



Elliptical fragments, syntactic identity, and the mismatch voice effect

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Background

- Ellipsis fragments can indicate the same meaning as full sentences.

Matching Active

- Breanna took the cake to Catherine.
 - No, MITCHELL took the cake to Catherine.
- or
- No, MITCHELL.

Both acceptable

Matching Passive

- The cake was taken to Catherine by BREANNA.
 - No, the cake was taken to Catherine by MITCHELL.
- or
- No, by MITCHELL.

- Assumption:** Active and passive sentences mean approximately the same thing, but have different syntactic structures.
- What if the antecedent and the answer don't match in voice? According to Merchant 2007: In fragment answers, elided material and antecedent phrase must match in voice.

Matching Voice

- The cake was taken to Catherine by BREANNA.
 - No, the cake was taken to Catherine by MITCHELL.
- or
- No, by MITCHELL.

?

Mismatched Voice

- Breanna took the cake to Catherine.
 - No, by MITCHELL.
- or
- No, the cake was taken to Catherine by MITCHELL.

- Mismatch Voice Effect:** Difference in acceptability rating between match and mismatch voice conditions
- Syntactic Identity Hypothesis:** We understand fragments by filling in their syntactic structure on the basis of the syntactic structure of the antecedent material.
- Semantic Identity Hypothesis:** We understand fragments by filling in their semantic structure on the basis of the antecedent material.

Voice Mismatch in Fragments

Materials

- Experimental voice-matched**
 - The cake was taken to Catherine by BREANNA.

or
- Experimental voice-mismatched**
 - BREANNA took the cake to Catherine.
- Replies**
 - No, by MITCHELL. (fragment)
 - No, the cake was taken to Catherine by MITCHELL. (non-elliptical)

Design

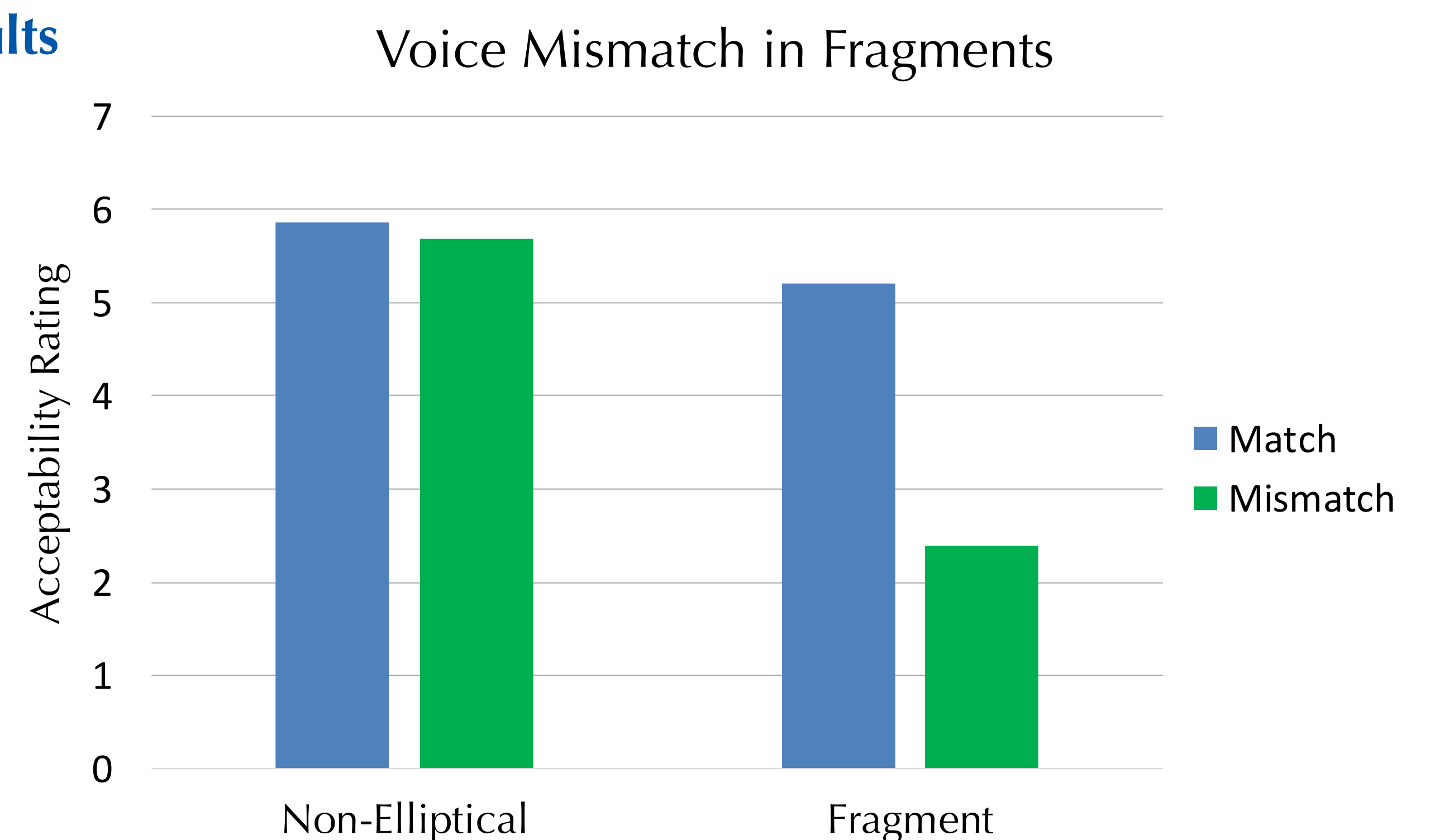
- Written experiment
- Participants read sentences with matched and mismatched voice
- Rated the same replies on a likert scale from 1-7
- Run on Amazon Mechanical Turk
- 146 participants
- 16 items, at least 70 fillers
- 2x2 design
- Participants saw four items per condition

Predictions

- Under the **Syntactic Identity Hypothesis**, a mismatch voice effect in fragment continuations should be greater than in non-elliptical controls.
- Under the **Semantic Identity Hypothesis**, a mismatch voice effect should be the same in fragment and non-elliptical controls.

Results

Results



- Raw data was analyzed with a cumulative link mixed model:
 - clmm(enteredResponse ~ C1Contrast * C2Contrast + (1 + 1Contrast + C2Contrast|participant) + (1 + C1Contrast + C2Contrast|context), data = Data)
- There were main effects of:
 - construction type (e.g. Stripping vs. Canonical word order) ($\beta = 3.47 \pm 0.27, p < .001$)
 - match (e.g. voice match vs. voice mismatch) ($\beta = 2.13 \pm 0.09, p < .001$)
- Interaction between these factors ($\beta = -3.54 \pm 0.19, p < .001$)
- The effect of match was larger in the stripping conditions ($\beta = 6.53 \pm 0.55, p < .001$) than in the canonical conditions ($\beta = 0.58 \pm 0.29, p = .05$).
- Difference between voice-matched and voice-mismatched conditions was greater in fragment continuations (2.83pts difference on 7pt scale) than in non-elliptical continuations (0.16pt difference).

Conclusions

- These results support the **Syntactic Identity Hypothesis**: We use the syntactic structure of the antecedent to understand elliptical fragments.
- There was a smaller **Mismatch Voice Effect** in the non-elliptical conditions because the inclusion of antecedent material in reply sentences provided a new syntactic structure for the response to match regardless of voice match to the original statement given.
- The **Mismatch Voice Effect** was greater in the fragment conditions because without antecedent material, only the syntactic structure of the original statement given was available for the voice to match.