

Exploring the Relationship between L1 Transfer and Over-passivization of Intransitive Verbs in L2 English

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1 Introduction

It is widely recognized that second language learners (L2ers) of English, coming from various first language (L1) backgrounds, often tend to overuse passive constructions with intransitive verbs, including both unaccusative and unergative verbs. This phenomenon has been discussed in many research papers by Perlmutter (1978), Ju (2000), Hirakawa (2003), Inaba (2020), Zobl (1989), and others. Several hypotheses have been put forth in the literature to explain the over-passivization phenomena. For example, the Unaccusative Hypothesis (Perlmutter 1978, Oshita 2000) is proposed within the framework of Generative Grammar. In addition, the overgeneration of causativization has been discussed by Ju (2000). In contrast, this study argues that first-language transfer plays a role in specific aspects of over-passivization. It examines the acceptability of English translations of Japanese indirect passive constructions and investigates their correlation with passive constructions involving unergative and unaccusative verbs. The present research is also meant to investigate the extent to which first language transfer is involved, and which verb patterns Japanese L2ers are more likely to over-passivize.

2 Issues and Previous Studies

In this paper we address an over-passivized construction, as demonstrated by L2ers of English in (1).

(1) * The accident was happened by the bus driver last night.

The example sentence (1) involves the passivization of an intransitive verb, resulting in an ungrammatical sentence. Much in-depth research has been proposed to elucidate this type of over-passivized sentence. For instance, an approach based on causativization (Ju 2000, Yip 1995), unlike pure syntactic account, argues that L2ers of English tend to transitivize intransitive verbs (especially unaccusative verbs) by assuming the “conceptualized” agent, and this leads to over-passivization of unaccusative verb construction. This approach covers some range of data of L2ers. However, it is often reported that the causativization approach fails to capture the difficulty of assuming causative agents for a specific group of unaccusative verbs such as “emerge” and “exist.” On the other hand, many syntactic accounts have been found in the literature, most of which are based on the Generative Grammar framework, such as the

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Unaccusative Hypothesis. The unaccusative approach assumes that unaccusative and unergative verbs are derived from the deep structure to the surface structure through different derivation processes: Unaccusative verbs are believed to occur as the internal argument in the object position of a verb phrase at the deep structure level, and then move to the subject position at the surface structure, as illustrated in (2a). In contrast, unergative verbs are expected to have already emerged in the subject position, the external argument position, at the deep structure level, as in (2b).

- (2) a. [[VP disappeared Mary]] → [Mary [VP disappeared t]]
 b. [Mary [VP cried]]
- (3) [Mary [VP threw this ball]]

In contrast, the regular transitive construction is assumed to exhibit the surface structure, as seen in (3). When the transitive verb construction is passivized, the object NP “this ball” in (3) is moved to the higher subject position. According to the Unaccusative Hypothesis, L2ers of English notice the similarity between sentences (2a), which is the deep structure, and (3), where verbs are followed by noun phrases (NPs). Consequently, they over-generalize this similarity and incorrectly move the NP in sentence (2a) from the object position in the deep structure to the subject place in the surface structure. This results in the formation of an ungrammatical sentence. This Unaccusative Hypothesis has been widely used to build up other derivative approaches, but it fails to explain why L2ers often over-generate passives in the unergative construction in (2b) that has no NP in its object position.

This study posits that transfer from the first language influences the over-passivizations in both accusative and unergative constructions. Specifically, this paper investigates the “indirect passive” construction in Japanese, as seen in (4), which is difficult to translate into English to examine the influence of knowledge of Japanese L2ers on the over-generation of intransitive passive.

- (4) Taro wa kaerimichi ni ame ni furare-ta.
 Taro TOP the way back home LOC rain DAT PASSIVE–PAST
 (Intended meaning) Taro got wet as it rained while he was on his way back home.

Yamakawa (1994), Inaba and Inaba (2019) and others argue that the suffix “rare” in (4) is the same inflection as the passive form, leading L2 learners to overuse passivization in intransitive constructions. For example, Yamakawa (1994) carried out an experiment in which participants were expected to translate indirect passive constructions of Japanese to English and examined the ratio and frequency of errors in the resulting English translations. In contrast, this study explores the influence of the first language transfer on over-passivization, explicitly studying the correlation of acceptance between translated English versions of indirect passives in Japanese and over-passivized English intransitive constructions.

3 Experimental Methodology

This study involved an acceptability judgment test including five patterns of passive constructions across 30 experimental sentences. We adopted the test design of Sato (2008) where participants judge sentences from -2 (totally unacceptable) to +2 (totally acceptable). These experimental sentences comprised five different construction patterns, as seen in Table 1. Pattern I comprised four unaccusative verbs with transitive alternation, Pattern II included four unaccusative verbs without transitive alternation, Pattern III contained four unergative verbs, and Pattern IV involved three indirect passive constructions of intransitive verbs. Pattern V consisted of three passive constructions of transitive verbs. The experimental sentences also include 12 grammatically correct sentences, such as simple question sentences and affirmative sentences, serving as distractors¹. The sentences with unaccusative verbs used in this experiment

¹The sentences used in the experiment are shown in the appendix.

Table 1: Patterns of verbs used in the experiment

Patterns	Types of verbs
I	Unaccusative verbs with transitive alternation
II	Unaccusative verbs without transitive alternation
III	Unergative verbs
IV	Indirect passives (intransitive verbs)
V	Indirect passives (transitive verbs)

were borrowed from Perlmutter (1978) and Yamakawa et al. (2005) and Inaba (2020) and were changed for the design and purpose of the study. Three native speakers judged the experimental sentences in advance, and we selected those whose positive or negative acceptance levels were the same among native speakers. The experimental sentences were randomly shuffled and presented to participants for testing. 32 Japanese undergraduate university students (intermediate level) participated in this research. The content of this study was submitted to and approved by the University's Non-Medical Research Ethics Review Committee.

4 Results and Discussion

This section presents the results and discussion of the experiments. Table 2 and Figure 1 show the mean acceptability score for each construction pattern. The mean of passives of unaccusative verbs without transitive alternation is 0.95 (SD = 0.68). MacDonald's omega was used to examine reliability, which was .76. The mean of passives of unaccusative verbs with transitive alternation is 0.86 (SD = 0.87 and MacDonald's omega = .76). The means of indirect passive construction of transitive and intransitive are -0.76 and -0.34, respectively. The mean value of transitive and intransitive indirect passives in total verbs is -0.55 (SD = 0.83 and omega = .78). The mean value of unergative passive construction is -0.32 (SD = 1.14, omega = .90). MacDonald's omega of each pattern ranges from .69 to .9, which is relatively high and reliable. When comparing the acceptability of passive constructions of unaccusative and unergative verbs, it has been observed that unergative verb passives are much less acceptable than unaccusative verb passives, as shown in previous research. All distractors were grammatical sentences, and the mean of participants' acceptability was 0.99, the highest score in every pattern, illustrating that participants' grammatical judgments were reliable.

To examine the influence of language transfer of L1 on English, Spearman's rank correlation between indirect passives (of intransitive and transitive verbs) and passives of unaccusative and unergative verbs was calculated. Figure 2 shows the correlations across each pattern. The bottom right of Figure 2 shows the distribution of the acceptability scores of indirect passives (intransitive + transitive verbs), and on top of that are the correlations r with each pattern. There was a statistically significant correlation between indirect passives, including both intransitive and transitive verbs, and unergative passives was .64 ($p < 0.01$). As outlined in (4) of Section 2, the indirect passive construction is grammatical and

Table 2: Mean of acceptability of pattern I to V

Patterns	I	II	III	IV	V
mean (SD)	0.86 (0.87)	0.95 (0.68)	-0.32 (1.15)	-0.34 (0.82)	-0.76 (1.14)

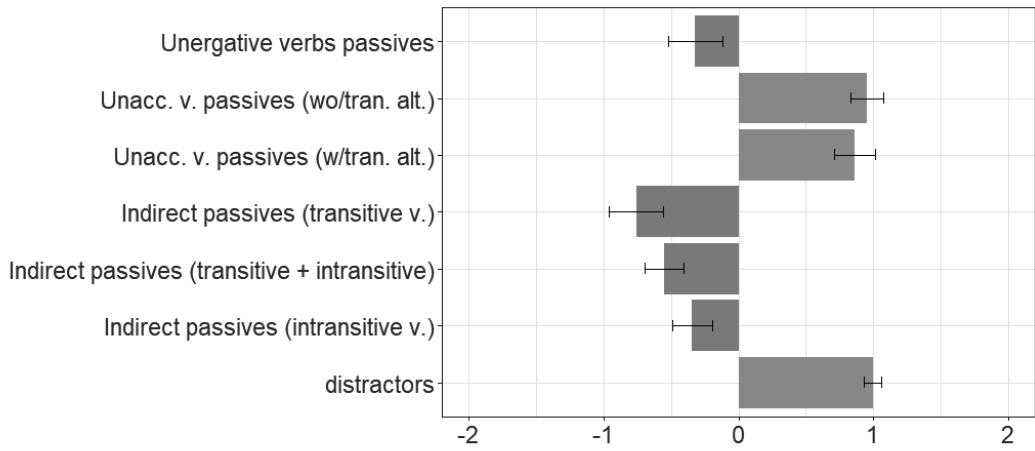


Figure 1: Mean of acceptability of each pattern

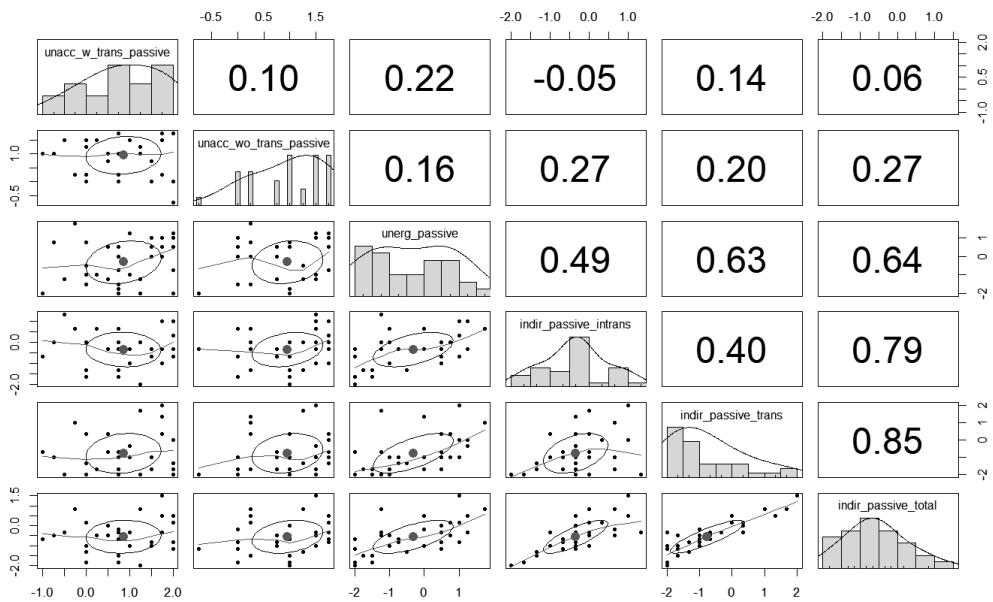


Figure 2: Coorelation across patterns

acceptable only in Japanese, and when it is translated into English, it is unacceptable. If we assume that the knowledge of Japanese L2ers is involved in the level of acceptance of indirect passive construction in English, which results in ungrammaticality, first language knowledge could have some correlation with the over-passivization of the unergative intransitive.

One thing remaining as future research is whether different mechanisms work for the over-passivization between unaccusative passives and unergative passives. The correlation between indirect passive and unaccusative verbs with and without transitive alternation is .06 and .27, respectively, suggesting that other factors may be involved. Even when we check the indirect passives of intransitive and transitive verbs' correlation with unaccusative passives with and without transitivity, -.05 and .14 are for unaccusative passives with transitivity, which show almost no correlation with indirect passives, and .27 and .20 are for unaccusative passives without transitive alternation, which show very low correlation with acceptance of indirect passives. As far as we know, there has been little previous research in the literature investigating over-passivization in terms of the relationship between unaccusative with and without transitive alternation and unergative verbs from the viewpoint of first language transfer, so a new design of experiment is needed to examine these issues as a future task.

5 Conclusions

This paper examined the influence of first language knowledge on the over-passivization of intransitive verbs, such as unaccusative and unergative verbs. An acceptability judgment test was conducted on participants, and it was observed that unergative verb passives are less acceptable than unaccusative verb passives, as indicated in previous research. Spearman's rank correlation on acceptance level between over-passivized intransitive and indirect passives was calculated, and there has been a correlation ($r = .67$, $p < 0.01$) between intransitive passives and unergative passives. In contrast, the correlations between indirect passives and unaccusative verb passives were low (-.05 to .27), so there could be a possibility that other factors may come into play. As further research, a new experiment needs to examine the relationship between unergative passives and unaccusative passives regarding language transfer.

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Appendix

Sentences used in the experiment.

Patterns	Types of verbs	Sentences
I	Unacc. verbs w/ tran.	His salary was increased by his company last year. This restaurant was opened by the owner last year. The class was started by the teacher at 10:30. The car was stopped by the police officer yesterday.
II	Unacc. verbs wo/ tran.	The girl was disappeared without saying anything. The train was arrived 20 minutes late because of the accident. The poster was fallen by the strong wind last night. The accident was happened by the taxi driver last night.
III	unergative verbs	My sister was worked by her boss on the weekend. The students were run by their coaches at school. The student was swum by his teacher at school. The students were danced by their teacher at their school festival.
IV	Indirect passives (intr.)	The teacher was cried by his student yesterday. His father was died by his son three months ago. My sister was rained on the way back home.
V	Indirect passives (tr.)	My father was broken his watch yesterday. My sister was built the apartment by the owner in front of her house. My brother was read a letter by my mother yesterday.
	distractors	My father was playing basketball when he was a child. Have you heard about the news? My brother prepared for the test as best as he could. My brother did weight training to get muscular arms. Although he is not rich, he is quite happy. What do you think she said? What do you think of it? No other book is as good as that one. My sister is taller than anyone else in my family. My older brother hasn't seen his own child for eight years. The movie was not what I thought it would be. That baseball player wanted to retire as soon as possible.