The processing of null and overt pronouns in European Portuguese. Effect of the animacy of the antecedent

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Accessibility (Ariel, 1991)

High accessibility

Anaphoric expressions
- zero pronouns
- reflexives
- agreement markers
- pronouns
- first name
- last name
- full name
- full name + modifier

Low accessibility
What makes an antecedent more accessible than another one?

- Centering Theory (Grosz, Weinstein and Joshi, 1983, 1995)
  - Salience is defined according to syntactic criteria (the subject is the most salient entity)
  - The ideal way to retrieve a salient entity is with a pronoun (so that local cohesion is maintained)
Focus of experimental studies in English

High accessibility

- Anaphoric expressions
  - zero pronouns
  - reflexives
  - agreement markers
  - pronouns
  - first name
  - last name
  - full name
  - full name + modifier

Low accessibility
Focus of experimental studies in Portuguese (and other null subject languages)

- High accessibility
  - Anaphoric expressions
    - zero pronouns
    - reflexives
    - agreement markers
    - (...)
    - pronouns
    - (...)
    - first name
    - last name
    - (...)
    - full name
    - full name + modifier

- Low accessibility
Experimental studies with null and overt pronouns

- **In Portuguese (European and Brazilian)**
  - Corrêa (1998) – BP
  - Fonseca and Guerreiro (2012) – BP
  - Teixeira (2013) – BP

- **In other null subject languages**
  - Carminati (2002) – Italian
  - Mayol (2010) – Catalan
  - Filiaci (2010) – Spanish and Italian
Findings (in general):

- In complex sentences (but not in independent ones) there is strong specification in the use of both pronominal forms
  - The null pronoun retrieves the subject or an antecedent in the Spec IP position (exclusively syntactic criteria)
  - The overt pronoun prefers to retrieve an antecedent which is not in the Spec IP position. It is also more influenced by semantic factors.
Fukumura and van Gompel (2011) – English

- Use of pronouns vs. repeated NPs
- Written sentence free completion task; independent sentences
- Plural entities (to avoid *he* or *she* indicating animacy)
  - Animate entities were more frequently chosen to be the subject of the second sentence
  - They were also more frequently retrieved by a pronoun than inanimate entities.
Barbosa, Duarte and Kato (2005)

- Corpora study (differences in the use of null and overt pronouns in EP and BP)

- In EP:
  - Inanimate antecedents are almost always retrieved by a null pronoun.
  - Inanimate antecedents are never retrieved by an overt pronoun.
Questions...

- Can the animacy of an antecedent influence the interpretation of the null or overt pronoun that retrieves it?

- Is the null pronoun, indeed, only sensitive to syntactic factors?
Examples:

- After **the alpinist** held the rope when climbing up the hill, [-]/he/it fell unexpectedly on the ground.
  
  [+animate] subject

- After **the rope** held the alpinist when climbing up the hill, [-]/he/it fell unexpectedly on the ground.
  
  [- animate] subject

→ Which sequence is easier to process? Which pronoun is more suitable in each condition?
Experimental work (in progress)
1st experiment

- Manipulation of the subject’s animacy trace
  - Retrieval of the subject either by a null or an overt pronoun in subject position
  - Complex temporal sentences (complementariness in the choice of both pronominal forms is stronger within the same sentence)
  - Order: subordinate – main sentence
Experimental design:

- $2 \times 2 = 4$ conditions
  - Animate / inanimate subject versus null / overt pronoun
- 6 sentences per condition = 24 experimental sentences
- 48 filler sentences
  - (to prevent participants from knowing what is being tested and from acquiring reading patterns)
1st experiment

Self-paced reading task

- No ambiguity in the sentences as to which antecedent is retrieved (different genders for the antecedent)

- Variables:
  - Independent – animacy of the antecedent and pronominal form that retrieves it
  - Dependent – reading times (after the verb in the main clause, after the direct object of that verb and at the end of the sentence)
    - accuracy of answers
Examples:

Depois de a escritora referir o livro na abertura da tertúlia, felicitou o autor da obra.

A escritora felicitou o autor da obra?

Sim ☑ Não

Depois de o livro referir a escritora no prefácio da antologia, aumentou a tiragem dos exemplares.

O livro aumentou a tiragem dos exemplares?

Sim ☑ Não
Hypotheses:

(i) Faster reading times when the animate or inanimate subject is retrieved by a null pronoun;

(ii) Slower reading times when the animate subject is retrieved by an overt pronoun;

(iii) Even slower reading times when the inanimate subject is retrieved by an overt pronoun.
Hypotheses:

- Faster reading times:
  - Animate / inanimate subject → null pronoun
  - Animate subject → overt pronoun
  - Inanimate subject → overt pronoun
If the hypotheses are verified, this means:

- The null pronoun is not only sensitive to syntactic factors, but also to semantic ones, namely animacy (new finding)

- The overt pronoun is sensitive to animacy (as well as other semantic factors, already known)
2nd experiment

- Manipulation of the animacy of the NP2 antecedent
  1. Animate or inanimate antecedent in object position
  2. Retrieval either by null or overt pronoun in subject position

- Complex sentences
- Self-paced reading task
Why?
- Overt pronoun is more suitable to retrieve NP2

BUT:
- Barbosa, Duarte and Kato (2005) claim it can’t retrieve an animate antecedent

Therefore:
- It is expected that retrieval of NP2 by an overt pronoun will be costly (reading times)

- Tension between syntactic and semantic information
Manipulation of NP2 animacy; retrieval in NP2 position

Problem: null pronoun in NP2 position is, apparently, only suitable in oral context

Example:
- After the alpinist secured the rope on climbing up the mountain, [-] kept [-] in his bag pack.
- After the rope secured the alpinist on climbing up the mountain, [-] kept [-] safe in the descent.

Could this be another problem?
3rd experiment

- Can this restriction compromise the results of the experiment?

- Solution:
  - different experimental paradigm – self-paced listening task