

Subject-Verb Inversion and Verb Finiteness are Independent in Spanish

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Background

English and Spanish both have *inversion* in *wh*-questions:

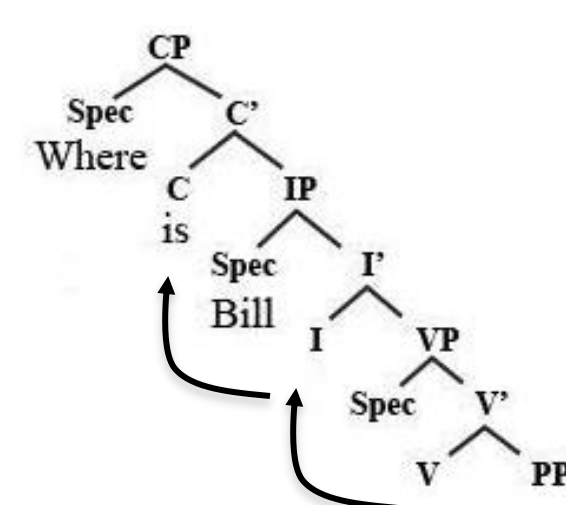
What **will** John say?
*What John **will** say?

Qué **dijo** Juan?
*Qué Juan **dijo**?

A common analysis: I-to-C movement (Rizzi 1991, Pesetsky & Torrego 2001). This satisfies the *Wh*-criterion.

Is I-to-C adequate for Spanish?

Can *Wh*-Criterion explain inversion in Spanish?



Differences between Spanish and English

1. Embedded questions

Mary asked what Peter would say.
*María preguntó qué Pedro dijo.

2. Adverb placement

Con quién nunca piensas (tú) hablar?
*With whom never do you plan to speak?

3. Auxiliary verbs

*Cuándo ha Juan bailado?
When has John danced?

4. Nature of *wh*-phrase

In Spanish, robustness of inversion depends on *wh*-phrase (e.g. *qué* yields stronger effect than *cuándo*). This is not known to occur in English

5. Satiation

Goodall (in press): Subjects do repeated judgments of unacceptable sentence types:

*What John will buy at the store?
*¿Qué Juan compró en la tienda?

Spanish-speakers show increasing acceptability ratings ("satiation"). English-speakers do not

Interim conclusions

Verbs are not in C in Spanish *wh*-questions. *Wh*-criterion is not satisfied.

Spanish and English use different mechanisms for inversion.

English: Close connection between I (finiteness) and inversion (driven by *Wh*-Criterion).

Spanish: No necessary connection between I and inversion.

A question for acquisition

English: Finiteness and inversion correlate ($r^2 = .275, p < .001$) (Santelmann et al (2002), Grinstead, Warren, Ricci and Sanderson (2009))

Spanish: Do finiteness and inversion correlate?

Answer unknown. Many studies find children in Spanish and related languages form adult-like interrogatives (e.g. Guasti (1996), Serrat & Capdevila (2001)), unlike English-speaking children.

Methodological problem: Small number of overt subjects (less than 20%) in spontaneous speech in null subject languages.

If there is a correlation between finiteness and inversion in child Spanish:

• this supports the idea that inversion is similar in Spanish and English.

If there is **not** a correlation:

• this supports the idea that inversion is fundamentally different in the two languages.

Experiment 1

Methodology

Grammaticality Choice Task (Pratt & Grinstead 2008)
A receptive task to get around the small number of overt subjects in spontaneous speech.

Participants

55 monolingual speakers of Spanish, from daycare centers in Mexico City. 11 children excluded for not passing fillers, leaving 44. Mean age of the 44 children: 4;9. Range: 3;2 (39 mo) – 6;6 (80 mo).

Procedure

Children were introduced to two puppets, and were told that the puppets were babies and were learning to talk, and sometimes they made mistakes.

Then, the child was presented with a picture of the puppets performing different actions.

Each of the puppets said a sentence about the picture, using both adult-like and non-adult like combinations of finite and non-finite forms.

The child then had to decide which puppet said the sentence better.

4 pairs of warm-up items.

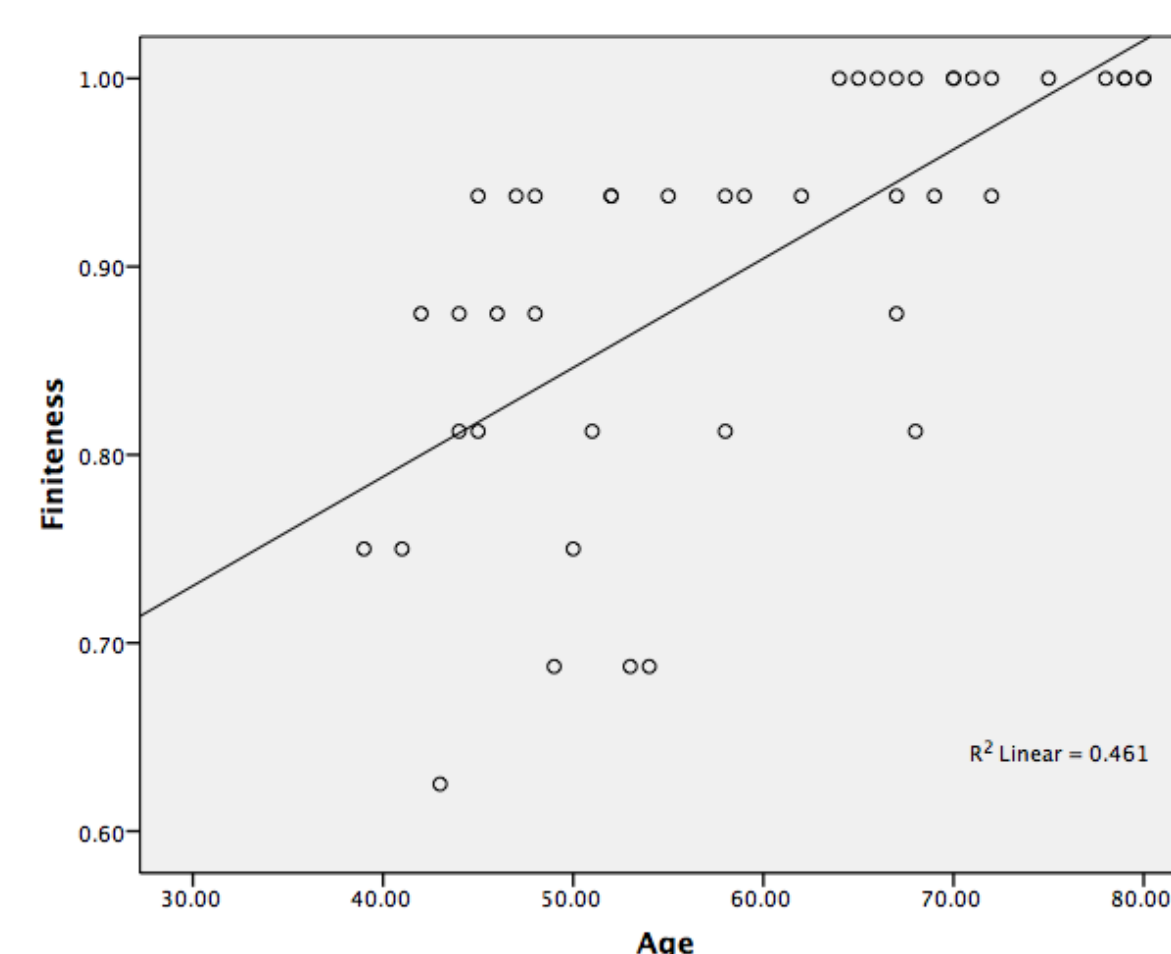
8 pairs of fillers.

16 pairs of experimental items.



Results

Overall average of correct answers: 90%, SD=.106 (N=44)
Finiteness judgments and age were correlated: $r = .679, p < .000$.



Conclusion

Spanish-speaking children by 3;0 distinguish between finite and non-finite verb forms above chance ($t(43) = 56.140, p < .001$).

Age and finiteness judgments are significantly correlated.

Consistent with Grinstead, et al (2008) for finiteness in English and with Grinstead et al (2009) for finiteness in Spanish.

Experiment 2

Methodology

Same as Experiment 1: Grammaticality Choice Task

Participants

Same as Experiment 1: Same 44 children.

Procedure

Same as Experiment 1.

4 pairs of warm-up items.

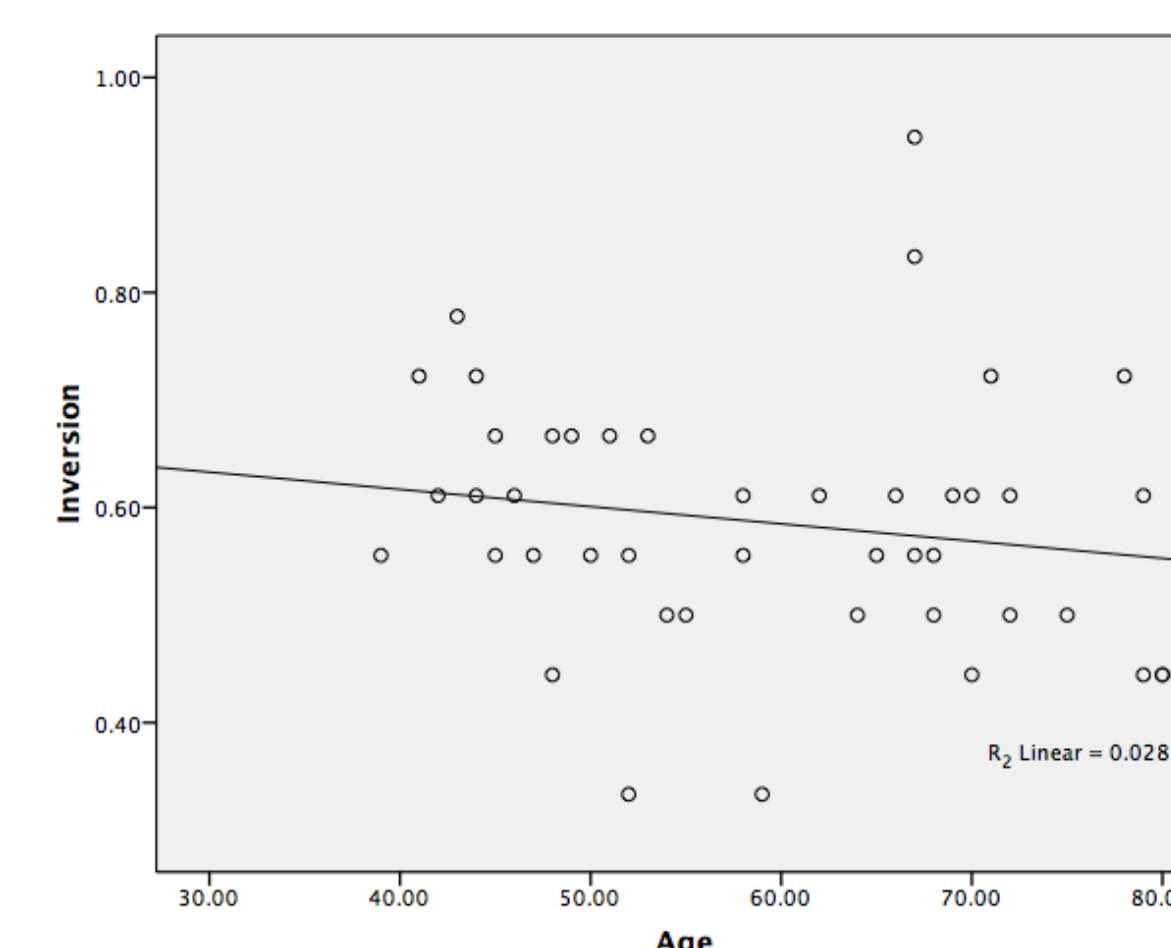
8 pairs of fillers.

18 pairs of experimental items (distributed evenly among argument *qué* 'what', and adjuncts *dónde* 'where' and *cuándo* 'when'.

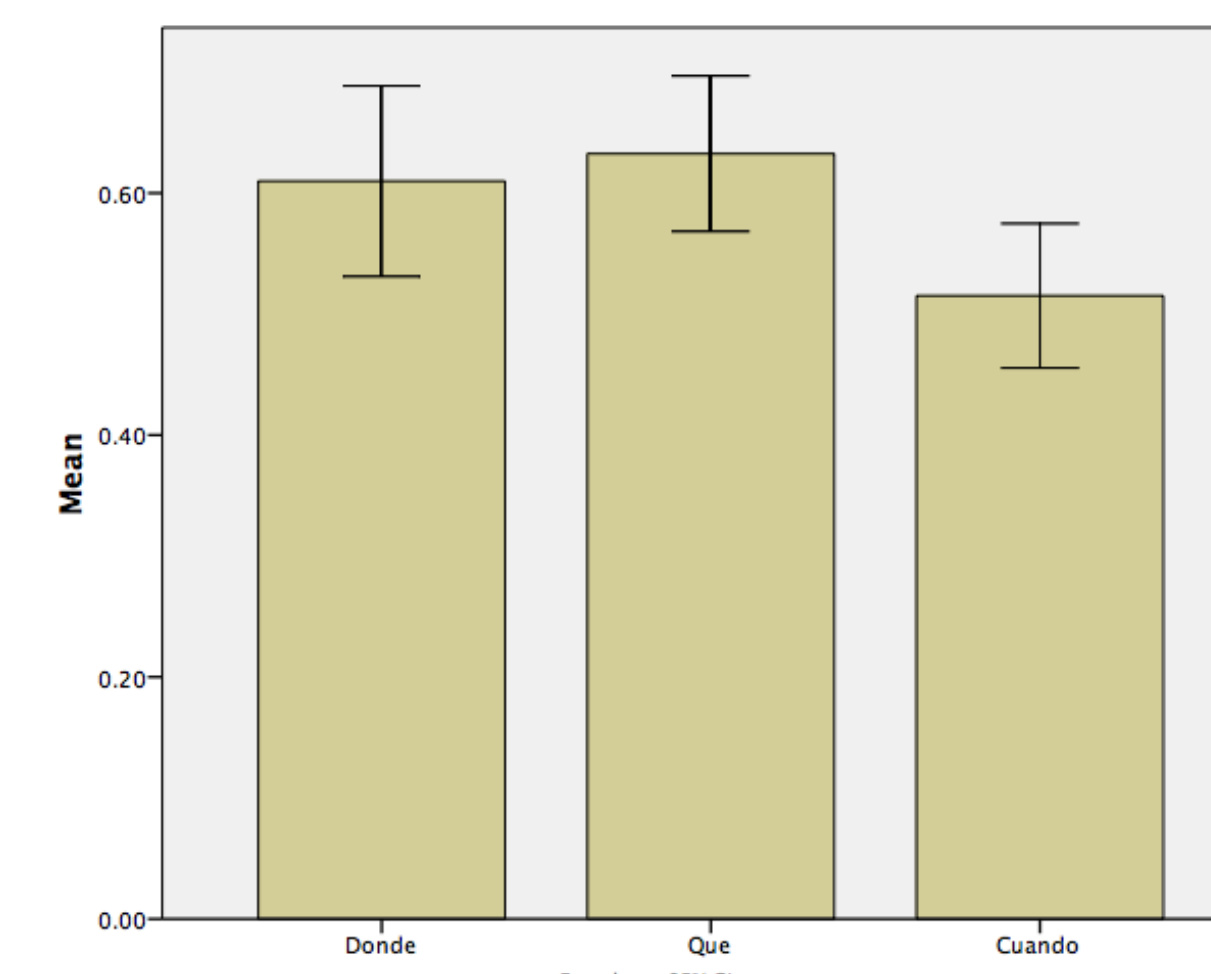


Results

Overall average of inverted questions: 58%, SD=.12 (N=44).



Inversion was chosen significantly less with *cuándo* than with *qué* ($p = .05$).



Judgments of inversion were significantly above chance ($t(43) = 4.743, p < .001$). Children were not guessing

No correlation between finiteness and inversion

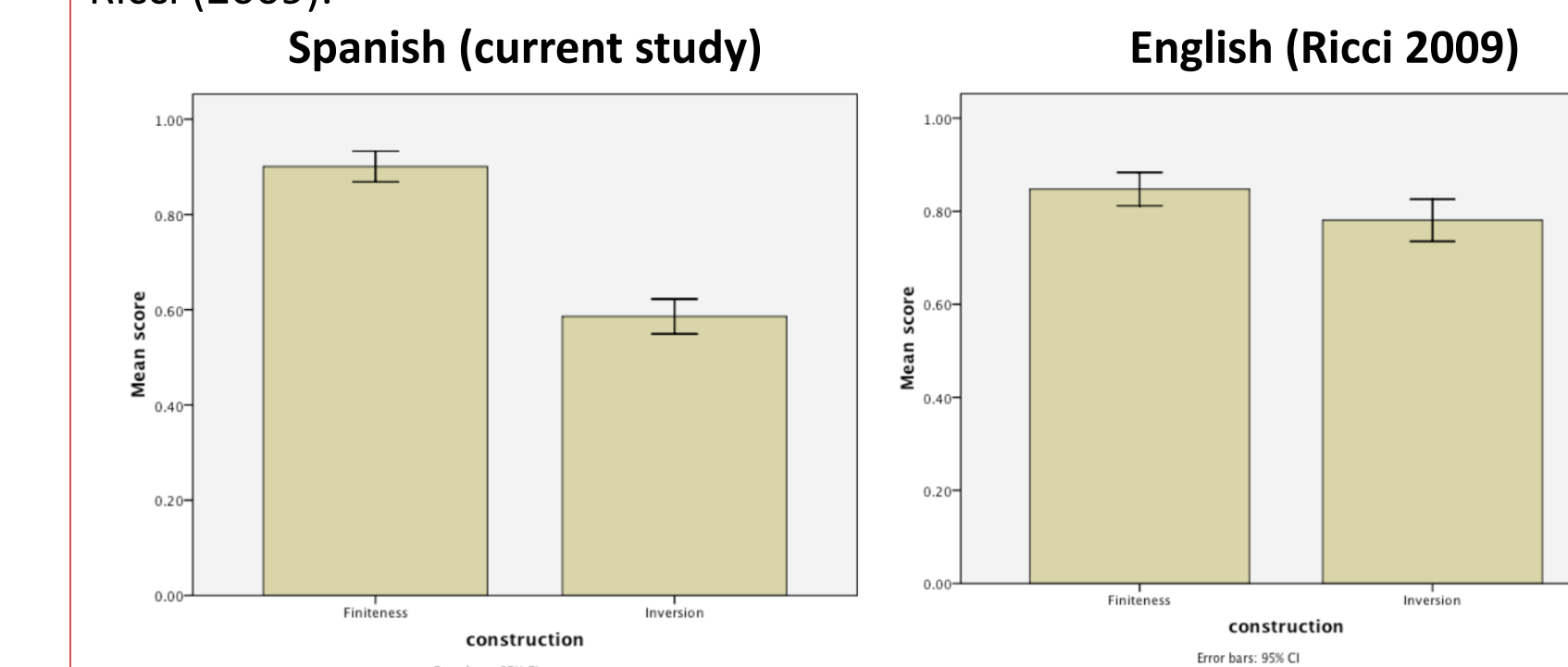
($N=44, r = -.239, p = .118$).

Conclusion

If our tasks measure finiteness and inversion, then our results suggest that finiteness and inversion are not related in Spanish.

Spanish and English compared

Compare finiteness and inversion rates with very similar study on English: Ricci (2009).



Populations in two studies are extremely similar:

- Spanish: $n = 44$, age range = 39-80 months, mean age = 59 months.
- English: $n = 63$, age range = 36-72 months, mean age = 59 months.

Difference between finiteness and inversion scores:

- Spanish-speaking children: 31% difference
- English-speaking children: 6% difference

Finiteness scores in both English ($F(1,125) = 5.364, p = .022$) and Spanish ($F(1,867) = 169.283, p < .001$) are significantly greater than inversion scores.

However, the effect size of this difference is dramatically greater in Spanish than it is in English. Partial eta-squared values for finiteness vs. inversion:

- Spanish: .663
- English: .041

This suggests that finiteness and inversion are unrelated in Spanish.

Both adults and children require inversion more robustly with *qué* 'what' (adults: 92%, children: 64%), but even in this case, there is no correlation with finiteness ($r = -.176, p = .254$).

Conclusion

Finiteness and inversion are not correlated in child Spanish, unlike what has been found for English.

This is consistent with the idea of different mechanisms:

English: *Wh*-criterion forces link between finiteness and movement to C.

Spanish: No movement to C. *Wh*-criterion not at work here.

Many potentially relevant variables remain to be considered in comparing subject-auxiliary inversion in English and subject-verb inversion in Spanish:

- Tense marking element
- main verb?
- auxiliary?
- modal?
- do?
- wh*-word
- Subject type
- full DP
- name
- pronoun

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