Morpho-syntactic cues for distributivity in Serbian
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In sentences with two numerically quantified NPs like “Three boys are holding two balloons”, two prominent interpretations are collective (Picture 1) and distributive (Picture 2) (Musolino, 2009).

A major difference between Serbian and English or Dutch is that Serbian adults completely reject distributive pictures (Picture 2), i.e. the given sentence is not ambiguous in Serbian due to the lack of overt distributive markers. Surprisingly, Serbian children show no sensitivity to distributive markers and prefer distributive readings. They only begin to be adult-like at the age of 8 or 9 (Musolino, 2009; Knežević, 2012). One potential explanation for these differences is that it is related to an interaction between the complex numeral and verbal morphological agreement system in Serbian and collective/distributive interpretations. This is precisely what we investigate in our study.

Very little work has been done on how verbal agreement might influence rates of interpretations. Recently, Ouwayda (2014) claimed that verbs marked as singular in Lebanese Arabic are interpreted distributively, while verbs marked as plural can have both readings, which is consistent with the claim that singular verbal agreement generally promotes distributivity (Drozd, & Van der Lely, submitted). However, an informal survey of Serbian speakers reported the opposite: their intuition is that plural verbal agreement suggests distributivity. To investigate these intuitions systematically we conducted four experiments with Serbian children and adults.

Because Serbian has several types of numerals, we ran two experiments with a paucal numeral tri (three) and a mixed gender numeral troje (three) with children and adults. Paucal numerals are numerals 2, 3 and 4 and they combine with a special form of a NP, that is neither singular nor plural, but paucal (1) (Belić, 2008). Mixed-gender numerals take mixed gender NPs in genitive plural, and are highly accepted with both singular and plural verbal agreement (2) (Bosnić, 2015).

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1) Tri klovna/*klovnova nose sofu.
   Three.pauc clown.pauc/*clown.gen.pl carry.pl sofa.acc
   “Three clowns are carrying a sofa.”
2) Troje dece drži/drže kutiju.
   Three.MixGenNum children.gen.pl hold.sg /hold.pl box.acc
   “Three children are holding a box.”
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Two Truth Value Judgement experiments were done with adults and 7-year-old children (MA: 7.5). 2X2 design with 24 target items and 24 fillers was used for both experiments. The experiments tested the influence of number (sg/pl) and collective/distributive interpretations.
The results showed no significant sensitivity to verbal agreement in either group (Fig1), but children were starting to show a more adult-like behavior. Furthermore, few children rejected distributive pictures because the object was in singular. The fact that singular objects cannot be interpreted in distributive environments as plural is contradicting the theories that suggest that singular object allows the atomic (individually-distributive) interpretations. Even though we have not found the source of Serbian’s exceptional interpretations, it might still be related to morphology. In our view, this could be caused by cognitive factors – perhaps Serbian children have an increased cognitive load due to the complexity of the system, resulting in insensitivity to distributive markers and non-adult-like behavior even at the age of 7.

Figure 1 – Adult and child results

<table>
<thead>
<tr>
<th></th>
<th>Adult</th>
<th>Children</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experiment 1 (paucal)</strong></td>
<td>97.37, 87.28</td>
<td>98.67, 98.67, 84.67, 84.67</td>
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<tr>
<td></td>
<td>coll pl</td>
<td>coll sg</td>
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<tr>
<td><strong>Experiment 2 (mixed gender)</strong></td>
<td>95.31, 94.79</td>
<td>99.3, 99.3, 94.44, 95.14</td>
</tr>
<tr>
<td></td>
<td>coll pl</td>
<td>coll sg</td>
</tr>
</tbody>
</table>

References


Knežević, N. (in prep.). Acquisition and processing of the distributive marker po in Serbian.
