Like other null-subject languages, European Portuguese (EP) has two types of subject pronouns (null and overt pronouns) that differ in their preferences to retrieve antecedents. Several studies have shown different syntactic and semantic biases for each pronominal form, either in EP or in other null-subject languages. The findings have been explained by the Antecedent Position Hypothesis (Carminati, 2002), (APH): the null pronoun prefers an antecedent in the Spec IP position while the overt pronoun prefers an antecedent in other syntactic positions. However, other properties that may constrain the interpretation of the pronouns have received less attention in the literature. One of those is the animacy of the antecedents. Unlike English, EP does not have a specific pronoun for inanimate entities and both pronominal forms can, theoretically, retrieve them. Yet, Cardinaletti & Starke (1999) notice a semantic difference between overt (strong) and null pronouns: null pronouns, unlike strong pronouns, are not semantically constrained for human or animate features. A corpus study (Barbosa, Duarte & Kato, 2005) also shows that in EP, unlike Brazilian Portuguese (BP), the overt pronoun tends to recover only animate antecedents.

This semantic effect, however, has not been investigated systematically with EP speakers. To test whether the overt pronoun is sensitive to the animacy of the antecedent, we used a moving window self-paced reading task with 26 undergraduate students reading 24 complex sentences initiated by a subordinate clause with subject (always animate) and object (either animate or inanimate) antecedents. In the matrix clause, the overt pronoun retrieved unambiguously (by gender agreement) the antecedent in object position, its preferable antecedent according to the APH. A yes/no comprehension question always followed, retrieving the object antecedent. Reading times were recorded for all regions, including the comprehension question, using PschoPy software. Accuracy of answer was also recorded. Reading times on the pronoun region were analysed by fitting a linear-mixed effects models using the 1mer function from the lme4 package in R. We found a significant effect ($\beta= 0.92; SE= 0.37; t=2.46; p=.01$) when the overt pronoun was forced to retrieve the inanimate antecedent and this was in the expected direction: slower reading times for inanimate antecedents.

We conclude the observed effect is due to animacy restrictions of the overt pronoun. This effect is in line with the assumption that EP has strong pronouns and that they favour animate antecedents.