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Proximity and same case marking do not increase attraction effect in comprehension: Evidence from eye-tracking experiments in Korean

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Background & Research questions

- Memory retrieval is content addressable (Lewis & Vasishth, 2005; Lewis et al., 2006; McElree et al., 2003; Van Dyke & McElree, 2006)
- Potential targets in memory are activated in parallel in response to retrieval cues.

- Facilitatory intrusion: Reading time penalty for a mismatching dependency could be reduced due to the presence of a partially matching distractor (Wagers et al. 2009; Vasishth et al. 2008; Xiang et al. 2009)

(a) The musician who the reviewer praise won the prize.
(b) The musicians who the reviewer praise won the prize.
- reading times at praise: (b) < (shorter) than (a)

Goal of study: To investigate whether attraction effects would be modulated by memory representation of a distractor (cf. Nicol et al., 2016; Kwon & Sturt, 2017)

Korean

- SOV word order with case marking & impoverished verbal agreement except for subject honorific agreement
- Subject honorific suffix -si- is optional and can be omitted (a) but when used, should agree with the subject in honorific feature (b) cannot be used with a subject of low social status (c)
  a) Grandpa-nom TV-acc watch-decl (optional)
  b) Grandpa-nom TV-acc watch-si-decl
  c) Kid-nom TV-acc watch-si-decl

Subject honorific violation in Korean elicits a P600 (Kwon & Sturt, 2015).

3 Experiments & Results (4 conditions: ± honorific features of NP1 and NP2; Emb.Verb-honorific)

- Experiment 1: different case markers & intervening distractor
  Subject control (-3, -keys); (+hon vs. –hon) NP1-nom x (+hon vs. –hon) NP2-dat ...

- Experiment 2: different case markers & distant distractor
  Object control (-3, -la); (+hon vs. –hon) NP1-nom x (+hon vs. –hon) NP2-dat ...

- Experiment 3: same case markers & distant distractor
  Center embedding; (+hon vs. –hon) NP1-nom x (+hon vs. –hon) NP2-dat ...

Predictions:
1) If proximity matters, stronger attraction effects in Exp 1 > Exp 2
2) If same case marking matters, stronger attraction effects in Exp 3 > Exp 2

Methods: 28 native Korean speakers per an experiment; 40 sets of experimental sentences; Eyelink 1000+

Results:
Regression path durations at spill-over region: Two words after the critical verb position

<table>
<thead>
<tr>
<th>Main subj</th>
<th>Emb subj</th>
<th>W1</th>
<th>W2</th>
<th>W3</th>
<th>W4</th>
<th>W5</th>
<th>W6</th>
<th>W7</th>
<th>W8</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>H</td>
<td>Teacher-nom</td>
<td>editor,dat</td>
<td>PRO₁</td>
<td>demo</td>
<td>cd-acc</td>
<td>listen-si-comp</td>
<td>calm</td>
<td>voice-in</td>
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<tr>
<td>NH</td>
<td>H</td>
<td>Minji-nom</td>
<td>editor,dat</td>
<td>PRO₀</td>
<td>demo</td>
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<td>H</td>
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</tr>
</tbody>
</table>

Exp1: Subject control
The teacher/Minji, told the editor/Tayho, that she, would listen to a demo cd.

Exp2: Object control
The teacher/Minji, told the editor/Tayho, to PRO₀ to listen to a demo cd.

Exp3: Embedding
The teacher/Minji, told the editor/Tayho, that she, listened to a demo cd.'

Discussion & Conclusions

The proximity effect was not observed, with the results suggesting a stronger attraction effect in Exp2 than in Exp1.
- Conservatively it is compatible with the hypothesis that cues are weighted. That is, the subject grammatical role is a critical cue for a subject-verb agreement such that a distractor marked with dative case (NP2) is less likely to be retrieved even when it is closer to retrieval point (Experiment 1) than a distractor marked with nominative case further away (Experiment 2).
- The same case marking did not incur a stronger attraction effect, given the similar level of attraction effects in Exp2 and Exp3 (t < 1).
- This is not compatible with the hypothesis that a greater number of matching cues of a distractor would trigger more mis-retrieval, in contrast to a previous finding that a greater number of (mis)matching cues of a licit antecedent does so (Park, 2014).

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