Acquisition of English Ditransitive Verb Structure by Japanese Learners of English

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1. Introduction

In the field of comparative linguistics, there are various typological differences between English and Japanese. Many studies have investigated the syntactic differences in English and Japanese and shed light on the linguistic issues in the two languages. Nakayama (1996; 16-22) categolized the typological differences between English and Japanese into the following five differences: Head-first vs. Head-final, Case particles, Interrogative maker and Wh-*in-situ*, Scrambling, and Empty Pronouns. One of the salient syntactic differences between English and Japanese lies in the direction of the projection of a phrase, namely, Head- first versus Head-final. In English, a head in a phrase comes first, whereas in Japanese, a head comes final in Japanese. The difference of the Head direction causes the basic word order differences between English and Japanese. Another difference relevant to Empty Pronouns can be defined as the presence or the absence of the phonologically null pronouns. In English, a subject noun, a direct object, and an indirect object phrase cannot be omitted in a tensed clause, thus they all have to be phonologically realized. On the other hand, a subject noun phrase, a direct object, and an indirect object phrase in Japanese can be null, and they do not have to be phonologically represented in a tensed clause as long as they can be identified in a context.

One of the fundamental issues in second language acquisition (SLA) pertains to the question of how second language learners acquire the L2 syntactic structures that differ from the ones in their native languages. The process in which the second language learners are influenced by their native language is called L1 transfer or Cross Linguistic Influence, and many researchers have investigated how L1 transfer influences the acquisition and use of the second language. Ellis (1997; 51) discusses that L1 transfer can be divided into two types: positive transfer and negative transfer. Positive transfer concerns the phenomenon that has a positive influence on the second language learning and eventually facilitates the acquisition of second language. On the other hand, negative transfer is defined as an influence that has a negative influence on the second language learning and causes errors in L2 acquisition. Thus, it would be meaningful for SLA researchers to examine the L1 influence on the L2 grammatical acquisition, and investigate reasons why L2 learners make L1 negative transfer errors.

As previously stated, there are many syntactic differences between English and Japanese, and many researchers have investigated the syntactic differences from a theoretical perspective. However, little is known about how Japanese learners of English acquire the grammatical differences found in English and in Japanese, and whether their L2 acquisition is influenced by their L1. This study investigates if the difference found in empty pronouns phenomenon between English and Japanese influences Japanese learners' L2 English acquisition of the English ditransitive verb structure which requires two noun phrases.

In the following sections, the theoretical background of the research, the details of the study and a discussion of the results will be presented will consisted of conclusions and implications for future research.

2. Theoretical Background

2.1. L1 Transfer

L1 transfer, which is also referred to as cross-linguistic influence or linguistic interference, can be found in various fields of L2 language acquisition. For example, Shirai (2008; 7) shows that Japanese learners of English tend to substitute the bilabial, stop consonant [b] for English labio-dental, fricative consonant [v] when they pronounce the English word, 'over.' One of the reasons of this mispronunciation can be attributed to the fact that the Japanese language lacks labio-dental, fricative consonants (Tsujimura, 1996; 13), and it would be unusual for the native speakers of Japanese to execute this consonant. Therefore, it is common for L2 learners of English to replace the bilabial, stop consonant [b] to the labio-dental, fricative consonant [v] in their pronunciation of the English word. This sort of error represents negative transfer or linguistic interference in L2 acquisition. Negative transfer is found not only in phonological errors but also in the various linguistic subsystems, such as syntax, morphology, lexicon, and discourse. Shirai (2008; 7) pointed out that Japanese learners of English often make grammatical mistake such as that in (1a):

(1a) When he came back, I will talk to him.
(1b) When he comes back, I will talk to him.

(1a) is ungrammatical, because the present tense must be used in the adverbial clause as is shown in (1b). Shirai (2008) discusses that Japanese learners of English tend to unconsciously recall the Japanese past tense verb, *kita*, which literally means 'came' in English. Then, they would mistakenly translate the Japanese past tensed verb into the English tensed verb 'came.'

Another syntactic error that can be caused by negative transfer is found in the English sentence that the Japanese learners of English produce in the process of English acquisition.

(2) My school is school uniform.

<div style="text-align:center">(Shirahata et al., 1999; 310)</div>

The English sentence in (2) is strange, because the school cannot be a school uniform. However, the Japanese learners of English often mistakenly produce the English sentence in (2) when their intended meaning is in fact, 'My school has a school uniform,' or 'I have to wear a school uniform.' Shirahata et al. (1999) pointed out that the one of the reasons for the error could be attributed to the fact that Japanese is typologically categorized into a topic-prominent language (Okutu, 1978). One of the features of topic-prominent languages is that they emphasize the topic-comment structure of the sentence like 'X' is 'Y.' Since Japanese learners of English are so familiar with the topic-comment structure that the structure in their native language tends to induce the wrong English structure as in (2). This kind of error also reflects the negative transfer or L1 interference to L2 acquisition in syntax.

While negative transfer interferes and causes negative influence on the acquisition of second language, learners' native languages sometimes facilitate L2 acquisition. This is called positive transfer. For example, it is often said that it is easier for the Japanese learners of English to acquire the possessive form represented by -' as in 'John's' than the morphological suffix indicating the plural form as in 'books.' Shirai (2008; 14) discusses that the learners' native language, Japanese, morphologically does not distinguish between a singular form and a plural form, and does not represent a plural form by adding "-s" to a noun. Therefore, Japanese learners of English would have some difficulties in acquiring the suffix of the plural forms, because their L1 and L2 do not share the syntactic feature for indicating the plural forms. However, the syntactic structure of the English possessive form represented by -' closely resembles the possessive form in Japanese, as shown in (3a) and (3b) respectively:

(3a) John's book

(3b) John-no hon

Japanese learners of English would notice the structural similarities between Japanese and English possessive forms, and they would find it easier to acquire the English possessive form than the English plural form. Thus, L1 transfer has both positive and negative influence on the L2 acquisition.

2.2. Pro-drop Parameter

In this section, I survey the theoretical background of one of the typological differences between English and Japanese: pro-drop parameter. Pro-drop parameter was originally proposed to explain the null subject phenomenon in the Romance languages such as Italian, Spanish, or Portuguese. In these languages, certain classes of pronouns can be null, and

thus, they need not be phonologically realized in a tensed clause as long as they can be retrieved in a discourse. Consider the following example in Italian:

(4) [e] ho trovato il libro.
    "I found the book."
                                    (Chomsky, 1981:240)

In (4), the subject pronoun 'I' can be left null, as it do not have to be phonologically realized. On the other hand, English does not allow a subject pronoun to be empty, so it always must be overt in a sentence as shown in the following examples.

(5) a. I found the book.
    *b. [e] found the book.

Chomsky (1982) pointed out that the rich agreement system between a pronoun in a subject position and an inflection of the verb allow the subject pronoun to be null in a tensed clause in Romance languages. Consider the following examples from Italian:

(6) a. io parlo   parlo   'I talk'
       tu parli   parli   'you talk'
       lui parla   parla   'he talks'
       noi parlamo   parlamo   'we talk'
       voi parlate   parlat   'you talk'
       loro parlano   parlano   'they talk'
                                    (Nakamura *et al.*, 1989: 152)

The pronouns in the subject positions can be either null or overt in (6), and verbs inflect in accordance with what the subjects are. Thus, the verb inflectional systems in the Romance languages are rich enough for a null subject to be easily retrieved in a sentence.

Japanese is also considered as one of the pro-drop languages, along with Korean and Chinese, because the pronouns in subject and in object positions can be phonologically unrealized in tensed clauses, as illustrated in (7)[1]:

(7) a. John-ga [e] tataita.
       'John hit him/her/it them.'
    b. [e] Bill-o tataita.
       'He/She/ They hit Bill.'
    c. [e] [e] tataita.
       'He/She/ They hit him/her/it them.'
                                    (Nakayama, 1996: 21-22)

In (7a), the pronoun in the object position is omitted, and it can refer to either 'him,' 'her,' 'it,' or 'them.' The subject pronoun in (7b) is also null, and its interpretations can be either 'He,' 'She,' 'They,' or other animate subjects which are identified in the contexts. In (7c), both the pronouns in the subject and in the object positions can be omitted as long are they are retrieved in the contexts. Therefore, even if Japanese do not have a rich morphology in the subject-verb agreement system like Italian, the pronouns both in the subject and in the object positions can be omitted in the sentences.

In sum, regarding the pro-drop or empty pronoun phenomenon, the languages are classified into two types: non pro-drop languages like English and French, or pro-drop languages such as Italian, Spanish, Portuguese, Japanese, Korean, and Chinese (cf. Chomsky 1981, Jaeggli and Safir 1989). Chomsky (1981) proposed pro-drop parameter to capture this typological difference in a uniformed way. He asserts that English has [- pro drop] parametric value, and Italian and Japanese have [+pro drop] parameter. According to the theory of pro-drop parameter, children acquiring L1 are born with having the both values of pro-drop parameter: [-pro drop] and [+pro drop]; however, in the process of L1 acquisition, they select either of these two parametric values based on the input they are exposed to. This raises a major research question: whether L2 learners, whose L1 pro-drop parametric values have already been set, are to "reset" the parameter in the course of their second language learning.

In the following section, I will examine the previous studies that investigate if L2 learners can reset the parametric values of pro-drop parameter, and if so, how and when they reset the values.

2.3. Parameter Resetting in L2 Acquisition

While various research studies have examined children's L1 acquisition of pro-drop parameter, SLA researchers have investigated a particular formidable question: how would adult second language learners, whose parametric values of pro-drop parameter differ from L1 to L2, notice and reset the parameter. White (1985) investigates how adult native speakers of Spanish learning English as a second language acquire the non pro-drop characteristic in English. She tests if the adult native speakers of Spanish learning English carry their L1 Spanish parametric values, [+pro-drop], over from their L1 Spanish to L2 English, which has [-pro-drop]. If so, it is expected that they will make a transfer error of missing pronouns in English sentences.

The subjects in White (1985) were 73 adults learning English at ESL courses in Canada. Out of them, 54 subjects were native speakers of Spanish, and 19 subjects constituting the control group were native speakers of French. All the subjects were divided into five levels on the basis of English proficiency: level one being beginning, and level five advanced. The task of the experiment was a grammaticality judgment task. The subjects were asked to judge if the given English sentences as in (8) were correct or incorrect:

(8) a. We will be late for school if don't take this bus.

　　b. My sister is very tired because came home late last night.

　　c. Francis is in trouble because did not do his homework.

　　d. John is greedy. Eats like a pig.

                                                        White (1985:62)

The experimental sentences of the experiment in White (1985) contained other ungrammatical English sentences with missing expletive pronouns, ungrammatical subject-verb inversion, or so-called *that*-trace violation. However, I will examine only the results of the experimental sentences with missing pronouns, as in (8).

The results indicated that the adult native speakers of Spanish learning English seemed to carry their L1 Spanish parametric value over to L2 English. White (1985:53) reported that 37% of the native speakers of Spanish judged (8a) was correct as an English sentence. This judgment is incorrect, as English does not allow an empty pronoun in a tensed clause. On the other hand, 21% of the native speakers of French judged (8a) is correct. Regarding (8b), 35% of Spanish speakers judged it correct, while 5% of French controls judged it correct. The difference between Spanish and French responses for (8b) is statistically significant. Spanish speakers responding (8c) correct were 48%, and 10% of French speakers judged it correct. The difference of responses between Spanish and French speakers is also significant. For (8d), 41% of Spanish speakers judged it correct, while 16% of French speakers judged it correct. The differences between Spanish and French responses for (8a) and (8d) are statistically insignificant.

White (1985:53) further examines if the subjects' English proficiency may affect the grammaticality judgments of the English sentences in (8). The examination of the results revealed that the beginning level subjects in the Spanish speaking group were more inclined to judge the ungrammatical sentences as grammatical. That is, the better the subjects improved in English, the less they tend to accept the ungrammatical English sentences in (8). For example, 100% of the subjects in the beginning level judged (8a) as grammatical, 64% in level 2, 37% in level 3, 17% in level 4, and 0% in level 5. This result indicates that the adult native speakers of Spanish learning English as a second language can reset the pro-drop parameter as they improve in English learning.

In sum, the study of White (1985) suggests that the adult native speakers of Spanish learning English as a second language initially hold their L1 pro-drop parameter, thus they make some errors in judging the grammaticality of the English sentences with empty pronouns. It could be inferred that the errors were caused by L1 negative transfer. However, as they advance in English proficiency, they could effectively reset their L1 parameter to the L2 parametric value.

3. The Study

The present study investigates how adult native speakers of Japanese learning English as a second language acquire the English grammatical construction with a ditransitive verb, which must take a subject noun and two objects in a tensed sentence. Since Japanese allows empty pronouns in object positions, Japanese learners of English may make transfer errors which omit object noun phrases in English sentences, due to the interference of their L1 Japanese.

3.1. Subjects

The participants of this study were 12 college students[2]. All the subjects were in sophomore, junior, or senior years studying English or psychology at a university in Japan. They had been studying English since they were in junior high school. After they enrolled in college, they took at least two compulsory English courses in their freshman year. Those who majored in English took other English courses which put their focus on English speaking, listening, reading and writing. Some of them had been to English speaking countries when they participated in this experiment, but none of them had lived in English speaking countries for more than a year.

3.2. Method

The task in this study was a sentence completion task. The participants in the study were asked to complete 32 English sentence fragments as they saw fit. The fragments consisted of two components: subject nouns with definite article and seven different kinds of ditransitive verbs, as exemplified in (9)[3]:

(9) The king gave... .

The participants could complete the fragments as they wanted. Thus, they could complete the fragments either with direct objects with prepositional phrases, as in (10a), or with double objects, as in (10b):

(10) a. The king gave *the sword to his son.*
      b. The king gave *his son the sword.*

Even though the participants could complete the fragments with either of the constructions in (10a) or (10b), English grammar requires both a direct and an indirect object to exist after a ditransitive verb. In addition to the test fragments, 24 filler fragments were also prepared to disguise the purpose of the test.

3.3. Results and Discussion

The sentence completions data from 12 participants were scored as prepositional completion, double objects completion, pro-drop completion or other. I scored the fragment completions as prepositional completion, only when the participants completed the fragments with theme noun phrases followed by the prepositions 'to' or 'for' plus beneficiary noun phrases, (e.g., The trainer gave *the towel to the runner*). I also scored fragment completions as double object completion when beneficiary noun phrases immediately followed by theme noun phrases were placed after the provided fragments (e.g., The bellboy handed *the guest a room key*). The sentence completions that lack theme noun phrases and/or beneficiary noun phrases (e.g., The hostess handed *a wine glass*) were scored as pro-drop completion. All other completions were scored as other (e.g., *The kid brought *his bicycle his room*). Table 1 illustrates the summary of each completion type:

Table 1   The sentence completions results

completion type	number of completion and the percentile in all completions
prepositional completion	151 (39.3%)
double objects completion	55 (14.3%)
pro-drop completion	162 (42.2%)
other	16 (4.2%)

As table 1 shows, out of the 384 fragments completions, 39.3% of them were completed with the prepositional completion such as *The student sent the letter to his friend.* On the other, only 14% of the completions were of the double object construction. Thus, the participants could made 53.6% of the grammatical English sentences either with direct objects with prepositional phrases or with double objects. Regarding the ungrammatical completions of the fragments, 42.2% of them were completed with the single object construction. This result indicates that the participants of the test omitted theme noun phrases and/or beneficiary noun phrases even if English grammar requires both of them after the ditransitive verbs. The other ungrammatical completions were 4.2%. As the results illustrate, the participants tended to complete the fragments with the prepositional completion. One of the reasons for this tendency would be attributed to the existence of the preposition. Since Japanese represents the grammatical functions such as the accusative, the dative, the genitive cases with Case particles, native speakers of Japanese learning English might prefer to complete the fragments with the prepositional completion.

The results discussed above seem to indicate the possibility that the adult native speakers of Japanese learning English as a second language may carry their L1 pro-drop parameter over to L2 English parameter, due to the interference of L1 parameter setting. Thus, the participants of the test might omit the noun phrases in more than 40% of the

sentence completions. However, in more than 50% of the completions, the participants produced the grammatical sentences in which both theme noun phrases and beneficiary noun phrases were placed after the ditransitive verbs. This result implies that the tested Japanese L2 learners of English acquire the English ditransitive verb structure and reset their L1 parameter correctly to L2 non pro-drop parameter in the process of English learning.

4. Conclusion

The present study examined the acquisition of the English ditransitive verb structure by a group of adult native speakers of Japanese learning English as a second language. The production data from the Japanese L2 learners of English indicated that English learners at this level of proficiency tend to omit noun phrases after English ditransitive verbs. This result is consistent with the findings in White (1985), which revealed that adult native speakers of Spanish learning English as a second language initially seem to hold their L1 pro-drop parameter setting, and make some L1 transfer errors in judging the grammaticality of the English sentences with empty pronouns. White (1985) further discussed that the Spanish L2 learners of English could reset their L1 parameter to the L2 parametric value as they advance in English proficiency. The same tendency was also found in the production data in the present study: more than 50% of the completions were grammatical non pro-drop English sentences. Thus, further researches that examine the Japanese L2 learners' production data from different levels of English proficiency will be necessary in order to investigate the source of the transfer errors of pro-drop phenomenon.

Notes:

1. The phonologically unrealized pronouns are also referred to zero pronouns, empty pronouns.
2. The subjects participated in the test as a part of their course work.
3. The ditransitive verbs used in the test are "handed," "gave," "lent," "showed," "sent," "brought," and "offered."

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