

The Role of UG in Adult Language Learning

— Binding Condition A¹⁾ —

YAMASHITA Hiroshi

Summary

In order to know whether Universal Grammar is available in second language acquisition of adult learners, I have in this paper conducted another experiment targetting Japanese university students learning English as a second language. It is well known that Japanese selects a parametric value different from that in English concerning the governing category for Principle A of the Binding Theory. More specifically, Japanese allows co-indexing of the embedded anaphoric subject with an item in the main clause, which is not possible in English. If the students can adapt themselves to a new parameter in their second language, that certainly means UG is still active in L2 learning of adults. If, on the other hand, they stick to the parameter of their mother tongue, that clearly indicates that UG is dead for adult learners and that it cannot be used in the process of learning new languages. Based on the results of my new experiment, I will conclude that the former seems to be correct.

Key words : Universal Grammar, Principle A, Binding Theory, anaphor, governing category, parameter

1. Introduction

There has been much controversy over whether Universal Grammar is available in second language acquisition of adult learners. For example, Otsu and Naoi (1986) and Naoi (1989) took up the principle of Structure-Dependence (Chomsky (1975), which stipulates that linguistic rules must operate on structural units rather than on linear concepts, and found out that L2 learners' hypotheses about the L2 are structure dependent. What this simply suggests is that UG is still available in second language acquisition of adults. Similar conclusions have been reached by Richtie (1978) and Yamashita (1999, 2001, 2005). Especially worth noting here is that in Yamashita (2001) I have found out not only the possibility that UG is active in second language acquisition of post-adolescent learners but also that what is often referred to as the *critical period* may not exist in language learning.

However, there are some others who suggest differently. Schachter (1989, 1990) conducted an experiment using Subjacency, and concluded that principles of UG are only observed in L2 acquisition when they operate in similar fashion in the L1 and L2, in other words, that UG can only be accessed via the L1.

In this paper, I will conduct another experiment to see which of the two opposing proposals mentioned above is on the right track. In order to do this, we first need to look for some principles or parameters of UG that do exist in one language but missing in another. I will here use

Department of International Studies and Communications, Faculty of Global Policy Management and Communications, Yamanashi Prefectural University

Binding Condition A targetting Japanese learners of English. Although Binding Condition A does exist in both English and Japanese, it operates differently in these two languages. I will be maintaining my earlier remark that UG is still active in L2 learning of adults.

2. Binding Theory

Binding Theory constrains the relationships between various kinds of noun phrases. The theory consists of three principles, Principle A, Principle B and Principle C.

Principle A is mainly concerned with anaphors like reflexives and reciprocal pronouns and states that an anaphor must be bound in its governing category. We will here define a governing category as the smallest NP or IP containing the anaphor and the governor of the anaphor.

Principle B handles pronouns and states that a pronoun must be free in its governing category. That is, its co-indexed NP must not c-command it within the same clause or NP.

Principle C covers lexical NPs and states that a lexical NP must be free, ie., it must not be c-commanded by a co-indexed NP at all, no matter how far away.

We will here summarize Binding Theory as follows:

(1) Binding Theory

(i) Principle A

An anaphor must be bound in its governing category.

(ii) Principle B

A pronoun must be free in its governing category.

(iii) Principle C

A lexical NP must be free,

We tentatively define a governing category as in (2) below;

(2) Governing Category

A governing category of α is the smallest NP or IP containing α and the governor of α .

Now consider the sentences in (3). In each sentence, the governing category has been bracketed.

(3) a. [John_i saw himself_i]

b. * [John_i saw him_i]

c. * [He_i saw John_i]

d. John said that [Fred_i hurt himself_i]

e. * John_i said that [Fred hurt himself_i]

f. John_i said that [Fred hurt him_i]

g. * He_i said that [Fred hurt John_i]

In (3a), *John* c-commands the reflexive within its governing category and so the sentence is permitted by Principle A. In (3b), *John* c-commands the pronoun, which must be free in its governing category, violating Principle B. (3c) and (3g) violate Principle C, as the lexical NPs are bound. The contrast in grammaticality between (3d) and (3e) can be accounted for by Principle A. In (3d), the reflexive is correctly bound by a c-commanding antecedent within its governing category, while this is not the case in (3e). Finally in (3f), the pronoun *him* is free in its governing category in accordance with Principle B. As you can see, Binding Theory can account for various phenomena concerning the referentiality of various types of NPs in English.

Here the question arises as to whether the same Binding Conditions are at work in other languages such as Japanese. Japanese seems to choose a somewhat different parameter for Principle A. To see this, consider the following examples from Japanese:

- (4) a. Taro_i-wa [_{IP} karejishin_i-ga soko-ni iku to] itta
 ‘Taro [_{IP} himself there to go that] said
 Taro said that he would go there.
 b. Taro_i-wa [_{IP} jibunjishin_i-ga soko-ni iku to] itta
 ‘Taro [_{IP} oneself there to go that] said
 Taro said that he would go there.

This type of co-indexing is completely ungrammatical in English, as you can see from the following example:

- (5) * Taro_i said that [_{IP} himself_i/oneself_i would go there]

(5), which is the equivalent of the Japanese sentences in (4), is out since *himself/oneself* are not bound within their governing category violating Principle A. Although it is not clear how we should define Principle A of the Binding Theory for Japanese, what is certain is that it selects different parametric value for the principle.

3. Experiments

In order to know whether UG is still active in second language acquisition of adults, I have conducted another experiment targeting Japanese students learning English as a second language, using Principle A of the Binding Theory. As we have seen in the previous section, there are parametric variations between Japanese and English concerning this principle, so I believe it is suited as an item to be tested to know the role of UG in L2 learning of adults. If the students act similarly in both languages, this means they can learn their second language only through their mother tongue. If, on the other hand, they master different parameters for English, this certainly indicates UG is still playing its role in L2 learning.

The subjects are all students at Meiji Gakuin University majoring in literature or linguistics other than generative grammar. Those majoring in generative grammar are strictly excluded because their profound knowledge in syntax may affect the results of the tests. (Part 3 of the tests

in Appendix 1, along with some of the questions in Part 1, are designed to make sure that they don't have any knowledge in syntax.) Their age ranges from 21 to 23, which means that they have studied English for about ten years. Those who began learning English earlier (before the age of 10), including those returnees from English-spoken countries are also excluded from the tests since these students might have started learning English during what is often called the *critical period*. A number of researchers accept the availability of UG for child L2 learners but deny it for adults. Obviously, studies of such early-starters do not address the questions of language learning by adults.

The students are given the tests shown in Appendix 1. Part 1 of the tests concerns Japanese, and is designed to know what type of parametric values each student has in his or her mother language concerning the principles of Binding Theory. Only those with different parametric values from those of English will be analysed for Part 2, where judgement of English sentences is the main concern. Those who share the same values in Japanese and English are excluded at this stage because there is a strong possibility that such students might have accessed UG via the L1.

In the next section, the results of these two tests will be carefully analysed for further discussions.

4. The Results

The results for the tests in PART 3 indicate that all the students who participated in the tests are well-qualified for the purpose mentioned above. The results for the tests in PART 1 is shown in Table 1 below.

Table 1 : The results for PART 1

	1	2	3	4	5	6	7
01	a	a	a	c	c	a	a
02	a	c	a	b	c	b	b
03	a	a	a	c	c	b	c
04	b	c	a	b	c	b	b
05	a	c	a	b	a	b	c
06	a	b	a	b	a	b	c
07	c	c	a	c	c	b	c
08	a	a	a	c	a	b	b
09	c	a	a	a	c	b	b
10	c	c	a	b	c	c	b
11	c	c	a	b	a	b	c
12	a	b	a	c	a	b	c
13	a	c	a	b	c	b	c
14	c	b	a	a	c	b	a
15	a	c	a	b	c	a	?
16	a	a	a	b	c	b	b

What we see here is that Japanese allows co-indexing in such sentences as (6).

- (6) a. Taro_i-wa [_{IP} karejishin_i-ga soko-ni iku to] itta
 'Taro [_{IP} himself there to go that] said
 Taro said that he would go there.
- b. Taro_i-wa [_{IP} jibunjishin_i-ga soko-ni iku to] itta
 'Taro [_{IP} oneself there to go that] said
 Taro said that he would go there.

Although both grammatical, it is true that (6b) sounds more natural than (6a) for most native speakers of Japanese. I assume this is the reason behind the fact that some students judged the sentence in Question 1 ungrammatical while accepting that in Question 3.

Those who chose (a) in Question 1 and Question 3 and answered appropriately²⁾ in other cases related to Principle A (Questions 4 and 6) will be analysed for Part 2. If they act similarly in the English tests, this means they can learn their second language only through their mother tongue (Japanese), with UG playing no role. If, on the other hand, they master different parameters for English, this certainly shows UG is still playing its role in L2 learning. The results for the tests in PART 2 are shown below.

Table 2 : The results for PART 2

	1	2	3	4	5	6	
02	b	c	c	c	c	c	Questions 1, 2 and 6 are related to Principle A. The remainders are included in the test as distractors.
05	b	c	a	a	a	c	
06	b	c	a	a	b	c	
13	b	c	a	a	a	c	
16	b	a	a	a	a	a	
	b	c	a	a	a	c	Correct Answer

From the overwhelming success rates in Questions 2 and 6, it is natural to conclude here that adult L2 learners can master different parameters with the help of UG.

5. Concluding Remarks

In this paper, I have conducted another experiment to see whether UG is still active in second language acquisition, using Principle A of the Binding Theory. The subjects are Japanese adult students learning English as a second language. Although both English and Japanese make use of Binding Theory, they seem to select different parameters for the width of the governing category for Principle A. In other words, the governing category for Japanese anaphors and reflexives is somewhat larger than that for English counterparts. The results show that adult L2 learners can master different parameters with the help of UG.

Although much needs to be done, I believe that this present work can help us gain more understanding of what UG does in the process of adult language learning.

Appendix 1 Test Sheets

PART 1

Name () Age ()

Questions

1. When did you start learning English? —— At the age of ().
2. Have you ever lived in countries where English is mainly spoken? (YES NO)
3. Only to those who answered YES to Question 2.
—— I lived in () for () years since I was at the age of ().
4. Have you ever studied generative grammar or syntax? (YES NO)
5. Who was in charge of your grammar class when you were a freshman?

Direction

Read the following sentences and judge who each underlined pronoun refers to.

- 1 太郎は次郎と駅前で話していた。太郎は彼自身がそこに行くと言った。
 - a 太郎
 - b 次郎
 - c そもそも非文法的
- 2 太郎は次郎と駅前で話していた。太郎は彼がそこに行くと言った。
 - a 太郎
 - b 次郎
 - c そもそも非文法的
- 3 太郎は次郎と駅前で話していた。太郎は自分自身がそこに行くと言った。
 - a 太郎
 - b 次郎
 - c そもそも非文法的
- 4 太郎は次郎が自分自身を刺したと言った。
 - a 太郎
 - b 次郎
 - c そもそも非文法的
- 5 太郎は次郎が彼を刺したと言った。
 - a 太郎
 - b 次郎
 - c そもそも非文法的
- 6 太郎は次郎が彼自身を刺したと言った。

- a 太郎
- b 次郎
- c そもそも非文法的

7 太郎の車が次郎の車と衝突した時、太郎は次郎に次のように言った。「自分自身が悪いのだから、私を責めるな。」

- a 太郎
- b 次郎
- c そもそも非文法的

PART 2

Name () Age ()

Direction
Read the following sentences and judge who each underlined pronoun refers to.

- 1 John said Tom killed himself.
 - a John
 - b Tom
 - c The sentence is ungrammatical.

- 2 John said himself likes Tom.
 - a John
 - b Tom
 - c The sentence is ungrammatical.

- 3 John said Tom kicked him.
 - a John
 - b Tom
 - c The sentence is ungrammatical.

- 4 John said he likes Tom.
 - a John
 - b Tom
 - c The sentence is ungrammatical.

- 5 John said to Tom that he had scored another run.
 - a John

- b Tom
- c The sentence is ungrammatical.

6 John said to Tom that himself had scored another run.

- a John
- b Tom
- c The sentence is ungrammatical.

PART 3

Name () Age ()

1 Do you know what Condition A of the Binding Theory is? If you do, explain it in the space provided below.

2 Do you know what Condition B of the Binding Theory is? If you do, explain it in the space provided below.

Appendix 2 English transcription of the sentences in PART 1

1 太郎は次郎と駅前で話していた。太郎は彼自身がそこに行くと言った。

Taro was talking to Jiro in front of the station. Taro said himself would go there.

- a Taro
- b Jiro
- c The sentence is ungrammatical.

2 太郎は次郎と駅前で話していた。太郎は彼がそこに行くと言った。

Taro was talking to Jiro in front of the station. Taro said he would go there.

- a Taro
- b Jiro
- c The sentence is ungrammatical.

3 太郎は次郎と駅前で話していた。太郎は自分自身がそこに行くと言った。
Taro was talking to Jiro in front of the station. Taro said oneself would go there.

- a Taro
- b Jiro
- c The sentence is ungrammatical.

4 太郎は次郎が自分自身を刺したと言った。
Taro said that Jiro stabbed oneself.

- a Taro
- b Jiro
- c The sentence is ungrammatical.

5 太郎は次郎が彼を刺したと言った。
Taro said that Jiro stabbed him.

- a Taro
- b Jiro
- c The sentence is ungrammatical.

6 太郎は次郎が彼自身を刺したと言った。
Taro said that Jiro stabbed himself.

- a Taro
- b Jiro
- c The sentence is ungrammatical.

7 太郎の車が次郎の車と衝突した時太郎は次郎に次のように言った。「自分自身が悪いのだから、私を責めるな。」

When Taro's car collided with Jiro's, Taro said to Jiro as follows. "Oneself is responsible, so don't blame me."

- a Taro
- b Jiro
- c The sentence is ungrammatical.

Notes

1. I would here like to thank all the students who participated in this survey for their cooperation. Without them, I could not have finished this paper in time.
2. For most speakers, object reflexives must be bound in its governing category, which is not in line with my personal judgement. Subject reflexives can even be bound outside the sentence, which I can agree one hundred percent.

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Hiroshi Yamashita

E-mail : hiroshi@yamanashi-ken.ac.jp