

## Multiple Effects and the Learnability of English Unaccusatives

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This study investigates learnability problems in the acquisition of English unaccusative constructions, and tries to provide causes and remedies for the problems. Specifically it focuses on why between-verb variation exists among unaccusative verbs in terms of the rate of overpassivization errors, and why Korean learners of English produce more overpassivization errors compared to other L1 learners. A grammaticality judgment test was administered to Korean college and graduate students to investigate why all the unaccusative verbs are not subject to the equal amount of error rates and what determines the extent of the error rates. The results suggest that the overpassivization errors are attributable to multiple factors: English inherent factors, L1 influence, and semantic factors. The study proposes that the rate of overpassivization errors is subject to the number of factors involved in the different unaccusative constructions. The learners have the most difficulty when the verbs involve multiple factors. With regard to the remedies for these problems, it suggests that negative evidence be provided to help the learners avoid this unaccusative trap.

### I. INTRODUCTION

A number of studies in second language acquisition research have observed inappropriate passive morphology (*be* + the passive participle) in the English of L2 learners. The examples in (1) show that L2 learners from various L1 backgrounds inappropriately extend the English passive rules to intransitive verbs, resulting in errors.

- (1) a. \*The most memorable experience of my life was happened 15 years ago.  
(Arabic; Zobl, 1989)
- b. \*First, the change of life-style will be happened.  
(Korean; Min Kyung Ju, 1997)

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- c. \*My mother was died when I was just a baby. (Thai; Zobl, 1989)
- d. \*Our offspring will be suffered because we neglect the pollution.  
(Chinese; Yip, 1995)
- e. \*You are arrived in the eternity city. (Italian; Oshita, 2000)
- f. \*Two or three days ago, the important trouble was happened.  
(Japanese; Oshita, 2000)

What makes the overpassivization errors fascinating in interlanguage studies, as first observed by Hubbard (1983, cited from Hubbard, 1994), is that these errors are restricted to a particular class of intransitive verbs known as unaccusatives. The term *unaccusative* was first introduced by Perlmutter (1978) who hypothesized that intransitive verbs are subdivided into unaccusative verbs and simple intransitive verbs. Interestingly, all the verbs presented in (1) belong to the unaccusative verbs.

The main findings regarding the overpassivization errors in the literature are as follows. First, the overwhelming majority of those errors appear only with unaccusative verbs in the production or judgment data of learners' interlanguage English, but not with the other intransitive verbs (Hubbard, 1994; Oshita, 1997; Zobl, 1989). Second, these errors are not restricted to any particular L1 group, but are observed across learners of different native languages such as Arabic, Chinese, French, Italian, Japanese, Korean, Spanish, and Thai (Balcom, 1997; Jong-Bae Hwang, 1999, 2001; Min Kyung Ju, 2000; Oshita, 2000, 2001; Yip, 1994, 1995; Zobl, 1989). Third, these errors are surprisingly prevalent among high proficiency learners. Even advanced L2 learners who use passives correctly most of the time make overpassivization errors with unaccusative verbs (Hubbard & Hix, 1988; Yip, 1995; Zobl, 1989).

A number of studies have tried to account for the overpassivization phenomenon, but have not reached a consensus about the ultimate causes of these errors. Some researchers (e.g., Hubbard & Hix, 1988) suggested that these errors are due to L1 transfer, but the transfer account has been overtaken by a language universal account since, as a number of studies cited above attested, the phenomenon was observed crosslinguistically. Yip (1994, 1995), for example, claimed that native language transfer was not involved in the overpassivization phenomenon since Chinese learners of English inappropriately passivize unaccusative verbs despite the fact that the active form is required in equivalent sentences in Chinese. Min Kyung Ju (1997) also argued that the problem is not direct L1 transfer since Korean learners are no exception to those errors even though Korean expresses the unaccusative verbs such as *happen* and *die* in active voice, namely *ilenata* and *cwukta*, without passive morphemes.

Discounting L1 transfer, Yip (1994, 1995) proposed a transitivization hypothesis, claiming that learners somehow interpret unaccusatives as underlying transitives.

According to her, unaccusatives are underlyingly represented as transitives in the learners' interlanguage. Still other researchers advanced the NP movement hypothesis (Balcom, 1997; Oshita, 2000; Zobl, 1989). According to this, learners subsume unaccusatives under the syntactic rule for passive formation since the postverbal single argument of the unaccusative verbs is very similar to the passive layout. Recently, Min Kyung Ju (2000) shed a new light on the phenomenon by introducing a cognitive factor. She contended that conceptual agents in discourse play an important role in these errors and thus learners are more likely to make overpassivization errors in externally caused events than internally caused events.

Apart from the different views on the sources of the errors, second language researchers appear to be in general agreement with the position that the overpassivization phenomenon is language universal. Regarding Korean learners of English, however, a couple of puzzles remain unresolved in the literature. The first comes from Oshita (2000). Based on an analysis of the Longman Learners Corpus, a computerized database of written English produced by L2 learners of various L1s, he compared the overpassivization errors across different L1 groups. What he found was that Korean learners of English produced the most errors compared to the other L1 learners: Korean learners produced the overpassivization errors 80% of the time among the total syntactic errors, whereas Italian and Spanish learners produced 36% and 26% respectively. He stated this as an unexpected result and left the phenomenon unexplained.

The second puzzle pertaining to Korean learners comes from an observation by Min Kyung Ju (1997). According to her, Korean learners show between-verb variation with overpassivization errors. In a grammaticality judgment task, a substantial discrepancy was observed among unaccusative verbs in terms of accuracy rate. For instance, her Korean subjects incorrectly rejected the sentence *The accident happened* only 20% of the time, while incorrect rejection was 80% with the sentence *The car disappeared*. It was not only Min Kyung Ju's work that reported verb variation among unaccusative verbs in terms of error rate. Balcom (1997) reported that the acceptance of overpassivized sentences differed among verb classes, ranging from 4% to 71%. Jong-Bae Hwang (2001) also reported that Korean learners showed different behavior patterns depending on verb types: The focus on form instruction significantly influenced the learning of *happen*-type unaccusative verbs, but not the *change*-type ones.

The accounts proposed so far in the literature have converged on the reasons why L2 learners produce overpassivized unaccusative sentences. Little research has been done on why different behavior is observed among different unaccusative verbs and among different L1 groups in terms of overpassivization errors. If a single cause, whatever it is, can be found, as the previous studies have argued, we would expect all unaccusative verbs to be equally susceptible to those errors. As discussed above, however, this is not the case.

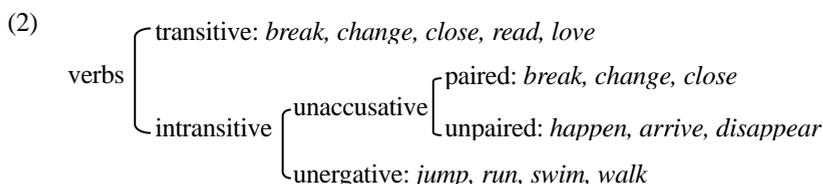
Then critical questions to be resolved are why all the unaccusative verbs are not subject to the equal amount of error rates and what determines the extent of the error rates. This study is launched with a hypothesis that the discrepancy among the verbs and among the different L1 groups is due to multiple effects at work.

In order to test this hypothesis, we will first examine some properties of the target constructions and proceed to discuss the learnability problems of the constructions. Next, we will present an experimental study where three hypotheses were tested on college and graduate students via a grammaticality judgment test. Then, the results will be discussed to closely examine what the causes of the overpassivization errors are. Finally, some remedies will be suggested for the learnability problems.

## II. LEARNABILITY PROBLEMS OF ENGLISH UNACCUSATIVES

The English unaccusative construction poses a challenging learnability problem. As the previous studies repeatedly reported, L2 learners treat unaccusatives like passives by placing the passive auxiliary verb *be* in front of the unaccusative verbs. The overpassivization errors seem to stem from the similarities between the unaccusative and the passive in English.

In order to understand the properties of the two constructions, let us first look at the typology of verbs. Traditionally, verbs have been classified into transitive and intransitive, as in (2). A transitive verb has subject and object on the surface whereas an intransitive verb has subject only.



It was Perlmutter (1978) who first noticed that intransitive verbs are not homogeneous, but consist of two subclasses. Ever since Perlmutter proposed the Unaccusative Hypothesis, linguists have agreed that the intransitive verbs can be subdivided into unaccusatives and unergatives (Burzio, 1986; Keyser & Roeper, 1984; Levin, 1993). The two classes of intransitive verbs are syntactically similar in that they do not take objects, but differ semantically in that only the subject of unaccusatives undergo a change of state. The subject in (3a), for instance, undergoes the change of state: 'The dish' is Patient of the event of breaking. On the other hand, the subject 'the boy' in (3b) is Agent in the event of jumping.

- (3) a. The dish broke. (unaccusative)  
 b. The boy jumped. (unergative)

Unaccusative verbs still can be further classified into two subtypes: paired and unpaired, terms used by Yip (1995). Paired unaccusatives have their corresponding transitive sentences which allow the passivized sentences as in (4),<sup>1</sup> while unpaired unaccusatives do not have them and thus do not have the passivized counterparts, as shown in (5).

- (4) Paired Unaccusative  
 a. The door closed.  
 b. The man closed the door.  
 c. The door was closed (by the man).

- (5) Unpaired Unaccusative  
 a. The diamond disappeared.  
 b.\*The man disappeared the diamond.  
 c.\*The diamond was disappeared.

A learnability problem seems to arise from the fact that the patient or theme arguments which undergo the change of state surface into the subject both in passives and unaccusatives, as exemplified in (6b) and (6c).

- (6) a. The boy broke the window. (transitive)  
 b. The window was broken by the boy. (passive)  
 c. The window broke. (unaccusative)

The two sentences are similar in meaning in that the subject is Patient or Undergoer of the event described by the verb. Here a learner may establish a working hypothesis: If a theme argument appears in the subject position, the sentence should be in the passive. This is a plausible scenario when we consider the relationship between thematic roles and grammatical relations in English: the semantic role of Agent typically takes the grammatical function of subject, and that of Theme or Patient, the function of object. When the learners apply this hypothesis to unaccusative verbs, the result would be an overpassivization error. This line of argument may account for why overpassivization errors are observed language universally across the learners of different L1 backgrounds.

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<sup>1</sup> The paired unaccusative verbs are also referred to as 'ergative verbs' by some linguists (Burzio, 1986; Chung, 2005; Keyser & Roeper, 1984).

Now we are interested in why between-verb variation exists among unaccusative verbs. Some unaccusative verbs are more likely to be subject to overpassivization errors than other unaccusative verbs. The error rate of overpassivization seems to be affected by the multiple factors such as English inherent factors, semantic factors, and L1 influence. First, let us consider a possible learnability problem due to English inherent factors. As considered in (4) and (5), unaccusative verbs are not homogeneous. Some unaccusative verbs, namely paired ones, have transitive counterparts while unpaired ones do not. For example, the verb *close* allows both the unaccusative sentence in (4a) and the passive one in (4c). The two sentences are semantically similar in that the subject *door* is Theme which undergoes the change of state, even though they are syntactically different. What is worse, unaccusatives do not have their own forms. They are not morphologically distinguished from transitive verbs. Here the likelihood is that the passive preempts the unaccusative since the passive is morphologically salient. On the other hand, unpaired unaccusatives would not cause the learnability problem as much as paired ones would, since they do not have transitive counterparts. This may be a source of between-verb variation among unaccusative verbs.

A further learnability problem may be generated by cognitive factors. Yip (1995), for example, puts forth a cognitive factor to account for the learnability problems of unaccusatives. According to her, learners have a tendency not to accept that any change of state occurs spontaneously, without external causation, and thus may prefer the passive, which has an implicit agent, to the unaccusative.<sup>2</sup> If this is the case, learners would have more problems with inanimate subjects than with animate subjects. This prediction is in line with what some researchers have claimed: Animacy plays an important role in choosing the voice of sentences (Croft, 1995; Min Kyung Ju, 2000). Here we will consider the animacy effect as a semantic factor rather than a cognitive factor.

On top of the English inherent factors and semantic factors pointed out above, Korean learners may encounter redoubled learnability problems due to native language influence. English differentiates passives from unaccusatives by marking passives morphologically, while Korean does not reflect the distinction between the two constructions. Both constructions appear with the same morpheme, *ci*, in Korean as in (7) and (8).

(7) Passive

English: The window was broken by the boy.

Korean: Changmun-i ku sonyun-ey uyhayeo ccay-*ci*-ess-ta.

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<sup>2</sup> Refer to Haspelmath (1993) and Levin and Rappaport Hovav (1995) for the semantics of the unaccusative verbs.

## (8) Unaccusative

English: The window broke.

Korean: Changmun-i ccay-*ci*-ess-ta.

To make matters worse, Korean has lexical passive (or intransitive passive) morphemes as well as derived passive morphemes marked by *ci*, *i*, *hi*, *li*, *gi*, *u*, *gu*, or *chu* as shown in (9) and (10) (For Korean passive morphemes, refer to Sang-Uk Lee (1970) and Sun-Im Pae (1988)).

## (9) Derived passives in Korean

ccay-ta 'break' --> ccay-*ci*-ta 'be broken'

baccwu-ta 'change' --> baccwu-*i*-ta 'be changed'

tat-ta 'close' --> tat-*hi*-ta 'be closed'

## (10) Lexical passives in Korean

sarac*ita* 'disappear'

ttelec*ita* 'fall'

epec*ita* 'vanish'

What complicates the matters of the unaccusatives in Korean is the fact that they are not morphologically homogeneous: The verbs, *happen*, *appear*, *fall*, *die*, *arrive*, and *disappear* which belong to the same subclass (i.e., unpaired unaccusative) in English are differently marked in Korean counterparts, as shown in (11).

## (11) Morphological marking in unpaired unaccusatives

Verbs marked with lexical passive *ci*: Korean verbs for *disappear*, *vanish*, *fall*

Verbs without *ci*: Korean verbs for *happen*, *arrive*, *die*, *appear*

Taking all these complexities into consideration, it would not be unreasonable to draw the inference that Korean learners have difficulty in learning English unaccusatives.

### III. HYPOTHESES

The present study hypothesized that difficulty in learning the English unaccusative constructions is owing to multiple factors: English inherent factors, L1 influence, and semantic factors. This study sought to test the following hypotheses.

Hypothesis 1 (English inherent factor): A significant difference will be found between paired and unpaired unaccusatives with respect to the rate of overpassivization errors. Learners will accept passivized unaccusatives when the verbs are paired more often than when unpaired.

Hypothesis 2 (L1 influence): The presence or absence of passive marking in Korean translations of the unaccusative verbs will affect the performance on the test. Korean learners of English will be more likely to accept passivized unaccusatives when their Korean translations include the derived or lexical passive morphemes *ci*, *i*, *hi*, *li*, or *gi* than when they don't.

Hypothesis 3 (Semantic factor): The properties of the subject, animate or inanimate, will affect the extent of overpassivization errors: Learners will be more likely to reject passivized unaccusatives when the subject is animate than when inanimate.

## IV. METHODS

### 1. Subjects

The subjects consisted of 64 college students and 48 graduate students who were enrolled in four different English education courses at two universities in Seoul. College students were selected since previous studies have reported that the overpassivization phenomenon is commonly observed with advanced learners who can use passives correctly most of the time. Graduate students were included to see if there is any difference in test results depending on English proficiency levels. Most of the subjects did not have scores from standardized tests and thus their grammar proficiency levels were gauged through distracter items scattered throughout the judgment test. The TOEFL scores some graduate students provided were used as a reference point to be compared to the judgment test scores.

The subjects were asked to indicate grammaticality of the given sentences by circling G for grammatical sentences and U for ungrammatical ones. In case they circled U, then they were asked to underline and correct the ungrammatical part of the sentence. They were instructed in Korean to judge the grammaticality of each sentence based on normal and natural contexts, excluding any possibility of some superpower being involved. Thirty minutes were given to complete the test.

### 2. Procedures and Materials

A total of 70 sentences, either grammatical or ungrammatical, were created for the judgment test (See Appendix): 48 sentences to test the hypotheses and 22 distracters. The distracter sentences

served dual purposes. The first was to disguise the purpose of the experiment so that the learners do not overly focus on the form of unaccusative verbs. The second was to test the learners' grammar knowledge whose results will serve for judging learners' grammar proficiency levels. Distracters included inappropriate prepositions, gerunds, *to*-infinitives, reflexives, etc.

Independent variables to test Hypothesis 1 and 2 were subclasses of unaccusative verbs, namely, paired vs. unpaired, and the presence or absence of the passive morphemes (*ci*, *i*, *hi*, *li*, *ki*) in Korean translations of each verb. Hereafter the morpheme *ci* will be used to represent Korean passive morphemes in general. It is a matter for further work to decide whether *ci* marker in lexical passive verbs such as *saraciŋa* 'disappear' is a morpheme or not, but here we will use the word for the convenience of depicting those classes of verbs.

The combination of these two variables classifies unaccusatives into four types of verbs, as in Table 1.

**TABLE 1**  
**Four Types of Unaccusative Verbs**

Korean translation	Verb classes	
	paired unaccusative	unpaired unaccusative
<i>ci</i> marked	[+P, +Ci]	[-P, +Ci]
zero marked	[+P, -Ci]	[-P, -Ci]

The feature  $[\pm P]$  indicates the verbs are paired or not and  $[\pm Ci]$  shows the verbs are marked with passive morphemes (*ci*, *i*, *hi*, *li*, *gi*) or not, either derived or lexical, in Korean translations. Recall that paired unaccusatives are verbs with transitive counterparts and unpaired unaccusatives are those without them. For instance, [+P, +Ci] registers that the verb is a paired unaccusative which is marked with *ci* in Korean (e.g., *ccayŋita* 'break') and [-P, -Ci] represents that the verb is an unpaired unaccusative which is zero marked in Korean counterparts (e.g., *tochakhata* 'arrive').

Twelve unaccusative verbs were selected from those with which the previous studies have already observed overpassivization errors. Each verb was tested four times: twice in grammatical sentences and twice in ungrammatical ones. The distribution of the test items are as follows.

**TABLE 2**  
**Distribution of the Test Items**

Verb types	Number of sentences		Verbs employed
	Grammatical	Ungrammatical	
[+P, +Ci]	6	6	break, change, close
[+P, -Ci]	6	6	boil, freeze, burn
[-P, +Ci]	6	6	disappear, vanish, fall
[-P, -Ci]	6	6	happen, appear, arrive
Distracter	6	16	prepositions, gerunds, etc.
Total	30	40	

In order to test Hypothesis 3, that is, to see if there are any animacy effects of the subject, the variable ‘animacy’ was nested within ungrammatical unpaired unaccusative sentences (e.g., *disappear, appear, vanish, arrive, fall*), as exemplified in (12).

(12) Contrast in animacy

Animate subject: (G / U) The prisoner was disappeared after being released on bail.

Inanimate subject: (G / U) Her nervousness was disappeared once she was on stage.

The test sentences were randomized so that no identical verbs would appear in consecutive items.

### 3. Analyses

The subjects’ responses were coded as being correct or incorrect, only considering the responses on the verb forms, excluding distracters. For instance, the response below was scored correct even though the learner marked the grammatical sentence to be ungrammatical, unnecessarily correcting the preposition *at* to *on*. The logic behind this was that the learner accepted the sentence as far as the verb form was concerned.

(13) (G / U) Your name will appear at the front of the book.

→ on

One point was assigned to each test item if the participant accepted the grammatical sentences or rejected the ungrammatical sentences. Otherwise, a score of zero was given.

## V. RESULTS

Table 3 presents correct responses, broken down by four verb types and distracter.

**TABLE 3**  
**Correct Responses on the Grammaticality Judgment Test**

Verb types	Grammatical		Ungrammatical		Total
	%	N	%	N	
[+P, +Ci]	51.9	349/672	19.0	128/ 672	35.5%
[+P, -Ci]	67.0	450/672	33.6	226/ 672	50.3%
[-P, +Ci]	67.1	451/672	43.2	290/ 672	55.1%
[-P, -Ci]	73.2	492/672	54.2	364/ 672	63.7%
Distracter	79.9	537/672	50.0	896/1792	58.2%
Total	67.8%		42.5%		

Overall, the students performed better on grammatical sentences than on ungrammatical ones. To test the effects of the variables, the results were analyzed through a two way repeated measure ANOVA. There was a significant effect on the variable [ $\pm$ P],  $F(1, 111)=100.331, p<.01$ . Hypothesis 1 was supported: The learners performed better on the unpaired unaccusatives (i.e. *appear, arrive, happen, disappear, vanish, fall*) than on the paired ones (i.e. *break, change, close, boil, burn, freeze*). Hypothesis 2 was supported, too. A significant effect was found with the variable [ $\pm$ Ci],  $F(1, 111)= 81.065, p<.01$ . The learners performed worse on the verbs when their Korean translations include passive morphemes (i.e. *break, change, close, disappear, vanish, fall*) than when they are zero-marked (i.e. *boil, burn, freeze, appear, arrive, happen*).

There was a strong interaction between the two variables, [ $\pm$ P] and [ $\pm$ Ci],  $F(1, 111)=5.599, p<.05$ . The students performed best on [-P, -Ci], the unpaired unaccusative verbs without Korean passive morphemes (i.e., *appear, arrive, happen*), and worst on [+P, +Ci], the paired unaccusatives with Korean passive morphemes (i.e., *break, change, close*). When the two variables worked in tandem, the learners experienced the most difficulty. They showed a strong tendency to accept passivized ungrammatical unaccusatives and to reject grammatical unaccusatives.

In order to see if there is any difference in response patterns depending on grammar proficiency levels, the results, in a post hoc analysis, were grouped into two levels on the basis of the test scores from 22 distracter items. The learners who scored under 13 were grouped into Level 1, and those scored 13 and over into Level 2, as presented in Table 4.

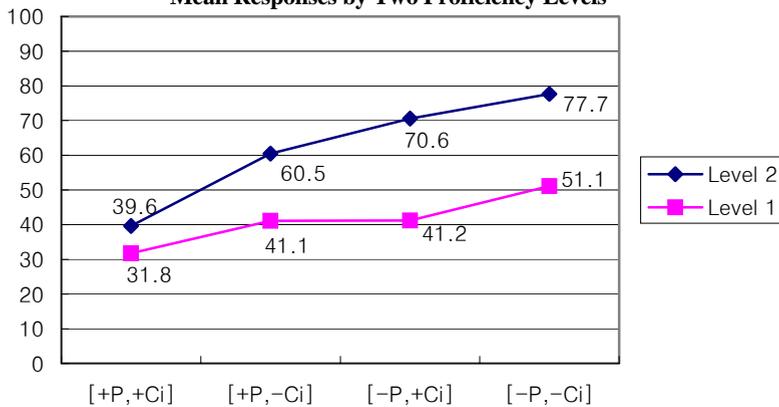
**TABLE 4**  
**Two Levels in the Post hoc Analysis**

Level	N	Mean	SD
1	59	9.4	1.6
2	53	16.0	2.05

Even though we understood that most of the learners were at a fairly advanced level of English proficiency, as surmised by the TOEFL or TOEIC scores supplied by some students, the mean scores on the distracters were not so high. This seems to be because the test did not provide any choices to decide which part was ungrammatical. Rather, it was the learners who had to find out which part was ungrammatical and this might have made the test very hard.

Figure 1 displays the results on the four verb types by two grammar proficiency levels.

**FIGURE 1**  
Mean Responses by Two Proficiency Levels



Both groups showed a similar tendency in that they had the most difficulty with [+P, +Ci], the paired unaccusatives with *ci* morphemes and did the best with [-P, -Ci], the unpaired ones without *ci* morphemes. However, the learners in Level 2, the more advanced group, were much more sensitive to each variable than those in Level 1, and the interaction effects appeared much stronger with those in Level 2. What is of special interest is that with [+P, +Ci], there was no statistically significant difference between the two levels. This indicates that most of the learners wrongly judged the ungrammatical unaccusatives (ex. *When the two planes crashed, one of them was broken into two pieces*) to be grammatical, and the grammatical ones (ex. *All the windows broke during the last earthquake*) to be ungrammatical, correcting the sentence by inserting *was* before the verb.

What is noteworthy in Figure 1 is that Level 1 did not show any significant difference between the two verb types, [+P, -Ci] and [-P, +Ci]. To see the effects of each variable by level, the results were plotted contrasting the two variables in Figure 2.

**FIGURE 2**  
Spread of Responses by [ $\pm$ P] and [ $\pm$ Ci]

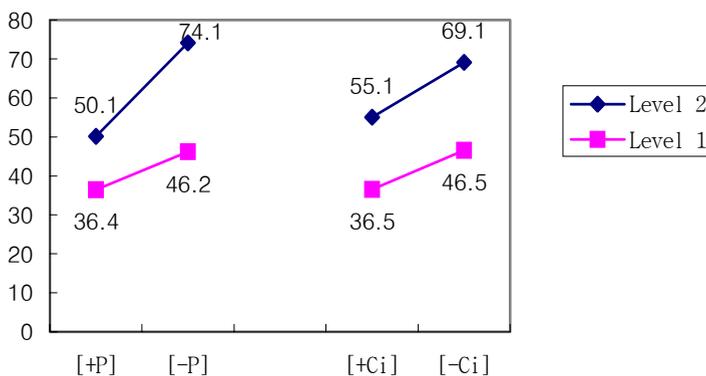
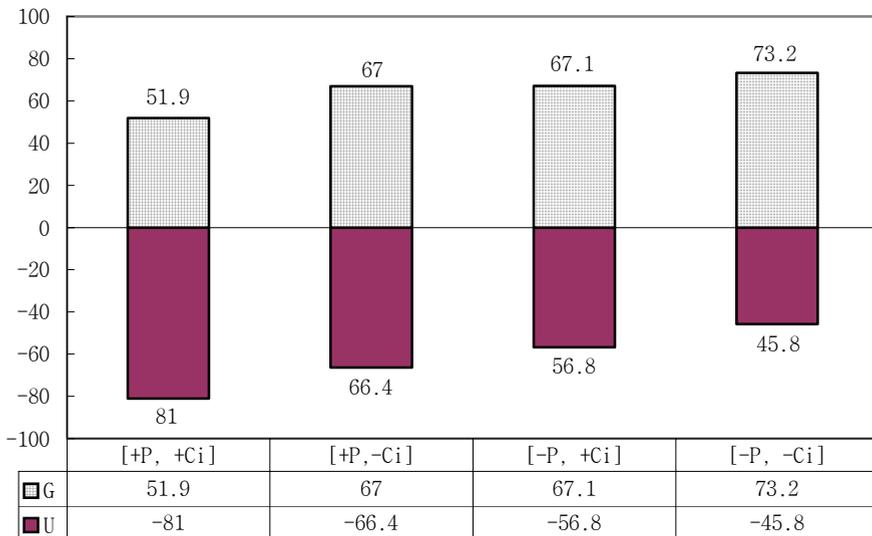


Figure 2 illustrates that the two variables,  $[\pm P]$  and  $[\pm Ci]$ , worked equally powerful in Level 1 whereas the effect of the variable  $[\pm P]$  appeared stronger than the variable  $[\pm Ci]$  in Level 2. This is very interesting in that more advanced learners were more affected by English inherent factors than by L1 influence.

Recall that each verb in the test was presented in two grammatical sentences and in two ungrammatical sentences. It is worth examining how the learners responded to the two types of sentences. Figure 3 shows the mean acceptance rates of each verb type, spreading out the responses of the grammatical and ungrammatical sentences vertically.

**FIGURE 3**  
**Mean Acceptance Scores on Four Constructions**



Notice that the downward bars indicate the percentage the learners incorrectly accepted the ungrammatical passive sentences (e.g., *All the windows were broken during the last earthquake*). The upward bars display the percentage that the learners correctly accepted the grammatical unaccusative versions (e.g., *All the windows broke during the last earthquake*). The results show that for the  $[+P, +Ci]$  type, the learners strongly preferred the passivized versions to the active ones. A great majority of the learners (81%) judged the passivized unaccusatives as grammatical. For the  $[+P, -Ci]$  and  $[-P, +Ci]$  types, the learners had a strong tendency to accept both grammatical and ungrammatical unaccusatives: More than half of the learners allowed either type, passive or active, to be grammatical. For  $[-P, -Ci]$ , the learners tended to accept the grammatical unaccusatives and reject the passivized

ones. What we can infer from these results is that the learners seem to have the following interlanguage systems.

(14) Interlanguage systems of Korean learners of English

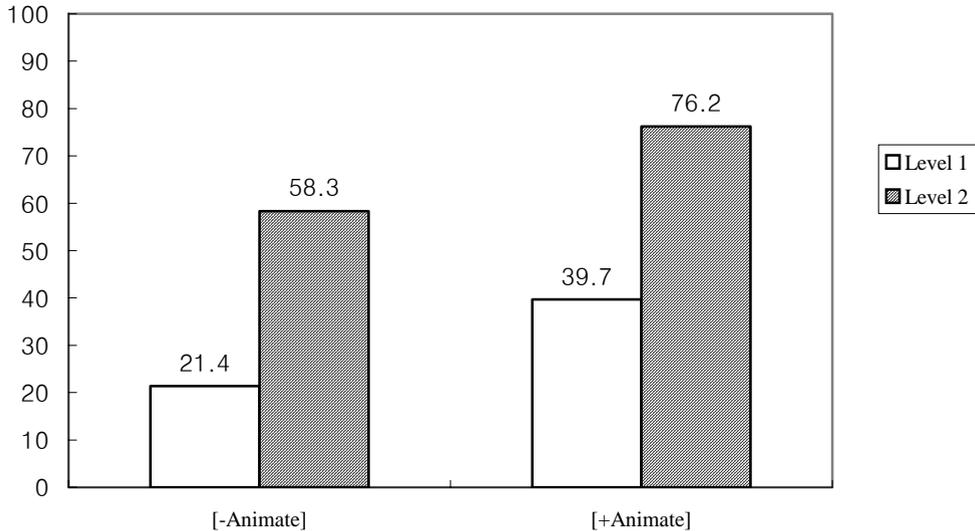
[+P, +Ci]: Passivized forms are correct forms.

[+P, -Ci], [-P, +Ci]: Either passivized forms or unaccusatives are acceptable.

[-P, -Ci]: Unaccusatives are norms.

A final analysis was conducted against the variable, animacy of the subject. The results are depicted in Figure 4.

**FIGURE 4**  
**Mean Responses by Animacy of the Subject**



Recall that the variable animacy of the subject was nested in ungrammatical sentences. Its effect was significant in a paired  $t$ -test,  $t=6.443$ ,  $p<.01$ . When the subject was animate, the learners were more likely to reject the ungrammatical unaccusatives. They might think that animate subjects do not go well with passive verb forms since Agent which is typically animate is suppressed in the passive voice. However, care should be taken in generalizing this animacy effect since it was not the case that all the four types were contrasted in the animacy variable. Many unaccusative verbs (e.g., *break*, *close*, *freeze*, *boil*, *happen*, etc.) do not allow animate subjects semantically.

## VI. DISCUSSION

The research questions of the present study were set out from two observations reported in the literature. The first was that a substantial discrepancy was revealed among unaccusative verbs in terms of accuracy in judging their grammaticality (Balcom, 1997; Jong-Bae Hwang, 1999, 2001; Min Kyung Ju, 2000). The second was that Korean learners produced heavier overpassivization errors compared to other L1 learners (Oshita, 2000). The question was why. The previous studies tried to define a single cause for the phenomenon by proposing the L1 transfer account (Hubbard & Hix, 1988), the transitivity hypothesis (Yip, 1995), the NP movement hypothesis (Balcom, 1997; Zobl, 1989), or some other single factor. What they failed to notice was the fact that L2 learners show different behavior in terms of the rate of overpassivization error, depending on unaccusative subtypes and on different L1 groups. If a single factor were the cause of the problem, it would follow that all the unaccusative verbs would be equally susceptible to those errors, evenly distributed across different L1 groups. As discussed earlier, however, this was not the case.

This study tried to approach the question via multiple factors: English inherent factors, L1 influence, and semantic factors. As Hypothesis 1 predicted, the learners were more likely to accept passivized unaccusatives when the verbs were paired than when unpaired. The reason why the learners showed more difficulty with paired unaccusatives seems to be related to the inherent properties of English, where unaccusatives are not morphologically distinguished from transitive verbs. The L2 learners might overgeneralize passive rules into unaccusatives, resulting in errors, presumably because the subject of both unaccusatives and passivized transitive verbs is Patient or Theme which undergoes a change of state. This phenomenon is not unique to unaccusatives, but a natural process of human learning. Human beings approach any new problem with an existing set of cognitive structures. When learners who have already learned passives, which are morphologically salient, encounter unaccusatives, they generalize their knowledge to new items, unless there is evidence not to do so. This line of argument accords to what the Uniqueness Principle (Slobin, 1971; Yip, 1995) claims: Learners prefer one-to-one correspondences between forms and meaning so that they can simplify the target rules.

The second finding was that Korean learners of English were more likely to accept the passivized unaccusatives when their Korean translations included passive morphemes than when they did not. This manifests that the factor L1 influence affected the error rate of overpassivization. Now we can nicely account for the between-verb variation reported by Min Kyung Ju (1997): Korean learners incorrectly rejected the sentence *The accident happened* only 20% of the time, while the incorrect rejection was 80% with the sentence *The car disappeared*. The reasoning here goes: The verb *disappear* 'saracita' is a lexical

passive in Korean with the *ci* morpheme, whereas the verb *happen* 'ilenata' is not. This line of inference can go further to solve the puzzle reported by Oshita (2000), namely, why Korean learners produce a higher rate of overpassivization errors compared to other L1 learners. It seems that the factor L1 influence was operating against the Korean learners. This account, however, remains a hypothesis since the present study did not employ other L1 subjects. A further study is needed for a direct comparison between Korean subjects and other L1 subjects such as Chinese and Japanese.

The third hypothesis was that properties of the subject, animate or inanimate, would affect the amount or degree of overpassivization errors. As the hypothesis predicted, the learners performed better on passivized unaccusatives when the subject was animate than when inanimate. They strongly tended to reject passivized unaccusative sentences when the subject was animate. They might figure that animate subjects do not go well with passive verb forms.

To put the results all together, we can draw the inference that the rate of overpassivization errors is a function of the number of factors involved in the construction. The reason why the learners had the most difficulty with [+P, +Ci] was that the two factors, English inherent factor and L1 influence, were operating together, inflating up the error rate. On the other hand, the learners had the least problem with [-P, -Ci], probably because the two factors were not present. This inference supports the prediction that the most difficult unaccusatives would be paired ones with *ci* morphemes appearing with inanimate subjects since here the three factors are intermingled. This remains a speculation since inanimate subjects in general cannot naturally appear in paired unaccusatives with *ci* morphemes.

We have tried to argue that L2 learners have more difficulty with unaccusatives when multiple factors are operating together. This line of argument here conforms to the Multiple Effects Principle by Selinker and Lakshmanan (1993). In an attempt to explain why certain linguistic structures become fossilized while others do not, they proposed the following principle: "When two or more SLA factors work in tandem, there is a greater chance of stabilization of interlanguage forms leading to possible fossilization" (p.198). It can be understood from the Multiple Effects Principle why a substantial discrepancy was revealed among unaccusative verbs and across different L1 learners. The principle states that interlanguage structures will tend to fossilize when these are the result of two or more factors working in tandem. Selinker and Lakshmanan granted a central role to language transfer and went on to propose that whenever the Multiple Effects Principle is applicable, one of the SLA factors will always be language transfer. In a similar vein, some other researchers (Anderson, 1983; Zobl, 1980) contended that interlanguage forms persist when language transfer works in tandem with universal processes. According to them, affected learners get stuck on a fossilization plateau longer than those producing a similar form but with no possible language transfer effects involved.

The subjects of the present study were college and graduate school students whose English proficiency is fairly advanced. Even the two subjects who reported TOEFL scores of over 600 and got all the distracters correct made wrong judgments on unaccusative verbs by accepting contextually inappropriate sentences such as *When the two planes crashed, one of them was broken into two pieces*. Considering how overpassivized errors persistently occur in the interlanguage English of advanced learners, some steps should be taken to help the learners avoid unaccusative traps.

What are possible remedies for these learnability problems? As a number of researchers have repeatedly argued for (Harley & Swain, 1984; Jong-Bae Hwang, 1999; White, 1991; Yip, 1994), input alone is not sufficient for successful second language acquisition, because it does not provide the negative evidence that tells the learner a structure is not grammatical. Learners cannot find any evidence in the English input showing that passivized unaccusatives are ungrammatical. This is where negative evidence is needed. Even though grammar teaching has been in and out of language teaching methodology as the pendulum swings from form-focused methods to meaning-focused approaches, whether to teach grammar or not is no longer the focus of debate. Now the issue is centered around at what aspects of grammar to teach to what learners at what levels. We suggest here that unaccusatives should be explicitly taught to Korean learners at advanced levels.

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## APPENDIX

### Grammaticality Judgment Test

Circle the letter G if the sentence is grammatical or U if not. For ungrammatical sentences, please indicate which part is ungrammatical and correct the part.

(TOEFL or TOEIC scores if available: \_\_\_\_\_)

1. (G / U) The play was so bored that I fell asleep.
2. (G / U) All the windows broke during the last earthquake.
3. (G / U) I am looking forward to see you soon.
4. (G / U) Suddenly the rain was changed into showers.
5. (G / U) This restaurant closes only on Christmas Day.
6. (G / U) I have gone to the airport to see her off.
7. (G / U) When soup is boiled, add salt and sugar.
8. (G / U) Oil hardly freezes until the temperature is below zero.
9. (G / U) She looks good now that she has recovered.
10. (G / U) The prisoner was disappeared after being released on bail.
11. (G / U) The European settlers were arrived in the country two centuries ago.
12. (G / U) Comparing with his brother, he is not so clever.
13. (G / U) Your name will appear at the front of the book.
14. (G / U) The thief was vanished into the crowd and was never seen again.
15. (G / U) About 8000 years ago, people began using animals to carry themselves.
16. (G / U) The most memorable experience of my life happened 15 years ago.
17. (G / U) All the colored leaves fell in the last night storm.
18. (G / U) My father decided to stop to drink and smoke.
19. (G / U) When the two planes crashed, one of them was broken into two pieces.
20. (G / U) When oil was added, the firewood was burned.
21. (G / U) I know why the volcano boiled up again.
22. (G / U) I have two brothers; one lives in Seoul and another in Busan.

23. (G / U) This river is not frozen even during the cold winter.
24. (G / U) The log house burned in the Valley Fire.
25. (G / U) He is a talented and imaginable writer.
26. (G / U) The temperature was fallen by 10 degrees over the night.
27. (G / U) Her nervousness was disappeared once she was on stage.
28. (G / U) The traffic lights changed from green to red.
29. (G / U) She looks very fatter than she was a month before.
30. (G / U) When we sneeze, our eyes are closed instantly.
31. (G / U) Breakfast was arrived while he was in the bathroom.
32. (G / U) There is nothing to fear, provided that you are just.
33. (G / U) The airplane was vanished in the air without trace.
34. (G / U) A strange thing was happened on New Year's Eve.
35. (G / U) This is the book which everybody thinks is very interesting.
36. (G / U) This problem was first appeared in the inner cities.
37. (G / U) She dropped the plate and it broke into several pieces.
38. (G / U) Water is boiled at 100 C.
39. (G / U) Tom turned on the fan and the smoke disappeared.
40. (G / U) The teacher suggested to us that we study English very hard.
41. (G / U) The soldiers were fallen 1000 meters before opening their parachutes.
42. (G / U) A woman was appeared at the far end of the street.
43. (G / U) My father is usually going to his office by bus.
44. (G / U) The space shuttle arrived 20 seconds later than scheduled.
45. (G / U) Her life changed completely when she won the lottery.
46. (G / U) The door was closed smoothly after I oiled the hinges.
47. (G / U) He is the taller of the two boys.
48. (G / U) The World Trade Center burned on the eleventh of September.
49. (G / U) The big blue diamond vanished at the same time everyone heard whispers.
50. (G / U) You had better not going out in such a heavy snowfall.
51. (G / U) World War III may be happened in the future.
52. (G / U) The lake is not frozen even when the temperature goes down below zero.
53. (G / U) Our product is superior to our competitor's.
54. (G / U) Caterpillars were changed into butterflies.
55. (G / U) The automatic door closed immediately after the man walked through it.
56. (G / U) Liquid nitrogen boils at a very low temperature.
57. (G / U) Taking all things into consideration, he cannot be the criminal.
58. (G / U) When milk freezes, it expands.
59. (G / U) This curtain is not burned easily even when a fire breaks out.
60. (G / U) He asked me that I loved him.
61. (G / U) All the books disappeared from the shelf.
62. (G / U) A shooting star fell from the sky to earth.
63. (G / U) I found the missing envelope just outside of the house.
64. (G / U) The cookie house vanished in a second when Hansel turned back.
65. (G / U) New videos will arrive in the shops this month.
66. (G / U) She was doing whichever she could to stay alive.
67. (G / U) His second novel appeared under the title "Getting By".
68. (G / U) The waves were broken when they reached the pier.

69. (G / U) Anybody in this class does not deserve to be happy.  
70. (G / U) The car accident happened yesterday on the country road.

Applicable levels: secondary education, college education

Key words: Learnability, Unaccusative, Overpassivization errors, L1 influence, Interlanguage,  
Multiple effects

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