

# IS AGREE ALSO DELAYED AS WELL AS MOVEMENT?

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## 1. Introduction

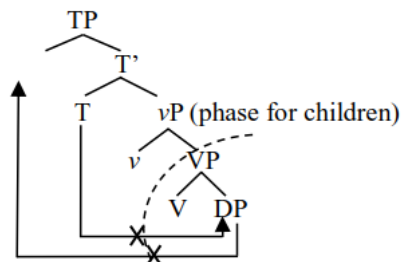
Children's difficulty in comprehending verbal passives has been reported in a wide variety of languages: for example, Dutch (Verrips 1996), English (Maratsos et al. 1985), Greek (Terzi and Wexler 2002), Hebrew (Berman 1985), and Japanese (Sugisaki 1999; Minai 2000; Sano 2000). To account for this from the perspective of grammatical maturation, Wexler (2004) proposes that children lack the ability to create defective/weak phases. This maturational hypothesis is called the Universal Phase Requirement (UPR) as illustrated in (1). According to him, the delayed comprehension of verbal passives is due to their violation of the Phase Impenetrability Condition (PIC; Chomsky 2000) in (2).<sup>1</sup>

- (1) Universal Phase Requirement:  
Children take *all*  $vP$  and  $CP$  to define phases.
- (2) Phase Impenetrability Condition:  
In phase  $\alpha$  with head  $H$ , the domain of  $H$  is not accessible to operations outside  $\alpha$ , only  $H$  and its edge are accessible to such operations.

The essence of the PIC is that the complement domain of a phase head  $H$  is not accessible to operations from outside of the phase  $HP$  because it is spelled out to PF/LF interfaces when the phase  $HP$  is constructed. Keeping this in mind, consider how to explain children's difficulty with verbal passives under the UPR. The structure of the English passive sentence (3) is roughly as shown in (4). Suppose the  $v$  in passives is a defective phase head for adults (Chomsky 2000).

(3) Mary was kissed.

(4)



For adults, the internal argument DP moves to Spec TP after undergoing Agree with T. This does not violate the PIC because the  $v$  in passives does not constitute a phase for adults. In contrast for children, since even a defective  $v$  defines a phase under the UPR, the movement as well as the Agree relation induces their violation of the PIC. This is why children have trouble with verbal passives under the UPR.<sup>2</sup>

The UPR has been examined with constructions that involve movement; for example, passive, raising, and unaccusative constructions. However, given that Agree is a prerequisite for movement, we cannot identify which one causes the delayed acquisition of these constructions, Agree or movement. To address this issue, we have to test constructions that involve only Agree. Nominative Object Construction (NOC) in Japanese is one test case. The result of my experiment with NOCs shows that NOCs are not delayed in acquisition, contrary to the prediction of the UPR. It suggests that children's observed difficulty with passives and other constructions is related to their inability to create a certain type of movement, rather than the Agree relation between T and objects.

This paper is organized as follows. In Section 2, I briefly introduce the syntactic analysis of NOCs, and then verify the prediction of the UPR for the acquisition of NOCs in Section 3. Section 4 reviews previous studies. Section 5 reports the results of my experiment, which suggests that children around age five have already acquired NOCs. Section 6 concludes the paper.

## 2. Nominative Object Constructions in Japanese

In Japanese, the nominative case marker *-ga* is canonically attached to a subject. On the other hand, an object is canonically marked with accusative case marker *-o*.

- (5) John-*ga* nihongo-*o* hanas-u.  
 John-NOM Japanese-ACC speak-PRES  
*John speaks Japanese.*

However, objects can be marked with the nominative marker *-ga* in certain stative constructions as shown in (6) (Kuno 1973). This is the so-called Nominative Object Construction (NOC). In some NOCs, subjects may be marked with the dative case marker *-ni*.

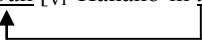
- (6) John-*ga/ni* nihongo-*ga* hanas-e-ru.  
 John-NOM/DAT Japanese-NOM speak-can-PRES  
*John can speak Japanese.*

In the literature it has been argued that nominative objects do not qualify as subjects even though they are marked with nominative case (Shibatani 1977; Ura 1999; Kishimoto 2004; Koizumi 2008; Takano 2003). The subject-oriented anaphor *zibun* is often used as a diagnostic for subjecthood.

According to Kuroda (1965), *zibun* takes only a subject as its antecedent. The example in (7) shows that only the subject *Taro*, not the object *Hanako*, qualifies as a possible antecedent of *zibun*.

- (7) Taro<sub>i</sub>-*ga* Hanako<sub>j</sub>-*ni* zibun<sub>i/\*j</sub>-*no* e-*o* mise-*ta*.  
 Taro-NOM Hanako-DAT self-GEN picture-ACC show-PAST.  
*(lit.) Taro<sub>i</sub> showed Hanako<sub>j</sub> self<sub>i/\*j</sub>'s picture.*

I follow Katada (1991) for a theoretical explanation of the subject-orientation property of *zibun*. She attempts to explain it in terms of Binding Condition A. According to her proposal, *zibun* is an anaphoric operator and it adjoins to VP at LF as shown in (8). Hence, *zibun* can be bound only by a subject.

- (8) [<sub>TP</sub> Taro-*ga* [zibun [<sub>VP</sub> Hanako-*ni* *t*-*no* e-*o* mise]-*ta*]
- 

Example (9) shows that nominative objects do not qualify as antecedents of *zibun* (Shibatani 1977). Note that in the passive sentence in (10), the internal argument *Mary*, which is also marked with the nominative case, can be an antecedent of *zibun*.

- (9) John<sub>i</sub>-ga/ni Mary<sub>j</sub>-ga zibun<sub>i/\*j</sub>-no heya-kara mi-e-ta.  
 John-NOM/DAT Mary-NOM self-GEN room-from see-can-PAST  
*(lit.) John<sub>i</sub> can see Mary<sub>j</sub> from self<sub>i/\*j</sub>'s room.*
- (10) Mary<sub>i</sub>-ga John<sub>j</sub>-ni zibun<sub>i/\*j</sub>-no imouto-to kurabe-rare-ta.  
 Mary-NOM John-DAT self-GEN sister-with compare-PASS-PAST  
*(lit.) Mary<sub>i</sub> was compared by John<sub>j</sub> with self<sub>i/\*j</sub>'s sister.*

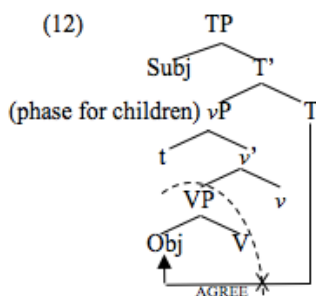
This suggests that nominative objects do not undergo A-movement to TP Spec, unlike internal arguments of passives (Takano 2003; cf. Saito 2010).

I assume Takahashi's (2010) proposal for the NOCs. He proposes that  $v$  becomes a phase head if and only if it values accusative Case. Therefore,  $v$  in the NOCs does not constitute a phase head because it does not value accusative Case. Accordingly, nominative objects are case-valued by T via Agree without any PIC violation, as shown in (11).

- (11) [<sub>TP</sub> Subj [<sub>T'</sub> [<sub>VP</sub> t [<sub>v'</sub> [<sub>VP</sub> Obj<sub>NOM</sub> V] v] ] T] ]
- 

### 3. UPR's prediction for NOC

If the structure of the NOC in (11) is subject to the UPR, nominative Case of the object is not licensed as in (12) because the PIC blocks AGREE between T and the nominative object.<sup>3</sup>



Thus, the UPR predicts that children should have trouble in generating nominative objects because uCase of the object remains unvalued.

Note that Japanese children have difficulty in comprehending passives until around age 6 (Minai 2000; Sano 2000; Sano, Endo, and Yamakoshi

2001; cf. Okabe and Sano 2002).<sup>4</sup> Given this, it is predicted under UPR that nominative objects are difficult for children until around age 6.

However, this prediction seems wrong since Japanese children even at age 2 are able to produce nominative case marker *-ga* attached to objects in stative predicates as shown in (13) (Matsuoka 1998).

- (13) a. Aki-chan are-ga hoshi-i yo. (Aki, 2;10;7)  
 Aki that-NOM want-PRES SFC  
*Aki (= I) wants that thing.*
- b. Kore-ga deki-na-i. (Kan, 2;4;25)  
 this-NOM can-NEG-PRES  
*(I) can't do this.*
- c. Hiru-wa omanju-ga tabe-ta-i. (Sumi, 2;7)  
 noon-TOP sweet.bun-NOM eat-want-PRES  
*I want to eat a sweet bun for lunch/afternoon snack.*

Although this data clearly shows the acquisition of NOCs, one might think of a possible way for the UPR to account for it by assuming children apply a different structure from the adult's to NOCs. A similar idea is proposed by Babyonyshev et al. (2001). They propose that children give an unergative structure to unaccusatives in order to explain children's early production of unaccusative verbs, which are expected to be delayed under the UPR. For example, the English unaccusative sentence in (14) has a structure like (15), which is identical to an unergative's.<sup>5</sup>

(14) The mail arrived.

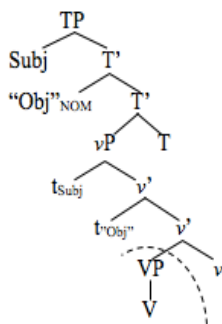
(15) [<sub>TP</sub> The mail<sub>i</sub> T [<sub>vP</sub> t<sub>i</sub> v [<sub>VP</sub> arrived]]] (no object trace)

In (15), the "internal" argument *the mail* is base-generated in the external position and then moves to TP Spec as the subjects of unergative verbs do. This is an example of what I call misanalysis. According to Babyonyshev et al. (2001), misanalysis takes place when there is a syntactic-homophones defined in (16). Such a misanalysis approach is also proposed for Japanese unaccusatives by Machida, Miyagawa, and Wexler (2004).

(16) A phrase  $\alpha$  is a syntactic homophone (s-homophone) of  $\beta$  if  $\alpha$  and  $\beta$  have distinct structure but common pronunciation.

With the idea of misanalysis, the UPR is able to account for children's production of NOCs as reported by Matsuoka (1998). Given s-homophones, children may misanalyse nominative objects as nominative marked phrases other than nominative objects, that is, (nominative marked) subjects. If so, the structure of NOCs for children is not (11) but rather (17).<sup>6</sup>

(17)



Note that the nominative “object” behaves like a usual subject in (17); it is base-generated in the external argument position. In this structure, even if children’s vP becomes a phase, uCase of the “object” can be valued by T at vP Spec without violating the PIC.<sup>7</sup> Therefore, there are two subjects in (17); the original subject and the misanalysed “subject”. It seems to be likely that Japanese children generate two “subjects” in a sentence, given that Japanese allows multiple subjects as in (18) even in adult grammar.

- (18) John<sub>i</sub>-ga okusan<sub>j</sub>-ga zibun<sub>ij</sub>-no heya-de nemutte i-ru.  
 John-NOM wife-NOM self-GEN room-in sleep be-PRES  
*(lit.) As for John<sub>i</sub>, his wife<sub>j</sub> is sleeping in self<sub>ij</sub>'s room.*

In (18), the subject-oriented anaphor *zibun* can refer to the first NP *John* or the second NP *wife*.

Therefore, one might be able to account for the early production of NOCs under the UPR by assuming this type of misanalysis. However, as a prediction, if children misanalysed nominative objects as subjects in NOCs, then their nominative “objects” should become a possible antecedent of *zibun*, unlike adults’, because they are base-generated in vP Spec and can bind the *zibun*-anaphor in the VP. To test the prediction, I conducted an experiment with NOCs including *zibun*.

#### 4. Previous studies

Before going to the experiment section, I review the previous studies of the acquisition of *zibun* and nominative objects. Otsu (1999) reported that Japanese children at age 3-5 have already acquired knowledge of *zibun*. One of his test items is shown in (19), repeated from (8). In his experiment, almost all the participants knew that *zibun* refers to the subject, not the indirect object.

- (19) Taro<sub>i</sub>-ga Hanako<sub>j</sub>-ni zibun<sub>i/\*j</sub>-no e-o mise-ta.  
 Taro-NOM Hanako-DAT self-GEN picture-ACC show-PAST.  
*(lit.) Taro<sub>i</sub> showed Hanako<sub>j</sub> self<sub>i/\*j</sub>'s picture.*

Based on his observation, I assume that young children at age 3 to 5 already have knowledge of the subject-orientation of *zibun*.

There are some studies investigating whether children's nominative object is truly an object. In Fujiwara (2013), I examined NOCs such as (20).

- (20) Baikinman<sub>i</sub>-wa usagi<sub>j</sub>-ga zibun<sub>i/(\*)j</sub>-no niwa-de  
 Baikinman-TOP rabbit-NOM self-GEN garden-in  
 onbu-deki-ta.  
 piggyback-can-PAST  
*(lit.) Baikinman<sub>i</sub> was able to piggyback the rabbit<sub>j</sub> in self<sub>i/(\*)j</sub>'s garden.*

The task for children in this experiment is choosing between two pictures, which differ as to whether Baikinman piggybacks the rabbit in Baikinman's garden or the rabbit's garden. The antecedent of *zibun* in (20) is *Baikinman*, not *rabbit*. The result is that children chose the matching (Baikinman's garden) picture at the rate of 45.5% (10/22). One possible problem with the experiment is that, since there is no context in the picture selection task, the potential sentence in (20) is not used in a felicitous way. Another possible problem is that the sentence yields a structural ambiguity as shown in (21).

- (21) a. [<sub>TP</sub> Subj<sub>TOPi</sub> [<sub>VP</sub> Obj<sub>NOMj</sub> [<sub>PP</sub> zibun<sub>i/\*j</sub> ...] V] T]  
 b. [ Obj<sub>TOPi</sub> [<sub>TP</sub> Subj<sub>NOMj</sub> [<sub>VP</sub> [<sub>PP</sub> zibun<sub>\*i/j</sub> ...] t<sub>OBJ</sub> V] T]

(21a) is canonical regarding the subject-object order, but (21b) is not, in that the first phrase in (21b) is a topicalized object. Thus, (21b) displays

the object-subject order. Therefore, the antecedent of *zibun* in (20) can vary depending on which structure is applied to the sentence.

However, this ambiguity can be avoided by using the dative subject in NOCs.<sup>8</sup> Sano, Shimada, and Fujiwara (2014) used exactly such a sentence in an experiment with the Truth Value Judgment Task (TVJT; Crain and Thornton 1998). We tested sentences such as (23) in the situation illustrated in (22): A dog, an elephant, a pig and a monkey are in the dog's class (on the left side). A pig, a squirrel, an elephant and a cat are in the pig's class (on the right side). The dog is about to give a medal to an animal who he finds the most interesting in each class. He considers the elephant the most interesting in his class, while in the pig's class, he is interested the most in the pig.

(22)



- (23) Inu<sub>i</sub>-ni-wa buta<sub>j</sub>-ga [zibun<sub>i/\*j</sub>-no kumi]-no-naka-de  
 dog-DAT-TOP pig-NOM [self-GEN class]-in  
 ichiban omosiro-i  
 the most interesting-PRES  
 (lit.) *The dog<sub>i</sub> is interested the most in the pig<sub>j</sub> in self<sub>i/\*j</sub>'s class.*

In (23), *zibun*'s antecedent is the dative phrase *dog* but not the nominative phrase *pig*. Note that the sentence in (23) does not yield a structural ambiguity because a dative-marker can be attached only to the subject in this construction. In this experiment, children around age 5 correctly rejected (23) for the situation in (22). The result that children around age 5 disallowed nominative objects as *zibun*'s antecedent is unexpected under the UPR. However, it is unclear whether the acquisition of sentences such as (23) is predicted to be delayed under the UPR because its predicate is adjectival and its structure is not clearly defined. To fix this problem, I used verbal predicates in NOCs in my experiment.

In addition, Sano et al.'s experiment itself may have a problem. Consider the possibility that children correctly rejected the target items in



the situation in (22) without interpreting *zibun*. If children have ignored *zibun* in (23), the same interpretation should arise in (24).

- (24) Inu-ni-wa buta-ga kumi-no-naka-de ichiban  
 dog-DAT-TOP pig-NOM class-in the most  
 omosiro-i  
 interesting-PRES  
*The dog is interested the most in the pig in a class.*

Contrary to the target items such as (23), the sentence in (24) is true of the situation in (22). As a prediction, if children ignored *zibun* in interpreting the target sentences, they would also reject the example in (24) as they rejected the target items in the situation in (22). Although this test was not conducted with children, out of the 18 adult participants, 14 adults wrongly rejected Example (24) in the situation in (22). Most of them rejected it for the reason that they paid attention only to the dog's class because the dog who gave the medals belonged to that class. Thus, whether *zibun* is used in a test sentence or not, adults tend to answer on the basis of the dog's class in the scenario of (22). Given that, it can be reasonably speculated that whether *zibun* is used in a test sentence or not, the children in our experiment would also have given their answers only paying attention to the dog's class as the adults did in the test with (24).

## 5. Experiment

The UPR predicts that NOCs are difficult for children until around age 6 like passives. Recall that in order to account for children's production of NOCs reported by Matsuoka (1998), under the UPR one may need to assume that nominative objects are misanalysed as subjects. If such a misanalysis took place, however, children's nominative objects should be *zibun*'s antecedent. The purpose of the experiment is to see whether this prediction is borne out.

### 5.1. Method

15 Japanese children, aged from 4;9 to 5;11 (mean 5;4) participated in this experiment with TVJT. Example (25) is one of the target items in this experiment. In (25), the dative marker *-ni* is attached to the subject, instead of the nominative marker *-ga*, in order to avoid a structural ambiguity.

- (25) Buta<sub>i</sub>-ni-wa inu<sub>j</sub>-ga zibun<sub>i/\*j</sub>-no heya-kara tatak-e-ta.  
 pig-DAT-TOP dog-NOM self-GEN room-from hit-can-PAST  
*(lit.) The pig<sub>i</sub> was able to hit the dog<sub>j</sub> from self<sub>i/\*j</sub>'s room.*

The topic marker *-wa* is added to the dative subject to make the sentence sound natural (Shibatani 2001). Two types of verbs – *tataku* “hit” and *tutuku* “poke” – were used in the target items, attached to the potential suffix *-e* “can”. Thus, the predicates are stative as a whole. *Zibun*’s antecedent can be the dative subject *pig* but not the nominative object *dog*.

Four target items were given to children in matching and mismatching scenarios. A sample mismatching scenario for the target items is the following: There are two rooms near a tree. One is a dog’s, the other a pig’s. The dog and pig play tag with a stick. The pig, as tagger, looks for the dog and goes to the PIG’s room. He finds the dog hiding behind the tree and tries to hit the dog from the PIG’s room, but he fails because the tree is in the way. Then, he goes to the DOG’s room, and succeeds in hitting the dog from the DOG’s room (For a matching scenario, capitalized PIG replaces DOG and vice versa). The final scenes of the mismatching and matching situation are shown in (26) and (27), respectively.

- (26) Situation: the pig hits the dog from the dog’s room.



- (27) Situation: the pig hits the dog from the pig’s room.



Sentence (25) is false for the mismatching situation in (26), but if children regarded the nominative object *dog* as a subject, then they would accept it in the story. In the matching scenario in (27), the sentence in (25) is true. If children know the dative-marked phrase *pig* is the subject, children should accept it in the matching situation.

The result of the target items is as follows. In the mismatching scenario in (26), children correctly rejected the target items such as (25) at the rate of 96.7% (29/30). On the other hand, in the matching scenario in (27), they correctly accepted them at the rate of 86.7% (26/30). It means that children did not take the nominative object as *zibun*'s antecedent but instead took the dative subject as the antecedent. It seems that the nominative-marked DPs in sentences like (25) do not behave as subjects in child Japanese, contrary to the prediction discussed above. However, it is possible to suspect that the children gave correct answers in this task for other reasons.

First, consider the possibility that children gave correct answers to the target items without interpreting the sentences. Recall that in the matching scenario in (27), the pig is in his room in the final scene of the story, while he is not in his room but in the dog's room in the last scene of the mismatching scenario (26). Therefore, children may have accepted/rejected the target stimulus sentences, depending on whether or not the pig is in his room in the last scene. To exclude this possibility, control sentences such as (28) were included just before the target items.

- (28) Buta-ni-wa inu-ga inu-no heya-kara tatak-e-ta.  
 pig-DAT-TOP dog-NOM dog-GEN room-from hit-can-PAST  
*The pig was able to hit the dog from the dog's room.*

A phrase *inu-no heya-kara* "from the dog's room" is used in (28), instead of *zibun-no heya-kara* "from self's room" in the target item (25). The control items are presented in the same scenarios used in the target items. Contrary to the target items, this control items become true for the situation in (26) and false for the situation in (27). If children responded "true" or "false" depending on whether the pig is in his room in the final scene of the story, then they would give wrong answers to the control items like (28) because it is true in the situation where the pig is in the dog's room.

There were two trials of this control item for each child: one for Situation (26) and the other for Situation (27). All of the 30 trials with (28) except one response in the situation in (26) were correct answers, which

means that children did not rely on such a strategy in giving correct answers to the target items.

There was another control item. In the target item (25), since *pig* is not only the subject but also the first phrase of the sentence, it is possible to suspect that children took it as *zibun*'s antecedent because it is the first phrase. This strategy was tested by means of control sentences like (29).

- (29) Buta<sub>i</sub>-ni-wa inu<sub>j</sub>-ga zibun<sub>\*i/j</sub>-no heya-kara booru-o  
 pig-DAT-TOP dog-NOM self-GEN room-from ball-ACC  
 nage-ta.  
 throw-PAST  
*(lit.) To the pig<sub>i</sub>, the dog<sub>j</sub> threw a ball from self<sub>\*i/j</sub>'s room.*

Here, I used the verb *nage* “throw,” which takes an indirect object. Since (29) does not have the potential suffix *-e*, the predicate is not a stative, which means nominative objects and also dative subjects cannot appear in (29). Note, however, that this control item is the same as the target item in (25) regarding the NP-*ni-wa* NP-*ga* order. The difference is that the first phrase *pig* is a topicalized indirect object in (29). The subject of (29) is the nominative marked phrase *dog*. Therefore, the antecedent of *zibun* is the second phrase *dog* but not the first phrase *pig*. If children took the first phrase in a sentence as *zibun*'s antecedent, they would incorrectly interpret the control item in (29).

There were two trials with control items like (29): one with a matching story and the other with a mismatching story. The matching story for (29) is as follows: a dog and a pig play with a ball. The dog tries to throw the ball to the pig from the PIG's room, but he cannot because there is a tree between the dog and the pig. Then, he moves to the DOG's room and throws the pig the ball from there (For the mismatching story, capitalized PIG replaces DOG and vice versa).

Out of 30 trials with this control, only one response in the matching scenario was a wrong answer. The correct answer rate is at 96.7% (29/30). This result suggests that children do not simply take the first phrase in a sentence as *zibun*'s antecedent.

## 5.2. Discussion

Recall that it is predicted under the UPR that immature children cannot construct the Agree relation between objects and T and move objects to TP Spec because both operations are blocked by phases created by the UPR. Accordingly, NOCs and passives should both be delayed in

acquisition under the UPR because the former includes the Agree relation and the latter both operations.

The result of the experiment demonstrates that 5-year-old children know that nominative objects cannot be the antecedent of *zibun*. Considering that they easily identify *zibun*'s antecedent in NOCs, it clearly shows that they do not “misanalyse” nominative objects as subjects.<sup>9</sup> This suggests that the Agree relation between the nominative object and T is not problematic for children at this age, in contrast to the prediction of the UPR.

Note that the age of success with NOCs is before the age of success with the Japanese passive. Given this, the observed delay in passives is not relevant to the Agree relation but to movement of the object. Thus, it seems that the UPR is too strong to be maintained.

## 6. Conclusion

In this paper, I investigate what causes children's delayed acquisition of verbal passives. Given the Universal Phase Requirement proposed by Wexler (2004) and the Phase Impenetrability Condition, one possible answer to this issue is the movement of the internal argument to Spec TP. Another possible answer is the Agree relation between the internal argument and T. If such an Agree relation is problematic for children, Japanese nominative object constructions should also be delayed in acquisition.

The result of my experiment demonstrates that Japanese children around age 5 do not have trouble with nominative objects. Acquisition of Japanese nominative objects suggests that children allow the object to be a goal for the T probe in contrast to the prediction of UPR. It suggests that the delay of passives is not caused by Agree between T and an object. Rather, it would be related to movement of the object to TP Spec. In this sense, UPR is too strong to be maintained. Thus, the maturational hypothesis should be related to movement as stated in the A-Chain Deficit Hypothesis (Borer and Wexler 1987), the Universal Freezing Hypothesis (Hyams and Snyder 2006; cf. Snyder and Hyams 2015) or the Argument Intervention Hypothesis (Orfitelli 2012). These hypotheses all claim that children's grammar is unable to create a certain type of movement. In order to determine what type of movement is delayed, we need to wait for further studies.

## Notes

<sup>1</sup> The PIC introduced in Chomsky (2000) is different from the one given in (Chomsky 2001) in terms of the condition of Spell-Out. Under the former, Spell-Out is applied once a phase is completed, while it must wait until the next higher phase head is introduced under the latter. Wexler (2004) seems to adopt the former version. It appears that the UPR cannot attribute children's delay of passives to violation of the latter version of PIC. In this paper, I assume the version of the PIC introduced in Chomsky (2000).

<sup>2</sup> The UPR seems to assume that children cannot take an option of moving the internal argument to the target position, TP Spec, through the edge of  $\nu$ P. If this option were available for children, the UPR would lose the ability to explain children's delayed passives because such a movement does not violate the PIC.

<sup>3</sup> Here, I assume that the nominative object cannot undergo movement or scrambling to the edge of  $\nu$ P in order to be Case-valued by T without the PIC violation. See also f.n.2.

<sup>4</sup> Similarly, it is reported by Hirsch and Wexler (2007) that 6-year-old children also have difficulty with verbal passives in English.

<sup>5</sup> As to theta roles in (15), Babyonyshev et al. (2001) mention that children fully know Baker's (1988) Uniformity Theta Assignment Hypothesis (UTAH) but they can violate it. Thus, although the "internal" argument *the mail* is base-generated in the external position, that is, the specifier of  $\nu$ P, it possesses the correct theta role *theme* in (15).

<sup>6</sup> This is similar to the structures proposed by Saito and Hoshi (1998), Shibatani (2001), and Takano (2003) in that nominative objects are base-generated outside of the predicate. See Takahashi (2010) for arguments against supposing such a structure in NOCs.

<sup>7</sup> Although I suppose that the nominative "object" moves to Spec TP to satisfy EPP in (17) as usual subjects do, it is possible to consider that the nominative "object" stays in the base-generated position Spec,  $\nu$ P. The choice of the movement does not affect the discussion.

<sup>8</sup> See Isobe and Okabe (2013) for the acquisition of dative subjects in Japanese.

<sup>9</sup> One may suspect that children just selected the dative subject as *zibun*'s antecedent in the target sentence in (25) although they regarded nominative objects as subjects. It means children have a tendency to choose a distant and dative-marked subject between two possible antecedents of *zibun*. Okabe's (2008) experiments might be helpful to consider this point although constructions used in her experiments and my experiment are different. Studying a construction that has two subjects, she found that children from 4 to 6 prefer to take the nominative-marked subject as *zibun*'s antecedent in sentences like (i), in which the embedded subject is marked with dative Case. And if both subjects are nominative marked as in (ii), children prefer the one that is nearer to *zibun*.

(Bold shows children's preference for *zibun*'s antecedent)

- (i) **Buta-ga** [kuma<sub>j</sub>-ni zibun<sub>ij</sub>-no bousi-o kabur]-ase-ta.  
 pig-NOM bear-DAT self-GEN hat-ACC put.on-cause-PAST  
 (lit.) *The pig<sub>i</sub> made the bear<sub>j</sub> put on self<sub>ij</sub>'s hat.*

- (ii) Buta<sub>i</sub>-wa [**kuma<sub>i</sub>-ga** zibun<sub>i,j</sub>-no keeki-o tabe-ta] no-o mi-ta.  
 pig-TOP bear-NOM self-GEN cake-ACC eat-PAST COMP-ACC see-PAST

(lit.) *The pig<sub>i</sub> saw that the bear<sub>j</sub> ate self<sub>i,j</sub>'s cake.*

Given this, if children consider that there are two subjects in (25), they should choose the nominative object as *zibun*'s antecedent because it is nominative-marked, and it is the closest potential antecedent to *zibun*. From this, I speculate that children's performance on the target items in my experiment reflects their knowledge of grammar, not their preference in choosing *zibun*'s antecedent.

## Acknowledgments

I am grateful to Takuya Goro, Ken Hiraiwa, Miwa Isobe, Diane Lillo-Martin, Reiko Okabe, Hiroyuki Shimada, William Snyder, and especially to Tetsuya Sano for valuable comments. I would also like to thank the children and the staff at their day-care center for offering me the opportunity to conduct the experiments.

## References

- Babyonyshev, Maria, Jennifer Ganger, David Pesetsky, and Kenneth Wexler (2001), "The Maturation of Grammatical Principles: Evidence from Russian Unaccusatives," *Linguistic Inquiry* 32 (1), 1-44.
- Baker, Mark C (1988), *Incorporation: A Theory of Grammatical Function Changing*. Chicago: University of Chicago Press.
- Berman, Ruth (1985), "Acquisition of Hebrew," in: Isaac D. Slobin (Ed.), *The Crosslinguistic Study of Language Acquisition*, 1, 255-371. Hillsdale, NJ: Erlbaum.
- Borer, Hagit, and Kenneth Wexler (1987), "The Maturation of Syntax", in: Thomas Roeper and Edwin Williams (Eds.), *Parameter Setting, Studies in Theoretical Psycholinguistics* 4, 123-72, Dordrecht: Springer.
- Chomsky, Noam (2000), "Minimalist Inquiries: The Framework", in: Howard Lasnik, Roger Andrew Martin, David Michaels, and Juan Uriagereka (Eds.), *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, 89-156. Cambridge, MA: MIT Press.
- . (2001), "Derivation by Phase," in: Michael J. Kenstowicz (Ed.), *Ken Hale: A Life in Language*, 1-52. Cambridge, MA: MIT Press.
- Crain, Stephen, and Rosalind Thornton (1998), *Investigations in Universal Grammar: A Guide to Experiments on the Acquisition of Syntax and Semantics*. Cambridge, MA: MIT Press.
- Fujiwara, Yoshiki (2013), "Zibun-Anaphora in Child Japanese and Nominative Objects in Potential Sentences," in: Yukio Otsu (Ed.), *The*

- Proceedings of the Fourteenth Tokyo Conference on Psycholinguistics*, 43-59. Tokyo: Hituzi Syobo.
- Hirsch, Christopher, and Ken Wexler (2007), "The Late Development of Raising: What Children Seem to Think about Seem," in: William D. Davies and Stanley Dubinsky (Eds.), *New Horizons in the Analysis of Control and Raising, Studies in Natural Language and Linguistic Theory 71*, 35-70. Dordrecht: Springer.
- Hyams, Nina, and William Snyder (2006), *Young Children Are Frozen: Reflexive Clitics and the Universal Freezing Hypothesis*. Ms UCLA and University of Connecticut.
- Isobe, Miwa, and Reiko Okabe (2013), "Dative Subject Constraint in Child Japanese," in: Kazuko Yatsushiro and Uli Sauerland (Eds.), *Formal Approaches to Japanese Linguistics 6, MIT Working Papers in Linguistics 66*, 85-95, Cambridge, MA: MITWPL.
- Katada, Fusa (1991), "The LF Representation of Anaphors," *Linguistic Inquiry 22*(2), 287-314.
- Kishimoto, Hideki (2004), "Transitivity of Ergative Case-Marking Predicates in Japanese," *Studies in Language 28*(1), 105-36.
- Koizumi, Masatoshi (2008), "Nominative Object," in: Shigeru Miyagawa and Mamoru Saito (Eds.), *The Oxford Handbook of Japanese Linguistics*. 141-64. Oxford: Oxford University Press.
- Kuno, Susumu (1973), *The Structure of the Japanese Language*. Mit Press.
- Kuroda, Sige-Yuki (1965), "Generative Grammatical Studies in the Japanese Language". Doctoral Dissertation, Massachusetts Institute of Technology.
- Machida, Nanako, Shigeru Miyagawa, and Kenneth Wexler (2004), "A-Chain Maturation Reexamined: Why Japanese Children Perform Better on 'Full' Unaccusatives than on Passives," in: Aniko Csirmaz, Andrea Gualmini, and Andrew Nevins (Eds.), *Plato's Problems: Papers on Language Acquisition, MIT Working Papers in Linguistics 48*, 91-112. Cambridge, MA: MITWPL.
- Maratsos, Michael, Dana E. C. Fox, Judith A. Becker, and Mary Anne Chalkley (1985), "Semantic Restrictions on Children's Passives," *Cognition 19*(2): 167-91.
- Matsuoka, Kazumi (1998), "The Acquisition of Japanese Case Particles and the Theory of Case Checking". Doctoral Dissertation, University of Connecticut.
- Minai, Utako (2000), "The Acquisition of Japanese Passives," in: Mineharu Nakayama and Charles J. Quinn, Jr. (Eds.), *Japanese/Korean Linguistics 9*, 339-50, Stanford: CSLI.



- Okabe, Reiko (2008), "Child Causatives: Acquisition of Bi-Clausal Structures in Japanese". Doctoral Dissertation, University of California, Los Angeles.
- Okabe, Reiko, and Tetsuya Sano (2002), "The Acquisition of Implicit Arguments in Japanese and Related Matters," in: Barbora Skarabela, Sarah Fish, and Anna H.-J. Do (Eds.), *Proceedings of the 26th Annual Boston University Conference on Language Development*, 485-99, Somerville, MA: Cascadilla Press.
- Orfitelli, Robyn (2012), "Argument Intervention in the Acquisition of A-Movement". Doctoral Dissertation, University of California, Los Angeles.
- Otsu, Yukio (1999), "First Language Acquisition" in: Natsuko Tsujimura (Ed.), *The Handbook of Japanese Linguistics*, 378-97. Oxford: Blackwell.
- Saito, Mamoru (2010), "On the Scope Properties of Nominative Phrases in Japanese," in: Rajat Mohanty and Mythili Menon (Eds.), *Universals and Variation: Proceedings of GLOW in Asia VII*, 313-33. Hyderabad: The EFL University Press.
- Saito, Mamoru, and Hiroto Hoshi (1998), "Control in Complex Predicates", in: Report of the Special Research Project for the Typological Investigation of Languages and Cultures of the East and West, 15-46. University of Tsukuba.
- Sano, Tetsuya (2000), "Issues on Unaccusatives and Passives in the Acquisition of Japanese," in: Yukio Otsu (Ed.), *The Proceedings of the First Tokyo Conference on Psycholinguistics*, 1-21. Tokyo: Hituzi Syobo.
- Sano, Tetsuya, Mika Endo, and Kyoko Yamakoshi (2001), "Developmental Issues in the Acquisition of Japanese Unaccusatives and Passives," in: Anna H.-J. Do, Laura Domínguez, and Aimee Johansen (Eds.), *Proceedings of the 25th Annual Boston University Conference on Language Development*, 668-83. Somerville, MA: Cascadilla Press.
- Sano, Tetsuya, Hiroyuki Shimada, and Yoshiki Fujiwara (2014), "The Lack of Nominative-Orientation for a Japanese Anaphor Zibun in L1 Acquisition and Its Implications" in: Will Orman and Matthew James Valteau (Eds.), *Proceedings of the 38th Annual Boston University Conference on Language Development*, 393-402. Somerville, MA: Cascadilla Press.
- Shibatani, Masayoshi (1977), "Grammatical Relations and Surface Cases," *Language* 53(4): 789-809.
- . (2001), "Non-Canonical Constructions in Japanese," in: Alexandra Y. Aikhenvald, Robert M. W. Dixon, and Masayuki Onishi (Eds.), *Non-*

- Canonical Marking of Subjects and Objects*, 307-54. Amsterdam: John Benjamins Publishing.
- Snyder, William, and Nina Hyams (2015), "Minimality Effects in Children's Passives," in: Elisa Di Domenico, Cornelia Hamann, and Simona Matteini (Eds.), *Structures, Strategies and Beyond: Studies in Honour of Adriana Belletti*, 343-68. Amsterdam/Philadelphia: Benjamins Publishing Company.
- Sugisaki, Koji (1999), "Japanese Passives in Acquisition," in: David Braze, Kazuko Hiramatsu, and Yutaka Kudo (Eds.), *Cranberry Linguistics: University of Connecticut Working Papers in Linguistics 10*, 145-56, Cambridge, MA: MITWPL.
- Takahashi, Masahiko (2010), "Case, Phases, and Nominative/Accusative Conversion in Japanese," *Journal of East Asian Linguistics* 19(4): 319-55.
- Takano, Yuji (2003), "Nominative Objects in Japanese Complex Predicate Constructions: A Prolepsis Analysis," *Natural Language & Linguistic Theory* 21(4): 779-834.
- Terzi, Arhonto, and Ken Wexler (2002), "A-Chains and S-Homophones in Children's Grammar: Evidence from Greek Passives," in: Mako Hirotsani (Ed.), *Proceedings of NELS, 32*, 519-37.
- Ura, Hiroyuki (1999), "Checking Theory and Dative Subject Constructions in Japanese and Korean," *Journal of East Asian Linguistics* 8(3), 223-54.
- Verrips, Maaike (1996), *Potatoes Must Peel: The Acquisition of the Dutch Passive*. Dordrecht: Holland Institute of Generative Linguistics.
- Wexler, Ken (2004), "Theory of Phasal Development: Perfection in Child Grammar," in: Aniko Csirmaz, Andrea Gualmini, and Andrew Nevins (Eds.), *Plato's Problems: Papers on Language Acquisition, MIT Working Papers in Linguistics 48*, 159-209. Cambridge, MA: MITWPL.