Refining salience and the Position of Antecedent Hypothesis: a study of Catalan pronouns
Laia Mayol
University of Pennsylvania

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 United States.

b. Raquel lived in the United States.

(3) Results in %

<table>
<thead>
<tr>
<th></th>
<th>subject antecedent</th>
<th>object antecedent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cond 1: svo + null</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>Cond 2: ovs + null</td>
<td>58</td>
<td>42</td>
</tr>
<tr>
<td>Cond 3: svo + overt</td>
<td>35</td>
<td>65</td>
</tr>
<tr>
<td>Cond 4: ovs + overt</td>
<td>51</td>
<td>49</td>
</tr>
</tbody>
</table>

(4) Type of pronoun is significant: F1 (F1(1,31) = 7.02, p < 0.01; F2(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: (F1(1,31) = 2.32, p = 0.07; F2(1,15) = 3.06, p < 0.05).

**References**


