"Two possessor-raising constructions in Brazilian Portuguese"

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The possessor raising constructions

- **We analyze two types of possessor raising constructions in Brazilian Portuguese :**

(1) a. O cabelereiro cortou o cabelo d*o João*.

     the hairdresser cut the hair of João

     'The hairdresser cut João's hair.'

    b. *O João* cortou o cabelo.

     João cut the hair

     'João had his hair cut.'

The possessor raising constructions

(2) a. Alguém quebrou o braço d*o João*.
      someone broke the arm of the John
      'Someone broke John's arm.'
   b. *O João* quebrou o braço.
      João broke the arm
      'João broke his arm.'

At first sight, these sentences seem to be identical, but they differ in semantic and syntactic aspects.

The possessor raising constructions

- We claim that in both cases, verb alternations are instances of possessor raising. Based on semantic aspects and distributional syntactic properties which distinguish the sentences in (1) and (2), Cançado (2010) classifies verbs such as *cortar* 'cut' and *quebrar* 'break' in two different classes due to differences in their lexical properties.

Our objectives

1) to offer an account to the lexical properties observed in the two classes of verbs in terms of a syntactic treatment of argument structure, such as proposed by Hale and Keyser (2002);

2) to show that the different lexical configurations associated with each verbal class entail two different possessive raising constructions;

Our objectives

3) to argue that a smuggling approach (Collins, 2005) to the possessor raising associated with the class of verbs such as *cortar* 'cut' accommodates in a better way the syntactic and semantic properties involved in this verb class.

Distributional properties (Cançado, 2010)

- Cançado (2010) shows in her paper that there are semantic and syntactic properties which distinguish sentences in (1) and (2), in a distributional way. These differences are due to lexical properties of the sentence verbs.

Distributional properties (Cançado, 2010)

- **1.The semantic interpretation of the constructions:**

(3) a. João cortou o cabelo.

   b. João had someone cut his hair deliberately.

(4) a. João quebrou o braço.

   b. *João had someone broke his arm deliberately.

   c. João had his arm broke accidentally.

- **2.The presence of the agent as an adjunct**

(5) O João cortou o cabelo com o cabeleireiro.
João cut the hair with the hairdresser
'João had his hair cut by the hairdresser.'
(6) *O João quebrou o braço com alguém.
João broke the arm with someone

- **3. The modifiers**

(7)a. *O João cortou o cabelo com o cabelereiro acidentalmente.

João cut the hair with the hairdresser accidentally

b. O João cortou o cabelo com o cabelereiro intencionalmente.

João cut the hair with the hairdresser intentionally

Distributional properties (Cançado, 2010)

- **3. The modifiers**

(8) a.O João quebrou o braço acidentalmente.
   João broke the arm accidentally
   'João broke his arm accidentally.'
   b.*O João quebrou o braço
   intencionalmente. (non-agentive reading)
   João broke the arm intentionally
   'João broke his arm intentionally.'

- **4. Inanimate subjects**

(9) a.   O João cortou o galho da árvore

'João had the tree's branch cut.'

  b. *A árvore cortou o galho.

the tree cut the branch

(10) a. O João quebrou o galho da árvore

'João broke the tree's branch.'

  b. A árvore quebrou o galho.

the tree broke its branch

Distributional properties (Cançado, 2010)

■ These facts lead Cançado (2010) to conclude that the subject of example in (1b) has some kind of agentivity, and it can be interpreted as if an indirect agent permits another agent to act in his place. This linguistic phenomenon allows both agents to be present in the sentence.

- **5. The syntactic distinctions: causative alternation**

(11) a. O cabelereiro cortou o cabelo do João.
　　　 'The hairdresser cut John's hair.'
　　b. *O cabelo do João cortou.
　　　 '*John's hair cuts.'
(12) a. Alguém quebrou o braço do João.
　　　 'Someone broke John's arm.'
　　b. O braço do João quebrou.
　　　 'John's arm broke.'

BP data

- Cançado (2010) calls the first type of possessor raising, example in (1b), **"agent-possessor alternation".**

- The second type, example in (2b), **"body-possessor alternation".**

- We assume this terminology to make our description easier .

BP data

- **Agent-possessor examples:**

(13) a. O funcionário xerocou o artigo do João.
    'The employee photocopied João's paper.'
  b. João xerocou o artigo.
      'João had his paper photocopied.
(14) a. O rapaz lavou o carro de Maria.
      'The boy washed Maria's car.'
  b. Maria lavou o carro.
      'Maria had her car washed.'

BP data

(15) a. O médico operou o nariz do João.

'The doctor operated on João's nose.'

b. O João operou o nariz.

'João had his nose operated on.

(16) a. O dentista extraiu o dente de João.

'The dentist extracted John's tooth.'

b. João extraiu o dente.

João extract the tooth.

'João had his tooth extracted.

BP data

- **Some other agentive verbs that permit this alternation form are:**

  (17) afiar 'sharpen', anestesiar 'anesthetize', limpar 'clean'; consertar 'fix', decorar 'decorate (a house)', demolir 'demolish', construir 'build', esterelizar 'sterilize', fotografar 'photograph', gravar 'record', pintar 'paint', radiografar 'radiograph', retirar 'remove', remover 'remove'…

BP data

- **The body-possessor examples:**

(18) a. Alguém quebrou o pescoço/ o braço/ a perna do João.

   'Someone broke João's neck/arm/leg.'

   b.   O João quebrou o pescoço/o braço/a perna.

   'João broke his neck/arm/leg.'

BP data

(19) a. Um prego furou o pneu do carro.
    'The nail punctured the car tire.'
  b. O carro furou o pneu (com um prego).
   'The car had its tire punctured by a nail.'
(20) a. A chuva estragou o ponteiro do relógio.
    the rain ruined the hand of the clock
    'The rain ruined the clock hand.'
  b. O relógio estragou o ponteiro (com a chuva).
  'The clock had its hand ruined by the rain.'

■

BP data

- **Other causative verbs that allow this alternation form are:**

(21) apagar 'put out', apodrecer 'rot', arranhar 'scratch', arruinar 'ruin', arrebentar 'break', cortar 'hurt', contundir 'bruise', desbotar 'discolor', destruir 'destroy', machucar 'hurt', queimar 'burn', rasgar 'tear', torcer ' twist', trincar 'crack' …

BP data

- At this point, we should conclude that agentive verbs accept the agent–possessor alternation and causative verb accept the body-possessor alternation. Nonetheless, some agentive verbs do not accept the alternation and also some causative verbs do not accept the body-possessor alternation.

BP data

- **Examples of agentive verbs that do not accept the agent-possessor alternation:**

(22) a. João leu/analisou o artigo do professor.
    'João read/analyzed the teacher´s paper.'
  b. *O professor analisou o artigo (com o João).
(in a reading in which João did it in   the professor's place).
    the teacher read/analyze the paper (with João)

BP data

(23) a. Maria comeu o peito da galinha.
   'Maria ate the chicken's breast.'
   b. *A galinha comeu o peito (com a Maria).
   the chicken ate the breast (with Maria)

(24) a. O João escreveu o discurso do presidente
   'João wrote the speech of the president.'
   b. *O presidente escreveu o discurso (com o João). (in a reading in which João did it in the president's place).
   the president wrote the speech (with João)

BP data

- **Examples of causative verbs that do not allow the body-possessor alternation:**

(25) a. A tempestade derrubou a raiz da árvore.
     'The storm uprooted the tree root.'
  b. *A árvore derrubou a raiz.
     the tree uprooted the root

(26) a. A ventania carregou a porta da casa.
     'The wind carried the door house.'
  b. *A casa carregou a porta.
     the house carried the door

BP data

(27) a. A beleza do rapaz conquistou o coração de Maria.

'The boy's good looks won Maria's heart.'

b. *Maria conquistou o coração.

Maria won the heart

(28) a. O menino arrancou a folha do caderno.

'The boy tore the note pad sheet.'

b. *O caderno arrancou a folha.

the note pad tore the sheet

Constraints on the possessor raising constructions

- Therefore, before we go further on the syntactic analysis, it is worth to specify on which conditions these verb classes allow the possessor raising to the subject position of these specific sentences.

Semantic constraints

- **The semantic nature of the verbs**

  - **1.)** Both verb classes must be causative constructions, that is to say, they must be an event that denotes two sub-events.

  - **2.)** The agent-possessor type verbs must be "result verbs" (Rappaport and Levin, 2010).

Semantic constraints

- **The semantic nature of the verbs**

- **3.)** The body-possessor type of verbs must denote a change of state. (Parsons, 1990; Cançado and Godoy, 2010)

- **4.)** The agent-possessor sentence must have an agent in the external argument position.

Semantic constraints

- **The predicate semantic structure**

  - *cortar 'cut':*
    [AGENT] CAUSE [Y BE *<RESULT>*]

  - *quebrar 'break':*
    [EVENT] CAUSE [Y BECOME *<STATE>*]

- **However, even if some agentive verbs like those above do not undergo "possessor raising":**

(29) a. O João rasgou o caderno do Paulo.

   'João teared Paulo's notebook.'

   b. *O Paulo rasgou o caderno (com o João).

   Paulo teared the notebook (with João)

Pragmatic constraints

- But, even if we reach the semantic conditions, the alternation is only allowed if we can infer from the VP a kind of action that you usually ask someone else, an expert, to do for you; otherwise, the alternation fails.

The possessor relation nature

- Finally, both alternating basic sentences must have an argument in object position that denotes a possession relation. But additionally, the possessor relation of the body-possessor alternation must be exclusively a whole-part relation.

Hale & Keyser's Theory of Argument Structure

- Argument Structure:
  - syntactic configurations projected by a lexical item
  - is determined by properties of lexical itens, in particular the syntactic configurations in which they must appear
  - There are just two syntactic relations, complement and specifier

# Two different Argument Structures

Based on the empirical facts, two different argument structures are proposed for *quebrar* and *cortar:*

➢ Hale & Keyser propose that verbs of the *break* class consist of two structural elements: a root (R) and a verbal host (V). The verbal component takes a complement, realized as the root. The root contains the semantic and the phonological features. The root requires a specifier. This configuration accounts for the fact that verbs of the *quebrar* class participate in the transitive alternation.

➢ We will extend this proposal to the *quebrar* verb class in BP.

Quebrar argument structure

```
                         V
              ╱──────────────────╲
           DP                      V
        ╱──┴──╲              ╱──────╲
  o braço de João         V          R
                       quebrar
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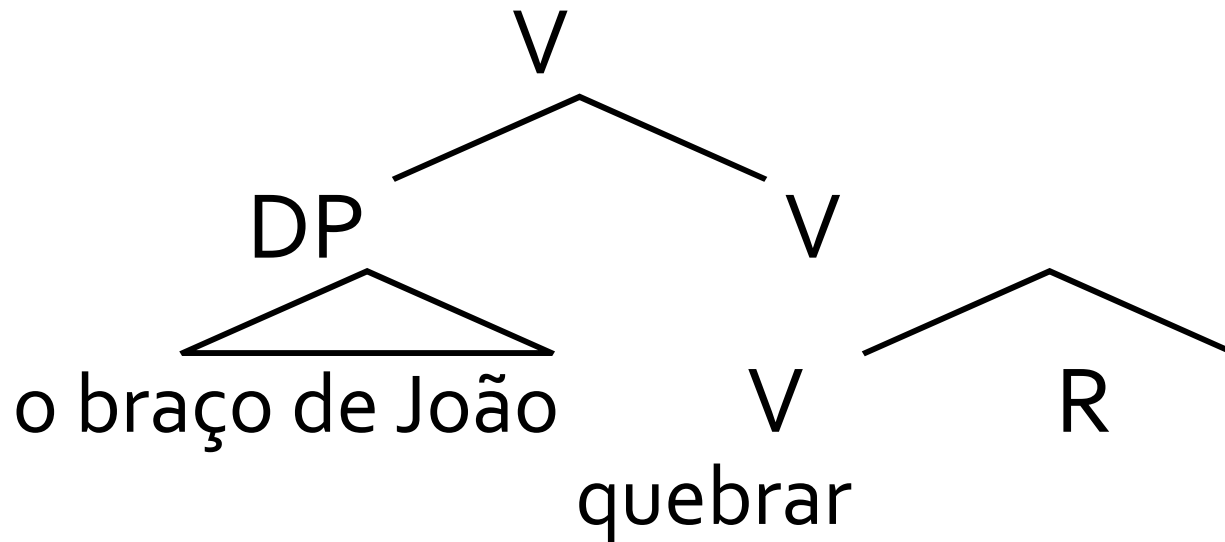
Two different Argument Structures

Based on the empirical facts presented, two different argument structures are proposed for *quebrar* and *cortar:*

➢ Hale &Keyser propose that verbs of material separation like *cut* are based on nouns. Their structure is headed by a preposition. They take both a complement and a specifier.

➢ We will extend this proposal to the *cortar* class of BP.
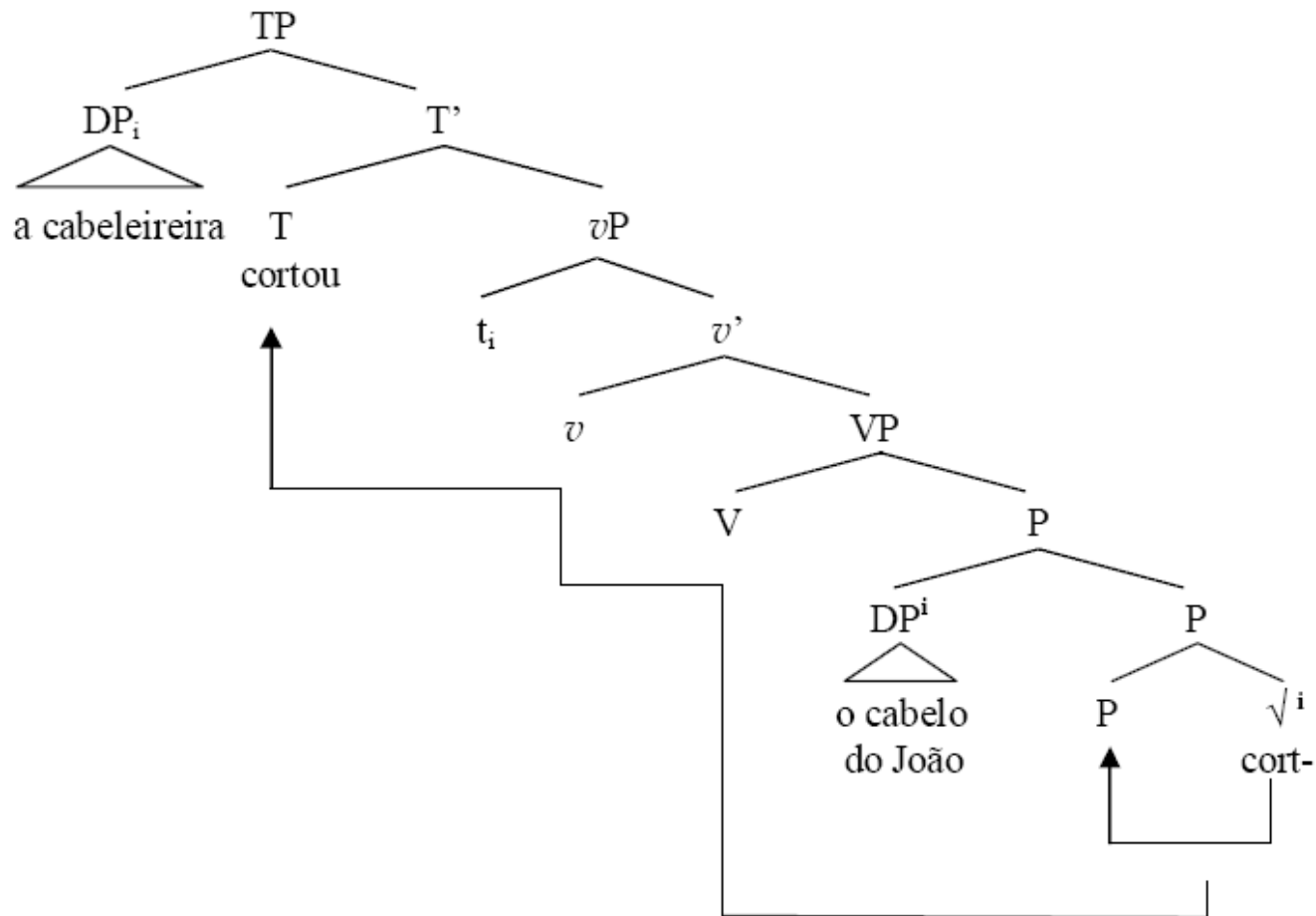
Cortar argument structure
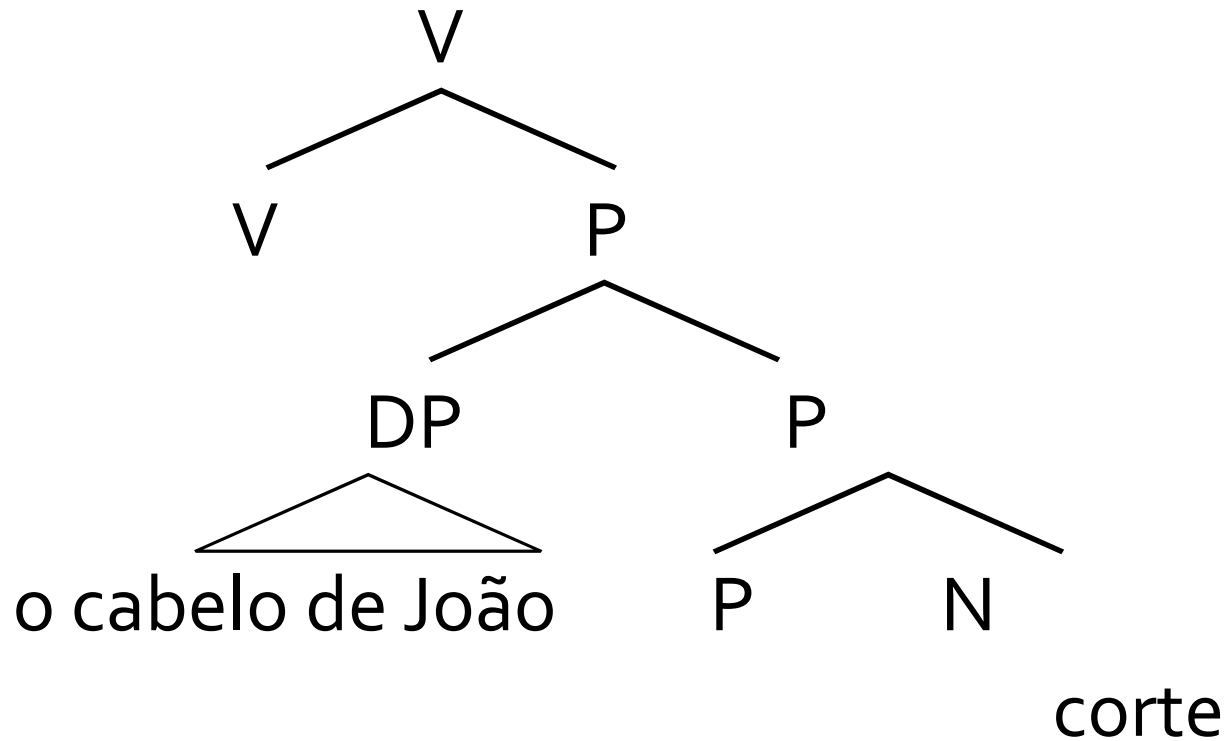
The sentential syntax of *quebrar* transitive form
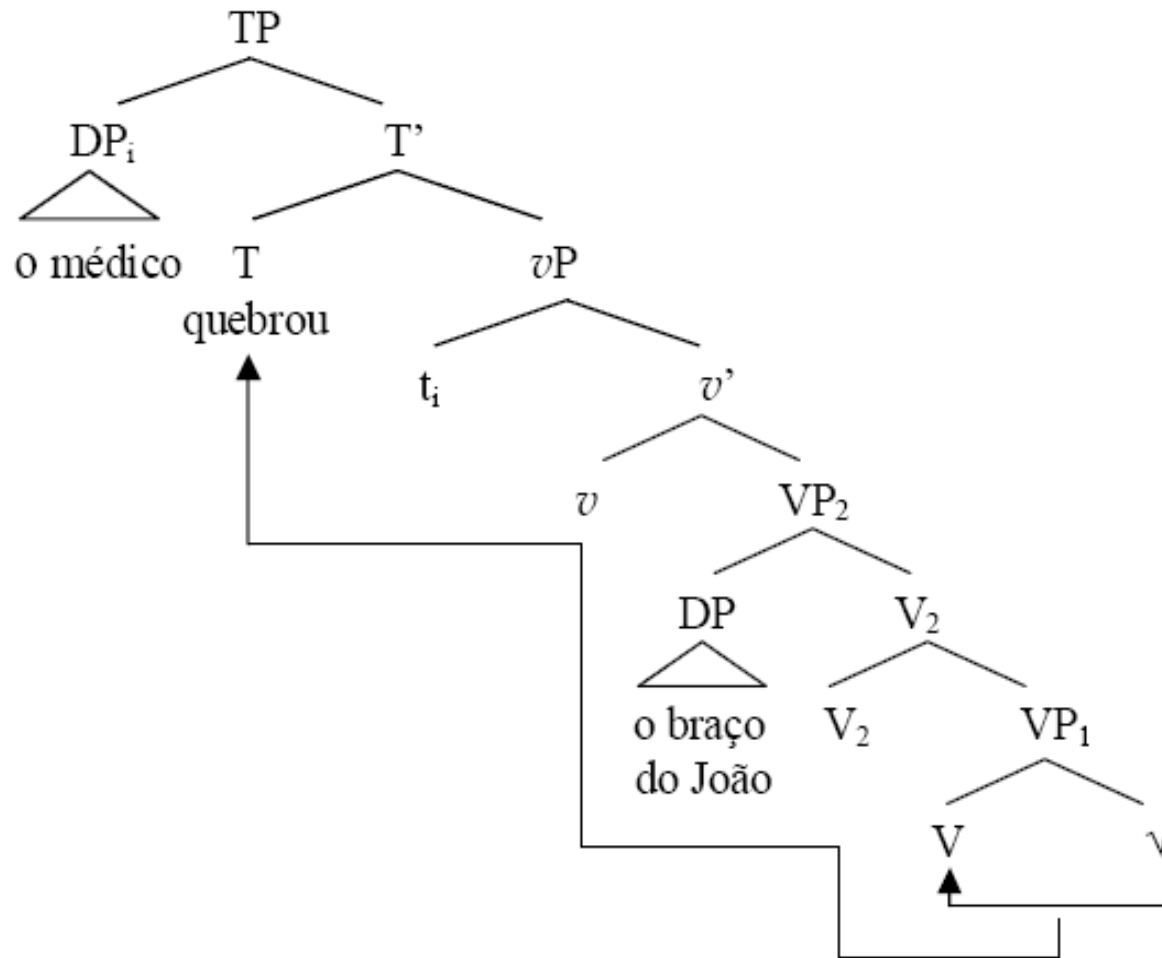
The sentential syntax of *quebrar* intransitive form
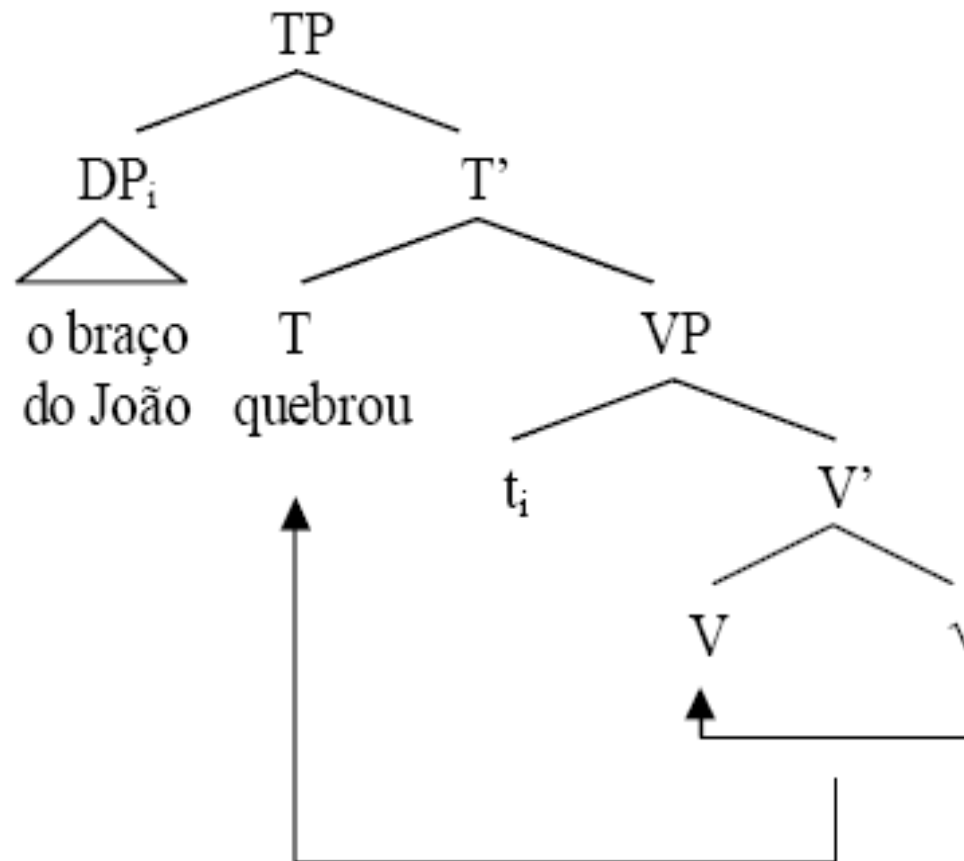
The sentential syntax of *cortar*

Possessor Raising

- Possessive Dative Construction properties

  - ➢ possessive dative must be interpreted as possessor/creator, not object/theme

  - ➢ possession (or creation) interpretation is obligatory (agent subject of a process nominal cannot be associated with PD)

  - ➢ the possessed DP cannot be an external argument

  - ➢ PD must c-command the possessed DP (or its trace)

  - ➢ possessive interpretation is constrained by locality (Landau, 1999, p.9)
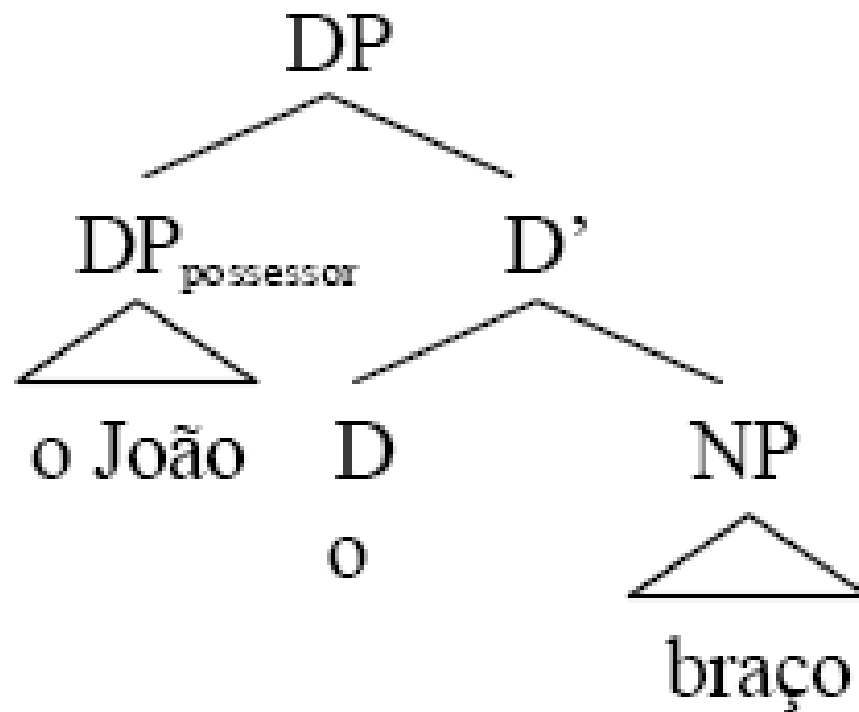
Possessor Raising

- Landau (1999): a case driven movement analysis for Possessive Dative Constructions (PDC) in Hebrew and Romance languages

  - ➢ the possessor is generated in a caseless Spec position within the possessee
  - ➢ it is generated with dative case features
  - ➢ it then raises to check its case features with V (p.9)

The structure of the DP
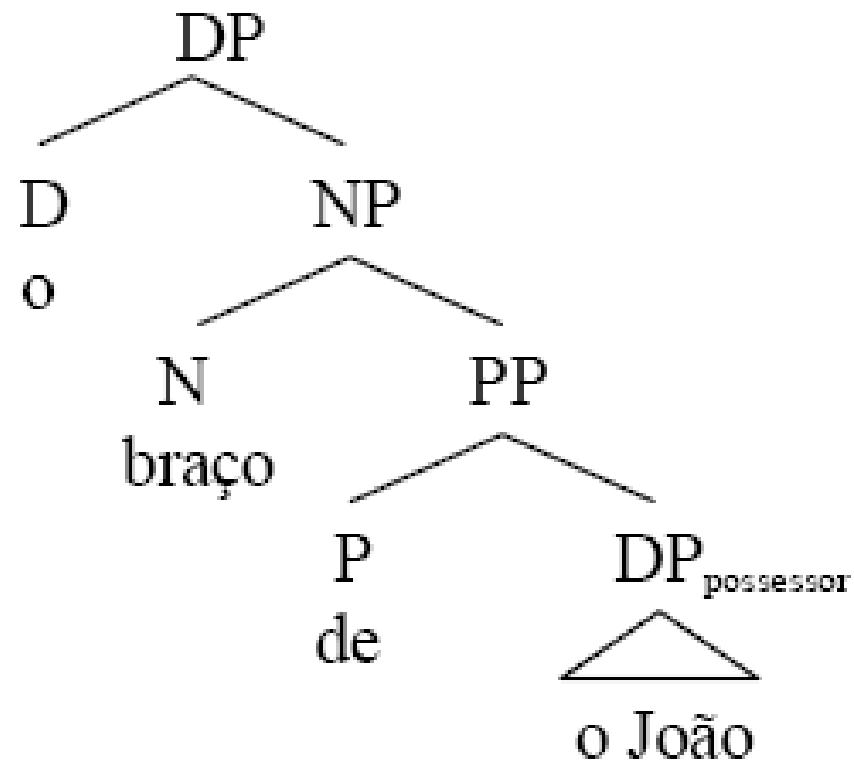
The structure of the DP involved in possessor raising

Empirical Evidence

Lunguinho (2006) provides data with quantifier floating in support to the DP structure in possessor raising constructions:

(30)a. Todos os carros furaram o pneu dianteiro
all the cars punctured the front tire
[$_{TP}$ Todos os carros furaram [$_{DP}$ todos os carros [$_{D'}$ o pneu dianteiro]
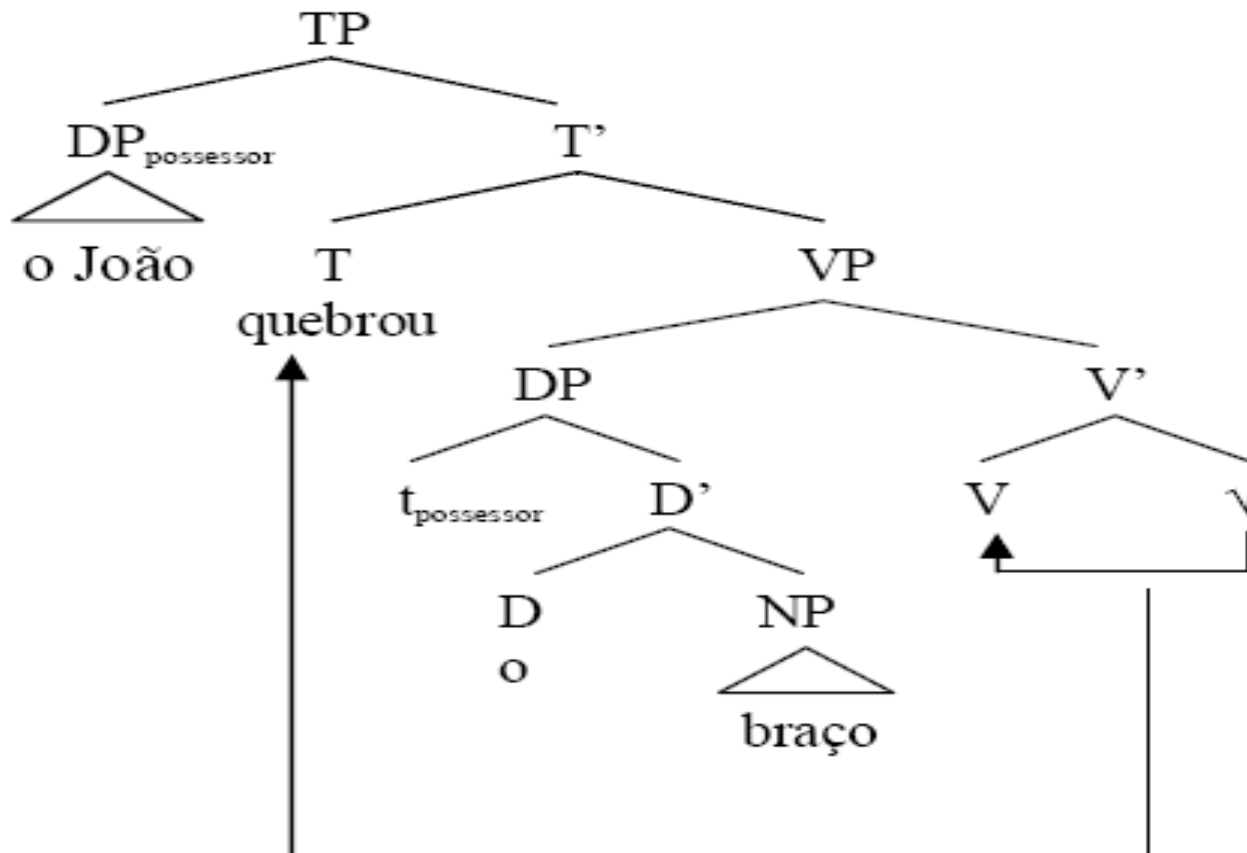 b. Os carros furaram todos o pneu dianteiro
[$_{TP}$ Os carros furaram [$_{DP}$ todos os carros [$_{D'}$ o pneu dianteiro]
 c.*Os carros furaram o pneu dianteiro todos
[$_{TP}$ Os carros furaram [$_{DP}$ o pneu dianteiro todos os carros]

Two types of possessor raising

Possessor Raising with *quebrar*

Two types of possessor raising

Possessor Raising with *cortar*: a smuggling approach

Collins (2005) proposes a smuggling approach to passives:

➢ the external argument is merged into the structure in the same way, both in active and passive sentences

➢ in passives, a participle must be licensed by moving to the specifier position of a functional category VoiceP

➢ the preposition **by** is the head of the functional projection VoiceP
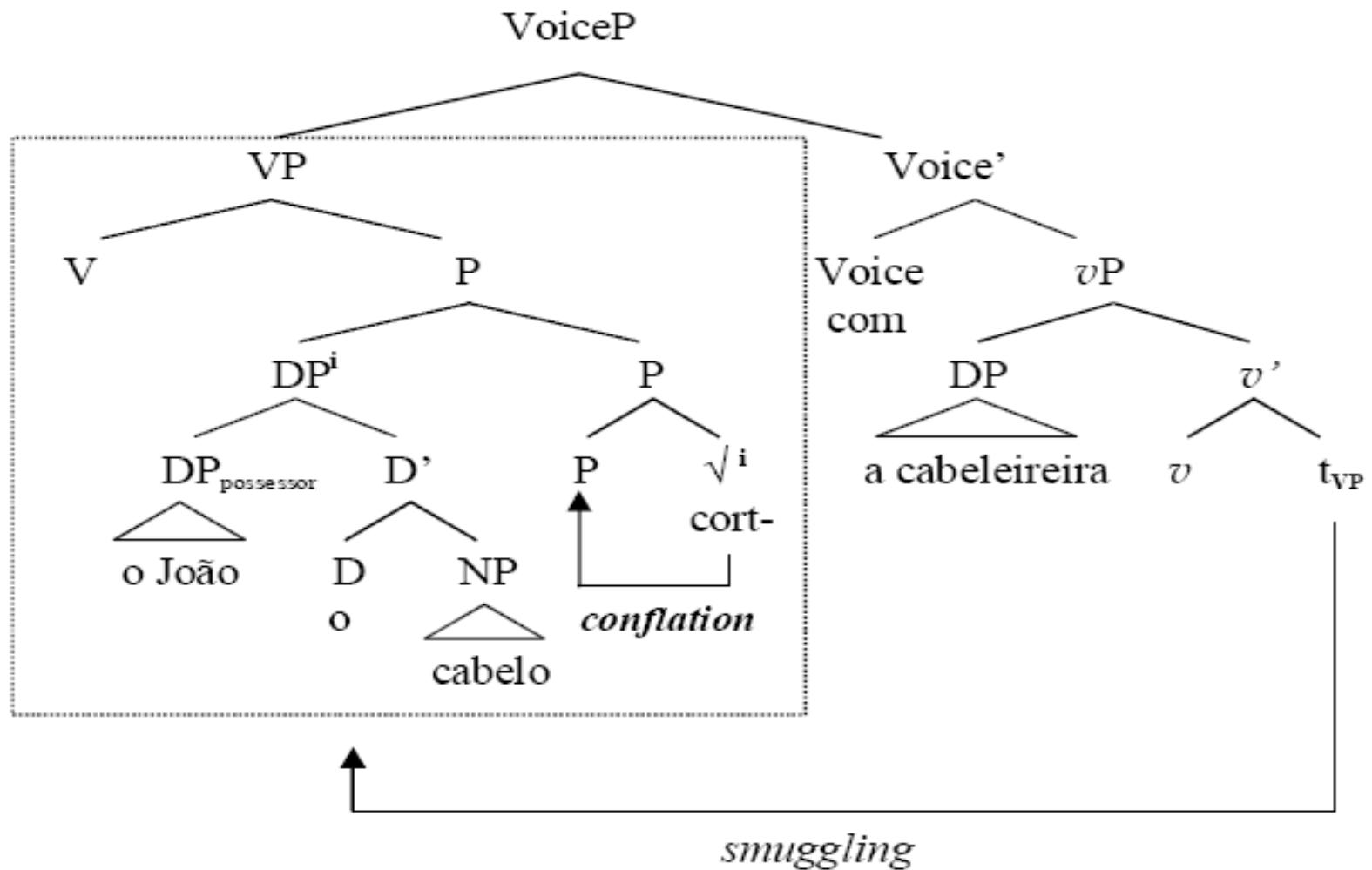
Possessor Raising: a smuggling approach

- The definition of smuggling (Collins, 2005):

    "Suppose a constituent YP contains XP. Furthermore, suppose that XP is inaccessible to Z because of the presence of W (a barrier, phase boundary, or an intervener for the Minimal Link Condition and/or Relativized Minimality), which blocks a syntactic relation between Z and XP (e.g., movement, Case checking, agreement, binding). If YP moves to a position c-commanding W, we say that YP smuggles XP past W." (p. 97)
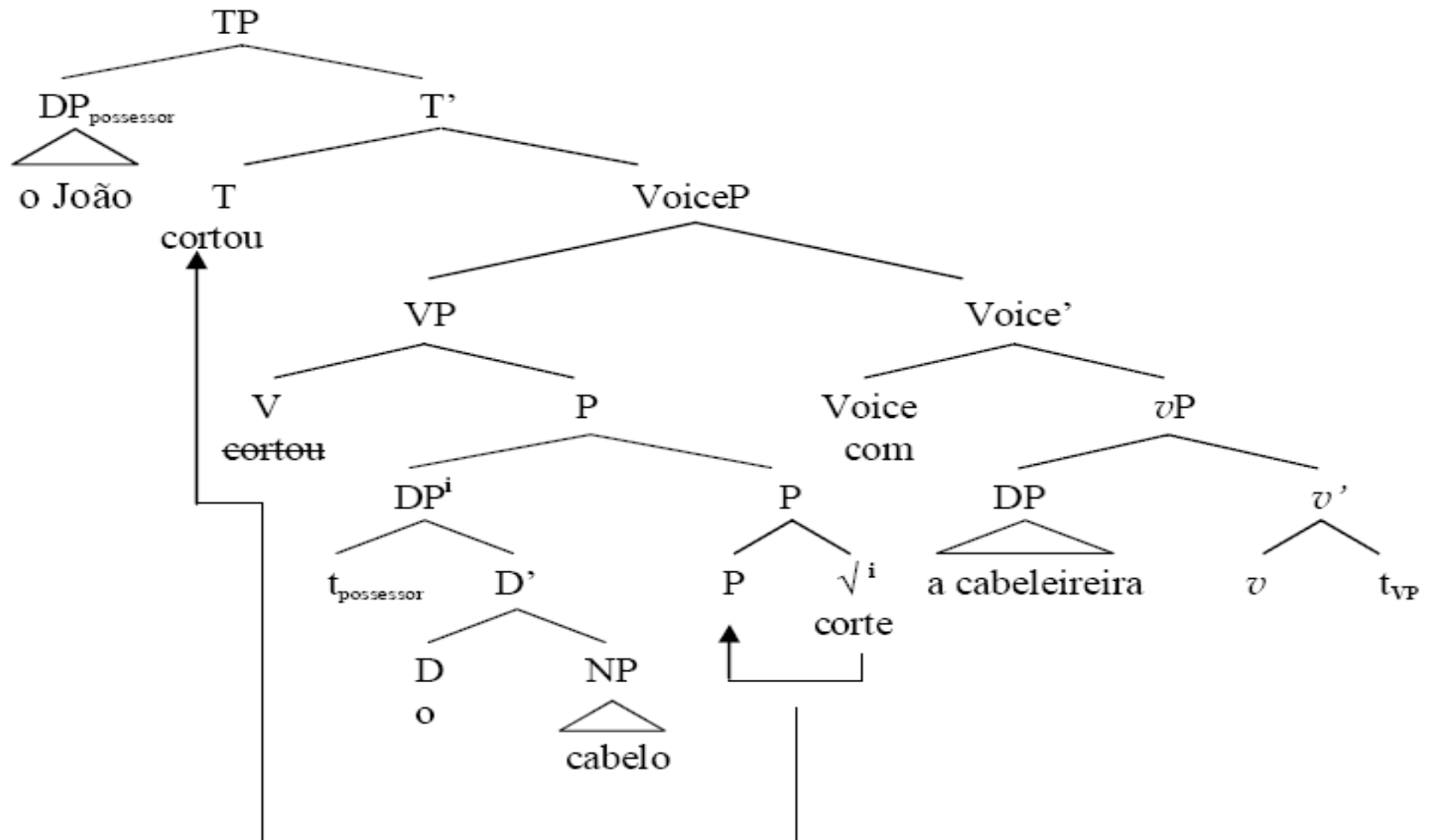
Passive: a smuggling approach
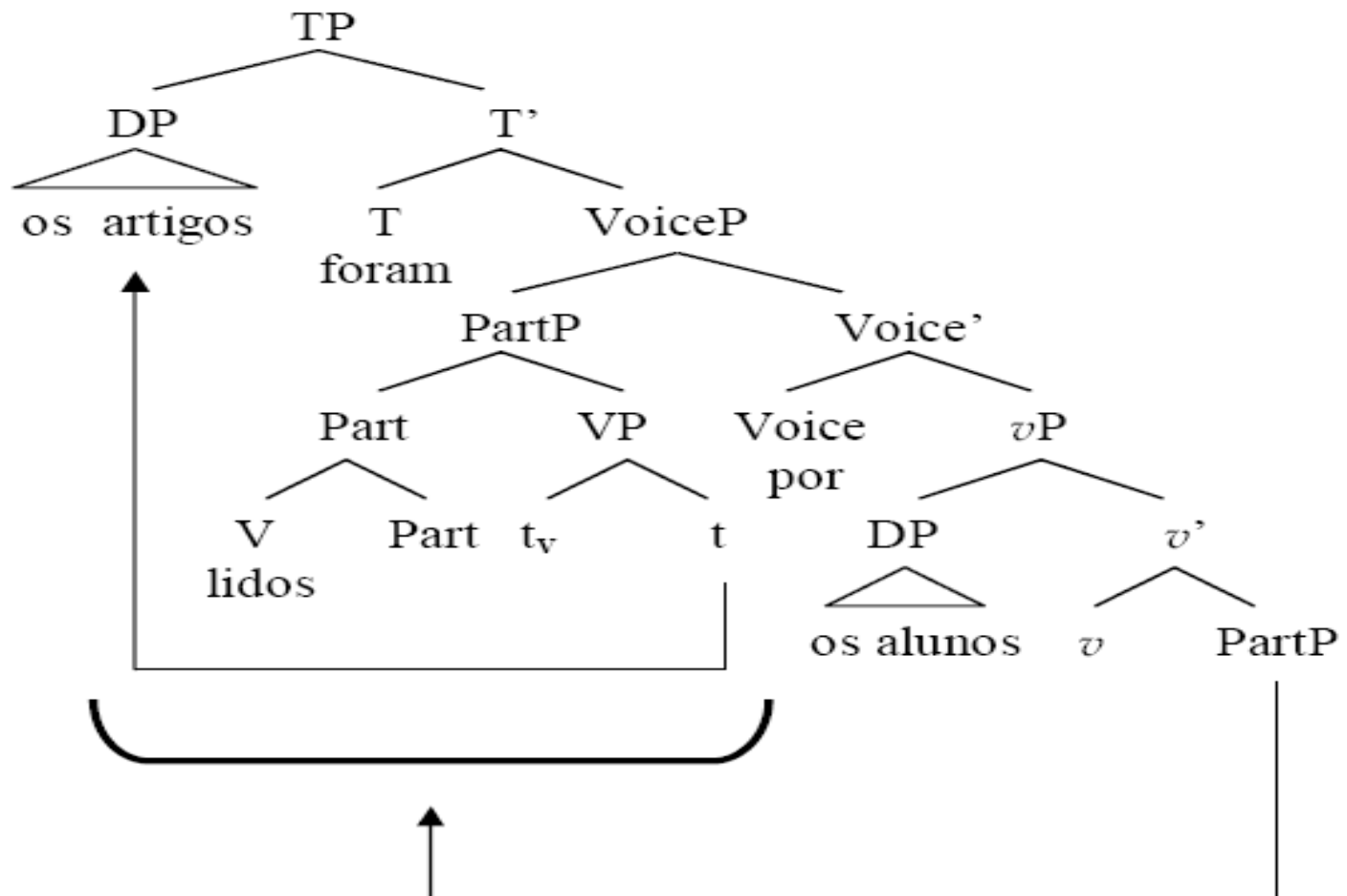
Possessor Raising: a smuggling approach

Possessor Raising: a smuggling approach

Final remarks

- Empirical evidence showed that we are dealing with two different phenomena.
- This difference was captured in terms of distinct lexical syntactic structure of two different verb classes.
- We showed that BP has two different possessor raising constructions: the first, with verbs such as *quebrar*, treated in terms of head movement, and the second, with verbs such as *cortar,* treated in a smuggling approach.

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Thank you!