



# Which factors affect the production of Overt pronouns in Catalan?

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# Goal

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Study the **production** of **Overt** pronouns in Catalan,

- in competition with Null pronouns and DPs (Names)
- in non-focal, non-contrastive contexts.

(1) L'Isaac va corregir la Mercè. La Mercè/Ella/∅ havia comès molts errors.

'Isaac corrected Mercè. Mercè/She/∅ had made lots of mistakes.

## Previous work in Romance

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Division of labor between Nulls and Overts.

**The Position of Antecedent Hypothesis (PAH)** (Carminati 2002): Nulls prefers an antecedent which is in Spec, IP position[...], while Overts prefer an antecedent which is not in the Spec, IP position.

- (2) Sofia ha chiamato Laura, mentra  $\emptyset$ / lei era in bagno.  
'Sofia called Laura, while  $\emptyset$ /she was in the bathroom.'

Similar contrast was found in **intersentential** contexts in Italian (Rose 2021)

For **Spanish**, biases for both pronouns are less clear (Chamorro 2018, Alonso-Ovalle et al. 2002, Leonetti et al. 20019)

## Previous work in Catalan

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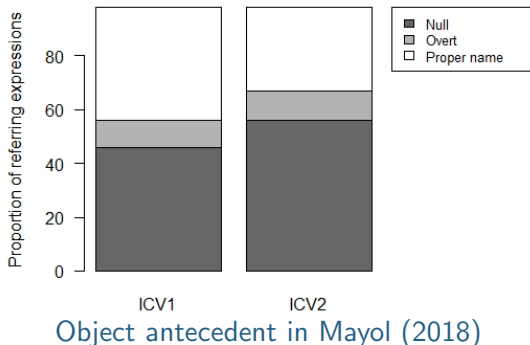
PAH is replicated intersessionally in a questionnaire study (Mayol and Clark 2010). In a discourse-completion study (Mayol 2018), we also found Overts more object-biased than Nulls.

- (3) La Núria va elogiar la Maria.  $\emptyset$ /Ella ....  
'Núria praised Maria.  $\emptyset$ /She ....'

In **production**, the picture is less clear: Overt pronouns are very scarcely produced to refer to the object (between 12.5% and 14%)

- (4) La Núria va elogiar la Maria. ....  
'Núria praised Maria. ....'

## Previous work in Catalan



- (5) La Núria va elogiar la Maria. **Ella** es va posar vermella.  
 'Núria praised Maria. She blushed.'

**Why aren't Overts used more often?**

## Predictability and pronominalization

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Implicit Causality Verbs (ICV):

- (6) a. ICV1: **Paul** amazed Charles.  
b. ICV2: Paul congratulated **Charles**.

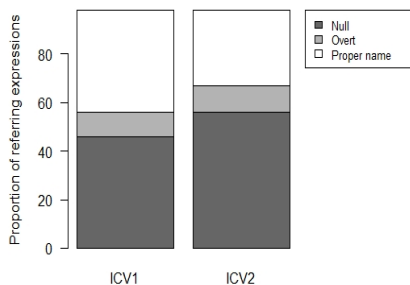
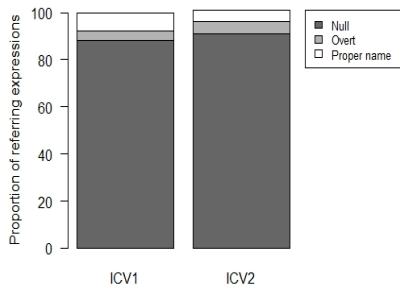
Semantic factors (like verb bias) make one referent more predictable.  
Does this affect the rate of pronominalization?

- **Expectancy Hypothesis** (Arnold 1999, 2001): More predictable referents are more accessible and are more likely to be pronominalized.
- **Bayesian account** (Rohde and Kehler 2014): Only structural factors (e.g. syntactic position) have an effect on pronominalization, semantic factors (e.g. verb bias) do not. (cf. Fukumura and Van Gompel (2010))

# Predictability and pronominalization

## Subject antecedent

## Object antecedent



Mayol (2018)

- (7) a. Tu: El Pol intimida el Carles (la Maria).  
'You: Pol intimidates Carles (Maria).'
- b. El teu amic: Per què?  
'Your friend: Why?'
- Discourse completion study: participants had to imagine they were talking to a friend and needed to answer a 'why' question.



- (1) a. Tu: El Pol intimida el Carles (la Maria).  
'You: Pol intimidates Carles (Maria).'
- b. El teu amic: Per què?  
'Your friend: Why?'

## 3 factors

- 1 Verb bias: Implicit causality verbs biased to the subject (ICV1) or the object (ICV2).
- 2 Antecedent position: Subject or object was underlined, indicating antecedent for the subject of the completion.
- 3 Ambiguity: The two entities in the context sentence were introduced with stereotypical proper names of either different gender or same gender.

- (1)
  - a. Tu: El Pol intimida el Carles (la Maria).  
'You: Pol intimidates Carles (Maria).'
  - b. El teu amic: Per què?  
'Your friend: Why?'
- 16 items critical items (8 ICV1s and 8 ICV2s) and 16 fillers.  
Four lists were generated, following a 2x2 design.

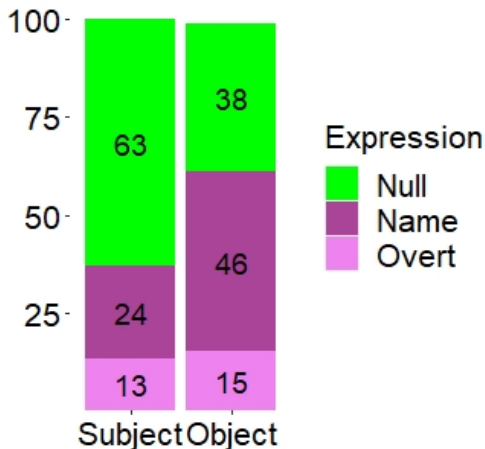
- ① Overts will be mostly used to refer to object antecedents.
- ② Verb bias is not expected to have an effect on pronominalization.
- ③ Overts will be produced more often in contexts in which they have the potential to disambiguate.

- 72 Catalan native speakers participated in the experiment, yielding 1152 (72\*16) completions.
- 161 (13.4%) completions excluded (ambiguous, nonfinite clause, introduced a 3rd referent, did not refer to the underlined referent).

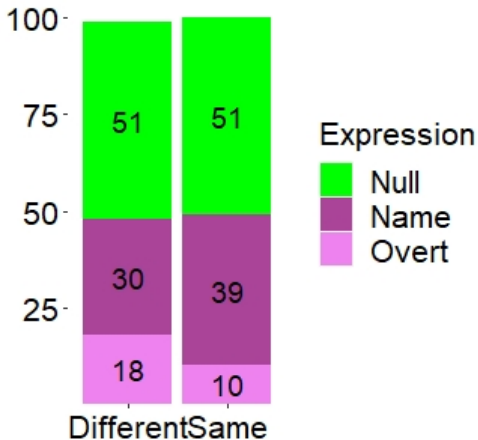
Referring expression of the subject in the 991 correct completions:

- Nulls (50.9%, N=504)
- Names (34.8%, N=345)
- Overt (14.1%, N=140)
- Others: Demonstratives (0.1%, N=1), right-dislocations (0.1%, N=1)

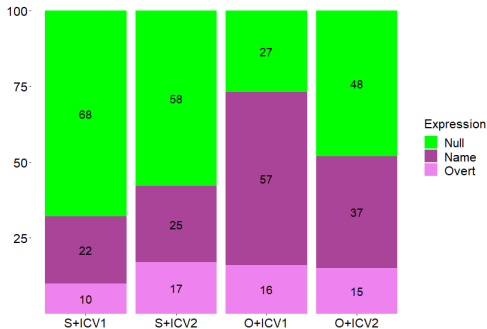
Subjects favor Nulls; Objects favor Names.



No effect of Ambiguity in Nulls. Overts are mildly favored in ambiguous contexts and Names in non-ambiguous contexts.



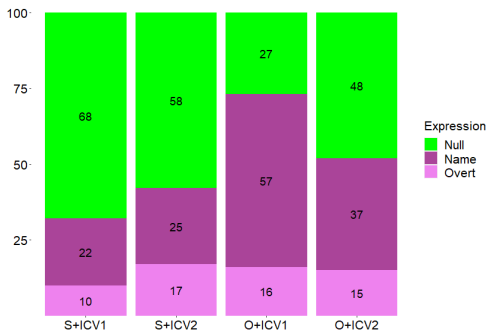
Syntactic preferences is modulated by verb bias:



Null's subject preference is stronger with the expected bias (ICV1) and their object dispreference stronger with the unexpected verb bias (ICV1).



Syntactic preferences is modulated by verb bias:



Names are favored in O+ICV1 and Overt are disfavored in S+ICV1.

Mixed-effect logistic regressions performed on two subsets of the data:

- **Overts vs. Names:** Overts are used significantly more in cases of **different gender**,  $b = 1.29$ ,  $p = .003$ , and for **subject antecedents**,  $b = 1.34$ ,  $p = .003$ .
- **Overts vs. Nulls:** Overts are used significantly more in cases of **different gender**,  $b = 1.32$ ,  $p = .02$ , and for **object antecedents**,  $b = -2.08$ ,  $p = .005$ . There is also a **syntactic function\*verb bias interaction**,  $b = 2.43$ ,  $p = .006$ : the probability of Overts is higher in the S+ICV2 and O+ICV1 combinations.

- ① Overts will be mostly used to refer to object antecedents. 😐
- ② Verb bias is not expected to have an effect on pronominalization. 😞
- ③ Overts will be produced more often in contexts in which they have the potential to disambiguate. 😄

What is the source of the differences between this study and previous work?

- Design differences: monologue vs. dialogue
- % of Nulls: 51% in this study and 70% in Mayol (2018)
- % of Nulls with subject antecedent: 63% in this study and 89% in Mayol (2018)

Why aren't Overts produced more often (to refer to a less salient antecedent)?

- Overts are not optimal: they are neither maximally economical to produce nor completely non-ambiguous.
- Nulls are ambiguous but highly economical form to produce.
- DPs are more costly to produced but are non-ambiguous.

## Which factors affect the production of Overt pronouns in Catalan?

Overt pronouns in Catalan are scarcely produced (in non-focal, non-contrastive contexts).

Which factors affect the production of Overt pronouns in Catalan?

- Favored when they have the potential to disambiguate.
- Disfavored in high salience contexts: S+ICV1

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**Thanks for your attention!**

Which factors affect the production of Overt pronouns in Catalan?

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