# The Acquisition of Reciprocals by Japanese－Speaking Learners of English 

Akihiro Kano


#### Abstract

This study investigated whether Japanese－speaking learners of English obey Condition A of binding theory when interpreting the English reciprocal pronoun each other．The study also explored whether L2 participants transferred the properties of otagai，a Japanese reciprocal pronoun，allowing long－distance binding even when the local subject does not have a［＋plural］feature．The results，obtained via a contexualized grammatical judgment task，showed participants＇grammar to be constrained by Condition A；and a significant number of L2 participants incorrectly allowed long－distance binding when the local subject had a［＋singular］feature． Although this latter finding is consistent with L1 transfer，the fact that native control participants showed the same tendency indicates the transfer hypothesis is unwarranted．


## I．Introduction

Binding theory（e．g．，Chomsky，1981；1986；1995）attempts to regulate the distribution of nominal expressions． Condition A of binding theory states that an anaphor must be bound in its local domain；Condition B states that a pronoun must be free in its local domain；and Condition C states that a referential expression must be free． In（1a）and（1b），then，the reflexive and reciprocal pronouns，both being anaphors，are subject to Condition A． Therefore，while they can be bound to the local subject DPs，the matrix subject DPs cannot be construed as their antecedents in these structures：
（1）a．The boysi said［the menj hit themselves ${ }^{*}{ }_{i j}$ ］．
b．The boysi said［the menj hit each other ${ }^{*} i_{i} \mathrm{j}$ ］．

Binding theory enables second－language（L2）researchers to investigate whether L2 learners＇grammatical knowledge is systematically constrained by universal grammar（UG）．Many studies have examined L2 learners＇ interpretation of reflexive pronouns（e．g．，Akiyama，2002；Cook，1990；Felser，Sato，\＆Bertenshaw，2009；Finer \＆Broselow，1989；Hamilton，1998；Matsumura，2007；Thomas，1993；Wakabayashi，1996）．On the other hand，the L2 research on reciprocal binding is limited．${ }^{1}$

The reason for such asymmetry is self－evident．In order to investigate whether L2 learners are sensitive to locality conditions in the binding of reflexives，we need to test whether they can accept the local referent and reject the non－local referent in test sentences as in（2a）：
（2）a．Mikei said Tomj hit himself $\psi_{i} / j$ ．
b．［Mike and Derek］$]_{i}$ said［Tom and Steve $]_{j}$ hit each other ${ }^{*} / \mathrm{j}$ ．

On the other hand，a reciprocal requires a plural antecedent．However，simply examining whether L2 learners

[^0]can accept the local antecedent and rule out the long-distance antecedent in sentences such as (2b) is inadequate, as there are multiple ways L2 learners could anchor an English reciprocal to a plural referent.

In (3), for example, L2 learners may take the cross reading (i.e., Tom recommended Steve and Steve recommended Tom); they may take the parallel reading (i.e., Tom recommended Tom and Steve recommended Steve); and it is also possible for them to take the group reading (i.e., the group formed by Tom and Steve recommended its own group)
(3) Tom and Steve recommended each other.

Although the cross reading is the only appropriate interpretation in this context, learners' identification of the appropriate antecedents does not necessarily indicate they are interpreting reciprocal expressions properly.

Simply put, studies using reflexive pronouns help researchers to tap L2 learners' knowledge of Condition A in a more straightforward fashion than those employing reciprocal pronouns. Yet cross-linguistic studies on reciprocal pronouns provide L2 researchers with opportunities to investigate how the syntactic and semantic properties of the reciprocals of learners' first language (L1) can influence the acquisition of the reciprocals of their second language.

For example, the English and Japanese sentences in (4a) and (4b) each contain reciprocals that obey the locality condition:
(4) a. [John and Mike]i said [Kevin and Jack]j blamed each other ${ }^{*} \psi_{j}$.
b. [John-to Mike]i-ga [Kevin-to Jack]j-ga otagai*ilj-o hinansi-ta
and NOM and NOM each other-ACC blame-PAST koto-o hanashi-ta.

COMP-ACC say-PAST
'[John and Mike]i said [Kevin and Jack]j blamed each other*i/j.'

On the other hand, while it is often claimed that each other, an English reciprocal, is the equivalent of the Japanese reciprocal otagai, as Ikawa $(1997,2012)$ pointed out, otagai can take the long-distance subject antecedent when the local complement lacks a [+plural] feature, shown as in (5):
(5) John-to Mary-wa [kantoku-ga otagai-o (sinritekini) kizutuketa]-to

John and Mary-TOP director-NOM each other-ACC (psychologically) hurt -COMP omotte iru
think
'John thinks that the director hurt Mary. And Mary thinks that the director hurt John.'
(adapted from Ikawa, 1999)

In fact, a comparison of each other and otagai reveals different grammatical and semantic properties; ${ }^{2}$ and one might expect Japanese-speaking L2 learners of English to have difficulty interpreting each other in the absence of explicit instruction as to these differences. Studies on the acquisition of reciprocals thus provide a fruitful area of inquiry as to whether the linguistic knowledge of adult L2 learners is constrained by properties of UG.

## II. Theoretical Background

Heim, Lasnik and May (1991) (HLM hereafter) split the reciprocal into a distributor and a reciprocator, arguing that each moves and adjoins to its antecedent phrase at LF. For instance, in (6) each adjoins to the groupdenoting antecedent and serves as a distributor over the plural NP, as shown in (7). HLM argued that the $\mathrm{e}_{1}$ in [ $\mathrm{e}_{1}$ other] is an anaphor and is therefore subject to Condition A of binding theory, in which case the residue, namely, [ $\mathrm{e}_{1}$ other], is an R-expression and is adjoined to the VP by quantifier raising, yielding a structure as shown in (8):
(6) John and Mary like each other.
(7) [[John and Mary] each 1 ] l like [ $\mathrm{e}_{1}$ other].
(8) $\left[[J o h n \text { and Mary }]_{\text {each }}^{1}\right]_{1}\left[\mathrm{e}_{1} \text { other }\right]_{2}$ like e2.

HLM argued that sentences such as (9) are ungrammatical because there is no local binder for the trace of each in (9), resulting in the violation of Condition A. The movement of each is shown in (10). In the examples shown here the only potential binder for the trace is John, and John lacks the [+plural] feature.
(9) *They think that John likes each other.
(10) $*[\text { They eachi }]_{i}$ [think that John likes [ei other $]$ ].

English reciprocals obey the locality condition and are subject to Condition A. As stated earlier, it is often argued that otagai corresponds to each other; however, as the following example shows, otagai does not always obey the locality constraint:
(11) [John to Bill]i-wa [Chomsky-ga naze otagaii-o suisensita no ka]
[John and Bill]-TOP [Chomsky-NOM why each other-ACC recommended Q] wakaranakatta.
did not understand
'[each of John and Bill] did not understand why Chomsky had recommended the other.'
'[each of John and Bill]ı had no idea why Chomsky had recommended himı.'
'[John and Bill]ı had no idea why Chomsky has recommended themı.'
(adapted from Hoji, 2006)

Ikawa (1999) argued that sentences such as (11) are well-formed because otagai selects a complement whose feature is [ +2 individuals or +2 groups]; the complement seeks a plural antecedent; and otagai moves to the "lowest fully-compatible position" (p. 219) that is also marked [+plural].

In addition to otagai, Japanese also contains the reciprocal V-aw. A structure employing V-aw is shown in (12):
(12) John-to-Mary-ga aisi-aw-te iru (koto)
and NOM love-AW be that
'John and Mary love each other.'

[^1]Ikawa (1999) highlighted several important differences between otagai and V-aw. One difference concerns the event structure: otagai is a two-event marker, which forces a "two-event reading" of the sentence, while V-aw is a single macro-event marker, which forces a single-event reading. Ikawa pointed out that the sentence in (13a) can be used in the context in which John criticized Mary and Mary criticized John, while the sentence in (13b) cannot be used in the same context because a V-aw structure denotes a single general event:
(13) a. John-to Mary-wa otagai-o hihansi-ta.

John and Mary-TOP each other-ACC criticize-PAST
'John and Mary criticized each other.'
b. John-to Mary-wa [e] hihan si-aw-tta.

John and Mary-TOP [e] criticized-AW-PAST
'John and Mary criticized each other.'
(adapted from Ikawa, 1999)

While Japanese has two reciprocals, this study hypothesizes that Japanese-speaking L2 learners of English transfer the properties of otagai more easily than the properties of V-aw when interpreting the English reciprocal pronoun each other. One reason for this assumption is that otagai is more salient: otagai is a free morpheme and is thus more easily identified, whereas, assuming $a w$ is a verbal affix (e.g., Ishii, 1989), aw is less salient, making it difficult to recognize the internal composition of the verb structure. In addition, in three major English-Japanese dictionaries published in Japan ${ }^{3}$, each other is described as the equivalent of (o)tagai ${ }^{4}$ and none of these dictionaries discusses the reciprocal's meaning in relation to V-aw constructions. Given that language learners use dictionaries to identify the meanings of new words, one would expect firstlanguage word- and phrase equivalents to have a significant impact on learners' lexical knowledge. This study hypothesizes that if Japanese-speaking learners transfer the grammar of otagai to the English reciprocal, they may accept long-distance binding in such sentences as (11).

## III. Purpose of the Study

This study examined whether Japanese-speaking L2 learners of English obey the locality constraint when interpreting reciprocal pronouns. The study further investigated whether such learners can disallow longdistance reciprocal binding when the local subject DP has a [+singular] feature.

## IV. Methodology

This study employed a contextualized grammaticality judgment task, a task that was designed for and used for the first time in this study. More specifically, participants were presented a context in which contestants in an English language contest in the U.S. had been asked to watch a video recording of various events and then write sentences summarizing these events in English. Participants were told that the dialogues and/or event descriptions contained in the test stimuli were transcriptions of these videotaped events and that the sentences appearing below the transcriptions were written by a contestant whose score had not yet been entered.

[^2]Participants were asked to evaluate the contestant's performance by determining whether his one-sentence summaries accurately described each event or, alternatively, were either ungrammatical or did not describe the event correctly. (Participants were also told that the one-sentence summaries did not have to describe the entire event.)

The grammaticality judgment task was preceded by a pretest designed to determine whether participants could understand and follow the task procedures. The pretest contained eight stimuli. Once participants completed the pretest they were invited to note any questions or comments they had concerning the test and were then instructed to proceed to the main task. The main task examined three sentence types and contained 12 test sentences (four sentences per sentence type) along with 12 fillers. Examples of the three sentence types, referred to in this study as Sentence Types A, B, and C, are below. (The sentences used in the pretest and main test are listed in the appendix.)

Sentence Type A (the reciprocal pronoun takes the local referents as its antecedents)
Jane and Mary said [Susan and Kathy]i blamed [each other]i.
Sentence Type B (the reciprocal pronoun takes the referents of the matrix subjects as its antecedents)
*[Laura and Victoria]i said Ashley and Mary recommended [each other]i.
Sentence Type C (the reciprocal pronoun takes the referents of the matrix subjects as its antecedents; the local subject DP has a [+singular] feature)
*[Venessa and Jennifer]i thought Leah criticized [each other]i.

While the instrument used in this study is similar to a truth-value judgment task (e.g., Kano \& Nakayama, 2004), in the truth-value judgment task the grammaticality of test sentences depends on one's interpretation of the sentence. In other words, in the truth-value judgment task the experimenter forces a particular interpretation of the sentence and then evaluates participants' evaluation of sentence grammaticality based on that chosen interpretation.

On the other hand, the task employed in this study contained sentences that are ungrammatical regardless of interpretation. To be more specific, Type C sentences should be ungrammatical for L 1 participants regardless of the context in which they are used. Moreover, because in this study participants were asked to evaluate sentences as "wrong" if they believed the sentence was either ungrammatical or did not correctly describe the situation, while their rejection of test sentences could reflect an ungrammatical reading of the test stimuli, such rejection could also be based on the fact that the sentence was ungrammatical. (To maintain consistency across the main test, pretest and fillers, the pretest and fillers also included stimuli (two pretest stimuli and two filler stimuli) that are ungrammatical regardless of interpretation.)

L2 participants were L1 Japanese-speakers majoring in English at Kwassui Women's University in Nagasaki (participants were recruited from among those attending the experimenter's classes). Participants attended experimental sessions at their convenience and completed consent forms and demographic questionnaires prior to completion of the contextualized grammaticality judgment task. The experimenter monitored the data collection process to answer any questions regarding the task procedures and to ensure participants did not communicate with each other during the session. Although participants were allowed to take as much time as they needed to complete the materials, no participant required more than 60 minutes to complete all distributed materials. Participants received a 1000-yen library card in exchange for their participation. Twenty-three L2
learners participated in the study.

L1 English-speaking control participants were recruited from the Ohio State University by a faculty member in the Department of East Asian Languages and Literatures. Students who agreed to participate in the study were provided with an electronic copy of the demographic questionnaire and a written version of the contextualized grammaticality judgment task and were asked to complete the materials at their convenience. Control participants were each paid $\$ 10.00$ for their participation. Ten control students (eight undergraduate students and two graduate students) participated in the study.

For L1 control participants, all materials were written in English, while for Japanese-speaking participants the consent form, demographic questionnaire, and task directions and content were written in Japanese, with the exception of the summary test sentences written in English. Thus, both L2 and control participants read task directions and stimuli contexts in their native language, evaluating sentences written in English.

## V. Results

Participants who provided three or more incorrect responses to pretest items were excluded from further analyses. Three L2 participants were excluded based on these criteria (no control participants were excluded). The 20 L2 participants remaining in the study were divided into two proficiency groups based on self-reported TOEIC scores. ${ }^{5}$ Table 1 lists the mean TOEIC scores for the two L2 groups:

Table 1. L2 Participants' TOEIC Scores

| L2 Group | $N$ | $M$ | $S D$ |
| :---: | :---: | :---: | :---: |
| Low-Proficiency | 10 | 494 | 70 |
| High-Proficiency | 10 | 675 | 72 |
| Total | 20 | 584 | 116 |

Figure 1 shows the percentage of correct responses achieved for each test sentence type. Correct responses to Type A stimuli and Types B and C stimuli are Right and Wrong, respectively.

Figure 1. Percentage of correct responses by sentence type


[^3]As can be seen in Figure 1, both L2 groups were more accurate in accepting well-formed stimuli (Type A) than in rejecting ill-formed stimuli (Types B and C); and the control group was more accurate in rejecting Type B sentences and less able to accept Type A sentences. Participants' accuracy on Type C sentences was unexpectedly low, amounting to near-chance results for all groups ( $60 \%, 65 \%$ and $52 \%$ for the low-proficiency group, high-proficiency group and control group, respectively).

Two-way ANOVA revealed a significant main effect for sentence type $(F(2,81)=7.142, p=.0014)$, but there were no significant differences between participant groups $(F(2,81)=.573, p=.5764)$; and the interaction was also non-significant $(F(4,81)=1.567, p=.1910)$. Post-hoc Fisher's PLSD tests indicated a significant difference $(p<.05)$ in accuracy on Type A vs. Type C sentences and Type B vs. Type C sentences.

## VI. Discussion and Concluding Remarks

This study showed that L2 participants were able to correctly accept Type A sentences while also correctly rejecting Type B sentences. These results suggest that Japanese-speaking L2 learners' grammar of reciprocals is constrained by Condition A of binding theory; and it is thus fair to say that their knowledge of reciprocal pronouns is guided by UG. While L2 students' inaccurate responses to Type C stimuli seem initially to reflect an L1 transfer, the fact that control speakers were also inaccurate suggests the transfer hypothesis is unwarranted. The reason for participants' low scores on Type C sentences is unknown.

## Acknowledgements

I would like to thank Mineharu Nakayama for helping me to collect data from control subjects. My appreciation also goes to Kirsten Enriquez, who edited this paper. All shortcomings are, of course, mine.

## References

Akiyama, Y. (2002). Japanese adult learners' development of the locality condition of English reflexives. Studies in Second Language Acquisition, 24, 27-54.
Chomsky, N. (1981). Lectures on government and binding. Dordrecht: Foris.
Chomsky, N. (1986). Knowledge of language. New York: Praeger.
Chomsky, N. (1995). A minimalist program for linguistic theory. In N. Chomsky (Ed.), The Minimalist Program (pp. 167-217). Cambridge, MA: MIT Press.
Cook, V. (1990). Timed comprehension of binding in advanced L2 learners of English. Language Learning, 40, 557-599.
Felser, C., Sato, M., \& Bertenshaw, N. (2009). The on-line application of binding principle A in English as a second language. Bilingualism: Language and Cognition, 12, 485-502.
Finer, D. L., \& Broselow, E. I. (1986). Second language acquisition of reflexive binding. Proceedings of the Sixteenth Annual Meeting of the North Eastern Linguistic Society, 154-168.
Hamilton, R. (1998). Underdetermined binding of reflexives by adult Japanese-speaking learners of English. Second Language Research, 14, 292-320.
Heim, I., Lasnik, H., \& May, R. (1991). Reciprocity and plurality. Linguistic Inquiry, 22, 63-101.
Hoji, H. (2009). Otagai. In A. Ueyama (Ed.), Theoretical and empirical studies of reference and anaphoratoward the establishment of generative grammar as an empirical science (pp. 126-138). Retrieved from https://www.researchgate.net/publication/334108220_Otagai
Ikawa, H. (1999). Events and anaphoric processes. (Doctoral thesis, University of Arizona, Tucson, AZ).

Retrieved from https://repository.arizona.edu/handle/10150/288990
Ikawa, H. (2012). Ibento imiron to nichieigo no kouzou [Event semantics and structures of Japanese and English]. Tokyo: Kurosio Publishers.
Ishii, Y. (1989). Reciprocal Predicate in Japanese. Proceedings of ESCOL 6, 150-161.
Kano, A. \& Nakayama, M. (2004). Knowledge of binding and the role of empathy in interpreting anaphora among adult second-language learners. In M. Minami, H. Kobayashi, M. Nakayama, \& H. Sirai (Eds.), Studies in Language Sciences (Vol. 3) (pp. 169-184). Tokyo: Kurosio Publishers.
Matsumura, M. (2007). Semantics behind the structure and how it affects the learner: A new perspective on second language reflexives. IRAL, 45, 321-352.
Nishigauchi, T. (1992). Syntax of reciprocals in Japanese. Journal of East Asian Linguistics, 1, 157-196.
Thomas, M. (1993). Knowledge of reflexives in a second language. Philadelphia: John Benjamins.
Wakabayashi, S. (1996). The nature of interlanguage: SLA of English reflexives. Second Language Research, 12, 266-303.

Appendix<br>Pre-Test Sentences and Main Test Stimuli

I. Pre-Test Sentences (correct responses are shown in parentheses)

1. Joan went to the store. (Right)
2. Kimberly gave Jessica a present. (Wrong)
3. Sara said Gianna praised her. (Wrong)
4. Samantha did not show up at the party. (Right)
5. Morgan failed to submit her homework. (Right)
6. She was angry when Olivia left Alexia's room. (Wrong)
7. Emily could not go outside before cleaning her room. (Right)
8. Sophie watched often the movies. (Wrong)

## II. Main Test Stimuli

Type A (the reciprocal pronoun takes the local referents as its antecedents)

1. Kevin is a college student. He met his classmates, Jane and Mary, in the hallway.

Kevin: "Did you meet Susan today?"
Jane: "Yeah, a couple of minutes ago. She was arguing with Kathy. They lost their basketball game yesterday. Susan said it was because Kathy did not coordinate with her teammates. But Kathy said Susan missed several shots."
Kevin: "Really?"
Mary: "Yeah, Jane is right. Susan told Kathy she should have trusted her teammates. Then Kathy said that Susan should have been more focused. I hope they will make up later."

Jane and Mary said Susan and Kathy blamed each other. Right / Wrong
2. Nancy is a vice president at a famous apparel company. She is planning to open a new store in Columbus, Ohio. She consulted with two section chiefs, Julia and Becky.
Nancy: "As you know, we are going to open up a new store in Columbus. Do you have any good candidates for store manager?"
Julia: "I talked about our plan for the new store with Jessica. She said that Sophia is a great candidate. Then I met with Sophia. She said that Jessica could be a great manager for the store."
Becky: "Yeah, I met with both Jessica and Sophia. They said the same thing to me."
3. Susan is a member of the student council at her college. She is endorsing a new regulation to make the whole campus smoke-free. She has a roommate, Emily, who is a heavy smoker. Rachel and Angela, her classmates, saw Susan in the cafeteria sitting alone. At the adjacent table was her roommate, Emily. Rachel and Angela went and talked to Susan.
Rachel: "How are you, Susan?"
Susan: "I am doing OK. How are you, Rachel?"
Rachel: "I am fine."
Angela turned to Emily and greeted her.
Angela: "Hey, Emily. What's going on?"
Emily: "I am waiting for Steve. We just started going out."
Angela: "That's great! Is that why you are sitting alone?"
Emily: "Yes. He will be here any minute."
Angela: "I thought you had an argument with Susan over the non-smoking policy."
Rachel: "Me, too."
Emily: "No. We are doing fine. Isn't that right, Susan?"
Susan: "Yeah, we are doing great."
Angela and Rachel thought Susan and Emily criticized each other. Right / Wrong
4. Kimberly and Cathy own a small lending company. A week ago they went to lunch together. While they were gone, Beth and Allison were working in the office. When Kimberly and Cathy came back from lunch, $\$ 1,000$ was missing from the cash register. Although they immediately contacted the police, they suspected that either Beth or Allison had stolen the money. After the incident occurred, Beth ignored Allison, and Allison pretended that Beth was not in the office. Kimberly and Cathy suspected that Beth and Allison had a big fight over the money. The money, as it turned out, was found deep inside the cash register.

Kimberly and Cathy thought Beth and Allison accused each other. Right / Wrong

Type B (the reciprocal pronoun takes the referents of the matrix subjects as its antecedents)
5. Anna and Melanie were real estate agents working for Rachel and Sara. Sales were down last month. Anna and Melanie went for lunch and talked about the dipping sales figures.
Anna: "I talked with Rachel and Sara. They said that you did a poor job of marketing to potential customers. They believe they themselves have nothing to do with the low sales. Rachel said Sara does a good job. Sara said Rachel is a good manager."
Melanie: "They are always pointing the finger at someone else. They said that you made sales calls at the wrong hours."

> Anna and Melanie said Rachel and Sara blamed each other. Right / Wrong
6. Laura and Victoria belonged to the student council at college. Ashley was the president of the council while Mary helped Ashely as vice president. Every year the council had to choose a new president and vice president. The existing executive committee could recommend someone for these positions and the members had to vote for/against the resolution. Laura met Victoria in the hallway.
Laura: "Hi Victoria."
Victoria: "Oh. Hi, Laura."
Laura: "You know what. I talked with Ashley and Mary. Ashley said Mary is having health problems and cannot serve in the student council next year. Mary said Ashley is transferring to a different college and won't be here next year."
Victoria: "Yeah. They told me the same thing."
Laura: "Really? Did you know that they are nominating you for president next year?"
Mary: "Really? They told me they would endorse you for vice president."

Laura and Victoria said Ashley and Mary recommended each other. Right / Wrong
7. Megan, Anne, Sophie and Jennifer are biology majors working in the same lab. They recently conducted an important experiment, but the experiment failed, which disappointed them very much. Megan saw Anne in the hallway and talked to her about the research.

Megan: "Hi, Anne! How are you surviving?"
Anne: "I am hanging in there. Have you talked with Sophie and Jennifer lately?"
Megan: "Yeah. They are praising my work on the project even though the experiment itself was a failure."
Anne: "Good to hear that. To be honest, I was afraid they were going to blame you for the failure. You know how they are. They never blame themselves."
Megan: "I see what you are saying. They are always pointing the finger at someone else. I was afraid they were going to accuse you."
Anne: "No, they are treating me very well. As a matter of fact, they are inviting me over to their barbeque party tomorrow."

Megan and Anne thought Sophie and Jennifer criticized each other. Right / Wrong
8. Julia is working in the product development division of a toy company, while Emily is in the sales department. The company recently put a new product on the market, but sales did not meet their expectations. Isabella and Jessica are vice presidents of the company. They, too, were disappointed with the product's sales. Today Julia and Emily went out to lunch together.
Julia: "Have you talked with Isabella and Jessica lately?"
Emily: "Yeah, they said "Keep up the good work." They know I tried so hard to promote the new toy."
Julia: "Good to hear that. I was afraid they were going to blame you."
Emily: "No, I was afraid they were going to blame you for the product design. But they said they like your design."
Julia: "I am quite relieved to hear that. Isabella never blames Jessica and Jessica never blames Isabella. When a problem occurs, they always find someone else to blame. That's why I was so worried."
Emily: "I agree. I hope that will change."
Julia and Emily thought Isabella and Jessica accused each other. Right / Wrong

Type C (the reciprocal pronoun takes the referents of the matrix subjects as its antecedents; the local subject DP has a [+singular] feature)
9. Kathy and Brenda were coaches on the women's baseball team. The team, however, recently lost to their rival. Mary, the pitcher, allowed three home runs in the game. Kathy and Brenda went to a nearby coffee shop for a break.
Kathy: "Mary was very disappointed by the loss. She is good at throwing a straight ball. But you have been training her to throw a curve. She said that was a mistake and hinted that she was misled."
Brenda: "I also talked with Mary right after the game. You had been telling her to watch out for base-stealing. She said your advice prevented her from throwing the ball."

Kathy and Brenda said Mary blamed each other. Right / Wrong
10. Maria and Rachel both have daughters who go to the same high school. Sara is the president of the school PTA. As her term will expire in several months, the board will have to elect a new president soon. In their school the sitting president can nominate candidates for this leadership position. Maria and Rachel went to a café after a PTA meeting.
Maria: "We are going to have a new president very soon."
Rachel: "You know what? I talked to Sara. And she said she is going to nominate you for president."
Maria: "Really? I spoke with her last month. She said she is going to nominate you."
Rachel: "Hmmm. Maybe she is going to recommend several people and let the board decide who the new leader will be."

Maria and Rachel said Sara recommended each other. Right / Wrong
11. Leah has two daughters, Vanessa and Jennifer. One Saturday morning the family sat down to have breakfast together. Throughout breakfast Leah looked sullen and ate without saying a word. She then left for work.
Vanessa: "What happened to Mom? Is she angry at you for staying out all night several nights ago?"
Jennifer: "No, she did not say a word about it. I am old enough. I wonder if she blames you for not keeping your room clean."
Vanessa: "No, she respects my privacy."

Jennifer: "OK. Let's see how it goes. Maybe she will be fine."

Vanessa and Jennifer thought Leah criticized each other. Right / Wrong

12. Emma, Katherine and Susan are housemates. Last week their house was burglarized and Susan's new laptop was stolen. Susan was shocked and looked very sad for several days. While Susan was at work, Emma and Katherine talked in the dining room.
Emma: "Have you talked with Susan lately?"
Katherine: "Yes. We're doing fine."
Emma: "Glad to hear that. I thought she blamed you for the robbery, because you always keep the windows open."
Katherine: "She did not say a word about the incident. How about you? Are you getting along with Susan?"
Emma: "Yeah. We are going shopping this evening."
Katherine: "Good! I was afraid she was going to blame you because you keep the door unlocked."
Emma: "She did not say anything about that. So let's just let it go."

Emma and Katherine thought Susan accused each other. Right / Wrong


[^0]:    1 To my knowledge，there are no published studies investigating the interpretation of reciprocals among L2 learners．

[^1]:    2 For detailed discussions on the differences between each other and otagai, refer to Hoji (2006), Ikawa (1997, 2012), and Nishigauchi (1992), among others.

[^2]:    3 Kenkyusya New English-Japanese Dictionary (6 ${ }^{\text {th }}$ ed.) (2002); Genius English-Japanese Dictionary (2001); and Shogakukan Random House English-Japanese Dictionary (2 ${ }^{\text {nd }}$ ed.) (1994)
    4 Otagai is formed by adding the suffix $o$ to tagai. Otagai and tagai have very similar meanings and their distribution is similar (Hoji, 2006).

[^3]:    5 Kwassui Women's University administers TOEIC IP several times a year. English-majors are required to take the test at least once a year. L2 participants were asked to report their highest TOEIC score achieved within the past two years.

