

Refining salience and the Position of Antecedent Hypothesis: a study of Catalan pronouns

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Introduction: This paper presents an experiment that investigates which factors govern the referring preferences of two types of subject pronouns in Catalan: null pronouns, with no phonological content, and overt pronouns, which carry gender and number features. Since it is generally assumed that the more reduced an anaphoric expression is, the more salient its antecedent will be (Ariel, 2001), the results of the experiment also contribute at defining which factors compose salience. The results support a multiple-factor model of salience, in which grammatical as well as pragmatic function play a role.

Background: Carminati (2002) has proposed that Italian pronouns are governed by the Position of Antecedent Hypothesis (PAH), which states that null pronouns tend to refer to the antecedent in [Spec, IP], while overt pronouns tend to refer to an antecedent lower in the sentence. She showed that the PAH holds in a variety of intrasentential contexts with online and offline experiments but did not test (i) whether the PAH holds intersententially and (ii) whether the PAH is a byproduct of the pragmatic structure of the sentence (subjects act frequently, but not necessarily, as topics).

Experiment: The experiment tests both (i) and (ii). In Catalan, pragmatic function is encoded through word order (Vallduví, 1992): preverbal material encodes the topic (where new information is introduced) and postverbal material the focus (the update potential of the sentence). Topics are usually realized as subjects and the resulting sentence is SVO. However, in a left-dislocation with a postverbal subject, the roles are inverted: the left-dislocated constituent acts as a topic and the postverbal subject is focal. The experiment tests the effect of both syntactic and pragmatic function. Word-order (SVO vs. OVS) and type of pronoun (null vs. overt) were crossed, creating four conditions (see (1)). The conditions for the 16 items were counterbalanced and incorporated into a questionnaire with 24 filler items and 5 practice items. Participants (n=32) read the two-sentence discourses and had to choose their preferred paraphrase ((2)).

Results and discussion: The results can be seen in (3): null pronouns show a subject preference (Conditions 1 and 2), regardless of its pragmatic function, while overt pronouns show an object preference, when the object is not the topic (Condition 3) and show no clear preference when the object is the topic (Condition 4). Null pronouns only seem to be sensitive to syntactic function, while overt pronouns are sensitive to both pragmatic and syntactic function (see the ANOVA analysis in (4)). These results support a notion of salience in which different factors play a role and different referential expressions are sensitive to different factors. In particular, both subjecthood and topichood add to salience, but the former has a larger weight than the latter. The null pronoun is the default pronominal form and exhibits a preference for the most salient entity, the subject, which remains the most salient entity even if it is not the topic. In contrast, overt pronouns have more constrained preferences: they are constrained to refer to non-salient entities. When both factors contributing to salience (syntactic and pragmatic function) agree in marking a referent as non-salient, this is the one the pronoun will prefer. When both factors do not agree (one potential antecedent is subject, but non-topic and the other is non-subject but topic), both potential antecedents have an intermediate degree of salience, there is no low-salient antecedent and, therefore, the overt pronoun does not show a clear preference for any of the candidates. Our results are very much in line with the study by Kaiser and Trueswell (2008). They carried out a sentence-completion study for two types of anaphoric expressions in Finnish: the pronoun *hän* and the demonstrative *tämä*, which can both be used pronominally. The relationship between Finnish word-order and pragmatic function is very similar to the one described for Catalan and this study also tested for the effect of word order. Their results showed that the pronoun *hän* exhibits a subject preference regardless of word order, while *tämä* has an object preference in SVO and a weak preference for the subject in the OVS conditions along with many non-pronominal demonstrative uses of *tämä*. These results converge towards the same analysis of salience as a non-homogenous concept made of several building blocks.

Conclusion: My experiment shows that null and overt pronouns in Catalan have different referential preferences. Null pronouns refer to the most salient antecedent, which is always the subject, even if it not

the topic (contra Frana (2007) or Samek-Lodovici (1996)). In contrast, the overt pronoun refers to a non-salient antecedent, if there is one. I also argue for a multi-factor notion of salience, in which both syntactic and pragmatic function play a role, but the former does so with a greater weight than the latter.

Data and results

- (1) a. Cond 1 (SVO + Null):
La Marta escrivia sovint a la Raquel. Vivia als Estats Units.
The Marta wrote frequently to the Raquel. Lived in the United States.
‘Marta wrote frequently to Raquel. [null] lived in the United States.’
- b. Cond 2 (OVS + Null):
A la Raquel, l’escrivia sovint la Marta. Vivia als Estats Units.
To the Rachel, clitic wrote frequently the Marta. Lived in the United States.
‘To Raquel, Marta wrote frequently. [null] lived in the United States.’
- c. Cond 3 (SVO + Overt):
La Marta escrivia sovint a la Raquel. Ella vivia als Estats Units.
The Marta wrote frequently to the Raquel. She lived in the United States.
‘Marta wrote frequently to Raquel. She lived in the United States.’
- d. Cond 4 (OVS + Overt):
A la Raquel, l’escrivia sovint la Marta. Ella vivia als Estats Units.
To the Rachel, clitic wrote frequently the Marta. She lived in the United States.
‘To Raquel, Marta wrote frequently. She lived in the United States.’
- (2) a. Marta lived in the Unites States.
b. Raquel lived in the United States.
- (3) Results in %

	subject antecedent	object antecedent
Cond 1: svo + null	60	40
Cond 2: ovs + null	58	42
Cond 3: svo + overt	35	65
Cond 4: ovs + overt	51	49

- (4) Type of pronoun is significant: F_1 ($F_1(1,31) = 7.02$, $p < 0.01$; $F_2(1,15) = 5.07$, $p < 0.05$).
The interaction between type of pronoun and word order is also significant, although it is only marginally significant by subjects: ($F_1(1,31) = 2.32$, $p = 0.07$; $F_2(1,15) = 3.06$, $p < 0.05$).

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