

# Influences of Language Differences on Japanese Learners’ Anaphora Comprehension

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## I Introduction

In the process of L2 (second language) reading, some learners claim that they cannot get a general idea of the meaning of a passage even though they can understand every sentence in the passage. Such learners can translate every English sentence into Japanese, but they cannot make connections between or among sentences. In other words, they cannot understand relationships between or among sentences expressed by co-referential devices such as connectives and personal pronouns.

To understand cohesion is necessary to recognize coherence of texts. There are several “cohesive devices”; reference, ellipsis/substitution, and conjunction. Reference includes pronouns, demonstratives, the article *the*, and items like *such a*. Ellipsis is the omission of the items which are usually required by the grammar. Substitution is performed with words like *one(s)*, *do*, *so/not*, and *same* (McCarthy, 1991). Among those cohesive devices, the most frequent one might be “reference.” To be more specific, pronouns are quite perpetual as well as the article *the*. In high school classes of English, students are often asked to point out antecedents of personal pronouns. It is noticeable that they are not always able to indicate antecedents for personal pronouns although they can translate the sentences into Japanese. Why such a phenomenon occurs? What makes students difficult to find out the antecedents of personal pronouns?

There seem not to be many studies for directly searching the reasons of this phenomenon. There are two possible phenomena. The first one is lack of understanding of words and structure of the sentences. The second reason might be a misunderstanding of the systems which personal pronouns have. To give a clear example for the second reason, a chart often seen in the textbooks for 7<sup>th</sup> grade students in junior high school is cited below in Table 1.

As explained in the chart, the pronoun “they/their/them” can refer to both human antecedent (彼ら) and non-human antecedent (それら). However, the frequency of these two antecedents seems to be different; human antecedents are probably used a lot more than non-human ones. This gap in frequency might affect the recognition of learners about antecedents of personal pronouns. For instance, when Japanese learners of English see the pronoun “they” in the text, they may first interpret it as referring to a human antecedent.

Table 1: Description about cases of personal pronouns

		主格 (～が・は)	所有格 (～の)	目的格 (～を・に)
1 人称	単数	I (私が・は)	my (私の)	me (私を・に)
	複数	we (私たちが・は)	our (私たちの)	us (私たちを・に)
2 人称	単数	you (あなたが・は)	your (あなたの)	you (あなたを・に)
	複数	you (あなたたちが・は)	your (あなたたちの)	you (あなたたちを・に)
3 人称	単数	he (彼が・は)	his (彼の)	him (彼を・に)
		she (彼女が・は)	her (彼女の)	her (彼女を・に)
		it (それが・は)	its (そのの)	it (それを・に)
	複数	they (彼らが・は) (それらが・は)	their (彼らの) (それらの)	them (彼らを・に) (それらを・に)

The present study investigates the knowledge of Japanese high school students to point out the non-human antecedent of pronoun “they.” This study focused on the question: does the language difference affect learners’ understanding of antecedent of English personal pronoun “they”? This question merits investigation for two reasons: (1) if the students replace the non-human antecedents with human antecedents, it means there should be proper instruction to emphasize the fact that the pronoun “they” can indicate not only human antecedents but also non-human antecedents, (2) if such a tendency of the inadequate knowledge about the characteristic of the pronoun “they” exists among high school students, there may be something that can be done in earlier part of the education, for example, in the introduction of personal pronouns.

## II Background

Several studies have been conducted, examining the effects of L1 (first language) transfer on finding the antecedents of personal pronouns. These studies focused mainly on the learners’ production of personal pronouns. Flynn (1987) examined the influence of L1 on the acquisition of English personal pronouns. Flynn compared Spanish learners with Japanese learners. Spanish is a “head-initial” or “right

branching” language, in which complements follow the head noun and it is the same as English. On the other hand, Japanese is a “head-final” or “left branching” language, in which complements precede the head noun. In this study, there was an investigation into the influence of the difference in head-direction of L1 on the acquisition process of anaphor in L2 (second/foreign language). Flynn expected that Spanish learners might benefit from their L1 structure when learning English anaphors. Both production and comprehension of English anaphors were examined. The result showed that L1 background significantly affected L2 acquisition of personal pronouns in complex sentences.

Williams (1988) examined the use of “zero anaphora” in the English production of three speaker groups: native speakers, second language learners, and speakers of non-native institutionalized variety (people in nations previously under (primarily British) colonial rule and their dominant language is English). “Zero anaphora” is one feature of the non-use of subject pronouns. According to Williams’ definition, “zero anaphora” is different from “pronoun omission.” In the use of “zero anaphora,” the referent is potentially recoverable either from prior discourse, the context of the conversation, or general knowledge. One of the interesting results of this study was that second language learners and non-native learners of English preferred to use “zero anaphora” to refer to further nouns compared with native speakers. However, the influence of L1 structures was not investigated in detail. Moreover, this study was an investigation of the production of “zero anaphora” and did not investigate its comprehension.

Thomas (1989) examined how Spanish learners and Chinese learners interpreted antecedents of English reflexive pronouns. Spanish has almost the same system of reflexive pronouns as English, and Chinese does not. This study aimed to investigate whether learners transferred their L1 rules into L2, or whether they followed the developmental process of L1 learners. The results could prove neither of the hypotheses. However, a notable point of this study was that there was a tendency among Chinese subjects to transfer their L1 system when they interpreted English reflexive pronouns, Spanish subjects did not seem to do so. Thus, it is possible that there is L1 transfer in understanding antecedents of pronouns if L1 and L2 have different grammatical systems. In addition, it is interesting to examine whether or not this result can be applied to Japanese learners of English.

It may be taken for granted that the cross-linguistic differences affect Japanese learners’ acquisition of English pronouns. However, it has not been cleared out whether cross-linguistic differences really influence on Japanese learners’ understanding of English pronouns. Experimental studies on this topic will give much beneficial information to the field of L2 education and acquisition.

### III Method

#### 1. Purpose

The purpose of the present study is to investigate the following research question:  
Does the language difference between Japanese and English personal pronouns affect learners' understanding of antecedents of English personal pronoun "they"?

#### 2. Participants

148 high school students in one of the public high schools in Tokyo participated in the present study. One class in the 10<sup>th</sup> grade and three classes in the 11<sup>th</sup> grade are randomly chosen; 39 of them are freshmen and the rest, 109, are juniors. The details of the subjects are described in Table 2.

Table 2: The number of the participants

	male	female	sum
class1 (10th grade)	21	15	36
class2 (11th grade)	17	18	35
class3 (11th grade)	19	19	38
class4 (11th grade)	19	17	36
total	76	69	145

#### 3. Material

A test to investigate the ability to point out antecedents of pronoun "they" was made by the researcher. This test consists of two parts; first part includes a practice quiz in order to make the participants understand the test material, and the second part includes the test itself. In this test, a passage with 149 words was presented. Within the passage, there were five pronouns underlined. All of them were personal pronoun "they"; either nominative case "they" or objective case "them." In those five pronouns "they", three of them had non-human antecedents, and two of them had human antecedents. Subjects were also instructed to translate sentences including those five pronouns.

A questionnaire was also made to check the subjects' experience of living abroad and their knowledge about reference of pronouns, in other words, what kind of antecedents each personal pronoun can refer to.

The whole passage is cited as follows:

This book is called "Message Book." There are messages from the Internet in it. Children in many countries of the world wrote (ア) them.

For example, a boy from Japan said, “We use a lot of water every day. Our rivers and seas are not very clean now. Trees are cut down, too. We should think about these problems now.” Many children read his message in the Internet. All of (イ) them joined the “VOTE (Voice for the Earth)” Project. Children in the “VOTE” Project can talk about many problems in the world. (ウ) They are about world peace, nature of the world, and so on. Young people should talk to each other and should learn a lot from their friends in other countries. People can think and work together if (エ) they use the Internet. There will be more problems around the world. The Internet will become more important to work on (オ) them.

#### **4. Procedure and data analyses**

##### **4.1 Procedure**

All the experiments were carried out in charge of the researcher, and also in the same manner with all four classes. The procedure is as follows: (1) a brief instruction for the experiment, (2) distribution of the test material (a sheet of paper), (3) practice quiz, (4) check the answer of the practice quiz, (5) test, (6) collecting test sheets, (7) distribution of the questionnaire, (8) answering the questionnaire, (9) collecting the questionnaire sheets.

In (1), the participants were not told what kind of ability was going to be investigated. In (3), approximately two minutes were given to the subjects. In (5), the subjects were told that they were going to be given fifteen minutes to solve all the questions, and they were also told to try their best to answer all of the questions. Moreover, the subjects were instructed to circle any words of which they did not know the meaning.

##### **4.2. Scoring**

All the markings were conducted by the researcher. When a participant successfully indicated what a personal pronoun in the text referred to, he or she got one point.

##### **4.3 Data analyses**

The analyses were conducted as follows:

(1) In all the participants, the following subjects were excluded before the analyses were carried out.

- (a) Participants who have experience living abroad.
- (b) Participants who could not answer all the five questions.

(2) Answers of each participant were analyzed with the aspect whether they were one-sided (all human antecedents or all non-human antecedents).

(3) The numbers of participants who could correctly indicate the antecedents in each question were compared, with the aspect of whether there was any difference between pronouns “they/them” with non-human antecedents and those with human antecedents.

(4) Error analysis was carried out in order to see the cause of the incorrect answers. Translations written by the subjects were used to investigate their errors.

## IV Result

### 1. Elimination of the participants

As a result of the elimination, the number of the subjects for the analysis is described in Table 3.

**Table 3: The number of the subjects for the analysis**

	male	female	sum
class1 (10th grade)	17	13	30
class2 (11th grade)	15	18	33
class3 (11th grade)	14	18	32
class4 (11th grade)	14	15	29
total	60	64	124

### 2. Descriptive statistics

The answers of the participants are summarized in the following table.

**Table 4: The numbers of subjects who got correct answers**

	class1	class2	class3	class4	sum	%
(ア) them	12	13	15	9	<b>49</b>	39.5
(イ) them	24	25	28	22	<b>99</b>	79.8
(ウ) They	11	19	15	20	<b>65</b>	52.4
(エ) they	24	29	27	24	<b>104</b>	83.9
(オ) them	16	19	15	13	<b>63</b>	50.8

\* Total number of the subjects analyzed was 124.

\* Pronouns (ア), (ウ), (オ) refer to non-human antecedents. Pronouns (イ), (エ) are with human antecedents.

As shown in this table, “they” or “them” with non-human antecedents seems to be more difficult for the participants to understand.

When answers of each participant were analyzed, only three participants out of 124 were one-sided type, which means they chose only human nouns as antecedents of the personal pronoun “they/them” in the passage. These three participants answered in their questionnaire that the personal pronoun “they” could refer to both human and non-human antecedents. The gap exists between their knowledge and performance.

In spite of their knowledge about duality of the personal pronoun “they,” many of the subjects still made mistakes to point out the non-human antecedents of the pronoun “they,” as shown in the Table 4 (ア), (ウ), (オ). There is still a room to consider the difference on humanity of antecedents as one of the causes that make readers confused. What was the reason for fewer subjects grasping correct antecedents for pronoun “they” with reference to non-human nouns? In order to answer this question, detailed analysis with each question was conducted.

### 3. Comparison between human antecedents and non-human antecedents

In order to investigate whether humanity or animacy of antecedents influences learners’ understanding of personal pronoun “they,” the participants in this study were divided into four groups: 1) those who successfully indicated antecedents of personal pronoun “they/them” regardless of humanity or animacy of its antecedents, 2) those who performed better in indicating antecedents of personal pronoun “they” with human antecedents than in doing so with non-human antecedents, 3) those who performed better in indicating antecedents of personal pronoun “they” with non-human antecedents than in doing so with human antecedents, and 4) those who completely failed to indicate what personal pronoun “they/them” in the passage referred to. To make the difference among each group clearer, 15 participants who performed equally with both human and non-human antecedents were eliminated. The following table shows us the result.

**Table 5: Cross-tabulation table**

		Non-human	
		<i>Answered correctly</i>	<i>Failed</i>
Human	<i>Answered correctly</i>	20	79
	<i>Failed</i>	9	1

In order to examine whether the differences of distribution in this table is statistically significant, Fisher’s exact test was conducted. The result indicated that the difference was statistically significant ( $p < .01$ ). This brought us an insight that comprehending personal pronouns with non-human antecedents is more difficult for

Japanese learners than with human antecedents.

#### 4. Error analysis

Responses to the personal pronoun “they” with non-human antecedents were analyzed to explore the reasons for its difficulty.

**Table 6: Answers to (ア) them**  
(Children in many countries of the world wrote (ア) them.)

Answers	Correct	Wrong				
Antecedents	<i>messages</i>	<i>children</i>	<i>Message Book</i>	<i>this book</i>	<i>message</i>	<i>the Internet</i>
Total	49	5	56	2	7	5

The most frequent wrong answer is “Message Book” - 56 subjects considered “Message Book” as the answer. The possible reason for this phenomenon is inadequate understanding of the plural feature of the pronoun “they.” In their translations, 31 subjects used a Japanese word (それら) indicating plural noun, though they chose the singular word “Message Book” as their answers. 15 subjects used a Japanese word (それ) indicating singular noun. 8 subjects used a Japanese word (本) indicating “a book.” All of those subjects seemed to fail to pay attention to plurality of the pronoun “they.”

**Table 7: Answers to (ウ) They**  
((ウ) They are about world peace, nature of the world, and so on.)

Answers	Correct	Wrong				
Antecedents	<i>problems</i>	<i>children</i>	<i>VOTE</i>	<i>many project</i>	<i>project</i>	<i>message book</i>
Total	65	36	19	1	2	1

The most perpetual wrong answer was “children.” The first possible reason for this consequence was the unknown word. 25 subjects stated they did not know the meaning of “and so on.” 15 of them could answer the question correctly and the rest 10 could not. Therefore, it seemed the unknown word could not explain the result in Table 6 by itself.

To search for another reason of errors made by those 36 subjects, an analysis on their translations was performed. 19 of them could not complete their translation and 15 could complete their translation by adding some words which are not indicated in the original sentence, namely, they made up the sentence so that the subject “children” made sense. What could be seen from this phenomenon is that there is possibility the nominative case “they” is considered, by the subjects, to refer



to human antecedent. In other words, when the subjects see the form “they,” they might take it for granted that the word refers to something human.

**Table 8: Answers to (才) them**

(The Internet will become more important to work on (才) them.)

Answers	Correct	Wrong					
		<i>children</i>	<i>people</i>	<i>The Internet</i>	<i>VOTE</i>	<i>world</i>	<i>work</i>
Antecedents	<i>problems</i>						
Total	63	3	18	3	4	31	1

31 subjects selected “world” as the antecedent of “them,” and the second frequent wrong answer was “people.” The reason subjects picked up the word “world” could be the misunderstanding of the expression “to work on.” Seen from their translation, most of them took “to work on” as “to work in the world.” The grouping verb “to work on” meaning “to struggle” or “to wrestle” seemed not to be familiar enough for the subjects to find out the antecedent of the pronoun “them.”

Moreover, there seemed to be the same tendency, seen in the analysis in Table 4, of inadequate attention for plurality of the pronoun “they.” Even if the subjects do not know the expression “to work on,” they can still get to the correct answer with noticing that the pronoun “they” usually refer to something plural. However, the 39 subjects who chose wrong non-human antecedents seemed to fail in doing so.

## VI Discussion

### 1. Answer to the research question

The answer to the research question, “Does the language difference between Japanese and English personal pronouns affect learners’ understanding of antecedents of English personal pronoun “they?”” is “Yes.” since the participants seemed to have difficulty in comprehending the personal pronouns with non-human antecedents although they had an idea that the pronoun “they/them” could mention both human and non-human antecedents. There are two possible reasons for this phenomenon: (1) recognition of plurality and (2) nominative case “they” with non-human antecedents.

In the analysis of question 1 ((ア) them), 65 subjects can be considered to understand the content of the sentence, if the regulation of plurality is eliminated - 56 subjects chose “Message Book,” 2 subjects chose “this book,” and 7 subjects chose “message” as the antecedent for (ア) them. Those 65 could be successful in answering this question with a little more attention toward plurality of the pronoun “they/them.”

As a result showed in the analysis of question 3 ((ウ) They), subjects who selected “children” as their answers may have prejudice to relate normative case

“they” with human antecedents. When a careful watch was paid to translations of those 36 subjects, there was an interesting feature that they attached some new words by themselves in order to make sense out of their translations. There were also subjects who could not complete their translations, but still chose the human antecedent “children.” Moreover, among those 36 subjects, only three are the ones who chose only human antecedents in all five questions. This fact may indicate those subjects did not try to adjust their knowledge to non-human words even though they knew the pronoun “they/them” could refer to non-human antecedents.

## **2. Suggestions for further studies**

Several improvements in the materials and experimental procedures can be made in order to obtain better results and implications.

- (1) Will the same result come out with younger subjects, such as junior high school students?
- (2) To what extent the concept of plurality affects the understanding for the antecedents of personal pronouns?
- (3) Further investigation should be performed to clarify the prejudice of the subjects about the relationship between nominative case “they” and human antecedents.

## **VII Conclusion**

This study investigated the influence of humanity or animacy on Japanese learners of English in understanding antecedents of personal pronoun “they.” This study went along with a research question: does the language difference between Japanese and English personal pronouns affect learners’ understanding of antecedents of English personal pronoun “they”?

In order to find out the answer to the research question, an experiment was carried out. 148 high school students studying in a public high school in Tokyo participated in the experiment. Among them were 36 freshmen and 109 juniors. In the first part of the experiment, a test to check the participants’ ability to indicate antecedents of the pronoun “they/them” was carried out. This test included 149-word-passage about an internet system in which children all over the world could exchange their opinions. The passage contained five pronouns, either “they” or “them.” Three of those pronouns referred to non-human antecedents and two of them referred to human antecedents. After the test, a sheet of questionnaire was passed out to each student. With this questionnaire, subjects were asked about their experience living abroad, and about their knowledge of possible antecedents that personal pronouns could indicate.

The results came out as follows: (1) only three among 124 subjects answered all five questions with human antecedents. (2) In comparison among five pronouns, there was a statistical difference between the numbers of the subjects who could point out

antecedents correctly and who could not. This result stated; (1) the subjects have knowledge about duality in the characteristics of the antecedents of pronoun “they/them.” However, (2) there seem to be some factors that confuse students in finding out non-human antecedents of pronoun “they/them.”

To see the cause for the confusion, error analysis with careful look at translations written by the subjects was carried out. The upshot of the investigation showed that one of the conceivable causes for the puzzle of the subjects was the lack of recognition on plurality of the pronoun “they/them.” Another possible cause for the disorder was the belief of the participants that nominative case “they” tends to have human antecedents.

Further investigation is needed to gain more concrete and general conclusion.

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## [抄 録]

### 日英語の違いが学習者の照応表現の理解に与える影響

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本研究は日英語の代名詞の性質の違いが、日本人学習者の先行詞理解に与える影響を明らかにすることを目的とした実証研究である。数ある日英語の代名詞の性質の違いの中から、本研究では they が指す先行詞の有生性に焦点を当てた。they という代名詞は、有生物と無生物の両方を指すことができる。一方日本語では「彼ら」「それら」のように異なる言葉を使っている。この事実に加えて、日本人学習者にとって無生物を指す they は有生物を指す they よりもなじみの薄いものであり、日本語では「それら」という言葉は「彼ら」と比べて使用頻度が低い。本研究では高校生145人を対象に、英文パッセージ中の代名詞 they あるいは them の先行詞を答えさせるタスクを与え、有生物を指す場合と無生物を指す場合で、学習者の理解度に差が見られるかを検証した。その結果、本研究で対象とした高校生の間では無生物を指す they/them の方が、先行詞理解が難しいということがわかった。ただし、理解を難しくさせている原因は、先行詞の有生性だけでなく、日英語の単複の概念の違いでもあるのではないかという可能性が残った。