

# L2 Acquisition of Singular/Plural Interpretation of Japanese Bare Nouns

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## 1. Introduction

As pointed out by Watanabe (2017), bare nouns in Japanese partitive constructions appear to display number-sensitivity despite the lack of a number-sensitive overt morphology. Bare nouns in partitive constructions are interpreted as either being in singular form or plural form, whereas bare nouns in reverse partitive constructions are only interpreted as being in plural form. Thus, bare nouns in Japanese reverse partitives are subjected to a semantic restriction for being plural. In contrast, no singular/plural ambiguity exists in English partitive constructions owing to the availability of the overt plural morphology. This paper describes an empirical study that has investigated the question of whether the native English speaking learners of Japanese can acquire the semantic restriction of Japanese reverse partitives absent in their L1. To the best of the author's knowledge, only a few attempts have been made to empirically investigate the L2 acquisition of the semantic restriction of Japanese reverse partitives. Therefore, the present study is expected to yield new insights for the field of L2 studies.

The rest of this paper is structured as follows: Section 2 presents (reverse) partitive constructions in English and Japanese, adopting the two-noun analysis carried out by Sauerland and Yatsushiro (2017). Section 3 explains the relevant previous study of Okuma (2019), showing how the present study attempted to extend Okuma (2019). Section 4 presents the research questions and Section 5 explains the experiment. Section 6 presents the results and Section 7 discusses the implications of the findings. Section 8 concludes the paper, suggesting that some of the L2 learners successfully acquired the semantic restriction, correctly interpreting bare nouns in their plural form, despite the lack of plural morphology in Japanese.

## 2. Linguistic property

### 2.1. English partitive constructions

English partitive constructions include noun phrases consisting of a quantificational expression followed by the preposition *of* and a definite noun

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phrase, such as (1). In the structure, the preposition *of* represents a part-whole relation.

(1) two of all the books

Following Jackendoff (1977), Sauerland and Yatsushiro (2017) suggest that the partitive construction in (1) originally contained two nouns, a noun that represents the part (i.e.,  $N_{\text{part}}$ ) and a noun that represents the whole (i.e.,  $N_{\text{whole}}$ ), as in (2a). In English, these nouns can undergo PF deletion. When  $N_{\text{part}}$  undergoes deletion, the partitive construction in (2b) is formed. Conversely, when  $N_{\text{whole}}$  is deleted, (2c) is formed. Following Sauerland and Yatsushiro (2004, 2017), I call the structure in (2c) a reverse partitive construction. When both  $N_{\text{part}}$  and  $N_{\text{whole}}$  are deleted, the structure in (2d) is obtained.

- $N_{\text{part}}$                        $N_{\text{whole}}$
- (2) a. two books/things of all the books                      (original expression)  
 b. two ~~books/things~~ of all the books                      (partitive:  $N_{\text{part}}$  is deleted)  
 c. two books/things of all those ~~books~~ (reverse partitive:  $N_{\text{whole}}$  is deleted)  
 d. two ~~books/things~~ of all those ~~books~~  
 (adopted from Sauerland and Yatsushiro [2017] with minor modifications)

## 2.2. Japanese partitive constructions

### 2.2.1. Partitive constructions with numerals

Like English, Japanese has partitive constructions, which include a noun followed by the genitive case marker *no* ‘of’ and a quantificational expression, as in (3).

- (3) Partitive:  $N_{\text{whole}}$ -no-Q  
 Hon-no                      ni-satu-ga                      yogoreteiru.  
 book<sub>whole</sub>-GEN two-CL-NOM is dirty.  
 ‘Two of the books are dirty.’

Sauerland and Yatsushiro (2017) assume that Japanese numeral expressions are derived from the underlying structure in which a numeral precedes a noun and a classifier proposed in Watanabe (2006, 2008). Sauerland and Yatsushiro (2017) suggest that  $N_{\text{part}}$  moves from #P to  $NP_{\text{part}}$ , and then  $N_{\text{part}}$  is deleted. Accordingly, only  $N_{\text{whole}}$  remains in Japanese partitive constructions. Thus, Japanese partitives and English partitives share the operation of deleting  $N_{\text{part}}$ . Sauerland and Yatsushiro (2017) also suggest that Japanese has reverse partitive constructions, in which a quantificational expression is followed by the genitive case marker *no* ‘of’ and  $N_{\text{part}}$ , as in (4). In Japanese reverse partitives,  $N_{\text{whole}}$ , is deleted and only  $N_{\text{part}}$  remains, just as in English reverse partitive constructions.

- (4) Reverse partitive: Q-no-N<sub>part</sub>  
 Ni-satu-no hon-ga yogoreteiru.  
 two-CL-GEN book<sub>part</sub>-NOM is dirty.  
 ‘Two books are dirty.’

### 2.2.2. Partitive constructions with *hotondo* ‘most’

In the examples presented in (3) and (4), the noun *hon* ‘book’ is interpreted as being in plural form because it occurs with a quantificational expression consisting of the numeral *ni* ‘two’ and the classifier *satu*. In other words, the nouns in the partitive (3) (i.e., book<sub>whole</sub>) and the reverse partitive (4) (i.e., book<sub>part</sub>) both carry a plural interpretation although (3) and (4) have distinct word orders. However, when the quantificational expression does not contain a numeral, a singular/plural interpretive difference of the noun emerges between partitives and reverse partitives. Sauerland and Yatsushiro (2017) and Watanabe (2017) suggest that it is either the singular-whole interpretation (i.e., the singular interpretation of N<sub>whole</sub>) or the plural-whole interpretation (i.e., the plural interpretation of N<sub>whole</sub>) that is available for partitives, while only the plural-whole interpretation is possible for reverse partitives. For example, the partitive in (5) and the reverse partitive in (6) do not contain a numeral, but contain the word *hotondo* ‘most’. The noun *hon* ‘book’ in (5) represents N<sub>whole</sub> and it can be either singular (‘a book’) or plural (‘books’). Thus, the sentence in (5) has either the singular-whole interpretation or the plural-whole interpretation, and as a result, the sentence is ambiguous in terms of the singular-plural distinction of *hon* ‘book’. In contrast, in (6), both the remaining noun *hon* ‘book’, (N<sub>part</sub>) and the deleted noun *hon* ‘book’, (N<sub>whole</sub>) are interpreted as plural, not singular. In other words, the sentence in (6) only carries the plural-whole interpretation. As a result, the sentence is not ambiguous in terms of the singular-plural distinction of *hon* ‘book’.

- (5) Partitive: ambiguous (singular or plural-whole interpretation)

Hon-no hotondo-ga yogoreteiru.

book<sub>whole</sub>-GEN most-NOM is dirty.

a. ‘Most of the book is dirty.’ (singular-whole interpretation)

b. ‘Most of the books are dirty.’ (plural-whole interpretation)

- (6) Reverse partitive: unambiguous (plural-whole interpretation only)

Hotondo-no hon-ga yogoreteiru.

Most-GEN book<sub>part</sub>-NOM is dirty.

\*a. ‘Most of the book is dirty.’ (singular-whole interpretation)

b. ‘Most of the books are dirty.’ (plural-whole interpretation)

Table 1 summarizes the interpretive difference between partitives and reverse partitives that do not contain a numeral, but contain *hotondo* ‘most’. As shown in Table 1, reverse partitives are subjected to the semantic restriction

that disallows a singular interpretation of the bare noun,  $N_{\text{whole}}$ . In contrast, partitives are free from this restriction, although partitives and reverse partitives have an identical surface form, except the word order.

Table 1. Differences between the partitives and reverse partitives that contain *hotondo* ‘most’ in Japanese

Structure	Word order	Interpretation	
		Singular-whole interpretation	Plural-whole interpretation
Partitive	a bare noun $N_{\text{whole}}$ precedes <i>hotondo</i> ‘most’	✓	✓
Reverse partitive	a bare noun $N_{\text{part}}$ follows <i>hotondo</i> ‘most’	✗	✓

It should be noted that both  $N_{\text{part}}$  and  $N_{\text{whole}}$  are interpreted as plural in the reverse partitives that contain *hotondo* ‘most’. It is based on this observation that Watanabe (2017) proposed the systematic correlation between word order and number interpretation in Japanese. When a bare noun follows a partitive word, such as ‘most’ (i.e., a reverse partitive construction), it must be plural. Watanabe’s insight is very interesting, potentially challenging the traditional view that all bare nouns are number-neutral in classifier languages (Chierchia 1998). Nevertheless, it might be too hasty to conclude that the word order completely determines the plurality of bare nouns in Japanese. In fact, when a bare noun follows another partitive word, it can be interpreted as singular. For example, 99% of the native Japanese speakers interpreted the bare noun *ringo* ‘apple’, which follows the partitive word *ichibu* ‘part’, in (7), as singular in Okuma (2019). In other words, (7) can describe the situation in which only one of the three apples is rotten.

- (7) *Ichibu-no ringo-ga kusatteiru.*  
 Part-LINK apple<sub>part</sub>-NOM is rotten.  
 ‘Some of the apples are rotten.’

In contrast, Watanabe (2017: 2) suggests that, in (7), “the whole cannot be a single apple. It must be plural. Furthermore, more than one apple must be rotten.” Thus, the plurality of  $N_{\text{part}}$  in reverse partitives seems to depend on individuals. Therefore, the present study focuses on the interpretation of  $N_{\text{whole}}$ , rather than  $N_{\text{part}}$  in reverse partitives, and investigates whether L2 learners can acquire the semantic restriction regarding  $N_{\text{whole}}$ .

### 2.3. Interpretation of English partitive constructions

In contrast to Japanese, no singular/plural ambiguity exists in English partitives due to the availability of overt plural morphology, as shown in (8). In addition, the fixed word order of English disallows the structural difference

observed in Japanese partitives and reverse partitives. Furthermore, the singular/plural interpretations of (reverse) partitives are not taught in Japanese language classes. Therefore, acquisition of the singular/plural distinction of the bare nouns in Japanese (reverse) partitives can cause a learnability problem to L1 English speakers.

(8) Interpretation of English partitive constructions (Watanabe 2017: 3)

- a. Most of the city is off-limits to foreigners. (singular-whole interpretation)
- b. Most of the cities are off-limits to foreigners. (plural-whole interpretation)

### 3. Previous study

To the best of the author's knowledge, few empirical attempts have been conducted to investigate the interpretation of Japanese (reverse) partitives by L2 speakers, with the exception of Okuma (2019). Okuma investigated the acquisition of the semantic restriction on Japanese reverse partitives that contained *ichibu* 'part'. She found the L1 English speakers of L2 Japanese to initially misunderstand the partitive word *ichibu* as a different word, namely *ichi-bu*, in which the numeral *ichi* 'one' is followed by the classifier *bu*. Therefore, the present study turns to look at another partitive word *hotondo* 'most', which does not have a homonym containing a numeral or a classifier, to avoid any potential misunderstanding from L2 speakers. Thus, the present study extends Okuma by investigating the Japanese reverse partitives that contain *hotondo* 'most'.

### 4. Research questions

The present study addresses the following research questions in (9).

- (9) a. Do native Japanese speakers obey the semantic restriction that disallows the singular-whole interpretation of Japanese reverse partitives containing *hotondo* ('most'), as the literature suggests?
- b. Can the semantic restriction on Japanese reverse partitives be acquired by L1 English speakers?

With regard to (9a), Japanese reverse partitives are subjected to the semantic restriction. As we have seen in Table 1, the singular-whole interpretation is not allowed in reverse partitives (Sauerland and Yatsushiro 2004, 2017; Watanabe 2017; Ishizuka 2018, among others). This semantic restriction on Japanese reverse partitives has been discussed in linguistic literature, nevertheless, to the best of the author's knowledge, very few empirical studies have been conducted to investigate the interpretation of bare nouns in reverse partitives by native Japanese speakers. The present study aims to clarify as to how strong the semantic restriction is by looking at the interpretations of native Japanese speakers.

With regard to (9b), it has been predicted that L1 English speakers of L2 Japanese may have a problem acquiring the semantic restriction on Japanese reverse partitives. They might allow illicit singular-whole interpretation of reverse partitives, just like partitives, for bare nouns remain in the sentence. Although  $N_{\text{whole}}$  is also interpreted as being in the plural form in English reverse partitives, no singular/plural ambiguity exists in English due to an over plural morphology, as we have seen in (8). Therefore, L2ers may initially fail to recognize the interpretive difference between partitives and reverse partitives.

## 5. Experiment

### 5.1. Participants

The participants consisted of 27 native English speakers studying Japanese as L2. They were residents of Japan at the time of testing. Their Japanese language proficiency, including their knowledge of grammar and vocabulary, was independently confirmed in a written cloze test adapted from Okuma (2015). There were 32 native Japanese speakers who also participated in the experiment as the control group. They were university freshmen (non-linguistics majors) and had never been abroad for more than three months. Table 2 summarizes the participants' profiles.

Table 2. Participants' profile (J represents Japanese on the table)

Group	n	Age (years)	Age of the first exposure to J	Formal education (years)	Naturalistic exposure to J (years)	J language test score (%)
L2 speakers	27	33 (23-46)	20 (14-28)	4.1 (0.1-7.0)	5.9 (1.0-20.0)	61 (42-85)
Native J speakers	32	19 (18-20)	n.a.	n.a.	n.a.	n.a.

### 5.2. Stimuli

The picture-sentence matching test was administered among the participants. The participants were presented with the combinations of a written Japanese sentence and a picture. They were then asked to judge whether the sentence matched the situation illustrated in the picture by choosing one of the three responses, namely *tadashii* 'true', *machigai* 'false', or *wakaranai* 'I don't know'.

The sentences consisted of two types, namely, the partitive or reverse partitive construction. Each sentence contained the partitive word *hotondo* 'most' and a countable noun, including *ringo* 'apple', in the subject position, as the examples in (10) show. The sentence also contained an adjective, including *kusatteiru* 'rotten', which indicated that the object was damaged. The pictures consisted of four types, as shown in Table 3. All the pictures depicted either a single object or multiple objects of the noun used in the sentence, but they differ

in terms of the number of damaged objects. The two sentence types and the four picture types created a total of eight conditions, as shown in Table 3.

Table 3. Stimuli conditions and expected responses based on the control group

Con.	Sentence	Picture	Explanation for the picture		Response
			$N_{part}$	$N_{whole}$	
1	Partitive	1 	Singular	Singular	✓
2	Partitive	2 	Singular	Plural	✗
3	Partitive	3 	Plural	Plural	✓
4	Partitive	4 	Plural (all)	Plural	✓
5	Reverse partitive	1 	Singular	Singular	✗
6	Reverse partitive	2 	Singular	Plural	✗
7	Reverse partitive	3 	Plural	Plural	✓
8	Reverse partitive	4 	Plural (all)	Plural	✗

The examples in (10) present the four crucial conditions, namely Conditions 1, 3, 5, and 7, to examine as to how the semantic restriction works in native and L2 grammar. In (10a) and (10b) (Conditions 1 and 3), the Japanese sentence is a partitive, which can either have a singular interpretation or a plural interpretation of  $N_{whole}$  and  $N_{part}$ . Therefore, the combinations of the Japanese sentence and the accompanying picture were expected to be judged as ‘true’ by the native Japanese speakers. In (10c) and (10d) (Conditions 5 and 7), the Japanese sentence is a reverse partitive, which only allows for a plural interpretation of  $N_{whole}$ . Therefore, this sentence is not compatible with the single object picture in (10c). Consequently, the native Japanese speakers were expected to choose ‘false’ in (10c). On the contrary, in (10d), the accompanying picture shows multiple objects (five apples, four of which are rotten). As this is an appropriate combination, the control group was expected to choose ‘true’.

#### (10) Stimuli examples

##### a. Condition 1 (partitive with a singular interpretation)

Ringo-no hotondo-ga kusasteiru.

apple-GEN most-NOM is rotten.

‘Most of the apple is rotten.’



‘true’

‘false’

‘I don’t know’

## b. Condition 3 (partitive with a plural interpretation)

Ringo-no hotondo-ga kusasteiru.  
apple-GEN most-NOM is rotten.

‘Most of the apples are rotten.’



‘true’

‘false’

‘I don’t know’

## c. Condition 5 (reverse partitive with a singular interpretation)

Hotondo-no ringo-ga kusasteiru.  
most-GEN apple-NOM is rotten.

‘Most of the apples are rotten.’



‘true’

‘false’

‘I don’t know’

## d. Condition 7 (reverse partitive with a plural interpretation)

Hotondo-no ringo-ga kusasteiru.  
most-GEN apple-NOM is rotten

‘Most of the apples are rotten.’



‘true’

‘false’

‘I don’t know’

The remaining conditions, namely 2 and 4, are variants of Condition 3. In Conditions 2 and 4, the test sentences are the same as those in Condition 3, but the pictures are different. In the picture of Condition 2, only one apple out of the total three apples is rotten, which does not match the meaning of ‘most’. Therefore, native Japanese speakers would judge the stimulus as false. The picture of Condition 4 depicts the situation in which each apple is mostly rotten. If the participants interpret the bare noun *ringo* ‘apple’ as a mass noun, the picture is appropriate; accordingly, native Japanese speakers would judge the stimulus of Condition 4 as true. Alternatively, native Japanese speakers who prefer to interpret the bare noun *ringo* ‘apple’ as countable would judge the stimulus as false.

Conditions 6 and 8 are the variants of Condition 5. They have the same reverse partitive sentences as that of Condition 5, but have inappropriate pictures. The reverse partitives with ‘most’ require that the rotten apples should carry the plural form; as a result, Condition 6, which contains the picture of a single rotten apple, is not appropriate and native Japanese speakers would reject the stimulus. Similarly, native Japanese speakers would reject Condition 8 as all the apples are rotten in the picture, which does not match the meaning of ‘most’.

A total of 16 combinations of the sentence and the picture were originally created per condition, which were then divided into four Latin Square lists so that each participant does not judge the same sentence repeatedly. As a result, each participant judged a total 40 stimuli. Table 3 summarizes the conditions and the expected response from the native Japanese speakers. Of the 40 test items, the numbers of the expected true and false responses are counterbalanced.

## 6. Results

### 6.1. Group results for partitive constructions

Figure 1 presents the group means of the proportions of ‘true’ responses to partitives (Conditions 1–4), of the native Japanese control group and L2 group. As expected, the control group accepted the licit singular-whole and plural-whole interpretations of the partitive constructions more than 80% of the time (see Figure 1). More specifically, the control group accepted the licit singular interpretations of the  $N_{\text{whole}}$  and  $N_{\text{part}}$  of the partitive constructions 87% of the time (Condition 1). They also accepted the licit plural interpretations of the  $N_{\text{whole}}$  and  $N_{\text{part}}$  of the partitive constructions 81% of the time (Condition 3). In the Condition 2 results, as expected, the control group correctly rejected illicit stimuli, in which the picture did not match the meaning of ‘most.’ When presented with the mass-noun interpretation of *ringo* (apple), the control group accepted it only 38% of the time (Condition 4). This suggests that native Japanese speakers tend to interpret *ringo* (apple) as a countable noun rather than a mass noun, likely because *ringo* (apple) is used more often as a countable noun, although it can also appear as a mass noun.

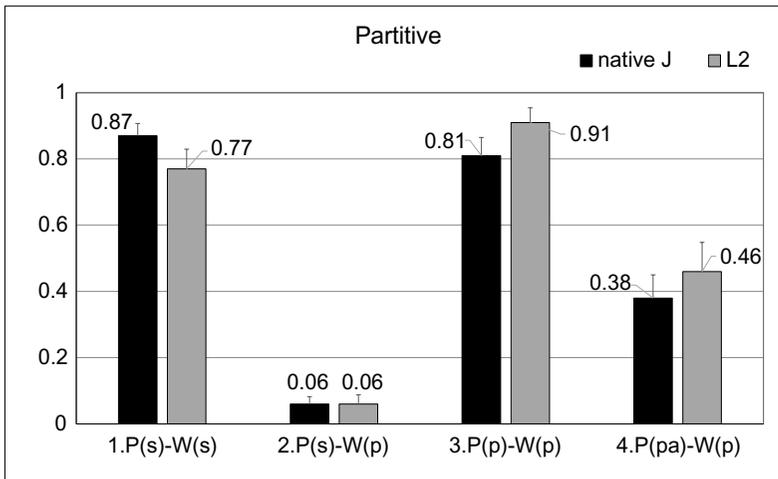


Figure 1. The extent to which each interpretation of partitive constructions was accepted by the native Japanese group and the L2 group

As Figure 1 shows, the L2 group interpreted the partitive constructions in just the same way as the control group. Licit interpretations (Conditions 1 and 3) were accepted 77% and 91% of the time, respectively. The L2-group acceptance rates under these conditions did not differ statistically from the control group acceptance rates in Condition 1 ( $t(57)=1.45$ ,  $p=0.15$ ) or Condition 3 ( $t(57)=-1.31$ ,  $p=0.20$ ). The L2 group also rejected the illicit interpretation in Condition 2, demonstrating a correct understanding of

partitives. The group chose the mass-noun interpretation of ‘apple’ 46% of the time, just as the control group did in Condition 4 ( $t(57)=-0.72, p=0.47$ ). These results show that the L2 group had the same knowledge of partitives as the control group.

## 6.2. Group results for reverse partitives

Figure 2 presents the group means of the proportions of ‘true’ responses to reverse partitives (Conditions 5–8), by the native Japanese control group and L2 group. As expected, the control group made a clear distinction between the illicit singular-whole interpretation and the licit plural-whole interpretation of reverse partitives. The control group accepted the illicit singular interpretation of  $N_{\text{whole}}$  only 13% of the time (Condition 5) and the licit plural interpretation of  $N_{\text{whole}}$  99% of the time (Condition 7). Moreover, they accepted the inappropriate pictures in Conditions 6 and 8 less than 30% of the time, demonstrating an accurate understanding of the meaning of *hotondo*, ‘most.’

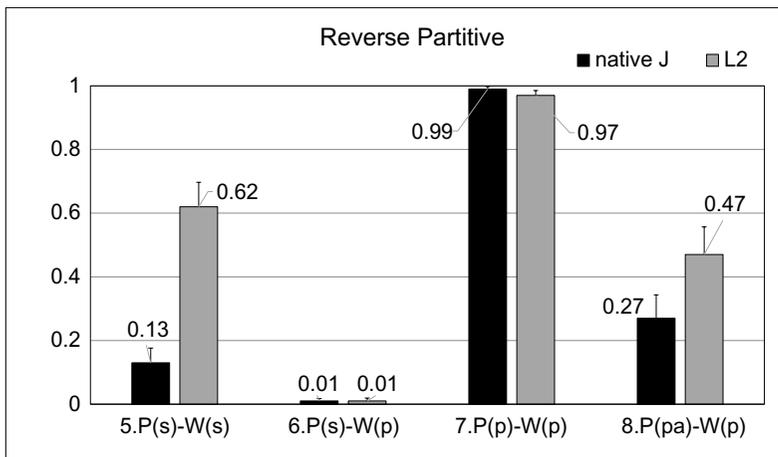


Figure 2. The extent to which each interpretation of reverse partitive constructions was accepted by the native Japanese group and the L2 group

Figure 2 shows that the L2 group differed from the control group in Condition 5. The L2 group accepted the illicit singular-whole interpretation 62% of the time—a much higher percentage than the native Japanese control group’s 13% acceptance rate ( $t(57)=-5.7, p<0.01$ ). In regards to the remaining three reverse-partitive conditions, Conditions 6, 7 and 8, the L2 and control groups were statistically the same:  $t(57)=-0.12, p=0.90$  for Condition 6,  $t(57)=1.21, p=0.23$  for Condition 7, and  $t(57)=-1.83, p=0.07$  for Condition 8. The next section analyzes the disparity between native Japanese speakers and the L2 speakers in Condition 5 in more detail by dividing the L2 speakers into two smaller groups.

### 6.3. Development of L2 grammar

To analyze the development of L2 grammar, L2 speakers were divided into two sub-groups, based on their scores on the Japanese language proficiency test, as shown in Table 4. The advanced L2 group consisted of 14 L2 speakers with scores between 61% and 85% and a group mean of 71%. The intermediate L2 group included the remaining 13 L2 speakers, whose scores fell between 42% and 58%, with a group mean of 51%. The difference between the scores of the two L2 groups was statistically significant ( $t(20)=7.00, p<0.01$ ).

Table 4. Japanese proficiency-test scores of the two L2 groups

L2 group	n	Japanese language test scores (%)
Advanced L2 group	14	71 (61–85)
Intermediate L2 group	13	51 (42–58)
Total	27	61 (42–85)

Figure 3 presents the Condition 5 results of the two L2 groups, alongside the control-group result shown in Figure 2. Figure 3 reveals a change in the accuracy of the L2 groups, who become more inclined to reject the illicit singular-whole interpretation of reverse partitives as their Japanese proficiency improves from the intermediate to advanced level. The next section analyzes individual results to determine how well each L2 speaker has understood the semantic restriction on reverse partitives.

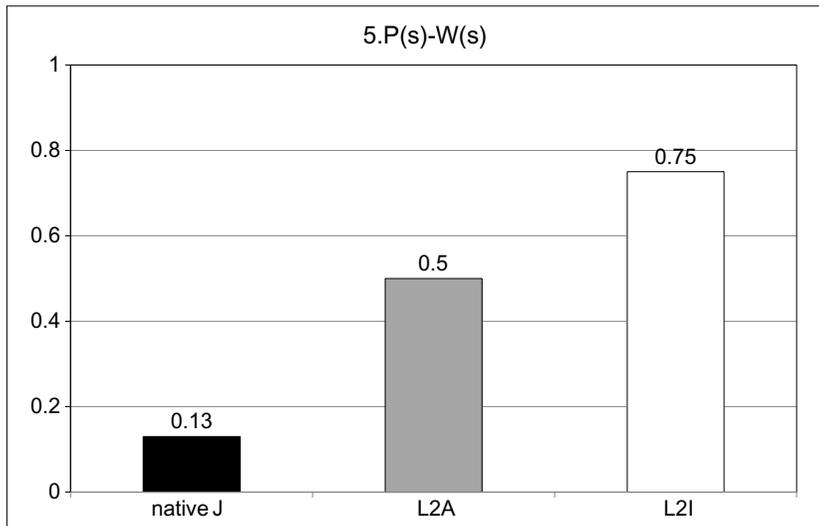


Figure 3. Interpretation of Condition 5 by the native Japanese group, advanced L2 group, and intermediate L2 group

#### 6.4. Individual results

Figures 4 and 5 show the individual results in Condition 5. Figure 4 presents each native Japanese speaker's acceptance rate for the illicit singular-whole interpretation of reverse partitives. As the figure reveals, 23 of the 32 native Japanese speakers (92%) consistently rejected the illicit singular-whole interpretation of reverse partitives.

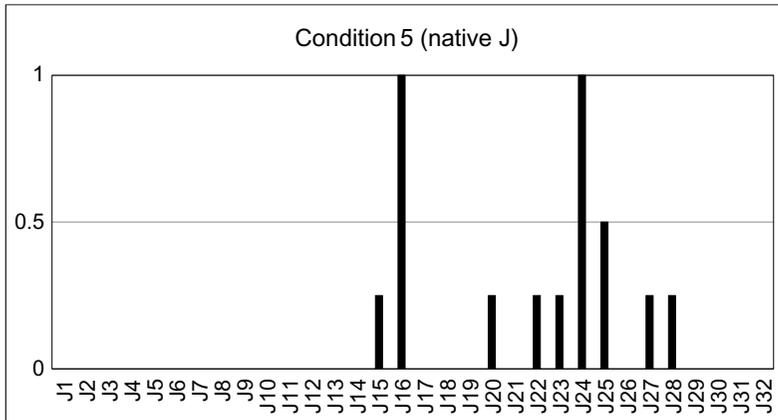


Figure 4. The individual results of native Japanese speakers in Condition 5

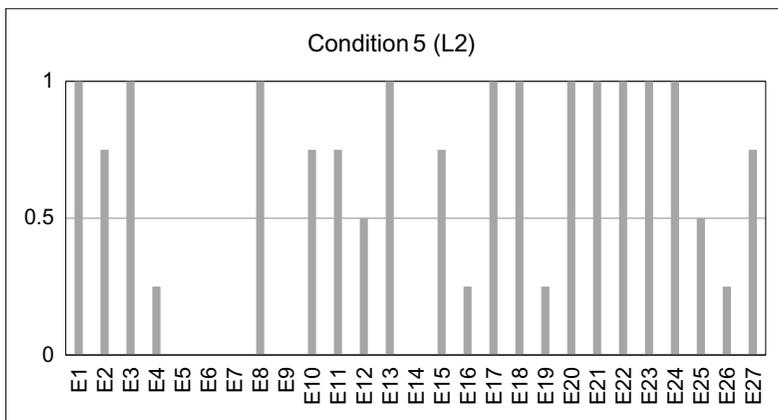


Figure 5. The individual results of L2 speakers in Condition 5

Figure 5 shows each L2 speaker's acceptance rate for the illicit singular-whole interpretation of reverse partitives. In Figure 5, the L2 speakers are arranged from left to right on the horizontal axis, based on their Japanese language-proficiency test scores. In other words, E1 at the far left was the most proficient, while E27 was the least proficient. As Figure 5 reveals, only 5 of the

27 L2 speakers (E5, E6, E7, E9, and E14) consistently rejected the illicit singular-whole interpretation. As Figure 5 shows, a weak correlation was found between the individual performances of L2 members and their Japanese language-proficiency scores ( $r=0.22$ ). A weak correlation was also found between the individual performances of L2 members and their time spent in formal Japanese-language education ( $r=0.35$ ).

## 7. Discussion

Section 4 poses the following research questions (see (11) below):

- (11) a. Do native Japanese speakers obey the semantic restriction that disallows the singular-whole interpretation of Japanese reverse partitives containing *hotondo* ('most'), as the literature suggests?  
 b. Can the semantic restriction on Japanese reverse partitives be acquired by L1 English speakers?

The results, which show that the semantic restriction,  $N_{\text{whole}}$  must be plural in Japanese reverse partitives, hold true in the grammatical usage of native Japanese speakers. Native Japanese speakers in the present study disallowed the illicit singular-whole interpretation of reverse partitives, observing the semantic restriction. By contrast, they allowed both the singular-whole and plural-whole interpretation of partitives. Thus, native Japanese speakers made a singular/plural distinction between partitives and reverse partitives, as Sauerland and Yatsushiro (2017) and Watanabe (2017) predicted.

In relation to the second research question, it appears that semantic restriction can be acquired by a limited number of L2 speakers. As a group, L2 speakers in the present study accepted the illicit singular interpretation of reverse partitives 62% of the time; however, their judgement improved as their proficiency increased. In fact, five out of the 27 L2 speakers successfully observed the semantic restriction, as presented in 6.4.

Figures 6 and 7 were created to analyze how the L2 speakers developed their ability to distinguish between partitives and reverse partitives. Figures 6 and 7 show the difference between each participant's acceptance rate for the singular-whole interpretation in Conditions 1 and 5. As Figure 6 reveals, 30 out of the 32 native Japanese speakers (94%) accepted the singular-whole interpretation of partitives more often than they accepted reverse partitives. According to Figure 7, 10 of the 27 L2 speakers (37%) accepted the singular-whole interpretation of partitives more often than they accepted reverse partitives. In addition, L2 speakers distinguished between partitives and reverse partitives more successfully as their proficiency improved; two L2 speakers (E6 and E7) made a clear distinction, just like the native Japanese speakers. Thus, the present study confirms that L1 English speakers can acquire the semantic restriction on Japanese reverse partitives. However, the data do not reveal why

these L2 speakers were successful and the details of their development remain unexplained.

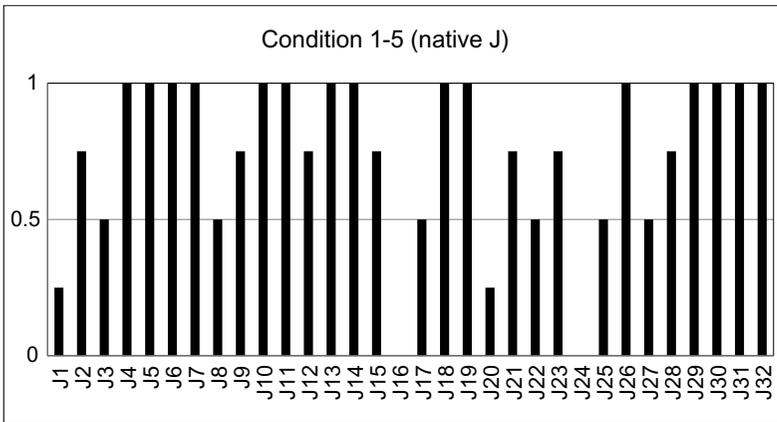


Figure 6. The difference between the singular-whole interpretation of partitives and reverse partitives, carried out by individual native Japanese speakers

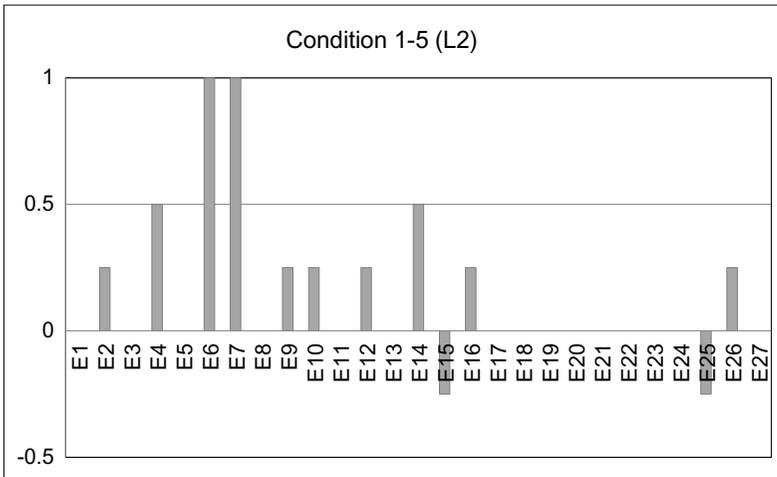


Figure 7. The difference between the singular-whole interpretation of partitives and reverse partitives, carried out by individual L2 speakers

## 8. Conclusion

The present study has investigated the extent to which the semantic restriction that disallows the singular-whole interpretation of Japanese reverse partitives holds true in the grammar of native Japanese speakers and can be

acquired by L1 English speakers. A picture-sentence matching test was administered to 27 L1 English speakers of L2 Japanese and 32 native Japanese speakers to compare their interpretations of bare nouns in partitive and reverse partitive constructions that contained *hotondo* ('most') in Japanese. The results show that the semantic restriction held true and could also be acquired. The L2-group members initially failed to distinguish between partitives, accepting both singular-whole and plural-whole interpretations for both structures. However, some L2 speakers successfully acquired the semantic restriction; a weak correlation was found between the L2-group members' interpretations and their Japanese-language proficiency. However, as their success could not be entirely explained, the details of L2 development must be clarified in future research.

## References

- Chierchia, Gennaro (1998). Reference to kinds across languages. *Natural Language Semantics* 6. 339-405.
- Ishizuka, Tomoko (2018). Does Japanese have 'reverse partitives?' In Céleste Guillemot, Tomoyuki Yoshida, & Seunghun J. Lee (Eds.), *Proceedings of the 13<sup>th</sup> workshop on Altaic formal linguistics (WAFL13)*, 165–177. Cambridge, MA: MIT Working Papers in Linguistics
- Jackendoff, Ray (1977). *X-bar syntax: A study of phrase structure*. Cambridge, MA: MIT Press.
- Okuma, Tokiko (2015). *Overt Pronoun Constraint effects in second language Japanese*. Ph.D. dissertation, McGill University, Montreal, Canada.
- Okuma, Tokiko (2019). *L2 acquisition of singular/plural interpretation of Japanese partitive constructions*. Paper presented at the 14<sup>th</sup> Generative Approaches to Language Acquisition (GALA14), University of Milano-Bicocca, Italy, on September, 2019.
- Sauerland, Uli & Yatsushiro, Kazuko (2004). A silent noun in partitives. In Keir Moulton & Matthew Wolf (Eds.), *Proceedings of NELS 34*, 505–516. Amherst, MA: University of Massachusetts, GLSA Publications.
- Sauerland, Uli & Yatsushiro, Kazuko (2017). Two nouns in partitives: evidence from Japanese. *Glossa: a journal of general linguistics* 2(1): 13. 1–29.
- Watanabe, Akira (2006). Functional projections of nominal in Japanese: Syntax of classifiers. *Natural Language and Linguistic Theory* 24, 241–306.
- Watanabe, Akira (2008). The structure of DP. In Shigeru Miyagawa & Mamoru Saito (Eds.), *The Oxford handbook of Japanese linguistics*, 513–540. New York: Oxford University Press.
- Watanabe Akira (2017). The mass/count distinction in Japanese from the perspective of partitivity. *Glossa: a journal of general linguistics* 2(1): 98. 1–26.

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