

On δ -features and φ -features in Brazilian Portuguese

1. It is well-known that Brazilian Portuguese (BP) has certain constructions that sets it apart from some Romance languages: loss of VS order (Berlink 1989, 1995), loss of null subjects (Duarte 1993), impoverishment of the subject-verb agreement system (Galves 1996), loss of the preposition *a* and restricted Differential Object Marking (DOM) (Cyrino & Irimia 2019), among others. In the constructions in (1a), noticed first in Pontes (1987), an element other than the subject is left-dislocated, but it still agrees with the verb; see the structure in (1b):

- (1) a. *Essas casas batem sol.* b. [_{CP} *Estas casas_i* [_{TP} *t_i* [_{VP} *batem t_i muito sol*]]]
 These.PL houses.PL beat.PL sun.
 ‘These houses get a lot of sun.’
 Lit. ‘these houses beat down sun’

Additionally, it is possible for objects and locatives to agree with the verb, as seen in (2):

- (2) a. *As salas estão limpando.* b. *Os pneus furaram.*
 the.PL room.PL be.PL cleaning the.PL tire.PL punctured
 ‘The rooms are being cleaned’ ‘The tires got punctured.’

Based on the constructions above Teixeira de Sousa (2010) argues that BP is a language that shows focus prominence and poor agreement. In her proposal, δ -features and φ -features are located in C, and not T.

2. On the other hand, Cyrino & Irimia (2019) have proposed that DOM in BP is restricted to some contexts, one of them expressed in (3). Note that the sentence is possible without the *a*-marker, but in that case, it has a different meaning (4) (Cyrino & Irimia 2019:180):

- (3) *Eu vi o menino e ao rei também.*
 I saw the boy and DOM-the teacher too
 ‘I saw the boy and (I saw) the teacher too.’
 (4) *Eu vi o menino e o professor também.*
 I saw the boy and the teacher too
 ‘I saw the boy and the teacher did too.’

As it is well-known DOM is also a kind of topic marker (Escandell-Vidal 2009). Cyrino & Irimia (2019) propose that DOM is expressed when certain types of topics act as last resource licenser to value discourse/Case features.

3. In order to account for these data, in this paper, we advance an analysis based on the proposals in Miyagawa (2010, 2017), whereby languages differ with respect to the specification of agreement features (φ -features) and discourse features (δ -features). According to Miyagawa, languages can be categorized according to the placement of φ and δ features in C and T (7) (Miyagawa 2017: 4):

- (5) Category I: C φ , T δ - Japanese
 Category II: C δ , T φ - English
 Category III: C, T φ/δ - Spanish
 Category IV: C φ/δ , T – Dinka

We assume that BP is a Category IV language, and we advance the hypothesis that δ -features and φ -features are also present in the low left periphery (Belletti 2004, Lacerda 2015) in the language.

4. Evidence for φ -features and δ -features in C in BP are the possibility for echo verb answers followed by polarity particles (7) and the agreement displayed by the item in first position in the sentence, regardless of whether it is the logical subject (6a-b):

- (6) a. *Sujou as mesas de novo.* b. *As mesas sujaram de novo.*
 dirty.SG the.PL table.PL of again. the.PL table.PL dirty.PL of again
 ‘The tables got dirty again.’ ‘The tables got dirty again.’
 (7) A: *Você comprou café?* B: *Comprei não.*
 you bought coffee bought not
 ‘Did you buy coffee?’ ‘No, I didn’t.’

Teixeira de Sousa (2020) argues that negative sentences as (7B) present an exclusive structure for polar questions and that fact further supports her claim with respect to C features. The author proposes the structure in (8):

- (8) [_{FocP} [_{comprei_i}] [_{Foc'} [_{PolP} [_{Pol'} [_{<comprei_i>}] [_{Pol} [_{não}] [_{TP} ~~comprei_i~~ [_{VP} ~~eu-comprei~~ café]]]]]]]]

This shows that, unlike EP, the verb must be moved to a position higher than PolP in order to value its focus feature.

5. Interestingly, we also find evidence for both φ -features and δ -features in the BP low periphery, as we show below:

a) As for δ -features, we observe the occurrence of DOM (*a*-marking, Torrego 1998, a.o.) in BP. See the sentences in (9), (9a) with a clitic and (9b) with the full pronoun *ele*, the latter being more common in the language and possible with or without the *a*-marking.

- (9) a. Eu o vi e *(a)o irmão também.
 I him.CL saw and DOM.the brother too
 'I saw him and I saw his brother too.'
 b. Eu vi (a) ele e *(a)o irmão também.
 I saw DOM him and DOM.the brother too
 'I saw him and I saw his brother too.'

Cyrino & Irimia (2019), assuming these coordinated sentences can be reduced to ellipsis, propose the structure in (10), where the animate DP contains a [+person] feature that is licensed as a last resort by a Topic head.

- (10) [_{TOP} a[o irmão] também [TP eu vi [vP ... [o irmão]]]]

The authors propose that DOM is associated with an additional layer of licensing: in their proposal, a low Topic head inherits/copies a Case assigning capacity from the Case licenser in the antecedent/first conjunct of sentences as (9). The authors follow the idea that discourse-related heads can license Case in the absence of relevant formal ϕ -licensing heads (like T, v, Miyagawa 2010, 2017).

We assume that analysis, and we propose that DOM in BP is the manifestation of δ -licensing: agreement with discourse features. In fact, we can also see these agreement features in the high periphery in BP, as in (11), where DOM is necessary for the intended topicalization interpretation. Notice that the VS order (impossible in neutral sentences in BP) is obligatory: (11b), with no DOM, has a different (opposite) meaning:

- (11) a. Ao bem venceu o mal. b. O bem venceu o mal.
 DOM.the good won the evil. the good won the evil
 'Evil conquered good.' 'Good conquered evil.'

b) As for ϕ -features, it has been proposed that BP has restricted and optional direct object clitic doubling, as in (12), which is only possible for 1st. and 2nd person (Machado-Rocha 2016, a.o.). Additionally, the clitic has a fixed position: it must always be located immediately before the main verb. This fact shows it may be considered the manifestation of agreement:

- (12) a. A Lia me ajudou eu. b. Eu vou te pegar você mais tarde.
 the Lia me.CL helped I I go you.CL pick-up you more late
 'Lia helped me' 'I'll pick you up later'

Assuming that these clitics are the spell out of agreement, since they share the [+person/+participant] features of the object (see Agnostopoulou 2006, 2015, Ormazabal & Romero 2010, a.o.), we consider this as evidence for ϕ -features in the low periphery of the language.

6. By assuming an analysis for BP as a Category IV language and extending this analysis to the low periphery, we aim to explain, in a more unified way, some properties of BP syntax, as the lack VS order (Berlink 1989, 1995), the lack of null subjects (Duarte 1993), the impoverishment of the subject-verb agreement system (Galves 1996), the loss of the preposition *a* and the restricted occurrence of Differential Object Marking. In other words, both the high periphery and the low periphery retain ϕ -features and δ -features in the language.

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