

# The role of morphology in the L2 acquisition of unaccusative verbs

Yasuko SATO

## 0. Introduction

Morphology plays an important role in semantics-syntax correspondences in that it can mark grammatical functions of arguments and argument structure alternation. However, languages vary in how they mark argument structure alternation morphologically, and this causes learning problems for learners (e.g. Juffs 1996b; Montrul 2001a, 2001b, 2001c). For example, Japanese is a morphologically rich language while English is not, so this relative reduction in morphological marking of semantics-syntax correspondences in their target language poses problems to Japanese learners of English. With regard to unaccusative verbs, errors such as the incorrect passive (e.g. *\*The accident was happened*) have been reported (e.g. Balcom 1997; Oshita 1997, 2000; Yip 1995; Zobl 1989). Furthermore, Japanese learners of English tend to prefer the passivised unaccusatives (e.g. *The door was opened*) to the intransitives (e.g. *The door opened*) even in the case where no agent is implied (e.g. Hirakawa 1995, 2003; Sato 2009). In Japanese, the morphemes mark the causative alternation overtly, which is strikingly different from English that does not mark the alternation overtly. This paper discusses morphological differences marking causative alternation between English and Japanese and considers learning problems in order to provide an account of the acquisition of unaccusative verbs.

## 1. Theoretical background

It has been suggested that so-called intransitive verbs can be divided into two types: unaccusative verbs as in (1a) and unergative verbs as in (1b) (Burzio 1986; Perlmutter 1978).

- (1) a. The door closed. (unaccusative)
- b. The boy laughed. (unergative)

The surface position of the sole argument of each verb is identical but the theme subject of unaccusatives is an internal argument. It is projected to the VP internal object position and moves to subject

position to receive case because unaccusatives are not able to assign case to their internal argument according to Burzio's Generalization.

Burzio's Generalization (Burzio 1986)

A verb which lacks an external argument fails to assign accusative Case.

Thus, the sentence (1a) is derived by NP movement of *the door* as in (2).

(2) The door<sub>i</sub> closed t<sub>i</sub>  
    ↑  
    └──────────┘

Some unaccusative verbs (e.g. *break*, *close*, *melt*, *open*, etc.) allow the argument structure alternation as shown in (3). In the pair of sentences in (3a) and (3b), the same semantic role is linked to different syntactic positions.

- (3) a. The sun melted the snow.  
    b. The snow melted.

English lacks the morphology marking the argument structure alternation while Japanese does not as seen in (4b) and (5b). Japanese has a causative marker such as *-e-* in (4) and an inchoative marker such as *-a-* in (5).

- (4) a. Mary ga doa wo shim-e-ta  
      Mary NOM door ACC close-CAUS-PAST  
    b. 'Mary closed the door.'

- (5) a. doa ga shim-a-tta  
      door NOM open-INCH-PAST  
    b. 'The door closed.'

If Japanese learners of English assume that the argument structure alternation is shown by overt morphology, they will not accept the argument structure alternation that is not marked by overt morphology in English, influenced by their L1.

## 2. Morphology marking argument structure alternation

In this chapter, first, we introduce in 2.1 Baker's (1988) morphological theory, according to which morphology plays an important role especially in changing grammatical functions of arguments, and following this, we show that Japanese has both productive and non-productive suffixes in 2.2 and 2.4 respectively after introducing the morphological patterns of the causative alternation proposed by Haspelmath (1993) in 2.3. Lastly, we summarise the differences between English and Japanese in morphology.

### 2.1 Changing grammatical functions and their relation to morphology (Baker 1988)

Baker (1988) examines the processes that change grammatical functions and calls them 'incorporation' by which one word is incorporated into another word. As a representative of these grammatical function changing processes, we may consider the passive in English. In the passive sentence, considered in relation to the corresponding active sentence, the syntactically highest argument is demoted or suppressed and the second highest argument is promoted to the subject position. We note that it is passive morphology *be-en* that signals the operation to suppress the syntactically highest argument and promote the second highest argument to the subject position. In (6), processes of syntactic changes in passive, antipassive, applicative, causative and possessor raising are represented in Baker (1988) as follows:

- (6) (i) Passive: subject  $\rightarrow$  oblique (or null); object  $\rightarrow$  subject  
 (ii) Antipassive: object  $\rightarrow$  oblique (or null)  
 (iii) Applicative: oblique/ indirect object/ null  $\rightarrow$  object;  
 object  $\rightarrow$  2nd object (or oblique)  
 (iv) Causative: a. null  $\rightarrow$  subject; subject  $\rightarrow$  null  
 b. null  $\rightarrow$  subject  
 If there is an object, subject  $\rightarrow$  oblique  
 otherwise, subject  $\rightarrow$  object  
 c. null  $\rightarrow$  subject; subject  $\rightarrow$  object  
 If there is an object, object  $\rightarrow$  2nd object (or oblique)  
 (v) Possessor Raising: possessor of object  $\rightarrow$  object; object  $\rightarrow$  2nd object

Baker (1988) argues that changing grammatical functions is associated with morphological changes,

by giving the following examples in (7) (Baker's (22)).

- (7) a. Passive: *bit*                    *was bit-ten* (English)  
                  *shikar-ta*    *sikar-are-ta* (Japanese)
- b. Antipassive: *paar-ai*    *paar-si-vuq* (Greenlandic)
- c. Applicative: *y-a-taa-ye*    *y-a-taa-ye-mo* (Kinyarwanda)
- d. Causative: *u-na-gw-a*    *a-na-gw-ets-a* (Chichewa)
- e. Possessor Raising: *a-na-dy-a*    *a-na-dy-er-a* (Chichewa)

(Baker 1988: 12)

The first verb form in (7a)–(7e) is related to the second verb form by a productive affix. The affixes in the examples above, Baker argues, act as a cue to signal that grammatical function changing takes place. Although his main claim is not to give a functional explanation to the relationship between morphology and syntax but to propose that all grammatical function changing processes are the movement of a word, his functional explanation for morphology provides a helpful framework within which accounts for Japanese learners' phenomena.

## 2. 2 Japanese productive suffixes

Japanese has the passive morpheme  $-(r)are^{-1}$  in (8a) and the potential morpheme  $-(r)e^{-2}$  in (9a). These bound morphemes in (8a) and (9a) are productive in that they can attach to the root form of a verb in a uniform way.

- (8) a. John no    nikki ga    haha    ni yom-are-ta.  
          John GEN diary NOM mother by read-PASS-PAST
- b. 'John's diary was read by his mother.'
- (9) a. Kono hon wa    kantan'ni yom-e-ru.  
          this book TOP easily    read-POT<sup>3</sup>-PRES
- b. 'This book reads easily.'

With regard to English sentences corresponding to Japanese passive and middle sentences in (8a) and (9a) respectively, only the passives in (8b) have overt passive morphology *was read* to mark NP movement of the logical object to the grammatical subject position as in (10). Middle sentences that

also involve NP movement as in (11) lack the marker.

(10) Passives: John's diary<sub>i</sub> was read t<sub>i</sub>.

(11) Middle verbs: This book<sub>i</sub> reads t<sub>i</sub> easily.

We have seen that Japanese has productive morphemes. Before going into non-productive morphemes as seen in transitive and intransitive verb pairs, we turn to the morphological patterns found in the causative alternation by surveying Haspelmath (1993).

### 2.3 The morphological patterns of the causative alternation in Haspelmath (1993)

Haspelmath (1993) examined the morphological patterns of inchoative and causative verb pairs and divided them into three types: causative, anticausative and non-directed alternations. In this account, causative verbs are defined as verbs including an agent causing an event, whereas inchoatives are verbs implying the absence of an agent and depicting the situation as if occurring spontaneously. In the causative alternation, the inchoative verb is basic and the causative verb is derived. For example, in French, a causative verb is marked by the causative auxiliary *faire*, and in Arabic, it is marked by stem modification as in (12a) and (12b) respectively.

(12) a. French fondre 'melt (intr.)'

*faire* fondre 'melt (tr.)'

b. Arabic darasa 'learn'

darrasa 'teach'

Haspelmath (1993: 91)

Meanwhile, in the anticausative alternation, the causative verb is basic and the anticausative verb is derived. In Russian, an anticausative verb is marked by the affix *sja* as in (13a), and in Hindi-Urdu, it is marked by stem modification as in (13b).

(13) a. Russian katat'-*sja* 'roll (intr.)'

katat' 'roll (tr.)'

b. Hindi-Urdu khul-naa 'open (intr.)'

khol-naa 'open (tr.)'

Haspelmath (1993: 91)

In the case of verbs belonging to non-directed alternations, they are further divided into three types: suppletive, labile and equipollent. In suppletive alternations, different lexical items are used, such as *kill* and *die* in English: the verb pairs in this group are not morphologically related to each other.

In equipollent alternations, both causative and inchoative forms are derived from the same stem with different affixes as in the Japanese examples (14a) and (15a) respectively. Labile alternations allow the same verb to be used both for causative and inchoative use, as seen in the English examples (14b) and (15b) respectively.

- (14) a. John ga    doa    o   shim-e-ru  
          John NOM door ACC close-CAUS-PRES  
      b. ‘John closes the door.’

- (15) a. Doa ga    shim-a-ru  
          door NOM close-INCH-PRES  
      b. ‘The door closes.’

In (14a) and (15a), the verbal suffixes *-e-* and *-a-* function as causative and inchoative morphemes, respectively. However, the morpheme *-e-* is also used as an inchoative morpheme, as shown in (17a), in relation to (16a).

- (16) a. John ga    mame   o   ni- $\phi$ -ta  
          John NOM beans ACC boil-CAUS-PAST  
      b. ‘John boiled beans.’

- (17) a. Mame ga   ni-e-ta  
          beans NOM boil-INCH-PRES  
      b. ‘Beans were boiled.’

The morphological complexity of transitive and intransitive verb pairs sharing the same stems will be summarised in a moment.

## 2. 4 Transitive and intransitive verb pairs in Japanese

We saw above that Japanese has productive suffixes. However, all the suffixes are not productive and

some suffixes appear with only the specific verb roots. The transitive and intransitive suffixes are such cases. Shibatai (1990) divides transitive/intransitive verb pairs according to their derivational affixes which show a certain sub regularity<sup>4)</sup>. Although the morphological patterns marking transitive and intransitive verb pairs are not as regular and productive as the morpheme of passives, the verb pairs share a non-suffixed stem, as shown in *shim-* in (14a) and (15a) and *-ni-* in (16a) and (17a). So they are related to each other in terms of morphology. We present four major morphological patterns of transitive and intransitive verb pairs based on Shibatai's (1990) classification in Table 1.

**Table 1 Transitive and intransitive verb pairs in Japanese**

Morphological pattern	Intransitive	Transitive	Meaning
(1) -ar <sup>5)</sup> / -e-	hirom-ar-u	hirom-e-ru	spread
	hajim-ar-u	hajim-e-ru	begin
	shim-ar-u	shim-e-ru	close
	tom-ar-u	tom-e-ru	stop
(2) - $\phi$ - / -e-	ak-u	ak-e-ru	open
	sizum-u	sizum-e-ru	dissolve
	tsuzuk-u	tsuzuk-e-ru	continue
	ukab-u	ukab-e-ru	float
(3) - $\phi$ - / -as-	kawak-u	kawak-as-u	dry
	koor-u	koor-as-u	freeze
	kusar-u	kusar-as-u	spoil
	wak-u	wak-as-u	boil
(4) -e- / - $\phi$ -	sak-e-ru	sak-u	split
	war-e-ru	war-u	break
	yak-e-ru	yak-u	burn
	yabur-e-ru	yabur-u	break

The four morphological patterns show a certain regularity and each morpheme in four patterns is used only with specific verbs, which reveals that the morphemes in transitive/intransitive verb pairs are not so regular as the morphemes of passive and middle verbs as seen in 2.2.

## 2. 5 Summary

We have examined the role of morphology in signalling argument structure alternation by surveying Baker's (1988) morphological theory and as a typical example, passive morphology *be + en*, which functions as a NP movement marker, was given. We then showed that Japanese has productive passive morpheme and non-productive morphemes (e.g. causative and inchoative morphemes in transitive and intransitive verb pairs respectively).

### 3. Learning problems for Japanese learners of English

This chapter reviews the main findings of experimental studies whose subjects are Japanese learners (e.g. Hirakawa 1995; Montrul 2001c; Oshita 2000; Sato 2009) and identifies learning problems caused by English unaccusative verbs.

#### 3. 1 Hirakawa (1995)

This experimental study examined L2 acquisition of English unaccusatives by Japanese learners at the intermediate level. The specific purposes were to examine how unaccusativity is represented in the interlanguage grammar of Japanese learners, and to explore the learners' knowledge about NP movement in English. The verb types tested were alternating unaccusatives (e.g. *melt*, *break*), non-alternating unaccusatives (e.g. *appear*, *die*), unergatives (e.g. *sing*, *cry*), middle verbs (e.g. *wash*, *read*) and transitives (e.g. *hit*, *cut*). In sentence completion task, the subjects were presented with stories, which provided a context in which only the intransitive structure was allowed with regard to alternating unaccusatives, and were asked to complete sentences with an appropriate form of the designated verb.

The results showed that as far as the alternating unaccusatives were concerned, the learners produced passivised unaccusatives with three verbs out of six: *break* (5 subjects out of 11), *spill* (3 out of 11) and *dry* (5 out of 11). The learners produced an inappropriate passive form such as *all of the snow was melted* in cases in which *all of the snow melted* should have been produced, regardless of the context in which only a change of state reading was possible. With regard to non-alternating unaccusatives, there were no passivised errors, contrary to the previous studies (e.g. Balcom 1997; Yip 1995; Zobl 1989).

The same verbs were used for a grammaticality judgement task in which the learners were presented with stories and asked to judge the appropriateness of a sentence that appeared at the end of each story. There were four sentence types to be tested: intransitive sentences, short passive sentences, full passive sentences and transitive sentences. The overall results indicated that the learners failed to reject ungrammatical passives such as *\*Jane was fallen down* and *\*Bill was cried*. However, the subjects who allowed incorrect passivised unaccusatives did not always assume that there are transitive counterparts for the verbs. Hirakawa attributed these errors to the fact that problematic verbs in this experiment have transitive counterparts in Japanese (e.g. *taoreru* 'fall (int.)' / *taosu* 'fall (tr.)', *naku* 'cry (int.)' / *nakasu* 'cry (tr.)') and suggested the effect of morphological properties of Japanese intransitive/transitive verb pairs in the acquisition of unaccusative verbs.

### 3. 2 Oshita (2000)

Oshita (2000) summarised the accounts proposed by the previous research as follows:

- (i) Transfer of a compound tense/aspect structure in the learners' first language
- (ii) Overgeneralisation of adjectival passive formation in English
- (iii) Non-target lexical causativisation
- (iv) Identification of the passive morphosyntax with the lack of a logical subject
- (v) Nontarget overt marking of syntactic NP movement.

Oshita (2000: 293)

Oshita re-examined the data reported in previous work with the large computerised database and proposed 'the movement-marker analysis' as in (v) above. In his data, 10 non-alternating unaccusative verbs were chosen: *appear, arise, arrive, die, disappear, exist, fall, happen, occur* and *rise*. A total of 941 tokens were obtained on unaccusative verbs. They were divided into nine syntactic patterns. The most common pattern used by all the L1 groups<sup>6</sup> was NP-*be*-Ven (e.g. *\*Three boys were arrived*), which confirmed to the observations made by previous studies. This result was interpreted as evidence against the transfer account given in (i) above because L2 learners with different L1s made the same errors. Furthermore, the adjectival passive account in (ii) was not supported by examples such as *\*...they were happened a few days ago* (Oshita 2000: 312). In this sentence, stative meaning which adjectival passives should denote cannot be expressed because the time adverbial, *a few days ago*, is present. The third account of passive unaccusatives is based on the evidence that learners causativise non-alternating unaccusatives as seen in *\*I rose my hand* (Oshita 2000: 313). However, Oshita argues against this account. If the passive unaccusatives are produced by learners assuming that the verb is causative, there should be evidence that the passive is a verbal passive, for example, indicating the existence of a suppressed external argument. However, there was only one example out of 11 tokens which could be regarded as the verbal passive in the corpus data. This was regarded as posing a challenge to the causativisation analysis of the passive unaccusatives. Oshita argued that the syntactic issue of passive unaccusative needs to be separated from the lexical issue of causativisation (Oshita 2000: 315). The fourth account was proposed assuming that passive morphology is associated with the lack of a logical subject. However, there were only 4 errors which were considered to support this account. Of these, *\*After the war, there were appeared a lot of women who believed...*(Oshita 2000: 315) is such a case. At the same time, however, post-verbal NP sentences without passive morphology such as *\*...it happened a tragic event / \*In every country exist criminals* (Oshita 2000: 315–316) were also found. So, this analysis was considered to be a weak explanation for the passive unaccusa-

tives. Having examined the four accounts proposed by previous research in the light of the corpus data, Oshita proposed that the passive unaccusatives can be taken as an overt marker of NP movement.

### 3.3 Montrul (2001c)

A series of experimental studies by Montrul (2000, 2001a, 2001b, 2001c) examined the acquisition of the causative alternation in English, Spanish and Turkish as second languages by learners whose native languages are English, Spanish, Turkish and Japanese. Montrul made the prediction that morphological errors can be traced back to L1 and conducted experiments using subjects whose L1s vary in the morphological manifestation of the alternation.

The hypotheses formulated were (1) if morphology is expressed overtly in L1 but not overtly in L2, learners will have difficulty with zero morphology in L2, and (2) if morphology is not expressed overtly in L1 but is expressed overtly in L2, learners will assume that such morphology does not have an overt form in L2 either. In the experiment, a picture was presented with a pair of sentences. There were two pictures per verb: one picture denoted a transitive situation in which an agent was doing something to someone or something and the other picture described an intransitive situation in which only one participant was given. All transitive pictures were accompanied by lexical causatives (e.g. *The thief broke the window*) and *make* causatives (e.g. *The thief made the window break*). In a similar way, all intransitive pictures were accompanied by intransitive sentences (e.g. *The window broke*) and passives (e.g. *The window got broken*). The verbs *make* and *get*, used in *make* causatives and in *get* passives, respectively, were used to manipulate the morphological and syntactic form of each verb because English lacks causative and anticausative markers. Three experiments, which were identical in methodology but different in terms of L2 languages, were conducted. We review the experiment 1 in which English was used as L2.

This experiment tested the hypotheses with Spanish and Turkish learners of English. It was predicted that Spanish learners whose L1 has overt anticausative morphology and non-overt causative morphology would be accurate with English unaccusative sentences with non-overt morphology but would be inaccurate with English intransitive sentences with non-overt morphology and prefer *get* passives as a correlate for the reflexive clitic *se* in Spanish. These predictions were confirmed and the results showed that L1 influence appeared in the domain of morphology.

In the case of Turkish learners, their L1 has both causative and anticausative morphology. However, not all verbs have both types of morphology. It depends on an individual verb whether it has causative or anticausative morphology. For example, Turkish verbs corresponding to English *melt* and

*sink* have causative morphology while those corresponding to English *open*, *close* and *break* lack causative morphology but have anticausative morphology. Turkish learners were expected to assume that English verbs also follow different morphological patterns like Turkish and treat individual verbs differently following their L1 rule. That is, it was predicted that Turkish learners would not accept transitive sentences of *melt* and *sink* which lack causative morphology but they would accept transitive sentences of *open*, *close* and *break* without causative morphology following their L1 rule of morphology.

The results showed that Turkish learners accepted transitive sentences without morphology (e.g. *The thief broke the window*) more than intransitive sentences without morphology (e.g. *The window broke*). With regard to *make* causatives (e.g. *The thief made the window break*), the learners did not prefer this sentence type, contrary to the hypothesis. Together with their acceptance of transitive sentences with non-overt morphology, their low acceptance of *make* causatives seems to indicate that Turkish learners did not transfer the causative morphology of their L1 onto English.

### 3. 4 Sato (2009)

Sato (2009) performed an experiment with 40 Japanese learners of English and 10 native speakers of English to examine (i) the effect of overt morphology in the absence of morphological cues in the L2 and (ii) the availability of a UG principle of canonical linking. She hypothesised that (i) the learners would accept the constructions with morphology (e.g. *get* passives and *make* causatives) more readily than intransitive and transitive sentences without morphology because intransitive/transitive verbs in Japanese are morphologically marked (the Morphological Cue Hypothesis) and (ii) linking the Theme to the subject would be more problematic than the Agent to the subject (the Non-Canonical Linking Hypothesis).

The experiment showed that Japanese learners failed to accept intransitive use of alternating unaccusatives without overt morphology and accepted contextually inappropriate *get* passives, influenced by their L1 that marks causative alternation overtly. The learners preferred passives because passive morphology overtly marks that the object is promoted to the subject position. Thus, this result confirmed the Morphological Cue Hypothesis.

Sato also found that *get* passives were more accepted than *make* causatives, which indicates learners' preference for passives. Considering the fact that Japanese and English are strikingly different from each other in that the former has both causative/inchoative morphemes whereas the latter has neither of them, it was predicted that if Japanese learners were influenced by overt morphology, they

were likely to reject both transitive and intransitive sentences of unaccusative verbs without morphology and accept *get* passives and *make* causatives. However, this was not the case with *make* causatives. Thus, she concluded that there is an interaction between a UG principle and L1 influence. *Make* causatives involve overt morphology and canonical linking whereas *get* passives involve overt morphology and non-canonical linking. Therefore it was concluded that Japanese learners only transferred morphological patterns in L1 when non-canonical linking is involved. Lastly, transitive sentences without morphology were more accepted than intransitive sentences without morphology. The learners' acceptance of transitive sentences without morphology was attributable to a UG principle of canonical linking. In other words, she argued that the linking rule of transitive verbs by which the Agent and the Theme are linked to the subject and object positions respectively is less difficult than that of intransitive verbs by which the Theme is mapped onto the subject position for Japanese learners, and it was concluded that learners followed canonical linking and the transitive form is syntactically easier than the intransitive form for Japanese learners. This is the issue that a series of Montrul's (2000, 2001a, 2001b, 2001c) experimental investigations have attempted to address but left unsolved because of morphological patterns in her subjects' L2s. Furthermore, she revealed that there is an interaction between a UG principle and L1 transfer: learners transferred their morphological patterns when non-canonical linking is involved, but not when canonical linking is involved. This can be interpreted as evidence against Montrul's (2000) modular view of transfer.

### 3. 5 Summary

The previous research reviewed above indicated that unaccusative verbs are difficult to acquire by L2 learners, especially as shown by the learners' incorrect passivised unaccusatives. Both Hirakawa (2005) and Oshita (2000) made syntactic explanations for learners' interlanguage claiming that the learners overgeneralise the passive morphology when promoting the single argument of an unaccusative verb to subject position. Although the two research did not aim to investigate the role of morphology, their work suggests that the learners are influenced by the passive morphology. Montrul (2001c) and Sato (2009) revealed the effects of overt morphology in L1 using the English learners with different L1s: Spanish and Turkish learners in Montrul (2001c) and Japanese learners in Sato (2009). Both studies showed their learners were affected by their L1s in morphology as predicted. However, the learners did not accept the transitive construction with overt marker, that is, *make* causatives, strongly, which was not consistent with the hypothesis. In this regard, it is necessary to take into consideration whether the overt morpheme is inflectional, derivational or syntactic, as Montrul admits that this might be 'an important and confounding factor' (2001c: 152). For example, the

English periphrastic causative, which was problematic for Japanese and Turkish learners, is syntactic and the verb *make* is used whereas the periphrastic causative is not syntactic but formed through derivational morphology in Japanese and Turkish. This difference between free and bound morphemes seems to have affected the learners, considering that their L1s are agglutinative languages.

#### 4. Conclusion

Based on our discussion of Japanese morphological patterns and the results of previous work, we provide an alternative account of the acquisition of unaccusative verbs by assuming the following rule:

Japanese learners' argument structure changing rule: suppress the most prominent argument and promote the second prominent argument to the subject position by means of passive morphology.

In (18a), the syntactically highest argument is marked by  $x$  and the second highest argument is  $y$ . In (18b),  $x$  is suppressed and  $y$  is promoted to the syntactically highest subject position. This process is overtly marked by passive morphology. An argument with  $\phi$  (e.g.  $x-\phi$ ) indicates that the argument is suppressed.

(18) a. melt ( $x(y)$ ) e.g. John melted the butter

$x$                        $y$   
Agent                      Theme

b. melted ( $y(x-\phi)$ ) e.g. The butter was melted.

$y$   
Theme

This learners' argument structure changing rule can be considered to make a unified explanation for the learners' behaviour with alternating unaccusative verbs.

As potential areas of future research, it will be useful to conduct tasks on the influence of L1 in morphology with a wider range of constructions that allow argument structure alternation. It needs to be established whether such tasks yield results that replicate the general results obtained from the previous research. Secondly, close examination of Japanese morphological patterns will be necessary to investigate the effect of L1 morphology in L2 acquisition. It has been suggested that there is a differ-

ence between bound morphemes in Japanese, specifically between productive morphemes such as passive suffix and non-productive morphemes such as transitive and intransitive suffixes. Admittedly, Japanese morphological systems, especially those denoting transitive and intransitive, are complicated. In order to give a fully satisfactory explanation for the results obtained from the previous studies, a finer classification of morphological forms as a framework will be necessary.

\*The study was conducted under financial support from Otomon Gakuin University ('tokushoku aru kojinn kenkyu'), for which I am grateful.

### Notes

- 1) The initial consonant *r* in this morpheme is maintained with a vowel-ending stem (e.g. *tabe-rare-* 'eat-passive') but not with a consonant-ending stem (e.g. *yom-are-* 'read-passive').
- 2) The initial consonant *r* in this morpheme is maintained with a vowel-ending stem (e.g. *hai-re-* 'enter-potential') but not with a consonant-ending stem (e.g. *ur-e-* 'buy-potential').
- 3) The abbreviation POT is used to refer to the potential suffix.
- 4) Jakobson (1992) lists 12 groups of the verb pairs and argues that there seems to be no rule explaining which affix attaches to which root form, so each verb must be learned on an item-by-item basis.
- 5) The inchoative verbs in this group have consonant-ending stem such as *hiromar* in *hiromaru*. So, *hirom-ar-u*, not *hirom-a-ru*, is used.
- 6) This data contains the sentences produced by native speakers of Italian, Spanish, Japanese and Korean.

### References

- Baker, M. C. (1988). *Incorporation: A theory of grammatical function changing*. Chicago: University of Chicago Press.
- Balcom, P. (1997). Why is this happened? Passive morphology and unaccusativity. *Second Language Research*, 13(1), 1–9.
- Burzio, L. (1986). *Italian syntax: A government-binding approach*. Dordrecht: Reidel.
- Haspelmath, M. (1993). More on the typology of inchoative/causative verb alternations. In Comrie, B. & Polinsky, M. (eds.), *Causatives and transitivity*. Amsterdam: John Benjamins. 87–120.
- Hirakawa, M. (1995). L2 acquisition of English unaccusative constructions. In MacLaughlin D. & McEwen, S. (eds.), *Proceedings of the 19th Annual BostonUniversity Conference on Language Development*. Somerville, MA: Cascadilla Press. 291–302.
- Hirakawa, M. (2003). *Unaccusativity in second language Japanese and English*. Tokyo: Hitsuji Syobo.
- Jacobson, W. M. (1992). *The transitive structure of Events in Japanese*. Tokyo: Kuroshio Shuppan.
- Juffs, A. (1996a). *Learnability and the lexicon: theories and second language acquisition research*. Philadelphia, PA: John Benjamins.
- Juffs, A. (1996b). Semantics-syntax correspondences in second language acquisition. *Second Language Research*, 12(2), 177–221.
- Katada, F. (1994). Pseudo intransitives and weak transitives. In Nakamura M. (ed.), *Current topics in English and Japanese*. Tokyo: Hitsuzi Shobo. 53–73.
- Montrul, S. (2000). Transitivity alternations in L2 acquisition: Toward a modular view of transfer. *Studies in*

- Second Language Acquisition*, 22, 229–273.
- Montrul, S. (2001a). The acquisition of causative/inchoative verbs in L2 Turkish. *Language Acquisition*, 9, 11–58.
- Montrul, S. (2001b). Causatives and transitivity in L2 English. *Language Learning*, 51: 1, 51–106.
- Montrul, S. (2001c). First-language-constrained variability in the second language acquisition of argument-structure-changing morphology with causative verbs. *Second Language Research*, 17, 2, 144–194.
- Oshita, H. (1997). *The unaccusative trap: L2 acquisition of English intransitive verb*. Ph. D. dissertation, University of Southern California.
- Oshita, H. (2000). What is happened may not be what appears to be happening: a corpus study of ‘passive’ unaccusatives in L2 English. *Second Language Research*, 16, 293–324.
- Oshita, H. (2001). The unaccusative trap in second language acquisition. *Studies in Second Language Acquisition*, 23, 279–304.
- Perlmutter, D. M. (1978). Impersonal passives and the Unaccusative Hypothesis. *Proceedings of the Annual Meeting of the Berkeley Linguistics Society*, 4, 157–189.
- Sato, Y. (2009). Jitakoutai wo yurusu hitaikakudoushi no syuutoku ni okeru bogo to UG no eikyo (The effects of UG and L1 on L2 Acquisition of English Alternating Unaccusatives) *LET Kansai Chapter Collected Papers (Japan Association for Language Education and Eechnology)*, 12, 37–51.
- Shibatani, M. (1990). *The languages of Japan*. Cambridge: Cambridge University Press.
- Zobl, H. (1989). Canonical typological structures and ergativity in English L2 acquisition. In S. Gass & J. Schachter (Eds.), *Linguistic Perspectives on Second Language Acquisition* (pp. 203–221). Cambridge: Cambridge University Press.
- Yip, V. (1995). *Interlanguage and learnability*. Philadelphia, PA: John Benjamins.