Introduction

- Use of Binding Principles (Chomsky, 1981) during the processing of reflexives
- Structure-based Account: binding principles filter the possible grammatical antecedent for the reflexive (Nicol & Swinney, 1989)
- Unconstrained Cue-based Account: other linguistic cues like gender may compete with binding principles and affect the processing of reflexives (Badecker & Straub, 2002)
- Encoding interference: is predicted to occur whenever items share features, no matter whether these features are used for retrieval or not
- Retrieval interference: effects occur when more than one item matches the retrieval features
- With gender-marked reflexives, effects may be explained by both encoding and retrieval, not distinguishing Structure-based from Unconstrained accounts
- With gender unmarked reflexives, effects may only be explained by encoding, favouring Structure-based accounts

Methods

- 32 undergraduate students from the University of Lisbon
- Self-paced moving window paradigm
- Gender overlap vs. No-overlap

Experiment 1 (Unmarked reflexive)

- RT in unmarked reflexive + verb and post-critical regions; question-answer time and accuracy (Question: Did John hurt himself?)
- 32 experimental sentences + 64 fillers

(1) O Pedro / A Maria explicou que o João durante o jantar se magou com a faca do bolo.

Experiment 2 (Unmarked + Marked reflexive)

- RT in unmarked reflexive + verb, marked reflexive and post-critical regions; question-answer time and accuracy
- 24 experimental sentences + 48 fillers

(2) O Pedro / A Maria explicou que o João durante o jantar se magou a si mesmo com a faca do bolo.

Results

Table: [Exp1] LMM effects of each dependent variable (sig. effects in green).

<table>
<thead>
<tr>
<th></th>
<th>β</th>
<th>SE</th>
<th>z</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>−1.367</td>
<td>0.216</td>
<td>−6.340</td>
<td>&lt; 0.001</td>
<td></td>
</tr>
<tr>
<td>RT answer</td>
<td>−0.115</td>
<td>0.014</td>
<td>−8.447</td>
<td>&lt; 0.001</td>
<td></td>
</tr>
<tr>
<td>RT unmark. reflex + verb</td>
<td>0.042</td>
<td>0.028</td>
<td>1.491</td>
<td>0.136</td>
<td></td>
</tr>
<tr>
<td>RT post-critical</td>
<td>0.021</td>
<td>0.040</td>
<td>0.520</td>
<td>0.603</td>
<td></td>
</tr>
</tbody>
</table>

Table: [Exp2] LMM effects of each dependent variable (sig. effects in green).

<table>
<thead>
<tr>
<th></th>
<th>β</th>
<th>SE</th>
<th>z</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>−2.115</td>
<td>−0.287</td>
<td>−7.378</td>
<td>&lt; 0.001</td>
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<td>RT answer</td>
<td>−0.107</td>
<td>0.013</td>
<td>−8.510</td>
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<tr>
<td>RT unmark. reflex + verb</td>
<td>0.001</td>
<td>0.032</td>
<td>0.022</td>
<td>0.982</td>
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<tr>
<td>RT marked reflex</td>
<td>0.064</td>
<td>0.043</td>
<td>1.484</td>
<td>0.138</td>
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</tr>
<tr>
<td>RT post-critical</td>
<td>0.017</td>
<td>0.026</td>
<td>0.652</td>
<td>0.514</td>
<td></td>
</tr>
</tbody>
</table>

Conclusions

- Interference effects found in off-line measures can only be explained by encoding, since gender information was not needed to interpret the reflexive
- As proposed by the Structure-based Account, during interpretation binding principles narrow the number of possible candidates to the grammatical ones
- On-line results do not favour encoding nor retrieval interference effects, thus, leaving the tension between Structure-based and Unconstrained Accounts open

References


Acknowledgements

This work was financed by Fundação para a Ciência e a Tecnologia with a grant to the first author (IF/FCT/104168/2014) and by the project: UID/LIS/04214/2013.