

The Syntax of Contrastive Topic-Focus Association in the Middle Field of Brazilian Portuguese

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1. Introduction

Brazilian Portuguese (BP) allows for dislocated topics to appear both in the left periphery of the clause and in the (postverbal) middle field, as is illustrated by the PP *do Chomsky* in (1).¹

- (1) a. *Do Chomsky_{TOP}*, eu li três livros. *Left periphery*
of-the Chomsky I read three books
b. Eu li, *do Chomsky_{TOP}*, três livros. *Middle field*
I read of-the Chomsky three books
'I read three books by Chomsky_{TOP}'.

This paper investigates the interface between syntax and information structure in sentences involving middle-field topicalization, such as (1b), under a contrastive interpretation (in Büring's 2003, 2016 sense). Contrastive topics require the presence of an independent (associated) focus (see also Wagner 2012). The goal of this paper is to determine the syntactic conditions governing the (proper) relative positioning of contrastive topics and their associated foci, a relation I call *Contrastive Topic-Focus Association* (CTFA), to distinguish it from the traditional *Topic-Comment Articulation* (which I reserve for aboutness topics). In doing so, I argue against the existence of topic- and focus-dedicated cartographic projections in the middle field of BP. The constraints on CTFA I will present here are better accounted for by a *configurational approach* to the mapping from syntax to information structure.²

2. Contrastive Topic-Focus Association

While traditional aboutness topics (Reinhart 1981) must be related to (and overtly c-command) a full proposition, forming the so-called *Topic-Comment Articulation*, as in (2), contrastive topics (CTs) are licensed based on their relative positioning with respect to an independent focus (F), whose presence is obligatory. Büring's (2003) examples in (3B) and (4B) show that a relation can be established between a CT and a F when both elements are in their canonical positions (e.g. subject and object positions) and that a CT may in principle either precede or follow its associated F.³ The immediate question is then why dislocation of CTs is allowed at all, as is illustrated by the BP sentence (5B1), in a scenario where its canonical-order counterpart (5B2) is also perfectly grammatical and felicitous.

- (2) [*That book_{AT}*]_{Topic}, [I really liked (it)]_{Comment}.
(3) A: Well, what about *Fred*? What did *he* eat?
B: *Fred_{CT}* ate *the beans_F*. (Büring 2003: 511)
(4) A: Well, what about the *beans*? Who ate *them*?
B: *Fred_F* ate *the beans_{CT}*. (Büring 2003: 512)

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¹ Translations are given in the canonical order for English. The informational values of the relevant elements are indicated by the diacritics TOP (topic), CT (contrastive topic), AT (aboutness topic), G (discourse-given topic), and F (focus). Rising intonation is indicated by forward slashes /.../ and falling intonation by backslashes \...\.

² See Lacerda (in preparation) for a more detailed discussion and Lacerda (2016b) for related issues.

³ See Büring (2003, 2016) and Wagner (2012) for semantic and pragmatic properties of contrastive topicalization.

- (5) A: Pra quem você deu o livro do Pinker?
 ‘Who did you give Pinker’s book to?’
- B1: /O livro do Chomsky_{CT}/, eu dei /pro João_F/. ✓ *Left periphery*
 the book of-the Chomsky I gave to-the John
- B2: Eu dei /o livro do Chomsky/_{CT} /pro João_F/. ✓ *Canonical order*
 I gave the book of-the Chomsky to-the John
 ‘I gave Chomsky’s book_{CT} to John_F.’

I maintain that dislocation of CTs, when syntactically available, allows for the creation of a new relative configuration between the CT and the F. When the base-generated order does not fulfill all the CTFA requirements, dislocation in fact becomes obligatory. I will now illustrate one simple but crucial requirement. In Büring’s dialogues above in (3) and (4), the CT is introduced already in speaker A’s question, which I claim allows for either ordering of CT and F in B’s answers (note the dislocated counterpart of (4B): *The beans_{CT}, Fred_F ate them*). Turning back to BP, now compare the scenario in (5) with (6). In both cases, *do Chomsky* is introduced as an alternative to *do Pinker* by speaker B, precisely by virtue of their uttering a contrastive topicalization structure. In this case, the CT must precede the F. In (5), the canonical order already places the direct object CT in a higher position than the indirect object F; both (5B1) and (5B2) thus comply with that requirement. In (6), however, the CT *do Chomsky* is more deeply embedded than the F *três livros*; here dislocation of the CT becomes obligatory — note that dislocation to either the left periphery (6B1) or the middle field (6B2) places the CT higher than the F.⁴ For control, note that the scenario in (7) is like Büring’s (3)–(4), in that *do Chomsky* is introduced as an alternative to *do Pinker* previously in the discourse, making (7B) a felicitous answer (with *do Chomsky* being less accented than in (6B1)–(6B2), for being second-occurrence here), as would be (6B1)–(6B2).

- (6) A: Quantos livros do Pinker você leu (esse ano)?
 ‘How many books by Pinker did you read (this year)?’
- B1: /Do Chomsky_{CT}/, eu li /três livros_F/. ✓ *Left periphery*
 of-the Chomsky I read three books
- B2: Eu li, /do Chomsky_{CT}/, /três livros_F/. ✓ *Middle field*
 I read of-the Chomsky three books
- B3: #Eu li /três livros/ /do Chomsky_{CT}/. ✗ *Canonical order*
 I read three books of-the Chomsky
 ‘I read three books_F by Chomsky_{CT}.’
- (7) A: Você leu cinco livros do Pinker. E *do Chomsky*?
 ‘You read five books by Pinker. What about Chomsky?’
- B: Eu li /três livros_F/ /do Chomsky_{CT}/. ✓ *Canonical order*
 I read three books of-the Chomsky
 ‘I read three books_F by Chomsky_{CT}.’

We have seen above that CTs are not subject to the same requirements as aboutness topics. Rather, their licensing depends on their (structural and interpretive) relation with an associated F, the *Contrastive Topic-Focus Association*. With that in mind, we can probe further into the constraints on CTFA to investigate the nature of contrastive topicalization in the mapping from syntax to information structure.

3. The locality constraint on middle-field CTFA

In this section, I will present a previously unobserved locality constraint on middle-field CTFA. I will then argue that this constraint is unexpected if the middle field of BP contains cartographic topic-and focus-dedicated projections (unlike what Belletti 2004 proposed for Italian). The facts thus provide evidence for a configurational, non-cartographic analysis of middle-field topicalization in BP. First note in (6B2) above that the middle-field CT may be associated with a direct object F. Additionally, note in (8B) that an indirect object may be focalized in situ (the base order being DO–IO). Now let us observe in the paradigm in (9) what happens when we try to associate the same CT *do Chomsky* with the focalized

⁴ Sentence (6B3) is acceptable with readings other than contrastive topicalization, which is orthogonal to the present discussion. Judgments are assigned to the relevant readings, with the IS values and intonational patterns indicated.

indirect object *pra Ana*. The left-peripheral topicalization in (9B1) shows that this is in principle possible. Given that *do Chomsky* is a good middle-field CT (cf. (6B2)) and *pra Ana* is a good in situ focus (cf. (8B)), the unacceptability of (9B2) is rather puzzling. I maintain that it is precisely their association (i.e. CTFA) that is disrupted in the structure in (9B2). For now, let us take the contrast between the good (6B2) and the bad (9B2) to indicate that the middle-field CT and the F must be “accessible” (i.e. local) to each other (in a way to be defined in the next section). If there were a FocusP position in the middle field (presumably under a TopicP hosting the topic), as in (10), one would expect it to be able to attract the indirect object closer to the topic. However, movement of the focalized indirect object past the direct object into the middle field is independently degraded, as in (9B3) (in Lacerda in prep.). I argue that there is in fact no focus-driven movement in BP), and crucially does not salvage (9B2) — on the contrary, (9B4) is even worse than (9B2)–(9B3).

- (8) A: Pra quem você recomendou livros do Pinker?
‘Who did you recommend books by Pinker to?’
B: Eu recomendei livros do Pinker *pra Ana_F*.
I recommended books of-the Pinker to-the Ana
‘I recommended books by Pinker to *Ana_F*.’
- (9) 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: ??/Do Chomsky_{CT}/, \eu recomendei\ /pra Ana_F\ \livros\ (ontem).
of-the Chomsky I recommended to-the Ana books (yesterday)
B4: *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).’
- (10) [TP subject verb [TopicP topic [FocusP focus [vP]]]]

The facts observed in (6) and (9) thus suggest that only the highest internal argument of the verb is a suitable F for a middle-field CT (note that nothing in principle prevents an oblique internal argument from being focalized in the presence of a middle-field CT, as (11B) shows). This odd restriction is unexpected under a cartographic approach to topicalization and focalization.

- (11) A: Em quantos alvos os atletas atiraram no campeonato de tiro?
‘How many targets did the athletes shoot at in the shooting championship?’
B: Os atletas atiraram, /na prova final_{CT}/, /em dois alvos_F/.
the athletes shot in-the round final in two targets
‘The athletes shot at two *targets_F* in the *final round_{CT}*.’

In the next section, I will provide an analysis for the distribution of topics and foci in the middle field of BP and provide further evidence for a (non-cartographic) *configurational* approach to CTFA.

4. A phase-based configurational account of middle-field CTFA

4.1. The mapping rule

In order to account for the contrast between (6B2) and (9B2)/(9B4), I will now argue that the following constraint is operative: If an element dislocated to the middle field of BP is interpreted as a contrastive topic, it must be associated with a focus in the same Spell-Out Domain. Without resorting to a cartographic TopicP above vP, I propose that middle-field topics are adjoined the uppermost projection in the extended domain of vP, represented as XP in the structure in (12). XP (whose precise category is immaterial) is similar to an “object shift” projection, in that its specifier hosts the highest internal argument of the verb. Observe the scenario in (13), where (13B1)–(13B2) are to be interpreted as all-new, broad-focus sentences. The (discourse-neutral) direct object *uma história* in (13B1) may freely precede or follow low adverbs (e.g. manner *direito*) — that is, it may surface outside or within vP —,

whereas the indirect object in (13B2) can only follow the low adverb (*pra Maria* can only precede *direito* if it is interpreted as a contrastive or given topic). Moreover, while the direct object can be independently focalized in either position, the indirect object can only be focalized in the lower position. I thus conclude that the movement of the direct object to Spec,XP is independent of information structure (as I argued in Lacerda 2016a, where quantifier floating data provide further evidence for XP). Since XP closes off the vP domain, I take it to be a phase (assuming with Wurmbrand 2013, Bošković 2014 that the highest projection in a domain is phase), with X^0 thus triggering Spell-Out of the vP. Being at the edge of the XP phase, the CT in (12) is thus part of the higher SOD, and when it is transferred to the interfaces, only YP (in Spec,XP) can be identified as its associated F. There being no focus-driven movement to that area of the clause (cf. (9B3)–(9B4)), it follows that in a ditransitive construction only the direct object (which we have seen can independently escape the vP) is a suitable associated F for the middle-field CT.

- (12) *Contrastive Topic-Focus Association* (descriptive mapping rule)

In the configuration [CP [TP [XP [XP WP [XP YP [x' X [vP ...]]]]]]],
if WP is a contrastive topic, then YP is its associated focus.

- (13) A: O que aconteceu? ‘What happened?’

B1: O João não explicou [XP {uma história} [vP direito [vP {uma história} pra Maria]]].
the John not explained {a story} right {a story} to-the Maria

B2: O João não explicou [XP {#pra Maria} [vP direito [vP uma história {pra Maria;}]]].
the John not explained {#to-the Maria} right a story {to-the Maria}
‘John didn’t explain a story to Mary well.’

I take CTFA (as descriptively represented in (12)) to be a configurational (mapping) rule, in the sense of Neeleman and van de Koot (2008, 2010). The structure in (12) is independently created by syntax by resorting to object shift of YP and edge movement (an independently available operation) of WP, which expands the c-command domain of WP (expanding its “domain of contrast”, in N&K’s 2010 terms). When the structure reaches the interfaces, assignment of CT interpretation to WP forces its association with a c-commanded F (by CTFA). As CTFA, when applied to a middle-field CT, is phase-sensitive in the manner discussed above (which I will not deduce here), YP must be focalized, which is independently possible in that position. Being phase-based, CTFA is therefore expected to be computed derivationally, a prediction that is borne out. Let us look at the scenario in (14), where (14B2)–(14B3) are alternative questions to (14B1) and *do Chomsky* is introduced as a CT, whose associated F is the *wh*-element *quantos livros*. Being the direct object, *quantos livros* in (14B2) passes through Spec,XP on its way to Spec,CP, in the position indicated by t_F (in boldface). When *do Chomsky* reaches the interfaces and is assigned CT interpretation, CTFA identifies t_F as its associated F (*wh*-elements being suitable foci). Note that in (14B2) the CT linearly follows the F and still can be (newly) introduced as an alternative (contrastive) topic (cf. discussion of (6) above), since the relevant F (for the purposes of CTFA) is the lower copy/trace in Spec,XP, which is c-commanded by the CT adjoined to XP. Since BP allows for *wh*-elements to stay in situ, (14B3) is a natural alternative to (14B2).

- (14) A: Eu li vários livros pro curso de linguística.

‘I read several books for the linguistics course.’

- B1: Quantos livros você leu (pra esse curso)?

‘How many books did you read (for this course)?’

- B2: /Quantos livros_F/ \você leu\, /do Chomsky_{CT}/ t_F (pra esse curso)?
how many books you read of-the Chomsky (for this course)

- B3: 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)?’

4.2. There is no fixed (contrastive) topic position

The account proposed above dispenses with topic- and focus-dedicated projections in the extended domain of vP. I will now provide further evidence that elements that are interpreted as CTs in the postverbal position are not located in a fixed, unique topic position, rendering a cartographic analysis untenable. In other words, the CT interpretation and/or licensing of elements dislocated to the middle

field are not contingent on a Spec-head relation between the topic and a Topic⁰ head, as in the cartographic approach (e.g. Rizzi 1997). Evidence comes from contrasts such as the one between (15B1) and (15B2). While a postverbal direct object with CT interpretation may be associated with a focalized adverbial in (15B1), any other elements cannot, as in (15B2). In the configurational analysis proposed here, *o livro do Chomsky* is in its regular “object shift” position (as discussed above), as in (16) (with English words) — recall that this movement takes place regardless of information structure (*nota bene*, not being a derived middle-field CT, *o livro do Chomsky* is not subject to the locality constraint on middle-field CTFA). If *o livro do Chomsky* were located in a cartographic Spec,TopicP (which would then license its CT interpretation) and *esse mês* in Spec,FocusP, as in (17a), the unacceptability of (15B2) would remain unaccounted for, since *do Chomsky* and *esse mês* should be able to undergo the same movements to Spec,TopicP and Spec,FocusP, respectively, as in (17b). In other words, the cartographic analysis in (17) predicts (15B1)–(15B2) to have the same status, contrary to fact. Assuming alternatively that *do Chomsky* in (15B2) is adjoined to XP (the adjunction being licensed at the interfaces), thus being a derived middle-field topic, it is subject to the locality constraint. If the structure of (15B2) is as in (18a), *esse mês* is spelled-out with the VP and is thus inaccessible to the CT. The alternative structure in (18b) (which would comply with the locality constraint) is still ruled out, due to the illicit movement of *esse mês* from adjunct of VP to adjunct of XP (this movement has no formal reason and is not licensed by an information structure requirement at the interfaces, that is, *esse mês* cannot move merely to become a suitable associated focus, since focus movement to the middle field of BP is completely excluded).

- (15) A: Quando você leu os livros pro curso de sintaxe?
 ‘When did you read the books for the syntax course?’
- B1: Eu li /o livro do Chomsky_{CT} /esse mês_F/.
 I read the book of-the Chomsky this month
 ‘I read the book by Chomsky_{CT} this month_F.’
- B2: *Eu li, /do Chomsky_{CT}/, /esse mês_F/ \o livro\ t_{CT}.
 I read of-the Chomsky this month the book
 ‘I read the book by Chomsky_{CT} this month_F.’
- (16) [TP I read [XP the book of the Chomsky_{CT} [x: [VP this month_F [VP [VP t_{CT}]]]]]]]
- (17) a. [TP I read [_{TopicP} the book of the Chomsky_{CT} [_{FocusP} this month_F [VP tf [VP [VP t_{CT}]]]]]]]
 b. [TP I read [_{TopicP} of the Chomsky_{CT} [_{FocusP} this month_F [VP tf [VP the book t_{CT}]]]]]]]
- (18) a. [TP I read [xp of the Chomsky_{CT} [xp [x: [vp this month_F [vp [vp the book t_{CT}]]]]]]]
 b. [TP I read [xp of the Chomsky_{CT} [xp this month_F [xp [x: [vp tf [vp the book t_{CT}]]]]]]]]]

To conclude this section, I will provide one piece of independent evidence for a configurational analysis of CTFA in BP. In proposing a cartographic hierarchy of topics in the Italian CP domain, Bianchi and Frascarelli (2010) pointed out that in multiple-topic constructions, contrastive topics obligatorily precede discourse-given topics. In BP, however, CTs and given topics may appear in any ordering with respect to each other, in any combination involving the left periphery and the middle field, as is shown in (19) (like CTs, given topics may even remain in situ).

- (19) 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: /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
- B4: \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
- B5: \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
- B6: \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
 ‘She donated ten books_F by Chomsky_{CT} to the department_G.’

Alternations of this sort are expected if these topics are adjoined to some independent projection in the clausal spine (such as XP in the middle field) — which means they can be freely ordered with respect to one another —, and if these topics have their interpretive needs met configurationally (the dislocation of both contrastive and given topics is licensed based on their relative position with respect to a focus). It is important to point out that both (19B5) and (19B6) comply with the locality constraint on middle-field CTFA: In both cases (represented in (20)), regardless of the position of the given topic, the CT and the F are in the same SOD. Note that the given topic *pro departamento* in (19B5)/(20a) does not interfere with the association between *do Chomsky* and *dez livros*, since it is not a suitable focus in that position (dislocation to the middle field of BP being licensed by topicalization but not focalization), whereas *dez livros* can be independently focalized in Spec,XP, as we have seen above.

- (20) a. [XP of the Chomsky_{CT} [XP to the departament_G [XP ten books_F [X' [vP]]]]]] (19B5)
b. [XP to the departament_G [XP of the Chomsky_{CT} [XP ten books_F [X' [vP]]]]]] (19B6)

Under a cartographic approach, the topics in (19) should be located in hierarchical fixed-position specifiers. While such an analysis could leave room for (19B3)–(19B4), which employ different areas of the clause, no fixed hierarchy is observed in either the left periphery (19B1)–(19B2) or the middle field (19B5)–(19B6). The paradigm in (19), especially the acceptability of (19B5), thus advocate for the configurational analysis of *Contrastive Topic-Focus Association* proposed here.

5. Final remarks

Due to their position in the clause, middle-field topics do not c-command full propositions and therefore cannot form the traditional *Topic-Comment Articulation* (ruling out aboutness interpretation; see Lacerda in prep.). Having observed that they can have contrastive interpretation, in this paper I tackled the issue of their relation with respect to their associated foci — the *Contrastive Topic-Focus Association*, which encompasses both interpretive and structural requirements. Focusing on syntactic constraints on middle-field CTFA, I provided an analysis for novel data that favor a (non-cartographic) configurational approach to the mapping from syntax to information structure in Brazilian Portuguese.

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