

# Are Non-native Speakers Sensitive to Microvariation in Anaphora Resolution? The Case of Italian Learners of European Portuguese

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## 1. Introduction

Over the past decades, a large body of research focusing on the syntactic and discourse conditions which govern the interpretation of overt and null subject pronouns in consistent null subject Romance languages (NSRLs) has revealed that, in native grammars, overt subject pronouns tend to mark topic shift and are typically assigned to a non-subject antecedent, either an antecedent in object position or an extra-linguistic referent, whereas null subjects tend to be used to mark topic continuity and are generally assigned to an antecedent in subject position (e.g., Carminati, 2002; Alonso-Ovalle et al., 2002; Filiaci, 2010). This is illustrated for Italian and European Portuguese (EP) in (1) below (the Italian example is taken from Carminati, 2002, p. 58).

- (1) a. Quando Mario<sub>i</sub> a telefonato a Giovanni<sub>j</sub>, lui<sub>j</sub> / pro<sub>i</sub> aveva appena finito di mangiare. (Italian)  
when Mario has called to Giovanni he had only finished of eat-INF
- b. Quando o Mário<sub>i</sub> telefonou ao João<sub>j</sub>, ele<sub>j</sub> / pro<sub>i</sub> tinha acabado de comer. (EP)  
when the Mário called to.the João he had finished of eat-INF  
'When Mario/Mário called Giovanni/João, he had just finished eating.'

According to Carminati (2002), these interpretative preferences correspond to a parsing strategy, known as the *Position of Antecedent Strategy* (PAS), which determines that, in intra-sentential contexts, “the null pronoun prefers an

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antecedent which is in the SpecIP position, while the overt pronoun prefers an antecedent which is not in the SpecIP position” (p. 57). She shows that adult native speakers of Italian are faster at processing complex sentences such as (1) if the context favours the preferred interpretation of the subject pronoun (i.e., coreference with the subject antecedent for the null subject and coreference with the object antecedent for the overt subject pronoun) than if the context disfavours these interpretations (in which case, the penalty is more severe for null than for overt subject pronouns).

However, recent studies have indicated that there may be variation in the antecedent preferences of subject pronouns in NSRLs. For example, overt pronominal subjects appear to allow subject antecedents more easily in Spanish than in Italian (Filiaci, 2010; Filiaci, Sorace & Carreiras, 2013). According to Filiaci, Sorace & Carreiras (2013), these differences in the resolution of overt pronominal subjects may be related to differences in the architecture of the pronominal systems of the two languages: while Italian has two types of overt subject pronouns (strong and weak), Spanish only has strong pronouns, which may explain the less categorical division of tasks between overt and null pronouns found in Spanish. Moreover, there is conflicting evidence regarding the resolution of null subjects in NSRLs, suggesting that, in some contexts, they may also allow object antecedents, at least in some languages (e.g., Carminatti, 2002; Sorace & Filiaci, 2006; Filiaci, 2010; Chamorro, 2018). For example, Sorace and Filiaci (2006) found that, in semantically ambiguous sentences as in (2) below (taken from Sorace & Filiaci, 2006:352), L1 Italian speakers display a very strong preference for the object antecedent for the overt pronominal subject (82%), but no clear antecedent preference for the null subject, which allows both a subject and an object antecedent (51% and 44%, respectively). This led Sorace and Filiaci (2006: 357-8) to the conclusion that “the pragmatic plausibility, topicality and accessibility (in terms of recency of presentation) of the complement all converge in overriding the PAS and its bias against non-subject referents”.

- (2) La mamma<sub>i</sub> dà un bacio alla figlia<sub>j</sub> mentre lei<sub>j</sub> /pro<sub>i</sub><sub>j</sub> si mette il cappotto  
 the mother gives a kiss to.the daughter, while she / pro REFL puts the coat  
 ‘The mother kisses the daughter while (she) puts the coat on’

The optionality observed in the interpretation of null subjects in these contexts may also be related to clause order. There is some evidence that, in Italian (and also in Spanish; see e.g., Chamorro, 2018), the PAS is adopted for null subjects when the order is subordinate-main, leading to a preference for antecedents in subject position (e.g., Carminati, 2002; Filiaci, 2010), but not when it is main-subordinate, in which case the null pronoun may recover either a subject or an object antecedent, as shown clearly in the results of Sorace and Filiaci’s (2006) study (see also Carminatti, 2002; Filiaci, 2010). However, clause order may not affect the resolution of null subjects in every language. For example, Lobo, Madeira and Silva (2017) found that the PAS preferences of null subjects were maintained in EP even with the order main-subordinate.

In addition to syntactic and discourse factors, semantic factors such as animacy may also play a role in anaphora resolution (Cardinaletti & Starke, 1999). For example, a few studies have suggested that, in some languages, at least some overt subject pronouns (but not null subjects) may be sensitive to the animacy of a potential antecedent. This appears to be the case of some overt pronouns in Italian (e.g., *lui* ‘he’), which are specified as [+human] (Cappellaro, 2017). Similarly, Morgado, Luegi and Lobo (2018) have suggested that, in the presence of two potential antecedents (one in subject position and the other in object position), native speakers of EP prefer to interpret the overt pronoun as coreferential with the object only when this is animate (as in (3a)); their findings indicate that this bias disappears if the object is inanimate (as in (3b)), in which case there is optionality in antecedent assignment (51% object antecedent and 49% subject antecedent).

- (3) a. Depois de o instrutor pintar o recruta [...], ele ficou camuflado [...]  
 After of the instructor paint-INF the recruit, PRON became camouflaged  
 ‘After the instructor painted the helmet [...], he was camouflaged [...]’  
 b. Depois de o instrutor pintar o capacete [...], ele ficou camuflado [...]  
 After of the instructor paint-INF the helmet, PRON became camouflaged  
 ‘After the instructor painted the helmet [...], it was camouflaged [...]’  
 (Morgado, Luegi & Lobo, 2018:280)

In a recent study comparing anaphora resolution in EP and Italian in intrasentential main – subordinate contexts, Madeira, Fiéis and Teixeira (2021) found that the two languages display similar resolution preferences only for overt subjects and when antecedents are animate, in which case the pronominal subject tends to retrieve the object antecedent in both languages. However, when the object is inanimate, the overt subject tends to recover the subject antecedent in Italian, but not in EP, where the preference for the object antecedent is maintained (in contrast with Morgado, Luegi & Lobo’s findings). The two languages also differ in the interpretation of null subjects: EP native speakers display a strong bias towards the subject antecedent, regardless of animacy, while Italian native speakers show no clear antecedent preference (in line with the judgements of Sorace & Filiaci’s participants). These findings are particularly relevant, as Madeira, Fiéis and Teixeira (2021) used an experimental design similar to the one used in the present study.

Hence, previous research indicates that there is microvariation in the resolution of pronominal subjects between EP and Italian. On the one hand, these two languages vary with respect to the weight attributed to the position and the animacy of the antecedent in the resolution of overt subject pronouns, which is determined predominantly by position in EP and by animacy in Italian. On the other hand, there is variation in the resolution of null subjects, which consistently follows the PAS in EP, but not in Italian.

In L2 acquisition, research on anaphora resolution has focused on the PAS, considering mostly contexts in which all potential antecedents are animate.

Overall, these studies have revealed that learners exhibit persistent optionality with overt pronominal subjects, but not with null subjects (e.g., Sorace, 2016; Sorace & Filiaci, 2006). The resolution of overt and null subject pronouns appears to be unaffected by L1 influence, as these patterns have also been found in learners whose L1 is a consistent null subject language (e.g., Lozano, 2006). These findings have been used as evidence in favour of the Interface Hypothesis (IH) (Sorace, 2011; Sorace & Filiaci, 2006). In its current version (Sorace, 2011), this hypothesis claims that, while core syntax and grammar-internal interfaces (e.g., syntax-semantics) are generally unproblematic at the end state of L2 acquisition, phenomena at external interfaces (e.g., syntax-discourse) are prone to permanent optionality due to processing difficulties associated with the cost of real-time integration of grammatical and extragrammatical information (Sorace, 2011, 2016). Therefore, the IH predicts that the syntax-discourse interface should be an area of permanent optionality regardless of the L1-L2 combination. Given that permanent optionality at the external interfaces is primarily caused by processing inefficiencies, Sorace (2011) proposes that this phenomenon is best captured by tasks that give insights into processing abilities, such as offline tasks with time pressure.

The asymmetry between internal and external interfaces predicted by the IH has been confirmed by several studies that tested the acquisition of both types of interface properties by the same groups of speakers (e.g., Serratrice et al., 2009; Tsimpli & Sorace, 2006). However, contrary to the predictions of the IH, a few studies have found evidence that properties at the syntax-discourse interface are not necessarily problematic (e.g., Slabakova & Ivanov, 2011; Rothman, 2009). On the other hand, there is also evidence that, in some cases, internal interfaces (e.g., Hopp, 2007; Kraš, 2011) can cause difficulties for near-native speakers.

Despite the extensive research conducted in this domain, many areas in the L2 acquisition of anaphora resolution are still not well understood. Although most research has concluded that overt subject pronouns are persistently problematic, there are a few studies that have found no evidence of such difficulties at advanced levels (Rothman, 2009). These findings raise doubts as to whether the resolution of overt subjects is necessarily an area of permanent optionality in L2 and, therefore, represent a challenge to the IH, as properties at the syntax-discourse interface are predicted by this hypothesis to be always problematic. Moreover, given that previous L2 studies on anaphora resolution have mostly considered contexts in which all potential antecedents are animate, it is unclear whether the animacy constraints on overt subject pronouns can be fully acquired, as would be predicted by the IH. Finally, since most studies to date have assumed that NSRLs behave alike regarding anaphora resolution (e.g., Sorace, 2016), it is not known to what extent L2 learners are sensitive to microvariation in this domain.

In order to contribute to a better understanding of these issues, the present study investigates the interpretation of subject pronouns in intra-sentential contexts in L2 EP by intermediate, advanced, and near-native Italian-speaking

learners, using two multiple-choice tasks (untimed and speeded). We consider the role of animacy in antecedent assignment and, given the differences between Italian and EP described above, examine whether learners are sensitive to microvariation in the resolution of subject pronouns. To this purpose, we address the following research questions:

**RQ1.** Are L1 Italian-L2 EP learners sensitive to L1-L2 differences regarding the role of animacy in overt subject resolution?

Based on the IH, we predict that near natives – but not necessarily advanced and intermediate learners – will perform target-like regarding animacy in untimed and speeded tasks, given that this is a semantic feature. More specifically, we predict that near natives will assign the overt pronominal subject to a non-subject antecedent, regardless of animacy.

**RQ2.** Are L1 Italian-L2 EP learners sensitive to L1-L2 differences regarding the strength of the subject antecedent bias in null subject resolution?

Based on the IH and previous research, we predict that Italian learners of L2 EP will perform target-like in null subject resolution at a near-native level – but not necessarily at advanced and intermediate levels –, assigning null subjects preferentially to antecedents in subject position in untimed and speeded tasks.

The paper is organised as follows: section 2 describes the methodology adopted in the study; section 3 presents the results of the two experimental tasks; and finally, in section 4, we discuss the results and present the main conclusions of the study.

## 2. Methodology

### 2.1. Participants

The participants in this study were 25 adult EP native speakers, 25 intermediate, 25 advanced, and 19 near-native Italian adult learners of L2 EP. Details about their profile are presented in Table 1.

**Table 1. Participants' profile**

|       | Group        | Age  |      | Age of onset |      | Years of residence in a Portuguese-speaking country |      |
|-------|--------------|------|------|--------------|------|---|------|
|       |              | M    | SD   | M            | SD   | M   | SD   |
| L2    | Near-native  | 34.4 | 10.4 | 25.4         | 6.9  | 5.0   | 1.7  |
| EP    | Advanced     | 26.4 | 8.5  | 21.8         | 8.8  | 1.4   | 2.2  |
|       | Intermediate | 27.9 | 7.6  | 21.7         | 3.9  | 3.1   | 10.6 |
| L1 EP |              | 29.0 | 9.3  | n.a.         | n.a. | n.a.  | n.a. |

As there is no standardized placement test for EP, we assessed learners' proficiency through an adapted version of the screening procedure used by Sorace and Filiaci (2006). All participants were individually interviewed in EP for about 5 minutes. Three EP native speakers subsequently evaluated learners' speech samples for pronunciation, morphology, syntax, vocabulary, fluency, and overall impression, using a grid with a 9 cm long straight-line below each criterion, labelled "non-native" at the left end and "native" at the right end. To turn the judges' ratings into discrete values, a transparency with a 9-cm line divided into an 18-point scale (each 0.5 cm = 1 point) was laid over the ratings. Table 2 shows the minimum scores required for a participant to be placed at each proficiency level.

**Table 2. Minimum scores required for each proficiency level**

| Proficiency level | Scores for syntax, morphology and vocabulary | Scores for each of the other criteria |
|-------------------|--|---------------------------------------|
| Near-native       | ≥ 17   | ≥ 16 (with a max. of one exception)   |
| Advanced          | ≥ 15   | ≥ 13 (with a max. of one exception)   |
| Intermediate      | ≥ 13   | ≥ 10 (with a max. of one exception)   |

## 2.2. Experimental design

We used two multiple-choice tasks (untimed and speeded) to elicit participants' interpretation preferences in complex sentences where the main clause is followed by a subordinate clause introduced by *quando* ('when'). The tasks were administered in random order and with a one-week interval between them.

Both tasks had a 2 x 2 design, crossing the following variables: animacy of the matrix object ([+animate] vs. [-animate]) and type of embedded pronominal subject (overt vs. null). There were 6 items per condition and as many fillers as experimental items. Sample experimental items are presented in Table 3.

**Table 3. Sample experimental items**

|                   | Null pronominal subject   | Overt pronominal subject   |
|-------------------|---|--|
| [+Animate] object | <i>O porteiro viu o professor quando [-] caiu das escadas.</i><br>The doorman saw the teacher when [-] fell from the stairs | <i>O porteiro viu o professor quando ele caiu das escadas.</i><br>The doorman saw the teacher when he fell from the stairs |
| [-Animate] object | <i>O menino viu o brinquedo quando [-] caiu da cadeira.</i><br>The boy saw the toy when [-] fell from the chair             | <i>O menino viu o brinquedo quando ele caiu da cadeira.</i><br>The boy saw the toy when he fell from the chair             |

In the untimed multiple-choice task, participants had to read a complex sentence, which was followed by an incomplete statement. Based on their preferred interpretation of the embedded subject, they had to select the most appropriate option to complete the statement. There were three options: the matrix subject, the matrix object, and neither the subject nor the object. Options appeared in random order. An example test item is shown in (4).

- (4) O porteiro viu o professor quando ele caiu das escadas.

The doorman saw the teacher when he fell from-the stairs

\_\_\_\_\_ caiu das escadas.

\_\_\_\_\_ fell from-the stairs

Options: o porteiro, o professor, nem o porteiro nem o professor  
the doorman, the teacher, neither the doorman nor the teacher

In the speeded multiple-choice task, a fixation cross appeared for 1500 ms, followed by a sentence, which appeared word by word, in a non-cumulative way, at a rate of 450 ms per word. After this auto-paced presentation, participants had to answer a multiple-choice question like the one in (4).

### 2.3. Statistical analysis

Statistical analysis was conducted on R (*lme4* package), using mixed-effects models with random effects for subjects and items. We conducted two types of analyses: (i) global analyses of each group's results, and (ii) analyses that aimed to determine whether each group made a significant difference between subject and object antecedents in each experimental condition (e.g., null subject x [+animate] object, in the near-native group). For reasons of space, only the latter will be reported in the present article. These analyses included the variable *antecedent* (subject vs. object) as a fixed effect, random intercepts for subjects and items, and by-subject random slopes for *antecedent*. The two levels within the fixed effect were contrast coded as 0.5 and -0.5. For each level, participants' answers were coded as 'chooses this antecedent' = 1 and 'does not choose this antecedent' = 0. As the selection rate of the option "neither the subject nor the object antecedent" was very low, ranging from 0% to 10%, these data were not included in the analyses reported here.

## 3. Results

### 3.1. Overt pronoun resolution

As shown in Figures 1 and 2, in the interpretation of overt pronominal subjects, the L1 EP group prefers the object antecedent in both tasks, regardless of animacy factors (O vs. S:  $ps < .001$ ).<sup>1</sup> As for learners, they only perform

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<sup>1</sup> For the complete statistical analysis of the differences between subject and object antecedent assignment in overt pronoun resolution, see Table 4.

consistently native-like in overt pronoun resolution in the animate condition, where they exhibit a clear preference for interpreting the overt subject as coreferential with the matrix object in both tasks and across proficiency levels ( $p \leq .00101$ ). In the interpretation of overt subjects in the inanimate condition, the only group that has a target-like preference for the object antecedent is the near-native group. This preference is observed in the untimed task ( $p < .001$ ), but not in the speeded task, where near-natives exhibit optionality, i.e., they assign the overt subject to the antecedent in either the subject or the object position ( $p = .3904$ ). The other L2 groups also display optionality in overt pronoun resolution in the untimed task when the matrix object is inanimate ( $ps \geq .1608$ ). Under time pressure, advanced learners maintain the same pattern of behaviour (O vs. S:  $p = .3919$ ), but intermediate learners do not. They resort to the L1 strategy of assigning the overt subject to the animate antecedent in the sentence, i.e., the matrix subject ( $p = .01155$ ). Thus, with the exception of the near-native group in the untimed task, all L2 groups display animacy effects in overt pronoun resolution.

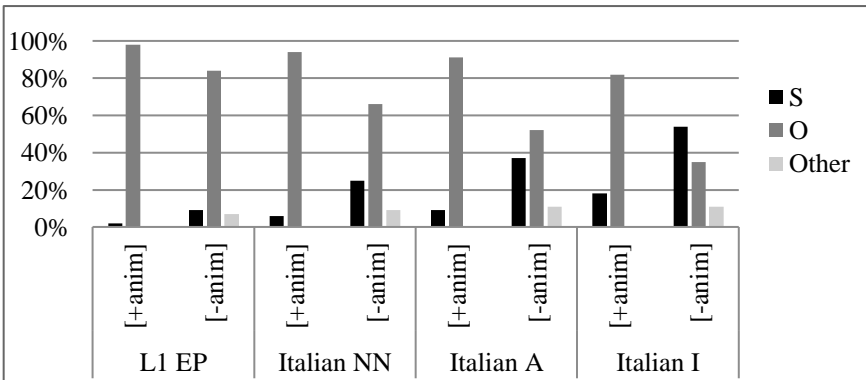


Figure 1. Interpretation of the overt subject in the untimed task

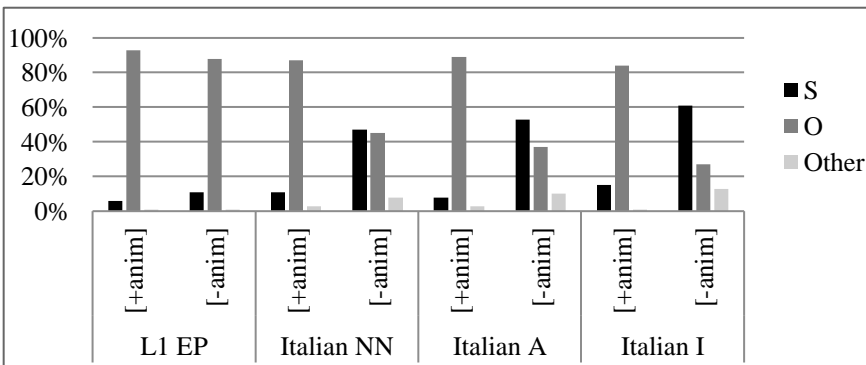


Figure 2. Interpretation of the overt subject in the speeded task



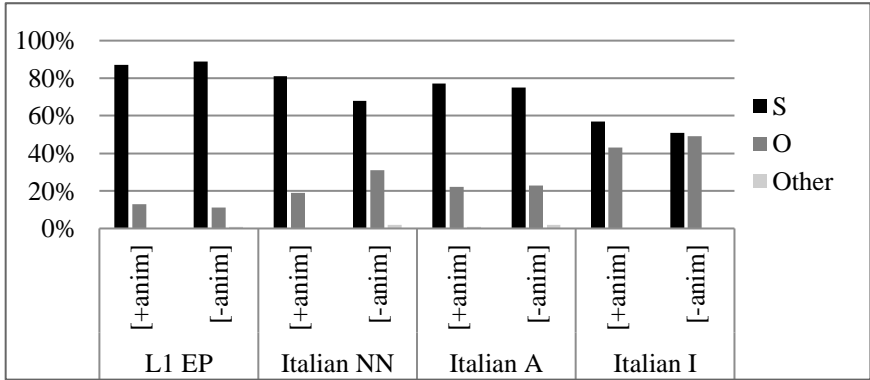
**Table 4. Difference between subject and object antecedent assignment in overt pronoun resolution**

| Group      | Task    | Animacy of the matrix object | Estimate | SE     | <i>p</i> |
|------------|---------|------------------------------|----------|--------|----------|
| L1 EP      | Untimed | [+ animate]                  | 8.0191   | 2.1686 | < .001*  |
|            |         | [- animate]                  | 20.5958  | 6.1322 | < .001*  |
|            | Speeded | [+ animate]                  | 5.6857   | .7117  | < .001*  |
|            |         | [- animate]                  | 5.7805   | 1.1346 | < .001*  |
| Italian NN | Untimed | [+ animate]                  | 6.3119   | 1.1939 | < .001*  |
|            |         | [- animate]                  | 4.0108   | 1.1735 | .0208*   |
|            | Speeded | [+ animate]                  | 5.4652   | 1.1055 | < .001*  |
|            |         | [- animate]                  | .7632    | .8885  | .3904    |
| Italian A  | Untimed | [+ animate]                  | 8.7611   | 2.6653 | .00101*  |
|            |         | [- animate]                  | 1.447    | 1.5551 | .3509    |
|            | Speeded | [+ animate]                  | 6.0416   | 1.0225 | < .001*  |
|            |         | [- animate]                  | .7606    | .8883  | .3919    |
| Italian I  | Untimed | [+ animate]                  | 6.0999   | 1.6664 | < .001*  |
|            |         | [- animate]                  | 1.1981   | .8543  | .1608    |
|            | Speeded | [+ animate]                  | 3.9245   | .5797  | < .001*  |
|            |         | [- animate]                  | 2.2483   | .8902  | .01155*  |

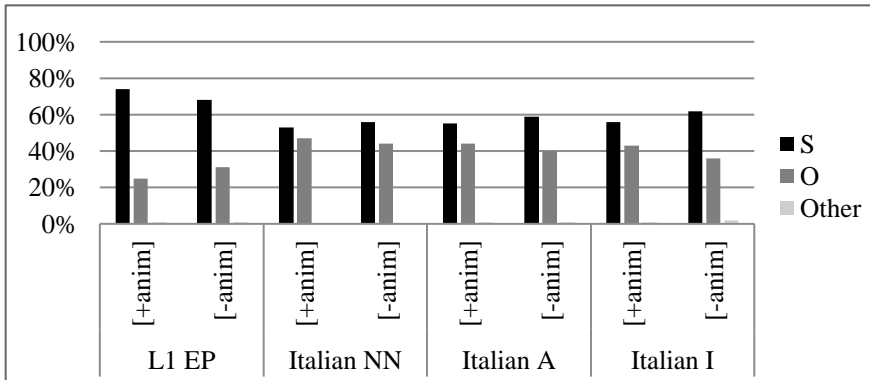
### 3.2. Null pronoun resolution

As shown in Figures 3 and 4, in the interpretation of null subjects, the L1 EP group has a clear preference for the subject antecedent in both tasks, regardless of animacy factors (O vs. S:  $ps \leq .00101$ ).<sup>2</sup> As for learners, only near-native and advanced groups display a target-like preference for the subject antecedent. Crucially, this preference is found in the untimed task ( $ps \leq .0296$ ), but not in the speeded task, where near-native and advanced learners exhibit optionality ( $ps \geq .106$ ). The intermediate group shows optionality in null subject resolution in all tasks and conditions ( $ps \geq .268$ ), except in the inanimate condition in the speeded task. Here they display a preference for assigning the null pronoun to the subject antecedent ( $p = .0133$ ).

<sup>2</sup> For the complete statistical analysis of the differences between subject and object antecedent assignment in null pronoun resolution, see Table 5.



**Figure 3. Interpretation of the null subject in the untimed task**



**Figure 4. Interpretation of the null subject in the speeded task**

**Table 5. Difference between subject and object antecedent assignment in null pronoun resolution**

| Group      | Task    | Animacy of the matrix object | Estimate | SE     | <i>p</i> |
|------------|---------|------------------------------|----------|--------|----------|
| L1 EP      | Untimed | [+ animate]                  | 5.8946   | 1.2359 | < .001*  |
|            |         | [- animate]                  | 10.7679  | 4.6000 | .0192*   |
|            | Speeded | [+ animate]                  | 3.2366   | .7899  | < .001*  |
|            |         | [- animate]                  | 2.7054   | .8228  | .00101*  |
| Italian NN | Untimed | [+ animate]                  | 4.9379   | 1.3788 | < .001*  |
|            |         | [- animate]                  | 3.5915   | 1.6514 | .0296*   |
|            | Speeded | [+ animate]                  | .3011    | .6924  | .664     |
|            |         | [- animate]                  | .7375    | .8205  | .369     |
| Italian A  | Untimed | [+ animate]                  | 6.0505   | 1.9377 | .00179*  |
|            |         | [- animate]                  | 4.2730   | 1.1794 | < .001*  |
|            | Speeded | [+ animate]                  | .6218    | .5424  | .252     |
|            |         | [- animate]                  | 1.4130   | .8729  | .106     |
| Italian I  | Untimed | [+ animate]                  | 1.1301   | 1.1777 | .337     |
|            |         | [- animate]                  | .0441    | .94319 | .963     |
|            | Speeded | [+ animate]                  | .7272    | .6563  | .268     |
|            |         | [- animate]                  | 1.4389   | .5815  | .0133*   |

#### 4. Discussion and conclusion

Before addressing the research questions, it is important to recall that, in Italian and EP, anaphora resolution differs in two respects (cf. section 1): (i) the resolution of overt subjects in the presence of inanimate object antecedents (in Italian, overt subject pronouns tend to be assigned to animate antecedents, while, in EP, this preference does not exist), and (ii) the resolution of null subjects (in Italian, there is optionality, while, in EP, there is a clear preference for subject antecedents). Our research questions focused precisely on these two areas of microvariation.

The first question asked whether L1 Italian-L2 EP learners are sensitive to L1-L2 differences regarding the role of animacy in overt subject resolution. We found that, in the resolution of overt subjects, Italian learners of EP behave target-like when the object is animate, assigning it to an object antecedent. However, in the inanimate condition, this target-like behaviour is only found at the near-native level, and only in the untimed task, because, in the speeded task, even the group of near-natives exhibits optionality. Thus, these results show that learners become sensitive to microvariation regarding the semantic constraints on overt subject resolution at a near-native level (as seen in the untimed task), but their performance remains permanently unstable in this area (as seen in the speeded task), which is not in line with our first prediction.

The second research question asked whether L1 Italian-L2 EP learners are sensitive to L1-L2 differences regarding the strength of the subject antecedent bias

in null subject resolution. Our results show that only near-native and advanced learners perform target-like as they tend to interpret the null subject as coreferential with the subject antecedent, but this is only visible in the untimed task. In the speeded task, on the contrary, our L2 learners display optionality in the resolution of null subjects even at the near-native level. These results indicate that learners become sensitive to microvariation in null subject resolution at an advanced level (as seen in the untimed task). However, once again, their performance remains permanently unstable in this area (as seen in the speeded task), which runs counter to our second prediction.

Our results challenge three key ideas conveyed in previous studies (cf. section 1). First, by showing that the semantic constraints on overt subject resolution are a source of difficulties even for near-natives, our findings bring into question the prediction of the IH that grammar-internal interfaces are not persistently problematic in an L2. Second, this study disputes the commonly held idea that overt subjects – but not null subjects – are problematic in L2 anaphora resolution, as it shows that overt subject resolution poses no difficulties in the contexts where the L1 and the L2 are similar (i.e., contexts where all the antecedents are animate), even at the intermediate level, and that, on the other hand, null subject resolution remains an area of optionality, even at the near-native level. Finally, our research findings point to the importance of L1 influence in L2 anaphora resolution, which is a factor played down in previous studies. This is because Italian learners of EP only exhibit persistent problems in the two areas where the L1 and the L2 differ.

Given that near natives' problems are found in the speeded task but not in the untimed task, they are likely to be caused by processing inefficiencies and not by representational deficits. Note that, as anaphora resolution is not explicitly taught in L2 classes and learning materials, participants were unlikely to have explicit knowledge about this phenomenon that they could use in the untimed task. As a consequence, their results in this task should reflect their implicit knowledge representations. Thus, if a participant performs target-like in the untimed task and non-target-like in the speeded task, this difference is unlikely to result from the fact that an untimed task gives participants unlimited time to access and use their explicit knowledge. Therefore, the most plausible cause for such a difference is that the speeded task is more sensitive to processing inefficiencies.

Summing up, the present study shows that learners become progressively sensitive to microvariation as L2 proficiency increases. However, their performance remains permanently unstable in the areas where the L1 and the L2 differ. These findings challenge the idea that the L1 plays a minor role in anaphora resolution.

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