1. RC Attachment Asymmetries

Variation in Relative Clause (RC) attachment across languages (i.e., [1]), a.o.:

- **Low Attachment, LA**
  - Someone shot the maid, of the student, that, was standing on the balcony.
  - LA: Bilingual counterparts contra la criada, de la actriz, que, estaba en el balcón.

- **High Attachment, HA**
  - Someone shot the maid, of the student, that, was standing on the balcony.
  - HA: Bilingual counterparts contra la criada, de la actriz, que, estaba en el balcón.

A number of factors have been shown to influence attachment (including e.g., syntactic position, proximity, referentiality, animacy), and several accounts for the asymmetry have been proposed. However, there is general consensus that none of them is fully satisfactory [3, a.o.].

2. The PR Confound

Grillo & Costa 2012 [4]. In some languages and structures, apparent RCs can also be interpreted as Pseudo-Relative Small Clauses (PRs).

1. a. Ho visto [o Juan que corría / o Juan que corrió]
   - PR: o Juan que corría
   - RC: o Juan que corrió

2. a. I saw [John that ran / I saw [John running]
   - PR: I saw [John running]
   - RC: I saw [John that ran]

PRs and RCs are string identical, but have very distinct structural and interpretive properties:

- **CRUCIALLY, WHEN PR IS PROJECTED IN COMPLEX NP CONTEXTS, [o Juan que correva] IS NOT AN ACCESSIBLE SUBJECT:**

3. Experiment 1: Timed Questionnaire

To test the role of PR in attachment preferences we manipulated PR availability through verb type: event-introducing (PR only) vs. status-introducing (PR + verb) verbs (e.g., saw vs. knew [6]).

Method: Timed Questionnaire, with pseudonym.

Participants: (n=24) European Portuguese Speakers. Materials and Design: 24 stimuli, minimal pure contrast PR availability, 46 fillers. Stimulus sentences were matched for number of syllables, plausibility, referentiality and animacy. Counterbalanced materials and questions.

**Stimuli:**

1. PR + RC
   - A Paula concorda com o aluno do professor que estava a jantar no café.
   - RC Only
   - A Paula concorda com o aluno do professor que estava a jantar no café.

2. RC
   - A Paula concorda com o aluno do professor que estava a jantar no café.

3. EFERENCES


4. Experiment 2: Self-paced Reading

Method: Self-paced reading. PC running Linger (Doug Rodhe, http://delphi.mit.edu/d_SELECT). Participants: (n=48) EP speakers divided in two groups. Materials and Design: 24 stimulus/4 trial sets of PR/RC (PR+verb) X 2 V-type (attachment: local / nonlocal) X 2 V-type (number disambiguation: singular / plural) X 2 V-type (version: [PR] / [RC]). 3 sets of 24 target sentences (4 versions each, adapted from previous study), 46 fillers. Stimuli sentences were tested for plausibility and matched for number of syllables. Counterbalanced materials and questions. 3 subjects performed at chance on comprehension questions and were eliminated from analysis.

To avoid potential effects of Attraction triggered by the intervention of a different number marking, we used all combinations of Singular and Plural for disambiguation. See [5] for evidence of Attractions effects in nonlocal attachment in EP.

Stimuli (NP1PRlocal, NP2PRlocal, version):

- **A. PR, verbal**
  - O Eduardo ouvira os irmãos do jovem que estavam a cantar no largo. Eduardo heard the brothers of the youngster (that were) singing in the street.

- **B. PR, local**
  - O Eduardo ouvira os irmãos do jovem que estavam a cantar no largo. Eduardo heard the brothers of the youngster (that were) singing in the street.

- **C. RC, verbal**
  - A Matilde vive com os irmãos do jovem que estavam a cantar no largo. Matilde lives with the brothers of the youngster that were singing in the street.

- **D. RC, local**
  - A Matilde vive com os irmãos do jovem que estavam a cantar no largo. Matilde lives with the brothers of the youngster that was singing in the street.

3. RESULTS TQ

**ATTACHMENT PREFERENCE**

**RESULTS SPR**

**RTs at Complementizer**

Table 4: RTs at Comp

**RTs at Infinival Marker**

Table 5: RTs one word downstream from disambiguation point

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<thead>
<tr>
<th>Condition</th>
<th>Local</th>
<th>Nonlocal</th>
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<td>V-type*nonlocal</td>
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4. More Results Self-paced Reading

**Accuracy at Comprehension Qs**

Table 6: Mean % Correct Responses

**RESPONSE TIMES**

Table 7: Mean Response Time

5. Conclusions

1. Greater proportion of HA in PR than in the RC condition only.
2. Faster RT for PR/RC than RC-only condition at the first point of ambiguity (i.e., complementizer).
3. Faster offline RT for HA than LA in PRs.

1 and 3 are clearly in line with the PR-first hypothesis, as is 2 when further considered. The PR-RC condition has potential sources of ambiguity (structural and attachment) but RC-only has one (attachment). In conjunction with the data from the disambiguating region, it seems the parser keeps both structural options available without making any attachment decisions, whereas in the case of RC-only the parser makes an early LA decision. The effect of 2 is thus accounted for by the cost of making an attachment decision in RC-only and further supported by a larger RT for HA over LA at the point of disambiguation in this condition only.

Limitations: Finally, the non-significant tendency to favour HA in the PR condition (t-value = 1.74) appears to contradict an early preference for PRs over RCs, and calls for further investigation.

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