

Repeated names, pronouns and null pronouns in Brazilian Portuguese and Italian

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The choice of anaphor form, such as a repeated name, overt pronoun, or null pronoun is heavily influenced by antecedent salience. Gordon et al. (1993) showed that, in English, repeated names are harder to process than pronouns when the antecedent is the grammatical subject. This *repeated name penalty* (RNP) has also been elicited in Chinese (Yang et al., 1999), a pro-drop language. Gelormini-Lezama & Almor (2011) extended the RNP to Spanish, a null subject language, but also found an *overt pronoun penalty* (OPP) such that sentences with null pronouns are read faster than sentences with overt pronouns when the antecedent is salient. Almor's (1999) Informational Load Hypothesis (ILH) explains anaphor processing as reflecting a balance between discourse function and processing cost: null pronouns are least costly and are linked to subject antecedents, and therefore, heavier anaphors are expected to cause a processing delay. The present work further tested this explanation by testing the RNP and OPP in two other null subject languages: Brazilian Portuguese and Italian. Brazilian Portuguese has been subject to recent loss of its verbal morphology and some researchers have claimed that it has become a non-pro-drop language (Duarte, 1995).

We used a self-paced sentence-by-sentence reading paradigm with two-sentence discourse items and a 2x3 design with factors Antecedent Salience and Anaphor Form (see Table 1). Sentence 1 introduced two names, which appeared in subject or object position. Sentence 2 made reference to the relevant proper name (*John*) with either (a) a repeated name, (b) an overt pronoun, or (c) a null pronoun. In both languages, we found a main effect of Antecedent Salience (*Italian*: $F_1(1,37)=6.58, p<0.02$; $F_2(1,35)=7.72, p<0.01$; *Brazilian Portuguese*: $F_1(1,44)=46.90, p<0.001$, $F_2(1,35)=43.43, p<0.001$, no main effect of Anaphor Form (F 's<1) and an interaction between the two factors (*Italian*: $F_1(2,74)=13.58, p<0.001$, $F_2(2,70)=5.57, p<0.01$, *Brazilian Portuguese*: $F_1(2,88)=9.21, p<0.001$, $F_2(2,70)=9.09, p<0.001$). To explore this interaction we ran two-way ANOVAs comparing reading times of sentences containing: (a) repeated names vs. null pronouns, (b) overt pronouns vs. null pronouns. We found an interaction effect in both languages such that sentences with null pronouns were read faster than sentences with repeated names (*Italian*: $F_1(1,37)=25.09, p<0.001$, $F_2(1,35)=11.40, p<0.01$, *Brazilian Portuguese*: $F_1(1,44)=38.13, p<0.001$, $F_2(1,35)=14.60, p<0.001$) and also faster than sentences with overt pronouns (*Italian*: $F_1(1,37)=13.42, p<0.001$, $F_2(1,35)=6.30, p<0.02$, *Brazilian Portuguese*: $F_1(1,44)=10.12, p<0.01$, $F_2(1,35)=36.65, p<0.001$), when the antecedent was in subject but not in object position.

These results indicate that the RNP and the OPP occur in Brazilian Portuguese and Italian. The OPP in Brazilian Portuguese is interesting because of the high frequency of overt pronoun use in this dialect. This shows that the processing cost associated with anaphora in reading is not a mere reflection of general production patterns. Instead, in line with the ILH, we propose that the extra semantic features of repeated names and overt pronouns, relative to null pronouns, impose an unnecessary cost when the antecedent is salient.

Table 1.

		Antecedent Salience	
Sentence	Anaphor Form	Subject	Object
S 1		<i>John met Mary.</i>	<i>Mary met John.</i>
S 2	Repeated Name	<i>John found her sad.</i>	
S 2	Overt Pronoun	<i>He found her sad.</i>	
S 2	Null Pronoun	<i>(Null) found her sad.</i>	

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