

Children's Knowledge of the Structural Difference between Relative Clauses and *Wh*-Questions in Japanese

1. Introduction: In the syntactic literature, it has been widely assumed since Saito (1985) that relative clauses in Japanese are IPs (or TPs), while those in English are CPs (see e.g. Murasugi 1991, Taguchi 2008). This study reports results of our experiment which investigates whether Japanese-speaking preschool children have adult-like knowledge of the structure of relative clauses, namely, the knowledge that Japanese relatives are IPs.

2. The Structure of Relative Clauses in Japanese: Relative clauses in Japanese exhibit some peculiar properties that are not shared by English relative clauses. One prominent difference is that, while English permits an overt complementizer to appear between the relative clause and its head noun, Japanese never allows such an element, as illustrated in (1). Another important difference is that, while relativization from an embedded adjunct position is possible in English, this is not permitted in Japanese: Relativization from an adjunct position is clause-bound in Japanese. Hence, while the English example in (2) is ambiguous between the structure involving long-distance relativization (2a) and the structure involving short-distance relativization (2b), such structural ambiguity does not exist in Japanese: Only the structure involving short-distance relativization in (3b) is permitted, and as a consequence, the example in (3) can only be interpreted as “the reason of Mary’s thinking that John came back,” never as “the reason why John came back in Mary’s idea.” The absence of the latter reading is especially striking, in light of the fact that the corresponding *wh*-question involving the adjunct *naze* ‘why’ permits two interpretations, as illustrated in (4).

- (1) a. the book [(that) Ken bought]
 b. [Ken-ga katta (*no)] hon
Ken-Nom bought C book ‘the book (*that) Ken bought’
- (2) the reason [(why) Mary thinks [that John left]]
 a. ^{OK} the reason [(why)_i Mary thinks [that John left t₁]]
 b. ^{OK} the reason [(why)_i Mary thinks [that John left] t₁]
- (3) [Mary-ga [John-ga kaettekita to omotteiru]] riyuu
Mary-Nom John-Nom came back C think reason
 a. * [*Mary-Nom* [*John-Nom* t₁ *came back* C] *think*] *reason*₁
 b. ^{OK} [*Mary-Nom* t₁ [*John-Nom* *came back* C] *think*] *reason*₁
- (4) *Naze* John-ga kaettekita to Mary-wa omotta no?
why John-Nom came back C Mary-Top thought Q
 ‘Why did Mary think that John came back?’
 a. ^{OK} ‘Why did Mary get the idea that John came back?’
 b. ^{OK} ‘Why did John come back, in Mary’s idea?’

Murasugi (1991) argues that the above two peculiar properties of relative clauses in Japanese indicate that Japanese relative clauses are IPs. Since the CP layer is lacking, Japanese relatives have no position for a complementizer. In addition, since the landing site for the relative operator is an adjoined position to IP, this operator cannot act as an antecedent governor for the intermediate trace in the embedded [Spec, CP], leading to an ECP violation (Lasnik & Saito 1991). In contrast, a complement *that*-clause in Japanese is a CP, and hence it allows *naze* to undergo long-distance LF *wh*-movement out of it, leading to the grammaticality of the interpretation in (4b).

3. Experiment: Given the sharp contrast between the adjunct relative clause as in (3) and the adjunct *wh*-question as in (4), an interesting acquisitional question arises as to whether Japanese-speaking preschool children are sensitive to this interpretive difference. In order to address this question, we conducted an experiment with 20 Japanese-speaking children ranging in age from 4;10 to 6;04 (mean age 5;06). Each subject was presented with four target trials and one warm-up trial. In each trial, a child was told a story, which was accompanied by a series of pictures presented on a laptop computer. At the end of each story,

a puppet posed a question about the story to the child. The task for the child was to answer these questions.

The subjects were divided into two groups. One group of children (10 children, Experimental Group) was presented with test sentences involving a relative clause, as in (5). These sentences contain relative clauses that correspond to the one in (3), and only allow the interpretation that stems from the short-distance relativization. Hence, the only possible answer provided by the story was (7a). The other group of children (10 children, Control Group) was presented with *wh*-questions involving *naze* ‘why’, as illustrated in (6). *Why*-questions as in (6) contain an embedded complement clause, and are ambiguous between the structure in which *naze* is located in the matrix clause (6a) and the structure in which *naze* is located in the embedded clause (6b). Since the complement CP is not an island, it permits LF *wh*-movement out of it, and hence both of these structures are possible for adults. Thus, for adults, both (7a) and (7b) can be possible answers to (6).

- (5) [[Kaerusan-ga kaettekita to] okaasan-ga omotta] riyuu-o osiete.
frog-Nom came-back C mother-Nom thought reason-Acc tell
 ‘Tell me the reason the mother thought that the frog had already come back.’
- (6) Naze kaerusan-ga kaettekita to okaasan-wa omotta no
why frog-Nom came-back C mother-Top thought Q
 ‘Why did the mother think that the frog had already come back?’
- a. *why* [_{CP} *frog-Nom came-back C*] *mother-Top thought Q*
 b. [_{CP} *why frog-Nom came-back C*] *mother-Top thought Q*
- (7) Potential answers provided by the story:
 a. Short-Distance Answer: ‘Because the mother found a tricycle at the front door.’
 b. Long-Distance Answer: ‘Because the frog got hungry.’

The results of our experiment are summarized in the following table. Except for the “errors” from a single child, all the answers to relative-clause sentences were short-distance answers. In contrast, children provided a significant number of long-distance answers to *why*-questions. The interpretive contrast between relative-clause sentences and *why*-questions suggest that preschool children can make the relevant structural distinction, which in turn indicates that they have knowledge that relative clauses in Japanese are IPs.

	short-distance answers	long-distance answers
Experimental Group / Relative Clauses	90% (36/40)	10% (4/40)
Control Group / <i>Why</i> -questions	62.5% (25/40)	37.5% (15/40)

4. Conclusion: Our findings suggest that Japanese-speaking preschool children have knowledge that long-distance relativization of adjuncts is not possible in Japanese. According to our analysis of the child-directed speech available in the CHILDES database (MacWhinney 2000), the input data that directly indicate the absence of long-distance relativization are hardly available to Japanese-speaking children. In light of this observation, our results argue for the proposal by Murasugi (1991) that UG should contain a parameter that links the unavailability of long-distance relativization to a more prominent property of relative clauses (namely, the absence of a relative complementizer). A broader implication is that child language acquisition constitutes an important testing ground for parametric proposals (Sugisaki 2003, Snyder 2007).

Selected Reference:

Murasugi, K. 1991. *Noun Phrases in Japanese and English: A Study in Syntax, Learnability and Acquisition*. Doctoral dissertation, University of Connecticut.
 Saito, M. 1985. *Some Asymmetries in Japanese and Their Theoretical Implications*. Doctoral dissertation, MIT.