

Bilingualism in Brazilian Portuguese

Evidence from an experimental study on Oku's Generalization

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1. Introduction. This paper offers the first experimental study on the interpretation of third null subjects in embedded clauses in Brazilian Portuguese. Saab (2020) has noted that, surprisingly, Brazilian Portuguese speakers do not reject Oku sentences (see (1)-(3)). According to the informal judgments Saab recollected, some speakers seem to accept both strict and sloppy readings for those null subjects (radical pro-drop behavior), whereas others only accept strict readings (consistent pro-drop behavior). Both reactions are unexpected under the accepted assumption that Brazilian Portuguese speakers are partial pro-drop speakers (Ferreira 2000, Rodrigues 2004, Holmberg 2005, among others). With the aim of further evaluating these judgments experimentally, we ran an experimental study (see section 3). Our main result is that there is no split among BP speakers. Oku sentences are indeed accepted but only under strict readings. This still calls for an explanation. Therefore, we propose (i) that Brazilian Portuguese does not allow for referential null subjects in embedded clauses, and (ii) that Oku sentences are interpreted from a L2 grammar acquired during schooling, a fact in consonance with other important results in Kato (2011) and Nunes (2019).

2. Oku's Generalization. Oku (1998) first observed that Spanish and Japanese differ in nontrivial ways as far as the interpretative properties of null subjects are concerned. Thus, while the null subject in the Japanese example in (1) is ambiguous between a strict and a sloppy reading, according to which either John thinks that Mary's proposal will be accepted or his(=John) own proposal will, the null subject in (2) only admits the strict reading, according to which the empty subject can only refer to María's proposal and not to John's:

Japanese: strict reading OK, sloppy reading OK

- (1) a. Mary-wa [zibun-no teian-ga saiyo-sare-ru-to] omotteiru.
Mary-TOP [self-GEN proposal-NOM accept-PASS-PRES-COMP] think
'Mary₁ thinks that her₁ proposal will be accepted.'
- b. John-mo [*e* saiyo-sare-ru-to] omotteiru.
John-also [*e* accept-PASS-PRES-COMP] think
Lit. 'John also think *e* will be accepted.'

Spanish: strict reading OK, sloppy reading *

- (2) a. María cree que su propuesta será aceptada.
María believes that her proposal be.fut accepted
'María believes that her proposal will be accepted.'
- b. Juan también cree que *e* será aceptada.
Juan also believes that it be.fut accepted
'Juan also believes that it will be accepted.' [Oku 1998: 165]

According to Oku, and subsequent literature, this fact adds a new piece of evidence for the claim that radical and consistent pro-drop languages are qualitatively different as far as the null subject parameter is concerned.

3. Experimental evidence in Brazilian Portuguese. As advanced, Brazilian Portuguese speakers do not mark sentences like (3B) as ungrammatical, besides the well-known fact that partial pro-drop languages do not license referential third person null subjects in embedded clauses.

- (3) A: João disse que sua proposta será aceita.
J. says that his proposal will-be accepted
'J. says that his proposal will be accepted.'
- B: Pedro também disse que [*e*] será aceita.

P. also says that will-be-accepted
 ‘P. also says that it will be accepted.’

3.1. Experiment. We ran a Force-choice task of comprehension hosted on Qualtrics, with the following independent variables: Structure (ellipsis / no ellipsis), Animacy ([+animate] / [-animate]), and Education (high level / no high level) and the following dependent variables: sloppy and strict readings.

3.2. Participants. Brazilian Portuguese speakers from Baixada Fluminense zone in the state of Rio de Janeiro. For the analysis, we considered 32 participants. There were two groups of speakers: 16 with higher level and 16 without higher level. They were all over 18 years old. None were bilingual speakers, nor were students of Arts or Linguistics.

3.3. Procedure. The survey was distributed by email and social media. We followed the ethic protocol. On the same page they could read the terms of consent approved by the ethics committee. Participants received basic information with instructions, with no specific details about the study objectives. Before the task, they had to fill in a sociolinguistics (zone, age, education degree) and language background questionnaire (if or not bilingual). Whenever the participant did not meet one of the required criteria, the survey was automatically terminated. The same number of lists was programmed for each group of participants. In the end, they received a “thank you” message.

3.4. Material. We used four experimental conditions: E[-A] (ellipsis / [-animate] referent), E[+A] (ellipsis / [+animate] referent), NE[-A] (no ellipsis / [-animate] referent), and NE[+A] (no ellipsis / [+animate] referent), and designed four experimental sets with 16 experimental sentences (four for each experimental condition) and 32 fillers. It had a Latin Square distribution and a within-subjects design. Participants were exposed to four sets of each four experimental conditions, not to more than one version of an experimental item (i.e., there was no repetition).

4. Discussion. The results confirm our initial hypothesis that there is no split among our BP participants. They reject sloppy readings and interpret the relevant Oku sentences as pro-drop speakers. In addition, we noticed no effect on animacy and no relevant differences between overt and null subject sentences, again behaving as pro-drop speakers in this respect. Since partial pro-drop speakers do not allow referential null subjects in general, we conjecture that they resolve Oku sentences by using a sub-grammar acquired during schooling. This sub-grammar could be comparable to what is observed in L2 acquisition. As is well-known, what they acquire is based on a normative version of European Portuguese, a consistent pro-drop language. Now, this explanation does not generalize to other embedded null subject environments, e.g., a referential null subject reading is not allowed in examples like (4):

- (4) O João_i disse que [e]_{i/*k} comprou um carro.
 the J. said that bought a car
 ‘João said that he(=João) bought a car.’

We conjecture that this is because in this case, BP’s L1 grammar *does* license a bound null subject consistent with the partial pro-drop properties. This leads to the idea that the L2 acquired during schooling is activated only when needed and under explicit exposure.

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