in (111B1) in the copy/trace position, CTFA is properly satisfied at the Information Structure interface despite the *wh*-movement — this case therefore being a valid exception to the strong tendency of foci to be interpreted in their overt positions, as was discussed in Chapter 2. (Recall that *wh*-expressions in Brazilian Portuguese may optionally stay in situ, (111B2) thus also being an option.)

(110) A: Quem resenhou os livros pro curso de linguística?   = (98)
           'Who reviewed the books for the linguistics course?'
       B1: Olha, *do*   *Chomsky*_{CT}, *eu*_F resenhei os livros.
           look of-the Chomsky   I   reviewed the books.
       B2: #Olha, *eu*_F resenhei, *do*   *Chomsky*_{CT}, os livros.
           look   I   reviewed of-the Chomsky   the books.
           '*I*_F reviewed all the books *by Chomsky*_{CT}.'

(111) A: Eu li vários livros pro curso de linguística.
           'I read several books for the linguistics course.'
       B1: /*Quantos livros*_F/ \você leu\, /*do*   *Chomsky*_{CT}/ t_F (pra esse curso)?
           how.many books   you   read of-the Chomsky   (for this course)
       B2: Você leu, /*do*   *Chomsky*_{CT}/, /*quantos livros*_F/ (pra esse curso)?
           you   read of-the Chomsky   how.many books (for this course)
           '*How many books*_F *by Chomsky*_{CT} did you read (for this course)?

Two important remarks are in order here. First, since the element in question is a focus, it is restricted to moving to a position compatible with focus interpretation, which is the case with the *wh*-position in the CP domain in (111B1). If in (112B2) *o Barriers* moves from Spec,XP, where it

is interpreted as a focus, to a (left-peripheral) topic position, the result is catastrophic, since the contrastive topic *do Chomsky* ends up associated with a paradoxical topic-focus monster. Second, note that although *wh*-movement in (111B1) is compatible with focus interpretation, it is formally driven, rather than driven by interpretation. If a movement driven by interpretation removes the object from Spec,XP and places it in a higher position, the result is also ruled out. In (113B2), for instance, the direct object *só dois livros* 'only two books' undergoes *movement of focus*. As discussed in Chapter 2, movement of focus to the left periphery takes place when additional interpretive effects target focalized elements; as such, the moved focus must be interpreted as a focus in the left-peripheral position.[22] This result however disrupts the necessary relationship between the topic and the focus, therefore leading to the unacceptability of (113B2) under the relevant reading.[23]

(112) A: Qual livro de linguística você deu pra Maria?
           'Which book of linguistics did you give to Mary?'
       B1: Eu dei, *do   Chomsky*CT, *o Barriers*F (pra   Maria).
           I   gave of-the Chomsky   the Barriers   (to-the Mary)
       B2: *O Barriers*TOP, eu dei, *do   Chomsky*CT tTOP/FOC (pra   Maria).
           the Barriers   I   gave of-the Chomsky   (to-the Mary)
           'I gave *Barriers*F *by Chomsky*CT to Mary.'

(113) A: Quantos livros o João leu pro curso de linguística?
           'Which book of linguistics did you give to Mary?'
       B1: Olha, o João leu, */do   Chomsky*CT/, */só   dois livros*F/.
           look the John read of-the Chomsky   only two   books
       B2: #Olha, */só   dois livros*F/ o João leu, */do   Chomsky*CT/.
           look   only two   books   the John read of-the Chomsky
           'Look, John read *only two books*F *by Chomsky*CT.'

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[22] As was discussed in Chapter 2, *movement of focus* is to be distinguished from what is referred to in the literature as *focus movement*, in that *movement of focus* is not (formally) driven by (the licensing of) focus.

[23] Sentence (113B2) may become acceptable if *do Chomsky* is interpreted as an *after-thought*. In this case, however, it cannot have a contrastive topic interpretation, in that it does not give rise to the implicature that John read other books by other authors; that is, under that reading, (113B2) fully resolves the question by stating that the total number of books that John read for the syntax course is two, and they are both by Chomsky. Needless to say, this reading is orthogonal to the present argument.

Additional evidence that the middle-field topic in (111B1) above, where the *wh*-element is moved to the CP domain, must still make reference to the object shift position Spec,XP for the sake of focus identification comes from (114B1–B2), where the topic still faces the restriction that it cannot be associated with a focalized indirect object, for the indirect object (or trace thereof) is located in the lower spell-out domain, as represented in (115) — in the same manner as in the paradigm in (116), repeated from (47) above, which was used to introduce the relevant locality constraint at the outset of Section 3.2.1, whereby a middle-field topic and its associated focus must be in the same spell-out domain. In (114B1–B2), making the focalized indirect object a *wh*-element (and fronting it in (114B2)) does nothing to salvage the sentence, showing that the exceptionality of (111B1) cannot be merely attributed to the fact that the relevant focus is a (fronted) *wh*-element. On the face of these observations, I conclude that even though the focus/*wh*-element in (111B1) is overtly realized in a left-peripheral position, it must be identified as a focus associated with the middle-field topic in Spec,XP, the object shift position, via its copy/trace, as represented in (117).

(114) A: Eu recomendei vários livros de linguística pros meus amigos ontem.
             'I recommended several books of linguistics to my friends yesterday.'
       B1: *Você recomendou, /do   Chomsky$_{CT}$/, \livros\ /pra quem$_F$/ (ontem)?
             you   recommended of-the Chomsky   books   to   who   (yesterday)
       B2: */Pra quem$_F$/ \você recomendou\, /do   Chomsky$_{CT}$/, \livros\ t$_F$ (ontem)?
             to   who   you   recommended of-the Chomsky   books   (yesterday)
             'Who$_F$ did you recommend books *by Chomsky$_{CT}$* to (yesterday)'?

(115) a.   [$_{TP}$ Você recomendou [$_{XP}$ *do Chomsky$_{CT}$* [$_{XP}$ livros [$_{X'}$ X^0 [$_{vP}$ [$_{VP}$ *pra quem$_F$*]]]]]]
                                      |_____✖_____| CTFA: ✖

       b.   [$_{CP}$ *Pra quem$_F$* [$_{TP}$ você recomendou [$_{XP}$ *do Chomsky$_{CT}$* [$_{XP}$ livros [$_{X'}$ X^0 [$_{vP}$ [$_{VP}$ t$_F$]]]]]]]
                                      |_____✖____|
                                                CTFA: ✖

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(116) A: Pra quem você recomendou livros do Pinker ontem?   = (47)
            'Who did you recommend books by Pinker to yesterday?'
       B1: /*Do   Chomsky*~CT~/, \eu recomendei   livros\ /*pra Ana*~F~/ (ontem).
            of-the Chomsky   I   recommended books to-the Ana   (yesterday)
       B2: ??Eu recomendei, /*do   Chomsky*~CT~/, \livros\ /*pra Ana*~F~/ (ontem).
            I   recommended of-the Chomsky   books   to-the Ana (yesterday)
       B3: *Eu recomendei, /*do   Chomsky*~CT~/, /*pra Ana*~F~/ \livros\ (ontem).
            I   recommended of-the Chomsky   to-the Ana books   (yesterday)
       B4: */*Do Chomsky*~CT~/, \eu recomendei\ /*pra Ana*~F~/ \livros\ (ontem).
            of-the Chomsky   I   recommended to-the Ana books   (yesterday)
            'I recommended books *by Chomsky*~CT~ *to Ana*~F~ (yesterday).'

(117)   [~CP~ *Quantos livros*~F~ [~TP~ você leu [~XP~ *do Chomsky*~CT~ [~XP~ *t*~F~ [~X'~ X^0 [~vP~ [~vP~ t~DO~]]]]]]]
                            |_____| CTFA: ✓

Finally, recalling the distinction between topics in marked and unmarked positions, as discussed above, if the relevant topic is not a middle-field topic (adjoined to XP), it no longer faces the phase-based locality constraint proposed in Section 3.2.1. In this case, a topic in any unmarked/canonical position can in principle be associated with a fronted *wh*-question (all other relevant restrictions respected, evidently), as is shown in (118B) and (119B), for a direct object topic and a subject topic, respectively. Importantly, the foci are allowed to precede the newly-introduced topics in (118B) and (119B) due to *wh*-movement being a formally-driven rather than a discourse-driven operation (therefore, whenever necessary for Information Structure, the fronted *wh*-elements can be interpreted *qua* foci in a lower position, as in the relevant example (111B1) above).

(118) A: O professor recomendou diferentes livros do Chomsky pros alunos.
            'The professor recommended different books by Chomsky to the students.'
       B: *Pra quem*~F~ o   professor   recomendou   o   *Barriers*~CT~ t~F~?
            to   who   the professor   recommended the Barriers
            '*Who*~F~ did the professor recommend *Barriers*~CT~ to?

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(119) A: Nós sorteamos os amigos secretos na escola hoje. Quer saber quem eu tirei?
'We drew our secret Santas at school today. Do you want to know who I picked?'

B: *Quem*$_F$ *a Maria*$_{CT}$ tirou t$_F$?
who the Mary picked
'*Who*$_F$ did *Mary*$_{CT}$ pick?'

The above discussion therefore shows that the identification of focus at Information Structure may also not match the overt position where the relevant element is pronounced, despite the strong tendency of foci to be interpreted in their overt positions, as was discussed in Chapter 2. In the next section, I will return to the main issue of quantifier scope from the perspective of topics.

3.2.2.3. Quantifier raising of topics

In this section, I will argue that the conclusion that was reached in Section 3.2.2.1 for focalization can be extended to the notion of topic, in that the position where an element β is identified as a topic in Information Structure can also be dissociated from the position where β is interpreted as a quantifier (scope-wise).

Before we go into quantifier scope, I will make a cautionary note on topicalization and overt realization. With respect to the possibility of topics being overtly realized (i.e., pronounced) in one position but being interpreted as topics (for Information Structure purposes) in a *higher* position, it is well attested that this is not possible, as is shown by the pervasiveness of data like (98)/(110) above, repeated below in (120), where the derived middle-field topic in (120B2) cannot be associated with a higher focalized subject (the trace of the subject in Spec,vP is also inaccessible, as it is in a lower spell-out domain).[24] Additionally, recall from Chapter 2 that contrastive topics

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[24] As was discussed in Chapter 2, the unacceptability of (120B2) should follow from the given-before-new requirement imposed on marked topics, demanding that dislocated topics target a position overtly higher than their associated focus. See Neeleman & van de Koot (2008) for related issues in Dutch and a plausible deduction of that effect.

that newly introduce themselves as a contrastive alternative may precede but not follow their associated focus. In (121), *Chomsky* is not previously established in the discourse, the answers themselves contrastively introducing *Chomsky* as an alternative author; (121B3) is thus ruled out under the indicated interpretation.[25]

(120) A: Quem resenhou os livros pro curso de linguística?   = (98)/(110)
'Who reviewed the books for the linguistics course?'
B1: Olha, *do*   *Chomsky*CT, *eu*F resenhei os livros.
look of-the Chomsky   I   reviewed the books.
B2: #Olha, *eu*F resenhei, *do*   *Chomsky*CT, os livros.
look   I   reviewed of-the Chomsky   the books.
'*I*F reviewed all the books *by Chomsky*CT.'

(121) A: Quantos livros você leu pro curso de sintaxe?
'How many books did you read for the syntax course?'
B1: Bem, /*do*   *Chomsky*CT/, \eu li\   /*três livros*F/.
well of-the Chomsky   I   read three books
B2: Bem, \eu li\,   /*do*   *Chomsky*CT/, /*três livros*F/.
well I   read of-the Chomsky   three books
B3: #Bem,   \eu li\   /*três livros*F/ /*do Chomsky*CT/.
well I   read three books of-the Chomsky
'Well, I read *three books*F *by Chomsky*CT.'

The contrast between (121B1)–(121B2), on the one hand, and (121B3), on the other, therefore shows that the topic cannot move covertly in (121B3); if it could, (121B1), (121B2), and (121B3) should all have the same status in Information Structure, contrary to fact. Covert topic movement would also incorrectly rule in (120B2) and several other similar examples.

With respect to the possibility of topics being realized in one position and being interpreted as topics in a *lower* position, this option would seem to be going against what we have seen earlier regarding Information Structure. As we saw in many examples throughout this dissertation, issues

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[25] Like was indicated for sentence (113B2) above in footnote 23, (121B3) becomes acceptable if it fully resolves the question, that is, if three books by Chomsky is the totality of books reviewed (i.e., when *três livros do Chomsky* is the actual focus). Again, this reading is orthogonal to the current argument.

of Topic-Focus Association may in some cases force a topic to be higher than a focus, but never the other way around; thus, it would be very strange to find this option in the grammar. Examples of this sort seem to be in fact unattested. It seems then that topics must be identified as such by Information Structure in their overt structural positions (whatever those positions may be). As a consequence, in cases where a topic in its canonical position is illicitly placed under a focus, the repair must be done overtly.

While we cannot dissociate the notion of topic from its overt location (whatever the structural position may be), dissociating it from the covert location of the topicalized element, on the other hand, may be possible. I will now discuss a case where a conspiracy of factors forces a quantifier interpreted as a contrastive topic in the middle field to take scope in a higher position. First recall from Section 3.2.2.1 above that a sentence with a quantified direct object is potentially scopally ambiguous if there is another scope-bearing element in a higher position, as was the case in (99a) above, repeated below in (122), where focalization of the direct object forces it to take wide scope over *forget*. As we saw, whenever focalization of the direct object is obligatory due to the presence of a middle-field topic (cf. e.g. (106) above), wide scope of the direct object over the higher scope-bearing element becomes obligatory as well.

(122) O   João esqueceu de ler   dois livros.   = (99a)
       the John forgot   of to.read two   books
       'John forgot to read two books.'
       forget > 2; 2 > *forget*

Now let us see what happens in cases of that sort when the topic itself is also a quantifier, in particular the distributive quantifier *cada* 'each', which is compatible with contrastive topic interpretation (see Chapter 2). Given its strong distributive requirement, *cada autor* 'each author' in (123B) must take scope over the cardinal *dois livros* 'two books'. As before, due to focalization,

two books must take scope over *forget*. This creates a semantic problem: If *each author* is to take

scope in its surface position, that is, under *forget*, it cannot distribute over *two books*, which has to

be interpreted higher than *forget*. This paradox can in fact be resolved if *each author* is allowed to

take scope over *forget*, that is, undergoing quantifier raising (which we can assume here respects

Scope Economy, given that it creates a new reading; see Fox 2000, Wurmbrand 2018). The

resulting scope relation, where the distribution takes scope over *forget* (i.e., $\forall > 2 > forget$), is in

fact the only one available in (123B), giving rise to a reading where for each author x, there are

two books by x that John forgot to read. This available reading therefore makes (123B) felicitous

after the set-up question in (123A).

(123) A: O João esqueceu de ler quantos livros pro curso de linguística?
           'How many books did John forget to read for the linguistics course?'
       B: O   João   esqueceu de ler,   *de cada autor*$_{CT}$, *dois livros*$_F$.
           the John   forgot   of to.read of each author   two   books
           'John forgot to read *two books*$_F$ by *each author*$_{CT}$.'
           Only reading: $\forall > 2 > forget$

For control, note that in the absence of middle-field topicalization, focalization of the direct

object (as the only possible focus in those cases) is not mandatory here and the distribution is then

allowed to take either wide or narrow scope with respect to *forget*, as in (124).[26] (Importantly, note

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[26] Interestingly, the scope relation where *forget* disrupts the semantic contiguity between the universal quantifier and the cardinal (namely, $\forall > forget > 2$) results in an anomalous, unattested reading. This restriction suggests that the distribution works as a single operator when computed for scope with respect to other scope-bearing elements. In other words, once the distribution is computed, it becomes atomic: $[\forall > 2] > forget$ is in principle possible, as well as *forget* $> [\forall > 2]$; other possibilities are ruled out, by either disrupting the distributivity requirement (e.g., $2 > \forall$) or disrupting the "atomicity" of the distribution. That this might be on the right track is corroborated by the contrast in (i) below. If

that the relevant observations straightforwardly carry over to (125)–(126), where the relevant

quantified expression is an adverbial nominal (*cada semana* 'each week'), showing that neither

the base position of the topic nor the preposition *de* 'of' present in (123)–(124) play a significant

role in the present discussion. Note additionally that the quantifier can scope/bind out of the PP,

further showing that the preposition is immaterial for the phenomena in question.)

(124) O João esqueceu de ler   dois livros de cada autor.
   the John forgot   of to.read two books by each author
   'John forgot to read two books by each author.'
   $\forall > 2 > forget$; $forget > \forall > 2$

(125) A: O João esqueceu de ler quantos livros esse semestre?
    'How many books did John forget to read this semester?'
   B: O João esqueceu de ler,   *cada semana*$_{CT}$, *dois livros*$_F$.
    the John forgot   of to.read each week   two   books
    'John forgot to read *two books*$_F$ *each week*$_{CT}$.'
    Only reading: $\forall > 2 > forget$

(126) O   João esqueceu de ler   dois livros cada semana.
   the John   forgot   of to.read two books each week
   'John forgot to read two books each week.'
   $\forall > 2 > forget$; $forget > \forall > 2$

We have thus seen that in the particular case where there is a potential scopal paradox between

the obligatory quantifier raising of the direct object (triggered by obligatory focalization) and the

strong distributivity requirement of *cada* 'each', *cada* is allowed to take scope in a covert position

that is higher than the surface position where it is interpreted as a topic. This case therefore suggests

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each author and *two books* must be interpreted "atomically", *two books* must necessarily be focalized, in order to take
wide scope over *forget*. Consequently, while (ia) is well-formed, focus on *forget* renders (ib) anomalous.
(i) a. *De cada autor*$_{TOP}$, o João esqueceu de ler   *dois livros*$_F$.
     of   each author   the John forgot   of to.read two   books
     'John forgot to read *two books*$_F$ *by each author*$_{CT}$.'
     Only reading: $\forall > 2 > forget$
   b. #*De cada autor*$_{TOP}$, o João *esqueceu*$_F$ de ler   dois livros.
     of   each author   the John forgot   two read two   books
     'Intended: John *forgot*$_F$ to read two books *by each author*$_{CT}$.'
     Anomalous

that an element can be interpreted as a topic in one position (for Information Structure purposes) and satisfy a semantic requirement in another position, which we already saw above is possible with focalized elements.

In conclusion, the observations made above regarding the interaction of quantifier scope and topicalization/focalization provide evidence in favor of postulating that Information Structure has its own independent procedure to locate the position of the relevant topics and foci, which in the well-defined cases discussed in this section may not match the position where the relevant elements are interpreted in LF/Semantics. I take mismatches of this nature to highlight the role of topicalization and focalization as independent information-structural notions, which ultimately suggests that Information Structure is an independent interface level of the grammar.[27]

The observations made in this section are of course embryonic and programmatic. My main goal with this discussion was to bring attention to the possibility of disentangling information-structural notions such as topic and focus from the positions where topicalized and focalized elements are interpreted in LF/Semantics, which I believe is vital in identifying the role and the location of Information Structure in the architecture of the grammar.[28]

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[27] See Bobaljik & Wurmbrand (2012) for an account of mismatches between word order, quantifier scope, and information structure in terms of economy conditions. Importantly, that work also provides evidence that scope relations and topic-focus relations may not match.

[28] Information Structure notions such as topic and focus in a way have effects throughout the grammar. Take focus, for instance, and the possibility that focus is assigned to an element in Syntax through an item/feature from the Lexicon (see e.g. Lacerda 2016 for a proposal). Upon spell-out, the focus lexical item/feature may trigger a particular interpretation/operation at LF (e.g., wide scope/quantifier raising), it may trigger a particular intonational pattern in the prosodic component of PF (e.g., high pitch), and it may trigger a particular discourse strategy in Information Structure (e.g., question-answering or correction). In this sense, each interface component has its own mechanism to read the focus lexical item/feature off Syntax, focus thus not being a notion of a single component of the grammar.

3.3. Conclusion

In this chapter, I proposed an analysis of the structural make-up of the middle field/verbal domain in Brazilian Portuguese. The restrictions observed in the distribution of postverbal topics and foci were accounted for with the postulation of a single, independent "object shift" projection closing off the extended domain of the verb (XP in (127)), whose specifier can host the highest internal argument of the verb and to which middle-field topics can adjoin.

(127)   [$_{TP}$ [$_{XP}$ *middle-field topic* [$_{XP}$ *object shift* [$_{X'}$ X^0 [$_{vP}$ [$_{VP}$]]]]]]

In Section 3.1, I motivated the location of the "object shift" position as vP-external (i.e., higher than vP) and argued that movement to Spec,XP is not triggered by semantic or information-structural reasons (the relevant element in Spec,XP in principle being able to have any informational role, including neutral as in an answer to a *what happened* question). Rather, object shift was argued to be akin to subject movement, in that it involves movement to a unique A-specifier in the clause. Then, I argued that middle-field topics are located above the object shift position at the edge of the verbal domain, namely adjoined to XP. I further argued that compared to German *Mittelfeld* topics, Brazilian Portuguese middle-field topics are structurally too low to be able to have aboutness interpretation — more precisely, Brazilian Portuguese middle-field topics are located lower than sentential adverbs, which mark the edge of the propositional content.

In Section 3.2, I argued that the restrictions observed in middle-field Topic-Focus Association can be accounted for by a phase-based locality constraint whereby middle-field topics and their associated foci must be in the same spell-out domain. I showed that the proposed locality constraint can derive the attested distribution of topics and foci in postverbal positions if middle-field topics

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are analyzed as being adjoined to the object shift projection XP and if XP is a phase, which was independently motivated. Finally, based on the interaction between topicalization/focalization and quantifier scope, I showed that the informational status of an element can in principle be dissociated from the position where it is interpreted in LF/Semantics, which was in turn taken to suggest the existence of Information Structure as an independent component of the grammar.

While many questions still remain open regarding how topicalization and focalization interact with Syntax and especially Semantics in the issues discussed in this section, one question needs to be addressed at this point, namely whether Information Structure is best analyzed as being represented in the Syntax by cartographic topic- and focus-dedicated projections, or as involving a set of well-formedness conditions that must be met in the mapping from Syntax to Information Structure. In Chapter 4, I will argue that the interpretive and structural restrictions observed so far for Brazilian Portuguese pose a series of challenges for the cartographic approach and favor an alternative interface mapping approach to the interface between Syntax and Information Structure.

Chapter 4

The mapping from Syntax to Information Structure

Having discussed a number of syntactic properties of the sentential middle field of Brazilian Portuguese and their consequences for the theory of Information Structure in Chapter 3, in this chapter I will finally probe into the question of how the mapping of syntactic structures onto Information Structure relations is best analyzed in the language. In general terms, the question to be addressed in this chapter is whether discourse-related phenomena such as topicalization and focalization are licensed in the mapping from Syntax to Information Structure *rigidly*, in that topics and foci must occupy *fixed positions* in the clausal spine in order to be licensed, or *contextually*, in that topics and foci are licensed *relatively* with respect to each other and other relevant information-structure elements.

The observations made so far in this dissertation regarding the distribution of topics and foci in Brazilian Portuguese need to be accounted for by any approach to the Syntax-Information Structure interface. For example, we saw that while aboutness topicalization is subject to the traditional *Topic-Comment* bipartite articulation of the clause, discourse-given and contrastive topics are licensed with respect to an associated focus, in a relation which I have referred to as *Topic-Focus Association* (which in turn is subject to the *given-before-new* effect). In this respect, we saw that middle-field Topic-Focus Association is subject to a locality constraint, whereby the topic and its associated focus must be overtly realized in the same spell-out domain. We also saw that the informational roles available in the middle field are a proper subset of those available in the left periphery, most strikingly in that the middle field cannot host either aboutness topics, which were argued to require a higher position in the clause (above sentential adverbs), or foci, which

were argued to only be able to be dislocated to a position outside its associated presupposition. Any approach to topic and focus, and more generally Information Structure, needs to accommodate these empirical discoveries. In the face of the many restrictions on the distribution of topics and foci in Brazilian Portuguese discussed in this dissertation, I will now evaluate two prominent approaches to the Syntax-Information Structure interface, namely *Cartography* (Rizzi 1997 et seq., Belletti 2004) and *Mapping* (Neeleman & van de Koot 2008, 2010).

The chapter is organized as follows. In Section 4.1, I will address the question of whether cartographic topic- and focus-dedicated projections are suitable for Brazilian Portuguese and will defend the position that the data discussed in this dissertation receive a better account without the postulation of topic and focus projections in the clausal spine, which indicates that the cartographic Topic and Focus Criteria should be dispensed with. I will carefully investigate several challenges posed by Brazilian Portuguese data for the view that informational roles should be tied to absolute syntactic positions in the clausal spine, related to the postulation of clausal topic and focus heads (Section 4.1.1), the postulation of topic and focus projections in the "low left periphery" (Section 4.1.2), the interpretation of subjects in Spec,TP as aboutness topics (Section 4.1.3), and the structure of so-called "topic-drop" constructions (Section 4.1.4).

Next, in Section 4.2, I will propose an alternative mapping analysis, in the style of Neeleman & van de Koot 2008, 2010, whereby topics and foci are not subject to fixed positions in the clause, but rather must be *contextually licensed* with respect to specific sets of well-formedness conditions, which vary with respect to each informational role. I will defend the view that a mapping approach offers better ingredients to encode the restrictions observed in topicalization and focalization in Brazilian Portuguese, which should ultimately be deduced from independent principles and language-specific properties. Finally, Section 4.3 concludes the chapter.

4.1. Challenges for Cartography

In this section, I will show that the Brazilian Portuguese data discussed in this dissertation pose a series of challenges for the cartographic approach to the Syntax-Information Structure interface. I will argue that the postulation of topic- and focus-dedicated projections in the clausal spine of Brazilian Portuguese, such as the ones proposed by Rizzi (1997, et seq.) and Belletti (2004), runs into empirical problems, and therefore projections such as TopP and FocP should be dispensed with in the language, along with their corresponding Topic and Focus Criteria.

I will start with a more general, conceptual discussion in Section 4.1.1 regarding the theoretical status of topic and focus heads and their corresponding Topic and Focus Criteria. I will defend the position that clausal heads such as Top^0 and Foc^0 are not an interface necessity and should only be postulated in the presence of strong empirical evidence. In the case of Brazilian Portuguese, I will argue that clausal heads such as Top^0 and Foc^0 are not empirically motivated.

In Section 4.1.2, I will focus on the sentential middle field and will discuss the consequences of postulating a topic projection such as Belletti's (2004) in the middle field of Brazilian Portuguese. In light of the locality restrictions on middle-field Topic-Focus Association discussed in Chapter 3, I will argue that a cartographic analysis of middle-field topicalization faces empirical challenges, in particular with respect to the phasal status of the object shift projection and the observed distinction between topics in canonical positions and topics in marked positions.

In Section 4.1.3, I will discuss the structure of sentences where subjects are interpreted as aboutness topics. Based on the analysis of locative inversion constructions, I will show that subjects that remain in Spec,TP can have aboutness topic interpretation, Spec,TP being a position that allows for subjects to conform with the interpretive requirements of aboutness topicalization,
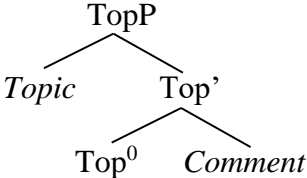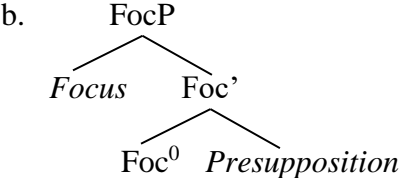
with no further dislocation to a left-peripheral topic position being needed for the Information Structure interface. This means that aboutness topicalization is not restricted to a single position in the clause, despite being dependent on a bipartite articulation of the clause, which in turn provides evidence against Rizzi's (1997) Topic Criterion.

In Section 4.1.4, I will discuss the consequences of the analysis proposed for aboutness topicalization in Section 4.1.3 for the analysis of topic-drop constructions. In particular, I will propose that null subjects locally licensed by topics (null or overt) are not derived as traces of movement.

4.1.1. Topic and focus heads

As we saw in the Introduction, the cartographic approach to the Syntax-Information Structure interface proposed by Rizzi (1997 et seq.) postulates the existence of topic- and focus-dedicated functional heads in the clausal spine, whose function is to mediate the relationship between a topic and a comment and the relationship between a focus and a presupposition, respectively, as is represented in (1)–(2).

(1)   [ForceP [TopP [FocP [TopP [FinP [IP]]]]]]   (Rizzi 1997: 297)

(2)   a.   TopP   b.   FocP

                Topic   Top'   *Focus*   Foc'

                        Top⁰   *Comment*   Foc⁰ *Presupposition*
                                                                                (Rizzi 1997: 286–287)

In this dissertation, I maintain that the postulation of functional heads such as Top^0 and Foc^0 (and their corresponding projections TopP and FocP) must always be demonstrated by independent evidence, that is, the mere presence of elements that are interpreted as topics and foci cannot be taken as enough evidence to justify the existence of Top^0 and Foc^0 (under the risk of circularity). In light of this, in this section I will briefly discuss the status of Top^0 and Foc^0 and the issues raised by Brazilian Portuguese, a language where I will argue that the postulation of topic and focus heads is not empirically justified.

First and foremost, it is not at all obvious that clausal heads such as Top^0 and Foc^0 are an absolute interface necessity. At the Information Structure interface, a topic minimally needs to be associated with a comment (or a focus), and a focus minimally needs to be associated with a presupposition. Therefore, cartographic analyses, which bring in additional assumptions, must independently demonstrate that a topic cannot be associated with its comment without the mediation of Top^0 and that a focus cannot be associated with its presupposition without the mediation of Foc^0. In other words, it appears that the clausal heads Top^0 and Foc^0 introduce an additional complication; more generally, the null hypothesis for a theory of *interpretation* seems to lie in the *interpretive* component of the grammar, and things should be moved into Syntax (or additional assumptions adopted in the Syntax) only if proved absolutely necessary.

In order to provide evidence for the existence of clausal topic and focus heads such as the ones in (2) above, defendants of the cartographic approach should provide evidence that what is claimed to be a clausal topic/focus head both (i) is part of the clausal spine (rather than part of the nominal domain) and (ii) unambiguously realizes topic/focus. In my view, few theory-independent arguments have ever been given to that effect, in particular with respect to the morpho-syntactic reality of these heads. The main argument presented in the literature, found in e.g. Rizzi (1997,

2013), is the existence of overt topic and focus markers in some languages. In particular, Rizzi (2013) argues that the fact that the Gungbe focus particle *wè* in (3) is possible with left-peripheral foci but not with foci in situ would be unexpected if *wè* were a DP-internal marker, but is compatible with the view that *wè* is a clausal head in the left periphery.

(3)   a.   fíté   wè é yì?
                 where FOC he went
                 [Where did he go?]
    b.   é yì   fíté   (*wè)?
                 he went where (FOC)
                 ['He went where?']   (Rizzi 2013: 204)

The restriction observed above with respect to Gungbe *wè*, although compatible with it being a clausal head, is not *sine qua non*. With Gungbe's nominal system being head-final, as illustrated in the example from Aboh (2004) in (4), it may very well be the case that topic and focus particles are attached to the right of the topicalized/focalized element itself in that language, that is, that they are part of what is topicalized/focalized.

(4)   [Lέsì Gúkɔ́m̀ɛ t̀ɔn lɔ́]   yà é ǹɔ víví gbáú.
     rice Gukome POSS DET$_{[+spec;+def]}$ TOP 3SG HAB sweet very
     'As for the aforementioned rice from Gukome, it is very sweet.'
                                               (Aboh 2004: 2)

Especially in the case of topics, this is a very typical situation. In fact, it seems to be the general case: *Bona fide* topic particles cross-linguistically are generally attached to the topicalized element itself, rather than part of the clausal spine — this makes sense from an interface perspective; being interpreted as a topic is a property of the topicalized element, not a property of the clause. This is illustrated by unrelated languages such as Japanese (Japonic, East Asia), Abau (Sepik–Ramu, Papua New-Guinea), Nepali (Indo-Aryan, South Asia), and Brazilian Portuguese (Romance, South

America). As is well-known, the Japanese topic particle *-wa* is attached to the right of the topicalized element itself, as in the example from Saito (2016) in (5); were *-wa* a clausal head, we would expect it to appear sentence-finally, given Japanese's consistent head-finality. Also attached (in the same manner) to the topicalized element are Abau *-kwe* in (6) (from Lock 2011) and Nepali *-ta* in (7) (from my own fieldwork).

(5)   Taroo-wa itumo   zibun-no hakaseronbun-o   inyoosu-ru.
        T.-TOP   always self-GEN dissertation-ACC cite-PRES
        'Taroo always cites his Ph.D. dissertation.'

                                                                    (Saito 2016: 132)

(6)   *Hiykwe   sapa mon ley. Hiykwe   hane me   nonkway kow pa.*
        hiy-kwe   sapa mon ley hiy-kwe   han-e me   nonkway kow pa
        3S.M.SUB-TOP forest LOC go   3S.M.SUB-TOP 1S-OBJ speak know   BEN NEG.PFTV
        'He went to the forest. He did not tell me.'

                                                                    (Lock 2011: 36)

(7)   A: Gitā-le   Hari-lāi   ãp   d-ī.
            Gitā-ERG Hari-DAT mango give-3SG.FEM
            'Gitā gave Hari a mango.'
        B: Ho-ina, Hari-lāi-ta   us-le   syāu d-ek-i   ho.
            AUX-NEG Hari-DAT-TOP 3SG-ERG apple give-EK-3SG.FEM AUX
            'No, to Hari she gave an apple.'

Returning to Gungbe *wè*, the argument from Rizzi (2013) that *wè* is impossible with elements in situ is also inconclusive to show that it is a left-peripheral clausal head. Recall from Chapter 2 that in Brazilian Portuguese the aboutness-shifting particle *já* 'lit. already' can license a sentence-initial (aboutness) topic, as in (8B1), but not a sentence-internal topic in situ, as in (8B2). In other words, Brazilian Portuguese *já* exhibits the same restriction as Gungbe *wè*, *prima facie*. If this restriction were enough to show that *já* is a topic head in the clausal spine, *já* should appear to the right of the topic; as (9) shows, though, this prediction is not in line with the data. That *já* is indeed a topic particle left-attached to the topic itself in these examples and not a sentence-level

coordinator is shown by its sharp contrast with *bona fine* sentence-level *mas* 'but', shown in (10).[1]

Unlike *já*, *mas* does not require fronting of any topic or focus and does not have to be adjacent to

the shifted/contrasted element (cf. (8B3)).

(8)   A: O Pedro teve que ler o Programa Minimalista pra esse curso.
                'Peter had to read the Minimalist Program for this course.'
        B1: *Já o Barriers*$_{AT}$, ele não teve que ler.
             JÁ the Barriers   he not had that to.read
        B2: *Ele não teve que ler   *já o Barriers*$_{AT}$.
             he   not had that to.read JÁ the Barriers
        B3: *Já ele não teve que ler   o Barriers*$_{AT}$.
             JÁ he not had that to.read the Barriers
             'Now *Barriers*$_{AT}$, he didn't have to read (it).'

(9)   a.   **O Barriers*$_{TOP}$ já ele não teve que ler.
             the Barriers   JÁ he not had that to.read
             'Now *Barriers*$_{AT}$, he didn't have to read (it).'
        b.   [$_{TopP}$ *topic* [$_{TopP'}$ TOP^0+*já* [$_{TP}$ …]]]

(10)   A: O Pedro teve que ler o Programa Minimalista pra esse curso.
                'Peter had to read the Minimalist Program for this course.'
        B1: <u>Mas</u> *o Barriers*$_{AT}$, ele não teve que ler.
             but the Barriers   he not had that to.read
             'But *Barriers*$_{AT}$, he didn't have to read (it).'
        B2: <u>Mas</u> ele não teve que ler   *o Barriers*$_{F}$.
             but he not had that to.read the Barriers
             'But he didn't have to read *Barriers*$_{F}$.'

    As we saw above, some elements that are argued in the cartographic tradition to be clausal

topic/focus heads may in fact be part of the nominal domain (more precisely, attached to the

topicalized/focalized element itself), most commonly with respect to topics. As we will see next,

some elements that are argued to be clausal focus heads may indeed be clausal, but may actually

not be realizing focus after all. Let us see how.

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[1] See Miranda & Silva (2015) for other relevant differences between and *já* and *mas*.

Similarly to the Gungbe focus particle discussed above, Rizzi (2013) argues that the Dutch particle *of* can appear with left-peripheral *wh*-elements, but not with *wh*-in situ, as in (11). Additionally, *of* is inconsistent with V2 (competing with the finite verb for the same position), as the contrast in (12) shows. Based on these observations, Rizzi (2013) concludes that Dutch *of* is a left-peripheral clausal focus head. As is well-known, like in some French varieties (see e.g. Boucher 2010), Brazilian Portuguese allows for the complementizer *que* 'that' to appear in very similar circumstances (*que* being the complementizer that introduces embedded declarative clauses in the language). As (13) shows, *que* is possible with a moved *wh*-element, but not with a *wh*-in situ (see Mioto 1994, Kato 2004, Figueiredo Silva & Grolla 2016, a.o.). With Brazilian Portuguese not being a V2 language, *que* can co-occur with a fronted *wh*-element in a matrix clause, as in (14).

(11)   Ik vraag me   af [wie of __ wat (*of) gezegd heeft].
           I ask   myself off who OF   what (*OF) said   has
           ['I ask myself who has said what.']   (Rizzi 2013: 204)

(12)   a.   Ik weet niet [wie of [Jan __ gezien heeft]].
                I know not   who OF   Jan   seen   has
                ['I do not know who Jan has seen.']
           b.   Wie (*of) heeft Jan __ gezien?
                [who (*OF) has   Jan   seen]
                'Who has Jan seen?'   (Rizzi 2013: 205)

(13)   Eu me pergunto quem (que) disse o quê (*que).
           I   me ask   who (that) said what (*that)
           'I ask myself who said what.'

(14)   Quem (que) o   João viu?
           who   (that) the John saw
           'Who did John see?

It seems then that Brazilian Portuguese *que*, like Dutch *of*, is a left-peripheral clausal head. While I will not dispute that claim, I maintain that the conclusion that *que* is a focus head is

unwarranted, and *que* in (13)–(14) is best analyzed as a complementizer head (likely realizing Fin^0, as we will see below). In Brazilian Portuguese, while *que* is in principle always possible with fronted *wh*-expressions, it resists co-occurrence with many fronted foci. Observe the scenarios in (15)–(16). Note that while *que* is possible in the questions in A, the presence of *que* leads to ungrammaticality in the B answers. Observe that without *que*, sentences (15B) and (16B) are perfectly acceptable with fronted foci in these contexts, as they involve additional interpretive effects, such as scalarity/evaluation (as discussed in Chapter 2, these are some of the effects that license *movement of focus*, as defined in that chapter).

(15) A: O que (que) o Pedrinho comeu na   festa?
          what   (that) the little.Peter ate   in-the party
          'What did little Peter eat at the party?'
     B: *Até   pedra*$_F$ (*que) ele comeu.
          even   rock   (*that) he ate
          'He ate *even rocks*$_F$.'

(16) A: O que (que) você comprou no   shopping?
          what   (that) you bought   in-the mall
          'What did you buy at the mall?'
     B: *Coisa nenhuma*$_F$ (*que) eu comprei! (Tudo   estava muito caro.)
          thing none   (*that) I   bought   (everything was   too   expensive)
          'I didn't buy *anything at all*$_F$! (Everything was too expensive.)'

While the ungrammaticality of (15B) and (16B) above remains unaccounted for if *que* is a focus head, it can be accounted for if *que* is a complementizer head instead. With *que* being a complementizer in (15B) and (16B), the only possible construal would be that of a cleft sentence. However, the foci in question (*até pedra* and *coisa nenhuma*) fail to be licensed in cleft sentences, as is shown in (17a–b) (compare (17a–b) with the acceptable (18a–b)). Regardless of how one is to analyze cleft sentences in Brazilian Portuguese, what is crucial here is that the versions of (15B) and (16B) with *que* above can be correctly ruled out if they are in the realm of clefting (where *que*

is a complementizer), but remain unaccounted for if they are in the realm of focus fronting (which, again, is licensed in (15B) and (16B) only in the absence of *que*). In sum, if *que* is a focus head in (15A) and (16A), it is very strange that it is incompatible with the *bona fide* foci in (15B) and (16B).

(17) a. *Foi *até   pedra* que ele comeu.
          was even rock   that he ate
          'It was even rocks that he ate.'
     b. *Foi *coisa nenhuma* que eu comprei.
          was thing none   that I   bought
          'It was nothing at all that I bought.'

(18) a. Foi *um bolo de chocolate* que ele comeu.
          was a   cake of chocolate that he ate
          'It was a chocolate cake that he ate.'
     b. Foi *um livro do   Chomsky* que eu comprei.
          was a   book of-the Chomsky that I   bought
          'It was a book by Chomsky that I bought.'

Further evidence that, when co-occurring with fronted *wh*-expressions, *que* realizes a complementizer head rather than a focus head comes from the observation that *que* is sensitive to the finiteness of the clause it appears in. As was noted by e.g. Figueiredo Silva & Grolla (2016), *que* is not allowed in infinitival clauses, as is shown in (19); (20) illustrates an embedded context. Assuming Rizzi's (1997) proposal that two complementizer heads make up the (split) CP system (namely, Force^0 at the top and Fin^0 at the bottom), the *wh*-related *que* can therefore be analyzed as realizing the Fin^0 head, which encodes finiteness.[2]

(19) O que (*que) fazer numa situação dessa?
      [what (*that) to.do in-a   situation of-this?]
      'What to do in a situation like this?'
                                          (Figueiredo Silva & Grolla 2016: 261)

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[2] It is important to make it clear that arguing against cartographic topic and focus heads does not amount to arguing against the entire idea of a split CP system.

(20) O João não sabe   o que (*que) fazer numa situação dessa.
      the John not knows what (*that) to.do in-a   situation of-this
      'John doesn't know what to do in a situation like this.'

Indeed, as (21a) shows, the *que* associated with a *wh*-expression is lower than the *que* that encodes (declarative) force in (21b) (cf. the interrogative *se* in (21c)); note that the topic *esse livro* "this book" precedes the *wh*-expression (and its Fin^0 *que*) in (21a), but follows Force^0 *que*/*se* in (21b–c).[3] Based on these observations, I conclude that the *que* that optionally co-occurs with fronted *wh*-expressions in Brazilian Portuguese realizes the Fin^0 complementizer head, therefore providing no evidence for the existence of a Foc^0 head in the clausal spine of the language.[4]

(21) a. *Esse livro*TOP, *pra quem* (que) o   João deu?
          this book   to who (that) the John gave
          'This book, who did John give it to?'
      b. O   João disse que, *esse livro*TOP, ele deu pra   Maria.
          the John said that this book   he gave to-the Mary
          'John said that, *this book*TOP, he gave it to Mary.'
      c. A   Ana   perguntou se, *esse livro*TOP, ele deu pra   Maria.
          the Anna asked   if this book   he gave to-the Mary
          'Anna asked if, *this book*TOP, he gave it to Mary.'

The above discussion regarding *wh*-related *que* in Brazilian Portuguese serves to show that even if a given topic/focus-related element can be shown to be a clausal head, it cannot be taken for granted that it is the realization of a clausal topic/focus head. As we saw, the Brazilian Portuguese *que* in question is best analyzed as a complementizer head, likely Fin^0, given its sensitivity to finiteness and its incompatibility with some *bona fide* foci. That *wh*-related *que*

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[3] It would be interesting to investigate these constructions in light of recomplementation phenomena, as observed in e.g. Spanish double-*que* constructions (see e.g. Villa-Garcia 2012).

[4] With a focus projection in the left periphery of Brazilian Portuguese being dispensed with, fronted *wh*-elements can then be analyzed as occupying the specifier of FinP, with left-peripheral topics arguably adjoined to FinP.

realizes Fin^0 should be no surprise, given that *que* is the element that introduces declarative sentences in the language (i.e., *que* is a complementizer).

In fact, it is at the very least suspicious that elements that are argued to be clausal topic/focus heads generally seem to have other functions, that is, they are generally not unambiguous topic/focus heads. Incidentally, the same *que* that introduces declarative clauses in Spanish has been argued to be a topic head by Villa-García (2012) (and also by Rizzi 2020, *Abralin ao vivo* lecture), given that *que* can (optionally) follow topicalized elements in "sandwich" constructions such as (22). Historically, it appears to be more likely that *que* remained a (traditional) complementizer in both Brazilian Portuguese and Spanish than that *que* underwent very different separate changes to become a focus head in one language and a topic head in the other.

(22)   Susi dice que a   los alumnos (que) les van a dar   regalos.
       Susi says that DAT the students (that) CL go to give presents
       'Susi says that they are going to give the students presents.'

                                                              (Villa-García 2012: 12)

As we have seen above, the arguments offered by Rizzi (2013) to justify the existence of clausal topic and focus heads in other languages are inconclusive at best and do not carry over to Brazilian Portuguese. Interestingly, while topics and comments, and foci and presuppositions, by necessity exist in both cartographic and non-cartographic approaches to the Syntax-Information Structure interface, clausal heads such as Top^0 and Foc^0 exist only in cartographic approaches. Therefore, non-cartographic approaches are in principle simpler, and cartographic approaches should then rely on irrefutable evidence for the morpho-syntactic reality of Top^0 and Foc^0 in the clausal spine.

To conclude this section, let us briefly address a consequence of the introduction of Top^0 and Foc^0 in the clausal spine, namely the introduction of the *Topic and Focus Criteria* by Rizzi (1997), as a reflection of the structures in (2) above:

> "[A] constituent endowed with topic or focus features must end up in a Spec/head configuration with Top or Foc, respectively; in other words, there are Topic and Focus Criteria, reminiscent of the Wh and Neg Criteria (Rizzi 1991, Haegeman 1995)."
>
> (Rizzi 1997: 287)

In compliance with the Topic Criterion, the topic *il tuo libro* 'your book' in the Italian sentence in (23), for example, is realized in Spec,TopP, with IP being interpreted as its corresponding comment. Similarly in (24), in compliance with the Focus Criterion, the focus *il tuo libro* is realized in Spec,FocP, with IP being interpreted as its corresponding presupposition.

(23) a. Il tuo libro, lo ho letto.   *Topicalization*
          the your book CL have read
          'Your book, I have read it'

      b. [TopP [Il tuo libro]i [IP lo ho letto ti]]   (adapted from Rizzi 1997: 286)

(24) a. IL TUO LIBRO ho letto (non il suo).   *Focalization*
          the your book   have read (not the his)
          'Your book I read (, not his).'

      b. [FocP [Il tuo libro]i [IP ho letto ti]]   (adapted from Rizzi 1997: 286)

Rizzi (1997: 188) further argues that the "topic-focus system" in the CP domain is only activated "if needed", that is, "when a constituent bears topic or focus features to be sanctioned by a Spec-head criterion". Two remarks are in order with respect to that assumption. First, it is important to point out that the assumption that topic and focus projections are optional in the clausal spine runs afoul of the notion of the functional hierarchy, whereby the absence of a

projection should entail the absence of all other projections that would be higher in the structural hierarchy (as is seen in e.g. restructuring clauses; see e.g. Wurmbrand 2014). To illustrate, in (25), the medial category YP should be absent only if the top category XP is also absent (cf. (25c–d)).[5]

(25) a. $[_{XP} [_{YP} [_{ZP}]]]$ ✓
      b. $[_{YP} [_{ZP}]]$ ✓
      c. $[_{ZP}]$ ✓
      d. $[_{XP} [_{ZP}]]$ ✗

Second (and most important for our current discussion), under the assumption that the Topic and Focus Criteria hold as originally proposed, a topic entails the presence of a Top^0 head in the clause and vice-versa, and a focus entails the presence of a Foc^0 head in the clause and vice-versa. This inherent circularity of the system often prevents us from testing the existence of Top^0 and Foc^0 heads independently of actual topics and foci (given that these heads are pervasively null, in particular in Romance languages). As such, this circularity has led much derived work in the cartographic tradition to postulate the existence of Top^0 and Foc^0 heads in the clausal spine merely based on the presence of topics and foci in the sentence (I will return to this in the next section).

In conclusion, I maintain that if the Information Structure interface can in principle do without the mediation of Top^0 and Foc^0 in order to interpret topic-comment and focus-presupposition relations, then a non-cartographic analysis is preferred. In other words, by Occam's Razor, Top^0/TopP and Foc^0/FocP should only be postulated when proven absolutely necessary. Note that

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[5] It is also not clear how selection should work here. Some cases are illustrated in (i) below: The $Force^0$ head may select for projections as diverse as TopP, FocP, or FinP. Similarly, the Top^0 head may select for either a FocP or a FinP, while the Foc^0 head may select for either a TopP or a FinP.

(i) a. $[_{ForceP} [_{TopP} [_{FocP} [_{TopP} [_{FinP}]]]]]$
     b. $[_{ForceP} [_{TopP} [_{FinP}]]]$
     c. $[_{ForceP} [_{FocP} [_{FinP}]]]$
     d. $[_{ForceP} [_{FinP}]]$

neither the head Top^0 nor its projection TopP are either the topic or the comment; similarly, neither Foc^0 nor FocP are either the focus or the presupposition. What all this indicates is that topic and focus clausal heads and their projections are not in principle a necessity of the interpretive interface. Moreover, independent evidence for the morpho-syntactic reality of Top^0 and Foc^0 is too often absent and, when present, is inconclusive at best. We also saw that the arguments offered by Rizzi (2013) for the existence of such heads in other languages do not carry over to Brazilian Portuguese without giving rise to a number of empirical problems. In light of all of this, my position is that cartographic clausal topic and focus heads/projections and their corresponding Topic and Focus Criteria should be eliminated from the theory of grammar unless proven absolutely necessary. Until then, a non-cartographic approach that does not rely on those assumptions is preferred.

4.1.2. The "low left periphery"

In this section, I will discuss how the postulation of topic- and focus-dedicated clausal heads in the middle field of Brazilian Portuguese fares with respect to the restrictions observed in the distribution of postverbal topics and foci in the language, in particular with respect to the phase-based locality constraint discussed in Chapter 3. I will argue that a cartographic analysis of the middle field faces the challenge of independently motivating additional assumptions that it requires to account for the observed restrictions on middle-field Topic-Focus Association.

In the literature on Romance languages, cartographic topic and focus projections for the sentential middle field were first proposed by Belletti (2004). In line with Rizzi (1997), the author argues that "the area immediately above VP displays a *significant resemblance* to the left periphery

of the clause" (Belletti 2004: 17; italics mine, RL).[6] In particular, she proposes that topic and focus

projections may also be found in sentence-internal positions (in the so-called "low IP area" or "low

left periphery") and proposes the structure in (26) for Italian, where topic and focus projections

are found between IP and vP.

(26)   [IP [TopP [FocP [TopP [vP]]]]]   (Belletti 2004: 25)

Based on a number of tests, Belletti (2004) argues that postverbal subjects in the language are

structurally low and, by virtue of their being informationally interpreted as topics or foci, she

proposes that they occupy one of the topic or focus positions in (26). This is illustrated in (27),

where the postverbal subject *Gianni* in (27B) is interpreted as a topic and thus in her analysis

occupies the specifier of a topic projection, as well as (28), where *Gianni* is interpreted as a focus

in (28B) and as such occupies the specifier of a focus projection (for similar proposals for other

languages, see e.g. Jayaseelan 2001 (Malayalam, German) and Paul 2002, 2005, 2015 (Chinese)).

(27)   A: Che   cosa   ha   poi   fatto Gianni?
              [what thing has   then done Gianni]
              'What has Gianni finally done?'
        B: Ha   parlato, Gianni.
              [has spoken Gianni]
              'He has spoken, Gianni.'   (Belletti 2004: 22)

(28)   A: Chi ha parlato?
              ['Who spoke?']
        B: Ha   parlato Gianni.
              has spoken Gianni
              ['Gianni spoke.']   (Belletti 2004: 21)

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[6] One may rightfully wonder if "significant resemblance" should entail that the left periphery and the middle field should work in the same way. As we saw in Chapter 2 for Brazilian Portuguese, they do not.

Although the low structural height and the informational roles of the relevant subjects were convincingly demonstrated in Belletti (2004), to the best of my interpretation no arguments were given to the effect that postverbal topics and foci must necessarily be located in informationally-designated specifiers, as proposed by Rizzi (1997). To quote the author herself: "As I have shown that the subject is low in the clause structure, this *naturally* leads to the proposal that it should fill a low Focus position (or Topic […]). This, in turn, argues in favor of the existence of such a position clause internally." (Belletti 2004: 22; italics mine, RL). In other words, the cartographic model seems to be *presupposed* by Belletti (2004), rather than *argued for*.[7]

Still, topic and focus projections such as the ones in (26) have been resorted to by a number of authors investigating the Syntax-Information Structure interface in Brazilian Portuguese (see e.g. Kato 2013, Lacerda 2012, 2016, Cépeda & Cyrino 2020). In those approaches, a ditransitive sentence such as (29B) (from Cépeda & Cyrino 2020), where the indirect object is interpreted as a topic and the direct object is interpreted as focus in the non-canonical order IO–DO (the base order being DO–IO), is usually analyzed as involving movement of both verbal complements to the periphery of vP, as is represented in (30). In a similar fashion, when the indirect object is focal and the direct object is topical in the IO–DO order, the (vP-external) topic position under the focus position can be resorted to, as in the example in (31) (from Kato 2013), represented in (32).

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[7] Importantly, most of the argumentation in Belletti (2004) (and in much work derived from it) comes from the interpretation of postverbal subjects. There are two problems with that, in my view. First, if postverbal subjects do in fact leave the vP, they might do so for independent formal reasons, which in turn does not provide irrefutable evidence that their movement to that area of the clause is informationally-driven. Second, it might be the case that subjects focalized in postverbal position in Italian are in fact pronunciations of lower copies due to the Nuclear Stress Rule, as was proposed by Stjepanović (2003) for Serbo-Croatian (she proposes that such subjects undergo regular movement to Spec,TP but a lower copy is pronounced when they are focalized and need to be assigned stress by the Nuclear Stress Rule, which assign stress to the most deeply embedded element). In this dissertation, in order to test the availability of Information Structure-driven movement to the middle field of Brazilian Portuguese, I have crucially tested elements that have no other independent reasons to leave the vP (such as adnominal PPs and indirect objects in the presence of direct objects). (Importantly, Brazilian Portuguese is not subject to the Nuclear Stress Rule (i.e., focal stress is possible in any position), therefore a lower-copy-pronunciation analysis does not apply to this language.)

(29) A: O que a Olga deu para o Mário?
          'What did Olga give to Mario?'
      B: A Olga deu para o Mário uma maçã.
          the Olga gave to   the Mario an   apple
          'Olga gave an apple to Mario.'   (Cépeda & Cyrino 2020: 110)

(30) [TP A Olga$_{subj}$ deu [TopP para o Mario$_{top}$ [FocP uma maçã$_{foc}$ [vP t$_{subj}$ [VP t$_{foc}$ [V' t$_{top}$]]]]]]

                                                          (Cépeda & Cyrino 2020: 112)

(31) Eu dei *pro meu pai* esse CD, não pra minha mãe.
      I   gave to my father this CD not to my   mother
      'It was to my father that I gave this CD, not to my mother.'   (Kato 2013: 183)

(32) [CP [TP Eu dei [FocP pro meu pai$_{foc}$ [TopP esse CD$_{top}$ [vP t$_{subj}$ [VP t$_{top}$ t$_{foc}$]]]]]]

                                                                (Kato 2013: 183)

Under the assumption that the Topic and Focus Criteria hold, even the canonical order DO–IO can be analyzed as involving vP-external topic and focus projections, depending on the informational status of each relevant element. For example, Cépeda & Cyrino (2020) claim that while both the direct object and the indirect object remain in situ when the whole sentence is new information, both objects move to the low left periphery when only the indirect object conveys new information, as schematized in (33).

(33) [TP subject verb [TopP DO$_{top}$ [FocP IO$_{foc}$ [vP t$_{subj}$ [VP t$_{top}$ t$_{foc}$]]]]]

I will now argue that a cartographic analysis of the Brazilian Portuguese middle field, as in the works above, is problematic. First and foremost, recall that I argued in Chapter 2 that focus movement to the middle field is not possible in the language, as is exemplified by the contrast between (34B1) and (34B2) and the contrast between (35B1) and (35B2) — note that the relevant PPs in the B2 examples can be interpreted as focus in their usual (canonical) positions, but movement of such PPs to the middle field leads to the unacceptability of the B1 examples.

Therefore, we cannot postulate that the middle field of Brazilian Portuguese has a focus-dedicated projection; postverbal foci in the language are licensed in their canonical positions (more generally, the Focus Criterion does not hold in the language).

(34)   A: Pra quem os professores deram dois livros cada um?
            'To whom did the teachers give two books each?'
      B1: ??Eles deram *só*   *pra*   *Ana*F dois livros cada um (até   agora).
            they   gave   only to-the Anna two   books   each one (until   now)
      B2: Eles deram dois livros cada um *só*   *pra*   *Ana*F (até   agora).
            they gave   two   books   each one only to-the Anna   (until   now)
            'They gave two books each *only to Anna*F (so far).'

(35)   A: De que autor os alunos leram cada um dois livros?
            'The students read two books by which author?'
      B1: *Eles leram *do*   *Chomsky*F cada um dois livros (até   agora).
            they   read   of-the Chomsky   each one two   books (until   now)
      B2: Eles leram cada um dois livros *do*   *Chomsky*F (até   agora).
            they read   each one two   books of-the Chomsky   (until   now)
            'They each read two books *by Chomsky*F (so far).'

Movement of topics to the middle field, on the other hand, is possible in Brazilian Portuguese. So the question is now whether middle-field topicalization can be analyzed as involving a topic-dedicated projection. Assuming the vP-external object shift projection XP motivated in Chapter 3, the "low left periphery" of Brazilian Portuguese would then look like (36) below. Let us then investigate the consequences of adopting the structure in (36).

(36)   [$_{TP}$ [$_{TopP}$ *middle-field topic* [$_{Top'}$ TOP^0 [$_{XP}$ *object shift* [$_{X'}$ X^0 [$_{vP}$ [$_{VP}$]]]]]]]

Recall from Chapter 3 that the proper licensing of middle-field Topic-Focus Association is contingent on the successful association of the topic with an accessible focus. Empirically, what we saw in that chapter is that in the presence of a middle-field topic, only the element that can independently reach the object shift position (Spec,XP) can be focalized (association of a middle-

field topic with any vP-internal element, including vP adjuncts, is ruled out). The relevant contrasts are repeated below. Compare the acceptable (37B) with the unacceptable (38B1–B2): the (XP-adjoined) topic *do Chomsky* 'by Chomsky' can be associated with the focus *dois livros* 'two books' (in Spec,XP) in (37B), whereas it cannot be associated with the focus *pra Ana* 'to Ana' in (38B1–B2). The relevant restriction is schematized in (39).

(37)   A: Você recomendou quantos livros do Pinker pra Ana ontem?
              'How many books by Pinker did you recommend to Anna yesterday?'
      B: \Eu recomendei\, /do   Chomsky$_{CT}$/, /dois livros$_F$/ \pra Ana\ (ontem).
              I   recommended of-the Chomsky   two   books to-the Anna (yesterday)
              'I recommended *two books$_F$ by Chomsky$_{CT}$* to Anna (yesterday).'

(38)   A: Pra quem você recomendou livros do Pinker ontem?
              'Who did you recommend books by Pinker to yesterday?'
     B1:   ??Eu recomendei, /do   Chomsky$_{CT}$/, \livros\ /pra Ana$_F$/ (ontem).
              I   recommended of-the Chomsky   books to-the Ana   (yesterday)
     B2:   *Eu recomendei, /do   Chomsky$_{CT}$/, /pra Ana$_F$/ \livros\ (ontem).
              I   recommended of-the Chomsky   to-the Ana   books   (yesterday)
              'I recommended books *by Chomsky$_{CT}$ to Ana$_F$* (yesterday).'

(39)   *topic* [$_{XP}$ *focus* [$_{X'}$ X^0 [$_{vP}$ [$_{vP}$ ⸺]]]]]
           |_____| TFA: ✓
           |_____✘_____| TFA: ✘

Let us then see how the structure in (36) fares with respect to the restrictions represented in (39). In particular, the relevant question here is what predictions the cartographic analysis makes for Topic-Focus Association in the middle field of Brazilian Portuguese. First and foremost, we have to assume that some kind of a locality constraint holds. Otherwise, every element under the topic in (40) should be able to be focalized (perhaps including even the subject, via its trace). Without a locality constraint of the sort I proposed in Chapter 3, we would face an overgeneration problem from the start. In fact, this constraint should be accounted for by any approach to the Syntax-Information Structure interface, cartographic or non-cartographic alike. So the crucial

issue for our present discussion is what the consequences of postulating a topic phrase above XP in (40) are for the contrasts observed in (37)–(38).

(40)   [$_{TopP}$ *topic* [$_{Top'}$ TOP^0 [$_{XP}$ {*DO*} [$_{X'}$ X^0 [$_{vP}$ *adverbial* [$_{vP}$ t$_{subj}$ [$_{VP}$ {*DO*} *IO*]]]]]]]

If we maintain Bošković's (2014) contextual approach to phasehood (adopted in Chapter 3), whereby the highest projection in the extended domain of a lexical category is a phase, TopP in (40) becomes a phase, with XP thus being its phasal complement. In this case, Top^0 would trigger spell-out of XP, as represented in (41), ultimately rendering all the elements below the topic indistinguishable for Topic-Focus Association. This is an unwelcome result; as we saw in many examples throughout this dissertation, the shifted object in Spec,XP can actually be focalized. Moreover, under the set of assumptions adopted from Bošković (2014), only phases and phasal complements can undergo ellipsis; the phasehood of TopP would thus render the possibility of ellipsis of vP in (42B) unaccounted for.

(41)   [$_{TopP}$ *topic* [$_{Top'}$ Top^0 ~~[$_{XP}$ {*DO*} [$_{X'}$ X$^\theta$ [$_{vP}$ *adverbial* [$_{vP}$ t$_{subj}$ [$_{VP}$ {*DO*} *IO*]]]]~~]]

(42)   A: A Maria adora ganhar livros de linguística.
         O João deu dois livros do Pinker e três livros do Chomsky pra ela no Natal.
         'Mary loves receiving linguistics books.
         John gave two books by Pinker and three books by Chomsky to her on Christmas.'
         B: E   eu dei,   *do   Chomsky*$_{TOP}$, *cinco livros*$_F$ <pra ela no   Natal>.
         and I   gave, of-the Chomsky,   five   books   <to her in-the Christmas>
         'And I gave *five books*$_F$ *by Chomsky*$_{TOP}$ <to her on Christmas>.'

Adopting a topic projection at the edge of vP in Brazilian Portuguese under the contextual approach to phasehood adopted in this dissertation would therefore lead to an undergeneration problem. The combination of those assumptions would fail to derive both the fact that shifted objects (in Spec,XP) can be focalized in the presence of middle-field topics and the fact that ellipsis

of vP (to the exclusion of the shifted object) is possible. We could alternatively return to Chomsky's (2000, 2001) original rigid approach to phasehood, whereby vP is always a phase. Under the assumption that vP is a phase, v^0 then triggers the spell-out of its phasal complement VP. As (43) shows, this analysis would render only the indirect object inaccessible to the topic, making not only the shifted object (direct object) a possible focus, but also (incorrectly) the adverbial (and again, potentially the subject via its trace), resulting in an overgeneration problem — in addition to failing to capture the fact that ellipsis of both XP and vP is possible.

(43)   [$_{TopP}$ *topic* [$_{Top'}$ Top^0 [$_{XP}$ {*DO*} [$_{X'}$ X^0 [$_{vP}$ *adverbial* [$_{vP}$ t$_{subj}$ [$_{v'}$ v^0 ~~[$_{VP}$ {*DO*} *IO*~~]]]]]]]]

We have thus seen that when it comes to the locality-based restrictions discussed in Chapter 3, the postulation of a topic projection above vP in Brazilian Portuguese fails to capture the sharp cut between shifted objects, on the one hand, and all other lower elements, on the other (in that only the former is a potential focus in middle-field topicalization constructions), regardless of the approach to phasehood chosen, rigid (Chomsky 2000, 2001) or contextual (Bošković 2014). Therefore, the challenge faced by the cartographic approach is the motivation of an alternative, independent approach to phasehood whereby XP is a phase in the presence of TopP. I know of no such approach (but cannot *a piori* rule it out as a possibility).

I will conclude this section by arguing that the postulation of middle-field topic projections, coupled with the cartographic assumption that the Topic Criterion holds, would also fail to account for the contrast between (marked) middle-field topics and topics in unmarked positions that is observed in Brazilian Portuguese. Recall from Chapter 3 that unlike other topics in the postverbal area, a shifted object interpreted as a topic does not face locality restrictions in the identification of the focus (i.e., Topic-Focus Association). For instance, direct objects can be topicalized in the

presence of a focalized (circumstantial) adverbial, as in (44B1–B2), in a sharp contrast with (45B1–B2), where the topic is an indirect object (necessarily a derived topic when in the middle field, the base order being DO–IO).

(44)   A: Quando você recomendou o livro do Pinker / livros de linguística pra Maria?
            'When did you recommend Pinker's book / books of linguistics to Mary?'
       B1: Eu recomendei   [o livro /*do*   *Chomsky*/]$_{CT}$ *esse mês*$_F$ pra ela.
            I   recommended the book of-the Chomsky   this month to   her
       B2: Eu recomendei   [o livro /*do*   *Chomsky*/]$_{CT}$ pra ela *esse mês*$_F$.
            I   recommended the book of-the Chomsky   to her this   month
            'I recommended *Chomsky's book*$_{CT}$ to her *this month*$_F$.'

(45)   A: Quando você recomendou livros do Chomsky pro João / pros seus alunos?
            'When did you recommend books by Chomsky to John / to your students?'
       B1: *Eu recomendei,   /*pra Maria*$_{CT}$/, /*esse mês*$_F$/ \livros do   Chomsky\.
            I   recommended to-the Mary   this   month books of-the Chomsky
       B2: *Eu recomendei,   /*pra Maria*$_{CT}$/, \livros do   Chomsky\ /*esse mês*$_F$/.
            I   recommended to-the Mary   books of-the Chomsky thismonth
            'I recommended books by Chomsky *to Mary*$_{CT}$ *this month*$_F$.'

Under cartographic assumptions, where topics have fixed positions (i.e., Spec,TopP), the direct object in (44B1–B2) would be located in Spec,TopP, as in (46a–b); similarly for the indirect object in (45B1–B2), represented in (47a–b). Crucially, note that the structures in (46a–b) are virtually indistinguishable from those in (47a–b), the only difference being which object (DO or IO) is topicalized. Yet, direct objects and indirect objects do not have the same status when interpreted as topics in a postverbal position, as is shown by the contrast between the acceptable (44B1–B2) and the unacceptable (45B1–B2).

(46)   a.   [$_{TopP}$ *DO-TOPIC* [$_{XP}$ [$_{vP}$ *adverbial-FOCUS* [$_{vP}$ [$_{VP}$ *IO*]]]]]   cf. (44B1) ✓

       b.   [$_{TopP}$ *DO-TOPIC* [$_{XP}$ [$_{vP}$ [$_{vP}$ [$_{VP}$ *IO*]] *adverbial-FOCUS*]]]   cf. (44B2) ✓

(47)   a.   [$_{TopP}$ *IO-TOPIC* [$_{XP}$ [$_{vP}$ *adverbial-FOCUS* [$_{vP}$ [$_{VP}$ *DO*]]]]]   cf. (45B1) ✗

       b.   [$_{TopP}$ *IO-TOPIC* [$_{XP}$ [$_{vP}$ [$_{vP}$ [$_{VP}$ *DO*]] *adverbial-FOCUS*]]]   cf. (45B2) ✗

It is not clear how a cartographic analysis could capture the observed asymmetry between direct objects and indirect objects if they are both located in the same middle-field topic projection. If Topic-Focus Association depends on the position of the topic and the focus, (44B1–B2) and (45B1–B2) should all have the same status, contrary to fact. The challenge the cartographic approach is left with is then to either motivate the observed asymmetry from independent properties of direct objects and indirect objects or relax the requirement that a vP-external topic must occupy the specifier of a topic projection (due to the Topic Criterion, as in Belletti 2004).

Finally, let us see how the cartographic approach compares with the analysis proposed in this dissertation with respect to the labeling considerations discussed in Chapter 3. Recall that I suggested in that chapter that the relevant distinction between elements interpreted as topics in the object shift position (Spec,XP) and elements interpreted as topics in the XP-adjoined position can be read off Syntax at the interfaces by the presence or lack of labeling, as schematized in (48). Note that object shift in (48a) is a formally-driven operation, which means that the element in Spec,XP (e.g., a direct object) undergoes Spec-head agreement with X^0, which allows for labeling to take place under feature sharing (Chomsky 2013). Conversely, movement of (e.g.) the indirect object in (48b) is not formally-driven under the current analysis, which means that no labeling results from the merger of IO and XP, due to the lack of feature sharing between the two objects.

(48)   a.   [$_{\mathbf{XP}}$ *DO* [$_{X'}$ X^0 [$_{vP}$ [$_{VP}$ …]]]]   *labeled position*
         b.   [$_?$ *IO* [$_{XP}$ *DO* [$_{X'}$ X^0 [$_{vP}$ [$_{VP}$]]]]]   *unlabeled position*

As I suggested in Chapter 3, the labeling problem in (48b) is resolved by a special mechanism at the interfaces that reads the XP-adjoined element as being in an informationally-marked position, rendering it subject to the locality constraint imposed on Topic-Focus Association

(resolution of a labeling problem being done locally, as discussed in that chapter). Importantly, no such constraint is imposed on the (unmarked) object in Spec,XP in (48a) (for there is no labeling problem there); the relevant distinction between the two positions is therefore captured under the labeling-based analysis proposed in Chapter 3.

Under the cartographic approach, on the other hand, there is a formally-driven topic movement that involves Spec-head agreement (Rizzi 1997), which would crucially allow for labeling to take place under feature sharing (Rizzi 2015). Therefore, if the indirect object in (48b) were to move to the specifier of a cartographic topic projection (as in (47) above), it would be indistinguishable from elements in the object shift position, as far as the labeling issues discussed above are concerned. In other words, under the cartographic approach (and the assumption that there is a topic-specific projection in the "low left periphery" of Brazilian Portuguese), the relevant contrasts discussed above between elements that are under the current analysis interpreted as topics in the object shift position and elements interpreted as topics in the XP-adjoined position could not be captured.

In conclusion, I have argued in this section that the distribution of postverbal topics and foci in Brazilian Portuguese, in particular with respect to the locality constraint on middle-field Topic-Focus Association established in Chapter 3, poses a number of empirical challenges for the cartographic approach to the Syntax-Information Structure interface. Importantly, a defender of the cartographic approach is left with the challenge of motivating the additional assumptions that are necessary to capture the data without sacrificing the core assumptions of the model, most strikingly the validity of the Topic Criterion.

In that respect, in the next section I will argue that subjects in Spec,TP can be interpreted as aboutness topics, which provides clear evidence against the Topic Criterion, since this shows that

aboutness topic interpretation does not require further dislocation to a topic-dedicated position, which shows that it can be licensed in more than one position of the clause.

4.1.3. Aboutness topics in Spec,TP

We have seen that in Brazilian Portuguese aboutness topics cannot be licensed in sentence-internal positions, but rather must be sentence-initial, in line with what is standardly observed in the literature (see Chapters 2 and 3). This restriction is evidenced by the distribution of the topic-shifting particle *já*, as in (49). With the canonical position of the direct object being sentence-internal, the aboutness topic *já o Barriers* in (49) can only be licensed when dislocated to the left periphery, as in (49B1), in a clearly derived topic position.

(49)   A: O Pedro teve que ler o Programa Minimalista pra esse curso.
              'Peter had to read the Minimalist Program for this course.'
        B1:   *Já o   Barriers*$_{AT}$,   ele não teve que ler.
              JÁ the Barriers   he not had   that to.read
        B2:   *Ele não teve que ler   *já o   Barriers*$_{AT}$.
              he   not had   that to.read JÁ the Barriers
        B3:   **Já* ele não teve que ler   *o   Barriers*$_{AT}$.
              JÁ he not had   that to.read the Barriers
              'Now *Barriers*$_{AT}$, he didn't have to read (it).'

   When it comes to subjects with aboutness topic interpretation, as in (50), a new question arises. Since the canonical position of subjects in Brazilian Portuguese is already sentence-initial, a sentence like (50B1) (where the subject-topic is not resumed by an overt pronoun) raises the question of whether the sentence-initial requirement of (*já*-marked) aboutness topics can be met in Spec,TP, as in (51a), or must involve further dislocation of the subject to a topic position in the CP area, as in (51b) (similarly to the structure in (51c) with a resumptive pronoun). Under

cartographic assumptions, licensing of topic interpretation is contingent on the realization of the

relevant element in the specifier of a topic-specific projection, as in (52). Thus, crucially, if

structure (51a) (with the subject-topic in Spec,TP) can be shown to be able to license aboutness

topicalization, we will then have found evidence against Rizzi's (1997) Topic Criterion.[8]

(50) A: O Pedro leu dez livros do Chomsky pra esse curso.
           'Peter read ten books by Chomsky for this course.'
      B1: *Já o   João*$_{AT}$ não leu   nenhum.
           JÁ the John   not read none
           'Now *John*$_{AT}$ didn't read any.'
      B2: *Já o   João*$_{AT}$, ele não leu   nenhum.
           JÁ the John   he not read none
           'Now *John*$_{AT}$, he didn't read any.'

(51) a.   [$_{TP}$ **Já-TOPIC** [$_{T'}$ ...]]   cf. (50B1)

      b.   [$_{CP}$ **Já-TOPIC$_i$** [$_{TP}$ *t$_i$* [$_{T'}$ ...]]]   cf. (50B1)

      c.   [$_{CP}$ **Já-TOPIC$_i$** [$_{TP}$ *RP$_i$* [$_{T'}$ ...]]]   cf. (50B2)

(52) a.   [$_{TopP}$ **Já-TOPIC $_i$** [$_{Top'}$ TOP^0 [$_{TP}$ *t$_i$* [$_{T'}$ ...]]]]   cf. (50B1)

      b.   [$_{TopP}$ **Já-TOPIC$_i$** [$_{Top'}$ TOP^0 [$_{TP}$ *RP$_i$* [$_{T'}$ ...]]]]   cf. (50B2)

In this section, I will argue that structure (51a), where an element in Spec,TP has an aboutness

topic interpretation, is attested in Brazilian Portuguese. Furthermore, I will argue that structures

such as (51b) and (52a), where the subject-topic moves from Spec,TP to a left-peripheral topic

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[8] A brief clarification is in order here. In distinguishing the subject position from the (left-peripheral) topic position, Rizzi (2006, 2018) argues that while left-peripheral topics have to be D-linked, (canonical) subjects do not; subjects may involve the notion of aboutness without being D-linked. Since *já* (when attached to a topic) necessarily introduces a referent in relation to the previous discourse topic, *já*-marked topics are necessarily D-linked (bear in mind that under the relevant use of *já*, *já* is a topic-shifting operator). Note in (iB) below that *já* is completely ruled out without previous discourse. In other words, *já*-marked topics are always D-linked, even if shown to be realized in Spec,TP.
(i)   A: Qual o problema?
           'What's the problem?'
      B: (#Já) nessa sala   trabalha gente   demais!
           (JÁ) in-this room works   people too.many
           'Too many people work in this room!'

position, are actually unattested, based on the proposal made by several authors that in many languages local movement of a subject to the left periphery cannot proceed via Spec,TP (see e.g. Lasnik & Saito 1992, Erlewine 2016, Bošković 2016, Messick 2020). As a result of the ban, a subject cannot be topicalized in its own clause via movement from Spec,TP. While I refer the reader to those works for a complete argumentation of the ban in question (and possible deductions thereof) in the languages analyzed there, I will briefly present some of their arguments here, before I proceed to argue that the same restriction is also found in Brazilian Portuguese.

The idea that local movement from Spec,TP to the left periphery is disallowed traces back to Lasnik & Saito (1992), who argue that string-vacuous topicalization of subjects, as in (53), is ruled out, based on extraction and anaphor binding tests. Let us first observe the extraction tests in (54). While extraction of *which athletes* out of the topicalized direct object *pictures of (which athletes)* in (54a) is judged as marginal, extraction of *which athletes* out of the topicalized subject *pictures of (which athletes)* in (54b) is judged as ungrammatical, and clearly worse than (54a). Crucially, the authors observe that if local topicalization of the subject were possible in (54b), (54b) should have the same status as (54a), where extraction is (at least marginally) possible. In other words, there should be no contrast in the judgements of (54a) and (54b) if subjects were able to undergo local topicalization.

(53)   *[$_{IP}$ John$_i$, [$_{IP}$ t$_i$ left].   (Lasnik and Saito 1992: 110)

(54)   a.   ??which athletes do you think that pictures of, Mary bought?
        b.   ?*which athletes do you think that pictures of, are on sale?
                                                                              (Lasnik and Saito 1992: 111)

Now let us turn to the contrast in (55) with respect to anaphor binding. In (55a), the direct object anaphor can be bound by an antecedent in the higher clause. Importantly, the subject

anaphor in (55b) cannot be. Similarly to the extraction cases above, if local topicalization of the subject were possible, there should be no difference between (55a) and (55b), contrary to fact. Based on these observations, Lasnik & Saito (1992) conclude that the structure in (53) is unavailable, that is, string-vacuous topicalization of subjects is ruled out.

(55) a. John$_i$ thinks that himself$_i$ Mary likes t$_i$.
      b. *John$_i$ thinks that himself$_i$ t$_i$ likes Mary.   (Lasnik and Saito 1992: 110–111)

Bošković (2016) and Messick (2020) take on Lasnik & Saito's (1992) original proposal and independently argue that quantifier floating contrasts observed by McCloskey (2000) in West Ulster English provide further evidence that movement of a subject to the left periphery cannot proceed through Spec,TP. Observe (56), for instance. While *all* can float in a postverbal position in passive sentences when the subject undergoes A'-movement to the left periphery, as in (56a), it cannot float in that position when the subject undergoes A-movement to Spec,TP, as in (56b). The authors then argue that if movement of the *wh*-subject to the left periphery in (56a) proceeded through Spec,TP, sentence (56a) should be ungrammatical, on a par with (56b), since the same step of movement would be floating *all* in both examples.

(56) a. Who$_i$ was arrested *all* t$_i$ in Duke Street?   (McCloskey 2000: 72)
      b. *They$_i$ were arrested *all* t$_i$ last night.   (McCloskey 2000: 77)

Let us now see one more argument for the ban in question, based on verbal morphology in Kinande, as in the paradigm in (57) (from Schneider-Zioga 1995). Bošković (2016) argues that the so-called anti-agreement morphology that shows up on the verb when the subject is a *wh*-expression indicates that subject movement to Spec,CP skips Spec,TP. While the regular subject *Kambale* in (57a) agrees with the verb, the interrogative subject *iyondi* 'who' in (57b) cannot

license the same verbal morphology; instead, an anti-agreement morpheme shows up on the verb, as in (57c). Assuming Chomsky's (2013) labeling framework, Bošković (2016) argues that because the subject does not occupy Spec,TP in (57c), regular subject morphology is not available to properly label TP under feature sharing (i.e., Spec-head agreement), the Kinande T^0 head being weak (in Chomsky's 2015 sense) to label TP on its own. The anti-agreement morphology is thus inserted as last resort in order to allow for the labeling of TP without a subject in its specifier (the contrast between (57a) and (57c) is represented in (58)).[9]

(57) a. Kambale **a**.langira Marya.
          Kambale AGR.saw Mary
      b. *Iyondi yo **a**.langira Marya.
          who   C AGR.saw Mary
      c. Iyondi yo **u**.langira   Marya.
          who   C ANTI-AGR.saw Mary   (Schneider-Zioga 1995)

(58) a. [$_{TP}$ subj [$_{T'}$ **AGR**+T^0 [$_{vP}$ …]]]   cf. (57a)
           |___|_____|

      b. [$_{CP}$ *wh*-subj [$_{TP}$ **ANTI-AGR**+T^0 [$_{vP}$ …]]]   cf. (57c)
                   |_____|

In light of the restrictions discussed above, if the ban on local subject movement to the left periphery holds in Brazilian Portuguese, sentence (50B1) above, repeated below in (59B), cannot be derived as (60b), but can have the structure in (60a), where aboutness topic interpretation is licensed (i.e., is possible) in Spec,TP. I will now argue that this is indeed the case, based on independent data from locative inversion constructions, as seen in (61a–b) (from Avelar & Cyrino 2008).

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[9] Bošković (2016) provides similar arguments for other languages as well. For instance, in Kaqchikel (see Erlewine 2016) the so-called *agent-focus* affix plays the same role as anti-agreement in Kinande. In Trentino and Fiorentino (see Brandi & Cordin 1989, Rizzi 1990), while subjects agree with the verb in the SV order but not in the VS order, preverbal *wh*-subjects do not agree with the verb (subject-verb agreement thus being contingent on the subject being in Spec,TP in those languages), indicating that *wh*-subjects skip Spec,TP on their way to Spec,CP.

(59) A: O Pedro leu dez livros do Chomsky pra esse curso.   cf. (50)
          'Peter read ten books by Chomsky for this course.'
      B: *Já o João*_{AT} não leu   nenhum.
          JÁ the John   not read none
          'Now *John*_{AT} didn't read any.'

(60) a. [$_{TP}$ **Já-TOPIC** [$_{T'}$ ...]]   ✔   cf. (59B)

      b. [$_{CP}$ **Já-TOPIC$_i$** [$_{TP}$ *t$_i$* [$_{T'}$ ...]]]   ✘   cf. (59B)

(61) a. Naquele quarto   dormiu   várias   pessoas.
          [in-that bedroom slept.3SG several people]
          ['Several people slept in that bedroom.']
      b. Naquela fábrica   trabalha   muitos amigos meus.
          [in-that factory works.3SG many   friends my]
          ['Many friends of mine work in that factory.']   (Avelar & Cyrino 2008: 61)

In light of the well-attested restrictions on postverbal subjects in Brazilian Portuguese, Avelar & Cyrino (2008) argue that unergative external arguments can be licensed in a postverbal position as long as a locative PP fills the subject position and satisfies the EPP requirement of T^0 — the authors note that the presence of the locative PP in Spec,TP triggers obligatory default (third-person singular) morphology on the verb and that without the locative PP in (61a–b), VS order would be ruled out. Avelar (2009) further argues that locative PPs may optionally be headed by a (null or overt) adverbial pronoun, as illustrated in (62). Assuming with Bošković (2007) that an element must overtly move to Spec,TP in order to probe T^0 and receive nominative Case, Avelar (2009) argues that what triggers movement of the locative PP to Spec,TP is therefore its need for Case when the adverbial pronoun (be it null or overt) is present. In this case, he argues, the external argument of the verb must be licensed in a postverbal position with inherent partitive Case (in the sense of Belletti 1988) (that is, the postverbal subject does not receive nominative Case by T^0).

(62) (lá)   na   cidade
     [(there) in-the city]   (Avelar 2009: 241)

That the analysis of locative inversion proposed by Avelar & Cyrino (2008) and Avelar (2009)

is on the right track is argued by Lacerda (2016). If the locative PP receives nominative Case and

the postverbal argument receives partitive Case instead, the postverbal argument is expected to

exhibit a definiteness effect, as discussed by Belletti (1988) — Belletti (1988: 15) claims that a

"list reading results when a definite NP is marked with partitive Case". This prediction is borne

out, as is shown by the contrasts in (63)–(64). While in (63B1) the indefinite DP is possible, the

list reading resulting from the definite DP in (63B2) renders the sentence infelicitous in an all-new

context. When the definite external argument is to be interpreted as a narrow focus, the list reading

is felicitous, as in (64B).

(63)   A: What is the problem? / What gives?
       B1: Nessa sala   trabalha/estuda muita gente.
            in-this room works/studies   many people
            'Too many people work/study in this room.'
       B2: #Nessa sala   trabalha/estuda o João.
            in-this room works/studies   the John
            'John works/studies in this room.'   (Lacerda 2016: 94)

(64)   A: Who works/studies in this room?
       B: Nessa sala   trabalha/estuda o João (e   o   Pedro).
            in-this room works/studies   the John (and the Peter)
            'John (and Peter) works/studies in this room.'   (Lacerda 2016: 94)

What we have then is the following: In order for an unergative external argument to be licensed

in a postverbal position (i.e., VS order), a locative PP must be present. When this locative PP is in

a preverbal position, this position is Spec,TP. We can now address the question of whether subjects

in Spec,TP can have aboutness topic interpretation. Given that prepositional phrases too can have

aboutness topic interpretation, we can use locative inversion constructions as our test case, since

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we can have a locative PP simultaneously be both a subject in Syntax (i.e., occupying Spec,TP) and an aboutness topic in Information Structure.

Let us observe (65). In (65B), the locative PP bears the topic-shifting particle *já*, and crucially the (indefinite) external argument *muitos engenheiros de hardware* 'many hardware engineers' is licensed in a postverbal position. Recall that *já*-marked topics must be sentence-initial, as the ungrammaticality of (66) shows in the case at hand. In light of Avelar & Cyrino's (2008) and Avelar's (2009) analysis of locative inversion exposed above, we can conclude that *Já na IBM* must occupy Spec,TP in (65B). The question is now whether it can remain in that position (in light of its topic interpretation).

(65)   A: No   Google trabalha muitos engenheiros de software.
                in-the Google works   many   engineers   of   software
                'Many software engineers work at Google.'
        B: *Já* *na*   *IBM*TOP trabalha muitos engenheiros de hardware.
                JÁ in-the IBM   works   many   engineers   of   hardware
                '(As for *IBM*TOP,) many hardware engineers work at IBM.'

(66)   *Trabalha muitos engenheiros de hardware *já* *na*   *IBM*TOP.
        works   many   engineers   of   hardware JÁ in-the IBM
        '(As for *IBM*TOP,) many hardware engineers work at IBM.''

If the hypothesis that *já*-marked locative PPs cannot move from Spec,TP to a (clause-mate) left-peripheral topic position is on the right track, in line with what was proposed by e.g. Lasnik & Saito (1992), Erlewine (2016), Bošković (2016), and Messick (2020) for other languages, it makes a clear prediction regarding the possibility of reconstruction of the PPs in question. Recall from Chapter 3 that subjects in Spec,TP cannot reconstruct for pronoun binding purposes, while topics in the left periphery can; the relevant contrast is illustrated in (67)–(68) below. In light of those contrasts, preverbal *já*-marked PPs are then predicted to be able to reconstruct for pronoun

binding if they can be realized in a left-peripheral topic position, but not if they must stay in subject position. As we will see next, the latter is the case.

(67) a. Cada autor$_i$ publicou seu$_i$ melhor livro.
          each author published his best   book
          'Each author$_i$ published their$_i$ best book.'
      b. *[Seu$_i$ pior livro]$_k$ envergonhou cada$_i$ autor t$_k$.
          his   worst book   shamed   each author
          'Their$_i$ worst book shamed each author$_i$.'

(68) [Seu$_i$ pior   livro]$_k$, cada autor$_i$ publicou t$_k$ *(num ano diferente).
      his   worst book   each autor published   *(in-a year different)
      'Their$_i$ worst book, each author$_i$ published in a different year.'

First observe in (69a–b) that (*já*-marked) locative PPs in a clearly left-peripheral topic position can indeed reconstruct and allow for the pronoun to be bound by the subject. Now let us observe what happens in locative inversion constructions. Note in the grammatical baseline sentences in (70a–b) that the external arguments are licensed in a postverbal position, which shows that the locative PPs satisfy the EPP requirement in Spec,TP, as discussed above. Now, crucially, introducing a possessive pronoun in the locative PPs in sentences (71a–b) renders the sentences unacceptable under the bound-variable reading. This shows that the PPs in (71a–b) behave as if in the subject position (which does not reconstruct for pronoun binding), not in a dislocated topic position (which does).

(69) a. Na   sua$_i$ pior empresa, muito empresário$_i$ trabalha por salário.
          in-the his worst company many businessman works   for salary
          'In their$_i$ worst company, many businessmen$_i$ work for a salary.'
      b. Já na   sua$_i$ melhor empresa, muito empresário$_i$ trabalha de graça.
          JÁ in-the his best   company many businessman works   of grace
          'In their$_i$ best company, many businessmen$_i$ work for free.'

(70) a. Nessa empresa trabalha muita gente de graça.
          in-this company works   many people of grace
          'In this company many people work for free.'
      b. Já naquela outra empresa trabalha muita gente por salário.
          JÁ in-that   other company works   many people for salary
          'In that other company many people work for a salary.'

(71) a. *Na sua$_i$ pior empresa trabalha muito empresário$_i$ por salário.
          in-the his worst company works   many businessman for salary
          'In their$_i$ worst company, many businessmen$_i$ work for a salary.'
      b. *Já na   sua$_i$ melhor empresa trabalha muito empresário$_i$ de graça.
          JÁ in-the his best   company works   many businessman of grace
          'In their$_i$ best company, many businessmen$_i$ work for free.'

Importantly, recall from Chapter 3 that postverbal subjects can leave the vP, as is shown in

(72); that this is also the case in locative inversion is shown by (73), where the postverbal subject

can bind a possessive pronoun in the vP-adjoined adverbial. With that in mind, binding of the

pronoun by the postverbal subject in (71b) should therefore be possible if the locative PP were

able to move to the left-peripheral topic position and thus be able to reconstruct from there, as in

(74); this prediction is however not borne out. The fact that (71b) is ungrammatical, on a par with

(71a), therefore shows that *já*-marked locative PPs must remain in Spec,TP in locative inversion

constructions, at the same time that they have an aboutness topic interpretation. That being the

case, reconstruction of the PP for pronoun binding is predicted to be ruled out, as in (75), according

to fact. In light of these observations, I conclude that movement from Spec,TP to a (clause-mate)

left-peripheral topic position is also ruled out in Brazilian Portuguese.

(72) Foram devolvidos [$_{XP}$ os livros$_k$ [$_{vP}$ (ontem) [$_{vP}$ cada um$_i$ t$_k$ pro   seu$_i$ autor]]].
      were returned   the books   (yesterday) each one   to-the its   author
      'Each of the books$_i$ was returned to its$_i$ author (yesterday).'   = (27)

(73) Nessa fábrica trabalha [$_{XP}$ cada um$_i$ [$_{vP}$ do   seu$_i$ jeito [$_{vP}$]]
      in-this factory works   each one   of-the his way
      'Each one$_i$ works in their$_i$ way in this factory.'

(74)   [TopP PP-LOC(*sua*) [TP *t*PP verb [XP **SUBJi** [vP **<PP-LOC(*suai*)>** [vP <SUBJ>]]]]]
         |_____| predicted ✓

(75)   [TP PP-LOC(*sua*) verb [XP **SUBJi** [vP **<PP-LOC(*suai*)>** [vP <SUBJ>]]]]
         |_____| predicted ✗

The discussion above provides evidence that the Topic Criterion does not hold for aboutness topics in Brazilian Portuguese. I have shown that aboutness topic interpretation is not contingent on the realization of the relevant element in the specifier of a topic-specific projection. Moreover, I have shown that aboutness topic interpretation is not restricted to a single absolute position in the clause (with aboutness topics being unique, as discussed in Chapter 2, there should be a single aboutness topic position in the clause according to cartographic assumptions). As we saw, the subject position Spec,TP can also license aboutness topic interpretation in Information Structure.

In order to preserve the Topic Criterion, with movement from Spec,TP to a (clause-mate) left-peripheral topic position being ruled out, one could hypothesize that the *já*-marked locative PPs in the relevant examples above are actually base-generated in a topic position, as represented in (76) (in this case, Spec,TP would have to be occupied by some empty category to satisfy the EPP and receive nominative Case). As is well-known, nominal elements can be base-generated in the left periphery of Brazilian Portuguese, an option which voids island effects (see e.g. Ferreira 2000), as in (77a–b); the question is then whether the same can be said of PPs.

(76)   [TopP PP-LOC [TP *ec* verb [XP SUBJ [vP …]]]]

(77)   a. *Essa fábrica*TOP, a   Maria   conhece um engenheiro que recomenda *pro*TOP.
             this   factory the Mary   knows   an engineer   that recommends
             '*This factory*TOP, Mary knows an engineer that recommends [it].'
         b. *Essa fábrica*TOP, a   Maria   perguntou quando o João   visitou *pro*TOP.
             this   factory the Mary   asked   when the John   visited
             '*This factory*TOP, Mary asked when John visited [it].'

As sentences (78a–b) show, the hypothesis that PPs can be base-generated in the left periphery is untenable. Topicalization of PPs across islands is ruled out, which shows that topicalization of PPs must be derived by movement (see Bastos-Gee 2011). Likewise, the PP in (79a) can be extracted from a locative inversion construction across a finite clause boundary, but not across an island, as in (79b). In sum, while the structure in (76), with base-generation of the locative PP in a left-peripheral topic position, would comply with Rizzi's (1997) Topic Criterion, it is not possible in Brazilian Portuguese.

(78)   a.   *$Nessa$ $fábrica_{TOP}$, a   Maria   conhece um   engenheiro que trabalha t_{TOP}.
             in-this   factory   the Mary   knows   an   engineer   that works
             '*In $this$ $factory_{TOP}$, Mary knows an engineer that works.'
    b.   *$Nessa$ $fábrica_{TOP}$, a   Maria   perguntou quando o   João   vai   trabalhar t_{TOP}.
             in-this   factory   the Mary   asked   when   the John goes to.work
             '*In $this$ $factory_{TOP}$, Mary asked when John is going to work.'

(79)   a. $Nessa$ $fábrica_i$, a   Maria disse   que t_i trabalha   muita   gente.
             in-this factory   the Mary   said   that   works   many people
             'Mary said that many people work in this factory.'
    b.   *$Nessa$ $fábrica_i$, a   Maria perguntou quando t_i trabalha   muita   gente.
             in-this   factory the Mary   asked   when   works   many people
             'Mary asked when many people work in this factory.'

In conclusion, we have seen above that locative PPs with aboutness topic interpretation must be realized in Spec,TP in order to license VS order — with local movement from Spec,TP to a left-peripheral topic position being independently ruled out in Brazilian Portuguese (on a par with several other languages discussed in the works cited above). Based on these observations, we can then conclude that aboutness topicalization, despite depending on a bipartite articulation of the clause (i.e., *Topic-Comment*), cannot be tied to an absolute, unique position in the clausal spine, as would be required under cartographic assumptions. In Brazilian Portuguese, both elements in the subject position (Spec,TP) and elements in the left periphery can get aboutness topic

interpretation. Under the view advocated for in this dissertation where aboutness topicalization is a matter of relative structural height rather than absolute positions, it is in fact expected that Spec,TP in Brazilian Portuguese may license aboutness topic interpretation. In Spec,TP, subjects can take scope over a full proposition, in line with Reinhart (1981).[10]

In the next section, I will address subjects that, unlike locative PPs, can be base-generated in the left periphery (namely, DPs) and be associated with a (null or overt) pronoun in Spec,TP. In particular, I will show how the ban on local movement from Spec,TP to a left-peripheral topic position can shed light on the analysis of so-called *topic-drop* constructions, which I will argue further confirm that *já*-marked locative PPs must stay in Spec,TP in the relevant examples discussed in this section.

4.1.4. Topic-drop

In this section, I will discuss the consequences of the ban on local movement from Spec,TP to a left-peripheral topic position (which I argued in the previous section also holds in Brazilian Portuguese) for the analysis of so-called topic-drop constructions (see e.g. Modesto 2000, Rodrigues 2004), as illustrated by (80B) (from Modesto 2000) — note that Brazilian Portuguese is not a prototypical *pro*-drop language, in the sense that referential null subjects are not available

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[10] Comments associated with aboutness topics are usually assumed to be a semantic object no smaller than a full proposition (see Reinhart 1981, Bianchi & Frascarelli 2010). Given the widely assumed predicate-internal subject hypothesis, the node that the subject is merged with in (i) below, namely T', includes a trace/copy of the subject itself (in Spec,vP), thus being a fully-saturated proposition and therefore a valid comment. Note additionally that the vP itself is assumed to be a potential target of quantifier raising (see e.g. Fox 2000, Wurmbrand 2018); that is, vP is already a type *t* node. With tense also being required for a well-formed comment, the smallest constituent that can qualify as a comment is then T'. T' is precisely the sister of canonical subjects in Brazilian Portuguese.
(i)   [$_{TP}$ subject [$_{T'}$ verb+T^0 [$_{vP}$ <subject> [$_{vP}$ …]]]

in the language (see e.g. Duarte 1995, Kato 1999, Ferreira 2000, Modesto 2000, Rodrigues 2004, Nunes 2008, 2011).

(80) A: E   o   Paulo$_i$?
          [and the Paul]
          'What's up with Paulo$_1$?'
      B: *ec*$_i$ trabalha na   universidade.
          [*ec*$_i$ works   in-the university]
          '(He) works at the university.'   (Modesto 2000: 51)

Both Modesto (2000) and Rodrigues (2004) analyze the null subject found in topic-drop constructions as a trace, as in (81), derived from the movement of the relevant DP from the subject position to a topic position, where it gets deleted (via some discourse-related operation). Both authors highlight the role of the topical status of the null subject: According to Modesto (2000: 52), "only previous linguistic discourse, but not the situational context" can license the null subjects in question. Similarly, Rodrigues (2004: 88) claims that the subject/topic "can be deleted only if it is in a topic position". This restriction is observed in her example in (82a) below, contrasted with the acceptable (82b): Given that *o João* occupies a topic position in (82a–b), she argues that the subject *eu* 'I' cannot move to that position and be deleted via topic-drop.[11]

(81)   [$_{TopP}$ ~~O Paulo$_i$~~ [$_{TP}$ t$_i$ [$_{T'}$ trabalha na universidade]]]

(82)   a. *O João, *e* acho   que vai ser   promovido.
            the João   think.1SG that will be.INF promoted
        b. O   João, eu acho   que vai ser   promovido.
            [the João I   think.1SG that will be.INF promoted
            'As for João, I think he is going to be promoted.'   (Rodrigues 2004: 84)

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[11] In Rodrigues's (2004) analysis, the empty subject/topic in (82a) competes for the position already occupied by the overt topic *o João*. As we will see below, *wh*-elements and contrastive topics, which can co-occur with the aboutness topics in question, give rise to the same restrictions; this in turn rules out Rodrigues's "competition" analysis as a unified analysis for the restrictions discussed in this section.

Unlike Modesto (2000) and Rodrigues (2004), I will argue that the null subjects found in topic-drop constructions in Brazilian Portuguese are best analyzed as not involving local movement of the relevant DP from Spec,TP to a left-peripheral topic position (contra (81) above), in compliance with the ban on local subject topicalization discussed in the previous section. In other words, if the ban in question also holds in Brazilian Portuguese, the null subjects found in topic-drop constructions cannot be traces of movement in this language.

In order to rule out the movement analysis, we have to probe into the restrictions observed in topic-drop constructions. As is well-known, while acceptable when sentence-initial (see (80B) above), null subjects derived via topic-drop are blocked when a *wh*-element is fronted to the left periphery, as is illustrated by the contrast between (83a) and (83b) (see Ross 1982, Sigurðsson and Maling 2010; see also Rodrigues 2004 for Brazilian Portuguese). That this is also the case in Brazilian Portuguese is shown by (84B) (from Martins & Nunes to appear).

(83)   a.   (Ich) hab' ihn schon gesehen.
              [(I) have him already seen]
              'I saw him already.'   (Ross, 1982)
    b.   *Was machte?
              [what made]
              'What did I make?'   (Rodrigues 2004: 87)

(84)   A: Onde está a   Maria?
            where is   the Maria
            'Where's Maria?'
    B: *O que Ø fez   desta vez?
            the what   did.3SG of-this time
            'What did she do this time?'   (Martins & Nunes to appear)

Importantly, the exact same restriction seen in (84B) for topic-drop constructions is observed even when the topic is not actually dropped, as in (85). As we saw in Chapter 2, a *já*-marked subject must obligatorily be resumed by an overt pronoun when a *wh*-element is fronted.

Considering that aboutness topics must independently precede *wh*-expressions (cf. (85B1)), the realization of the topic *já o João* in the left periphery (preceding the fronted *wh*-expression) renders resumption obligatory in the subject position, as is shown by the contrast between (85B2) and (85B3), represented in (86a–b) — note that no problem arises if the *wh*-element stays in situ, lower than the subject/topic, as in (85B4).

(85) A: O Pedro leu dez livros do Chomsky pra esse curso.
          'Peter read ten books by Chomsky for this course.'
      B1: *O que *já o   João*$_{AT}$ leu?
          what   JÁ the John   read
      B2: ?**Já o   João*$_{AT}$, o que leu?
          JÁ   the John   what read
      B3: *Já o   João*$_{AT}$, o que ele leu?
          JÁ the John   what he read
      B4: *Já o   João*$_{AT}$ leu   o quê?
          JÁ the John   read what
          'What did *John*$_{AT}$ read?'

(86) a. [Já o João [o que [$_{TP}$ __ [$_{T'}$ leu [$_{vP}$ ...]]]]] ✘   cf. (85B2)

      b. [Já o João [o que [$_{TP}$ ele [$_{T'}$ leu [$_{vP}$ ...]]]]] ✓   cf. (85B3)

The same contrast observed in (85B2–B3) above is observed when the "intervening" element is another topic (in particular, a contrastive topic, which can co-occur with aboutness topics). As is seen in (87B1–B2), fronting of the contrastive topic *o Barriers* forces the aboutness topic *já o João* to be realized in the left periphery (given that aboutness topics must precede contrastive topics), which in turn renders resumption obligatory in the subject position, as is shown by the contrast between (87B1) and (87B2). As (88B1–B2) show, the relevant pattern is replicated in a topic-drop context.

(87) A: A Maria não leu nem O Programa Minimalista nem o Barriers.
      'Mary read neither The Minimalist Program nor Barriers.'
  B1: *Já o João$_{AT}$, o Barriers$_{CT}$ leu$_F$.
      JÁ the John   the Barriers read
  B2: Já o João$_{AT}$, o Barriers$_{CT}$ ele leu$_F$.
      JÁ the John   the Barriers he read
      'As for John$_{AT}$, he did$_F$ read Barriers$_{CT}$.'

(88) A: A Maria não leu nem O Programa Minimalista nem o Barriers. E o João?
      'Mary read neither The Minimalist Program nor Barriers. What about John?'
  B1: *O Barriers$_{CT}$ leu$_F$.
      the Barriers read
  B2: O Barriers$_{CT}$ ele leu$_F$.
      the Barriers he read
      'Barriers$_{CT}$, he did$_F$ read.'

What these observations leave us with then is that null topics in topic-drop constructions and overt (*já*-marked) aboutness topics can be treated in a uniform fashion regarding the licensing of null subjects (*topic-drop* now being a misnomer). The question that needs to be addressed now is why topic-drop null subjects are not allowed in the presence of "interveners", such as *wh*-elements and contrastive topics. Suppose that local movement of the subject from Spec,TP to a topic position were allowed, as in Modesto's (2000) and Rodrigues's (2004) analyses. In this case, the crucial question would then be why the (null or overt) aboutness topic in (89) cannot cross a *wh*-element or a contrastive topic.

(89) [$_{TopP}$ TOPIC$_i$ [*wh*/CT [$_{TP}$ t$_i$ [$_{T'}$ …]]]]
              |_____✗_____|

In light of what we know about aboutness topics (in particular, the fact that they must precede contrastive topics and *wh*-elements), it is unlikely that the ungrammaticality of sentences like (84B), (85B2), (87B1), and (88B1) above would be due to a crossing effect such as the one in (89), whereby an aboutness topic cannot cross a *wh*-element or a contrastive topic. In fact, aside from

the cases discussed above, where the subject purportedly undergoes short movement from TP to CP, the "intervention" effect in question is not observed with any other elements. To illustrate a few cases: The B sentences in (90)–(93) show that both direct objects and indirect objects can be topicalized while crossing a *wh*-expression; sentence (94B) shows that a circumstantial adverbial PP can be topicalized while crossing a manner *wh*-expression; finally, sentence (95B) shows that a subject generated in a lower clause can move to the matrix clause and precede a *wh*-expression while perfectly licensing the subject gap.[12]

(90) $DO_{TOP} > IO_{WH}$
    A: O professor deu o Barriers pra Maria.
        'The professor gave Barriers to Mary.'
    B: *Já o Linguagem e Mente*$_{AT}$, pra quem o professor deu?
        JÁ the Language and Mind to who the professor gave
        'As for *Language and Mind*$_{AT}$, who did the professor give it to?'

(91) $IO_{TOP} > DO_{WH}$
    A: O professor deu o Barriers pra Maria.
        'The professor gave Barriers to Mary.'
    B: *Já pra Carol*$_{AT}$, que livro o professor deu?
        JÁ to-the Carol which book the professor gave
        'As for *Carol*$_{AT}$, which book did the professor give to her?'

(92) $DO_{TOP} > SUBJ_{WH}$
    A: O professor deu o Barriers pra Maria.
        'The professor gave Barriers to Mary.'
    B: *Já o Linguagem e Mente*$_{AT}$, quem deu pra ela?
        JÁ the Language and Mind who gave to her
        'As for *Language and Mind*$_{AT}$, who gave it to her?'

(93) $IO_{TOP} > SUBJ_{WH}$
    A: O professor deu um livro pra Maria.
        'The professor gave Barriers to Mary.'
    B: *Já pra Carol*$_{AT}$, quem deu um livro?
        JÁ to-the Carol who gave a book
        'As for *Carol*$_{AT}$, who gave her a book?'

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[12] Direct objects may alternatively be base-generated in the left periphery, rather than moved to that position, given the availability of null objects in Brazilian Portuguese (see e.g. Ferreira 2000, Modesto 2000, Nunes 2011). This is not a possibility, though, for prepositional phrases (see Bastos-Gee 2011) and embedded subjects (see e.g. Ferreira 2000, Modesto 2000, Nunes 2011). The examples are included for the sake of completion.

(94)   PP-ADV~TOP~ > ADV~WH~
       A: Os alunos se comportaram muito bem na segunda-feira.
            'The students behaved themselves very well on Monday.'
       B: *Já na   terça~AT~*, como os alunos   se   comportaram?
            JÁ in-the Tuesday how   the students self behaved
            'As for *Tuesday~AT~*, how did the students behave themselves?'

(95)   A: O Pedro foi promovido em 2018.
            'Peter got a promotion in 2018.'
       B: *Já a   Maria~AT~*, quando o   João disse que _ foi promovida?
            JÁ the Mary)   when   the John said that   was promoted
            'As for *Mary~AT~*, when did John say she got a promotion?'

The above observations are in fact well-known. Crucially, the conclusion that they leave us with is that the restriction on the licensing of null subjects in topic-drop constructions cannot be due to a crossing ban (of the aboutness topic over a contrastive topic or a *wh*-expression).[13] Therefore, if local movement of the subject from Spec,TP to a topic position were in principle allowed in sentences like (84B), (85B2), (87B1), and (88B1), then the ungrammaticality of those sentences would remain unaccounted for.

On the other hand, we can account for the ungrammaticality of those sentences in light of the ban on local movement of a subject from Spec,TP to the left periphery, as was independently proposed by Lasnik & Saito (1992), Erlewine (2016), Bošković (2016), and Messick (2020) for other languages, and was argued in the previous section to also hold in Brazilian Portuguese. In fact, as we saw, only local topicalization of subjects faces the topic-drop restrictions discussed above; in other words, ungrammaticality results only when the topic and the "intervener" are in the same CP, a fact that is captured under the local nature of the ban in question. Under this

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[13] Note that also with middle-field topicalization, a topic can cross a *wh*-element, as in (i) below.
(i)   Você deu, *pra   Maria~TOP~*, quantos   livros t~TOP~?
          you   gave to-the Mary   how.many books
          'How many books did you give to *Mary~TOP~*?'

analysis, then, null subjects in topic-drop constructions (a misnomer, recall, since overt topics face the same restriction), cannot be traces of movement.

Instead, I would like to suggest that the empty category in question is a defective or underspecified null pronoun that can only be licensed by local identification with the topic (however this mechanism is to be implemented) — importantly, this pronominal element is not a full-blown referential *pro* of the sort found in *pro*-drop languages, therefore requiring the presence of the topic (null or overt) to be licensed. In fact, several sorts of "defective" null pronouns have been independently proposed to exist in Brazilian Portuguese, a language that is considered a "partial" *pro*-drop language. For instance, Ferreira (2000) proposed that null objects in Brazilian Portuguese are derived by a defective *pro* that does not have a Case feature (and is thus barred from checking the EPP in Spec,TP and being used as a subject), whereas Carvalho (2019) proposed that null third-person subjects in existential impersonal constructions are derived by a *phi*-deficient *pro* lacking a person feature. At any rate, I will leave a fully worked-out analysis of the proper licensing mechanism of the proposed empty pronominal category for future work, since the existence of this category is simply being taken here as a consequence of the lack of local movement from Spec,TP to a (clause-mate) topic position, which I independently argued holds in Brazilian Portuguese.

In sum, having argued in Section 4.1.3 that local movement from the subject position to a topic position is independently excluded in Brazilian Portuguese, in this section I showed that null subjects locally licensed by (null or overt) topics cannot be derived as traces of movement. Based on the discussion of locative inversion in the previous section and topic-drop in this section, we can then conclude that (96a–c) are available structures for local subject topicalization, whereas (96d) is not — a subject/topic may either remain in Spec,TP (moved from Spec,vP), as in (96a),

or be base-generated in a left-peripheral topic position and be resumed by an overt resumptive pronoun or a (defective) null pronominal category, as in (96b) and (96c) respectively, but it cannot locally move from Spec,TP to a left-peripheral topic position, as in (96d).

(96)   a. $[_{TP}$ **TOPIC** $[_{T'}$ ... $]\,]$ ✓

        b. $[_{CP}$ **TOPIC**$_i$ $[_{TP}$ ***RP***$_i$ $[_{T'}$ ... $]\,]\,]$ ✓

        c. $[_{CP}$ **TOPIC**$_i$ $[_{TP}$ ***pro***$_i$ $[_{T'}$ ... $]\,]\,]$ ✓

        d. $[_{CP}$ **TOPIC**$_i$ $[_{TP}$ **t**$_i$ $[_{T'}$ ... $]\,]\,]$ ✗

To conclude, the ban on local movement from Spec,TP to the left periphery, observed in other languages and argued above to also hold in Brazilian Portuguese, allowed us to probe into the structure of sentences where subjects have an aboutness topic interpretation. The discussion presented in Section 4.1.3 and in this Section 4.1.4 led us to conclude that in Brazilian Portuguese aboutness topic interpretation is allowed for subjects that remain in Spec,TP, in addition to subject/topics in the left periphery — thus, aboutness topic interpretation is possible in more than one position in the structure, which is at odds with the cartographic Topic Criterion, whereby aboutness topic interpretation is tied to the specifier of a specific topic projection.

4.1.5. Interim Summary

In Section 4.1, I discussed a number of empirical challenges that Brazilian Portuguese poses to the cartographic approach to the Syntax-Information Structure Interface (e.g., Rizzi 1997 et seq., Belletti 2004). I argued that the postulation of topic- and focus-dedicated projections in the clausal spine of this language is not empirically warranted and that their corresponding Topic and Focus Criteria should thus be dispensed with. In the general case, the distribution of topics and foci (and,

in particular, their relationship with each other) is more complex than what absolute projections in a fixed hierarchy such as TopP and FocP can give us.

In Section 4.1.1, I questioned the conceptual necessity of postulating cartographic topic- and focus-dedicated heads in the clausal spine and argued that such heads are furthermore not empirically justified in Brazilian Portuguese. In particular, I argued that the evidence often used to justify the existence of a clausal focus head in fact reveals a complementizer head instead. Without compelling empirical evidence in favor of clausal topic- and focus-dedicated heads, I maintain that a theory that dispenses with them should be preferred on conceptual grounds.

In Section 4.1.2, I probed deeper into the licensing of Topic-Focus Association in the sentential middle field of Brazilian Portuguese and argued that postulating a topic projection in the "low left periphery" (as in Belletti 2004) faces empirical challenges with respect to the locality constraint observed to hold of middle-field topics in Chapter 3. In particular, no principled approach to phasehood (rigid or contextual) seems to be able to capture the observed restrictions under the postulation of a cartographic topic phrase in the left periphery of vP. I also argued that the observed dichotomy between topics in canonical positions and topics in marked positions cannot be captured under the assumption that all topics must be in the specifier of a topic projection.

In Section 4.1.3, I argued that, despite being the only informational role in Brazilian Portuguese that is subject to a bipartite articulation of the clause, aboutness topicalization is not restricted to a single topic position in the left periphery and should therefore also be analyzed in relative terms (that is, an aboutness topic is licensed when it is in good standing with respect to its comment). Based on the analysis of locative inversion (which was shown to involve a locative PP in subject position), I argued that locative PPs with aboutness topic interpretation must remain in Spec,TP in locative inversion constructions, with local movement of subjects from Spec,TP to a left-peripheral

topic position quite generally being ruled out. I therefore concluded that no informational role in Brazilian Portuguese can be shown to be subject to the Topic and Focus Criteria proposed by Rizzi (1997). I thus maintain that the Topic and Focus Criteria should be dispensed with in the language, opening the way for an approach where information-structural relations are evaluated contextually.

Finally, in Section 4.1.4 I addressed the consequences of the ban on local movement of subjects from Spec,TP to the left periphery for the analysis of topic-drop constructions in Brazilian Portuguese. Arguing that topic-drop constructions provide further evidence for the ban in question, I proposed that null subjects locally licensed by topics (null or overt, in fact) cannot be derived as traces of movement.

In light of the all the restrictions discussed in this dissertation so far, in particular the challenges posed by Brazilian Portuguese to the cartographic approach to the Syntax-Information Structure discussed in this section, I maintain that an interface mapping approach is preferred. In general, what we have seen so far is that the relationship between topics and comments, topics and foci, and foci and presuppositions is more complex than what the mere placement of topics and foci in absolute and fixed topic- and focus-dedicated projections can account for; rather, the licensing of Information Structure relations in Brazilian Portuguese is contextual and depends on the relative position of the relevant information-structure elements with respect to one another. In the next section, I will argue that mapping rules, in the spirit of Neeleman and van de Koot (2008, 2010), have the necessary format to encode the sets of well-formedness requirements that topics and foci are subject to in Brazilian Portuguese.

4.2. An Interface Mapping alternative

In this section, I will finally formalize the claim that the distribution of topics and foci in Brazilian Portuguese is best accounted for by a contextual approach to the Syntax-Information Structure interface, without resorting to topic- and focus-dedicated projections in the clausal spine and their corresponding Topic and Focus Criteria. In particular, I will propose a mapping analysis (in the style of Neeleman and van de Koot 2008, 2010) to account for the licensing of topicalization and focalization in Brazilian Portuguese, in light of the syntactic analysis proposed in this dissertation.

4.2.1. Discourse templates and mapping rules

Neeleman & van de Koot (2008) make the case for a double dissociation between syntactic structure and discourse interpretation and thus argue that the cartographic model to the Syntax-Information Structure interface cannot account for the distribution of topics and foci in the language. For example, a given element in Dutch can have the same informational role in more than one position. That observation is illustrated in (97), where the PP *van de bonen* 'of the beans' has the same topic interpretation both in its canonical position, as in (97a), and in a "scrambled" position past the focus, as in (97b).

(97)　A:　Hoe zit het met de SOEP? Wie heeft DIE gegeten?
　　　　　'What about the soup? Who ate that?'
　　　B:　Nou, dat weet ik niet, maar…
　　　　　'Well, I don't know, but…'
　　　a.　ik geloof dat *Wim*F van *de bonen*TOP meer gegeten heeft dan vorig jaar.
　　　　　I believe that Bill from the beans more eaten has than last year
　　　b.　ik geloof dat [PP van *de bonen*TOP] *Wim*F tPP meer gegeten heeft dan vorig jaar.
　　　　　I believe that from the beans Bill more eaten has than last year.
　　　　　'I believe that Bill has eaten more of the beans than last year.'

Dispensing with topic- and focus-dedicated projections in the clausal spine, Neeleman & van de Koot (2008) propose that syntactic structures are mapped onto Information Structure relations via *discourse templates,* which are conceptualized as "mapping rules that relate certain structural configurations with certain aspects of information structure" (p.141). In this system, structures that are independently made available by the syntax of the language may fit the description of a mapping rule in the discourse component. Upon observing that topics and foci in Dutch can be independently licensed in situ (cf. (97a)), the authors propose that derived structures may trigger the activation of mapping rules such as (98a) (for topics) and (98b) (for foci). Movement of topics and foci in derived structures, they argue, takes place freely in the syntax (syntactic constraints observed) and are licensed at the interfaces by its effects on interpretation. Movement of topics and foci thus creates new structures that can in turn trigger mapping rules.

(98)　a.　*Comment Mapping Rule*
　　　　　If XP in [(99)] is interpreted as a topic, then interpret N_2 as comment.
　　　b.　*Background Mapping Rule*
　　　　　If XP in [(99)] is interpreted as focus, then interpret N_2 as background.

(Neeleman & van de Koot 2008: 144)

(99)　　　　　N_1
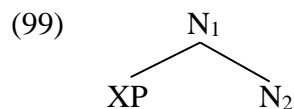
　　　XP　　　N_2　　　　　(Neeleman & van de Koot 2008: 144)

Unlike in the cartographic approach, movement of topics and foci does not affect the interpretation of the moved element itself (or the licensing of its informational role); rather, movement affects the element in the structure to which topics and foci may adjoin (N_2 in (99) above), in making it their associated comment or background, respectively. In the mapping system, licensing of topics and foci is thus not contingent on their being in absolute topic or focus positions. Neeleman & van de Koot (2008) claim that "mapping rules may have a structural description that can be met in various locations in the tree, while a single location in the tree might fit the structural description of more than one mapping rule." (p.141). In this system, then, licensing of topics and foci is contextual, evaluated in relative terms.

As I have argued throughout this dissertation, Brazilian Portuguese data favor a contextual view of the Syntax-Information Structure interface, in line with what is defended by Neeleman & van de Koot (2008, 2010), rather than the rigid view put forth by the cartographic approach. In the next section, I will argue that mapping rules in the spirit of those in (98) above are better equipped to represent the sets of well-formedness conditions that topics and foci are subject to in the language.

4.2.2. Well-formedness conditions

Before proposing mapping rules for Brazilian Portuguese topicalization and focalization, a brief clarification is in order. I must make it explicit that, as with most linguistic rules, mapping rules are descriptive statements (shortcuts, if you will) of complex sets of well-formed conditions, which should ultimately be deduced from the combination of independent, abstract principles and language-specific properties (see Neeleman and van de Koot 2008, 2010 for relevant

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considerations in that respect). In that sense, stating mapping rules is the beginning, rather than the end, of an analysis of the mechanisms that map syntactic structures onto Information Structure relations. The statement of mapping rules can be compared to the statement of, say, binding principles, as roughly represented in (100) (see Chomsky 1986b). Once rules are stated, a research agenda is opened to independently deduce them (see Chapter 2 for relevant considerations on the licensing of topicalization and focalization in Brazilian Portuguese).

(100)   *Binding Principles*
        Principle A: An anaphor must be bound in its domain.
        Principle B: A pronoun must not be bound in its domain.
        Principle C: An R-expression must not be bound.

Let us start by addressing the well-formedness conditions of topics and foci in unmarked/canonical positions (as we have seen throughout this dissertation, all informational roles can in principle be licensed in canonical positions). As we saw in Chapter 2, both new-information and contrastive foci can occur in situ (in fact, not a single case was found where that is not an option), often being the preferred option. With respect to foci in situ, Neeleman & van de Koot (2008) claim that "a background of an in-situ focus need not be a constituent at LF" (p.145). That Brazilian Portuguese corroborates this claim is shown by the many examples where we saw that foci do not undergo covert movement (*qua* foci) to a left-peripheral position. Recall from Chapter 3 that middle-field (contrastive) topics must be associated with a focus in the shifted object position, as in (101B). If the focus in (101B) were to move covertly (say, to satisfy the Focus Criterion), the topic would also have to move covertly, in order to preserve the topic–focus order required of newly-introduced contrastive topics (see Chapter 2). If the topic could move covertly, that would

then predict that it could be associated with an element overtly higher in the structure, such as the subject in (102B2), contrary to fact.

(101) A: Quantos livros você leu pro curso de linguística?
   'How many books did you read for the linguistics course?'
  B: Olha, eu li, *do* *Chomsky*$_{CT}$, *só* *dois* *livros*$_F$.
   look I read of-the Chomsky only two books
   'Look, I read *only two books*$_F$ *by Chomsky*$_{CT}$.'

(102) A: Quem resenhou os livros pro curso de linguística?
   '*Who* reviewed the books for the linguistics course?'
  B1: Olha, *do* *Chomsky*$_{CT}$, *eu*$_F$ resenhei os livros.
   look of-the Chomsky I reviewed the books.
  B2: *Olha, *eu*$_F$ resenhei, *do*   *Chomsky*$_{CT}$, os livros.
   look I reviewed of-the Chomsky the books.
   '*I*$_F$ reviewed all the books *by Chomsky*$_{CT}$.'

In fact, if both the focus and the topic had to be interpreted in covert left-peripheral positions, all the sentences in (103) would be incorrectly predicted to have the same acceptable status. These facts therefore provide further evidence for the view that foci can be interpreted in sentence-internal positions (as in Rooth's 1985 system, where all foci are interpreted in situ) and that backgrounds (presuppositions) do not need to form a syntactic or semantic constituent. This in turn provides evidence for the claim that the Focus Criterion does not hold in Brazilian Portuguese, be it overtly or covertly.

(103) A: Quantas vezes o João leu os livros pro curso de sintaxe?
   'How many times did John read the books for the syntax course?'
  B1: Bem, ele leu /o *Barriers*$_{CT}$/ /*só* *uma* *vez*$_F$/.
   well he read the Barriers only one time
  B2: *Bem, /*só* *uma* *vez*$_F$/ \ele leu\ /o *Barriers*/$_{CT}$ t$_F$
   well only one time he read the Barriers
  B3: Bem, /o *Barriers*$_{CT}$/, /*só* *uma* *vez*$_F$/ \ele leu\ t$_{CT}$ t$_F$.
   well the Barriers only one time he read
  B4: *Bem, /*só* *uma* *vez*$_F$/ /o *Barriers*$_{CT}$/, \ele leu\ t$_{CT}$ t$_F$.
   well only one time the Barriers he read
   'Well, he read *Barriers*$_{CT}$ *only once*$_F$.'

With foci in Brazilian Portuguese in principle always being well-formed in canonical positions (in particular without covert movement), it follows that overt dislocation of focalized elements is never required for interpretive reasons. In fact, dislocation of foci in this language is costly, in that it can only be licensed by additional interpretive effects (other than focalization itself, such as exhaustivity, scalarity, evaluation, and D-linking), as was extensively discussed in Chapter 2. This follows from the view that the placement of information-structure elements in marked positions is licensed by its effect in the interpretive output.

Now considering that discourse-given elements are licensed with respect to the focus, and that foci are in principle always possible in canonical positions, it follows that discourse-given elements are also always fine in canonical positions. As I argued in Chapter 2, the placement of a non-prominent discourse-given topic never interferes with the identification of the focus. Once this element is dislocated and its discourse prominence increases, a new set of well-formedness conditions arises, as its relationship with the focus changes (to be returned to below). In other words, the relationship between foci and discourse-given elements is contextual, which remains unexplained if fixed topic and focus positions are postulated.

I argued throughout this dissertation that contrastive topics are also licensed with respect to the focus. However, their relationship with the focus is different from that of discourse-given topics. Contrastive topics refer to a set of alternatives that directly restricts the alternatives in the set of alternative foci (e.g., by selecting Chomsky from the topic set, the set of possible books in the focus set is restricted to books written by Chomsky). As we saw in Chapter 2, once that relationship is already established in previous discourse, that is, when contrastive topics are "given", contrastive topics can freely follow foci if both elements are in their canonical positions, in the

same manner as given topics. In this case, contrastive topics neither impact the identification of the focus (in the same manner as given topics) nor need to establish the Contrastive Topic-Focus Association into the common ground (which is already done by previous discourse). That situation is illustrated in (104B), where Chomsky is given in the question in (104A). If Chomsky is not a known possible topic (i.e., if it is newly-introduced), it is upon the topic itself to establish CTFA into the common ground, in which case the topic cannot remain in its canonical position if it is located lower than the focus, as in (105B) (note that (105B) can accordingly be made acceptable if it is already part of the common ground that Chomsky was a possible reading in the syntax course in question). Again, with dislocation being informationally costly, if a contrastive topic is dislocated it must have its informational import increased/changed (that is what dislocation to a marked position signals, after all), in which case its relationship with the focus changes and the given-before-new effect shows up. In the end, what the distribution of discourse-given and contrastive topics and their associated foci tells us is that the topic-focus relationship is more complex than what can be obtained by the mere placement of topics and foci in fixed topic and focus positions, which calls for an alternative to the cartographic approach.

(104) A: Quantos livros do Pinker e quantos livros do Chomsky você leu?
           'How many books by Pinker and how many books by Chomsky did you read?'
       B: Bem, eu li   /três livros$_F$/ /do   Chomsky$_{CT}$/.
           well I   read three books   of-the Chomsky
           'Well, I read *three books$_F$ by Chomsky$_{CT}$*.'

(105) A: Quantos livros você leu pro curso de sintaxe?
           'How many books did you read for the syntax course?'
       B: #Bem,   \eu li\   /três livros$_F$/ /do Chomsky$_{CT}$/.
           well I   read three   books of-the Chomsky
           'Well, I read *three books$_F$ by Chomsky$_{CT}$*.'

Finally, we have also seen that aboutness topics can remain in canonical position, as long as that position is prominent enough to be associated with a well-formed comment. I argued in Section 4.1.3 that the subject position in Brazilian Portuguese (Spec,TP) is one such position. As aboutness topics are always evaluated with respect to a comment (that is, aboutness topicalization is dependent on a bipartite articulation of the clause), the set of well-formedness conditions imposed on derived aboutness topics and aboutness topics in canonical position (possible for subjects in Spec,TP) are virtually indistinguishable from one another. If the element in question is not a subject in Spec,TP and thus cannot be a well-formed aboutness topic in situ, dislocation (either by movement or base-generation) must bring it to a prominent-enough left-peripheral position.

Let us now turn to how mapping rules can be resorted to in the licensing of topics and foci in marked positions, which may be subject to different sets of well-formedness conditions brought about by both the interface cost necessary to license non-canonical orders and the syntactic properties of the new structure. Recall that mapping rules work as licensing devices for non-canonical structures in Neeleman & van de Koot's 2008 system; in this sense, what mapping rules do is represent new sets of well-formedness conditions imposed on topics and foci that arise from their being in marked positions.[14]

First and foremost, it is important to bear in mind that mapping rules apply to structures made independently available by the syntax of the language. Therefore, the fact that, for example, German has a (TP-adjoined) topic position above sentential adverbs and Brazilian Portuguese has a topic position at the edge of vP (adjoined to the object shift projection) has nothing to do with

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[14] Recall from Section 3.2.1 that I suggested that the unmarked/marked status of a given element can be read off the syntactic structure via the presence/absence of labeling (of the dominating node). Under that proposal, the labeling issue in question must be resolved at the interfaces with the assignment of a special interpretation to the relevant element, which in turn triggers the corresponding mapping rule that licenses it, as will be discussed below.

information structure. The syntactic properties of the two languages independently allow for the placement of elements in those positions. After those structures are sent to the interfaces, then, it is up to the mapping rules available (universally or in a particular language) to evaluate what informational role(s) the elements in question can have and under what conditions. Once the Information Structure interface identifies an element in a marked position, then that element is subject to a mapping rule at the Information Structure interface in order to be licensed. The first step is the identification of the informational role of the relevant element. Next, the interface evaluates whether the configuration meets the description of the rule corresponding to that informational role (cf. (98) above).

In order to propose the descriptions of the Brazilian Portuguese mapping rules, I will borrow and slightly modify a concept from Neeleman & van de Koot (2010). Recall from the discussion of the mapping rules in (98) above that Neeleman & van de Koot (2008) argue that topicalization and focalization affect the node N_2 in the structure which derived topics and foci merge with (by making it a comment or a background, respectively). In discussing contrastive topicalization, Neeleman & van de Koot (2010) refer to that node as the "domain of contrast" of the topic. I will adopt (and modify) that notion and generalize it to all informational roles. Unlike Neeleman & van de Koot (2008, 2010), however, I will not assume that the merger of a topic or focus XP to a node N_2 necessarily affects the informational status of N_2. In my view, what the merger of a topic or focus XP to a node N_2 does to N_2 is simply make N_2 the *informational domain* of XP (i.e., the scope of XP, which in turn follows from c-command). It is then up to XP and the mapping rule that it triggers in each case to decide what its informational domain must look like. This modification of Neeleman & van de Koot's (2008, 2010) original conception of mapping rules will allow us to generalize the format of the rules to all informational roles — which is needed

especially considering, as we saw throughout this dissertation, that different kinds of topics have different well-formedness requirements. The general rule will thus have the format in (106).

(106)   *Informational Domain Mapping Rule*
        If XP in (107) is in a marked position, then N_2 is the informational domain of XP.

(107) N_1

        XP   **N_2**
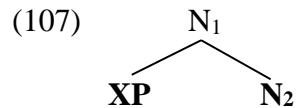
Depending on the specific informational role of XP in (107), a different set of well-formedness conditions will be at stake. In each case in (108) below, the domain must meet different criteria in order for the proper Information Structure relation to be well-formed. Note that in the rules in (108), the informational domain itself may not necessarily be affected. In case of focalization and aboutness topicalization (cf. (108a–b), respectively), the domain must indeed *be* an information-structure element — a presupposition and a comment, respectively. In the case of discourse-given and contrastive topicalization, however, the domain must simply *contain* an information-structure element — an accessible focus; the domain itself has no special interpretation. Let us then see what this modification to Neeleman & van de Koot's (2008, 2010) original formulation of mapping rules buys us.

(108)   a.   If XP = focus, then domain = presupposition
        b.   If XP = aboutness topic, then domain = comment
        c.   If XP = discourse-given topic, then domain must contain an accessible focus
        d.   If XP = contrastive topic, then domain must contain an accessible focus

The focalization rule in (108a) captures the fact that in Brazilian Portuguese a focus can only be moved to the left periphery, movement of focalized elements to the middle field being

completely ruled out, as the contrast between (109B) and (110B) shows. As discussed in Chapter 2, there is no focus-driven movement in the language. Movement of focus, which is licensed by additional interpretive effects, must completely remove the focus from its presupposition, in order to create a new configuration with it. While a purported middle-field focus cannot make the verbal domain a presupposition, a focus can target a node that can, independently, be its presupposition (under the analysis proposed in Chapter 3, this would then be movement to the focus operator position). Therefore, even though the syntax of Brazilian Portuguese independently allows for the dislocation of marked elements to its middle field, middle-field foci cannot meet the well-formedness conditions imposed on focalization in the language (see Chapter 2), and thus no mapping rule can be resorted to in order to license the non-canonical order in (110B), which is then ruled out as an ill-formed Information Structure configuration (note that non-canonical word orders that are illegible by the interfaces result in strong unacceptability). The same reasoning applies to aboutness topicalization in the rule in (108b); while aboutness topic cannot make its domain a comment, it can be merged with an element that can independently be its comment, as the contrast in (111) shows.

(109) A: O João leu os livros de todos os autores pro curso de sintaxe?
'Did John read the books by all authors for the syntax course?'
B: *Nem do Chomsky*_F o João leu os livros!
not.even of-the Chomsky the John read the books
'John didn't *even* read the books *by Chomsky*_F!'

(110) A: De que autor o João resenhou um livro ontem?
'John reviewed a book by which author yesterday?'
B: *O João resenhou *do Chomsky*_F um livro ontem.
the John reviewed of-the Chomsky a book yesterday
'John reviewed a book *by Chomsky*_F yesterday.'

(111) A: Me conta alguma coisa sobre a feira renascentista que você foi ontem!
          'Tell me something about the renaissance fair you went to yesterday!'
      B1: *(N)a   feira renascentista*_{AT}, eu comi várias comidas típicas (lá).
          (in-)the fair renaissance   I   ate   several foods typical (there)
          '*At the renaissance fair*_{AT}, I ate several traditional dishes.'
      B2: #Eu comi, *na   feira renascentista*_{AT}, várias comidas típicas (lá).
          I   ate in-the fair renaissance   several foods typical (there)
          '*At the renaissance fair*_{AT}, I ate several traditional dishes.'

Things are different, though, in rules (108c–d), regarding discourse-given and contrastive topicalization, which I have been arguing are not dependent on a bipartite articulation of the clause. Recall from Chapter 2 that whenever middle-field topicalization is well-formed, a left-peripheral counterpart is available with the exact same reading that is felicitous in the exact same context. This is illustrated in (112B1–B2) below with a contrastive topic. Note that compared to the middle-field topic in (112B2), the left-peripheral topic in (112B1) does not change the informational status of *eu li* 'I read' (it is backgrounded, deaccented information in both cases). The equivalence of (112B1) and (112B2) under the relevant reading thus shows that the exact size of the informational domain in each case is not crucial; rather, what is at stake is whether the informational domain of each topic contains an accessible focus (whatever is neither a topic nor a focus defaults to the status licensed by the context; in this case, background information). In other words, the informational domain itself is not an information-structure element in (112B1) and (112B2); rather, it simply defines the scope of the topic where it must find an accessible focus.[15]

(112) A: Quantos livros você leu pro curso de sintaxe?
          'How many books did you read for the syntax course?'
      B1: Bem, /*do   Chomsky*_{CT}/, \eu li\ /*três livros*_F/.
          well of-the Chomsky   I   read three books
      B2: Bem, \eu li\, /*do   Chomsky*_{CT}/, /*três livros*_F/.
          well I   read of-the Chomsky   three books
          'Well, I read *three books*_F *by Chomsky*_{CT}.'

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[15] In this case, an "accessible" focus is an overt focus or covert focus operator located in the same spell-out domain as the discourse-given or contrastive topic (see Chapter 3).

Note that the mapping approach allows for optionality of the sort seen in (112B1–B2) to exist. Crucially, both structures meet the description of the same mapping rule in (108d), and therefore equally license the Contrastive Topic-Focus Association in question. Moreover, optionality of this sort is also seen in cases where the canonical order already meets the interpretive requirements of the relevant information-structure elements. As is seen in (113B1), the canonical position of the direct object is already higher than that of the indirect object, therefore the order DO_{CT}–IO_F is well-formed as it is in this context (where CT is new), with no further dislocation of the direct object being required. Upon dislocation of the direct object to the left periphery (an independently available operation in the syntax of the language), as in (113B2), the direct object meets the description of the mapping rule in (108d), which in turn licenses the non-canonical order with the direct object being interpreted as a contrastive topic.

(113) A: Pra quem você deu o livro do Pinker?
            'Who did you give Pinker's book to?'
       B1: Bem, eu dei /*o livro do   Chomsky*/$_{CT}$ /*pro   João*/$_F$/.
            well I   gave the book of-the Chomsky   to-the   John
       B2: Bem, /*o livro do   Chomsky*/$_{CT}$/, eu dei /*pro João*/$_F$/.
            well   the book of-the Chomsky   I   gave to-the John
            'I gave *Chomsky's book*$_{CT}$ *to John*$_F$.'

The rules in (108c–d) are also stated in a way to encompass the given-before-new effect that I argued in Chapter 2 is triggered by the prominence acquired by dislocated given and contrastive topics. Since given and contrastive topics directly relate to the focus, focus identification is sensitive to the informational import of these elements. The interface cost paid by given and contrastive topics in marked positions is thus that their dislocation must increase their

informational prominence, in which case they must precede the focus, as was discussed in Chapter 2 and is illustrated in (114).

(114)   A: Quem deu um presente pra Maria na festa de Natal?
               ''Who gave a gift to Mary at the Christmas party?'
        B1:   /O JoãoF/ \deu um presente [pra MariaG] [na   festa de NatalG]\.
               the John   gave a   gift   to-the Mary   in-the party of Christmas
        B2:   */O JoãoF/ \deu [pra MariaG] [na   festa de NatalG]   um presente\.
               the John   gave to-the Mary   in-the party of Christmas a   gift
        B3:   */O JoãoF/ \deu [na   festa de NatalG]   [pra MariaG] um presente\.
               the John   gave in-the party of Christmas to-the Mary   a   gift
               'JohnF gave a gift to MaryG at the Christmas partyG.'

In conclusion, unlike the cartographic Topic and Focus Criteria, interface mapping rules allow for the flexibility we observe in the data discussed in this dissertation. What we see in Brazilian Portuguese is that the same informational role can be licensed in different positions of the clause and that the same position of the clause can license different informational roles. But far from being an "anything goes" kind of situation, the distribution of information-structure elements in Brazilian Portuguese is regulated by an intricate set of well-formedness conditions having to do with the specific informational role of each topic and focus, in combination with the syntactic environment where the relevant elements are realized.

On the face of the many empirical problems posed to the cartographic approach by the Brazilian Portuguese data discussed in this dissertation, I conclude that the mapping from Syntax to Information Structure in this language is best analyzed under the mapping approach. In general, we saw that topicalization and focalization are the epiphenomenal result of an intricate interplay of syntactic and informational constraints, in a way that is more complex than what the Topic and Focus Criteria can give us. The mapping approach, on the other hand, fares better at factoring in

the necessary structural and informational ingredients, and thus allows for the licensing of topics and foci in Brazilian Portuguese to be determined contextually, in line with the facts.

4.3. Conclusion

After having proposed a non-cartographic analysis of the structural make-up of the middle field of Brazilian Portuguese in Chapter 3, in this chapter I probed deeper into the question of whether the postulation of topic and focus projections in the clausal spine of the language is justified. I defended the position that the cartographic Topic and Focus Criteria proposed by Rizzi (1997) should be dispensed with in the language, in the face of the many empirical challenges posed to the cartographic approach by Brazilian Portuguese data.

I argued that the arguments offered in the cartographic literature (especially Rizzi 2013) to justify the morpho-syntactic reality of clausal topic and focus heads in other languages are inconclusive and especially do not carry over to Brazilian Portuguese. Not being an interface necessity, clausal topic and focus heads should only be resorted to in the presence of uncontroversial evidence in their favor, which in my view is absent. We also saw that, in the specific case of the Brazilian Portuguese middle field, the postulation of topic and focus projections fails to account for the proper distribution of topics and foci in postverbal positions, in particular with respect to the phase-based locality constraint discussed in Chapter 3. In other words, the postulation of a "low left periphery" in the style of Belletti (2004) cannot be maintained in Brazilian Portuguese.

With respect to the left periphery, I argued that aboutness topic interpretation is not restricted to a topic position in the CP area, based on the possibility of subjects in Spec,TP being interpreted

as aboutness topics, as evidenced by locative inversion data. That discussion provided further evidence for the ban on local movement from Spec,TP to the left periphery, widely attested in other languages. The ban in question was then used to argue against Rizzi's (1997) Topic Criterion and to shed light on the analysis of topic-drop constructions, argued to involve a null pronominal category rather than a trace of movement in subject position.

Finally, I argued in favor of an alternative mapping approach, in line with Neeleman and van de Koot (2008, 2010), whereby topics and foci are licensed based on a set of well-formedness conditions related to each informational role, contextually evaluated. I showed that canonical and non-canonical orders may be subject to different licensing conditions at the Syntax-Information Structure interface; in particular, non-canonical orders are licensed by their effect on the output. In the mapping system advocated for in this dissertation, non-canonical structures independently made available by the Syntax of Brazilian Portuguese can be licensed if they meet the description of a contextual mapping rule pertaining to each relevant informational role.

Chapter 5

Conclusion

In this dissertation, I investigated how the structural and interpretive properties of the middle field of Brazilian Portuguese, in particular when compared to the left periphery of the sentence, can shed light on the question of how syntactic structures are mapped onto the Information Structure component of the grammar. The novel and comprehensive comparison of those two areas of the clause undertaken here allowed us to shed light on a number of theoretical issues related to the licensing of topics and foci at the Syntax-Information Structure interface. In that respect, this dissertation contributes to fill a void in the literature and highlights the importance of comparing and contrasting different areas of the clause in the study of topicalization and focalization as interface phenomena, since many factors that play a role in the licensing of topics and foci may not be readily observable in the investigation of the left periphery alone.

In that enterprise, a number of empirical observations were made about the distribution and licensing of information-structure elements in Brazilian Portuguese. Most notably, the comparison of the left periphery and the middle field with respect to the licensing of (dislocated) topics and foci revealed that the two areas are in a subset-superset relationship, as in (1):

(1)   The functions of the middle field are a proper subset of those of the left periphery.

As we saw in Chapter 2, the informational roles available in the middle field are a proper subset of those available in the left periphery. While the left periphery can host all of the three types of topics discussed in this dissertation (i.e., aboutness, discourse-given, and contrastive), as well as both types of foci (i.e., new information and contrastive) (under special interpretive conditions,

which I will return to below), the middle field is restricted to discourse-given topics and contrastive topics. Simply put, the left periphery can do everything that the middle field can do, while the opposite is not the case, which can be argued to follow from their structural subset-superset relationship. In this respect, note that the informational domain of the middle field is in a sense structurally contained in the informational domain of the left periphery; that is, elements in the left periphery c-command everything that elements in the middle field c-command, but not vice-versa. The availability of informational roles in each area of the clause may then follow from the structural height of the relevant elements.

In comparing aboutness, discourse-given, and contrastive topics in Chapter 2, we were able to confirm that (2) holds in Brazilian Portuguese:

(2)   Different types of topics have different distribution.

The observation in (2) provides further evidence for a (minimally) tripartite classification of topic types (see e.g. Bianchi & Frascarelli 2010 and references therein). In the face of that observation, I argued that the traditional *topic-comment articulation* of the clause in fact only holds for aboutness topics; that is, out of the three types of topics discussed in this dissertation, only aboutness topics were shown to be licensed with respect to a comment in the traditional sense. Discourse-given and contrastive topics, on the other hand, were argued to be licensed based on their relative position with respect to an associated focus, in a relation I refer to as *Topic-Focus Association*, which is in turn subject to the *given-before-new effect* that comes about when topics are dislocated and become more prominent in discourse.

In distinguishing the three types of topics, especially with respect to the unavailability of aboutness topic interpretation in the middle field of Brazilian Portuguese, we were also able to observe the validity of (3):

(3)   Sentential adverbs delimit the availability of aboutness topic interpretation.

The diagnostic in (3) was established based on the comparison of Brazilian Portuguese middle-field topics and German *Mittelfeld* topics (as discussed by Frey 2004), as we saw in Chapter 3. While German *Mittelfeld* topics precede sentential adverbs and can have an aboutness interpretation, Brazilian Portuguese middle-field topics follow sentential adverbs and cannot have an aboutness interpretation. I interpreted this as indicating that the latter are located in a position that is too low to allow for aboutness interpretation, which is dependent on a full proposition (in turn delimited by sentential adverbs), which is interpreted as the comment in the topic-comment articulation. Since discourse-given and contrastive topics are not subject to the topic-comment articulation, as I argued, and thus do not depend on a proposition, they can follow sentential adverbs and as such discourse-given and contrastive topic interpretation is possible in the middle field of Brazilian Portuguese.

With respect to the licensing of foci in Brazilian Portuguese, I argued that (4) is the case:

(4)   There is no formally-driven focus movement in Brazilian Portuguese.

Against what is traditionally assumed in the literature on Brazilian Portuguese, I argued in Chapter 2 that the appearance of elements interpreted as foci in the left periphery of the language cannot be taken to be evidence for the existence of formally-driven focus movement. In particular, I argued that the realization of foci in the left periphery is only possible in the presence of additional

interpretive effects of semantic and/or pragmatic nature, that is, semantic/pragmatic effects other than focus interpretation itself. I take this observation to mean that dislocation itself is not involved in the licensing of focus interpretation *per se* — on the contrary, elements interpreted as foci are always possible and often better off in their canonical positions; in other words, failure to front foci was never shown to lead to unacceptability, which is really unexpected if the operation in question is formally-driven.

I also argued that dislocation of foci to the middle field is completely ruled out in Brazilian Portuguese (even in the presence of additional interpretive effects). With foci being semantically licensed with respect to a presupposition, only dislocation to the left periphery creates a (transparent) *focus-presupposition articulation* of the clause (which, *nota bene*, is not a requirement for focus interpretation; cf. discussion on focalization in situ). There being no formal reason for focus movement in the language, as I argued, movement of a focus to the middle field is expectedly not licensed at the interfaces, since the middle field of Brazilian Portuguese is just too low for a focus-presupposition configuration to obtain.

While probing deeper into the structural make-up of the middle field of Brazilian Portuguese in Chapter 3, I argued that Brazilian Portuguese has an operation that I refer to as *object shift*, defined as a formally-driven operation (akin to subject movement) that moves the (single) highest internal argument of the verb into the A-specifier of an independent functional projection XP above vP. I further argued that middle-field topics, which are realized immediately above the shifted object, are in turn adjoined to the object shift projection XP.

The comparison of elements in Spec,XP and elements in the XP-adjoined position revealed that these two positions have a different status at the Syntax-Information Structure interface. While shifted objects can have any informational role (including neutral, by virtue of being in a canonical

position in the sense adopted in this dissertation), elements adjoined to XP are informationally marked and must be interpreted as topics (focus interpretation being ruled out for the reasons exposed above). I then suggested that the different status of elements in Spec,XP and elements in the XP-adjoined position at the interfaces is read off the structure by the presence or absence of labeling, in a mechanism that reads elements under labeled nodes as informationally unmarked (in which case no special licensing is required) and elements under unlabeled nodes as informationally marked (in which case a special role in discourse is required). If these considerations are on the right track, we can then assume (5) to be true:

(5)   Labeling plays a role in Information Structure-related phenomena.

Among the exceptional properties of elements in the XP-adjoined position perhaps the most intriguing is that middle-field topics are subject to a phase-based locality constraint imposed on Topic-Focus Association, whereby the topic and its associated focus must be overtly realized in the same spell-out domain (a restriction that I suggested also holds for left-peripheral topicalization, where topics can be associated with a covert focus operator). That observation allows us to conclude that the general statement in (6) holds:

(6)   Phase-based locality plays a role in Information Structure-related phenomena.

I argued that the effects of (6) seen in middle-field Topic-Focus Association can be captured if the object shift projection XP is phase, which was independently argued to be the case. Considering that XP closes off the extended domain of the verb, its phasal status provides further evidence for a contextual rather than a rigid approach to phasehood (in particular Bošković's 2014 system where the highest projection in the extended domain of a lexical category is a phase).

The effects of the locality constraint observed on middle-field Topic-Focus Association were then shown to have important consequences for the theory of Information Structure. Of special relevance in that discussion was the observation that an LF operation (namely, quantifier raising) may not affect Information Structure relations. In particular, we saw that an element may be interpreted as a topic/focus in one structural position and at the same time be interpreted as a quantifier (scope-wise) in another position. I take that observation to shed light on the status of Information Structure in the architecture of the grammar, suggesting (7):

(7)   Information Structure is an independent component of the grammar.

Regarding the mapping from Syntax to Information Structure, in particular with respect to the question of whether topics and foci are licensed rigidly or contextually, the discussion of the *Cartography-Mapping* debate presented in Chapter 4 led us to conclude (8):

(8)   Topics and foci in Brazilian Portuguese are licensed contextually rather than rigidly.

The Brazilian Portuguese data presented and analyzed at length in this dissertation allowed us to conclude that topics and foci do not have to be realized in structurally-fixed positions in the clause. Rather, the data discussed here indicate that the licensing of topics and foci in this language is conditioned by their relative structural height with respect to each other and other relevant information-structure elements.

As was argued throughout the dissertation, Brazilian Portuguese poses a number of empirical challenges for the cartographic approach (Rizzi 1997 et seq.), the dominant view in the recent generative literature on topicalization and focalization in Romance languages. Most notably, the investigation of the well-known close-knit relationship between topichood and subjecthood

provided a strong argument that a particular informational role, namely aboutness topic, is not tied to a fixed left-peripheral topic position. In particular, we saw that elements that can be independently shown to remain in Spec,TP can also have an aboutness topic interpretation in discourse (for in that position the subject already c-commands a proper comment/proposition). Together with the overall distribution of topics and foci discussed in this dissertation, that observation allows us to safely claim that (9) holds for Brazilian Portuguese:

(9)   The same structural position can license more than one informational role, and
        the same informational role can be licensed in more than one structural position.

In the general case, what we have in Brazilian Portuguese is that the distribution of topics and foci (and, of particular interest here, their relationship with each other) is often much more complex than what fixed topic- and focus-dedicated positions can account for. In the particular case of the sentential middle field, I argued that the postulation of topic and/or focus projections at the edge of vP (as in Belletti's 2004 "low left periphery") is empirically problematic in that it cannot capture the distribution of topics and foci in that area of the clause, in particular with respect to the phase-based locality restrictions observed in middle-field Topic-Focus Association.

I further questioned the conceptual necessity of postulating functional heads (such as Top^0 and Foc^0) in the clausal spine to mediate topic-comment and focus-presupposition relations at the Syntax-Information Structure interface, and argued that the morpho-syntactic reality of such heads is not empirically supported by Brazilian Portuguese data.

Moving away from the assumptions of the cartographic approach, and maintaining the position that the Topic and Focus Criteria should be dispensed with, I proposed an alternative contextual analysis. In particular, I proposed *mapping rules* (in the style of Neeleman & van de Koot 2008, 2010) that convert syntactic structures into topic-comment and focus-presupposition relations in

Information Structure. Coupled with the syntactic analysis proposed in this dissertation, I maintain that the proposed mapping analysis can account for the distribution of topics and foci in Brazilian Portuguese in a more conceptually-elegant and empirically-supported way.

In conclusion, a *contextual* approach to the Syntax-Information Structure interface (mapping rules being one possible formalization of it) not only fares better with the data by factoring in the necessary structural and interpretive ingredients, but also does a better job in accounting for the flexibility observed in the licensing of the different types of topics and foci, which is evidenced by the Brazilian Portuguese data discussed at length in this dissertation. The distribution of topics and foci in this language should therefore be seen as epiphenomenal, the contextual by-product of the syntactic properties of the language and the licensing conditions that topics and foci are subject to in the mapping from Syntax to Information Structure.

I invite the reader to take on the many questions left open.

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