CHILDREN'S INTERPRETATION OF JAPANESE PARTICLES IN COMPLEX SENTENCES

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Abstract

This paper discusses how monolingual children speaking Japanese as their first language interpret the particles, WA and GA, in complex sentences. Previous studies (Nakaiwa et al. 1995, Uchida, at al. 1995, Nariyama 2002) reported adult Japanese-speakers' tendency of interpreting WA marking as a coreference with the elided subject while GA marking as a different subject. The current study examined children speaking L1 Japanese in a picture-selection task. Results show that children distinguished the particles similarly to adults in most conditions, while performing differently when WA appeared in the middle of a sentence.

1. Introduction

This paper discusses how children whose native language (L1) is Japanese interpret the particles WA and GA in complex sentences. WA and GA are particles which are attached to noun phrases (NPs). Although [NP-WA] and [NP-GA] can be placed in the subject or object position in a sentence, the focus in this study is on those in the subject position. Functional distinctions of each particle are ambiguous when given out of context. Japanese linguists have compared these particles and provided various types of usages and functions, such as contrastive/exhaustive, old information/new information, topic/ subject, etc. (Kuno 1973, Hinds, Maynard, & Iwasaki 1987, Noda 1996 among others). However, these definitions seem to be determined or interpreted subjectively, varying from person to person and from context to context.

Japanese as being as null-subject language allows elided subjects at roughly 70% in conversation and 50% in written narrative texts (Hinds 1983, Mizutani 1985, Nariyama 2000). How Japanese speakers determine the referential identity of elided subjects is explained as depending on contextual cues, structures (ex. active vs. passive), verbs (ex. transitive vs. intransitive), honorific expressions, etc. However, it appears that resolution for elided subjects in complex sentences are rather systematized and that adult Japanese speakers depend on the systems by distinguishing WA and GA consciously or unconsciously since it is attested that within a complex sentences WA indicates the identity of an elided subject as a coreference with the WA-marked subject and that GA more likely indicates the identity of an ellipsis as a different subject from the GA-marked subject (Narikawa et al. 1995, Uchida et al. 1995, Nariyama 2002). Although this WA/GA distinction in complex sentences seems to be a very common phenomenon in adult Japanese, how L1 Japanese-speaking children interpret each particle has yet to be investigated. With that said, the aim of the current study is to test whether L1 Japanese-speaking children use the aforementioned system to distinguish between WA and GA to resolve elided subjects in complex sentences, particularly those with two clauses: adverbial and matrix, in the same manner as adult L1 speakers do.

2. Literature Review

Previous studies on WA/GA distinction in complex sentences show that adult L1 speakers of Japanese make distinctions between these particles to identify elided subjects.

These studies reported that an elided subject is coreferential with a WA-marked subject in a complex sentence, and that GA tends to invite interpretation of switch-reference.

2.1. Examination of Translation Texts

Nakaiwa et al. (1995) examined translation from Japanese to English by L1 Japanese speakers. Out of 3781 complex sentences, which have zero pronouns making intrasentential and extrasentential anaphoric references, there were 515 zero pronouns in the locations of subject, direct object, indirect object, and others. 124 of them were in the subject location and their antecedent in the same sentence. Nakaiwa et al. found that 109 of them (88%) were translated as having subjects coreferential with WA-marked subjects, while only 8 of them (6%) were coreferential with GA-marked subjects. This finding indicates that 88% of coreferences were signaled by WA-marked antecedents and thus WA can be the indicator binding two subjects in a sentence as the same entity at significant frequency, while GA rarely triggers a coreferencing reading.

2.2. Sentence-Completion Task

Uchida et al. (1995) conducted a sentence completion test, targeting 67 adult native speakers of Japanese, to see how WA-, or GA-marked subjects in a subordinate clause[1] influence the reader's choice of subject in the following clause. Participants were asked to create main clauses which may follow given subordinate clauses. These subordinate clauses were presented in two different conditions: a minimal pair with the only difference being the subject markings of WA and GA. The responses show that the native speakers interpreted all WA-subject as an antecedent of the subject in the main clause (100%); on the other hand, 56% of GA was interpreted as marking different subjects. Although the percentage in the GA case appears to be too low for the particle to be claimed as the marker of a different subject from an ellipsis, this rather low percentage can be explained by experimental sentences being presented out of context.

2.3. Switch-Reference Systems in Japanese

Nariyama (2002) examined written narrative texts and argued that the interaction of WA and GA in complex sentences has an analogous property of switch-reference systems which determine the referential identity of elided subject. That is, WA signals Same Subject; GA signals Different Subject. She analyzed the WA/GA distinction in complex sentences as being similar to the function of switch-reference systems observed in Mojave language. Comparing the WA/GA distinction to the Mojave switch-reference systems, Nariyama (2002) proposed that WA, just like the marker *–k* in Mojave, signals Same-Subject (SS) which denotes that the subject of the marked, or subordinate, clause is the same subject as the subject in the main clause; on the other hand, GA, just like the marker *–m* in Mojave, signals Different-Subject (DS).

To sum up, as these studies show, there is a strong tendency that L1 Japanese-speaking adults use given particles to judge the identity of elided subjects in complex sentences. However, it seems that existing studies on the WA/GA distinction for elided subject resolution in complex sentences have examined written texts and been conducted with L1 Japanese-speaking adults only. In other words, no previous studies apparently address how L1 Japanese-speaking children resolve identifying elided subject in complex sentences.

[1] In Japanese, it is canonical that adverbial clauses are followed by the matrix clauses (Kuno, 1978).

3. Present Study
3.1. Method

I investigated the issue above by collecting data from children speaking L1 Japanese in a picture-selection task. The focuses of analysis were on whether children make distinctions between WA and GA in complex sentences, and if they do, how similarly or differently these distinctions are made in comparison to adults, in order to answer the research questions as follows:

(1) Do children make distinction between WA and GA to resolve elided subject in complex sentences?
(2) If they do, how similarly or differently do children interpret functions of WA/GA in complex sentences?

3.2. Participants

To investigate children's reactions to WA and GA in complex sentences, 5 monolingual Japanese children (Mean age 6;11, range 6;8–7;3) and 14 adult native speaker controls (Mean age 29, range 26–42) participated in a picture-selection experiment.

3.3. Materials

The experimental materials used in the picture-matching task were 5 sets of 15 sentences (5 test items and 10 fillers in each set). A total of 25 test items were prepared; 10 were composed of a *toki* 'when' clause and matrix clause, and 10 were composed of a *kara* 'because' clause and matrix clause. Among Japanese conjunctures, *toki* and *kara* were chosen due to their semantic features which can denote the simultaneousness of two different events expressed in subordinate and matrix clauses separately, unlike *maeni* 'before' or '*atode* 'after.' Furthermore, conjunctions which represent 'SS' only, such as *nagara* 'while (V1)ing / at the same time S + V2.' as in *Hanako-wa terebi-o mi-nagara, juusu-o nonda* 'Hanako, while watching TV, drank juice' and *te* 'X + V1 and then V2,' as in *Hanako-wa terebi-o mi-te benkyoo-shita* 'Hanako watched TV and then studied,' were disregarded in this study. (See Appendix 1 for sample scripts, including context sentence and test item). These sentences were audio-recorded and set to be played by clicking a speaker icon on a Power Point slide. On slides, corresponding pictures to the sentences, each of which depicts two different scenarios with one of the characters as a narrator (See Appendix 2 for sample pictures).

3.4. Procedures

(1) On a power-point slide, two contrastive pictures appear with a click. Participants were asked to describe each of the pictures. The purpose of this step is to provide the participants with an opportunity to examine the pictures and to make sure they know what differentiates them as to who did what. (2) On the second click, the narrator, one of the characters in given pictures, appears so that participants know who is the speaker of a forthcoming statement. (3) By clicking the audio speaker icon, which is placed in the center of the screen, participants hear the context and the narrator's statement. (4) After listening to the narrator, participants were directed to choose one of two pictures to indicate their interpretation of what the narrator has just said.

3.5. Results

Results indicate that children identified elided subjects in complex sentences in similar manners as adults did, in 4 out of 5 conditions. In the condition where a WA-marked subject appears in the middle of a sentence, children performed very differently from adults, shown in Tables 1 and 2 below:

Table 1. Adults' interpretation of identifying elided subject (n=14).

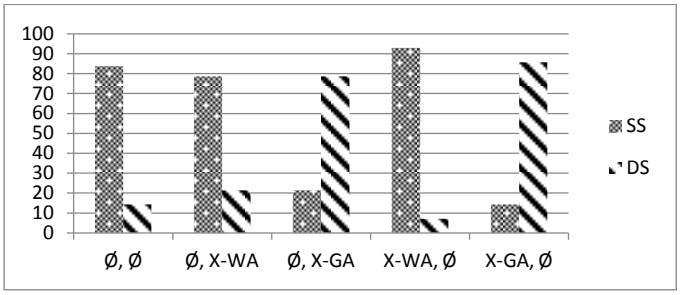
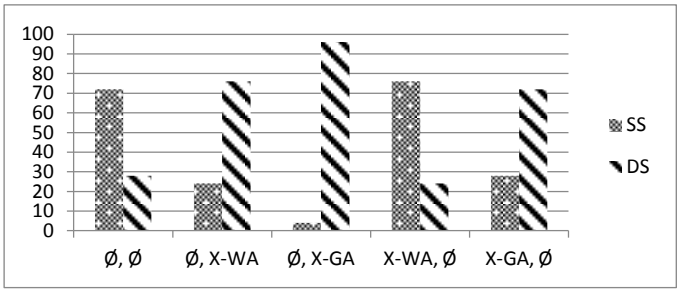


Table 2. Children's interpretation of identifying elided subject (n=5).



These findings may suggest that children by the age of 6 are sensitive to the WA/GA distinction in complex sentences, although the data collected is too small for generalization of such a linguistic phenomenon. Nonetheless, it can be an interesting observation that children at this age have tendency to interpret GA as the indicator of Different Subject (DS), wherever it is located, which is adult-like. When WA came in the front of the sentence, children more likely interpreted the WA-marked subject to be coreferential with an elided subject in the main sentence, or Same Subject (SS). This again turns out to be similar to the adult interpretation. In the case with null subjects in both clauses, they were more likely interpreted as coreferencing with each other (SS) identified as the narrator in given contexts (ex. ‘’Frog’ talking about the incident when he had an argument with ‘Snail’).

What may be most interesting in the data is the Condition 2 where WA appears in the middle of a sentence. While adults showed their tendency of a Same Subject reading in this condition, 76% of the time children took a DS reading although they seem to have understanding that WA and GA are different markers functioning differently.

4. Discussion

The results have revealed differences between the way children and adults interpret sentences in Condition 2. Specifically, the findings indicate that whereas adult native speakers of Japanese are rather influenced by the particles given in a sentence, rather than their locations, as attested from the previous studies, children may read given sentences linearly as they hear. In other words, children at the age of 6 distinguish the particle, WA or GA, marking

the NP in the very first position to use it as a tool to determine the identity of elided subjects following given conjunctions, *toki* or *kara*, as SS or DS (Conditions 4 and 5). These children also know that null subjects in the beginning of a sentence can be a coreference with the narrator (Conditions 1, 2, and 3), that the narrator keeps its identity with the other elided subject when no WA/GA-marked NP appears after a conjunctive (Condition 1), and that GA in the matrix subject position, following a clause with an elided subject, indicates someone else other than the narrator (Condition 3). Perhaps, in child Japanese, the particles, whether WA or GA, are indicators of DS when they appear in the middle of a sentence, having no functional differences from each other.

This interpretive difference of WA/GA placed in the middle of a sentence observed in child Japanese and adult Japanese may be attributed to differences in their linguistic processing skills which children at this age may not have yet developed. Among all the given conditions, Condition 2 represents relatively complicated structures where the WA-marked NP, although appearing to belong to the second clause, is actually binds the whole sentence to corefer with the elided subject in the first clause. For children who process sentences linearly as they hear, Condition 2 is challenging in that its structure requires reanalysis to trace back to the elided subject in the first clause to revise interpretation of the identity of the ellipsis from as the narrator to instead being someone else that is marked with WA. This is a complex processing and perhaps it is too complicated for 6-year old children to perform such reanalysis.

5. Conclusion

This study shows that children by the age of 6 understand the functions of WA and GA in complex sentences when the given structures are straightforward, whereby they make the WA/GA distinction for elided subject resolution mostly in the same manner as adults do. However, more data of both child and adult Japanese should be collected to generalize this particular linguistic phenomenon. Also it is necessary to refine stimuli sentences and their corresponding pictures to collect more precise data. Data from a younger population may provide further insight into innateness of child language regarding WA/GA distinctions.

Appendix 1

Context: Frog and Snail had a fight the other day. Frog is talking about that day.

<Condition 1>
Ø okotta kara, ø kaetta-nda.
ø was-angry because ø went-home
'Because ø was angry, ø went home.'

<Condition 2>
Ø okotta kara, Katatsumuri-wa kaetta-nda.
ø was-angry because Snail-WA went-home
'Because ø was angry, Snail went home.'

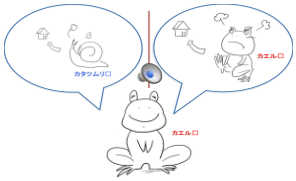
<Condition 3>
Ø okotta kara, Katatsumuri-ga kaetta-nda.
ø was-angry because Snail-GA went-home
'Because ø was angry, Snail went home.'

<Condition 4>
Katatsumuri-wa okotta kara, ø kaetta-nda.
Snail-WA was-angry because ø went-home
'Because Snail was angry, ø went home.'

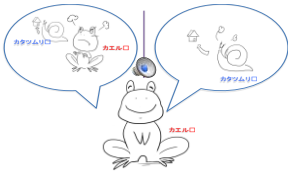
<Condition 5>
Katatsumuri-ga okotta kara, ø kaetta-nda.
Snail-GA was-angry because ø went home
'Because Snail was angry, ø went home.'

Appendix 2

For Condition 1:



For Conditions 2 & 3:



For Conditions 4 & 5:

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