

## Interpreting the ordering effects of CTs and Fs in Brazilian Portuguese

**Introduction.** In this paper we investigate the ordering effects of focus (F) and contrastive topics (CT) in Brazilian Portuguese (BP). It is still a matter of debate whether CTs and Fs can be freely ordered in a sentence. It is assumed, since [5], that English allows for F preceding CT (short: F>CT). German, on the other hand, is claimed not to allow for F>CT ([2]; more recently argued in [8], who claimed that the same holds for Italian).

**Claims.** We will show that the distribution of CT and F in BP strikingly parallels that observed for Dutch in [6]: ① it is possible for a focus to precede a contrastive topic, as long as this configuration respects canonical word order, and ② it is impossible for a focus to move across a contrastive topic. Building on [4]’s Topic Abstraction account, we propose a simple additional condition that captures [6]’s generalization for Dutch as well as the BP data: ③ **a focus interpretation of the moved F is blocked by the CT- $\lambda$** , and that’s why F>CT is impossible in overt movement cases.

**The data.** The data in this paper is based on experimental work conducted by the authors and from adapted examples discussed in the literature. The contexts are set up in a way that the focus corresponds to the wh-element in the question, and the CT is the constituent in the answer that differs from what has been asked in the question. (1) illustrates that it is indeed possible for a focus to precede a contrastive topic in BP, but only when F>CT corresponds to canonical word order:

(1) Context: This is the first time A comes to B’s house, and A notices that B has a lot of weird objects in her living room. **A:** ‘What about this samurai sword, who gave it to you?’/ **B:** ‘Well, I don’t remember, but I think that...

- |  |   |
|--|---|
| a. <b>UM REI<sub>F</sub></b> me deu <u>esse cocar de índio</u> <sub>CT</sub> . | b. <u>esse cocar de índio</u> <sub>CT</sub> <b>UM REI<sub>F</sub></b> me deu. |
| a king to.me gave this cocar of indian   | this cocar of indian a king to.me gave  |
| ... a king gave me this indian cocar’.   | ... a king gave me this indian cocar’.  |

F>CT is infelicitous if this configuration doesn’t correspond to canonical word order:

(2) Context: A knows that B has a good relationship with the king and queen of Morocco, whom B visited a few weeks ago. **A:** ‘And the queen, what did she give you?’ **B:** ‘Well, I don’t remember...

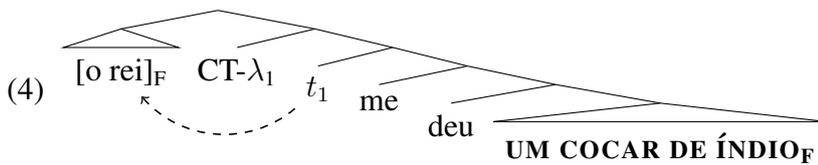
- |  |  |
|--|--|
| a. <u>o rei</u> <sub>CT</sub> me deu <b>UM COCAR DE ÍNDIO</b> <sub>F</sub> . | b. <b>#UM COCAR DE ÍNDIO</b> <sub>F</sub> <u>o rei</u> <sub>CT</sub> me deu. |
| the king to.me gave a cocar of indian  | a cocar of indian the king to.me gave  |
| ... the king gave me an indian cocar’.                                       |  |

In other words, the BP data is in line with the observation made in [6] for Dutch: it is possible to have an in-situ focus preceding a contrastive topic, like in (1-a), but a focus cannot move across a contrastive topic, as illustrated by the infelicitous sentence (2-b). Note also that a contrastive topic can move freely across a focus (1-b).

**Interpretation.** We propose to use [4]’s Topic Abstraction account, which assumes that contrastive topics are simply F-marked phrases (in the sense that they introduce alternatives) in a specific configuration. A syntactic operation raises a F-marked phrase to a CT-operator (CT- $\lambda$ ) position, adding a layer of nesting directly in the focus value. What is then interpreted as the contrastive topic is the F that minimally C-commands the CT- $\lambda$ , and the F constituent that stays in-situ is interpreted as the “real” focus. After the CT- $\lambda$  abstraction has taken place, the focus value is nested, i.e. it contains sets as members (see (3-b)). Since the nested alternatives structures are computed directly in the f-value dimension, Constant assumes that there is no need for syntactic CT-markers to feed the semantics interpretation (as opposed to [2]’s model, which derives f and ct-values separately). See below Constant’s Topic Abstraction:

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|--|-------------------------|
| (3) a. $\llbracket \text{CT-}\lambda_i \phi \rrbracket_g^o = \lambda x. \llbracket \phi \rrbracket_{g[i \rightarrow x]}^o$   | Ordinary Semantic Value |
| b. $\llbracket \text{CT-}\lambda_i \phi \rrbracket_g^f = \{ \lambda x. \llbracket \phi \rrbracket_{g[i \rightarrow x]}^f \}$ | Focus Semantic Value    |

(4) is the representation of (2-a) with the CT-operator in action. The contrastive topic is the F that covertly raises to the CT-operator, leaving a trace below. Direct evidence of such movement comes from topicalization (like example (1-b)), which are the overt realization of the CT-operation. For reasons of space, the reader is referred to [4] for the detailed description on how to derive a nested set of alternatives using only Rooth’s (1992) squiggle operator.



Furthermore, in order to interpret F>CT surface orders in English, Constant assumes that F undergoes CT-raising at LF, but is still pronounced in-situ. Applying Constant’s analysis to (1-a), *esse cocar de índio* undergoes CT-raising at LF, but it surfaces after the focus *um rei*. Thus, the two surface orders CT>F and F>CT are covered by Constant’s model.

**Proposal.** We propose that the reason why a focus cannot move across a topic (using [6]’s terminology) is exactly because movement of a F-marked phrase across another one sets off the CT-λ operation, and consequently the only interpretation available to the moved constituent is that of a contrastive topic. Therefore, the only felicitous configuration in overt movement of F across F is CT>F. This is summarized in the Principle below:

(5) Principle on movement of F across F:

In a configuration with two Fs, iff one F moves to a position C-commanding the other F, the moved F is interpreted as a contrastive topic.

These two necessary conditions (two Fs in the clause plus movement of F above the other F) must *both* occur in order for (5) to apply. First off, movement of a focus to the beginning of the clause doesn’t result in a contrastive topic interpretation of the moved focus: these are the well studied cases of focus fronting in Romance (see Cruschina & Remberger 2019 for an overview). Notice also that it has been independently shown for Italian ([1], [6]) that there cannot be a contrastive interpretation in the background of a moved focus (i.e. F>CT is impossible in overt focus movement cases). Second, (6-a) shows that there can be two Fs in the same sentence without one of them being interpreted as CT (as already pointed out [3]). If Steve Jobs invented the iPhone in 2008, there cannot be other questions like ‘Who invented the iPhone in 2009?’ (or ‘When did Bill Gates invent it?’), for the simple reason that things are only invented once:

(6) (Bill Gates invented the iPhone in 2008.)

a. Não, o STEVE JOBS<sub>F</sub> inventou (o iPhone) EM 2007<sub>F</sub>.  
 no the S. J. invented the iPhone in 2007  
 ‘No, Steve Jobs invented it in 2007’.

b. #Não, EM 2007<sub>F</sub> o STEVE JOBS<sub>F</sub> inventou o iPhone.

Crucially, if we move one F across the other as in (6-b), the sentence is infelicitous. We submit that (6-b) is infelicitous in the context above exactly because it indicates a complex discourse strategy, where the fronted F is interpreted as contrastive topic. Recall however, that a CT interpretation is impossible here, for the pragmatics reasons explained just above. Furthermore, an F-F interpretation is no longer possible, which is not expected given the felicity of (6-a). So, the sentences in (6) confirm the Principle in (5), illustrating that if F moves above F, the moved F is interpreted as a contrastive topic.

**Summing up.** The BP data presented here brings new evidence to a still not settled matter in the contrastive topics literature, namely the ordering restrictions between contr. topics and foci. We showed that foci can precede CTs in BP, as long as this corresponds to canonical word order. Furthermore, the two canonical word orders CT>F and F>CT are correctly interpreted using [4]’s, assuming that there is covert movement of F to the CT-λ position. We proposed a simple additional condition do [4]’s analysis that captures the ban on movement of a focus across a topic: if F overtly moves across F, the CT-λ block its interpretation as focus, allowing only CT>F to be possible in the overt movement cases.

**References.** [1] Brunetti, L. (2009). On links and tails in Italian. *Lingua*, 119(5), 756-781. [2] Büring, D. (2003). *On D-Trees, Beans, and B-accents*. *Linguistics & Philosophy*, 26(5): 511–545. [3] Büring, D. (2016). (Contrastive) topic. In *The Oxford handbook of information structure*. [4] Constant, N. (2014). *Contrastive Topic: Meanings and Realizations*. PhD thesis, University of Massachusetts Amherst. [5] Jackendoff, R. (1972). *Semantics in Generative Grammar*. MIT Press, Cambridge, MA. [6] Neeleman, A. and Van De Koot, H. (2008). Dutch scrambling and the nature of discourse templates. *The Journal of Comparative Germanic Linguistics*, 11(2):137–189. [7] Samek-Lodovici, V. (2015). *The interaction of focus, givenness, and prosody: A study of Italian clause structure*. [8] Wagner, M. (2012). Contrastive topics decomposed. *Semantics and Pragmatics*, 5:8:1–54.