"O CELULAR ACABOU A BATERIA": A DESCRIPTIVE AND FORMAL ANALYSIS FOR SUBJECT TOPIC CONSTRUCTIONS[1]

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▪ ABSTRACT: This paper examines the syntax of subject topic constructions in Brazilian Portuguese, such as "o celular acabou a bateria" ("the cell phone ended the battery"), in order to present: (i) the description of subject topic constructions involving a DP [+ possessor] in the subject position; (ii) a theoretical analysis, considering the assumptions of the Generative Theory in its Minimalist version (CHOMSKY, 1995, 1998, 2001). The data consists of (1) spontaneous speech, collected in Rio de Janeiro between 2012 and 2014; (2) sentences from online searches using Google's advanced search system. We propose that the subject topic is a kind of construction in which there is external possession and, therefore, the movement of the DP [+ possessor] to the subject position is triggered by syntactic requirements, such as, the necessity of checking of the Case by the DP in order to make visible its thematic role of [+ possessor] in the logical form.

▪ KEYWORDS: Subject topic constructions. External possession. Brazilian Portuguese.

Introduction[2]

This paper aims to analyze subject topic constructions in Brazilian Portuguese (BP) in the Generative framework in its Minimalist version (CHOMSKY, 1995, 1998, 2001). Subject topic constructions are characterized as a topic DP in subject position, uncontiguous with a DP in a lower position with which may have a [part-whole] relation or a [possessor-possessed] relation, without a preposition, in a possession structure such as [DP+DP] (DEN DIKKEN, 2010), with unaccusative verbs. Below,

in example (1), we show the subject topic constructions in which there is a relation of [part-whole] between uncontiguous DPs whereas, in example (2), this relation is present in the same DP, with a PP:

(1) a. [A minha filha] $_{[+possessor/whole]}$ cresceu [o cabelo] $_{[+possessed/part]}$ muito rápido porque eu cortei o cabelo dela na Lua crescente (spontaneous speech)
[the my daughter] grew [the hair] very fast …
"My daughter's hair grew very fast because I cut it during the Crescent Moon"

b. [A televisão da sala] $_{[+possessor/whole]}$ estragou [a tela] $_{[+possessed/part]}$ quando eu tava vendo o Jornal Nacional (spontaneous speech)
[the televison in the living room] broke [the screen] …
"the screen of the living room television broke when I was watching the evening news"

(2) a. Cresceu o cabelo da minha filha
Grew the hair of my daughter
"My daughter's hair grew"

b. Estragou a tela da televisão da sala
broke the screen of the television in the living room
"The screen of the living room television broke"

Topic subject constructions also appear in sentences in which there is raising of the locative DP to the subject position, such as in (3). In these sentences, the locative phrase in subject position is a DP, not a PP, as it is when it appears in a lower position, such as in (4). In these constructions, there is not a [whole/part] relation in a [DP+DP] configuration, and the locative phrase is a sentence constituent, not a subconstituent, such as in examples in (1).

(3) a. A casa tem muitos livros
The house has many books
"there are many books in the house"

b. A estante falta livro
The shelf lacks book.
"Some books are missing from the shelf."

(4) a. Tem muitos livros na casa
Has many books in the house
"there are many books in the house"

b. Falta livro na estante.
Lacks book on the shelf.
"Some books are missing from the shelf."

We noticed that these two types of subject topic constructions involve different kinds of raising: in (1) there is raising of a sub-constituent, whereas in (3) a constituent raises to subject position. In this paper, we analyze the first constructions that involve a whole-part relation among the DPs involved in topic subject constructions. Therefore, from now on, when we refer to subject topic constructions, we are dealing with constructions in which a DP (sub-constituent) is raised to subject position and bears a [whole-part] or [possessor-possessed] relation to the DP in the lower position.

We propose that the subject topic construction under analysis here has an external possession structure which Payne and Barshi (1999) define as a construction in which the semantic relation of possessor-possessed is expressed as the possessor as a verb argument and a discontinued/separate constituent that has the possessed item:

> We take core instances of external possession to be constructions in which a semantic possessor-possessum relation is expressed by coding the possessor as a core grammatical relation of the verb and in a constituent separate from that which contains the possessum. (PAYNE; BARSHI, 1999, p. 3).

Payne and Barshi's description of external possession is the one we find in subject topic constructions, as in example (5) where there is a semantic relation of possession between the constituents [possessee/part] and [possessor/whole], despite them being different constituents. The [possessor/whole] constituent is in [Spec, TP], as the subject of the unaccusative verb, and the [possessee/part] constituent is [VP, Comp] position, as in (5b):

(5) a. *O celular* _[possessor/whole] *acabou a bateria* _[possessee/part]
     b.
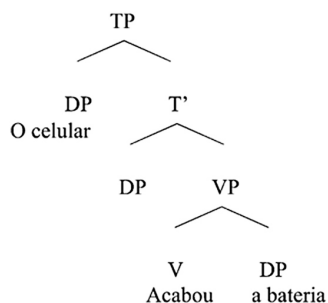
We may ask which the motivation for the movement operation that moves the DP [possessor/whole] to the [Spec, TP] position is. We claim that the movement operation happens in order to satisfy the visibility condition of the thematic role of the DP [possessor/whole], through Case checking. The absence of preposition "de" does

not allow the Genitive Case to be checked, therefore, the movement to [Spec, TP] is motivated to check Nominative Case. The DP [possessee/part], which lies in [Comp, VP] position also checks Nominative Case. The V-head selects a small clause in which the DP [possessee/part] is the predicative of the subject. Therefore, movement of the DP [possessor/whole] is motivated by syntactic requirements and not discursive issues.

The data for our analysis consists of sentences of subject topic constructions in which there is a relation of part/whole in (1) spontaneous speech, collected in Rio de Janeiro between 2012 and 2014 and (2) sentences from online searches using Google's advance search system. In this paper we describe the morphosyntactic characteristics of subject topic constructions and propose a formal analysis of the phenomenon.

This paper is organized as follows: section 1 presents an overview of subject topic constructions in BP; in section 2, we present the morphosyntactic characteristics of subject topic constructions and in section 3, we present a formal analysis of them.

Topic Constructions in Brazilian Portuguese

Word order is triggered by syntactic and discursive features as part of derivation: the operation move may be triggered either by checking syntactic or discursive features. Topic constructions are examples of structures in which the operation movement happens in order to check discursive features, especially in marked topic constructions. Berlinck, Duarte and Oliveira (2009) describe the following types of marked topic in Brazilian Portuguese: hanging topic, left dislocation, subject topic and anti-topic. The description of marked topic constructions is now presented.

Hanging topics are characterized by the absence of any syntactic bond between the topic and an empty category or a constituent in the comment sentence; there is, instead, semantic connectivity between the topic and the comment sentence, such as in (6):

(6) a. Drama, já basta a vida
    Drama, life is enough (As for drama, life is enough)
 b. *Filme, eu gosto mais de comédia.*
    Movie, I like comedy more. (As for movies, I like comedies better)
 c. *A BR-101 não precisa ir a Campos, cê dobre em Vitória ... pega a Vitória-Belo Horizonte.*
    The BR-101 highway (you) don't need to go to Campos …
    (As for the BR-101 highway, you don't need to go to Campos, you turn in Vitória … then you take Vitoria-Belo Horizonte highway.
                                        (BERLINCK, DUARTE; OLIVEIRA, 2009, p. 152)

The second type of topic construction characteristic of BP grammar is left dislocation, in which the topic is the referent of the subject:

(7) a. **Bom essas assembleias, habitualmente elas tratam dos assuntos**
Well, **these meetings**, generally **they** deal with the subjects.

b. *O IBGE, por exemplo, ele já é do Estado.*
IBGE, for example, it belongs to the Government.

c. *Ela de manhã ela sempre faz uma merenda pra mim.*
She in the morning she always prepares a snack to me.

(BERLINCK, DUARTE; OLIVEIRA, 2009, p. 154-155)

In left dislocation constructions in BP, the topic may appear as a DP (7a-b) or a pronoun (7c) and it may be bound to a nominative pronoun as in (7), or an anaphoric DP, as in (8a) or a demonstrative pronoun (8b). The topic may carry a [+/- animate] feature or [+/- definite] feature.

(8) a. *[A pessoa], muitas vezes a pessoa não quer nada.*
The person, may times, the person doesn't want anything.

b. *[Esse problema de puxar pela criança] [...] eu acho que isso não funciona muito.*
This problem of demanding a lot from the child, I think that this doesn't work very much.

(DE PAULA, 2013, p. 11-12)

We also find anti-topic constructions in which the topic appears in the right margin of the sentence:

(9) a. [-]$_i$ *leva azeite de dendê, o acarajé$_i$.*
[-] takes dendê palm oil, the acarajé.
(Acarajé takes dendê palm oil)

b. *Dizem que* [-]$_i$ *tá tudo abandonado aquele troço$_i$.*
(they) say that [-] is everything abandoned that thing.
(They say that that thing is abandoned)

Another type of topic construction is called topicalization, in which the topicalized constituent is bound by an empty category in the comment sentence and this can be an object (10a), a complement (10b) or/and adjunct (10c)[3]:

(10) a. *Aquele arroz com frutos do mar, a minha mulher é incapaz de, de provar* [-].
That seafood rice, my wife is incapable of trying. [As for the seafood rice, my wife is incapable of trying it]

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[3] In European Portuguese, these constructions with topicalized constituent without preposition are also productive:
(i) a. *Cenas dessas, não precisamos* [-]. (These scenes, we don't need.)
b. *Essa conferência, não assisti* [-]. (This conference, I have not watched.)

b. *Olinda_i, ninguém mora* [-]_i. *Ninguém diz é lá que eu moro; não, diz é lá que eu pernoito.*
   Olinda, no one lives [-]. No one say it is there where I live; No, [one] say it is there where I spend the night.
   No one lives in Olinda. No one says "I live there"
   "No, They says "it is there that I spend the night.""

c. *Paris_i, eu não pago hotel* [-]_i. *Paris_i eu fico na casa de um amigo* [-]_i.
   Paris, I don't pay hotel. Paris, I stay at a friend's house.
   "In Paris, I don't pay hotel. In Paris, I stay at a friend's house."

Brito, Duarte and Matos (2003), Duarte (2013), and Orsini (2012) analyze these constructions in (10) with movement of the topicalized constituent to [Spec, CP], which leaves a trace in the comment sentence. Berlinck, Duarte and Oliveira (2009), however, put into question this movement analysis, bearing in mind that the topicalized constituent is not a prepositional phrase: the oblique constituents in (11) are projected to the topic position without preposition.

(11) a. *O Norte_i principalmente no Amazonas e no Pará, a influência indígena sobre a alimentação é muito grande* [-]_i.
      The North especially in Amazonas and in Pará, the indigenous influence on food habit is considerable.
      "In the North, especially in Amazonas and Pará, indigenous influence over food habits is enormous"

   b. *Mas eu ah merenda escolar_i eu tenho pouca noção* [-]_i.
      But I [ah] the school meal I don't know much about (IT)
      "As for the school meal, I don't know much about it."

According to Berlinck, Duarte and Oliveira (2009, p. 158, our translation), in (11), the absence of preposition "seems to loosen, to a certain extent, the syntactic bound between topic and comment, approximating theses constructions to anacolutha and hanging topic constructions"[4].

We now turn to subject topic constructions. According to Berlinck, Duarte and Oliveira (2009), in these constructions, the topic constituent lies in a position similar to subject position in BP, but there is a null expletive in subject position as seen in (12); and there is agreement between the topic and the verb (13), as it happens with canonical subjects:

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4   Original: "*parece afrouxar, de certa forma, o vínculo sintático entre tópico e comentário, aproximando essas construções dos anacolutos ou tópico pendente*" (BERLINCK, DUARTE; OLIVEIRA, 2009, p. 158).

(12) a. **O Amazonas, [$_{expl}$] é impressionante o número de frutas, e frutas assim, tudo duro, tudo tipo cajá-manga**. (DID-RJ)

The Amazonas, it is impressive the number of fruits, and fruits like, ripened fruits, all like cajá-manga

It is impressive the number of fruits in Amazonas. Ripened fruits, all ripened, like caja mangos

b. *A televisão, [$_{expl}$] é horroroso quando eles estão fazendo propaganda.* (DID-SP)

Television, it is terrible when they are doing adverting [As for television, it is terrible when they are advertising]

(BERLINCK, DUARTE; OLIVEIRA 2009, p. 127)

(13) a. *O ônibus disparou a aceleração* (Rádio CBN)

The bus shot up the acceleration [the bus lost control the acceleration]

b. O Fluminense faltou sorte no segundo tempo (Rádio CBN)

The Fluminense lacked luck in second half [The Fluminense was unluck in the second half]

(BERLINCK, DUARTE; OLIVEIRA 2009, p. 128)

According to theses authors, topic subject constructions in BP are related to two grammatical properties. The first one is that they claim that BP is a topic-oriented language, i.e., syntactic operations are motivated by discursive functions (LI; THOMPSON, 1976). The second property, the preference for expressed pronominal subjects, forces a DP to move to the [Spec, TP] position of unaccusative and impersonal verbs.

Our proposal, however, is that the DP [+possessor] movement to [Spec, TP] is required by Case checking necessity. Therefore, this movement operation is triggered by syntactic requirements. In order to explain this analysis, we now present the subject topic constructions as an external possession construction under the Minimalist framework.

Subject topic as external possession

The syntax of possession expression is presented in three different configurations: possessive pronoun (14); internal possession in which the [+possessor] constituent is c-commanded by [+possessee], as seen in (15); and external possession configuration in which the DPs [+possessor] and [+possessee] do not stand at the same level in the syntactic hierarchy, as seen in (16):

(14) *O meu carro*

The my car

(15) *O carro da menina*
      The car of the girl

(16) a. *Comprei-lhe um carro.*
          I bought her a car
      a'. *Comprei o carro dela.*
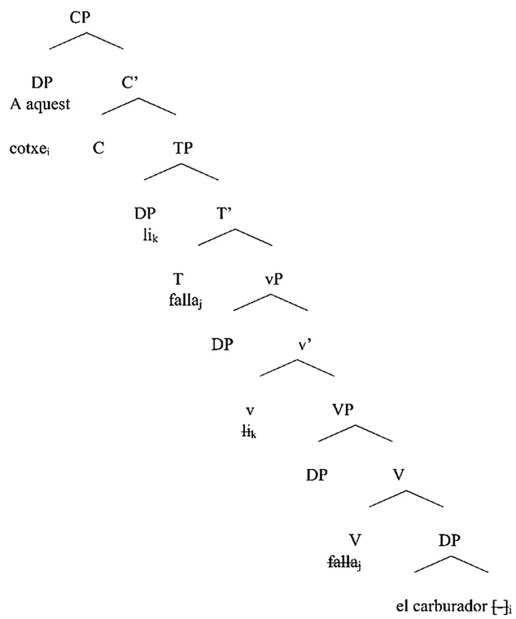   I bought the car of her [I bought her car.]

As in subject topic constructions, the [possessee-possessor] relation is expressed from an external possession structure, we present, in this section, the morphosyntactic properties of this kind of construction. External possession relation appears with unaccusative, transitive and bitransitive verbs and, according to Payne and Barschi (1999), the [+possessor] DP can be expressed as a subject, an object or a dative, but, no as a PP. Besides that, in some languages, this DP can appear as a pronoun or an affix in the DP that has the [+possessee] item. Generally, the external possession expression appears as lexical items: applicative morphemes, clitics or null/expressed DPs. The variation in the possibilities of marking the relation of external possession is linked to the syntactic properties of each grammar. For instance, in Catalan, as shown in (17), there is external possession with clitic "li".

In (17a,b), the DP [+possessor] raises to the topic position, as seen in (18). The [+possessee] constituent is marked with Dative Case, the clitic adjacent to the verb bears the external possession status to the sentence, because these constructions emerge when a constituent bounded to the post-verbal DP is syntactic related to the verb.
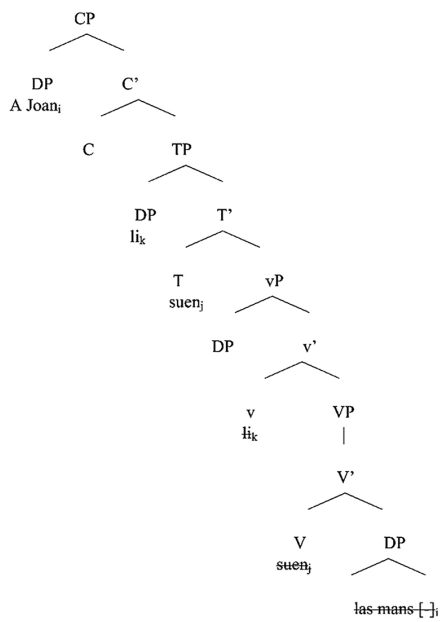
(17) a. <u>*A aquest cotxe li falla el carburador.*</u>
          To that car it failed the carburetor ("That car's carburetor failed")
          PB: *Àquele carro falhou o carburador* / PE: "*Àquele carro lhe falhou o carburador*."
      b. <u>*A Joan li suen las mans.*</u>
          To Joan, it sweats the hands
          PB: Suam as mãos do Juan

(PICALLO; RIGAU, 1999, p. 240)

(18) a.

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                        CP
                   ┌─────┴─────┐
                  DP           C'
                A aquest   ┌────┴────┐
                cotxeᵢ     C        TP
                       ┌────┴────┐
                      DP        T'
                      liₖ   ┌────┴────┐
                            T        vP
                          fallaⱼ ┌────┴────┐
                                DP        v'
                                      ┌────┴────┐
                                      v        VP
                                     l̶iₖ   ┌────┴────┐
                                           DP        V
                                               ┌────┴────┐
                                               V        DP
                                             f̶a̶l̶l̶aⱼ  ┌────┴────┐
                                                 el carburador [–]ᵢ
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b.

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                    CP
               ┌─────┴─────┐
              DP           C'
            A Joanᵢ    ┌────┴────┐
                       C        TP
                   ┌────┴────┐
                  DP        T'
                  liₖ   ┌────┴────┐
                        T        vP
                      suenⱼ ┌────┴────┐
                            DP        v'
                                  ┌────┴────┐
                                  v        VP
                                 l̶iₖ        │
                                           V'
                                       ┌────┴────┐
                                       V        DP
                                     s̶u̶e̶nⱼ  ┌────┴────┐
                                         l̶a̶s̶ ̶m̶a̶n̶s̶ [–]ᵢ
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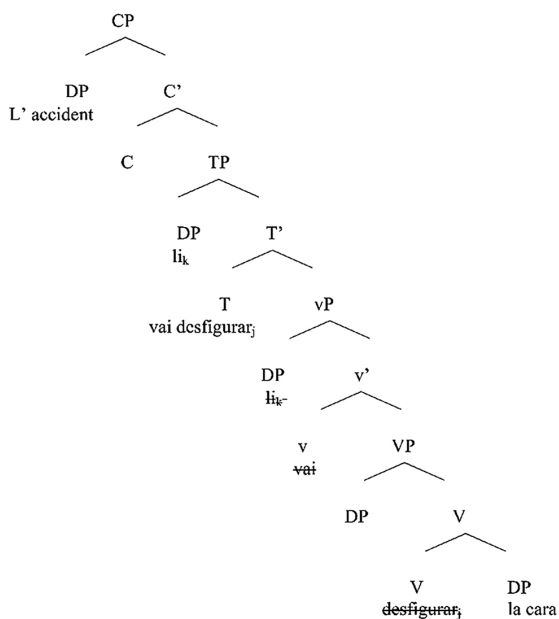
In (19), on the other hand, there is a dative clitic adjacent to the verb, but it is not like (17) in which two items mark the external possession construction, i.e., there is no doubling:

(19) *L' accident li va desfigurar la cara* (PICALLO; RIGAU, 1999, p. 241)
The accident it disfigured his face

PB: *O acidente desfigurou o rosto dele.* / PE: "*O acidente desfigurou-lhe o rosto*"

b.

Examples like (17a-b) are analyzed as having a clitic with Dative Case as an applicative morpheme, because its only function is to mark the emergence of a new syntactic structure, in which the verb has a "new argument". According to Jeong (2007, p.2), "(t)he applicative is usually understood as a construction in which a verb bears a specific morpheme which licenses an oblique, or non core, argument that would not otherwise be considered a part of the verb's argument structure.".

In (19), on the other hand, the clitic is the only item in the derivation that has a [+possessor] theta role. In this case, it is not analyzed as an applicative morpheme.

External possession in European Portuguese[5]

In European Portuguese we find external possession, as shown by Miguel, Gonçalves and Duarte (2011), Torres-Morais and Lima-Salles (2016), among others. Examples (20-22) show three kinds of external possession structures in EP: in (20a), we find the internal possession structure, i.e., the [+possessee] DP is c-commanded by the [+possessor] DP, with the presence of the genitive preposition "de". Therefore, this is a structure where the thematic role of possessor is visible through the checking of genitive Case. (20b) is also an example of internal possession, but, in this case, the preposition is "a" and it checks dative Case. In (20c), we find external possession, which means that, similar to Catalan, there is a clitic "lhe" with the thematic role of [+possessor] that checks dative Case, in a syntactic configuration with discontinuous DP [+possessee] and DP [+possessor].

(20) a. *O professor avaliou as provas dos estudantes.*
          The teacher evaluated the exams of the students
      b. *O professor avaliou as provas aos estudantes.*
          The teacher evaluated the exams to the students
      c. *O professor avaliou-lhe as provas.*
          The professor evaluated them the exams
          "The teachers evaluated the students' exams"
                    (MIGUEL, GONÇALVES; DUARTE, 2011, p. 390)

Torres-Morais and Lima-Salles (2016) show that in EP external possession involves dynamic verbs, such as "lavar" (to wash) and "beijar" (to kiss), or stative verbs, such as "interpreter" (to interpret) and "avaliar" (to evaluate).

(21) a. O João beijou-lhe a mão.
          The John kissed-her-CL the hand
          "John kissed her hand"
      b. *O João lavou-lhe o carro.*
          The John washed-her-CL the car
          "John washed her car" / "John washed the car for her"

(22) a. *O psicanalista interpretou-lhe os sonhos.*
          The psychoanalyst interpreted-her-CL the dreams
          "The psychoanalyst interpreted her dreams"

b. *O professor avaliou-lhes os textos.*
The teacher evaluated-them-CL the texts
"The teacher evaluated their texts"
(TORRES-MORAIS; LIMA-SALLES, 2016, p. 207)

European Portuguese shows certain competition between dative and genitive possession structures. Besides the syntactic and morphological differences, there are semantic differences between genitive and dative possession structures, especially in the external possession structure, which is discontinuous. According to Torres-Morais and Lima-Salles (2016), native speakers of European Portuguese state that there is a difference between the external possession structures and the ones with genitive.

In (23), regardless the syntactic Case, the constituent "o João" – either as a DP or a pronoun – is interpreted as [+possessor]. The difference relies on the constituent that receives the focus feature: in dative construction, the [+possessor] constituent receives focus; in genitive construction, it is the [+possessee] that receives focus.

(23) a. *A Maria admira o talento do João.*
Mary admires John's talent
b. *A Maria admira-lhe o talento.*
Mary admires-him the talent
"Mary admires his talent"

This configuration also changes the constituent that is the specifier: in (23a), in genitive possession, the constituent that specifies is [+possessor]; in (23b), the external possession with dative, the constituent that specifies is [+possessee]. This semantic interpretation comes from the beneficiary/affected feature that dative Case bears, either in a verb complement or in a noun adjunct.

The external possession in European Portuguese is related to the pronominal system in its grammar. There is a rich system of clitics in every person. Regarding third person clitics, dative pronoun appears either as a verb complement or in external possession constructions, where it is a noun adjunct. This rich clitic system is relevant to justify the productivity of external possession constructions. A possessor constituent which is discontinuous from a possessed constituent also appears in constructions in which the possessor is in subject position, as shown in (24):

(24) a. *A criança lavou a mão.*
The child washed the hand
"The child washed their hand"
b. *As crianças levantaram as mãos para chamar a atenção do professor.*
The children raised the hands to call the teacher's attention
"The children raised their hands to call the teacher's attention"

There are two external possession structures in European Portuguese with transitive verbs: (1) the [+possessor] DP is a clitic that checks dative Case and (2) the [+possessee] DP is a nominal expression that checks nominative Case.

We now move to the expression of external possession in Brazilian Portuguese, a grammar with a very different system of clitics, especially in relation to the third person.

External possession in Brazilian Portuguese

In previous sessions, we have presented data showing that external possession is grammatical in two Romance languages: Catalan and European Portuguese. This construction is also observed in Spanish (CUERVO, 2003; DEMONTE, 1995), and in French (VERGNAUD; ZUBIZARRETA, 1992), as we can see in examples (25) and (26) below:

(25) a. *El medico le examino la garganta.*
         ENG: The doctor him-CL examined the throat
         PB: *O médico lhe examinou a garganta*
         The doctor examined his throat
      b. *El nino lavó la mano*
         ENG: The child washed the hand
         PB: *A criança lavou a mão*
         The child washed their hand

(26) a. *Le médecin leur a examiné la gorge*
         ENG: The doctor him examined the throat
         PB: *O médico lhe examinou a garganta*
         The doctor examined his throat
      b. *L'enfant lavé la main.*
         ENG: The child washed the hand
         PB: *A criança lavou a mão.*
         The child washed their hand

In the different languages presented here, the external possession appears with transitive verbs with a dative clitic or a nominative DP as [+possessor] thematic role. In Brazilian Portuguese, the morphosyntax of this construction is different, because there is an external possession only if the [+possessor] DP checks nominative Case. In (27), the subject of the transitive verb is [+possessor] and it is discontinuous from the constituent [+possessee]:

(27) a. *As crianças lavaram a mão.*
  The children washed the hand
  "The children washed their hand"
 b. *A menina arrumou o cabelo.*
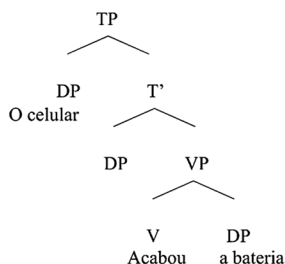 The girl fixed the hair
  "The girl fixed her hair"

Chappel (1999), based on data from Cantonese, analyzes another construction in which nouns with a possessive relation are in different constituents in the syntactic hierarchy. In these constructions, the [+possessor] DP is in subject position, whereas the [+possessee] constituent is in object position, as seen in (28):

(28)[6] a. *Poh^1*   *sue^6* *lok^6* *joh^2*   *ho^2*   *doh^1*   *yip^6*
  CLASS$_{REF}$ tree   fall   PERF   very   many   leaf
  "That tree has lost many leaves [Literally: The tree fell very many leaves]
 PB: *A árvore caiu muita folha*

(CHAPPELL, 1999, p. 95)

(29) Noun[possessor]   Verb[intransitive][7]   Noun[possessee/part]

In Brazilian Portuguese, subject topic constructions exhibit the exact same structure that Chappell (1999) describes for Cantonese; i.e., the [+possessee] constituent is below VP and the [+possessor] constituent is above VP, in [Spec, TP] position, as shown in (30):

(30) a. $_{[+ whole/possessor]}$ *O celular acabou a bateria*$_{[+part/possessee]}$
  b.

```
              TP
             /  \
           DP    T'
        O celular /  \
                DP    VP
                     /  \
                    V    DP
                 Acabou  a bateria
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Having presented this first syntactic characteristic of subject topic in Brazilian Portuguese, we now move to other characteristics. Subject topics in Brazilian Portuguese occur with unaccusative verbs (PONTES, 1987) and with inalienable possession, as we can see in examples (31-32), with body parts and kinship terms:

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[6] Chappel (1999) does not identify theses indices above each word in Cantonese.

[7] Chappel (1999) uses the term "intransitive" in a general perspective that the predicate selects only one argument. The author does not mention the difference between "unnacusative/ergative" and "unergative/intransitive" verbs.

(31) a. *O bebê cresce a unha e arranha o rosto todinho.*
   The baby grows the nails and scratches the face all
   The baby nails grow and he scratches all his face

   b. *A minha filha amadureceu a cabeça porque ficou grávida...*
   The my daughter matured the mind because got pregnant
   My daughter matured because she got pregnant (Lit: "My daughter's mind matured because she got pregnant"

   c. *A minha filha cresceu o cabelo muito rápido porque eu cortei o cabelo dela na lua crescente.*
   The my daughter grew the hair really fast because I've cut her hair in the Crescent Moon
   My daughter's hair grew really fast because I've cut it during Crescent Moon

(32) a. *Uma parenta dum amigo nosso morreu a avó.*[8]
   A relative of a friend of ours died the grandmother
   The grandmother of a friend of ours' relative died

   b. *sabe aquela dona gordinha, que morou aqui do lado um tempão? Uma que a Elvira chamava de tia? Então, o filho morreu.*
   Do you know that fat lady who lived here for a while? The one who Elvira used to call aunt? So, the son died.
   [...] So, her son died

Another kind of part-whole relation – meronymic possession (KLEIBER, 2002) – also appears in the subject topic constructions, as we can see in (33). The DP that lies in subject position does not have [+animated] or [+human] feature, which is typical of [+possessor] items. However, there is a part-whole relation between the DPs, with the same syntactic structure found in inalienable possession structures:

(33) a. *O carro descarregou a bateria e eu não demorei pra sair de casa pra trabalhar.*
   The car went flat the battery and I did not take too long to leave home to work.
   The car's battery went flat but it didn't take me too long to leave home and go to work

   b. *As árvores estragaram as frutas antes de amadurecer.*
   The trees spoiled the fruits before ripening
   The fruits of the trees got spoiled before they ripened

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c. *Senhores pais, os computadores do colégio queimaram os monitores por conta da queda de energia ocorrida no último dia 26/05/2014.*
Dear parents, the school's computers have blown the monitors due to a power failure on 05/26/2014.
Dear parents, the school's computers' monitors have blown due to a power failure on 05/26/2014.

Payne and Barshi (1999) describe yet other morphosyntactic characteristics of external possession: (i) preferably with [+eventive] or [+stative] predicates; (ii) preferably with [+possessor] with [+human] or [+animated] feature. In our sample, we found examples of external possession with both [+eventive] and [+stative] predicates, such as in (34-35):

(34) a. *A Manu nasceu o primeiro dentinho, estou muito feliz.*
        The Manu grew the first tooth, I'm very happy.
        Manu's first tooth has grown, I'm very happy.
     b. *O celular já carregou a bateria, já pode tirar do carregador.*
        The cell phone already charged the battery.
        The phone's battery has already been charged
     c. *A minha filha amadureceu a cabeça porque ficou grávida.*
        The my daughter matured the mind because got pregnant
        My daughter matured because she got pregnant

(35) O bebê cresce a unha e arranha o rosto todinho.
      The baby grows the nails and scratches the face all
      "The baby nails grow and he scratches all his face"

With regard to the animacy feature, subject topic in Brazilian Portuguese present a broader usage, because the [+possessor] DP in this construction may present either [+animated] or [+human] features of [-animated] features, as shown in (36-38):

(36) a. *Os adolescentes aparecem muitas espinhas no rosto ...*
        The teenagers appear many pimples on the face
        "Many pimples appear on teenagers' faces."
     b. *A Inoã caiu o cabelo todo ...*
        The Inoã fell the hair all over
        Inoã's hair fell all over
     c. *Eu inflamei a garganta e não teve jeito fiquei três dias sem dar aula.*
        I became inflamed the throat and there was no way I stayed three days without teaching
        "My throat became inflamed and there was no way I did not teach for three days."

(37) *O cachorrinho lá de casa caiu o dentinho.*
 The puppy at home fell the teeth.
 "My puppy's teeth fell."

(38) a. *Senhores pais, os computadores do colégio queimaram os monitores ...*
  Dear parents, the school's computers blew the monitors
  "Dear parents, the school's computers' monitors have blown"
  b. *os carros arrebentaram o para-choque na batida.*
  The cars broke the buffer on the crash
  "The cars'buffer broke with the crash"
  c. *A parede caiu o reboco[9].*
  The wall fell the plaster.
  "The wall's plaster fell apart."

According to Payne and Barshi (1999), in external possession, the presence of preposition in the [+possessor] item makes the sentence ungrammatical. Therefore, the absence of preposition has some consequences to derivation. The first one is that the [+possessor] item is not a PP, but a DP and, as such, needs to check Case, which is not genitive Case because of the absence of preposition.

Therefore, we propose that subject topic constructions are external possession structures in which the [+possessor] DP checks Nominative Case, differently from Torres-Morais and Lima-Salles (2016). These authors claim that external possession in BP is related to a rich clitic system and is restricted to written texts, typical of standard grammar (KATO, 2005). In our analysis, given that subject topic constructions resemble external possession, we may argue that the loss of a rich clitic system triggers chance in the configuration of this construction. External possession is no longer expressed by a clitic, but it is expressed with discontinuous DPs, in which the first one lies in [Spec, TP] position and the second one lies in [Comp, VP] position of unaccusative verbs. Therefore, in Brazilian Portuguese, external possession is restricted to nominative contexts. We can now analyze these constructions under the Minimalist framework.

A formal analysis for subject topics

Considering the morphosyntactic characteristics of subject topic constructions with external possession, we must regard the inalienable possession structure in order to propose a formal analysis for subject topic constructions. In this regard, we start with Abney's (1987) DP hypothesis that allows us to propose different functional projections between D and N. We also consider Andrade and Galves (2014), Alexiadou (2003) and Den Dikken (2006) to assume a functional phrase RP (Relational Phrase).

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[9]   Available at: https://d.facebook.com/jorgeeduardoeletricista220V/. Access on: 6 Oct. 2020.

Andrade and Galves (2014) and Alexiadou (2003) propose that the syntax of inalienable possession constructions presents a predication relation between the [+possessor] DP and the [+possessee] DP, which takes place via a small clause. The evidence for this analysis relies on examples like (39), in consonance with Hornstein, Rosen and Uriagereka (2002), who present structural ambiguity: (1) either there is a whole/part relation, as in (40a) or (2) there is a continent relation, i.e., the Ford-T engine is inside Saab, despite Saab is produced by Ford.

(39) There is a Ford T engine in my Saab.

(40) a. My saab has a Ford T engine.
      b. (Located) In my saab is a Ford T engine.
                    (HORNSTEIN, ROSEN; URIAGEREKA, 2002, p. 179)

In Brazilian Portuguese, we find similar constructions as the ones in (41), with two different interpretations. The continent interpretation can be seen in the paraphrase in (42):

(41) a. *o carro quebrou a caixa de marcha[10]*.
          The car broken the gearbox (The car's gearbox has broken")
      b. *Essa merda de tablet fica caindo a net toda hora*
          That shit of tablet keeps dropping the internet all the time
          ("The internet of this tablet is down all the time")
      c. *Ônibus da 18 de Setembro falta freio e por pouco não causa tragédia na Olimpio Vital.[11]*
          Bus on the 18th September Street lacks break and it almost causes a tragedy at Olimpio Vital
          "The bus on 18th Setember St ran out of break …"

(42) a. *Quebrou a caixa de marcha no carro.*
          Broke the gearbox in the car
          "The car's gearbox broke."
      b. *Fica caindo a net nessa merda de tablet toda hora*
          Stay dropping the internet in this f.. tablet all the time
          "The internet of this tablet is down all the time"
      c. *Falta freio no ônibus da 18 de Setembro.*
          Misses break on the bus of 18 September
          "The bus on 18th September St ran ouf of break"

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[10] Available at: https://www.reclameaqui.com.br/indices/lista_reclamacoes/?id=35205&status=EVALUATED_. Access on: 6 Oct. 2020.

[11] Available at: http://www.policiaeviola.jornalfolhadoestado.com/noticias/1206/onibus-da-18-de-setembro-falta-freio-e-por-pouco-nao-causa-tragedia-na-olimpio-vital-. Access on: 6 Oct. 2020.

The whole/part reading is also possible, as we can see in the paraphrases below in (43):

(43) a. *Quebrou* [parte]*a caixa de marcha* [todo]*do carro*
Broke the gearbox[part] of the car[whole]

b. *Fica caindo* [parte]*a net* [todo]*dessa merda de tablet toda hora.*
Stay dropping the internet[part] of the tablet[whole] all the time

c. *Falta* [parte]*freio* [todo]*do ônibus da 18 de Setembro.*
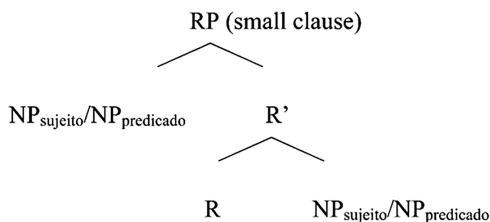Misses break[part] on the bus[whole] of 18 September

The syntactic ambiguity observed in English (HORNSTEI; ROSEN; URIAGEREKA, 2002) and in Brazilian Portuguese (subject topic constructions discussed here) can only be explained if we take two different derivations into account. On the one hand, in (43), there is a whole/part relation within a small clause; on the other hand, in (44), there is a locative relation which is not coded in a small clause. Therefore, the derivation of (44a) can be represented as (44b):

(44) a. *A caixa de marcha do carro*
b.
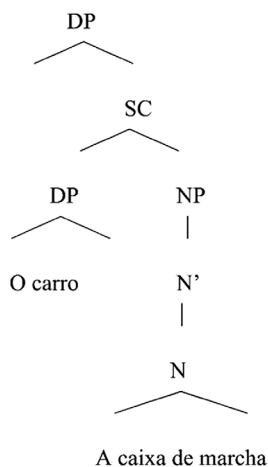
The projection of a small clause makes it necessary to project a head responsible for Case checking of the DPs in the derivation, especially in the [+possessor] DP. Den Dikken (2006) proposes that, in sentences with inalienable possession, there is a functional head R(elational) that is capable of mediating the relation between the constituent via predication. In this Relational Phrase (RP), the constituents do not need to lie in fixed positions, and, therefore the c-command relation determines its word ordering.

(45)

```
                        RP (small clause)
                       /              \
          NP_sujeito/NP_predicado      R'
                                      /    \
                                     R      NP_sujeito/NP_predicado
```
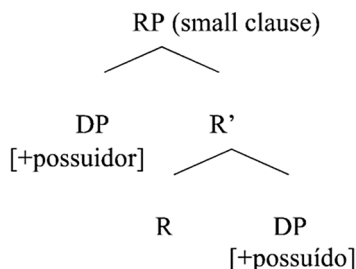
In Brazilian Portuguese, according to Lunguinho (2006), the [+possessor] DP c-commands the [+possessee] DP in subject topic constructions. The independent evidence for this analysis appears in sentences with floating quantifier as the ones in (46). In (46a), the DP "todos os carros" is in [Spec, TP], and the quantifier "todos" is shifted in the same movement operation with "os carros". In (46b), on the other hand, the floating quantifier stays in situ, below VP. In (46a-b), the quantifier is above the DP that expresses [+part] relation; and in (46c), the only ungrammatical sentence, the floating quantifier is below the DP that expresses the [+part] relation. Therefore, there is evidence to state that the DP [+possessor/whole] c-commands the DP [+possessee/part].

(46) a. [todo] [quantificador]*Todos os carros furaram* [parte]*o pneu dianteiro.* (LUNGUINHO, 2006, p. 142)
          All cars punctured the front tire
      b. [todo] *Os carros furaram* [quantificador]*todos* [parte]*o pneu dianteiro.*
          The cars were all flat the front tire
          "All the car's front tires were flat"
      c. *[todo] *Os carros furaram* [parte]*o pneu dianteiro* [quantificador]*todos.*
          The cars were flat the front tire all
          "All the car's front tires were flat"

Due to the grammaticality effects in (46), and the c-command relation between the DP [+possessor] and the DP [+possessee], we can propose a small clause as an RP as stated in (47). In this case, the DP [+possessor] is in [Spec, RP], and occupies the border of the phase:

(47)

```
              RP (small clause)
             /          \
          DP              R'
       [+possuidor]      /  \
                        R    DP
                          [+possuído]
```
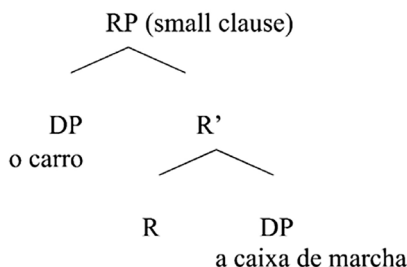
The [+possessor] occupies the border of the phase, therefore, it is only this DP that can be moved outside the RP, respecting minimality requirements, only DPs at the border of the phase can cross over a DP barrier. This explains the ungrammaticality of (48), in which the [+possesee] is raised to [Spec, TP]:

(48) *Os pneus dianteiros furaram todos os carros.*
      The front tires were flat all the cars

The representation of the DPs in the RP is shown in (49): the head R is empty. According to Den Dikken (2010), this happens because the R-head can only be filled with a preposition. As there is no preposition in the array of topic subject constructions, this head remains empty.
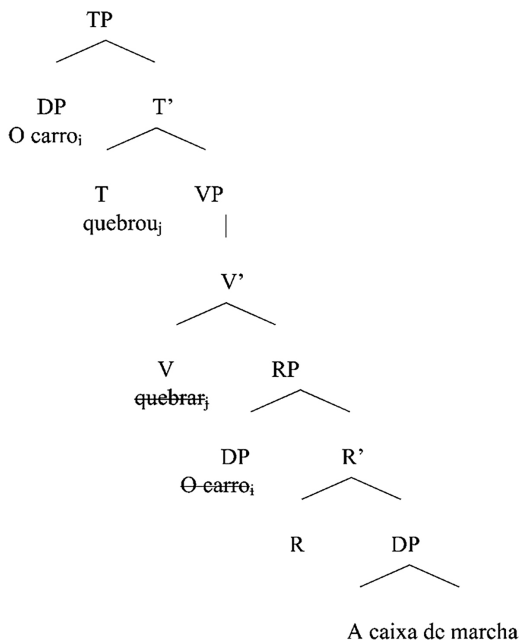
(49)

```
              RP (small clause)
             /          \
          DP              R'
        o carro         /   \
                       R     DP
                        a caixa de marcha
```

In the absence of the preposition "de" that checks Genitive Case, the DP "o carro" does not check Case in [Spec, RP], and its thematic role is not visible in Logical Form. The solution to convergence is that the DP "o carro" moves outside the RP. The verb is unaccusative, which means that its sole argument merges in [Comp, VP] position, but its Case is checked through operations Probe and Goal, in [Spec,TP]. Therefore, the DP "o carro" must move in order to check Nominative Case. After checking Nominative Case, the DP attributes value to its visibility condition, making the [+possessor] thematic role visible in the Logical Form.

As both DPs are in a small clause, the [+possessee] DP has the same Case as the [+possessor] DP, as shown in the derivation in (51):

(50) *O carro quebrou a caixa de marcha*.
      The car broke the gerabox

(51)

```
                        TP
                    ┌────┴────┐
                   DP         T'
                O carro_i  ┌───┴───┐
                           T        VP
                        quebrou_j    |
                                    V'
                                ┌───┴────┐
                                V         RP
                            quebrar_j  ┌───┴───┐
                                      DP        R'
                                   O carro_i ┌──┴──┐
                                             R      DP
                                                ┌───┴───┐
                                            A caixa dc marcha
```

Summing up, the [+possessor] DP merges into [Spec, RP] position, at the border of the phase of the functional head. As the R-head is empty, since there is no preposition in the array, this DP is raised to [Spec, TP] where it checks Nominative Case and enters into an agreement relation with T. the [+possessee] DP, on the other side, it has its thematic role visible in the Logical Form because it checks Nominative Case, in a predication in a small clause.

The movement operation occurs, therefore, to fulfill syntactic requirements, specifically the case check so that the thematic role becomes visible for the Logical Form. After this analysis, we must raise a question involving the nature of Brazilian Portuguese: would subject topic constructions be an evidence that Brazilian Portuguese is a topic-oriented language, as proposed by Pontes (1987)? Or would it be possible to question this proposal based on our analysis? In other words, will our proposal be another way of searching for other arguments to prove whether or not Brazilian Portuguese is a topic-oriented language?

Final remarks

The first studies that identified the subject topic construction as characteristic of Brazilian Portuguese were in a functionalist framework and described them as marked topic constructions (PONTES, 1986, 1987). Pontes claimed that the constituent that occupies the subject position, in these constructions, went through a grammaticalization process, once the topic became the subject of the sentence. After Pontes, many other researchers have also studied these constructions in order to describe them in different frameworks (LUNGUINHO, 2006; AVELAR; GALVES, 2003; MELO, 2015). Our investigation aimed to describe the properties of these constructions that differentiate Brazilian Portuguese from European Portuguese and other Romance languages.

Our comparative analysis that considered European Portuguese, Brazilian Portuguese, Catalan, French and Spanish, showed that Brazilian Portuguese is the only language with a grammatical system that presents external possession in which the [+possessor] DP is a referential expression that lies in subject position in sentences with unaccusative verbs.

Besides that, we can say that this paper contributes to formally describe the grammar of Brazilian Portuguese. We have shown that subject topic constructions are syntactic structures in which the array does not present a preposition that checks Genitive Case. This makes the DP to be raised to [Spec, TP] position in order to have its Case feature checked to make the thematic role of the [+possessor] and the [+possessed] DPs visible.

It is important, however, that additional research be conducted so we can better understand these constructions in Brazilian Portuguese and check whether this analysis accounts for other subject topic constructions that do not involve only whole-part relations, but also the ones with a locative lying in subject position. It is also important to discuss the nature of Brazilian Portuguese with regard to discourse-oriented languages, and carry out a diachronic analysis that relates the emergence of these constructions in Brazilian Portuguese due to the change undergone in the pronominal system, mainly, the ones involving the loss of third person clitics.

MELO, E.; CAVALCANTE, S. "O Celular acabou a bateria": a descriptive and formal analysis for the subject topic. **Alfa**, São Paulo, v.64, 2020.

- *RESUMO: Este trabalho examina a sintaxe das construções de tópico sujeito no PB, tais como "o celular acabou a bateria", com o objetivo de apresentar (i) a descrição das construções de tópico sujeito que envolvem um DP [+possuidor] na posição de sujeito; e (ii) uma proposta de análise teórica, considerando os pressupostos da Teoria Gerativa em sua versão Minimalista (CHOMSKY, 1995; 1998, 2001). Os dados analisados advêm de uma amostra constituída por (1) fala espontânea, recolhida no Rio de Janeiro, entre os anos de 2012 e 2014; (2) sentenças coletadas em buscas on-line, por meio do sistema de pesquisa avançada do Google. A análise aqui proposta é a de que este tipo de tópico sujeito, uma construção em que há posse externa*

e, por isso, o movimento do DP [+possuidor] para a posição de sujeito é desencadeado por requisitos sintáticos, especificamente, a necessidade de checagem do Caso pelo DP a fim de tornar visível, para a forma lógica, o papel temático de [+possuidor].

- *PALAVRAS-CHAVE: Tópico sujeito. Posse externa. Português Brasileiro.*

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