D-linking and working memory: New evidence from Spanish

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Background

D-linking and islands

Gaps in island environment show increase in acceptability when wh-filler is “D-linked” / lexically specified (Pesetsky 1987).

1) * What does Mary believe [the claim [that the teacher saw __ ]]?

2) ?? Which movie does Mary believe [the claim [that the teacher saw __ ]]?

A working memory account

Why (1) is bad under this account:
- Reintegration of wh-filler at gap site is difficult, reducing acceptability. In addition:
  - Clause boundary
  - Intervening referents
  - Complex structure (island)

Why (2) is better under this account:
- D-linked filler is more lexically elaborated, so it is more easily retrievable from working memory and reintegrated into structure at gap site, thus increasing acceptability. (cf. Hofmeister & Sag 2010, Kluender & Kutas 1993)

This account predicts amelioration in non-islands also, and this has been claimed to be true (Hofmeister 2007, Goodall 2015).

(3) What does Mary believe [that John saw __ ]?

(4) Which movie does Mary believe [that John saw __ ]?

Problems with the evidence

I. Overall results in the literature are mixed, with some studies finding no D-linking effect in non-islands (Alexopoulou & Keller 2013, Sprouse, Caponigro, Greco & Cecchetto 2015).

II. In the studies where an effect in non-islands has been found, this may be due to the simple presence of a D-linked filler (which might increase acceptability on its own), rather than to the dependency between the filler and the gap.

This experiment

Goal: Address the above two problems concerning the evidence for the working memory account. Do these problems argue against the working memory account?

Strategy: Make use of Spanish wh-questions, which favor inversion of subject and verb.

wh V S order

- (5) *¿Qué la profesora vio? what the teacher saw
- (6) ¿Vio la profesora? what saw the teacher

D-linking is thought to ameliorate S V order. What about V S order?

Things to note:
- SV order is not an island.
- Working memory account predicts D-linking effect nonetheless, since D-linking should ameliorate all wh-dependencies, whether in island environments or not.
- VS order has only trivial wh-dependency.

Working memory account predicts no D-linking effect here, since there is no significant retrieval problem that D-linking could ameliorate.

Results

Acceptability experiment

- 7-point scale (1 = “very bad”, 7 = “very good”)
- 45 participants, all native Spanish speakers residing in a Spanish-speaking country.
- Participants saw 3 tokens of each condition.
- 36 filler items (3 : 1 filler/experimental ratio)
- Counterbalanced (Latin square) and pseudo-randomized.

Experimental conditions in relation to filler items

Conclusion I

I. D-linking improves the acceptability of gaps even in non-islands. Spanish wh-questions with SV order are not a standard island environment:
- Clause is not embedded.
- Adjunct extraction better than argument extraction

Standard grammatical accounts of D-linking (e.g. Szabolcsi & Zwarts 1993) do not predict an effect here, since no Boolean operator intervenes between the wh-phrase and the gap.

References


Conclusion II

II. D-linking has no effect on acceptability with trivial filler-gap dependency.

In the VS order, there is only a trivial wh-dependency (the filler is followed immediately by the subcategorizing verb), so as expected, there is no D-linking effect. The D-linking effect emerges only when the dependency is non-trivial, as in the SV order, suggesting that the effect is due not to the simple presence of a D-linked filler, but to the ameliorating effect on the dependency.