

The interpretation of overt and null pronominal subjects in Portuguese-German heritage bilinguals

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Workshop:

Heritage Language Acquisition: Breaking New Ground in Methodology and Domains of Inquiry

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Topic of the talk:

Pronominal anaphora resolution in Heritage Portuguese (in contact with German)

(1) **O rapaz**_i cumprimentou **o avô**_j quando **pro**_i/**ele**_j chegou a casa.
The boy_i greeted the grandfather_j when ______i/he_j came home. (Lobo & Silva 2015)

- Preferences for **topic continuity**/**topic shift** with **null**/**overt** subject pronouns in ambiguous contexts (Tsimpli et al. 2004)

Guiding research questions:

1. Do heritage speakers of European Portuguese (EP) differ from monolingual speakers in the interpretation of null and overt subjects in the null subject language?
2. How can potential differences be accounted for?
3. What is the role of cross-linguistic influence?
4. What is the role of language internal factors?

Background

- Large body of research on null/overt subjects and pronominal resolution in monolingual and bilingual speakers:
Carminati (2002), Alonso-Ovalle et al. (2002), Montrul (2004), Tsimpli et al. (2004), Serratrice et al. (2004), Sorace & Filiaci (2006), Polinsky (2007), Sorace et al. (2009), Keating et al. (2011), Iraola Azpiroz & Ezeizabarrena Segurola (2011), Madeira (2012), Filiaci et al. (2013), Peristeri & Tsimpli (2013), Iraola Azpiroz (2014), Kaltsa et al. (2015), Papadopoulou (2015), Lobo & Silva (2015), ...
- Previous findings in bilingual populations:
Pronominal resolution/subject realization is a vulnerable domain in bilingual and L2 acquisition (interface hypothesis; Sorace, 2011 for an overview), deviation consists in the overuse of the overt pronoun in topic-continuity contexts (null subjects are in general target-like)
- Explanations:
not representational deficit concerning null subject property, CLI (unidirectional from non-null-subject to nullsubject), effect of bilingualism (dealing with different ling. systems), input (quantity and quality), complexity of information related to overt pronouns (discourse-pragmatic dependency)

Background

- What can we add to all these studies despite of data „from a less studied language pair“?
- Studies are not always comparable:
 - corpus data/experimental data, offline/online tests, bilingual children/adults, L1 attriters/early (heritage) bilinguals/L2 Learners
 - ambiguous/non-ambiguous contexts, anaphoric/cataphoric relations, intersentential/intrasentential anaphora, position of the antecedent/anaphor (antecedent/anaphor in the main or in the subordinate clause)

Anaphora resolution: different aspects involved

- Universal syntactic principles, e.g. *Binding theory* (Chomsky 1981),
- Language specific morphosyntactic options: null and overt pronouns (*Avoid pronoun principle* (Chomsky 1982)), strong and weak pronouns (*minimize structure principle* (Cardinaletti & Starke 1999, Filiaci et al. 2013)); pronouns vs. *demonstratives* (cf. Bosch et al. 2003, , Wilson et al. 2009))
- *unambiguous vs. ambiguous* contexts (one or more potential antecedents, Carminati 2002)
- *Directionality of anaphora: Forward vs. backward* anaphora (processing c.f. Reinhart 1986, Blackwell 2003, Tsimpli et al. 2004, Lobo & Silva 2016)
- *Intra-sentential vs. intersentential anaphora* (cf. Alonso Ovalle et al. 2002; Carminati 2002)
- *Discourse* accessibility (Ariel 1990), pragmatic aspects, *plausibility* considerations (Filiaci et al. 2013)

Aims of the present study

- Focus on **ambiguous** contexts (ex. 1): **two potential antecedents** for the anaphora
- To highlight the role of variation in the target system:
 - the difference between intra- and intersentential anaphora;
 - the difference between forward and backward anaphora;
 - the performance of several groups of speakers: monolingual children/adolescents; bilingual children/adolescents; monolingual adults; bilingual adults
- Considering these aspects can provide additional hints concerning:
 - the role of variation in the target (null subject) language (input)
 - the role of the dominant contact language

Aims of the present study

Hypotheses / Predictions

- **Variation in the input** (target system) can be relevant for the explanation of divergence between bilingual and monolingual speakers (bilingual speakers may extend options existent in the target system)
- What bilinguals do is **not fundamentally different** from what monolinguals do (against representation deficit, against a crucial role of the contact language).
- **CLI is not the guiding process** in heritage language acquisition

Present study:

Anaphora resolution in monolingual and bilingual speakers of European Portuguese

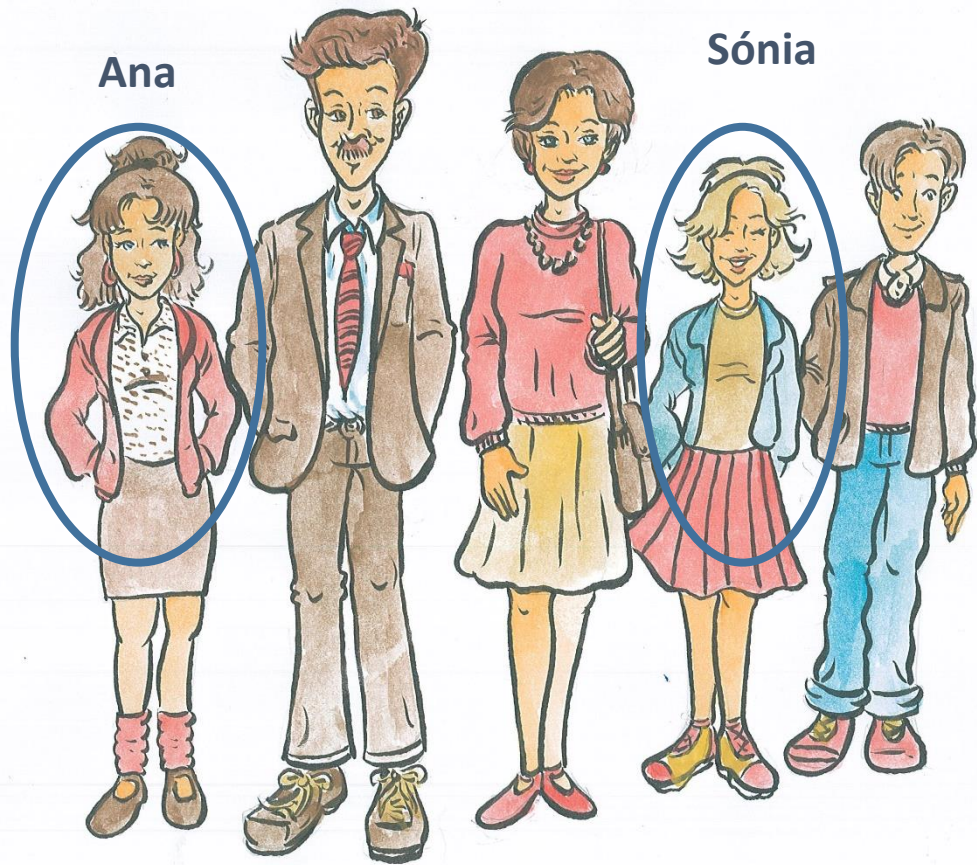
- **Participants:** 4 groups, 74 participants
- **EP MONOLINGUAL SPEAKERS**
 - 26 monolingual adults (university students, 20 – 23 years)
 - 18 monolingual children/teenagers (9 – 16 years, mean: 12.1)

Note: Pearson correlation tests did not show any correlation between age and performance within the child group
- **BILINGUAL SPEAKERS (EP Heritage speakers):**
 - Portuguese heritage speakers, living in Germany: with German as societal language and EP as home language; born in Germany or emigration until age 3. Portuguese spoken at home.
 - 14 bilingual adults (20 – 41 years, mean: 27.6)
 - 16 bilingual children/teenagers (9 – 16 years, mean: 13.1), same profile as bilingual adults

Note: Also here Pearson correlation tests did not show any correlation between age and the participants' performance in the several test conditions.

Method – Procedure

- Offline **anaphora resolution task** (comprehension task), with *ambiguous* sentences.
- Stimuli were presented orally with pictures; reference ambiguity resolved by answering to the question «Quem...?» (Who did...?)
- Different options Subject (*a Ana*)/ Object (*a mãe*)/ Other (*a Sónia*) (random order)
- Previous training item



A Sónia e a Ana ainda moram na casa dos pais.
Sónia and Ana still live at house of parents



Hoje foi um dia longo para todos, com muito trabalho.
today was a day long for all with much work

Mas quando chegou a casa, a Ana ainda esteve na conversa com a mãe.
but when arrived at home the Ana still was in conversation with the mother

Method – Test design

- 6 experimental conditions/5 items per condition/ 30 items:

I. Null subjects:

- a) Intersentential: *A Ana às vezes vai lá comer gelados com a Susana. Ø Só gosta de gelado de morango.*
the Ana sometimes goes there eat icecream with the Susan just likes strawberry icecream
- b) intrasentential – anaphoric: *E o Jorge só reconheceu o Pedro quando Ø se sentou na mesa.*
and Jorge only recognized the Pedro when set down at+the table
- c) intrasentential – cataphoric: *Mas quando Ø chegou a casa, a Ana ainda esteve na conversa com a mãe.*
but when came home the Ana still held a conversation with the mother

II. Overt subjects:

- a) Intersentential: *A Susana foi com a Ana a uma loja de roupa. De facto, ela gasta muito dinheiro em roupa.*
Susana went with Ana to a clothing store in fact she spends much money in clothes
- b) intrasentential - anaphoric: *A Susana tem de ligar à Sónia antes porque ela prometeu comprar os bilhetes.*
the Susana has to call to Sónia before because she promised to+buy the tickets
- c) intrasentential – cataphoric: *Enquanto ela se prepara para a festa, a Ana conversa animadamente com a Sónia.*
while she prepared for the party Ana talked joyfully with Sónia

Accounting for anaphora resolution in ambiguous contexts

- Interpretable features (Tsimplici et al. 2004):

- **overt** pronouns are marked by the interpretable feature [+TS] (topic shift); **null** pronouns by the feature [-TS] (topic continuity)

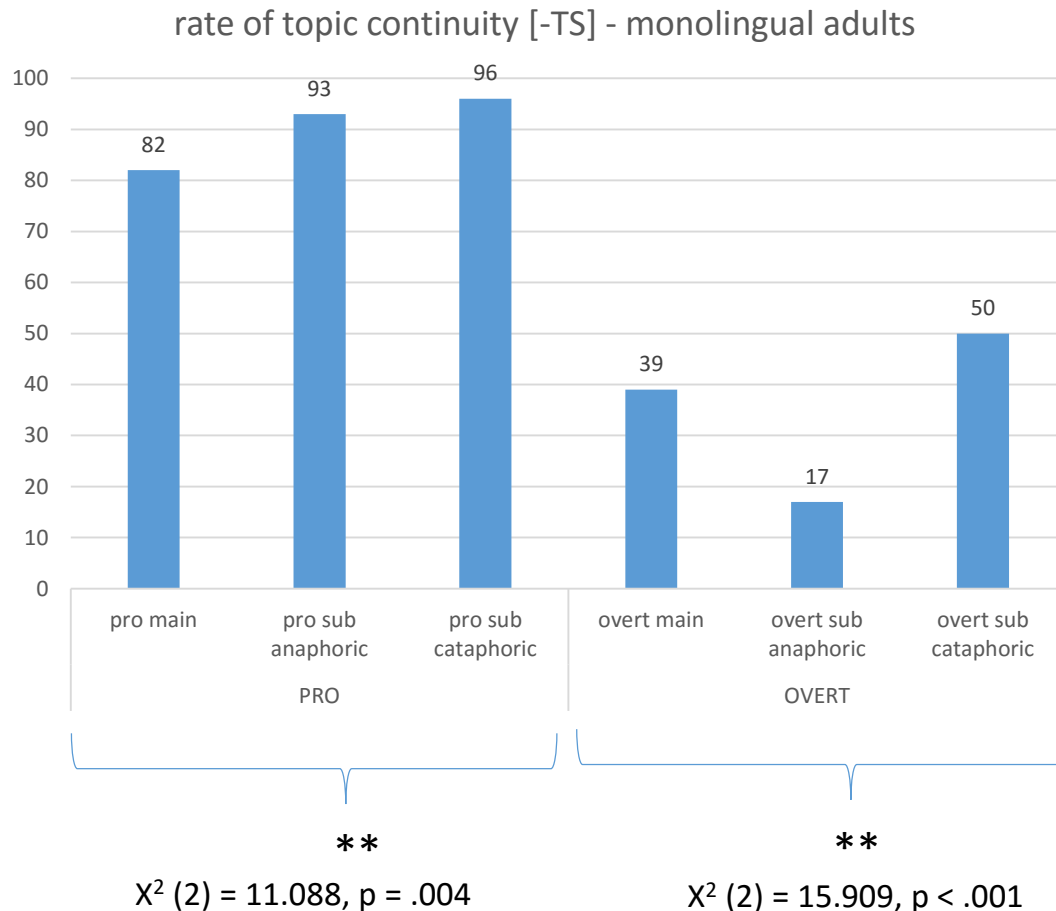
(1) **O rapaz_i** cumprimentou **o avô_j** quando **pro/ele_j** chegou a casa.
The boy_i greeted the grandfather_j when ____i/he_j came home. (Lobo & Silva 2015)

- Position of antecedents strategy (PAS) (Carminati 2002):

- a processing constraint on anaphora resolution
- in ambiguous contexts, the **null** refers to an antecedent that is **in the IP position**, the **overt** pronoun tends to select an antecedent **lower in the phrase structure**, typically a non-subject antecedent

(2) **Marta_i** scriveva frequentemente a **Piera_j** quando **____i / lei_{i/j}** era negli Stati Uniti.
Marta_i wrote often to Piera_j when ____i/she_{i/j} was in-the US
(Carminati 2002: 78) (preference for **pro S=80,72%**; **overt S=16,67%**)

Anaphora resolution in European Portuguese: adult monolingual speakers



** $p < .01$

- 82% – 96% **topic continuity in pro contexts** (Lobo & Silva 2016: 90% pro sub anaph & pro sub cataph.)
- Overall significant lower rates of [-TS] with overt pronouns (*Wilcoxon tests show significant differences between all pro-overt pairs*): **PAS is valid in European Portuguese: null subjects = [-TS], overt subjects = [+TS]**
- Sensitivity to type of overt-condition: Lowest rate of [-TS] in anaphoric intra-sentential contexts (17%);
- **PAS is weaker in cataphoric and intersentential contexts** (cf. Lobo & Silva 2016: 15% overt sub anaph & 39% overt sub cataph.)
- **Why?**

Weakening of the PAS in cataphoric contexts

- Anaphoric contexts vs. cataphoric contexts (*forward anaphora vs. backward anaphora*, cf. Lust 1986: 9)

(3) Enquanto ___/ela se prepara para sair, a Joana conversa com a Paula.
while she Refl. prepares for going out the Joana talks to the Paula

- Backward anaphora: marked form of anaphoric relation (Reinhart 1986, Blackwell 2003)
- Reinhart (1986): „... backward anaphora requires holding the pronoun in memory and going back to it.“; therefore, for processing reasons, the pronoun is interpreted **as soon as possible**
- Weakening of the PAS is a result of interaction of the PAS with this principle.

Weakening of the PAS in intersentential contexts

- The PAS is also weakened in anaphoric **intersentential** contexts.
- Alonso Ovalle et al. (2002) for Spanish:

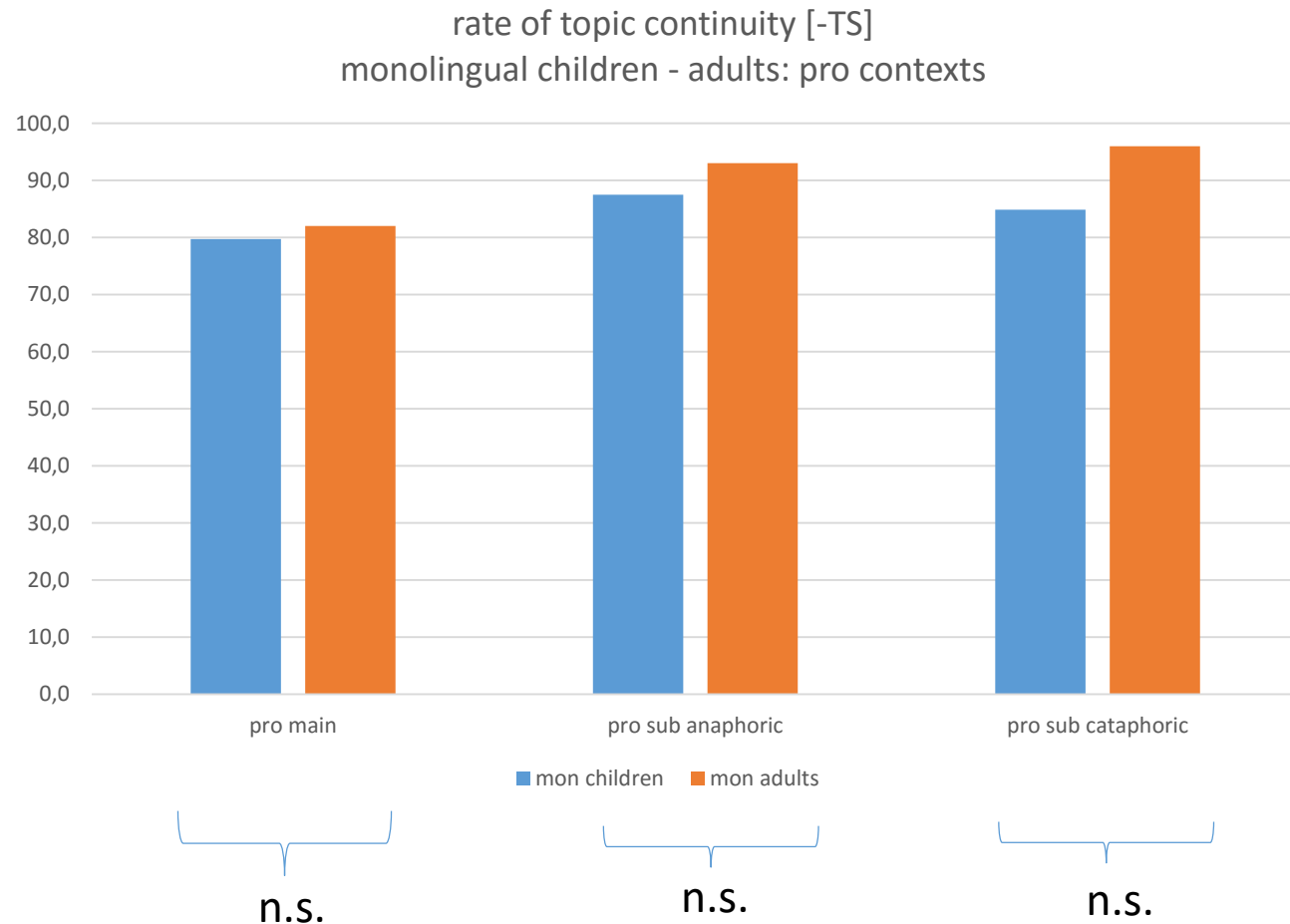
(4) Juan pegó a Pedro. **pro/Él** está enfadado. [73% S-preference vs. 50,2 % S-preference]
- Carminati (2002):

(5)a. [_{CP} Siccome **Alda** sembra essere brava in matematica], **pro/lei** `e stata scelta come tesoriere.
Since Alda seems to be clever at math she has been chosen as a treasurer
[pro 1.55 vs. **overt 3.68**] (on a scale from 1 very good to 5 very bad)

b. [_{CP} $\emptyset_{expl.}$ sembra che **Alda** sia brava in matematica] [_{CP} Per questo **pro/lei** `e stata scelta come tesoriere.]
It seems that Alda is clever at math. For this (reason) she has been chosen as a treasurer.
[pro 1.68 vs. **overt 2.89**]

Anaphora resolution in child Portuguese

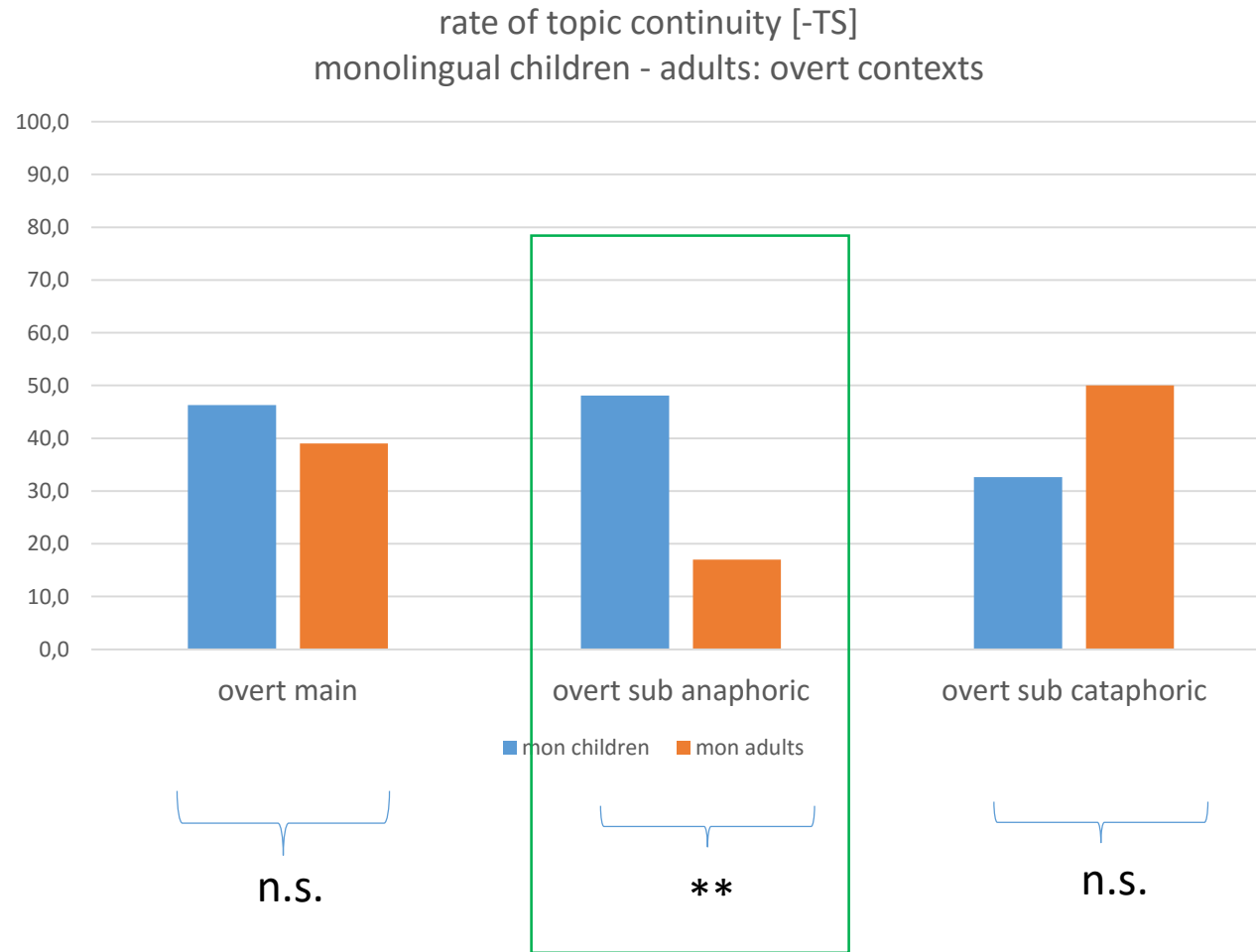
adult vs child monolingual speakers of EP: null subjects



- Similar rates of topic continuity between adult and child monolingual speakers
- No statistical differences (ANOVA with Gabriel post-hoc tests)
- Target-like behaviour with respect to null subjects.

Anaphora resolution in child Portuguese

adult vs child monolingual speakers of EP: overt pronominal subjects



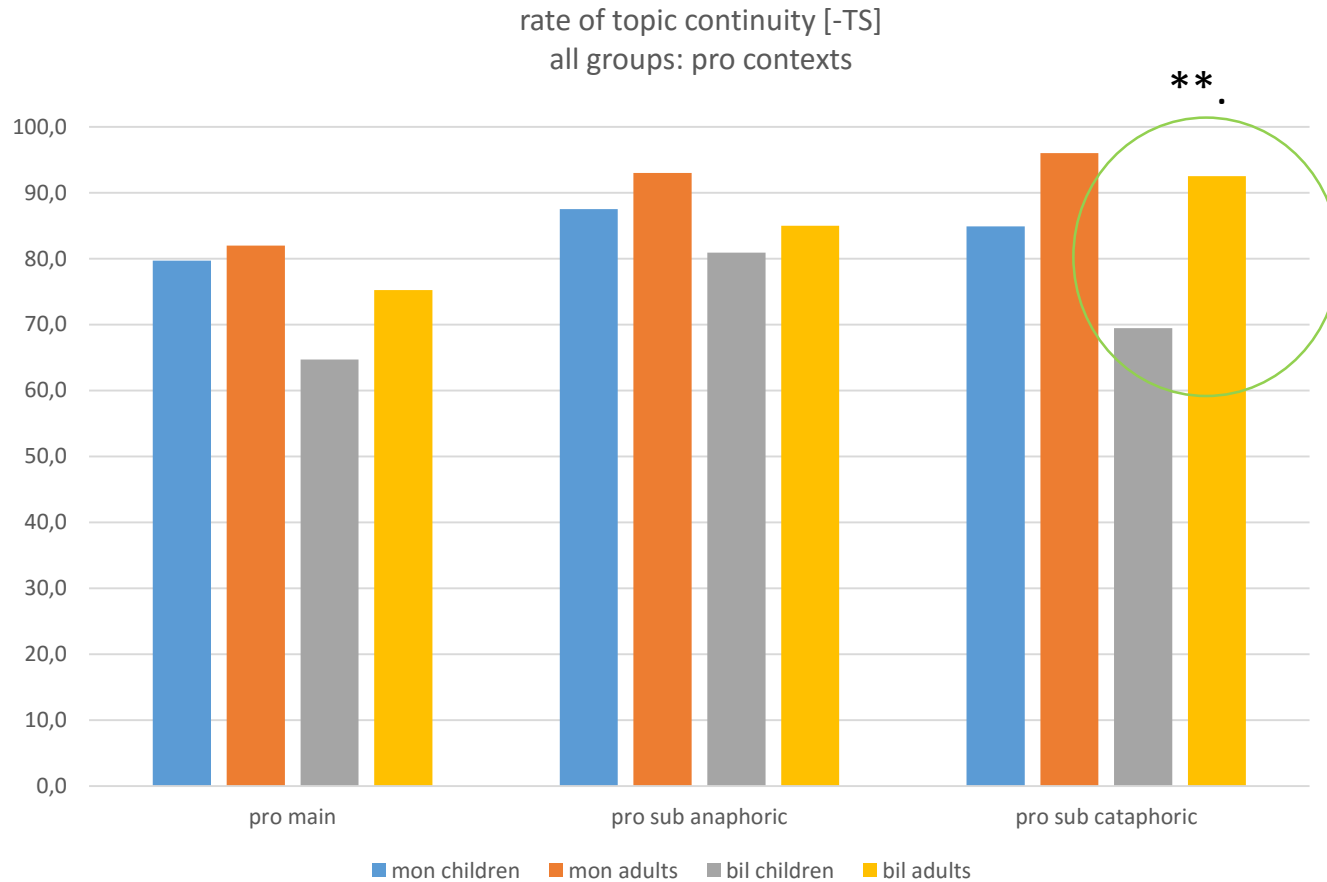
- Monolingual children are sensitive to overt pronouns in anaphora resolution (overall preference for [+TS]). They distinguish between overt and null contexts.
- Significant differences in intra-sentential anaphoric contexts.

Anaphora resolution in child Portuguese

- **General delay** in the acquisition of overt pronoun resolution (cf. Sorace et al. 2009 for 6-7 year old mon. Italian children, Papadopoulou et al. 2015 for 6-7.8 years old Greek children, Lobo & Silva 2015 for European Portuguese 8-9 year old children)
- According to Lobo & Silva (2015), delay is a result of: a) preferences instead of categoric decisions, b) variation in the adult grammar, c) integration of syntactic, semantic and pragmatic information
- **Acquisitional hierarchy:**

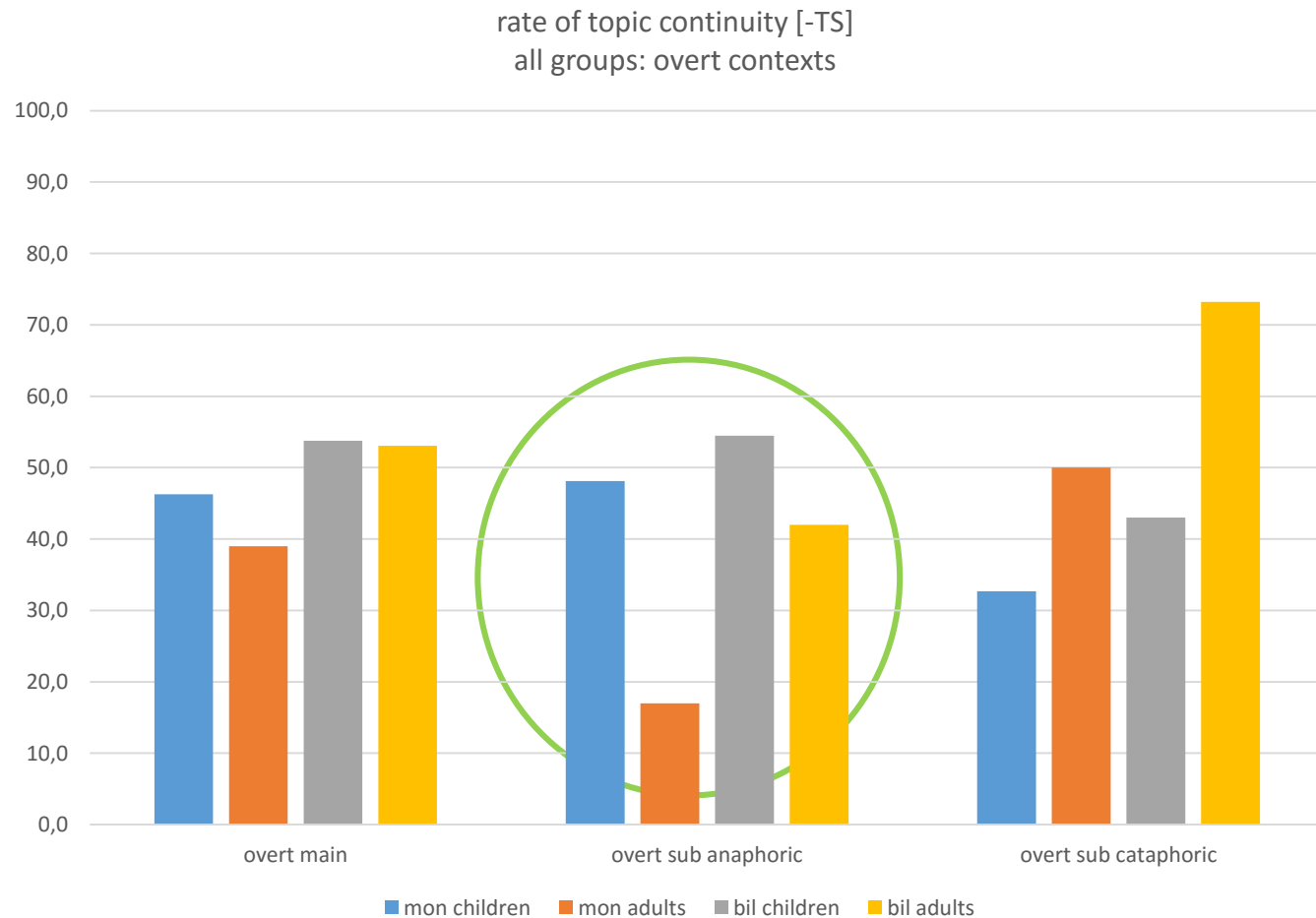
null anaphoric > null cataphoric > overt anaphoric > overt cataphoric

Anaphora resolution in heritage speakers: null subjects



- Bilingual adults show similar performance as monolingual adults;
- Bilingual adults differ from the bilingual children in the intra-sentential cataphoric context:
- This may be a reflex of Lobo & Silva's (2015) **acquisitional hierarchy**: anaphoric null > cataphoric null.
- This effect is no longer visible in the monolingual child group (older than Lobo & Silva's participants), but still there in the age-matched bilingual group.

Anaphora resolution in bilingual speakers: overt subjects



- Unlike monolingual adults, **bilingual adults maintain a more salient tendency to [-TS] in intra-sentential anaphoric context, such as the child groups.**
- Adult bilinguals also show a higher tendency to [-TS] in cataphoric contexts (but not statistically significant)

Summary and conclusions

- **PAS is valid in European Portuguese**: all monolingual and bilingual children and adults distinguish between null [-TS] and overt pronouns [+TS]
- **Weakening of the PAS in cataphoric and intersentential contexts** (interaction with other principles) affects only overt pronouns and leads to a higher acceptance rate of overt pronouns as [-TS]
- In child language acquisition, **overt pronoun resolution is delayed** (variation in the adult grammar, integration of different types of information, acquisition hierarchy)
- **Adult bilingual speakers do not differ in principled ways from monolingual adults: they differentiate between overt [+TS] and null [-TS]**, they show the same preferences in the null condition, they do not differ in the cataphoric and intersentential condition
- The **only difference** between monolingual and bilingual adults is found in the **anaphoric intrasentential** condition, where bilinguals overextend the use of overt pronouns in [-TS] contexts (such as children).

Summary and conclusions

- These findings cast **doubt on explanations which attribute the overuse of overt pronouns to CLI**, because:
 - Why should CLI be restricted to only one context of pronominal resolution?
 - [-TS] interpretation with overt pronouns is legitimate in European Portuguese: weakening of the PAS in a number of contexts (intersentential, cataphoric contexts, +contexts with only one possible antecedent (cf. Carminati 2002))
 - Adult bilinguals deviate from adult monolinguals in the same way as monolingual children do (until adolescence).
- More plausible „**a bilingual effect**“ - dealing with multiple grammars in a single mind; quantitatively less input (Sorace 2011, Kaltsa et al. 2015...)
- This effect is especially strong in relation to properties, which show **variation in the target** system, represent **a complex acquisition task** and are acquired relatively late in monolingual acquisition
- This is supported by preliminary results from Spanish-Portuguese bilinguals in Andorra.

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Takk, Danke, obrigada, thank you
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