

**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



Low accessibility

Anaphoric expressions

zero pronouns

reflexives

agreement markers

(...)

pronouns

(...)

first name

last name

(...)

full name

full name + modifier

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



Low accessibility

Anaphoric expressions

zero pronouns

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(...)

pronouns



(...)

first name



last name

(...)

full name

full name + modifier

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

High accessibility



Low accessibility

Anaphoric expressions

zero pronouns



reflexives

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(...)

pronouns



(...)

first name

last name

(...)

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Experimental studies with null and overt pronouns

- In Portuguese (European and Brazilian)
 - Costa, Faria and Matos (1998) – EP
 - Corrêa (1998) – BP
 - Costa (2003/ 2005) – EP
 - Morgado (2012) – EP
 - Luegi (2012) – EP and BP
 - Fonseca and Guerreiro (2012) – BP
 - Teixeira (2013) – BP
- In other null subject languages
 - Carminati (2002) – Italian
 - Alonso-Ovalle et. al (2002) – Spanish
 - Mayol (2010) – Catalan
 - Filiaci (2010) – Spanish and Italian

Experimental studies with null and overt pronouns

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.

The animacy factor...

- 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.

The animacy factor...

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

1st experiment

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

1st experiment

■ 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

1st experiment

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.

1st experiment

Hypotheses:

- Faster reading times:
 - Animate / inanimate subject → null pronoun
 - Animate subject → overt pronoun
 - Inanimate subject → overt pronoun




1st experiment

- 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

2nd experiment

- 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
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3rd experiment

- 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