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Recovery effects in L1 attrition: a study on anaphora resolution in Italian

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Abstract

After many years in a second language (L2)-environment, speakers may experience problems in their native language (L1): this phenomenon is known as attrition. Our question is whether these speakers show recovery effects after a re-immersion to their country of origin. In order to address this question, we investigated whether L1 attrition effects on anaphora resolution decrease with L1 re-immersion, by testing twice two groups of Italian native speakers, one functionally monolingual (21 participants), and the other one made up of late bilingual speakers of Swedish (20 participants). The group of late bilinguals consisted of adult native speakers of Italian who had left Italy after puberty and had lived in Sweden for at least seven years. The group of monolinguals consisted of adult native speakers of Italian who grew up in Italy, where they are currently living. Both groups had to identify the antecedents of overt and null pronouns in Italian sentences in an offline comprehension experiment. The material consisted of 20 target sentences (10 with a null pronoun and 10 with an overt pronoun) and 70 fillers. Each sentence was followed by a comprehension question, where participants had to choose between either a subject antecedent or an object antecedent, by pressing button “1” or “2” on the keyboard. We measured preferences, response times and reading times. According to the “Position of Antecedent Strategy” (Carminati, 2002), when interpreting intra-sentential anaphora, Italian null pronouns are generally assigned to the antecedent in the highest SpecIP, usually the subject, whereas overt pronouns are generally assigned to an antecedent in the lower syntactic position, usually the object (1). In Swedish, on the contrary, null pronouns in finite clauses do not exist, and this gives raise to ambiguity with respect to the antecedent of the pronoun (2).

(1) Monica ha discusso molto con Antonella da quando pro lei è tornata da Parigi.  
‘Monica has discussed a lot with Antonella since she came back from Paris.’

(2) Andreas lärde känna Jonas när han arbetade på en privatklinik.  
‘Andreas met Jonas when he was working in a private clinic.’

The bilinguals were re-immersed to their L1: we tested them once before their summer holidays in Italy and once directly after. Additionally, the control group was also tested twice. We hypothesize that, if attrition effects are temporary rather than permanent (i.e., Chamorro, Sorace, & Sturt, 2015), the bilinguals will show an improvement in terms of antecedent assignment and response times in the second session, while the control group will not. Our results show that the bilinguals differ significantly from the monolinguals in terms of overall preferences ($p=0.014$). Figure 1 shows a difference between bilinguals and monolinguals in the antecedent assignment for the overt pronoun in the first session. This difference almost disappears in the second session, after the L1 re-immersion.

Figure 1: Response proportions.
Compared to monolinguals, we found larger variability in both sessions of the bilinguals’ data for the null pronoun condition (Fig. 2), a result that is not consistent with previous findings that attrition effects are limited to overt pronouns (i.e., Tsimpli, Sorace, Heycock, & Filiaci, 2004).

**Figure 2:** Distribution of preferences.

![Graph showing distribution of preferences between monolinguals and bilinguals for null and overt pronouns in sessions 1 and 2.]

In terms of response times Figure 3 suggests that, in session 1, the bilinguals are faster in the null pronoun condition, compared to the overt pronoun condition. However, in session 2, this pattern is completely the opposite. On the other hand, the monolinguals are always faster in the overt pronoun condition rather than in the null pronoun condition. Finally, for reading times, data show no difference between sentences containing null pronouns and sentences containing overt pronouns, for both groups (Fig. 3). This element is important to demonstrate that sentences have the same level of difficulty.

**Figure 3:** L1 re-immersion effect in reading times and response times.

![Graph showing the re-immersion effect in reading times and response times for bilinguals and monolinguals across sessions.]

We found an unexpected change in the second session in the control group: the monolinguals improve in terms of preferences only in the null pronoun condition (Fig. 1), and, in terms of RT, they become faster in the second session (Fig. 3). Taken together, these findings suggest that, in anaphora resolution, L1 attrition effects are observable especially on overt pronouns, but attrition has an impact on null pronouns too. These attrition effects seem to decrease with L1 re-immersion but the training effect found in the control group do not allow us to make a strong conclusion.

**References**

