Effects of Morphological Identity and Voice Mismatch in VP Ellipsis

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I. Introduction

Licensing ellipsis. Implicit material in VP ellipsis Δ argued to be recovered by various mechanisms: syntactic identity, semantic identity, discourse, and combinations of the above.

1. a. John met Sue, and Mary did Δmet Sue, too.
2. b. Sue was met by John, and Mary was Δmet by John, too.

Voice mismatch asymmetry. Voice (Active, Passive) mismatches selectively tolerated: Passive-Active mismatches more acceptable than Active-Passive mismatches.[1–2] Inspired by ACT-R architecture

Retrieval accounts

2. Voice mismatch: Syntactic form of passive misremembered or misretrieved as active, resulting in occasional grammatical illusion.[3–4]

II. Competition-based account

Inspired by ACT-R architecture[3]

1. Lexical items spread activation to items of the same form, including homophonous Active-Passive forms
2. Unencountered Active or Passive forms receive spreading activation when Passive or Active forms are accessed
3. But Actives have a higher base activation than Passives due to increased base frequency, accounting for asymmetry:

- Active Passive
  - John met Sue, and Mary did Δmet Sue, too.
- Passive Active
  - Sue was met by John, and Mary was Δmet by John, too.

Novel prediction: Passives with different forms than Actives (was driven→drove) spread no/less activation to Actives, hence less facilitation for Passive-Active VPE than with the same form (was met→met).

Active Passive
- John drove Sue, and Mary did Δdrive Sue, too.
- Mary was Δdriven by Sue, too.

Passive Active
- John was Δdriven by Sue, too.
- Mary drove Δby Sue, too.

III. Materials and predictions

Materials. 24 quartets crossed Antecedent Voice type (Active/Passive) with Match (Same/Different) between items manipulation of Morph (Same/Different).

<table>
<thead>
<tr>
<th>Morph</th>
<th>Voice</th>
<th>Main clause</th>
<th>Match</th>
<th>Mismatch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same</td>
<td>Active</td>
<td>John found Mary, and then Peter</td>
<td>did too</td>
<td>was too</td>
</tr>
<tr>
<td>Passive</td>
<td>Mary was found by John, and then Peter</td>
<td>was too</td>
<td>did too</td>
<td></td>
</tr>
<tr>
<td>Different</td>
<td>Active</td>
<td>Abby drove Frank, and then Sloan</td>
<td>was too</td>
<td>did too</td>
</tr>
<tr>
<td>Passive</td>
<td>Frank was driven by Abby, and then Sloan</td>
<td>did too</td>
<td>was too</td>
<td></td>
</tr>
</tbody>
</table>

IV. Experiment 1: Acceptability ratings

24 native English speakers from UCLA rated sentences for acceptability on a Likert scale (1=Completely acceptable). All subjects passed catch item controls.

- Voice Mismatch Penalty: General cost for mismatching ellipsis.
- Passive Penalty: General cost for Passive over Active structures.
- Mismatch Asymmetry: Passive-Active mismatches more acceptable than Passive-Active mismatches.
- Mismatch Asymmetry modulated by Morphology: Increased acceptability of Passive-Active mismatch reduced or eliminated when morphological form of voice differs.

V. Experiment 2: RSVP Speeded grammaticality

64 native English speakers from UCLA rated over 70% on unrelated filler items. 2AFC Speeded acceptability study. Results analyzed as ex-Gaussian Bayesian models.

VI. Conclusions and further questions

- Support for novel prediction that Voice Mismatch Asymmetry restricted to cases where the Active and Passives share morphological form:
  - Exp 1. Asymmetry disappears in acceptability ratings when Passive and Active forms are distinct;
  - Exp 2. Shorter RTs for Passive Match case when morphological form is distinct from Actives – suggesting that there is decreased lexical competition from more frequent Actives, which speeds time to decision

- Effects of discourse coherence might also be limited to/modulated by morphology?
- Modeling effects directly within ACT-R model?

References