The Effect of Animacy and Schooling in the Production of Co-referential Objects in the Acquisition of Two Varieties of Portuguese

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Outline

• Focus of the study
• Differences in the pronominal systems of Brazilian Portuguese (BP) and European Portuguese (EP)
• Restrictions on null objects
• The status of null objects
• The role of animacy
• Why schooling?
• Research questions
• Elicited production in BP
• Elicited production in EP
• Discussion and final remarks
Focus of the study

• The production of 3rd person anaphoric forms as direct objects by BP native-speaking children (and adults) in contrast with EP native-speaking children.

• Co-referential forms in both varieties of Portuguese
  • Definite full DPs
  • Referential pronominal forms
  • Null object

• However, these varieties differ in their pronominal systems
Differences in the pronominal systems of Brazilian Portuguese (BP) and European Portuguese (EP)

<table>
<thead>
<tr>
<th></th>
<th>BP</th>
<th></th>
<th>EP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st per</td>
<td>3rd per</td>
<td>1st per</td>
</tr>
<tr>
<td></td>
<td>sing</td>
<td>pl</td>
<td>sing</td>
</tr>
<tr>
<td>SUBJECT</td>
<td>eu/Ø</td>
<td>nós / a gente/Ø</td>
<td>ele-a /Ø</td>
</tr>
<tr>
<td>OBJECT</td>
<td>me (eu)</td>
<td>nos / (nós) /a gente /Ø</td>
<td>o-a*/ele-a /Ø</td>
</tr>
</tbody>
</table>

( ) non-standard option  * formal/educated option

- Lexical and null forms are available for the encoding of subjects and direct objects in both varieties.
- Particular (processing) conditions may facilitate the choice of a particular form:
  - EP → consistent case distinctions in pronominal forms
  - Null forms – Particular discourse conditions, particularly accessible antecedents (Cyrino e Matos, 2016; Duarte & Costa, 2013)
- Nominative forms can occur as direct objects (even in the 1st person – more restricted non-standard option)
- Neutralization of case information in object position – decrease in the use of 3rd person clitics
- Stressed pronouns: nominative forms – agentivity → [+ animate] antecedents
Differences in the pronominal systems of Brazilian Portuguese (BP) and European Portuguese (EP)

• 3rd person definite anaphoric direct objects:
  • both varieties allow acc. clitics, although they are stylistically marked in BP:
    (1) Onde está o gato? Não o encontro. (BP / EP)
  • both varieties allow null objects, although with different restrictions:
    (2) Onde estão as chaves? Não encontro []. (BP / EP)
  • only BP allows strong pronouns:
    (3) Onde está a criança? Não encontro ela. (BP / *EP)
Restrictions on null objects

• Different studies have reported restrictions on null objects either for EP or for BP:
  
  • **Animacy** (Cyrino 1997 for BP; Costa & Duarte 2013 for certain contexts in EP)
    only [- animate] null objects are allowed in some contexts
  
  • **Island contexts** (Raposo 1989 for EP, revised in 2004)
    null objects are not allowed in (some) island contexts for some EP speakers
  
  • **Position of antecedent** (Kato & Raposo 2001)
    subject antecedents are not allowed for some speakers

→ Variation in acceptability judgements between speakers
Restrictions on null objects

• Null objects seem to be sensitive to constraints on movement in EP (Raposo, 1986; Costa & Lobo, 2004; Costa & Duarte, 2013; Costa & Lobo, 2011; Kato & Raposo, 2005 among others)
  • However, there is recent evidence that adult speakers of EP produce null object in island contexts (clefts; and adverbial clauses) (Rinke et al, 2017)
  • There is evidence from comprehension that EP-speaking children accept null objects in islands – overgeneralization of object omission (Costa & Lobo, 2009)

• Island contexts do not seem to impose constraints on null objects in BP
The status of null objects

- Hypotheses regarding null object in EP
  - Variable bound to the topic (Raposo, 1986), subject to island constraints
  - Null D (Raposo, 2004) dominating a null pro (Kato & Raposo, 2001; Raposo; 2004) — compatible with attested occurrences in island contexts
    (There seems to be differences in acceptability across varieties)

- Hypotheses regarding null object in BP
  - *pro* (Galves, 1989, 2001; Kato, 2001)
  - DP ellipsis (Cyrino, 1997; Cyrino; Matos, 2001).
  - Null D dominating a null pro for both EP and BP (EP allows CLLD; BP allows LD, topicalization, and duplication of the null D as a stressed pronoun (Kato & Raposo, 2001; 2005)
  - Variable bound to the topic/element that reactivates the topic, based on self-paced reading (Maia, 1997; Ventura, Maia & Guesser, 2018)
The role of animacy

- Animacy seems to affect the use of stressed pronouns vs the null form in the spontaneous production of BP-speaking adults and children (Casagrande, 2007; Lopes; Cyrino, 2005a; 2005b; Schwenter; Silva, 2002, 2003; Schwenter, 2006)

  - Null forms → inanimate antecedent
    A Maria levou seu carro pro trabalho porque quer vender Ø pra chefe.
    Mary took her car to the office because (she) wants to sell Ø to her boss
    However, ... Onde está aquela criança? Não encontro _em lugar nenhum!!!
    Where is that child? (I) don’t find Ø anywhere!!!

  - Stressed pronouns → animate antecedent
    A Maria levou uma amiga para o trabalho porque quer apresentar ela pra chefe.
    Mary took a friend to the office because (she) wants to introduce she to her boss.
    However, ... O carro vai ficar bonito porque nós pintamos ele.
    The car will get nice because we(’ve) painted it.
The role of animacy

• Animacy may also play a role in EP
  • Young EP children omit more inanimate objects than animate objects and produce more animate clitics (Tomaz et al 2019)
  • Animacy seems to affect EP-speaking adults’ spontaneous production of null objects (Schwenter, 2014; Rinke et al, 2017)
  • Animacy seems to affect the acceptance rates of null objects in islands for EP speakers (Castro, Rothman & Westergaard 2017)
  • Animacy, definiteness and specificity are equally important for null objects in EP (Schwenter, 2014).

• No experimental evidence concerning the effect of animacy in the production of null objects comparing EP and BP
Why schooling?

- The 3rd person stressed pronoun is not allowed in the written modality of BP and it is somewhat stigmatized in formal oral language.
- Elicited production of oral narratives by educated adults gives rise to 3rd person clitics (Lira, in prep.).
- Schooling has been shown to promote the inhibition of stigmatized forms of non-standard BP varieties (non-redundant plural marking) (Jakubów & Corrêa, 2019).
- It is expected that children progressively incorporate 3rd person accusative clitics in BP as a function of schooling.
- It is not clear the extent to which schooling affects the production of clitics and object omission in EP-speaking children.
Research questions

• Does animacy affect the distribution of co-referential object forms in the elicited production of BP-speaking children/adolescents in controlled contexts?

• What about EP?

• Are EP-speaking children sensitive to island constraints in the production of null object?

• What about BP-speaking children and adults?

• Does schooling affect null objects?

• What can children’s production inform on the status of the null object in PB and EP?
Elicited production in BP

• Two experimental tasks:

  1. WH questions→ to elicit the production of co-referential forms in simple sentences in discourse.

    - *Aqui tem um menino e um carrinho. E agora? O que o menino está fazendo com o carrinho?*
      Here there is a boy and a little car. And now? What is the boy doing with the little car?
2. Cloze task to elicit the production of co-referential in adverbial clauses (island context)

_Aqui tem uma menina e um menino. Agora olha o que está acontecendo._
Here there is a girl and a boy. Now look what is happening.

_A menina está pintando o menino. Então, o menino ficou chateado porque a menina_________.
The girl is painting the boy. So, the boy got angry because the girl _____________.

In both tasks, the independent variables were _animacy_ and _schooling_. 
Elicited production in BP

- Participants: 108 BP-speaking children/adolescents
  - G1: pre-schoolers (4;3-7;11 year olds; mean age 5;7 – 18 girls);
  - G2: 1st segment of elementary school (8;6-11 years old; mean age 9;8 – 17 girls);
  - G3 : 2nd segment of elementary school (12;6-15;1 year olds; mean age 13;9 – 21 girls)
  - Plus: 20 educated adults (31-57 years old; mean age 44 - 12 female) in oral and written modality
- Material: 4 sets of sentences for warming up, two for each task
  - 24 experimental sets of sentences (12 for each task; 6 for each animacy condition) and corresponding sets of slides (visual material)
Elicited production in BP

### Distribution (%) of co-referential forms in the production of BP-speaking children/adolescents

<table>
<thead>
<tr>
<th>Group</th>
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<th>Task 2: Island context</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>-animate</td>
<td>+animate</td>
</tr>
<tr>
<td></td>
<td>Stressed</td>
<td>Null</td>
</tr>
<tr>
<td>G1 (pre-schoolers)</td>
<td>12</td>
<td>49</td>
</tr>
<tr>
<td>G2 (1st seg elem school)</td>
<td>12,1</td>
<td>49,5</td>
</tr>
<tr>
<td>G3 (2nd seg elem school)</td>
<td>4,6</td>
<td>40,7</td>
</tr>
<tr>
<td>Total mean</td>
<td>9,6</td>
<td>46,4</td>
</tr>
</tbody>
</table>

- The null object is more frequent in the [–animate] condition and the difference is significant in both tasks (Task 1: $\chi^2 = 37.93$ (p<.0001); Task 2: $\chi^2 = 80.1$ (p < .0001))
In both tasks, the stressed pronoun is more frequent in the [+animate] condition and the difference is significant (Task 1: $\chi^2 = 41.6$ (p<.0001); Task 2: $\chi^2 = 62.3$ (p < .0001))

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<tr>
<td></td>
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<td>Null object</td>
<td>Clitic Full DP Other</td>
<td>Stressed pronoun</td>
</tr>
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<td>49</td>
<td>0 36 3 36,1 24,1 0</td>
<td>18,1</td>
</tr>
<tr>
<td>G2 (1st seg elem school)</td>
<td>12,1</td>
<td>49,5</td>
<td>0 37 1,4 34,7 12,5 0,9</td>
<td>28,2</td>
</tr>
<tr>
<td>G3 (2nd seg elem school)</td>
<td>4,6</td>
<td>40,7</td>
<td>0 52,8 1,9 25,9 27,8 0</td>
<td>25,9</td>
</tr>
<tr>
<td>Total mean</td>
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<td>0 41,9 2,1 32,3 21,5 0,3</td>
<td>24</td>
</tr>
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- In both tasks, the stressed pronoun is more frequent in the [+animate] condition and the difference is significant (Task 1: $\chi^2 = 41.6$ (p<.0001); Task 2: $\chi^2 = 62.3$ (p < .0001))
Elicited production in BP

Distribution (%) of co-referential forms in the production of BP-speaking children/adolescents

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- The number of clitics is very small and absent in the group of pre-schoolers.
- Clitics are more noticeable in the 2nd seg of elementary school, particularly in island context.
Elicited production in BP

- The effect of schooling on clitics can be attested in adults

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<tr>
<td><strong>Modality</strong></td>
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<tr>
<td>Spoken</td>
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<tr>
<td>Written</td>
</tr>
<tr>
<td>Total mean</td>
</tr>
</tbody>
</table>

- Clitics occur regardless of animacy in the written modality in both tasks
- Null objects are less frequent with [+ animate] antecedent in island context, particularly in the written modality
  - Though the effect of animacy on null objects was not significant in both tasks and modalities
- The number of stressed pronouns is small, even in the oral modality, except in task 2
  - Significant effect of animacy $\chi^2 = 4.9$ $p<.05$ more frequent with [+animate antecedents] as an alternative to nulls, clitics and full DPs – adults seem to be sensitive to some constraint on null objects in this context
Elicited production in BP

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<td>Stressed pronoun</td>
<td>Null object</td>
</tr>
<tr>
<td>Adults</td>
<td>Stressed pronoun</td>
<td>Null object</td>
</tr>
<tr>
<td>Spoken</td>
<td>0</td>
<td>23,3</td>
</tr>
<tr>
<td>Written</td>
<td>11,7</td>
<td>28,3</td>
</tr>
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- In task 1, null objects are preferred in [-animate] condition; **no preference with [+ animate] antecedent**
- In task 2, null objects are preferred in [-animate] condition; the stressed pronoun with [+animate] antecedent.
- The same for adults in oral modality; clitics are preferred in the written modality only
Summing up

- Null objects admit [+ animate] antecedents in simple sentences in discourse (as in task 1)
  - They can be an alternative to the stressed pronoun (possible effect of schooling on the stigmatized form)
- In island context, null objects recover [- animate] main clause subjects (no agentivity)
- Unlike in simple sentences, there seems to be constraints on null objects with [+animate] antecedents in island context

*O menino ficou chateado porque a menina pintou Ø (?)*

The boy got angry because the girl painted Ø

*A menina espetou o menino porque ele beliscou Ø (?)*

The girl (has) stuck the boy because he pinched Ø
Elicited production in EP

• Same tasks, some adaptations in the verbal material:

• Participants: 20 EP-speaking children/adolescents (age 6-15 years old; 8 girls) attending public schools in Lisbon, divided into 2 groups (10 participants each) as a function of schooling

• G1: 1st segment of elementary school (6,11-9,9 years old; mean age: 7,9 – 6 girls);

• G2: 2nd segment of elementary school (10,1-15,5 years old; mean age: 11,9 – 2 girls).
No difference due to *animacy* in the production of accusative clitics in both tasks but there are more dative clitics (as direct object) in [+animate] island context in G1.

More null objects with [-animate] antecedents in G1, in Task 1
- compatible with results from pre-schoolers, though the difference did not reach significance (p = .11)

In task 1, neither null objects nor full DPs were alternatives to clitics.
What is the role of schooling?

• In BP, clitics are restricted to the written modality (form associated with the standard language)

• In BP, schooling may lead to avoidance of stressed forms and preference for null objects

• Clitics did not present particular difficulties for EP-speaking children at school age (unlike data from pre-schoolers (Costa & Lobo 2011))

• It may contribute to the absence of the effect of animacy, which had been attested in EP-speaking pre-schoolers (Tomaz et al. 2019)
  • Clitics are not sensitive to animacy
What is the role of animacy?

• In BP, clear effect of animacy: more null forms with [- inanimate] antecedents; more stressed forms with [+ animate] antecedents, specially in oral language

• The possibility of strong pronouns in object position is likely to promote the effect of animacy (due to agentivity)

• Support for findings in the spontaneous production of BP

• The island context has, nevertheless, an effect in the use of null forms in BP, which can be dissociated from the status of the null object as a variable, since it is more evident with [+animate] antecedents

• Effect not attested in EP-speaking children at school age
Discussion and final remarks

Are there syntactic restrictions?

• In EP, clitics were preferred both in simple sentences and in islands
• In BP, null objects occurred, recovering the subject of the main clause in island context
• There seems to be, nevertheless, animacy restrictions
  • Null objects are preferred with [-animate] subject antecedents in island context, whereas avoided with [+animate] subject antecedents → stressed pronouns are the preferred option with [+ animate] antecedents for both children and adults
    • This finding would not be compatible with null objects as a DP ellipsis (Cyrino (1994), unless if a derived subject (Cyrino & Lopes, 2016)
    • It may be compatible with Kato & Raposo (2001; 2005) – pro with an animacy feature
    • The subject antecedent may be taken as a sort of topic, allowing for a different type of argument omission (cf. Cyrino, 2019)
  • Perhaps, the null element can be taken as a null argument which admits different syntactic status due to particular accessibility conditions - to be further investigated
Acknowledgments

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Thanks! Obrigada!