A Note on the Acquisition of Japanese Passives*

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Abstract
This paper investigates the acquisition of Japanese passives to settle the empirical and conceptual problems posed by previous studies. Empirically, this paper provides some additional data on children's comprehension of Japanese passives. Conceptually, this paper discusses four logical possibilities to explain the results on the basis of current theories of language acquisition and analyses of Japanese passives. This paper suggests that none of these possibilities are conclusive enough, and that further investigations are required.

Keywords: language acquisition, Japanese passives, Maturation Hypothesis, Continuity Hypothesis, gapped/gapless, -ni/-ni yotte.

1. Introduction

To investigate the nature of the human language, research has been carried out in various fields. The study of language acquisition is one of them. Children show different behavior from adults in the course of language acquisition. It seems only natural to ask why this is the case. The study of language loss is another field. Some people whose brain is impaired, aphasics, show different linguistic behavior from normal adults. The question arises as to what part of human language capacity is lost as a result of brain damage. Furthermore, it is well known that children and aphasics show similarities in linguistic performance. The order of language development is mirrored, in reverse, by the order of language loss (cf. Jakobson (1968) among others). It is worth exploring to ask why such parallel properties are seen between children and aphasics.

In the field of language acquisition, researchers have attempted to characterize children's linguistic knowledge in terms of current linguistic theories. In generative

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grammar, especially within the Principles and Parameters Theory, it is assumed that children are born equipped with a set of principles with parameters (Universal Grammar, henceforth UG). There are two distinct views as to how UG principles work in the course of language acquisition. One view assumes that all UG principles are available to children at the onset of the language acquisition (the Continuity Hypothesis). The other view, set forth by Borer and Wexler (1987), assumes that certain principles are not available to a child at an early stage of language acquisition, and that they mature gradually (the Maturation Hypothesis).[1] In the latter view, the difference between children's grammar and adults' is easily explained. At a certain stage, children can have different grammar from adults' because not all principles have yet matured. In the former view, various non-linguistic explanations, such as processing difficulty or the lack of pragmatic knowledge are postulated to explain the difference (Chien and Wexler (1990), Grodzinsky and Reinhart (1993), Thornton and Wexler (1999) among others).

Similarly, in the field of language loss, two distinct views are proposed. One assumes that aphasics partially lack knowledge of grammar. Because of this, they show poor performance in production or comprehension (cf. Grodzinsky's (1990) Trace Deletion Hypothesis). The other assumes that the knowledge of grammar itself is intact but some other reason such as processing difficulty is responsible for poor performance (Avrutin (2000)).

In both fields, two distinct views are proposed to explain the difference between children and aphasics on one hand and (normal) adults on the other. One view explains the difference in terms of the unavailability or lack of certain linguistic knowledge. The other view assumes that the knowledge itself is intact, and investigates some non-linguistic factors.

The studies so far are focused around English. To explicate the nature of human language, it is essential to consider cross-linguistic variation. Recently, research has been conducted on Japanese both in the field of language acquisition and language loss. In the area of language acquisition, some researchers investigated the acquisition of Japanese passives to test the validity of Borer and Wexler's (1987) Maturation Hypothesis. As evidence for their hypothesis, Borer and Wexler show that English-speaking children acquire adjectival passives earlier than verbal passives. Adjectival passives differ from verbal passives in that the derivation of the former does not involve any movement, or the formation

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[1] Strictly speaking, these two hypotheses are not the extremes. The Maturation Hypothesis is subsumed under the Continuity Hypothesis in that both assume that children are born equipped with UG and that the essential nature of UG does not change over time. In this paper I will use the term, the Continuity Hypothesis, for expository purposes. It should be noted here that this will be utilized in the sense that all the UG principles are available to children at the onset of language acquisition.

of A-chain, while that of the latter involves A-chain formation.[2] They argue that the principles which are responsible for forming an A-chain are not available to children at the very early stage of language acquisition, and these principles mature gradually (the Maturation of A-chain Hypothesis, henceforth the MAH). Some researchers have investigated the acquisition of Japanese passives to test the validity of the MAH, based on Kubo's (1992) analysis on Japanese passives. In the area of language loss, Hagiwara (1993) examines aphasics' comprehension of Japanese passives. However, consensus has not been reached yet, because of conflict between the data given by previous studies. How to analyze Japanese passives remains still controversial.

Although the same principles are considered to be at work in the course of language acquisition and language loss, in this paper, I will focus on language acquisition. The organization of this paper is as follows. Section 2 reviews the previous studies on the acquisition of Japanese passives and points out some problems of them. In section 3, the data from my experiment are provided. Section 4 discusses the four logical possibilities of in the way of interpreting experimental results, taking into account two distinct views of language acquisition and two different analyses of Japanese passives. Section 5 is conclusion.

2. Previous Studies on the Acquisition of Japanese Passives

Before reviewing the previous studies on the acquisition of Japanese passives, I will briefly introduce an analysis on Japanese passives given by Kubo (1992), on which all of the studies are based. According to Kubo, Japanese passives are divided into two major classes: gapped passives and gapless passives. Gapped passives are further divided into four subtypes: accusative passives (1), dative passives (2), accusative possessive passives (3), and dative possessive passives (4).[3] All of these subtypes have an NP-trace in some position.

(1) Taro-ga Hanako-ni t_i tatak-are-ta
(2) Taro-ga Jiro-ni Hanako-o t_i shookais-are-ta
(3) Taro-ga kaze-ni [t_i [boosi]]-o hukitobas-areta
(4) Taro-ga ryokoogaisha-ni Hawai-iki-o [t_i [kazoku]]-ni susume-rare-ta

(Kubo (1992: 236-237) with my slight modification)

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2 The relevant representations of adjectival and verbal passives can be exemplified as follows:
i) Adjectival passive: The doll was combed.
ii) Verbal passive: The doll$_i$ was seen t_i.

3 Among gapped passives, we restrict our attention to accusative passives and accusative possessive passives.

Gapless passives are divided into two subtypes: gapless passives with V_i (5) and gapless passives with V_t (6). Contrary to gapped passives, these subtypes do not have any NP-trace.

(5) Hanako-ga Taro-ni iedes-are-ta
(6) Taro-ga Hanako-ni shikou-shuukyoo-o hajimer-are-ta

(Kubo (1992:238))

Based upon this analysis, let us turn now to previous studies on the acquisition of Japanese passives.

2.1. Evidence for the MAH

Sugisaki (1998) investigates the acquisition of Japanese passives to test the prediction of the MAH. Adopting Kubo's analysis, he compares children's comprehension of two types of Japanese passives: accusative passives which involve an A-chain, and gapless passives with V_i not involving an A-chain. Sugisaki tested seventeen children whose ages range from 3;10 to 5;10, using the two-choice picture identification task. His results show that there is only one child who acquires accusative passives earlier than gapless passives with V_i (see Table 1). Based upon these results, he concludes that the MAH is well supported in Japanese.

Table 1 The number of children who passed/failed the accusative passive test and/or the gapless passive test

	Accusative Passives	
Gapless Passives	Pass	Fail
Pass	6	4
Fail	1	6

Minai (1999) also tested the prediction of the MAH, comparing children's comprehension of four types of Japanese passives: accusative passives, possessive passives, gapless passives with V_i and gapless passives with V_t. By the two-choice picture identification task, she tested thirty-five children from 3 to 6 years old. As Sugisaki, her results show that gapless passives are acquired earlier than gapped passives and give supporting evidence for the MAH (see Table 2).[4]

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[4] In this paper, I will use the following notation.
A = actives, AP = accusative passives, PP = possessive passives, APP = alienable possessive passives, IPP = inalienable possessive passives, GLP = gapless passives, and SCR = scrambling sentences.

Table 2 Percentages of Children's Correct Responses

	3 years old	4 years old	5 years old	6 years old
A	60.42	75.00	89.58	98.48
AP	54.17	60.42	60.42	69.70
PP	37.50	45.83	56.25	59.09
GLP with V_i	62.50	70.83	70.83	81.82
GLP with V_t	62.50	72.92	79.17	68.18

2.2. *Evidence against the MAH*

Harada and Furuta (1999) conducted three experiments to test the prediction of the MAH. First they examine children's production of accusative passives, accusative (inalienable) possessive passives, and gapless passives with V_i, by the elicited production task. Second they investigate children's comprehension of accusative passives, gapless passives with V_t, and gapless passives with V_i, by the agent identification task. The subjects that participated in both of the first and the second experiment were eighty-one children from 3 to 6 years old. Third, using the truth-value judgment task, Harada and Furuta compared the comprehension of the four types of Japanese passives: accusative passives, possessive passives, gapless passives with V_t, and gapless passives with V_i. There were thirty children from 4 to 6 years old. Throughout these three experiments, Harada and Furuta's results show that contrary to the prediction of the MAH, passives with an A-chain (accusative passives and possessive passives) are acquired earlier than passives without an A-chain (gapless passives with V_t and gapless passives with V_i). Harada and Furuta discuss that there are two possible explanations for their results: the MAH cannot be maintained or the structure of Japanese passives should be reconsidered.

Table 3 Percentages of Children's Correct Responses
(The elicited production task)

	3;6-3;11	4;0-4;5	4;6-4;11	5;0-5;5	5;6-5;11	6;0-6;5
AP	40.5	46.2	50.0	54.8	79.5	74.4
PP(inalienable)	15.5	11.5	34.5	38.1	21.8	42.3
GLP with V_I	4.8	10.3	14.3	14.3	20.5	20.5

Table 4 Percentages of Children's Correct Responses
(The agent identification task)

	3;6-3;11	4;0-4;5	4;6-4;11	5;0-5;5	5;6-5;11	6;0-6;5
AP	35.7	46.2	47.6	66.7	71.8	79.5
GLP with V_t	23.8	28.2	26.2	35.7	20.5	41.0
GLP with V_I	40.5	48.7	59.5	61.9	48.7	51.3

Table 5 Percentages of Children's Correct Responses
(The truth-value judgment task)

	4;0-4;5	4;6-4;11	5;0-5;5	5;6-5;11	6;0-6;5
AP	41.7	54.2	37.5	70.8	83.3
PP	25.0	45.8	50.0	45.8	66.7
GLP with V_t	20.8	45.8	25.0	16.7	45.8
GLP with V_i	50.0	50.0	33.3	44.4	61.1

2.3. Problems

As I have shown in the preceding sections, the results obtained by the previous studies are in conflict. Sugisaki (1998) and Minai (1997, 1999) show that children acquire gapless passives earlier than gapped passives. Harada and Furuta (1999) offer counter evidence that children acquire gapped passives earlier than gapless passives. Empirically, further examination of children's performance is required.[5] Further a conceptual problem arises. All of these three studies assume the syntactic analysis given by Kubo (1992) and their interest lay in testing the prediction of the MAH. This is, however, not the only way we should take in order to develop the theory for the acquisition of Japanese passives. Both in the theory of language acquisition and in the analysis of Japanese passives, alternative views have been presented.

As a first step for the investigation of children's acquisition of Japanese passives, I conducted an experiment. Based on the results obtained by my experiment, I will discuss four possibilities in explaining children's performance.

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[5] The comparison between these three studies suggests another way we should take. The methods used in these three studies vary from one to another. Sugisaki and Minai use the two-choice picture identification task. The task used in one of Harada and Furuta's experiments is the agent identification task. Harada and Furuta also conducted an experiment by the truth-value judgment task. Task differences may induce differences in results. As time was limited, I could not pursue this possibility. A conceptual problem arises when testing the same sentences by different task.

3. The Experiment

3.1. Materials and Subjects

The comprehension of three types of Japanese passives was examined by the two-choice picture identification task: accusative passives, gapless passive with V_i, and possessive passives.[6] Among possessive passives, two different kinds of passives were distinguished: alienable possessive passives and inalienable possessive passives.

(7) Buta-san-ga Kuma-san-ni shibar-are-ta
(8) Kuma-san-ga Buta-san-ni niger-are-ta
(9) Kuma-san-ga Buta-san-ni atama-o tatak-are-ta
(10) Buta-san-ga Kuma-san-ni hata-o taos-are-ta

There were sixteen sentences (four actives with V_t and two actives with V_i as a control, two accusative passives, two gapless passives with V_i, and two alienable possessive passives, two inalienable possessive passives, and two scrambling sentences).[7] The experiment consisted of two sessions. Each session included eight sentences: two actives with V_t, one active with V_i, one accusative passive, one gapless passive with V_i, one alienable possessive passive, one inalienable possessive passive, and one scrambling sentence. Each type of sentences is presented in a random order.

Seventy-one children participated in the experiment. They ranged in age from 2;7 to 5;8. The children who participated in the experiment were all native speakers of Japanese. Each child subject was tested individually in a quiet room. Children whose ages were 2;7-3;11 were tested in a quiet corner of the classroom with their teacher to make them feel relaxed.

3.2. Results

Among the seventy-one children who participated in the experiment, twenty-one children who could not go through with the experiment or could not give correct answers to at

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[6] Gapless passives with V_t are excluded from the test sentences for methodological and theoretical reasons. The methodological reason is children's limitation of concentration. It required about twenty minutes to test sixteen sentences. To lessen the effect of this factor, I kept the number of the test sentences as small as possible. The theoretical reason is that the possessive relationship requires further careful consideration.

[7] The sentences tested in this experiment are listed in the appendix.

least three active sentences were excluded from the results. The number of children of each age was as follows: Three children two years of age, ten children three years of age, seventeen children four years of age, and twenty children five years of age. The results of children's responses are summarized in Table 6.[8]

Table 6 Percentages of Children's Correct Responses

	A with V_t	A with V_i	AP	GLP with V_i	APP	IPP	SCR
2-years old	83.3	83.3	33.3	33.3	83.3	50	66.7
3-years old	87.5	95	55	60	35	50	50
4-years old	85.3	97.1	58.8	64.7	44.1	41.2	58.8
5-years old	87.5	95	77.5	67.5	60	62.5	55

As the results show, the comprehension of passive sentences is relatively worse than that of active sentences. Children show a tendency to understand GLPs with V_i more easily than APs or PPs.

3.3. Discussion

Now let us make a comparison of my results with the results obtained by previous studies. Sugisaki (1998) shows that GLP with V_i is acquired earlier than APs. According to Minai (1999), children's comprehension of GLPs with V_i is better than APs and PPs. Children can respond to AP more correctly than to PPs. Harada and Furuta (1998) observe the reverse order. Children's performance on APs and PPs is better than that on GLPs. Among APs and PPs, APs are comprehended or produced better than PPs. The results of my experiment (see Table 6) show that at ages three and four, children's comprehension of GLPs with V_i is better than that of APs and PPs. At age five, the ranking of GLPs with V_i and APs are reversed. Thorough these three groups, the percentage of the correct responses to PPs is the lowest. My results are in accord with Sugisaki and Minai in that children can understand GLP with V_i more easily than AP or PP, and AP more easily than PP.

4. What's the Problem for Children?

Although my experiment does not provide a conclusive answer to the question of how children acquire Japanese passives, I observed that children tend to comprehend gapless

[8] For the individual data, see the appendix.

passives more easily than gapped passives. This observation is in accord with Sugisaki (1998) and Minai (1999). Based on the results of their experiment, both Sugisaki and Minai argue that the MAH is well supported in Japanese as well. Other studies, however, provide evidence against the MAH.

Fox and Grodzinsky (1998) investigated the acquisition of English *be-* and *get-*passives. They compared the comprehension of Nontruncated Actional *be-* and *get-*passives, Nontruncated Nonactional *be*-passives, and Truncated Nonactional *be*-passives,[9] based on the assumption that English *get*-passives, as well as *be*-passives, involve an A-chain. They obtained the results that only Nontruncated Nonactional *be*-passives were problematic for children. Building on these results, they conclude that children's problem is not the knowledge to form an A-chain, but the theta-transmission (the *By*-Phrase Hypothesis). Otsu (1994) examined children's comprehension of Japanese Clause-Internal Scrambling which is assumed to involve an A-chain, and observed that the overwhelming majority of responses (43 out of 48) were correct ones. His results show that children have the knowledge to form an A-chain, at least, by the age of three. Sano (2000) investigated the acquisition of Japanese unaccusatives, full unaccusatives, and full passives to test Borer and Wexler's MAH and Fox and Grodzinsky's *By*-Phrase Hypothesis. From the facts that the rates of correct responses were well above chance with respect to both unaccusatives and full unaccusatives, Sano concludes that the MAH cannot be supported.

Before concluding whether the MAH can be maintained or not from the results of Sugisaki, Minai, and my own experiment, we have to take the following alternatives into account. As mentioned in section 2, all of the three previous studies on the acquisition of Japanese passives (Sugisaki (1998), Minai (1999), and Harada and Furuta (1999)) tacitly assume the Maturation Hypothesis and the analysis of Japanese passives given by Kubo (1992). However, an alternative view of language acquisition has been presented: all of the UG principles are available to children at the onset of language acquisition. The analysis of

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[9] The examples tested in Fox and Grodzinsky are as follows.
i) Nontruncated Actional *be*-passive:
The rock star is being chased by the koala bear.
ii) Nontruncated Actional *get*-passive:
The boy is getting touched by the magician.
iii) Nontruncated Nonactional *be*-passive:
The boy is seen by the horse.
iv) Truncated Nonactional passive:
The bear is seen.
They assume that *by* itself can assign an Agent theta-role to its object. If the theta-role given to the *by*-phrase NP is other than the Agent, the problem of theta-transmission arises. In the non-actional passive, the *by*-phrase NP should be assigned theta-role by theta-transmission because the external theta-role of a non-actional verb is not consistent with the Agent.

Japanese passives has not come to a consensus. Kuroda (1979)/Hoshi (1994, 1995) give a different analysis of passive. In this section, I will have a look at two competing analyses of Japanese passives and discuss four possibilities in explaining the results obtained.

4.1. Two Competing Analyses on Japanese Passives

A number of studies have been conducted on the structure of Japanese passives. It has been argued that Japanese passives are divided into two different classes: direct passives and indirect passives. Direct passives have been characterized as having active counterparts. In these passives, the subject of the corresponding active sentence appears with *-ni* and the object of the corresponding active sentence appears as the subject.

(11) Gakusei-ga sensei-o hihans-i-ta
(12) Sensei-ga gakusei-ni hihans-are-ta

(Hoshi (1995:191))

Indirect passives, on the other hand, have been characterized as having no corresponding active sentences. Indirect passives are subdivided into two subtypes according to the types of verbs: one with an intransitive verb as in (13) and the other with a transitive verb as in (14). In both subtypes, the subject cannot be considered as an argument of the verb suffixed with *-rare*.

(13) Sensei-ga gakusei-ni kurasu-de nak-are-ta (Hoshi (1995:191))
(14) Sensei-ga gakusei-ni ronbun-o hihans-are-ta

With the development of generative grammar, some alternative views for the classification of Japanese passives have been proposed. One of them is Kubo (1992). As briefly mentioned in section 2, Kubo divides Japanese passives into two classes: gapless passives and gapped passives. Gapless passives are divided into two sub-types: gapless passives with V_t and gapless passives with V_i. Gapped passives are divided into four sub-types of passives: accusative passives, dative passives, accusative possessive passives, and dative possessive passives. Under her analysis, direct passives in the above classification are classified as gapped passives. The passive sentence (12) is derived from the corresponding active sentence (11) by the movement of the object NP. As a result, it has an NP-trace in the object position as indicated in (15).

(15) Sensei-ga gakusei-ni t_i hihans-are-ta

Indirect passives with an intransitive verb are classified as gapless passives. The derivation of the sentence (13) does not include an NP movement. As to indirect passives with a transitive verb, what was uniformly classified as indirect passives in the above classification is sub-divided into two classes. Consider the following two sentences.

(16) Taro-ga kaze-ni [t_i[boosi]]-o hukitobas-areta
(Kubo (1992: 237) with my slight modification)

(17) Taro-ga Hanako-ni sinkou-shuukyoo-o hajimer-are-ta (Kubo (1992: 238))

Both sentences would be classified as indirect passives in the former classification. Kubo distinguishes these two sentences according to the existence/absence of the possessive relationship. In (16), there is a possessive relationship between the matrix subject, *Taro*, and the embedded object, *boosi*, while in (17) such a relationship is not held between the matrix subject, *Taro*, and the embedded object, *shinkou-shuukyoo*. Kubo proposes two distinct syntactic structures for these two types of passives. If there is a possessive relationship, the sentence is classified as gapped passives. The sentence is derived from the corresponding active sentence by the possessor raising. As (16) indicates, the matrix subject moves up from the possessor NP position in the embedded object. In contrast, if there is no such a relationship, the sentence is classified as gapless passives. Thus under Kubo's analysis, the possessive relationship is syntactically represented.

Kuroda (1979) proposes another view for the classification of Japanese passives. He argues that the crucial notion for the classification of Japanese passives is not whether they are direct or indirect, but rather it is how the agent phrase is marked. He divides Japanese passives into two classes according to their semantic properties: *-ni* passives and *–ni yotte* passives. *-Ni* passives have some implication of "affectivity", while *–ni yotte* passives lack such a property. Due to this affectedness connotation, *-ni* passives have some different properties from *-ni yotte* passives. In *–ni* passives, the subject should be understood as an affectee, and it has a close relationship with the agent. For example, an abstract noun phrase cannot be a subject of the *-ni* passive because the subject cannot be understood as an affectee.

(18) *Kaikai ga gityoo ni sengen sareta

(19) Kaikai-ga gityoo ni yotte sengen sareta

(Kuroda (1979: 309))

In contrast to *–ni* passives, *-ni yotte* passives are appropriate in an objective context. Kuroda points out two factors to determine the acceptability of *–ni yotte* passives: the closeness between the subject NP and the agent NP and a verb's lexical meaning

(20) John wa moo sukosi de ki o usinau tokoro o Bill ni tasuke-rareta

(21) John wa moo sukosi de ki o usinau tokoro o Bill ni yotte tasuke-rareta

(22) John wa moo sukosi de ki o usinau tokoro o soosaku-tai ni yotte kyuuzyo sareta

(Kuroda (1979:319-320))

The relationship between the subject *John* and the agent *soosakutai* is more objective than that between the subject *John* and the agent *Bill*. Further, the verb *kyuujosuru* (Sino Japanese) is more objective than the verb *tasukeru*. These two factors make (22) more acceptable than (21).

Based on these semantic differences between *-ni* and *-ni* yotte passives, Kuroda argues that these two classes of passives have different syntactic structures. Because *–ni yotte* passives are semantically equal to the corresponding actives, they are derived from the corresponding actives by transformation. The passive sentence (23) is derived from the corresponding active sentence (24) by the transformational rule (25).

(23) John ga Bill ni yotte hihan sareta

(24) Bill ga John o hihan sita

(Kuroda (1979: 308))

(25) NP_1 ga ...NP_2 o ...V-*ru* → NP_2 ga ...NP_1 *ni yotte* V-*rare-ru*

(Kuroda (1979: 337))

-Ni passives, on the other hand, have semantic implication of "affectedness" and their underlying structure is different from that of actives and *-ni yotte* passives. For example, the structure of -ni passives is illustrated as follows.

(26) [$_{S1}$John-ga [$_{S2}$ Bill-ni hihans]-are-ta]

While in *–ni yotte* passives the passive morpheme *-rare* is inserted by a reordering transformation, in *-ni* passives, *-rare* takes a sentential complement as a matrix main verb. Under his proposal, all *-ni* passives, whether they are direct or indirect, have the same underlying structure. If the matrix subject is identified with the embedded object, the embedded object is deleted and the direct passive is derived as in (27). If it isn't, the indirect passive is derived as in (28).

(27) John-ga [$_{S2}$ Bill-ni John-o hihans]-are-ta

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(28) John-ga [$_{S2}$ Bill-ni Hanako-o hihans]-are-ta

Adopting Kuroda's classification of *-ni* passives and *–ni yotte* passives, Hoshi (1994, 1995) proposes PRO-movement analysis for *-ni*-direct passives. He argues that Japanese has three classes of passives: *-ni* indirect passives, *-ni* direct passives, and *–ni-yotte* passives. According to Hoshi's analysis, the sentence (26) is derived via the movement of PRO in the embedded object position to the embedded subject position as illustrated in (29).

(29) John-ga [PRO$_i$ Bill-ni t$_i$ hihans]-are-ta

What should be noted here is that Kuroda/Hoshi consider the semantic difference between *–ni* passives and *–ni yotte* passives as a reflection of their syntactic differences.

Kubo and Kuroda/Hoshi give two distinct views of the classification of Japanese passives. The comparison Kubo's analysis and Kuroda/Hoshi's analysis indicates that one differs from the other with respect to what part of the difference in meaning should be syntactically distinguished. Kubo syntactically represents the possessive relationship, while Kuroda/Hoshi do not share this view. Kuroda/Hoshi distinguishes *–ni* passives from *–ni yotte* passives syntactically, while Kubo doesn't make such a distinction.

4.2. Possible Explanations and Future Problems

As I have shown in the previous subsection, current approaches to Japanese passives are divided roughly into two types: gapped/gapless vs. *-ni/ -ni yotte*. Kubo (1992) gives the former type of analysis, while Kuroda (1979)/Hoshi (1994, 1995) give the latter type of analysis. Moreover, they differ in the level at which the possessive relationship between the matrix subject and the embedded object is captured. Under Kubo's analysis, possessive relationship should be syntactically represented. Kuroda/Hoshi do not encode this relationship in the syntactic representation, rather they consider this relationship to be pragmatic.[10]

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[10] Based on Washio (1993, 1995), Tanaka (1997) proposes that the crucial notion for classification of Japanese passives is not *–ni/-ni yotte* distinction, but inclusion/exclusion distinction. This distinction corresponds to Kubo's gapped/gapless distinction. However, He does not admit any syntactic differences between these two classes of passives. Rather, he argues that it is a matter of cognitive shift. He notes that the inclusion passive is the extension of the exclusion passive, and then,

Bearing in mind these two competing analyses of Japanese passives and two distinct views of language acquisition, let us consider what is predicted with respect to the acquisition of Japanese passives. Combining two distinct views of language acquisition (the Maturation Hypothesis and the Continuity Hypothesis) and two different analyses of Japanese passives (Kubo and Kuroda/Hoshi), we have four logical possibilities as follows.

(30) a. the Maturation Hypothesis (the MAH) and the analysis given by Kubo
b. the Maturation Hypoithesis (the MAH) and the analysis given by Kuroda/Hoshi
c. the Continuity Hypothesis and the analysis given by Kubo
d. the Continuity Hypothesis and the analysis given by Kuroda/Hoshi

First let us assume (30a). This combination is the one tacitly assumed in previous studies (Sugisaki (1998), Minai (1999), and Harada and Furuta (1999)). Under this assumption, the later acquisition of AP and PP than that of GLP with V_i is properly predicted. This is because the former two subtypes of passives differ from the latter in that they involve an A-chain. Next, let us consider the second possibility (30b). What is predicted under this assumption? Under Kuroda/Hoshi's analysis, passives with an A-chain are *-ni yotte* passives. The MAH predicts that children acquire *–ni yotte* passives later than *-ni* passives. Because all of the tested sentences in the previous studies including my experiment are *-ni* passives, one cannot say whether the MAH can be maintained or not from the results.

Now let us take another view of the theory of language acquisition, that is, the Continuity Hypothesis, and discuss the third and fourth possibilities. Under this view, the difference between children's grammar and adults' should be explained not in terms of children's lack of some grammatical knowledge, but rather in terms of some non-linguistic factors. If we adopt Kubo's analysis (cf. (30c)), how can we account for the results obtained? One possible explanation is that children have difficulty in processing a sentence including some trace. They have the knowledge of the A-chain formation, but their processing system has not fully developed as in an adult. A null hypothesis is that children cannot successfully process any sentence with a trace. Under this assumption, it is predicted that children have difficulty not only with sentences with an A-chain, but also sentences with an A'-chain. Since we have not yet tested the sentences which include an A'-chain, we should investigate whether this prediction is borne out or not.

Finally, let us consider the fourth possibility (30d). Under Kuroda/Hoshi's analysis,

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they share properties of exclusion passives. The agent can be marked by *–ni*, both in exclusion and inclusion passives, while it can be marked by *–ni yotte* only in inclusion passives.

the later acquisition of APs than that of GLPs with V_i is not due to children's incapability of forming an A-chain, but to their incapability of treating PRO or identifying the matrix subject with the embedded object.[11] The later acquisition of PPs than that of GLPs can be explained in terms of their lack of pragmatic knowledge. Because the interpretation of the possessive relationship requires pragmatic knowledge, children have difficulty understanding PPs. GLPs have no such relationship, and it is easy for children to comprehend them. Under Kuroda/Hoshi's analysis, the problem for children would not be a syntactic one, rather a semantic or pragmatic one.[12]

5. Conclusion

In this paper, I have investigated the acquisition of Japanese passives to settle the problem posed by the conflicting results of previous studies. The results from my experiment show that children tend to comprehend gapless passives more easily than gapped passives, which is in accord with the results of Sugisaki (1998) and Minai (1999). However, these results do not provide sufficient ground for us to conclude that children lack the knowledge of the A-chain formation and that the MAH is tenable.

Taking into account alternative views of language acquisition and two competing analyses of Japanese passives, we have discussed other possible interpretation of the results obtained from the previous studies and my experiment. Since there is no indication of preference for one over the other, to develop a plausible theory of language acquisition, further investigation is necessary required.[13]

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[11] If we adopt Hoshi's analysis, the problem would be the PRO movement itself or the identification of the antecedent of PRO. To clarify the problem, we should compare children's performance on *–ni* direct passives with the other sentences which include PRO but not PRO movement.

[12] Tanaka's proposal has interesting implication for the analysis on the acquisition on Japanese passives. GLPs with V_i correspond to what he calls exclusion passives, while all of the remaining passives correspond to inclusion passives. He argues that inclusion passives are the extension of exclusion passives. From the cognitive point of view, the situation denoted by exclusion passives is subset of that denoted by inclusion passives. Based on this proposal, the earlier acquisition of GLPs with V_i than any other passives could be explained in terms of cognitive development.

[13] Cross-linguistic investigation is needed to consider which of four logical possibilities is most tenable. Hoshi (1994, 1995) and Washio (1993, 1995) analyze Japanese passives from cross-linguistic point of view. Hoshi argues that *–ni/-ni yotte* distinction in Japanese passives corresponds to *get-/be-* distinction in English passives. He takes this correspondence as an empirical support for his analysis. Washio compares Japanese passives with English experiencer *have* construction and argues that inclusion/exclusion distinction is well-supported. It is necessary to take these observations into account in order to make a precise analysis on Japanese passives.

References

Avrutin, Sergey (2000) "Comprehension of Discourse-Linked and Non-Discourse-Linked Questions by Children and Broca's Aphasics," Yosef Grodzinsky, Lewis P. Shapiro, and David Swinney (eds.), *Language and the Brain – Representation and Processing-*, Academic Press, San Diego.

Borer, Hagit and Kenneth Wexler (1987) "The Maturation of Syntax," Thomas Roeper and Edwin Williams (eds.), *Parameter Setting*, Kluwer, Dordrecht.

Chien, Yu-Chin and Kenneth Wexler (1990) "Children's Knowledge of Locality Conditions in Binding as Evidence for the Modularity of Syntax and Pragmatics," *Language Acquisition* 1, 225-295.

Fox, Danny and Yosef Grodzinsky (1998) "Children's Passive: A View from the *By*-Phrase," *Linguistic Inquiry* 29, 311-332.

Grodzinsky, Yosef (1990) *Theoretical Perspectives on Language Deficits*, MIT Press., Cambridge, MA.

Grodzinsky, Yosef and Tanya Reinhart (1993) "The Innateness of Binding and the Development of Coreference: A Reply to Grimshaw and Rosen," *Linguistic Inquiry* 24, 69-103.

Hagiwara, Hiroko (1993) "The Breakdown of Japanese Passives and Theta-Role Assignment Principle by Broca's Aphasics," *Brain and Language* 45, 318-339.

Harada, Kazuko I. and Furuta Tomoko (1999) "On the Maturation of A-chains: A View from Japanese Passives," *Researching and Verifying an Advanced Theory of Human Language: Explanation of the Human Faculty for Constructing and Computing Sentences on the Basis of Lexical Conceptual Structures, Grant-in-Aid for COE Research Report* (3), 397-426.

Hoshi, Hiroto (1994) "Theta-role Assignment, Passivization, and Excorporation," *Journal of East Asian Linguistics* 3, 147-178.

Hoshi, Hiroto (1995) "Passives," Natsuko Tsujimura (ed.), *The Handbook of Japanese Linguistics*, Blackwell, Maiden.

Jakobson, Roman (1968) *Child Language, Aphasia, and Phonological Universals*, Mouton, The Hague.

Kubo, Miori (1992) "Japanese Passives," *Hokkaidoo Daigaku Gengobunka-bu Kiyoo*.

Minai, Utako (1999) "The Acquisition of Japanese Passives," paper presented at Japanese and Korean Linguistic Conference.

Otsu, Yukio (1994) "Early Acquisition of Scrambling in Japanese," Teun Hoekstra and Bonnie D. Schwartz (eds.), *Language Acquisition Studies in Generative Grammar: Papers in Honor of Kenneth Wexler From the 1991 Glow Workshops*, John

Benjamins, Amsterdam.
Sano, Tetsuya (2000) "Issues on Unaccusatives and Passives in the Acquisition of Japanese," Ms., The First Tokyo Conference on Psycholinguistics.
Sugisaki, Koji (1998) "Japanese Passives in Acquisition," Ms., University of Connecticut, Storrs.
Thornton, Rosalind and Kenneth Wexler (1999) *Principle B, VP Ellipsis, and Interpretation in Child Grammar*, MIT Press., Cambridge MA.
Washio, Ryuichi (1993) "When Causative Mean Passive: A Cross Linguistic Perspective," *Journal of East Asian Linguistics* 2: 45-90.
Washio, Ryuichi (1995) *Interpreting Voice: A Case Study in Lexical Semantics*, Kaitakusha, Tokyo.

Appendix 1: Test Sentences

(1)a. Active with V_t
b. Active with V_t
(2) Active with V_i
(3) Accusative Passive
(4) Gapless Passive with V_i
(5) Alienable Possessive Passive
(6) Inalienable Possessive Passive
(7) Scrambling

Session 1

(1)a. Kuma-san-ga Buta-san-o ket-ta
b. Buta-san-ga Kumasan-o kan-da
(2) Butasan-ga nai-ta
(3) Buta-san-ga Kuma-san-ni shibar-are-ta
(4) Kuma-san-ga Buta-san-ni niger-are-ta
(5) Buta-san-ga Kuma-san-ni hata-o taos-are-ta
(6) Kuma-san-ga Buta-san-ni atama-o tatak-are-ta
(7) Buta-san-o Kuma-san-ga oikake-ta

Session 2

(1)a. Usagi-san-ga Neko-san-o tatai-ta
b. Neko-san-ga Usagi-san-o oikake-ta
(2) Usagi-san-ga nige-ta

(3) Neko-san-ga Usagi-san-ni taos-are-ta

(4) Usagi-san-ga Neko-san-ni nak-are-ta

(5) Neko-san-ga Usagi-san-ni booshi-o kam-are-ta

(6) Usagi-san-ga Neko-san-ni onaka-o ker-are-ta

(7) Usagi-san-o Neko-san-ga shibat-ta

Appendix 2: Data

Age: 2;6-2;11

Data1: Exp. 1/Sess. 1

(C; Correct Responses, W; Wrong Response, @; No Response)

	(1a)	(1b)	(2)	(3)	(4)	(5)	(6)	(7)
1(2;7)	C	C	C	W	W	@	W	C
2(2;10)	W	C	C	C	C	C	C	C
3(2;11)	C	W	C	W	W	C	C	C

Data 2: Exp. 1/Sess.2

	(1a)	(1b)	(2)	(3)	(4)	(5)	(6)	(7)
1(2;7)	C	C	C	W	W	C	W	W
2(2;10)	C	C	W	C	C	C	W	W
3(2;11)	C	C	C	W	W	C	C	C

Age: 3;0-3;11

Data 3: Exp. 1/Sess. 1

	(1a)	(1b)	(2)	(3)	(4)	(5)	(6)	(7)
4(3;3)	C	W	C	C	C	W	C	C
5(3;4)	C	C	C	W	C	W	W	C
6(3;4)	C	W	W	C	W	W	C	W
7(3;4)	C	C	C	W	C	C	W	C
8(3;5)	C	C	C	C	W	W	C	W
9(3;6)	C	W	C	C	C	W	W	C
10(3;8)	C	C	C	W	C	W	W	W
11(3;8)	C	C	C	W	C	C	W	C
12(3;10)	C	C	C	C	C	C	W	W
13(3;10)	C	W	C	C	C	C	W	C

Data 4; Exp. 1/Sess. 2

	(1a)	(1b)	(2)	(3)	(4)	(5)	(6)	(7)
4(3;3)	C	C	C	C	W	W	C	C
5(3;4)	C	C	C	W	C	W	W	W
6(3;4)	C	C	C	C	W	C	C	W
7(3;4)	C	C	C	C	W	W	W	W
8(3;5)	C	C	C	W	C	W	W	C
9(3;6)	C	C	C	W	W	W	C	W
10(3;8)	C	C	C	W	W	W	C	W
11(3;8)	C	C	C	C	W	C	C	C
12(3;10)	C	W	C	C	C	W	C	C
13(3;10)	C	C	C	W	C	C	C	C

Age: 4;0-4;11

Data 5; Exp. 1/Sess. 1

	(1a)	(1b)	(2)	(3)	(4)	(5)	(6)	(7)
14(4:0)	C	C	C	C	W	C	W	C
15(4;1)	C	W	C	C	W	C	W	W
16(4;2)	W	C	C	C	C	W	C	C
17(4;2)	C	C	C	W	C	W	C	W
18(4;2)	C	C	C	C	W	C	W	W
19(4;3)	C	W	C	C	W	C	W	C
20(4;3)	C	C	C	W	C	W	C	C
21(4;3)	W	C	C	W	C	W	W	W
22(4;4)	C	C	C	C	C	C	W	C
23(4;4)	C	W	C	C	C	W	W	C
24(4;5)	C	C	C	W	W	W	C	W
25(4;6)	C	W	C	C	C	C	C	W
26(4;7)	C	C	C	W	C	W	W	C
27(4;10)	C	C	C	C	C	C	W	W
28(4;10)	C	C	C	W	C	C	C	W
29(4;10)	C	C	C	C	C	W	W	C
30(4;11)	W	C	C	W	C	W	C	C

Data 6; Exp. 1/Sess. 2

	(1a)	(1b)	(2)	(3)	(4)	(5)	(6)	(7)
14(4;0)	C	C	C	W	C	W	W	C
15(4;1)	C	C	C	W	C	W	W	W
16(4;2)	C	C	C	W	W	C	W	C
17(4;2)	C	C	C	W	W	W	W	C
18(4;2)	C	C	C	C	W	C	W	W
19(4;3)	C	C	C	C	C	W	C	W
20(4;3)	C	C	C	C	W	W	W	W
21(4;3)	C	C	C	C	C	W	W	C
22(4;4)	C	W	W	W	C	W	C	C
23(4;4)	C	C	C	C	W	C	C	W
24(4;5)	W	C	C	C	C	W	W	C
25(4;6)	C	C	C	W	C	C	C	C
26(4;7)	C	C	C	W	C	W	W	W
27(4;10)	C	W	C	C	W	C	C	W
28(4;10)	C	C	C	C	C	C	C	C
29(4;10)	C	C	C	C	C	C	C	C
30(4;11)	C	C	C	C	W	W	W	W

Age: 5;0-5;11

Data 7; Exp.1/Sess.1

	(1a)	(1b)	(2)	(3)	(4)	(5)	(6)	(7)
31(5;0)	C	C	C	C	C	C	C	W
32(5;0)	W	C	C	C	W	C	C	C
33(5;0)	C	C	C	W	C	C	C	C
34(5;1)	C	W	C	C	C	C	C	C
35(5;1)	C	C	C	C	C	C	C	W
36(5;3)	C	C	W	W	W	C	W	W
37(5;3)	C	W	C	C	C	C	C	C
38(5;4)	C	W	C	C	C	C	C	W
39(5;4)	C	C	C	C	C	C	C	W
40(5;5)	C	C	C	W	C	W	C	C
41(5;5)	C	C	C	C	C	C	C	C
42(5;5)	C	W	C	C	W	W	C	C
43(5;5)	C	C	C	W	C	W	C	C
44(5;6)	W	C	C	W	C	C	W	C
45(5;7)	C	W	C	C	C	C	W	C
46(5;7)	C	W	C	W	C	W	W	W
47(5;7)	C	C	C	C	C	C	C	W
48(5;8)	C	C	C	C	W	W	C	C
49(5;8)	C	C	C	C	C	W	W	W
50(5;8)	C	C	C	C	C	W	C	C

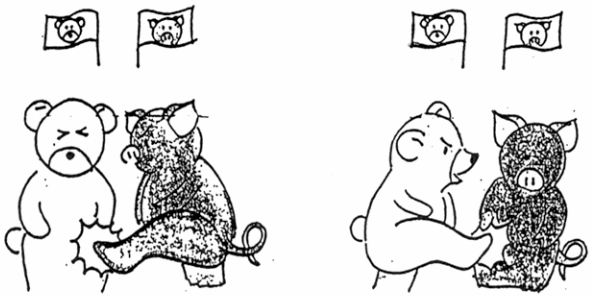
Data 8; Exp.1/Sess.2

	(1a)	(1b)	(2)	(3)	(4)	(5)	(6)	(7)
31(5;0)	C	C	C	C	W	C	W	W
32(5;0)	C	C	C	C	C	C	W	W
33(5;0)	C	C	C	C	W	C	C	C
34(5;1)	C	C	C	C	W	C	C	C
35(5;1)	C	C	C	C	C	C	C	C
36(5;3)	C	W	W	W	W	W	W	C
37(5;3)	C	C	C	C	C	W	C	C
38(5;4)	C	C	C	C	C	W	W	W
39(5;4)	C	C	C	C	C	C	W	C
40(5;5)	C	C	C	C	W	W	C	W
41(5;5)	C	C	C	C	C	C	C	W
42(5;5)	C	C	C	C	C	C	C	W
43(5;5)	C	C	C	C	W	W	W	W
44(5;6)	C	C	C	C	W	C	W	W
45(5;7)	C	C	C	C	W	W	W	W
46(5;7)	C	C	C	W	C	C	W	C
47(5;7)	C	C	C	C	C	C	C	C
48(5;8)	C	W	C	W	C	W	C	C
49(5;8)	C	C	C	C	W	W	W	W
50(5;8)	C	C	C	C	C	W	C	C

Appendix 3: Pictures

Session 1

(1a)



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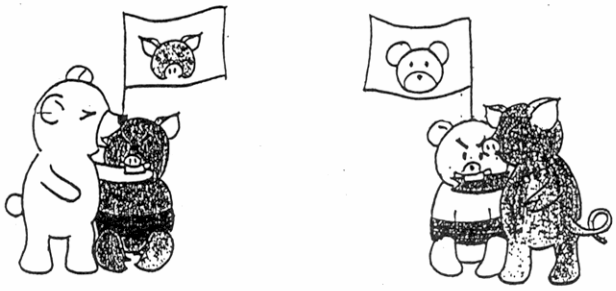

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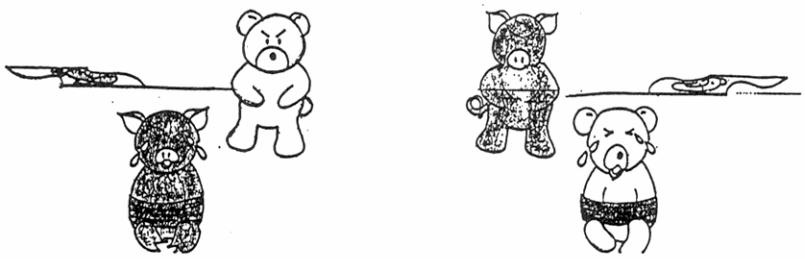

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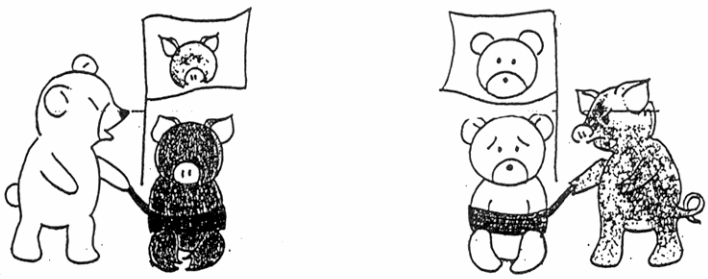

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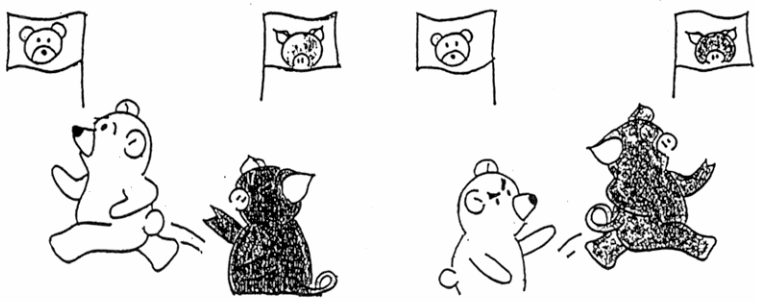

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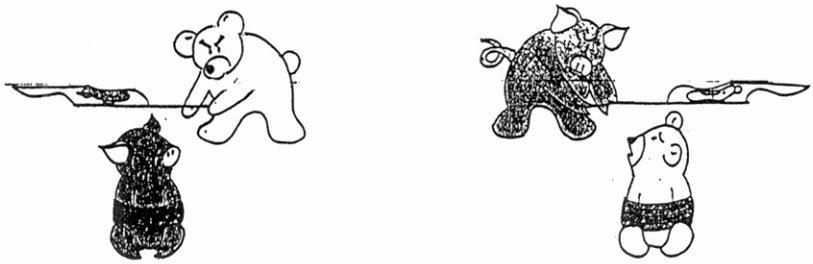

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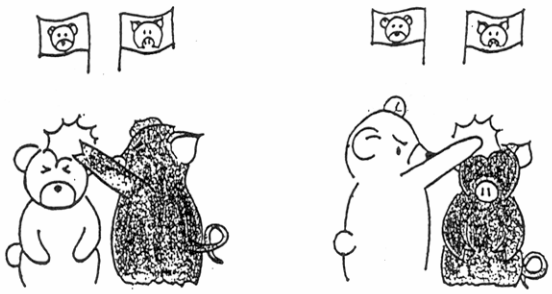

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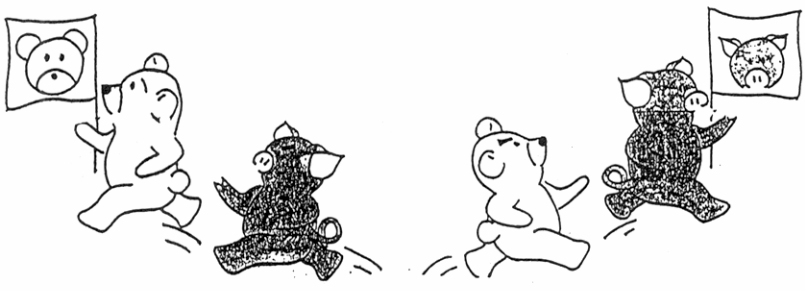

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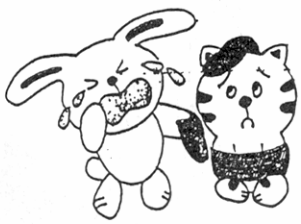

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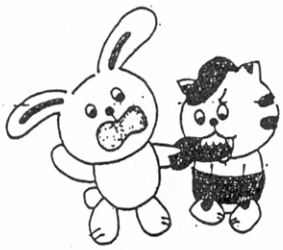

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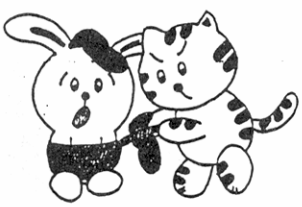

Session 2

(1a)

(1b)

(2)

(3)