

The Perception of Japanese Phrasal Reflexives by Native Speakers of Japanese : An Experimental Study in Response to Yuan's (1994) Discussion

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Boping Yuan (1994) discusses that Japanese has a set of phrasal reflexive pronouns (e.g. *kare zisin*) which bear the same reference properties as English. Therefore, even though Japanese learners of English successfully acquire the properties of English reflexive pronouns, it would not be evidence for parameter-resetting in second language acquisition (SLA) in the Universal Grammar (UG) framework. The current study purports to diagnose if Yuan's claim is appropriate. Twelve native speakers of Japanese demonstrate disagreement in determining the properties of Japanese phrasal reflexives, and their performance on two tasks turned out to be significantly different from a group of twelve native speakers of English who were given the same tasks for English reflexive pronouns. These results suggest that it is too premature to abandon Japanese learners of English as non-suitable candidates for the research of reflexive pronouns in UG-based SLA.

Keywords : reflexive pronouns, Japanese, parameter-resetting, second language acquisition,
Universal Grammar

I. Introduction

I.1. Theoretical Background

For more than three decades, researchers have attempted to show evidence for the availability of Universal Grammar (UG) in second language acquisition (SLA). The conventional procedure for their study is to pick a UG principle that is not evident in learners' native language and examine if they can achieve correct knowledge for linguistic properties related to the principle in second language. If the learners demonstrate native-like knowledge, researchers could appeal to UG as a possible explanation. One of the UG principles that

have been repeatedly examined in this way is Principle A in Binding Theory. The definition of the principle is as follows.

(1) Principle A in Binding Theory:

An anaphor must be bound in a local domain (Chomsky, 1995, p.95).

α binds β if α c-commands¹ β and α , β are coindexed (Chomsky, 1995, p.93).

e.g. [John_i saw himself_i]

*John_i said [that Fred hurt himself_i]

(White, 1989, p.26)

Concerning the “domain,” also known as the “governing category,” described in Binding Theory, many debates have been made. Among them, the argument of Wexler and Manzini (1987) is quite influential in UG-based SLA. They claim that the governing category varies across languages, and that the variations are summarized under Governing Category Parameter (GCP) as the following (Wexler and Manzini, 1987, p.53).

- (2)GCP : γ is a governing category for α iff γ is the minimal category which contains α and
- a. has a subject, or
 - b. has an INFL, or
 - c. has a TNS, or
 - d. has an indicative TNS, or
 - e. has a root TNS

Keys : iff = if and only if; INFL = inflection
(head of IP (= sentence)); TNS = tense

The following examples (3a-e) taken from Finer (1991, p.354, brackets added) correspond to the conditions (2a-e). The brackets exemplify the governing category that each condition claims.

- (3) a. Starsky considers [Hutch_i fond of Self_i].
 b. [Curly_i stole Moe’s pictures of Self_i].
 c. [Fred_i expected Barney to invite Self_i to lunch].
 d. [Ward_i requires that Wally be polite to Self_i].
 e. [Alex_i doesn’t care that Krystle dislikes Self_i].

Key : Self = reflexive pronoun bound
by the coindexed NP

Wexler and Manzini (1987) claim that every language falls into one of *a* to *e*. For example, English takes the condition *a*, the smallest governing category, and Japanese takes the condition *e*, the largest. The relationship among *a* to *e* is inclusive, that is, *e* includes *a* to *d*, *d* includes *a* to *c*, and so on. More specifically, languages that allow the condition *e* assume that every NP in the domains defined by *a* to *d* within the domain defined by *e* can be antecedents. For example, in (3e), *Self* can be coindexed with *Krystle* as well, which is an NP

occurred in the domain defined by *a*.

Wexler and Manzini (1987) propose yet another parameter related to Binding Theory, namely, Proper Antecedent Parameter (PAP). This parameter is concerned with the subject orientation of reference of reflexives, as is shown below (Wexler and Manzini, 1987, p.64).

- (4) PAP : A proper antecedent for α is
- a. a subject β ; or
 - b. an element β whatsoever

Again, every language falls into either type *a* or *b* with respect to PAP. It is discussed that English is a type *b* language whereas Japanese belongs to type *a*. That is, in the following example, English allows either John or Bill to be an antecedent of *himself* while in Japanese, only John is a possible antecedent.

- (5) **John** talked to **Bill** about himself
(Hirakawa, 1990, p.62).

In sum, English and Japanese are different in that the former takes the least inclusive value and the latter takes the most as regard to GCP, and the opposite holds regarding PAP. The following diagram manifests this point.

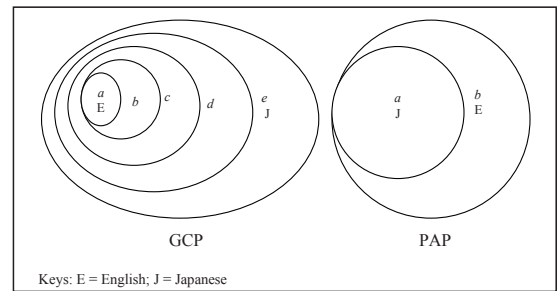


Figure 1. English and Japanese with Regard to GCP and PAP

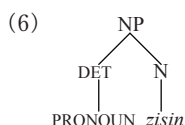
The fact that English and Japanese have different values of the two parameters related to Principle A in Binding Theory has attracted many researchers, and accordingly the successful acquisition of English reflexives by native speakers of Japanese has been repeatedly used as evidence for parameter-resetting

in SLA, and thus for the UG operation in SLA (e.g., Hirakawa, 1990; Finer, 1991; Wakabayashi 1996; Hamilton, 1998).

1.2. The Problem

In his 1994 discussion note, Boping Yuan expresses doubt about the validity of using the data on the acquisition of English reflexives by native speakers of Japanese as well as of Chinese and Korean as evidence for parameter-resetting in SLA. His doubt is caused by the existence of phrasal reflexives in these languages, which, he claims, behave in the same way as English reflexives do. In other words, restricting his discussion to only Japanese, the claim that Japanese is a type *e* language regarding GCP and belongs to type *a* with respect to PAP, as is shown in Figure 1, is true only for the bare reflexive, *zibun* ('self' with no indication for number and gender), and for phrasal reflexives, Japanese is type *a* in GCP and is type *b* in PAP just like English. He concludes his note by stating "it is very likely that no parameter resetting is involved" in the acquisition of English reflexives by native speakers of these languages (p.544).

Yuan demonstrates the structure of phrasal reflexives, as is reproduced in (6) below (Battistella and Xu, 1990, cited in Yuan, 1994, p.541, Chinese replaced by Japanese) and gives a list of Japanese phrasal reflexives as in (7) (Yuan, 1994, p.541).



(7)

<i>watashi zisin</i>	myself
<i>anata zisin</i>	yourself
<i>kare zisin</i>	himself
<i>kanojo zisin</i>	herself
<i>wareware zisin</i>	ourselves
<i>anatatachi zisin</i>	yourselves
<i>karera zisin</i>	themselves (masculine)
<i>kanojotachi zisin</i>	themselves (feminine)

It is, however, not quite the case that researchers have been simply unaware of the numerous phrasal reflexives given in (7) and have used learners' successful acquisition of English reflexives as evidence for parameter-resetting in SLA. Yusa (1998), for instance, states two reasons why L1 transfer of *kare-jishin*² ('himself') does not seem to be available (p.218).

First, most Japanese do not use *kare-jishin* as a reflexive in normal conversation. They pick up this lexical item when they first come across *himself* in English classes in junior high school. They overuse *kare-jishin* in junior high school, but later cease to use it, feeling that *kare-jishin* is a translation-flavor word. [...]

Second, if L1 transfer effects of *kare-jishin* were instantiated in L2 knowledge of *himself*, Japanese learners at the beginning level would demonstrate responses more similar to those of native speakers of English than advanced learners of English would, because they use *kare-jishin* more frequently soon after their first exposure to *himself* in formal education. Hirakawa (1990), however, reported that low-level learners cannot work out the properties of *himself* in a proper way. The results of the experiment we conducted also show that Japanese learners of English do not utilize L1 knowledge of *kare-jishin* in determining the properties of *himself*.

To prove or disapprove Yuan's argument against and Yusa's support for the validity of studies using the successful acquisition of English reflexives by speakers of Japanese as evidence for the UG availability in SLA, it seems the best to conduct an experiment that tests the intuition of native speakers of Japanese toward Japanese phrasal reflexives. The goals of the current study are a) to show how much intuition native speakers of Japanese have for rarely used Japanese phrasal reflexives and b) to determine whether or not Japanese phrasal reflexives indeed share the same properties as English reflexives regarding GCP and PAP as is claimed in Yuan (1994). The results of the study should contribute to diagnosing the validity of the kind of experimental studies described

above and to directing future research in the field.

II. Procedure

II.1. Participants

The participants of the study are 12 native speakers of Japanese and 12 native speakers of English, the latter serving as a control group. They are all university students in the United States. Table 1 below provides more information on the participants.

Table 1. General Information on the Participants

	Japanese Group	English Group
N	12 (4 males, 8 females)	12 (8 males, 4 females)
Age (mean)	22.5	20.1
Age (range)	19 – 27	17 – 26
Time spent in English-speaking countries (mean)	1 year and 10 months	N/A
Time spent in English-speaking countries (range)	3 months – 4 years and 6 months	N/A

II.2. Instrument

The instrument consists of two truth-value judgment tasks: a story task (White *et al.*, 1997) and a picture task (White, 1989; White *et al.*, 1997; Thomas, 1995; Hamilton, 1998). Truth-value judgment tasks are effective in investigating the knowledge of reflexive binding since the preference problem can be avoided. In the tasks where participants are asked to give their interpretation or to choose one of the given interpretations, their response may only reflect their preferences. White *et al.* (1997) state: “the fact that they choose only one interpretation does not necessarily mean that the other is excluded from their grammar” (p.148). Advantageously, truth-value judgment tasks can demonstrate possible interpretations, which would not otherwise be recognized. Each task consists of 12 items, as shown in (8) below.

(8) The breakdown of each task

- A. 2 monoclausal sentences where the context suggests the subject antecedent.
e.g. Mr. Big_i showed Mr. Thin a portrait of himself_i. Ⓟ F

- B. 2 monoclausal sentences where the context suggests the object antecedent.
e.g. The female interviewer asked Mary_i about herself_i. Ⓟ F
- C. 2 biclausal sentences where the context suggests the long-distance antecedent.
e.g. Sally_i reported to her mother that Polly hit herself_i. T Ⓟ
- D. 2 biclausal sentences where the context suggests the local antecedent.
e.g. Jennifer is glad that Lily_i dresses herself_i.
Ⓟ F
- E. 4 distractors with pronouns.
e.g. The son was very shocked that his father_i hurt him_i. T Ⓟ

Monoclausal items (A & B) are intended to examine PAP, and biclausal items (C & D) are designed to test GCP. The distractors with pronouns are aimed to both distract the participants’ excessive awareness of the targets (i.e. reflexive pronouns) and to balance the numbers of T and F responses. An example for each task is given in (9) and (10).

(9) Story Task

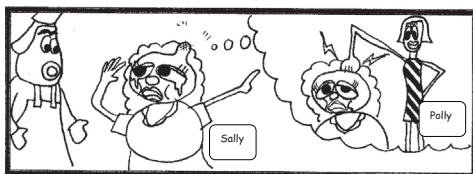
Instructions: Read each short story and the statement following it. If you think the statement matches the content of the story, circle ‘T.’ If you do not, circle ‘F.’ Please DO NOT spend too much time in doing this task, but rather, give your first reaction.

Mary is a college senior and is looking for a job. She went for a job interview at a cosmetics store today. A female job interviewer asked her why she wanted to work for the company, how she would describe her personality, and so forth.

The female interviewer asked Mary about herself.
Ⓟ F

(10) Picture Task

Instructions: Look at each picture and read the statement following it. If you think the statement matches the picture, circle 'T.' If you do not, circle 'F.' Please DO NOT spend too much time in doing this task, but rather, give your first reaction.



Sally reported to her mother that Polly hit herself.

T F

The Japanese group and the English group are given the same tasks, but each group is given the tasks in their native language. In order to maintain the naturalness in both languages, there are some differences between the two versions of the instrument, specifically in personal names, descriptions of cultural behaviors, and collocations. These differences were carefully constructed so that they would not disturb what the test intended to examine. The Japanese version of the complete instrument is given in Appendix A.

II.3. Hypothesis and Data Analysis

Regarding whether or not Japanese phrasal reflexives indeed share the same properties as English reflexives, the following hypothesis is formulated.

Hypothesis:

The performance of the Japanese group is significantly different from that of the English group on both GCP and PAP items.

In order to prove this hypothesis, the mean scores of the two groups on items for each parameter are compared by the paired samples *t*-test.

Furthermore, the data from the Japanese participants is closely examined in the light of diagnosing how much intuition they have toward phrasal reflexives in their own language and of determining the characteristics of the phrasal reflexives.

III. Results and Discussions

Figure 2 below shows the mean scores of the Japanese group and the English group on PAP and GCP items³.

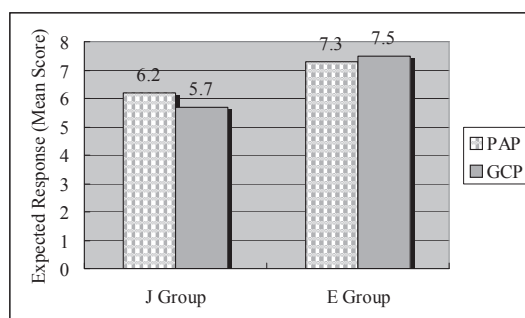


Figure 2. The Mean Scores of Each Group by Parameter

There are eight items to test each parameter, and the expected response suggests the T response for all the monoclausal sentences and the biclausal sentences with the context indicating the local antecedent, and the F response for the biclausal sentences with the context telling the long-distance antecedent. As Figure 2 demonstrates, on both parameters, the English group marks higher scores than the Japanese group, and the differences between the two groups are found to be statistically significant for both parameters (PAP: $t=3.92$, $p<.05$; GCP: $t=3.63$, $p<.05$). Therefore, the hypothesis established above is supported. This result questions Yuan's claim that Japanese phrasal reflexives behave exactly the same way as English reflexives.

Table 2. The Expected Response by Type of Sentences

	PAP		GCP	
	Type A Monoclausal SUB Ant	Type B Monoclausal OB Ant	Type C Biclausal Long-distance	Type D Biclausal Local
J Group	95.8%	58.3%	56.3%	85.4%
E Group	95.8%	87.5%	89.6%*	97.9%

Keys: SUB Ant = subject antecedent; OB Ant = object antecedent.

Note*: One participant changed the reflexive pronoun *themselves* into *them* in one of the biclausal items with the context indicating the long-distance antecedent and then gave a T response to the item. This participant gave F responses to all the other sentences of the same type. He could have given an F response to the item in question, which would raise the number to 91.7% in this box.

Furthermore, close examination reveals exactly where the differences are observed. Table 2 demonstrates the response of each group for each type of sentences. Large differences are found in the performance on the monoclausal items with the context indicating the object antecedent (Type B) and the biclausal items with the context suggesting the long-distance antecedent (Type C). More than 40 percent of the Japanese responses for Type B do not allow a phrasal reflexive to have an object antecedent, and more than 40 percent of the Japanese responses for Type C do allow a phrasal reflexive to have a long-distance antecedent. In contrast, the English speakers largely agree on that an English reflexive pronoun can have an object antecedent, but it cannot have a long-distance antecedent, which is in accordance with what has been repeatedly reported in the literature. The actual test items for Types B and C and each group's response for the four test items are given in Table 3. There is larger disagreement among the Japanese speakers than among the English speakers for virtually all of the items of Types B and C. Some Japanese participants treat Japanese phrasal reflexives just as the majority of the English participants deal with English reflexives, while some other Japanese participants

treat Japanese phrasal reflexives just like the Japanese bare reflexive *zibun*. As is often discussed in the literature, *zibun* can have either a long-distance or a local antecedent as long as it is the subject of the sentence or the clause⁴. The Japanese sentences below demonstrate these properties of *zibun*.

- (11) John_i-ga Tom_j-ni *zibun*_i-no koto-o hanashita.

John-Nom Tom-Dat self-Gen matter-Acc told
'John told Tom about *zibun*.'

- (12) John_i-ga Tom_j-ni [Joe_k-ga *zibun*_i-o hihanshita to] itta.

John-Nom Tom-Dat Joe-Nom self-Acc criticized that told
'John told Tom that Joe criticized *zibun*.'

(Yusa, 1998, p.217)

In (11), the antecedent of *zibun* has to be *John*, which is the subject of the sentence, not *Tom*, the object. The example in (12) shows that the antecedent of *zibun* can either be *Joe*, the subject of the embedded clause, or *John*, the subject of the main clause, but cannot be *Tom*, the object of the main clause. One plausible explanation for the Japanese response that treats Japanese phrasal

Table 3. The Responses to Types B and C Items

Items (Expected Response)	Expected Response (%)	
	J Group	E Group
Type B : Monoclausal Object Antecedent (T)		
St3. Margaret asked Emily _i about herself _i .	75%	83.3%
St9. The female interviewer asked Mary _i about herself _i .	66.7%	100%
Pc4. Sally warned Polly _i about herself _i .	50%	83.3%
Pc9. Rob and Tom asked [Yuta and Keita] _i about themselves _i .	41.7%	83.3%
Type C : Biclausal Long-distance Antecedent (F)		
St2. The couple _i is glad that their children trust themselves _i .	41.7%	75%*
St8. Barbara _i told her mother that Monica saw herself _i in her dream.	41.7%	91.7%
Pc1. Sally _i reported to her mother that Polly hit herself _i .	66.7%	91.7%
Pc10. [Rob and Tom] _i told their father that Yuta and Keita sprayed themselves _i with a hair spray.	75%	100%

Keys: St3 = story task #3; Pc4 = picture task #4 (the number corresponds to the order in which the items appear in the actual instrument).

Note*: For the reason described in the note under Table 2, the percentage could be raised to 83.3%.

reflexives as if they were the bare reflexive *zibun* can be that some Japanese participants have to resort to *zibun* in interpreting them because they are hard to process due to the lack of daily use. In fact, a few Japanese participants pointed out the difficulty of the Japanese sentences in the instrument while none of the American participants expressed a processing difficulty in reading the translated English sentences. Also, it is relevant to note that one Japanese participant, who was reading one of the test items aloud, replaced *kare-zisin* by *zibun*. It can be said that the dissent among the Japanese participants observed in Table 3 reflects either the lack of or deficiency in the intuition of Japanese speakers toward the interpretation of Japanese phrasal reflexives.

It was discussed above that the Japanese participants' reaction to phrasal reflexives might be influenced by *zibun*. Assuming that the Japanese participants are not confident about the interpretation of the phrasal reflexives, it is also reasonable to cast a glance at the possibility that they might use their knowledge of English reflexives in judging the references of Japanese phrasal reflexives since all of the participants use English in a daily basis. The Pearson correlation coefficient is conducted to examine whether or not there is correlation between the participants' time spent in English-speaking countries and their scores for the Types B and C items (the maximum score = 8). The result is, however, not significant as is shown in Figure 3 ($r = 0.29$, confidence limits = 95%). The amount of time spent in English-speaking countries does not affect the score, which seems to indicate that the Japanese participants do not

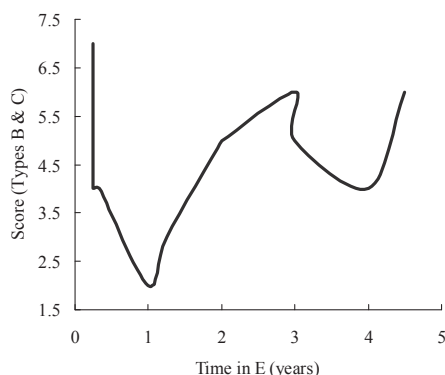


Figure 3. The Correlation between Time Spent in English Speaking Countries and the Scores on the Types B and C Items

resort to their knowledge of English reflexives when they judge Japanese phrasal reflexives. However, a much larger sample including the data from people with minimum English knowledge as well as sophisticated English proficiency level classification is necessary to reach a final conclusion.

The results of the study demonstrate that the Japanese participants respond to Japanese phrasal reflexives significantly differently from the way in which the American participants respond to the equivalent English reflexives. This finding is inconsistent with Yuan's discussion that English reflexives and Japanese phrasal reflexives share the same properties. Yuan claims that the acquisition of English reflexives by Japanese learners of English does not constitute valid evidence for examining parameter-resetting in SLA. This claim holds under the condition that Japanese has reflexive pronouns that behave exactly the same as the English ones. The results obtained in the current study appear to shake this condition. However, they are not strong enough to thoroughly discard Yuan's invalidity discussion or to support Yusa's argument of the non-availability of L1 transfer since the accurate properties of Japanese phrasal reflexives cannot be determined due to the disagreement among the Japanese participants. They agree on that Japanese phrasal reflexives can have a local subject antecedent, but they debate upon whether or not the phrasal reflexives can be bound to an object NP and whether or not they can be bound long-distantly. Figure 4 illustrates the indefinite position of Japanese phrasal reflexives observed in the responses of the Japanese participants in the current study.

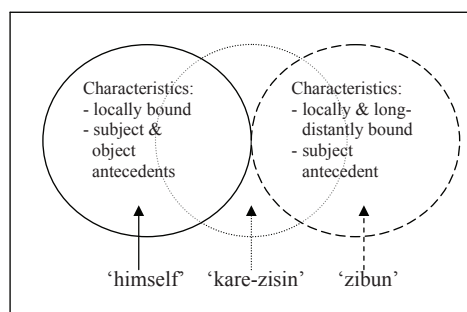


Figure 4. The Position of Japanese Phrasal Reflexives

IV. Conclusions

This paper presents a small experiment to test Boping Yuan's (1994) argument that Japanese phrasal reflexives behave in the same way as English reflexives does with regard to Governing Category Parameter (GCP) and Proper Antecedent Parameter (PAP), and therefore there is no parameter-resetting involved in the Japanese learners' acquisition of English reflexives. Two truth-value judgment tasks are given to a group of 12 native speakers of Japanese and a group of 12 native speakers of English, each group in their own language. The performance of the Japanese group turns out to be significantly different from that of the English group. The critical differences are observed in the response to the monoclausal items with the context suggesting the object antecedent and the biclausal items with the context leading to the long-distance antecedent. The Japanese participants do not agree on the interpretation of these items: Some demonstrate the interpretation required for English reflexives, and others show the interpretation for the Japanese bare reflexive *zibun*. The Japanese participants do not seem to be confident in interpreting the phrasal reflexives, obscuring what the properties of the reflexives really are. This finding questions Yuan's discussion on the invalidity of the studies on the UG availability in SLA, testing Japanese learners' acquisition of English reflexives.

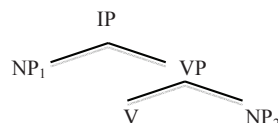
There are a number of limitations in this study. One of the major ones is its sample size. The replication of the study with a larger number of participants would be desirable. Another issue might be the Japanese participants' knowledge of English. They are all university students living in the United States. Even though the study reports no correlation between the performance on the tasks and time spent in English-speaking countries, those participants who have no or very little knowledge of English would perhaps be more favorable for the purpose of the experiment since there would be no possibility of the influence by English. Finally, as is the case for all kinds of studies, the instrument and procedure should always be elaborated. One would like to make it clearer to see the exact reasons behind the participants' choice for each item. It should be avoided that choices are made for wrong

reasons.

This study perhaps serves at best as a start of examining Yuan's discussion. He makes the same arguments for Chinese and Korean. Future studies certainly should consider speakers of these languages. At the present, to say the least, it would be premature to blindly believe Yuan's arguments and to negate all of the studies in the past, which examined the acquisition of English reflexives by Japanese learners as evidence for the UG availability in SLA.

Notes

- ¹⁾ α c-commands β if the first branching node that immediately dominates α also dominates β . For example, in the following diagram, NP₁ c-commands both V and NP₂ since the first branching node that immediately dominates NP₁, that is, IP (=S), also dominates V and NP₂. Also, V and NP₂ c-command each other for the same reason. However, V and NP₂ do not c-command NP₁ since the first branching node that immediately dominates them, that is, VP, does not dominate NP₁.



- ²⁾ Yusa spells the word differently from Yuan, but *kare zisin* and *kare-jishin* refer to the same word in Japanese.
- ³⁾ The performance of the individual participants is given in Appendix B.
- ⁴⁾ Recall that *zibun* is type *e* (the most inclusive) regarding GCP and belongs to type *a* (the least inclusive) with respect to PAP. See Figure 1.

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Appendix A

Instrument

性別：_____

年齢：_____

出身地：_____ 都道府県

海外経験：

国名 _____ 滞在時期 _____ 滞在期間 _____

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1. 短いストーリーを読み、それに続く一文がその物語の内容に合致していると思う場合は『正』に、そうでない場合は『誤』に丸を付けて下さい。じっくり考えるのではなく、直感的に感じた通りにお答えください。

1) <ストーリー>

徹と悟は双子の兄弟だ。同じ東京の大学に進学した。高校を卒業して以来三年、一度も北海道の実家に帰っていない。ある時、悟が自分と徹の写真を撮って両親に送ろうと言いつ出した。徹もそれに賛成し、二人は北海道の両親に写真を送った。

徹と悟は両親に彼ら自身の写真を送った。 正 誤

2) <ストーリー>

敬三は奈津子と結婚して二十年にもなる。二人の子供に恵まれ、長男は今年一流大学に入った。長女も高校一年になり、いろいろ母親の手伝いができる程に成長した。息子も娘も、医者の方三と弁護士の奈津子を尊敬し、大切なことはなんでも彼らに相談した。敬三夫婦は子供達に絶大に信頼されていると近所でも噂され、誇らしげだ。

敬三夫婦は子供達が彼ら自身を信頼していることを嬉しく思っている。 正 誤

3) <ストーリー>

美香はある時、通っている学校に自分とそっくりな学生がいることに気付いた。もしかして自分と血縁関係にある人ではないかと疑い、彼女を観察するようになった。名前は留美である事がわかった。ある時、思い切って留美に話し掛け、所属の学部や家族のことなど聞いてみた。

美香は留美に彼女自身について聞いた。 正 誤

4) <ストーリー>

大学生の中山君の趣味は旅行だ。未だ見たことのない美しい風景をカメラに収めることも好きだが、旅先でいろいろな人とめぐり会うことも楽しみにしている。最近タイに行った。そこで中山君はビムと名乗る青年と出会い、自分が日本から来たこと、学生であること、旅が何よりも好きなことなどを語った。

中山君はビムに彼自身について語った。 正 誤

5) <ストーリー>

幸恵は不治の病にかかり、余命いくばくもない。親友のエリカは本当に自分によく尽くしてくれた。幸恵は自分の感謝の気持ちをエリカに伝えたい一心で、エリカがどれだけ自分の支えになってきたか、エリカがどれほどすばらしい人間かを手紙に書き連ねてこの世を去った。

幸恵はエリカに彼女についての手紙を残した。 正 誤

6) <ストーリー>

裕子には里美という名前の四歳の娘がいる。最近、里美はお風呂に入ると裕子が洗ってやらずとも自分からすすんで体を洗うようになった。裕子はそんな娘の成長を嬉しく思っている。

裕子は里美が最近、お風呂で彼女自身を洗うようになったことを嬉しく思っている。 正 誤

7) <ストーリー>

晴子は小学校6年生で、今初めて一人で電車に乗っている。電車を二つ乗り継いでおじいちゃんのとこに遊びに行くのだ。たまたまとなり座った愛想のよい老婦人が晴子に話しかけてきた。晴子は初めての旅で緊張しているところにやさしそうな老婦人に話しかけられたことを嬉しく思い、聞かれるがままに自分のことをいろいろ話した。

晴子は老婦人に彼女についていろいろ話した。 正 誤

8) <ストーリー>

順子と由美はクラスメートだが、ほとんど口を聞いたことがない。ある日、順子が由美の夢を見たと言ってきた。由美はそれを不思議に思い、うちに帰ってからそのことを母親に話した。

由美はクラスメートの順子が夢で彼女自身を見たと言ったと母親に話した。 正 誤

9) <ストーリー>

みちるは大学四年生で、就職活動中だ。今日も化粧品会社の面接を受けてきた。女性の面接官がみちるに志望動機や自己の性格評価など事細かに質問した。

女性の面接官はみちるに彼女自身について質問した。 正 誤

10) <ストーリー>

直樹はモデルだ。ある日、彼は鏡の前でいろいろなポーズを研究していた。鏡に映る自分に酔いしれていた。それを見ていた直樹の弟は可笑しく思い、母親に話した。

弟は兄の直樹が鏡の中の彼自身に酔いしれていると母親に報告した。 正 誤

11) <ストーリー>

信二と卓也は家が近所で小さい頃からお互いを知っている。中学の頃から二人は学年トップの成績を争うライバルになっていた。勉強だけでなく、二人はスポーツにも秀でていた。しかし、あと少しのところでもいつも卓也の方が負けてしまうのである。信二はいつからか卓也が自分を避けていると感じるようになり、またある時は人から卓也が自分の悪口を言っていると聞かされ、卓也が自分を嫌っていると思うようになった。

信二は卓也が彼を嫌っていると思っている。 正 誤

12) <ストーリー>

最近、近所では若林親子の話題で持ち切りだ。父親が泥酔して帰宅したおり、手が付けられない程暴れ、挙句に小学校に入ったばかりの自分の息子の目の前で、自殺を計ったのである。父親は病院に運ばれ、一命を取り留めたものの、息子の方はあまりのショックに一言も口をきこうとしないでいる。

息子は父親が彼を傷付けたことにショックを受けている。 正 誤

2. 絵を見て、それに続く一文が絵と合致していると思う場合は『正』に、そうでない場合は『誤』に丸を付けて下さい。じっくり考えるのではなく、直感的に感じた通りにお答えください。

1)



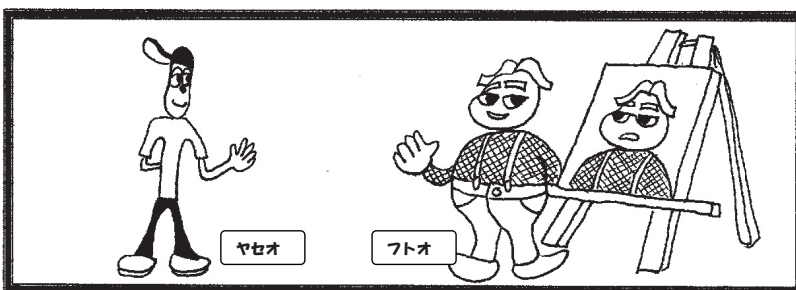
フトコちゃんはヤセコちゃんが彼女自身をぶったと母親に報告した。 正 誤

2)



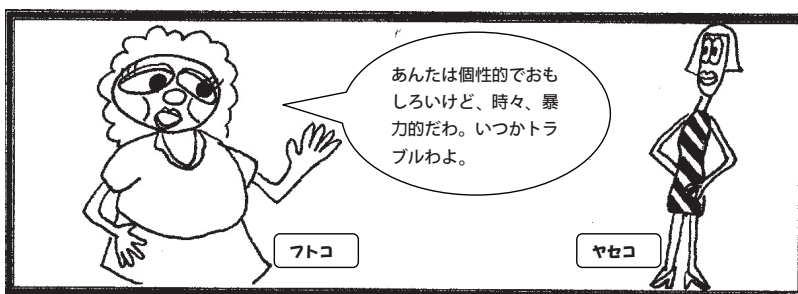
フトオさんはヤセオさんが彼自身をナイフで傷付けたと説明した。 正 誤

3)



フトオさんはヤセオさんに彼自身の肖像画を見せた。 正 誤

4)



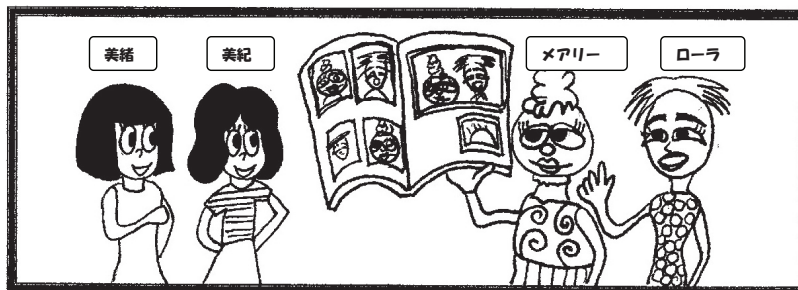
フトコちゃんはヤセコちゃんに彼女自身について忠告した。 正 誤

5)



フトオさんはヤセオさんが彼をナイフで傷付けたと説明した。 正 誤

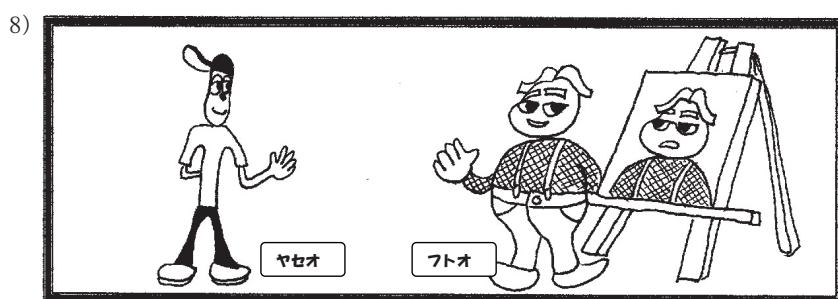
6)



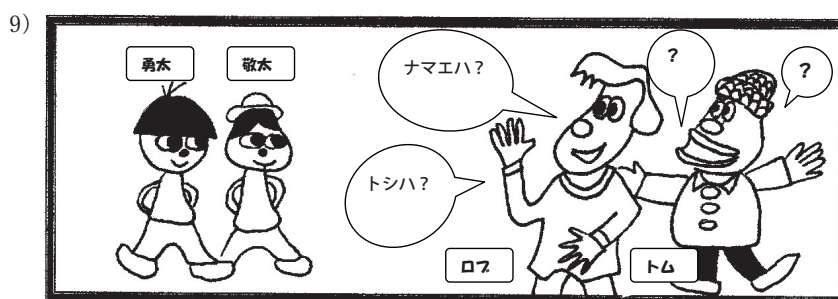
メアリーとローラは美緒と美紀に彼女達自身のアルバムを見せた。 正 誤



フトコちゃんはヤセコちゃんに彼女について忠告した。 正 誤



フトオさんはヤセオさんに彼の肖像画を見せた。 正 誤



ロブとトムは勇太と敬太に彼ら自身についていろいろ聞いた。 正 誤



ロブとトムは勇太と敬太が彼ら自身にヘアスプレーをかけたと父親に話した。 正 誤

11)



メアリーとローラは美緒と美紀が彼女達自身に砂をかけたと母親に報告した。 正 誤

12)



フトコちゃんはヤセコちゃんが彼女をぶったと母親に報告した。 正 誤

Appendix B

Individual Performance

a. Japanese Group

	ExR	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	ExR (%)
sex	—	F	M	M	F	F	F	F	F	F	F	M	M	M 4 F 8
age	—	21	22	20	27	26	22	22	19	25	24	20	22	mean 22.5
HT	—	Miyagi	Kana gawa	Osaka	Hokkaido	Osaka	Hyougo	Mie	Saitama	Kana gawa	Mie	Ishi kawa	Gunma	
TinE	—	4y	4y 6m	3y	2y	1y	3m	3m	4m	2y	1y 3m	3m	3y	mean 1y 10m
st1	T	T	T	F	T	T	T	T	T	T	T	T	T	91.7
st2	F	F	F	F	T	T	F	F	T	T	T	T	T	41.7
st3	T	T	T	T	T	F	T	F	F	T	T	T	T	75
st4	T	T	T	T	T	T	F	T	T	T	T	T	T	91.7
st5*	F	F	F	F	T	F	F	T	T	T	T	T	T	41.7
st6	T	F	T	T	T	T	F	T	T	T	T	T	F	75
st7*	F	T	T	T	T	T	F	T	T	T	T	T	F	16.7
st8	F	F	T	T	T	T	F	F	F	T	T	T	F	41.7
st9	T	F	T	T	T	F	T	F	T	T	T	F	T	66.7
st10	T	T	F	T	T	T	T	T	T	T	T	T	T	91.7
st11*	T	T	F	T	T	T	T	T	F	T	T	T	F	75
st12*	F	T	F	T	F	F	T	F	F	T	F	T	F	58.3
pc1	F	F	F	F	T	T	F	F	F	T	T	F	F	66.7
pc2	T	T	T	T	T	F	T	T	T	T	T	T	T	91.7
pc3	T	T	T	T	T	T	T	T	T	T	T	T	T	100
pc4	T	F	T	T	T	T	T	F	F	T	F	F	F	50
pc5*	F	F	F	F	F	F	F	F	T	F	F	F	T	83.3
pc6	T	T	T	T	T	T	T	T	T	T	T	T	T	100
pc7*	F	T	T	T	F	T	F	T	T	T	T	T	F	25
pc8*	T	T	F	T	T	T	F	T	T	T	T	F	F	66.7
pc9	T	F	T	F	T	F	F	F	F	T	T	T	F	41.7
pc10	F	T	T	F	F	F	F	F	F	F	T	F	F	75
pc11	T	T	T	T	F	T	T	T	T	T	F	T	T	83.3
pc12*	T	T	T	T	T	T	T	T	T	F	T	T	F	83.3
PAP (raw)	8	5	8	6	8	5	6	4	5	8	7	6	6	mean 6.2
GCP (raw)	8	6	5	7	4	4	7	8	7	5	3	6	6	mean 5.7

Keys: HT = hometown; TinE = time spent in English-speaking countries; st = story task; pc = picture task;

* = distractor item with a pronoun; ExR = expected response; P1 = Participant#1; y = year(s); m = month(s)

b. English Group

	ExR	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	ExR (%)
sex	—	M	M	F	M	M	F	M	M	M	F	M	F	M 8 F 4
age	—	20	18	19	26	19	17	19	22	19	20	23	19	mean 20.1
st1	T	T	T	T	T	T	T	T	T	T	T	T	T	100
st2	F	T	T**	F	F	T	F	F	F	F	F	F	F	75
st3	T	F	T	T	T	T	T	T	T	T	T	F	T	83.3
st4	T	T	T	T	T	T	F	T	T	T	T	T	T	91.7
st5*	F	T	T	F	T	T	T	T	F	F	T	F	F	41.7
st6	T	T	T	T	T	T	T	T	T	T	T	T	T	100
st7*	F	T	F	T	T	T	F	F	T	T	F	F	F	50
st8	F	F	F	T	F	F	F	F	F	F	F	F	F	91.7
st9	T	T	T	T	T	T	T	T	T	T	T	T	T	100
st10	T	T	T	T	T	T	T	T	T	T	T	T	T	100
st11*	T	T	T	T	T	T	T	T	T	T	T	T	T	100
st12*	F	F	F	F	F	F	F	F	F	F	F	F	F	100
pc1	F	T	F	F	F	F	F	F	F	F	F	F	F	91.7
pc2	T	T	T	F	T	T	T	T	T	T	T	T	T	91.7
pc3	T	T	T	T	T	F	T	T	T	T	T	T	T	91.7
pc4	T	T	T	T	T	F	T	F	T	T	T	T	T	83.3
pc5*	F	F	F	F	F	F	F	F	F	F	F	F	F	100
pc6	T	T	T	T	T	T	T	T	T	T	T	T	T	100
pc7*	F	F	F	T	F	F	F	T	F	F	F	T	F	75
pc8*	T	F	F	T	T	T	F	T	T	T	T	F	F	58.3
pc9	T	T	T	T	T	T	F	F	T	T	T	T	T	83.3
pc10	F	F	F	F	F	F	F	F	F	F	F	F	F	100
pc11	T	T	T	T	T	T	T	T	T	T	T	T	T	100
pc12*	T	T	T	T	T	T	T	T	T	T	T	T	T	100
PAP (raw)	8	7	8	8	8	6	6	6	8	8	8	7	8	mean 7.3
GCP (raw)	8	6	7	6	8	7	8	8	8	8	8	8	8	mean 7.5

Note**: This participant changed the reflexive *themselves* into the pronoun *them* and then gave a T response to this item.