The interpretation of English bare plurals by native Japanese speakers

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Abstract. This study investigates whether L1 Japanese L2 English learners can acquire the knowledge that English bare plurals prohibit specific readings, despite the absence of explicit evidence for this constraint in the input. In Japanese, bare plurals permit both generic and specific readings, whereas in English they allow only generic readings. This cross-linguistic difference creates a potential poverty-of-the-stimulus issue for Japanese-speaking learners of English. To examine whether learners can acquire this constraint, we conducted a sentence–picture matching truth-value judgment task with 30 L1 Japanese L2 English learners and 11 native English speakers. The L2 English participants also completed LexTALE to measure English proficiency. The results show that native English speakers consistently rejected the specific reading of English bare plurals, while native Japanese speakers consistently accepted both specific and generic readings in Japanese. Among the L2 learners, 43% consistently rejected the specific reading while accepting the generic reading in English, indicating successful acquisition of the target constraint. A generalized linear mixed-effects analysis further reveals that learners' sensitivity to the restriction increases significantly with English proficiency. We argue that learners gradually eliminate the transferred specific reading as a result of distributional evidence in the input, which aligns with Yang's (2003) variational learning model.

Keywords. second language acquisition; Japanese; bare plurals; poverty of the stimulus; variational learning

1. Introduction. Formal approaches to second language (L2) acquisition have primarily focused on two central questions: (a) whether first language (L1) transfer occurs, and (b) whether adult L2 learners have full access to Universal Grammar (UG). Regarding the second question, many studies have investigated linguistic phenomena that pose the poverty-of-the-stimulus (POS) issue for L2ers (e.g., Dekydtspotter et al. 1997; Kanno 1997; Marsden 2009; Slabakova 2003; Chen 2020, 2023). Specifically, if adult L2ers are able to acquire knowledge of constraints that are underdetermined by the input or not derivable from their L1, this would suggest that they still have access to UG even after the critical period (e.g., Schwartz & Sprouse 1994, 1996; White 2003). Although linguistic phenomena involving POS issues are often considered challenging for L2 learners and are generally assumed to be attainable only at advanced levels, several studies have shown that even intermediate learners may successfully acquire underdetermined knowledge of grammatical constraints (e.g., Kanno 1997; Slabakova & Montrul 2002, 2003; Marsden 2009).

This study conducted a sentence–picture matching truth-value judgment experiment (Crain & Thornton 1998) to investigate whether L1 Japanese L2 English learners can acquire the knowledge that English bare plurals such as *tigers* cannot carry a specific meaning. The data demonstrate that approximately 40% of our participants, although their English proficiency is

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below the advanced level, are able to acquire the target knowledge. We further show that acquisition is significantly predicted by English proficiency, as measured by LexTALE (Lemhöfer & Broersma 2012). Thus, our findings indicate that underdetermined knowledge can emerge even among non-advanced learners, although attainment remains proficiency-sensitive.

To account for why L2 learners are able to acquire the target constraint at the intermediate level, we propose that the regular occurrence of bare plurals in English input, together with the complete absence of specific readings for such forms, may lead learners to gradually expel the specific reading initially transferred from the L1. This proposal is grounded in Yang's (2003) variational approach to language acquisition. According to Yang, child learners initially entertain multiple competing grammatical options made available by UG. Each option is assigned a probabilistic weight based on its success in parsing the input to which the learner is exposed. As exposure accumulates, options that are consistently supported by the input increase in weight, whereas those that fail to receive sufficient support are gradually suppressed and may eventually be eliminated from the learner's grammar.

2. Bare plurals in English and Japanese. Languages differ in how bare plurals are interpreted. In English, bare plurals are restricted to generic readings and do not allow specific interpretations (e.g., Ionin & Montrul 2010). For example, tigers can only receive a generic reading, meaning 'tigers in general.' It cannot refer to a specific group of tigers. In contrast, Japanese bare plurals, according to Nemoto (2005), can carry only a specific reading. For example, *tora-tachi* 'tigers' in Japanese, where *-tachi* is a plural morpheme, can refer only to a specific group of tigers, not to tigers in general. However, based on our consultation with several native Japanese speakers, *tora-tachi* may also receive a generic reading, although this reading seems less preferred than the specific one. One goal of this paper is to experimentally examine whether Japanese bare plurals can carry both generic and specific readings. As we will show, the answer is yes. Therefore, Japanese and English differ with respect to bare plurals: whereas Japanese bare plurals allow both generic and specific readings, their English counterparts allow only generic readings.

We argue that this difference leads to a poverty-of-the-stimulus (POS) issue for L1 Japanese L2 English learners, based on the three criteria outlined by White (2003). First, English bare plurals are more constrained than Japanese bare plurals in prohibiting specific readings. Second, since English bare plurals do not have specific readings, native English speakers are never expected to produce them to express specific reference. Thus, L2 English learners exposed to input from native English speakers receive no positive evidence indicating that specific readings are prohibited for bare plurals. Third, based on our consultation with English language teachers in Japan and our review of English textbooks and online learning resources, instruction on the English plural morpheme *-s* primarily focuses on its basic form and variants (e.g., *-es*), as well as on the distinction between count and noncount nouns in the use of plural forms. Only a few online grammar resources mention that English bare plurals such as *lions* can be used to denote lions in general, alongside alternative forms such as *a lion* and *the lion*. There is no explicit instruction stating that English bare plurals cannot have specific interpretations. For these three reasons, the knowledge that English bare plurals disallow specific readings is underdetermined in the input available to Japanese-speaking learners, creating a potential learnability issue.

3. Research questions. This paper addresses the following research questions:
a. Can L1 Japanese L2 English learners acquire the knowledge that English bare plurals prohibit specific readings, given that this poses a learnability issue?

b. If so, does the acquisition of this knowledge correlate with learners' English proficiency?

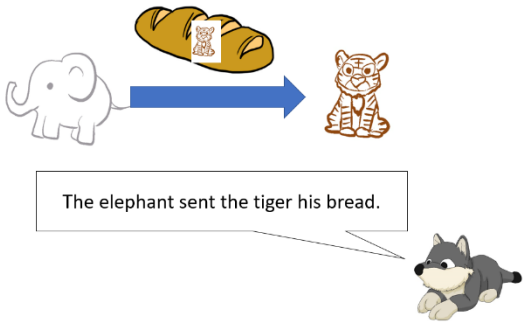
4. Experiment. To address the research questions, we designed a sentence-picture matching truth-value judgment (TVJ) task (Crain & Thornton 1998) and used LexTALE (Lemhöfer & Broersma 2012) as a measure of English proficiency. The TVJ task was modeled on the experiment reported in Ionin and Montrul (2010). In this task, participants looked at a picture depicting a scenario and read a written sentence produced by a dog, then judged whether the sentence matched the scenario by saying 'yes' or 'no.' There was no time limit for their responses. The TVJ task was created and presented to participants using Microsoft PowerPoint, and the entire experiment was conducted individually via Zoom.

At the beginning of the TVJ task, participants were informed that there was a zoo with many animals. The animals liked to put pictures of themselves on their belongings. For example, if a loaf of bread has a tiger's picture on it, this means that the bread belongs to the tiger. Several practice trials were presented first. The first practice trial is shown in (1). In this trial, participants were instructed to pay attention to the food item having an animal's picture. The dog's sentence was, 'The elephant ate the crocodile's chocolate.' Because the chocolate in the picture has a sheep's image, participants were expected to say 'no' to this trial.

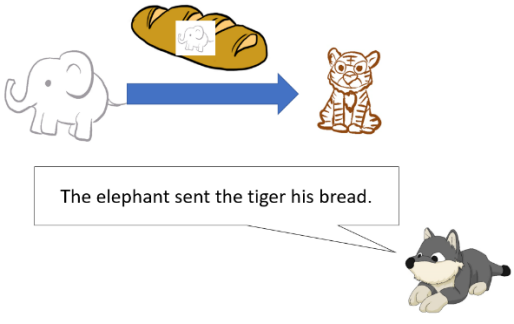
(1)

The second practice trial presented the same scenario, but the dog's sentence was, 'The elephant ate the sheep's chocolate.' In this case, participants were expected to respond 'yes.' The third and fourth practice trials are shown in (2) and (3):

(2)



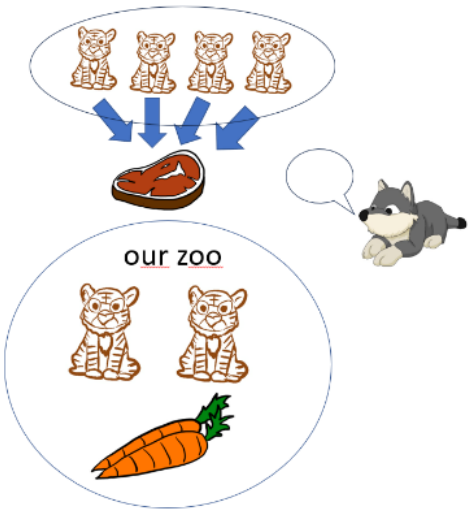
(3)



These two practice trials are designed to ensure that participants fully understand that some sentences may be ambiguous and allow two possible readings. As long as there is one reading that matches the given scenario, they should say 'yes.' This procedure was developed and imple-

mented in Chen (2024a, 2024b) to address a well-known preference issue in TVJ tasks. When participants are presented with semantically ambiguous sentences, they may unconsciously adopt a preferred reading and fail to consider an alternative, less favored one (White et al. 1997). As a result, in scenarios where the preferred reading is false but the less preferred reading is true, participants may incorrectly judge that the sentence does not match the scenario and respond 'false' (Meyer & Sauerland 2009). Moreover, some participants may adopt a general strategy of rejecting ambiguous sentences outright, responding 'false'/'no' simply because the sentence does not perfectly describe the scenario. Participants were first presented with the trial in (2). If they respond 'yes,' we proceed to the trial in (3). If they respond 'no,' they are asked to reconsider whether the target sentence can possibly be said in the scenario and are reminded that if there is any reading compatible with the context, the trial should be accepted. All participants who initially responded 'no' in (2) changed their response to 'yes' after reconsideration. In trial (3), all participants responded 'yes.' After completing the two trials, both were presented again on a single slide, and we explicitly reiterated the rule: 'A given sentence may have two possible readings. As long as one reading is possible in the given scenario, the trial should be accepted.' This ensured that participants understood they were to judge whether the target sentence could possibly be said in the scenario, rather than whether it provided an accurate description of it. After the practice session, a sample trial was presented to introduce the basic features shared by all experimental trials, which is shown in (4).

(4)



When viewing the scenario in this trial, participants were informed that the animals shown at the top of the picture represent that type of animal in general. In this case, they are tigers in general, which eat meat, consistent with real-world knowledge. In contrast, the circle at the bottom of the picture represents 'our zoo,' and there are two tigers in our zoo that eat only carrots. Several sentences were then presented one at a time alongside the same scenario in (4). For example, one of them was: 'There is one tiger that normally eats meat in our zoo,' to which participants were expected to respond 'no.' After this session, participants proceeded to the actual experimental trials, which consisted of critical condition trials and filler items.

Recall that bare plurals allow both specific and generic readings in Japanese, whereas in English they allow only generic readings. Accordingly, our TVJ task included two conditions: (i) a specific reading condition and (ii) a generic reading condition. For the specific reading condi-

tion, a trial based on the scenario illustrated in (4) would present the English sentences in (5) or their Japanese equivalent in (6), produced by the dog.

(5) There are two tigers in our zoo. Tigers normally eat carrots.

(6) watashitachi-no doubutsuen-ni-wa tora-ga nitou imasu. Tora-tachi-wa tsuujou
We-GEN zoo-LOC-TOP tiger-NOM two exist tiger-PL-TOP normally
ninjin-o tabe-masu.
carrot-ACC eat-COP
'There are two tigers in our zoo. Tigers normally eat carrots.'

These trials test the specific-reading condition because, if the sentences in (5) are intended to match the scenario in (4), the bare plural *tigers* in the second sentence must be interpreted as referring to the two tigers introduced in the first sentence. The same applies to the Japanese bare plural *tora-tachi* 'tigers' in (6). For the English trial involving (4) and (5), since English bare plurals cannot carry a specific reading, the intended co-reference fails. Therefore, we expect native English speakers to say 'no' in this trial. In contrast, for the equivalent Japanese trial involving (4) and (6), native Japanese speakers are expected to say 'yes' because Japanese bare plurals can be specific.

Regarding the generic reading condition, a trial based on the scenario in (4) includes the English sentences in (7) and the Japanese sentences in (8).

(7) There are two tigers in our zoo. I know tigers normally eat meat.

(8) watashitachi-no doubutsuen-ni-wa tora-ga nitou imasu. Watashi-wa
We-GEN zoo-LOC-TOP tiger-NOM two exist I-TOP
tora-tachi-ga tsuujou niku-o taberu koto-o shittei-masu
tiger-PL-NOM normally meat-ACC eat NMLZ-ACC know-COP
'There are two tigers in our zoo. I know tigers normally eat meat.'

These trials test the generic-reading condition because the bare plural *tigers* in the second sentence must be interpreted as referring to tigers in general, if (7) and (8) are intended to match the scenario in (4). In both the English trial involving (7) paired with (4) and the Japanese trial involving (8) paired with (4), native participants are expected to respond 'yes,' since bare plurals in both languages can carry generic interpretations.[1]

A total of 16 scenarios like (4) were created, each paired with sentences representing the two critical conditions. Specifically, each scenario was associated with two trials: a specific-reading trial and a generic-reading trial. Two experimental lists were then constructed using a Latin square design, such that each list had only one condition (either the specific reading trial or the generic reading trial) for any given scenario. Under this design, each experimental list had 8 specific reading trials and generic reading trials. In addition, each list included 32 filler items, consisting of 16 Type I fillers and 16 Type II fillers. For each scenario, one Type I filler sentence and one Type II filler sentence were presented alongside the critical trial sentences, resulting in

[1] As stated earlier, Nemoto (2005) claims that Japanese bare plurals can only be specific.

three trials per scenario: one critical trial, one Type I filler and one Type II filler. Sentences (9) and (10) are sample Type I and Type II filler trials, respectively, for the scenario in (4):

(9) Our tigers normally eat carrots/meat.

(10) All tigers outside the zoo eat carrots/meat.

For both Type I and Type II fillers, half were match trials and half were mismatch trials. Within each scenario, the order of the critical and filler trials was randomized. Because participants' interpretations in one condition could be influenced by exposure to the other, we adopted a block design to minimize cross-condition effects. Given that our goal was to examine whether L1 Japanese L2 English learners know that English bare plurals disallow specific readings, the specific reading trials were prioritized and presented first in Block 1, together with their corresponding fillers, while the generic reading trials and their fillers were presented in Block 2. This design avoided mixing specific and generic reading trials within a single list, thereby reducing the likelihood of interpretive interference, and lowering cognitive demands (e.g., Chan et al. 2009; Tanaka & Cherici 2022).

We recruited 30 L1 Japanese L2 English learners as participants. All participants met the following three criteria: (1) they were between 18 and 50 years old and were born and raised in Japan; (2) they had never lived abroad before the age of 18; and (3) both they and their parents were native speakers of Japanese, with Japanese as their only native language. Also, 11 native English speakers participated as native controls. Six participants were from the United States and five from the United Kingdom, all of whom reported English as their native language.

Our L1 Japanese L2 English participants first completed an English TVJ task, followed by a Japanese task, and then the LexTale vocabulary test (Lemhöfer & Broersma 2012) to assess English proficiency. Because there were two lists for the TVJ task in each language, participants who saw List 1 in English were presented with List 2 in Japanese, and those who saw List 2 in English were presented with List 1 in Japanese. English was always presented first to avoid priming effects from their first language.

The mean LexTALE score was $M = 58.13$, $SD = 7.08$, $SE = 1.29$, with scores ranging from 45 to 70. According to the proficiency ranges reported in Lemhöfer and Broersma (2012), scores below 59% fall within the lower-intermediate-and-below range, whereas scores between 60% and 80% correspond to the upper-intermediate range. Thus, the group mean ($M = 58.13$) falls within the lower-intermediate range, although some individual participants (scoring 60–70) reached the upper-intermediate range. Overall, our L2 English participants can be characterized as lower-intermediate to upper-intermediate learners of English.

5. Results. First, we examined participants' performance on the correct and incorrect filler items to determine whether they understood the task. Each list had eight trials for each of the following categories: Type I correct fillers, Type I incorrect fillers, Type II correct fillers, and Type II incorrect fillers. Participants were considered to have passed the screening if they accepted at least 7 out of 8 trials for each type of correct filler and rejected at least 7 out of 8 trials for each type of incorrect filler. [2] All L1 English participants met this criterion for the English TVJ task, and all

[2] According to the binomial distribution, the probability of accepting or rejecting 7 or more out of 8 trials by random guessing is below 0.05. Therefore, if participants met this criterion, we can be more than 95% confident that they made consistent judgments and that their responses were not random.

L1 Japanese L2 English participants met it for both the English and Japanese TVJ tasks. We now turn to participants' judgments on the trials in the two critical conditions. Table 1 summarizes their data.

Language	Specific Reading (SD, SE)	Generic Reading (SD, SE)
L1 English	0.09 (0.30.0.09)	0.91(0.30,0.09)
L1 Japanese	0.99 (0.04, 0.01)	1.00 (0.03, 0.01)
L2 English	0.58 (0.50, 0.09)	0.85 (0.33, 0.06)

Table 1. Summary of the mean acceptance rates in the two critical conditions

The L1 English and L1 Japanese data in Table 1 suggest that bare plurals in Japanese allow both specific and generic readings, whereas in English they prohibit specific readings. This pattern is further confirmed by the individual-level data. Because each condition included eight trials, we adopted seven as the cutoff for consistency: participants who accepted or rejected at least 7 out of 8 trials in a given condition were considered to have made consistent, rather than random, judgments. The individual-level results show that all 30 native Japanese speakers consistently accepted the trials in both conditions, whereas 10 out of 11 L1 English participants consistently accepted the generic reading condition while consistently rejecting the specific reading condition. These findings establish baseline data indicating that English bare plurals permit only generic readings, whereas Japanese bare plurals allow both generic and specific readings. The L1 Japanese data runs counter to Nemoto's (2005) claim that bare plurals in Japanese can only receive a specific interpretation. We now examine L1 Japanese speakers' L2 English data.
A generalized linear mixed-effects model was fitted to the L2 English dataset in R (R Core Team 2025) using the lme4 package (Bates et al. 2015). Model estimation was carried out with the *glmer* function. The analysis examined the effects of Context (specific vs. generic) and English proficiency on participants' responses. Responses were binary-coded (1 = 'yes,' 0 = 'no') and served as the dependent variable. Context was entered as a categorical fixed effect, and English proficiency was included as a continuous fixed predictor (covariate). Random intercepts were specified for both participants and items. The results are presented in Table 2.

	Estimate	Standard Error	*z*-value	*p*-value
Intercept	3.19	0.61	5.23	<.001***
Context	-2.23	0.35	-6.48	<.001***
English Proficiency	0.14	0.49	0.28	0.78
Context*English Proficiency	-0.59	0.26	-2.32	<.001***

Model: Score ~ Context * English Proficiency + (1 | Participant) + (1 | Item)

Table 2. Output of the binomial generalized linear mixed model fit by maximum likelihood

The data revealed a significant effect of *Context* (Estimate = -2.23, $p < .001$), indicating that participants showed a significantly higher likelihood of accepting the generic reading than the specific reading for English bare plurals. On the other hand, no significant main effect of English proficiency was found (Estimate = 0.14, $p = .78$), indicating that proficiency did not significantly predict participants' overall response patterns. In other words, higher proficiency did not general-

ly increase or decrease the likelihood of a 'yes' response across conditions. However, the interaction between Context and English proficiency was significant (Estimate = −0.59, $p < .01$). This interaction suggests that the effect of Context differed depending on participants' English proficiency level. Specifically, the difference between the generic and specific conditions became more pronounced as proficiency increased. In other words, learners with higher English proficiency were more accurate in rejecting the specific reading of English bare plurals, demonstrating a stronger sensitivity to contextual distinctions compared to lower-proficiency learners.

Recall that all 30 native Japanese participants consistently accepted both the specific and generic readings of Japanese bare plurals. We now check their individual performance in English. Of the 30 participants, 13 (43.3%) consistently rejected the specific reading while accepting the generic reading of English bare plurals, indicating that they successfully distinguished between Japanese and English with respect to bare plural interpretation. In contrast, the remaining 17 participants consistently accepted the generic condition, exhibiting a non-target-like response pattern.

6. Discussion. This study used a sentence-picture matching TVJ task to examine whether L1 Japanese L2 English learners can acquire the knowledge that English bare plurals prohibit specific readings, even though such readings are allowed in Japanese. We collected both L1 Japanese data and L2 English data from 30 L1 Japanese L2 English learners, as well as L1 English data from 11 native English speakers. First, the L1 English and L1 Japanese results clearly established the baseline: L1 English speakers consistently accepted the generic reading and rejected the specific reading for English bare plurals, while L1 Japanese speakers consistently accepted both readings for the Japanese counterparts. These baseline results not only align with our predictions for the two languages but also support the validity of the experimental design for native speakers. Second, the L2 English results show that, as a group, the learners were significantly more likely to accept generic readings than specific readings for English bare plurals. At the same time, this pattern became more pronounced as their English proficiency increased: higher-proficiency learners demonstrated greater sensitivity to the distinction between generic and specific readings. Third, the individual-level results show that 13 of the 30 L2 participants consistently accepted generic readings while rejecting specific readings for English bare plurals, which suggests that they have successfully acquired the constraint that English bare plurals prohibit specific readings. Taken together, our experimental results demonstrate that it is possible for L1 Japanese L2 English learners to acquire the underdetermined knowledge that English bare plurals do not allow specific readings, even though it is a POS issue for them. Moreover, the higher the learners' English proficiency, the more likely they are to exhibit such target knowledge.

These findings are consistent with the Full Transfer/Full Access model (Schwartz & Sprouse 1994, 1996). L1 Japanese L2 English learners initially transfer both the specific and generic readings of Japanese bare plurals to English bare plurals in their interlanguage grammar. With increased exposure to input and rising English proficiency, however, they are able to unlearn the specific reading, even in the absence of direct evidence that such a reading is prohibited in English bare plurals. At the same time, our findings also align with Lardiere's (2008, 2009) Feature Reassembly Hypothesis. This account proposes that a central task in L2 acquisition is for learners to disentangle the features from the way they are bundled in their L1 and reassemble them to match the morphological configurations of the target language.

In the acquisition of English bare plurals by L1 Japanese L2 English learners, they are faced with exactly the type of feature reassembly issue outlined by Lardiere. Japanese bare plurals are associated with both [+specific] and [+generic] features, whereas English bare plurals encode only [+generic]. Therefore, Japanese-speaking learners must reconfigure these semantic features by detaching the [+specific] feature from English bare plurals while retaining the [+generic] feature. Our findings indicate that learners are indeed capable of carrying out this reassembly process. Their proficiency data further support this conclusion: as learners' proficiency increases, they progressively restructure the feature composition of English bare plurals in their interlanguage grammar, ultimately converging on the target constraint that specific readings are disallowed.

A remaining question, then, is how Japanese-speaking learners acquire this underdetermined knowledge in English. Recall that the L2 participants in our study ranged in English proficiency from lower-intermediate to upper-intermediate levels. It seems that the knowledge that English bare plurals prohibit specific readings is not too difficult for them, as nearly half of the intermediate learners demonstrated evidence of having acquired it.

We propose that the regular occurrence of bare plurals in English input, together with the total absence of specific readings for such forms, may gradually guide learners to unlearn the specific reading initially transferred from the L1. Although we focused on the generic reading of English bare plurals in this study, they can be existential as well, as in (11) and (12):

(11) Tigers are in the garden.

(12) There are tigers in the garden.

Cilleruelo Calderón et al. (2025) conducted a large-scale corpus study of generics. They processed 50,534,844 documents, including webpages and scientific articles, and, after sentence segmentation and syntactic filtering, identified 14,303,840 bare plural candidates. After semantic classification, 3,183,293 (22.25%) of these bare plural sentences were marked as generics in the final dataset. Although this corresponds to approximately 0.06 generic bare plural sentences per document on average (roughly one per 16 documents), the dataset only includes bare plurals at the beginning of sentences. Thus, the results suggest that generic bare plurals do occur in the naturalistic input produced by native English speakers and are therefore unlikely to be absent from L2 learners' exposure. Moreover, when considering all syntactic bare plural sentences, there are approximately 0.28 bare plural sentences per document on average, corresponding to roughly one bare plural sentence every three to four documents. This suggests that bare plurals, regardless of their interpretation, are regularly attested in naturalistic input.

With respect to the English input to which L1 Japanese L2 English learners are exposed, bare plurals are interpreted either generically or existentially, but never specifically. We argue that it is precisely the absence of a specific interpretation for English bare plurals that leads learners to abandon the specific reading initially transferred from the L1. We argue that this consistent absence of a specific reading in the input guides learners to gradually abandon this reading in their grammar. According to Yang's (2003) variational approach to language acquisition, child learners initially entertain multiple grammatical options made available by UG, and each option is assigned a probabilistic weight based on its success in parsing the input. When learners are exposed to more and more input, the grammatical options that are consistently attested increase in weight, whereas those that fail to receive sufficient support are progressively

weakened and may ultimately be eliminated from the learner's interlanguage grammar due to their redundancy. Under this review, L1 Japanese L2 English learners may initially project a specific reading for English bare plurals. However, as they receive increasing amounts of input in which English bare plurals never instantiate a specific reading, the specific-reading option receives no positive evidence and therefore loses weight, eventually being eliminated from the interlanguage grammar.

This input-based account of L2 acquisition, grounded in Yang's model, is further supported by empirical evidence from inter-speaker variation among native speakers. Chen (2024b, 2026) investigated native speakers' interpretation of quantifier–negation (Q-Neg) sentences such as *All teachers did not use Sandy's car* in Chinese, Japanese, and Thai. In his 2024 study, Chen found that native Japanese speakers consistently accepted the inverse scope reading (i.e., Not all teachers used Sandy's car) in Japanese Q-Neg sentences, whereas native Chinese speakers consistently rejected such a reading in Chinese. In a subsequent study, Chen (2026) reported that native Thai speakers diverge in their interpretations: approximately half accept the inverse scope reading, while the other half reject it. Complementary corpus analyses revealed that although Q-Neg sentences are not rare in these three languages, the availability of input supporting the inverse scope reading differs substantially across them. In Japanese, 68.8% of Q-Neg sentences unambiguously carry the inverse scope reading; in Chinese, none do; and in Thai, only 9.9% of Q-Neg sentences support the inverse scope reading, and only one of these sentences involves an action verb. This distribution provides a plausible explanation for the categorical difference between Japanese and Chinese and the divided judgments observed among Thai speakers. Because the proportion of Thai input supporting the inverse scope reading is extremely limited, some Thai speakers may fail to receive sufficient positive evidence to maintain this interpretation. As a result, the inverse-scope option loses probabilistic weight and may ultimately be eliminated from their grammars.

It appears that this input-based account can also be extended to L2 acquisition. Our study provides a case in point. Specifically, our findings on Japanese-speaking learners' acquisition of English bare plurals can likewise be explained in terms of the frequency distribution of relevant input. This approach offers a plausible explanation for how L2 learners are able to acquire underdetermined knowledge. To further assess the validity of this account, future research should examine L2 acquisition of linguistic phenomena that are extremely rare in native speakers' input yet nevertheless pose a POS issue. If the relevant linguistic phenomenon is absent from the input,[3] we predict that L2 learners will have difficulty acquiring an underdetermined constraint, and that L1 transfer will persist.

7. Conclusion. Bare plurals differ cross-linguistically in their interpretation. In Japanese, they allow both generic and specific readings, whereas in English they allow only generic readings. This study employed a TVJ task and LexTALE to investigate whether L1 Japanese L2 English learners can acquire the constraint that English bare plurals disallow specific readings, and whether such acquisition is positively correlated with English proficiency. We treat knowledge of this constraint as underdetermined, as it cannot be directly inferred from native speakers' input or explicit classroom instruction. We collected L1 Japanese and L2 English data from 30 L1 Japanese L2 English learners, as well as baseline L1 English data from 11 native English speakers. The L1 English and L1 Japanese data confirmed the cross-linguistic difference: English

[3] Note that in this case, it is the linguistic phenomenon that is absent from the input, not a particular interpretation of a given structure.

prohibits specific readings of bare plurals, whereas Japanese allows them. The L2 group data indicate that Japanese-speaking learners of English are significantly more likely to reject specific readings of English bare plurals as their English proficiency increases. At the individual level, 13 L2 participants consistently rejected the specific reading in English while consistently accepting it in Japanese. This finding further suggests that L1 Japanese L2 English learners can acquire the underdetermined constraint in English, even at an intermediate proficiency level. Building on Yang's (2003) variational model of language acquisition, we argue that the L2 participants' successful acquisition is driven by distributional evidence in the input. Although bare plurals occur regularly in English, they instantiate only generic and existential readings, while specific readings are never attested. As a result, L2 learners may gradually eliminate the specific reading as a redundant option.

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