



UiT The Arctic University of Norway



Not all Clitics are Made the Same: Defective Agreement in Spanish Dative Clitic-Doubling.

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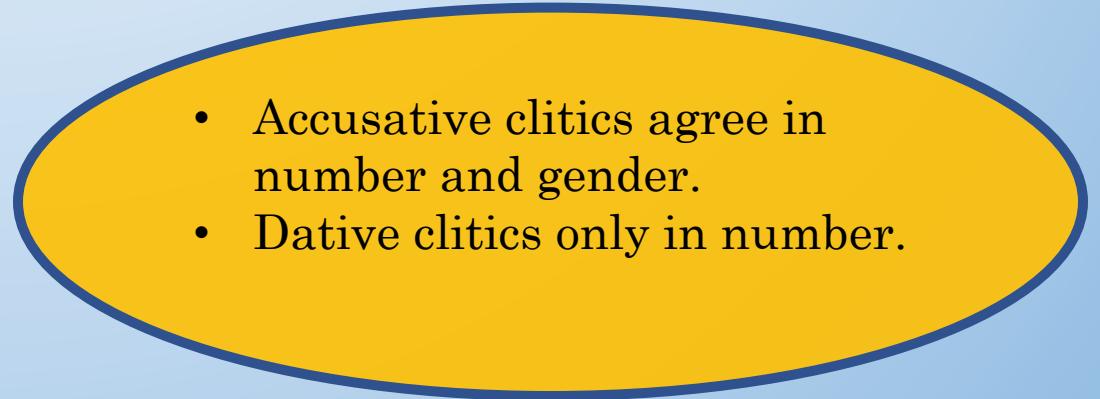


UiT Aurora Centre

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Clitic Doubling in Spanish

- Clitics can co-occur with their referential NPs under certain conditions.
 - **Accusative Clitics**
 - With preverbal objects and strong pronouns CD is obligatory.
 1. **[Esa pelicula] la vi anoche.**
‘I watched that movie last night’
 2. **Lo llamé [a él] pero no atendió.**
‘I called him but he didn’t pick up’
- **Dative Clitics**
 - They can always double.
 - 3. **Le dieron un premio [a Juan].**
‘They gave Juan a prize’
 - 4. **Les regalé un perro [a los chicos].**
‘I gave the kids a dog as a present’

- 
- Accusative clitics agree in number and gender.
 - Dative clitics only in number.

Defective Agreement

- Dative clitics do not always show agreement.
 - The singular clitic appears doubled with plural indirect objects.

5. Le daban aumento [**a los jubilados**]
SG PL

‘They gave a raise to pensionists’

• Argentina

6. Le meten miedo [**a los vecinos**].

‘They scare the neighbors’

• Ecuador

7. Ella le tiene pánico [**a los animales**].

‘She is terrified of animals’

• Spain

Defective agreement is constrained

- There are two contexts in which defective agreement cannot take place (to be expanded later)
 - Preverbal indirect objects:
8. [A los chicos] *le voy a dar un regalo sorpresa.
'I will give the kids a surprise present'
 - With no doubled NP:
10.
A: Le contaste [a los chicos] de la fiesta?
'Did you tell the kids about the party?'

B: Sí, *le conté cuando los vi.
'Yes, I told them when I saw them.'
- Full agreement is the only option in these two cases.
- These observations rule out the possibility that defective agreement may simply be a phonological process of [s]-weakening.

Research Questions

RQ.1. In those contexts in which defective agreement can occur, what factors favor the choice of clitic?

RQ.2. Why is defective agreement allowed in some clitic constructions but not in others?

Hypotheses

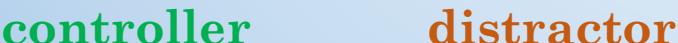
- i. Defective agreement is a result of number attraction from the DO onto the clitic because it is closer to the clitic than the IO is.

Prediction 1: *defective agreement will be more likely with intervening singular DOs than with intervening plural DOs.*

- ii. Defective agreement will be triggered by animacy features of both objects assuming (i) was correct.

Prediction 2: *if (i) is borne out, it can be expected that animacy of the DO may have a bigger effect on defective agreement than the animacy of the IO.*

Attraction Effects

- Attraction effects:
 - The phenomenon whereby the computation of agreement relations can be disrupted in the presence of alternative candidates (Bock and Miller 1991, Nicol et al. 1997).
e.g.: **The key** to **the cabinets** are there.

- Different types of dependencies can be subject to it:
 - Subject-verb agreement (Nicol et al 1997, Acuña-Fariña 2014)
 - Antecedent-pronoun agreement/concord (Bock et al. 1999, 2004)
- Asymmetrical phenomenon:
 - Plural distractor causes an attraction effect over a singular controller.
 - A singular distractor does not (seem to) cause an attraction over a plural controller (Nicol et al. 1997, Wagers et al. 2009)
e.g.: The keys to the cabinet is there.

Theoretical Background

- What syntactic position do the clitic and the doubled NP occupy when clitic doubling is obligatory?
 - In these contexts, the coreferential phrase is claimed not to occupy an argument position (Roca 1992).
 - Preverbal NPs are base-generated in that position.
 - Strong pronouns are generated in a right-dislocated position.
- So this suggests that in these cases the clitic is the true argument of the verb.

Methodology

- **The Data**

- A corpus study of 21 dialects from *Corpus del español*.
- Sentences with definite IOs and all types of DOs were extracted (definite, indefinite, bare, sg, pl, fem, masc).
- The clitic could be pre- or postverbal.
- The data was annotated for 15 predictor variables.
- 2376 sentences were extracted in total.

- **The Analysis**

- Conditional inference trees and mixed-effects logistic regression

Predictor Variables and Levels

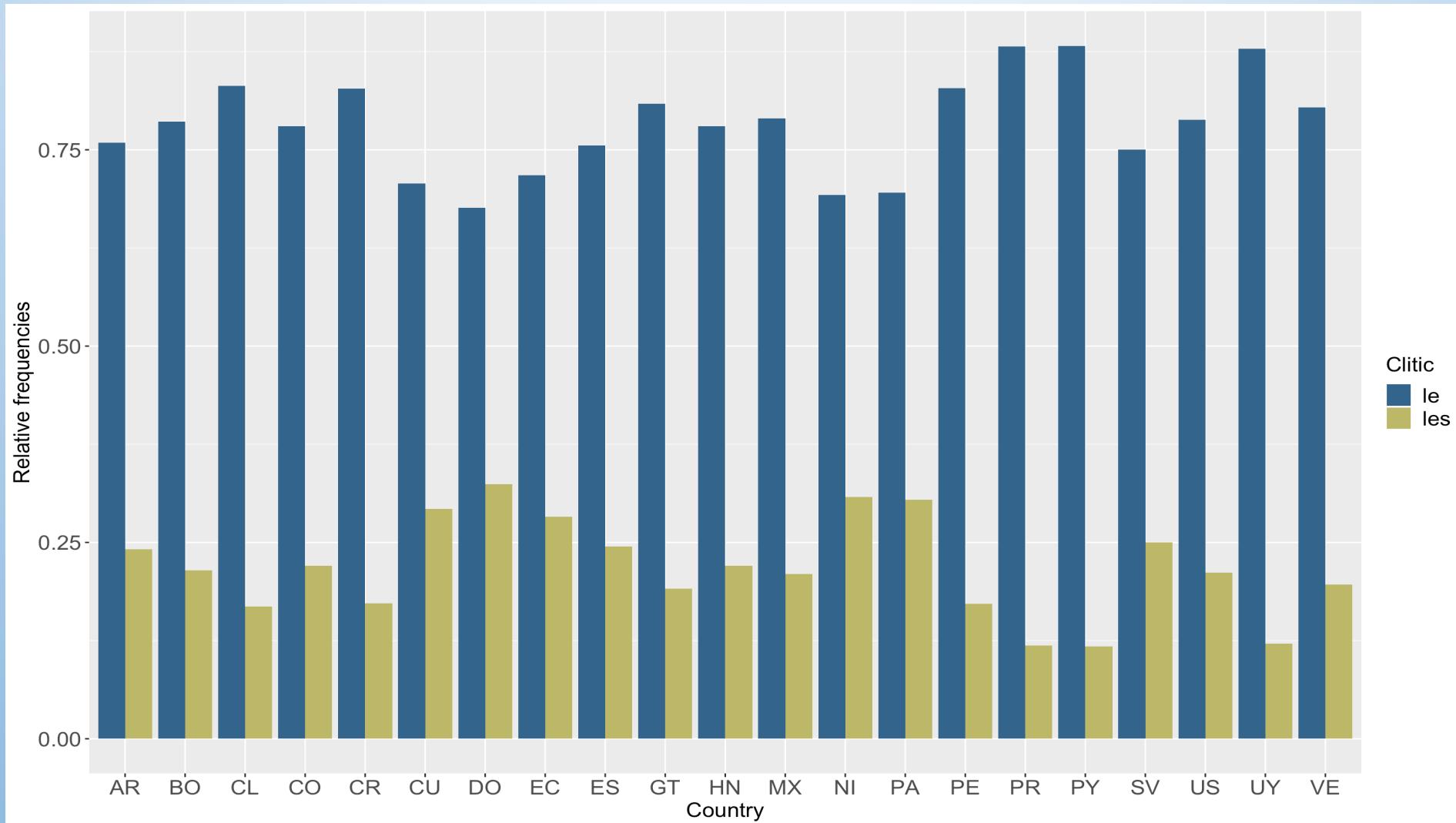
Variable Name	Levels	Variable Name	Levels
SOURCE	BLOG, GENERAL	ANIMACY IO	ANIMATE, INANIMATE
COUNTRY	ALL 21 COUNTRIES	POSITION OF CLITIC	PRE, POST
ADDRESS	WEBSITE ADDRESS	NUMBER DO	SG, PL
FINITE_V	ANY VERB	GENDER DO	FEM, MASC
NON-FINITE V	ANY VERB	GENDER IO	FEM, MASC
PERSON V	1 ST , 2 ND , 3 RD	DEFINITENESS DO	DEF, IND, BARE
NUMBER V	SG, PL	TYPE IO	PRONOUN, NP
ANIMACY DO	ANIMATE, INANIMATE		

- ADDRESS is a proxy for speaker.
- SOURCE is a proxy for register.

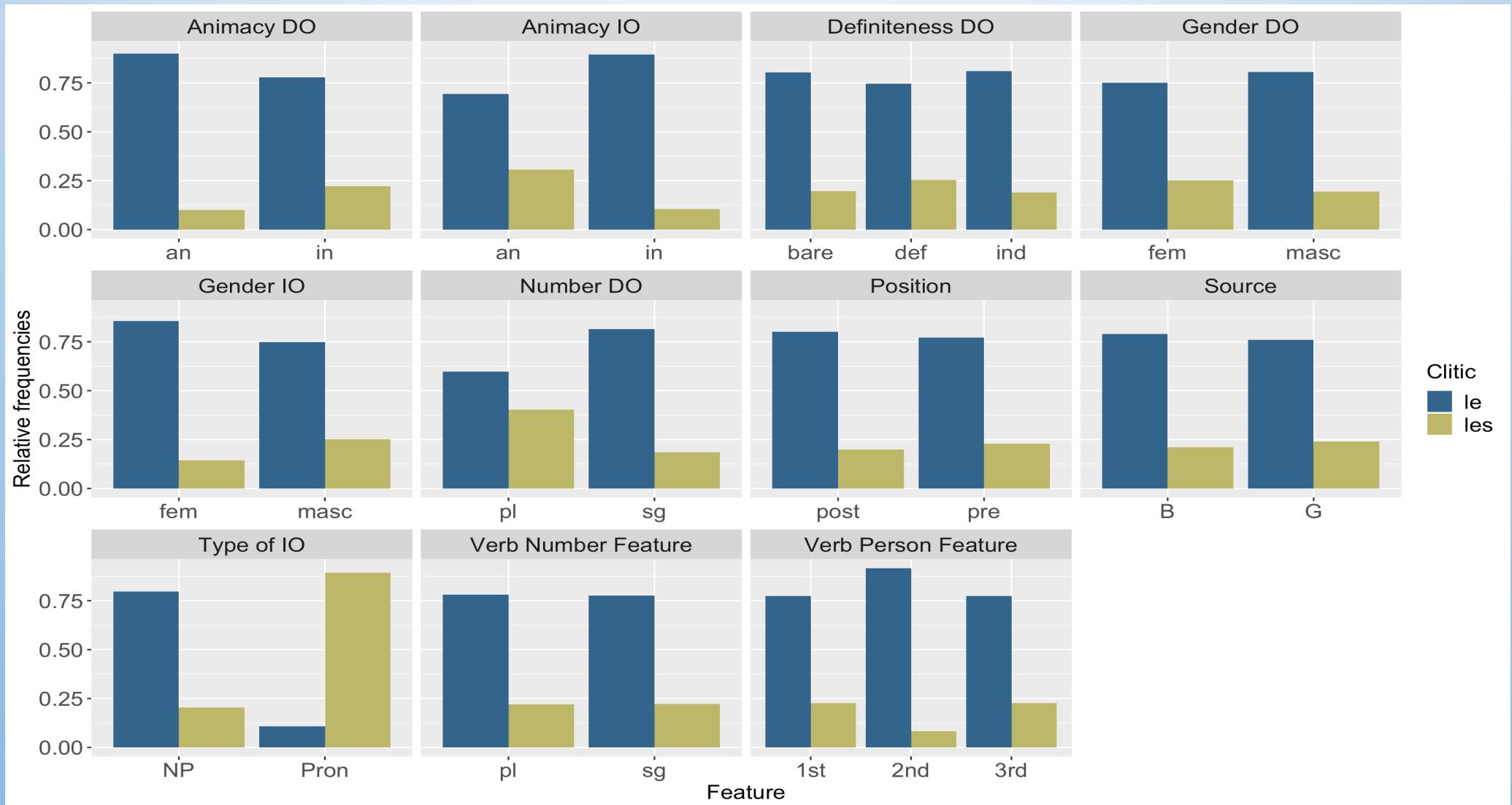
Preprocessing

- The data was moderately imbalanced:
 - 80% singular clitic 20% plural clitic
- Machine learning algorithms need good input to learn (don't we all!) so data imbalance is a big problem (Provost 2000, Chawla *et al.* 2004 *inter alia*).
- Solution:
 - Many approaches exist to address this issue.
 - I chose random undersampling:
 - Retain all cases of the minority class and remove cases of the majority class in a prespecified ratio.
 - In this case a 40/60 ratio was chosen (40% singular, 60% plural).
 - The new dataset contains 1330 sentences.

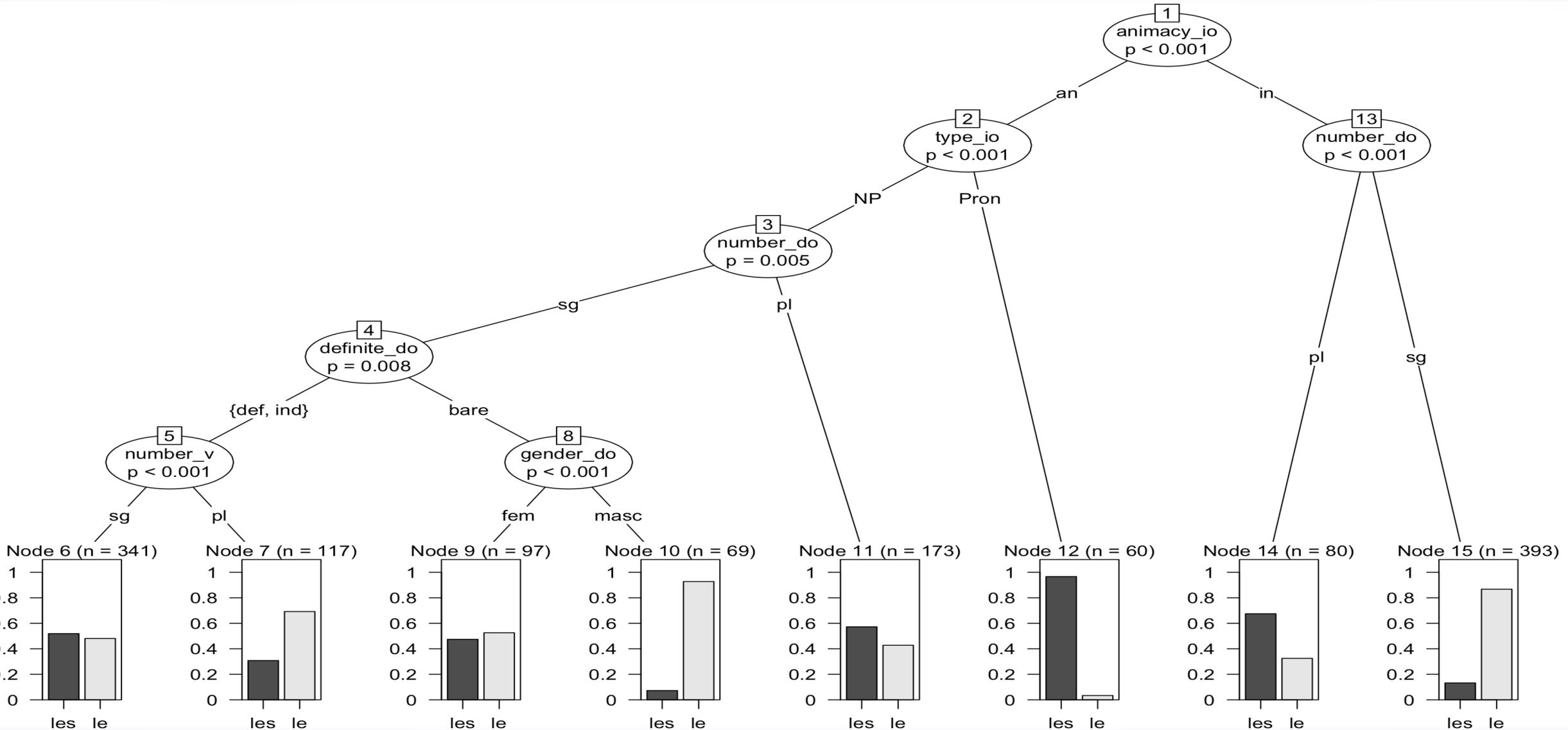
Results: Descriptive stats



Results: Descriptive stats



Results: Conditional Inference Tree



Results: Mixed-Effects Logistic Model

- The final model consists of:

Single terms: Person, Type of IO and Gender of IO

2-way interactions:

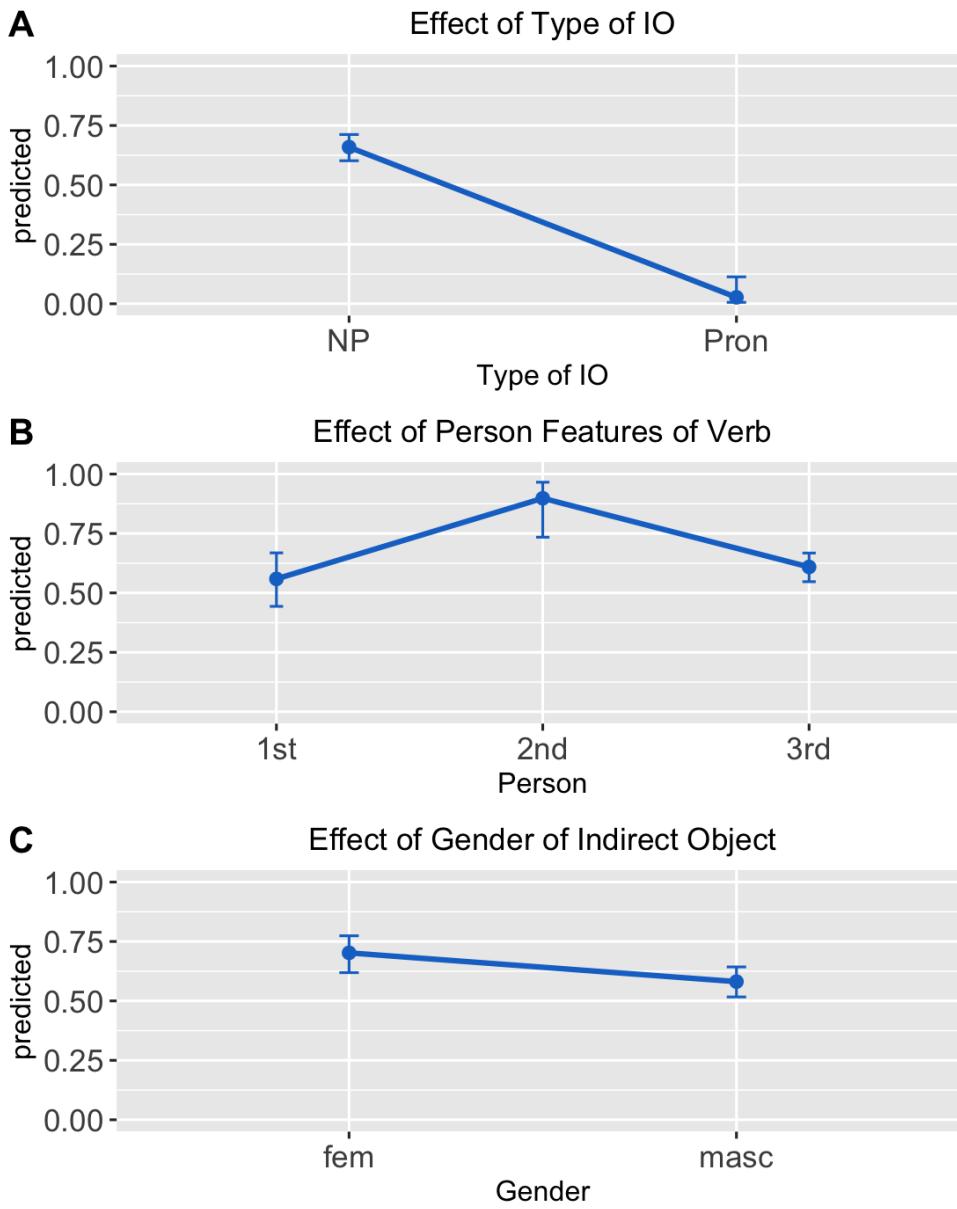
Number_DO*Animacy_IO

Gender_DO*Definiteness_DO

Definiteness_DO*Number_V

Goodness-of-fit: C -index = 0.85, Balanced Accuracy = 0.76

Effects of Single Terms

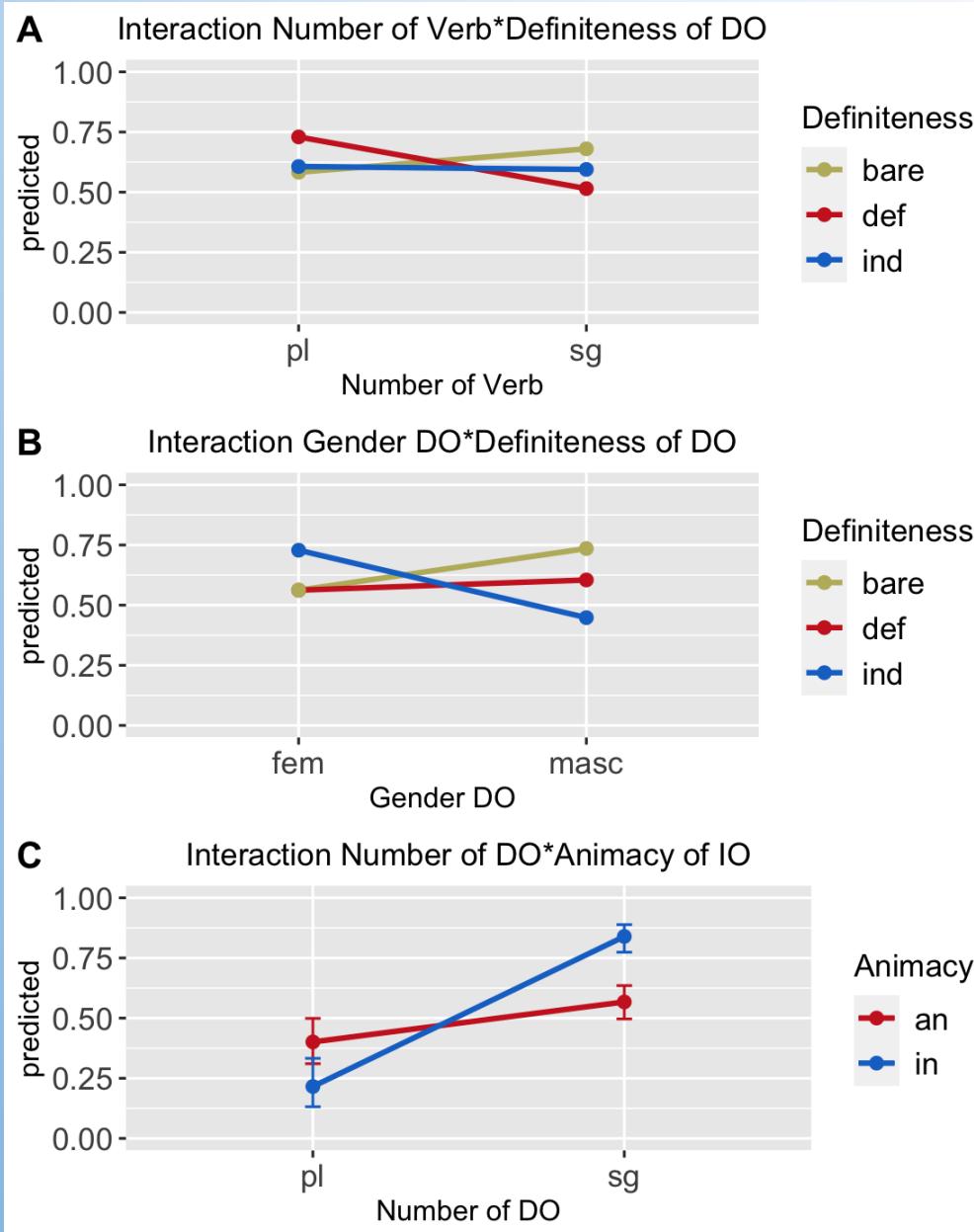


A: Pronouns categorically disallow defective agreement.

B: 2nd person favors defective agreement the most.

C: Fem IOs favor defective agreement.

Effects of Interaction Terms



A: Plural verbs with def. NPs have highest probability of defective agreement.

B: Fem Indef DOs have highest probability of defective agreement.

C: Singular DOs favor defective agreement regardless of animacy.

Interim Summary

- How did our hypotheses fare?
 - i. Defective agreement is a byproduct of the interaction of linear (surface) distance between the clitic and the coreferential NP:

Prediction 1: *defective agreement will be more likely with intervening singular DOs than with intervening plural DOs.*



This prediction was borne out as we saw that singular DOs favor defective agreement regardless of the animacy of the IO.

Interim Summary

- ii. Defective agreement will be triggered by animacy features of both objects assuming (i) was correct.

Prediction 2: *if (i) is borne out, it can be expected that animacy of the DO may have a bigger effect on defective agreement than the animacy of the IO.*

This hypothesis was only partially borne out in that animacy of the IO does have an affect on defective agreement. But DOs are almost always inanimate in this construction so animacy of the DO is not likely to be relevant.

Discussion: Attraction effects

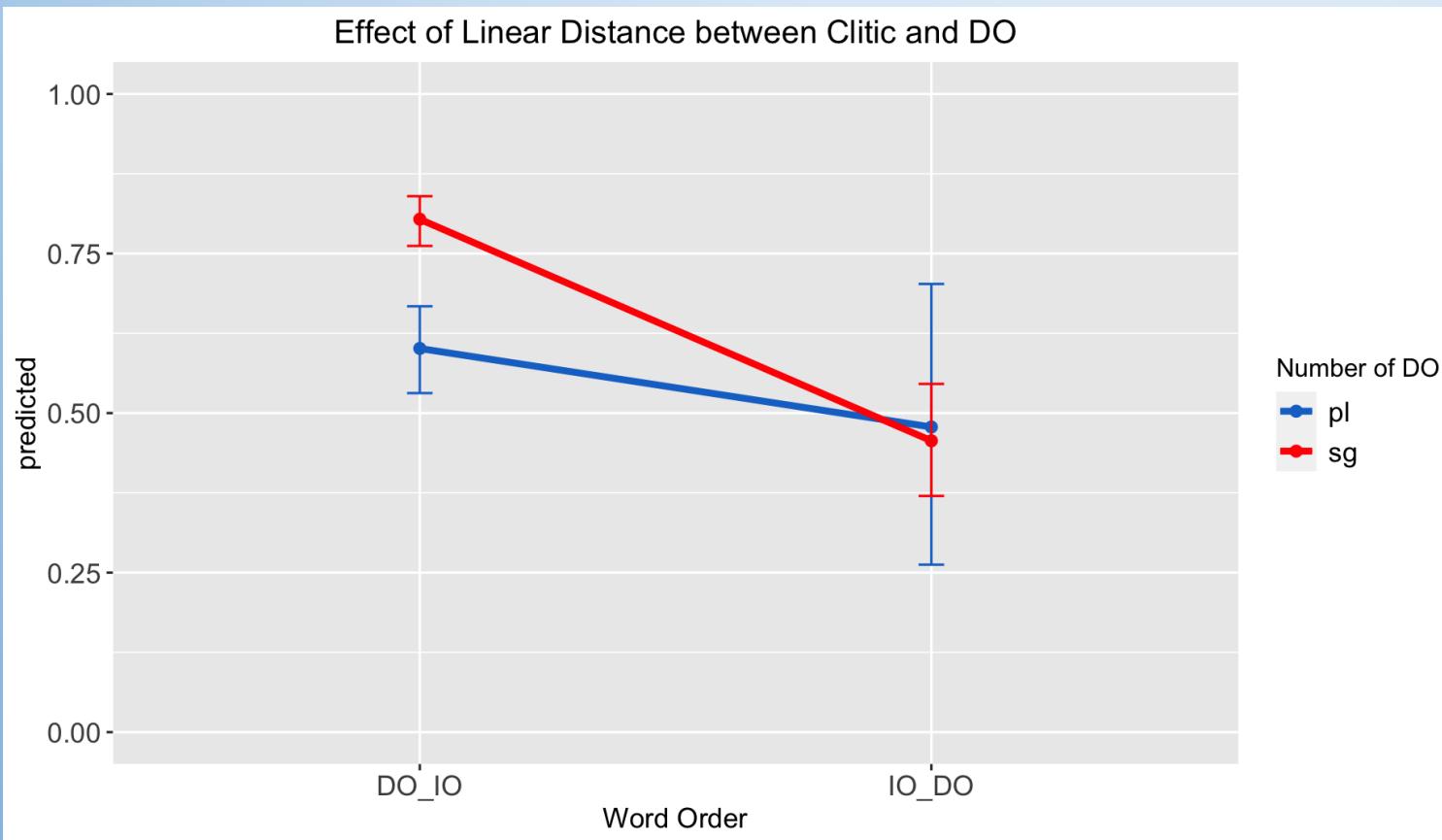
- In the attraction effects literature, the generalization is often made that attraction is uni-directional:
 - Plural but not singular attractors cause an effect.
 - a. The key to the cabinets are there. 
 - b. The keys to the cabinet is there. 
- But defective agreement is a case of (b).
 - Singular attractor causes an effect in the presence of a plural controller.
 - May this mean that this is NOT an attraction effect?

Discussion: Attraction effects

- If this is not an attraction effect then word order should not matter.
- If this is an attraction effect, the distance between the DO and the clitic should matter.
- Two possible word orders:
 - I. Clitic DO IO (default)
 - II. Clitic IO DO (marked)
- Prediction: defective agreement should be more likely in word order (I) than in (II) if this is a case of attraction.

Discussion: Attraction effects

- I fit a mixed effects model with the interaction between Word Order and Number of DO as predictor of defective agreement and Verb and Address as random effects.



Defective agreement is more likely when the singular DO is adjacent to the clitic ($p < 0.05$).

Discussion: What can the constraints on defective agreement tell us?

- Defective Agreement not possible:
 - i. with preverbal IOs.
 - ii. in non-doubled contexts.
 - iii. with strong pronouns.
- Interesting asymmetry:
 - Defective agreement is NOT possible in the same contexts in which doubling of the DO is possible (i.e., (i) and (iii) above).

Discussion: What can the constraints on defective agreement tell us?

- What do these contexts have in common?
 - In both contexts the lexical object is not in an argument position so the clitic is the true argument of the verb.
 - Without the clitic, the sentence would be ungrammatical because it would violate the selectional restrictions of the verb.
- Generalization:
 - *Defective agreement cannot occur if the NP coreferential with the dative clitic is not phonologically overt in an argument position.*
- This means that defective agreement cannot occur when the clitic is an argument to the verb.
 - Two types of clitics:
 - Pronominal vs. Agreement marker

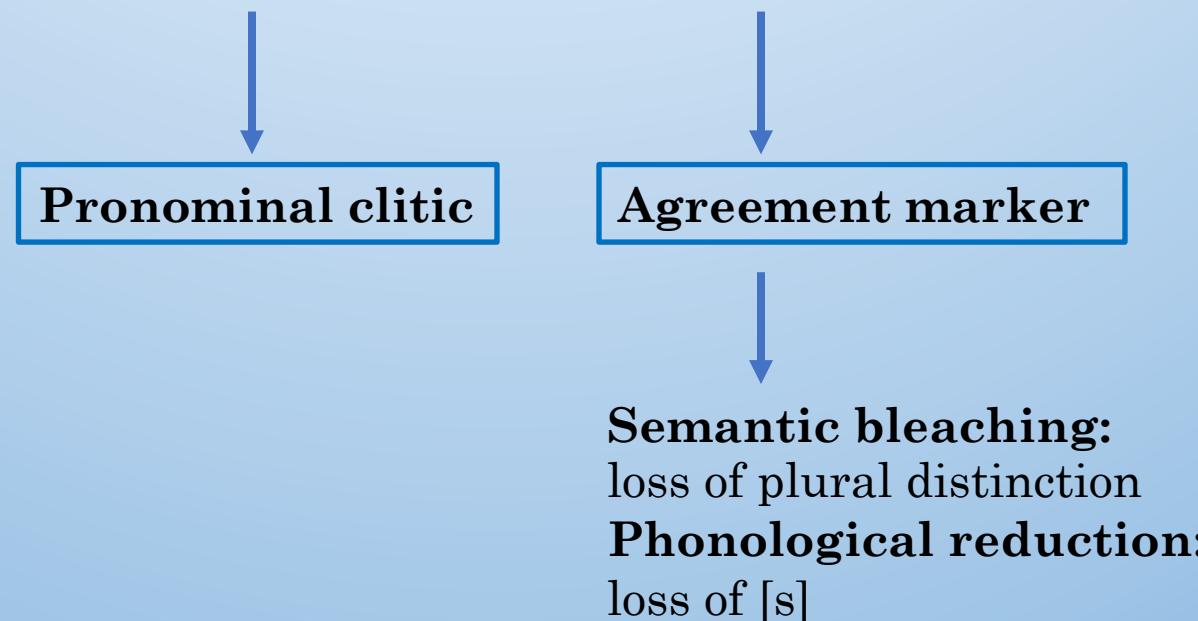
Discussion: What can the constraints on defective agreement tell us?

- Two types of (dative) clitics:
 - **Pronominal**: required, doubled or non-doubled, no defective agreement.
 - **Agreement markers**: doubled, highly preferred but not required, defective agreement allowed.
- Further evidence that defective agreement is sensitive to the categorial status of the clitic comes from psych-verbs and raising predicates.
 - With these predicates the clitic is obligatory (my pronominal type) and defective agreement is highly dispreferred.
 - A model with psych-verb as the predictor variable confirms this (coefficient = 1.25, se= 0.23, Bonferroni-corrected p < 0.001).

Pronominal vs. Agreement

- The distinction between pronominal and agreement clitic is probably due to different stages on the grammaticalization path of the clitic across constructions.

independent pronoun > weak pronoun > clitic pronoun > affixal agreement marker > fused agreement marker > Ø



Predictions

- If the categorial status of the clitic differs depending on the structural configuration in which it appears then:
 - We should expect that the type of dependency established between the clitic and the coreferential NP is of a different type in each case.
 - Pronominal clitic → a pronoun-antecedent type of dependency.
 - Agreement clitic → an agreement-type such as subject-verb agreement.
- Santesteban et al (2017) studied the dependency between a clitic and the doubled NP with preverbal objects (i.e., my pronominal type) with self-paced reading and ERPs.
 - They found that this type of dependency elicited responses akin to that of pronoun-antecedent.
- These results are in line with my proposal that the clitic is pronominal when it appears with preverbal objects.
 - In fact, I would argue that this is not a case of clitic doubling.

Conclusions

- Defective agreement is the norm in dative clitic doubling across all Spanish varieties.
- Most important factors determining defective agreement are:
 - Number of the DO
 - Animacy of the IO
 - Type of IO
 - Word Order
- Clitics are not amenable to an analysis that disregards the structural context in which they appear.
 - The categorial status of Spanish clitics depends on the syntactic position the clitic and the doubled lexical NP are in.

Thanks!