On the Generality of the Agent-First Strategy

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It is well-known that young children often misinterpret sentences with non-canonical word order. They often ignore morphological cues and misidentify sentences with non-canonical word order as sentences with canonical word order. Some researchers have suggested that occurs because young children rely on a semantics-and-word-order based strategy (Bever 1970, Hayashibe 1975) in interpreting a sentence with non-canonical word order (e.g., passive, scrambling). As an example of this kind of strategy, Slobin and Bever (1982) and Abbot-Smith et al. (2017) suggested that young children tend to interpret the first NP as the agent. I refer to this as the agent-first strategy, and question the generality of this strategy in this paper. I will point out an exception to this generalization by showing that children aged 4-5 do not rely on the agent-first strategy for interpreting a Japanese cleft sentence when the first NP is location and the second NP is agent.

1. Research question

In this section, I will introduce a previous study by Ohba et al. (2019), which proposed that Japanese-speaking children use the agent-first strategy in interpreting Subject Cleft sentences, and formulate a research question for this paper.

Ohba et al. (2019) examined Japanese children’s understanding of cleft sentences and noted that, at age 4 or 5, they have poor understanding of Subject Cleft sentences with patient as the first NP. For example, when presented with a stimulus sentence (1) for a picture (2), they are poor at rejecting it in the truth value judgment task (Crain and Thornton 1998); the rejection rate for such cases was generally below 60% for 4/5-year-olds in their experiment.

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To explain the result, Ohba et al. (2019) suggested that children use the agent-first strategy for interpreting Subject Cleft sentences. According to this strategy, the first NP (zousan ‘elephant’) is interpreted as the agent and the second NP (usisan ‘cow’) is interpreted as the patient in (1), ignoring case-markers.

In this paper, we question the generality of this account. We seek an exception to this generalization by testing a different kind of NP, one with a dative marker/postposition -ni and a location role, as the first NP in the Subject Cleft.

2. Experiment

To address the research question mentioned at the end of the previous section, I conducted an experiment. The experiment involved asking a wh-question. This method was chosen because it can generally be used to examine younger children better than the truth value judgment task.

A sample target question is given below.

(3) Subject Cleft with location as the first NP (target)
[Buta-ni not-teiru no wa] dare ka na?
Pig-NI ride-Prog C Top who Q SFP
‘Who is it that is riding on the pig?’

This question was asked after the following was acted-out: a pig rode on a dog, and an elephant rode on the pig. Below is the final scene of the sample act-out.
Crucially, the first NP in (3) has -ni (dative marker/postposition) and a location role. The correct answer for (3), querying about the sample act-out in Fig. 1, is “the elephant.” However, if a child applies the agent-first strategy for this, the answer would be “the dog.”

In addition, I also presented a question, like the one in (4), as a control condition for situations such as the one in the sample act-out in Fig. 1.

(4) Non-subject Cleft (control)

[Buta-ga not-teiru no wa] dare ka na?
Pig-Nom ride-Prog C Top who Q SFP
‘Who is it that the pig is riding on?’

This was asked to ensure that the child can name the bottom animal when it is the correct answer.

Fifteen Japanese monolingual children (4;7-5;10, mean 5;0) participated in the experiment. They were divided into two groups: Group A (N=8, 4;7-5;10, mean 5;1) and Group B (N=7, 4;7-5;6, mean 4;11). Each child was asked two target questions and two control questions. The participating animals were changed for each question. For Group A, the order of presentation was target-control-target-control, and for Group B, it was control-target-control-target.

The results of the experiment are given below.
Table 1: Correct Response Rates for the Target/Control Condition

<table>
<thead>
<tr>
<th>Condition</th>
<th>Group A</th>
<th>Group B</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target</td>
<td>93.8% (15/16)</td>
<td>71.4% (10/14)</td>
<td>83.3% (25/30)</td>
</tr>
<tr>
<td>Control</td>
<td>37.5% (6/16)</td>
<td>71.4% (10/14)</td>
<td>53.3% (16/30)</td>
</tr>
</tbody>
</table>

Remarkably, as shown by Group A’s very high correct response rate for the target, the percentage of agent-first errors for the target is observed to only be 6.2% for Group A. The correct response rate for the control for Group A is not high, but this is probably due to the order of presentation. The design of such experiments (i.e., within subject design) seems to often result in a carry-over effect from the first question to the rest of questions for young children. However, the correct response rate for the control for Group B is 71.4%. This means that, at this age, children can correctly answer for the control condition to a considerable extent when it is the first question asked in the experiment. Thus, Group A’s very high correct response rate for the target is not due to a methodological bias.

3. Discussion

This paper has shown that the agent-first strategy does not apply when the particle attached to the first NP is -ni. There are two possible reasons for this: 1) the semantic role (i.e., location) of the first NP; and 2) possibly the grammatical category (i.e., postposition? dative case-marker? See Sadakane and Koizumi 1995 for discussion) of the particle of the first NP. I leave this open for future research.

In this paper, I have identified an exception to the agent-first strategy. Thus, it seems that there are previously unthought of limitations to the scope of the agent-first strategy. However, it is still possible that young children utilize agent-verb-patient (for an SVO language) or agent-patient-verb (for an SOV language) as a basic scheme for understanding a sentence with two NPs with thematic roles. In other words, it is still possible that young children utilize a whole canonical sentence pattern (e.g., agent-verb-patient or agent-patient-verb) to understand a non-canonical sentence. I leave this matter for future research as well.

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1 Kim et al. (2018) have also independently shown that Heritage Korean speakers’ understanding of an OSV sentence improves when the particle attached to O is dative rather than accusative. I would like to note that the Korean dative marker -hanthey is disyllabic, while the Japanese particle -ni studied here is monosyllabic. Thus, the current study shows that an improvement occurs even when the replacer particle (i.e., dative) as well as the replacee particle (i.e., accusative) are monosyllabic; improvements are not limited to occurring only when the replacer particle (i.e., dative) is phonologically more salient than the replacee particle (i.e., accusative). I would like to thank William O’Grady for bringing this point to my attention.

2 In my understanding, this is what was originally proposed in Bever (1970).
References


