Morpho-syntactic cues for distributivity in Serbian

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1 Background

- Numerically quantified sentences have two prominent interpretations: collective (1a) and distributive (1b).

1a. Three clowns are holding two presents.

1b. Each clown is holding one present.

- English and Serbian acceptance rates are significantly different:

<table>
<thead>
<tr>
<th>Numerical quantification</th>
<th>Croatian adults</th>
<th>Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two</td>
<td>50%</td>
<td>42%</td>
</tr>
<tr>
<td>Three</td>
<td>60%</td>
<td>56%</td>
</tr>
</tbody>
</table>

- Serbian has several types of numerals and it shows a subject-verb agreement mismatch in environments with numerically quantified expressions. These factors may account for the disparity in English and Serbian child and adult results.

2 Serbian mismatch

- Paucal (numbers 2 and 3) vs. paucal (number 4) case
- Three klonova vs. Three klonova

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3 Methods

Two Truth Value Judgment Task

2x2 study, 24 items & 24 control items x 4 lists, balanced design

4 Results

- Paucal experiment:
  - 38 Serbian non-linguist adults (MA: 26.9) and 25 native Serbian children (MA: 7.6)
  - The factors tested were the influence of Number (singular and plural verbal agreement) and Collective/Distributive Interpretations.

- Mixed-gender experiment:
  - 32 Serbian non-linguist adults (MA: 25.1) and 24 native Serbian children (MA: 7.7)

- Children: Adults
  - General observations from the models are that adults are significantly less likely to choose distributive pictures matched with either singular (sg) or plural (pl) verb than children, and less likely to choose singular verbal agreement.
  - Neither experiment showed significant correlations between verbal agreement and collective/distributive interpretations.

5 Discussion

1) Adults understand numerically quantified sentences without distributive markers as scalar/conversational implicatures.

- Since there is a better alternative to convey a distributive message (using each, or in the case of Serbian – a distributive marker po), numerically quantified sentences must be collective. (Pagliarini et al, 2012)

2) Some children had a problem to interpret singular indefinite objects as conceptually plural. This was a motivation to reject distributive pictures in the Paucal experiment, which contrasts current empirical and theoretical data.

Future work:

- Hypothesis: complex morpho-syntactic system of Serb is loading children’s working memory, and it is affecting the processing of such ambiguous sentences.
  - Proposed test: unloading the working memory will change children’s choices and make them more adult-like.
  - Following Van Rij et al, (2009) – slowed-down speech rate

References


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