

The Acquisition of Japanese Topicalization and the Role of Discourse Context*

Tetsuya Sano
Meiji Gakuin University

1. Introduction

The canonical word order of Japanese sentences is SOV (see Kuroda 1980, for example). An example of the canonical SOV sentence is given in (1).

- (1) Zou-ga buta-o ketobashi-masi-ta. [canonical SOV]
elephant-Nom pig-Acc kick-Polite-Past
'The elephant kicked the pig.'

A non-canonical OSV word order can be derived by scrambling or topicalization. Examples of scrambling and topicalization are given in (2) and (3), respectively.

- (2) Buta-o zou-ga ketobashi-masi-ta. [scrambled OSV]
pig-Acc elephant-Nom kick-Polite-Past
'The pig, the elephant kicked.'

- (3) Buta-wa zou-ga ketobashi-masi-ta. [topicalized OSV]
pig-Top elephant-Nom kick-Polite-Past
'The pig, the elephant kicked.'

When the object phrase *buta-o* in (1) is preposed to the sentence-initial position, we obtain the scrambled OSV sentence (2). When the accusative marker *-o* is replaced by the topic marker *-wa* and the object phrase is preposed to the sentence-initial position, we obtain the topicalized OSV sentence (3). I discuss the acquisition of these three types of sentences in this paper.

Several previous studies have investigated the acquisition of scrambling. Hayashibe (1975) reports that young children (age 3-5) have difficulties in comprehending non-canonical scrambled OSV sentences, (2), misconstruing them as if they were canonical SOV (see also K.Sano 1977). However, Otsu (1994) has shown that Japanese 3-and-4-year-olds can comprehend scrambled OSV sentences without problems when the scrambled sentence is preceded by a context such as (4).

- (4) Koen ni ahiru-san ga imasita.
park in duck Nom is-Pol-Past
'There was a duck in a park.'
Sono ahiru-san o kame-san ga osimashita.
the duck Acc turtle Nom push-Polite-Past
'A turtle pushed the duck.'

In (4), the phrase scrambled in the second sentence is introduced as a topic in previous discourse and it is accompanied by a definite marker *sono* 'the'. According to Otsu (1994), children are good at comprehending (4), unlike (2), even at the age of 3-4. The type of discourse in (4) is called 'topicalizing discourse' in this paper.

In this way, Otsu (1994) has shown that young children do not lack grammatical knowledge of scrambling. This gives support to the Continuity Assumption (Pinker 1984, Crain and Wexler 2000) of

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grammatical competence.

2. Issues

In this paper, I examine children's comprehension of topicalized OSV sentence, which has not been reported in previous studies. As we have seen in the previous section, Otsu (1994) has shown that children can comprehend OSV scrambled sentences when the object phrase is introduced in the previous discourse. Here, I raise a question: what exactly is necessary for children's successful comprehension of non-canonical OSV sentences? I address this question by examining topicalization in addition to scrambling. Below I list two conceivable possibilities.

- (5) (a) As long as the object phrase is old information, children can successfully comprehend non-canonical OSV sentences
(b) For successful comprehension of non-canonical OSV sentences, it is necessary to provide a topicalizing discourse and the definite marker *sono* 'the' within the preposed object phrase.

Let us see what these possibilities in (5) imply for the acquisition of topicalization. To investigate the exact requirement of successful comprehension of OSV sentences, I tested children's comprehension of topicalization with two conditions such as the following.

- (6) (a) After simple introduction of names of participants, an OSV topicalized sentence is provided without the definite marker *sono*.

e.g., *Zou, kaeru, buta ga i-masi-ta.* Sosite,
elephant frog pig-Nom be-Polite-Past and
'There were an elephant, a frog, and a pig. And,

Buta-wa zou-ga ketobashi-masi-ta.
pig-Top elephant-Nom kick-Polite-Past
'The pig, the elephant kicked.'

- (b) After the **topicalizing discourse**, an OSV topicalized sentence is provided **with the definite marker *sono*** within the preposed object phrase.

e.g. *Zou, kaeru ga i-masi-ta.Sokoe buta-ga yatteki-masi-ta.*
elephant frog-Nom be-Pol-Pt there pig-Nom come-Pol-Pt
'There were an elephant and a frog, and there came a pig.'

Sono buta-wa zou-ga ketobashi-masi-ta.
the pig-Top elephant-Nom kick-Polite-Past
'The pig, the elephant kicked.'

Note that *-wa* is a topic marker and it by itself shows that the phrase to which it is attached is old information. Given this, if the possibility (5a) is correct, children should succeed in comprehending OSV topicalization even with the condition (6a) (as well as with the condition (6b), needless to say). In contrast, if the possibility (5b) is correct, children should fail in comprehending OSV topicalization with the condition (6a). In addition, if (5b) is correct, whether children succeed with the condition (6b) or not remains to be observed. If topicalization and scrambling are fundamentally the same in carrying out the comprehension task discussed here, we expect that children succeed with the condition (6b) if (5b) is correct. If, on the other hand, topicalization is somehow more demanding than scrambling, children may fail in comprehending OSV topicalization even with the condition (6b). In order to investigate the validity of the two possibilities in (5) and in order to see whether there is a difference between topicalization and scrambling, we examine children's comprehension of topicalization and scrambling with the two conditions (6a) and (6b).

3. Experiment

In this section, I report the experiment which I conducted to examine children's comprehension of topicalization and scrambling. The method of the experiment is the act-out. Children were asked to act-out what stimulus sentences meant by manipulating toy props. The subjects are Japanese monolingual children (N=50), age 3-6. They were divided into two groups, Group A & Group B (age-matched, N=25 each). To Group A, stimulus sentences were given **without** the definite marker *sono*, after the simple introduction of names of toys, as in (6a). To Group B, stimulus sentences were given **with** the definite marker *sono*, after providing a **topicalizing discourse**, as in (6b).

There were three conditions in the stimulus: canonical SOV, scrambled OSV, and topicalized OSV. For each condition, four types of verbs were used: *ketobasu* 'kick', *tobikoeru* 'jump over', *tobinoru* 'jump on', and *dakituku* 'hug'. Thus, there are 12 sentences in total for each child. The order of presentation was randomized.

The result of the experiment for Group A is given in Table 1.

Table 1: Result of Group A

<i>Age</i>	<i>Canonical</i>	<i>Scrambling</i>	<i>Topicalization</i>
6 (N=9, mean 6;3)	94.3%(33/35)	75.0%(27/36)	61.1%(22/36)
5 (N=7, mean 5;5)	96.4%(27/28)	74.1%(20/27)	57.2%(16/28)
4 (N=7, mean 4;6)	78.6%(22/28)	50.0%(14/28)	28.6%(8/28)
3 (N=2, mean 3;9)	100%(8/8)	62.5%(5/8)	37.5%(3/8)

Children in Group A performed poorly in the OSV topicalization condition from age 3 to 6. The performance with the OSV topicalization is much worse than the Canonical Control, even at the age of 6.¹

The result of the experiment for Group B is given in Table 2.

¹ The performance with the OSV topicalization is also worse than the OSV scrambling for all the ages observed. This is likely to be due to the fact that the topic marker *-wa* could be attached to both the subject and the object while the accusative marker *-o* is attached to the object only.

Table 2: Result of Group B

<i>Age</i>	<i>Canonical</i>	<i>Scrambling</i>	<i>Topicalization</i>
6 (N=9, mean 6;3)	97.2%(35/36)	100%(36/36)	100%(36/36)
5 (N=7, mean 5;6)	100%(28/28)	92.9%(26/28)	100%(28/28)
4 (N=7, mean 4;5)	89.3%(25/28)	85.7%(24/28)	82.1%(23/28)
3 (N=2, mean 3;10)	87.5%(7/8)	75%(6/8)	75%(6/8)

Children's performance with scrambling replicates Otsu's (1994) observation. Moreover, children in Group B performed very well in OSV topicalization, at all the ages observed. The performance of OSV topicalization is as good as the Canonical Control for Group B.

4. Conclusion

To recapitulate, children in Group A, who were tested with the context of (6a), were poor at the OSV topicalization. This means that marking the object phrase as the old information with *-wa* is not sufficient for children's successful comprehension of OSV topicalization. Thus, the hypothesis in (5a) is disconfirmed by the result of Group A. In contrast, children in Group B, who were tested with the context of (6b), were very good at the OSV topicalization. These two results of Group A and Group B altogether indicate that the topicalizing discourse and the definite marker *sono* are necessary for successful comprehension of the OSV topicalization. Thus, the hypothesis in (5b) is confirmed. Also, we have seen that children in Group B were good at both scrambling and topicalization. This suggests that topicalization is no more demanding than scrambling given the context in (6b).

Theoretical implication we can make from our discussion is the following. As seen in the result of Group B, young children do not lack grammatical knowledge of topicalization, supporting the Continuity Assumption of grammatical competence in the case of topicalization.

Appendix:

Recall that four types of verbs were used in my experiment reported in section 3: *ketobasu* 'kick', *tobikoeru* 'jump over', *tobinoru* 'jump on', and *dakituku* 'hug'. The first two of them take an NP (i.e., *NP-o*) as the object phrase, while the latter two of them take a PP (i.e., *NP-ni*) as the object phrase. Here I break down the experimental results into two types, depending on whether the object phrase is an NP or a PP, so that a comparison could be possible between NP objects and PP objects. Below I provide the results of Group A and Group B divided by the object phrase (i.e., NP or PP).

Table 3: Result of Group A (NP objects vs. PP objects)

Age	Canonical		Scrambling		Topicalization	
	NP	PP	NP	PP	NP	PP
6 (N=9, mean 6;3)	94.1% (16/17)	94.4% (17/18)	66.7% (12/18)	83.3% (15/18)	50.0% (9/18)	72.2% (13/18)
5 (N=7, mean 5;5)	100% (14/14)	92.9% (13/14)	61.5% (8/13)	85.7% (12/14)	42.9% (6/14)	71.4% (10/14)
4 (N=7, mean 4;6)	78.6% (11/14)	78.6% (11/14)	57.1% (8/14)	42.9% (6/14)	35.7% (5/14)	21.4% (3/14)
3 (N=2, mean 3;9)	100% (4/4)	100% (4/4)	50.0% (2/4)	75.0% (3/4)	25.0% (1/4)	50.0% (2/4)

Table 4: Result of Group B (NP objects vs. PP objects)

Age	Canonical		Scrambling		Topicalization	
	NP	PP	NP	PP	NP	PP
6 (N=9, mean 6;3)	100% (18/18)	94.4% (17/18)	100% (18/18)	100% (18/18)	100% (18/18)	100% (18/18)
5 (N=7, mean 5;5)	100% (14/14)	100% (14/14)	92.9% (13/14)	92.9% (13/14)	100% (14/14)	100% (14/14)
4 (N=7, mean 4;6)	92.9% (13/14)	85.7% (12/14)	85.7% (12/14)	85.7% (12/14)	85.7% (12/14)	78.6% (11/14)
3 (N=2, mean 3;9)	75.0% (3/4)	100% (4/4)	75.0% (3/4)	75.0% (3/4)	75.0% (3/4)	75.0% (3/4)

As you can see in Table 4, the NP object and the PP object are not treated differently in Group B. As for Group A, as shown in Table 3, the performance with the PP object is better than the performance with the NP object in the case of scrambling and topicalization, while they are about the same in the case of canonical SOV sentences. Yet, the performance with the PP object in Group A is not as good as the overall performance in Group B. Thus, having a PP as the object is not sufficient for children's

successful comprehension of non-canonical OSV sentences.

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