

## Unaccusativity and L2 Passive Construction\*

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Kim, Jung-Tae. (2006). Unaccusativity and L2 passive construction. *English Language & Literature Teaching*, 12(4), 69-89.

This study investigated whether and how semantic nature of intransitive verbs can be related to the L2 overpassivization errors. A total of 126 Korean high school students participated in a grammaticality judgment test on English sentences in which seven semantically different types of intransitive verbs were passivized. The results showed that there was an effect of semantic type on the students' judgment on overpassivization errors. Overall, it was shown that the students experienced the lowest degree of difficulty with the Controlled Process-Motional type verbs while experiencing the high degree of difficulty with the Change of State, Existence of State, Continuation of Pre-existing State, and Uncontrolled Process types. Two interlanguage patterns were also identified: the students at higher proficiency level and those at lower-proficiency level showed distinctive patterns on the task. It was argued that the simple dichotomy of unaccusative-unergative distinction does not suffice for the explanation of the complex phenomenon of L2 overpassivization.

[passive/overpassivization/unaccusative/intransitive, 수동태/과수동화/비대격/자동사]

### I. INTRODUCTION

It is well known that L2 learners often produce inappropriate passive forms

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\* The present study was supported by the 2005 Research Grant of the University of Incheon.

with intransitive verbs. Examples in (1) show some of the overpassivization errors by L2 learners of English reported by Oshita (2000), Yip (1995) and Zobl (1989).

(1) Examples of L2 overpassivization errors

- a. \*The important trouble was happened. (Oshita, 2000)
- b. \*Our offsprings will be suffered because we neglect the pollution.  
(Yip, 1995)
- c. \*Most people are fallen in love and marry with somebody. (Zobl, 1989)

Overpassivization errors in L2 acquisition were noticed as early as in the 1970s (Richards, 1973; Schachter & Hart, 1979), and these errors have been reported to be produced and judged as grammatical by learners with various L1 backgrounds (e.g. Balcom (1997) for Chinese, Can (2000) for Turkish, Hirakawa (1995) for Japanese, Hwang (1999) for Korean, Kellerman (1978) for Dutch, Oshita (1997) for Italian, Schachter & Hart (1979) for Spanish, Zobl (1989) for Arabic and Thai).

An interesting observation regarding L2 overpassivization phenomenon is that these errors occur mainly with a type of verbs known as unaccusatives (Hubbard, 1983, 1994; Oshita, 1997; Zobl, 1989). Unaccusatives are one of the two major types of intransitive verbs. According to Perlmutter (1978), intransitive verbs are of two types, unaccusatives and unergatives. Unaccusative verbs like *fall*, *happen*, or *disappear* usually denote instantaneous events or change of states and have nonagentive subjects, whereas unergative verbs like *talk*, *sing* or *walk* usually refer to process and have agentive subjects.

For the reason why unaccusative verbs are more susceptible to overpassivization errors, some different accounts have been proposed. Yip (1994, 1995) hypothesized that learners somehow interpret unaccusatives as underlying transitives. According to this hypothesis, the learners' interlanguage assumes unaccusatives as transitives, and consequently, they extend the passivization rule to most of the unaccusative constructions, producing ungrammatical passive forms. This hypothesis is often called as 'Transitivization Hypothesis.'

In what may be called the "Postverbal NP movement hypothesis", scholars like Balcom (1997) and Zobl (1989) proposed that overpassivization errors occur

due to the learners' incorrect combination of a postverbal NP movement rule and the passive rule. According to this hypothesis, the learners' knowledge of the lexical rule by which the postverbal NP is moved to a subject position is wrongly associated with the passivization. That is, the postverbal NP movement rule is subsumed under the passive rule. The learners use this rule for unaccusatives, thus leading to passivized unaccusative constructions.

More recently, researchers began to address the questions concerning between-verb variation among unaccusatives. Some studies have shown that the passivization errors do not apply to all unaccusatives uniformly (Balcom, 1997; Hwang, 2001; Ju, 2000; No & Chung, 2006). For example, Ju (2000) showed that Korean L2 learners made much more errors with the verb *disappear* than with *happen* in grammaticality judgment on English passivization, although both *disappear* and *happen* are unaccusatives. The fact that all the unaccusative verbs are not equal in their susceptibility to overpassivization errors requires further consideration on the reasons why L2 learners make these errors.

One of the reasons for the between-verb variation among unaccusatives is known to be related to the distinction between alternating and non-alternating unaccusatives. Unaccusatives can be classified into two subclasses: alternating and non-alternating unaccusatives (Haegeman, 1994; Levin & Rappaport, 1995).<sup>1)</sup> Alternating unaccusatives have a transitive counterpart, as shown in (2), while non-alternating unaccusatives do not have a transitive counterpart, as shown in (3).

(2) Alternating Unaccusative

- |                                      |                |
|--------------------------------------|----------------|
| a. The door closed                   | (unaccusative) |
| b. The child closed the door.        | (transitive)   |
| c. The door was closed by the child. | (passive)      |

(3) Non-alternating Unaccusative

- |  |                |
|--|----------------|
| a. The accident occurred.                    | (unaccusative) |
| b. *The driver occurred the accident.        | (transitive)   |
| c. *The accident was occurred by the driver. | (passive)      |

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1) Instead of 'alternating' and 'non-alternating', some scholars (e.g., Yip, 1995) used the terms 'paired' (for 'alternating') and 'unpaired' (for 'non-alternating').

Note that, although the sentence (2c) is grammatical, the following sentence is not grammatical because the action is viewed as occurring on its own, without any specific Agent.

- (4) \*The door was closed smoothly because Mary had remembered to oil the hinges.

Balcom (1997) reports that L2 learners frequently make overpassivization errors with alternating unaccusatives like (4). In fact, it has been known that, although learners make overpassivization errors with all unaccusatives, they make more errors with alternating unaccusative verbs (such as *break*, *open*, *close*, *increase*, etc.) than with non-alternating unaccusative verbs. (Balcom, 1997; Hirakawa, 1995). This may be due to the existence of the transitive counterparts of the alternating unaccusatives, which are not morphologically distinguished from intransitive forms. Affected by the existence of the transitive forms, learners may incorrectly assume that those verbs can be passivized like other transitive verbs.

Another source of the between-verb variation among unaccusatives may be the native language influence. No & Chung (2006) show that Korean learners of English are more likely to accept the passivized unaccusatives when their Korean translations include passive morphemes than when they do not. For instance, 'ttelecita,' the Korean translation of the English unaccusative *fall*, contains the Korean passive morpheme '-ci-' whereas 'natanata,' the Korean translation of the English unaccusative *appear*, does not contain any overt passive morpheme. According to No & Chung, Korean learners of English tend to make more overpassivization errors with the verbs like *fall* than with the verbs like *appear* due to the influence of their L1 morphology. Therefore, the transfer of L1 morphology can be a reason for the between-verb variation among unaccusatives.

Still, other factors seem to operate as possible sources of the between-verb variation. Yip (1995) argued that L2 learners were more likely to accept passives forms when events denoted by the verb occur spontaneously, without external causation. Inspired by this idea, No & Chung (2006) hypothesized that semantic factors like animacy of the subject would play an important role in L2

passivization. They predicted that learners would reject passivized unaccusatives when the subject is animate (human or animal) than when inanimate. This hypothesis was tested in their experimental study of grammaticality judgment in which 112 Korean learners of English participated. The results showed that, as predicted by the hypothesis, the participants tended not to accept passivized unaccusative sentences when the subject was animate. From these results, No & Chung inferred that L2 learners might figure that animate subjects do not go well with passive verb forms. In this study, animacy was regarded as a semantic factor affecting the between-verb variation.

To sum up, the findings in literature regarding different rates of overpassivization errors among unaccusatives are as follows. First, whether or not an unaccusative has a transitive counterpart affects the error rate: learners make more overpassivization errors with alternating unaccusatives than with non-alternating unaccusatives. Second, presence or absence of a passive morpheme in the learner's L1 translations of the unaccusative verbs affects the error rate: learners make more overpassivization errors with the verbs whose L1 translations include passive morphemes. Third, the properties of the subject, animate or inanimate, affect the error rate: learners are apt to reject passivized unaccusatives when the subject is animate.

Although these previous findings tell much about the sources of the between-verb variation, a question can still be asked about whether these are the only reasons for the observed difference in overpassivization error rates. That is, it is possible to conjecture that variation exists even within a group of verbs which share the same features that have been claimed to cause the between-verb variation. For example, a question can be asked whether different error rates are observed among the verbs which share the same features, [-alternating unaccusative], [-L1 passive morpheme], and [+animated subject]. If variation exists within the group of verbs sharing the same features, it will probably require us to look for another cause of the between-verb variation.

The present study investigates the semantic aspect of intransitive verbs as a possible cause of the between-verb variation in L2 overpassivization phenomenon. Especially I will utilize the classification of intransitive verbs proposed by Sorace (2000) to see how the different semantic natures of verbs affect L2 overpassivization rates. Although No & Chung (2006) treated the

animacy as a semantic factor, the dichotomy of [ $\pm$ animate] seems too simple to cover complex semantic aspects associated with overpassivization. Moreover, it was concerned with the subject of the verb, not the verb itself. In this study, having other known variables controlled as much as possible, I will focus on whether and how a finer semantic classification of verbs offered by Sorace (2000) can provide a better understanding of the between-verb variation in L2 overpassivization phenomenon.

## II. THEORETICAL BACKGROUND

For some scholars (e.g., Dowty, 1991; Van Valin, 1990) the distinction between unaccusative and unergative is purely semantic. According to them, what distinguishes the two types reduces to the notion of agentivity and telicity: unergatives are agentive and atelic while unaccusatives are nonagentive and telic.<sup>2)</sup> For other scholars (e.g., Burzio, 1986; Rosen, 1984), however, distinction between the two types of verbs is mainly syntactic. In this view, distinct syntactic representations have been established for the two types: the argument of an unaccusative verb is syntactically equivalent to the direct object of a transitive verb, while the argument of an unergative verb is syntactically equivalent to the subject of a transitive verb. Examples in (5) and (6) show the syntactic representations of the unaccusative and unergative.

(5) Syntactic representation of unaccusative

- a. Jane disappeared.
- b. [ $e$  [<sub>VP</sub> disappeared Jane]]
- c. [Jane<sub>i</sub> [<sub>VP</sub> disappeared  $t_i$ ]]

(6) Syntactic representation of unergative

- a. Jane worked.
- b. [Jane]<sub>VP</sub> worked]]

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2) The term 'telicity' is originated from Greek 'telos' which means *end*, *goal*, or *limit*. Telicity is the property that makes situations telic (with an inherent endpoint) or atelic (with no inherent endpoint, denoting a process).

As shown in (5b), unaccusative verbs have no external argument, and the patient (or theme) is base-generated in object position as an internal argument. The patient NP, then, is raised to subject position for nominative Case checking as shown in (5c). On the other hand, unergative verbs have only an external argument and no internal argument as in (6b). As in (5a) and (6a), both NPs (*Jane*) occupy the sentential subject position in the surface, thus, obscuring their distinction in the surface syntax.

If the distinction between unaccusative and unergative verbs is purely syntactic, then we may expect all unaccusative and unergative verbs to behave alike syntactically. However, Sorace (2000) has found that some languages display variable syntactic behaviors within the same verb class, depending on the semantic nature of the verb. For example, while some unaccusative verbs in Italian consistently select 'be' as an auxiliary while other unaccusative verbs are less consistent in auxiliary selection, sometimes choosing 'have' as an auxiliary. The similar difference was observed among unergative verbs: some unergative verbs were more consistent than others in auxiliary selection. Based on these observations, Sorace (2000) proposed that there is a continuum of gradients of unaccusative/unergative verbs. The hierarchy is decided in the light of the semantic concepts of telicity and agentivity. The ends of the continuum are the prototypes of the unaccusative and unergative verbs: the highest end, 'the change of location verbs', is the prototypical unaccusative verbs; the lowest end, 'the controlled nonmotional process verbs', is the prototypical unergative verbs. The verbs between the two ends are less unaccusative or unergative. The two extremes (change of location verbs and controlled process-nonmotional verbs) were called 'cores' while those in the middle were called 'peripherals'. The hierarchy is shown in (7).

(7) The unaccusativity hierarchy (Sorace 2000)

Change of location -----(Core unaccusative)  
 Change of state  
 Continuation of a pre-existing state  
 Existence of state  
 Uncontrolled process

Controlled process (Motional)

Controlled process (Nonmotional) ----- (Core unergative)

Among the above verb types, the verbs of change of location, change of state, continuation of a pre-existing condition, and existence of state are classified as unaccusatives while the other types are seen as unergatives.

Characteristics of each of the above verb types are described in the followings.

1) Change of location verbs: Verbs of this type express a change of location and are considered to have the highest degree of dynamicity and telicity. In English, verbs like *leave*, *arrive*, and *fall* belong to this type.

2) Change of state verbs: Next along the hierarchy are verbs denoting a change of state. This type of verb includes directed motion verbs such as *rise*, and *descend*, and internally caused verbs of change of state such as *become*, *wilt*, *bloom*, and *decay*, which express a change in a particular direction without specifying a telic endpoint. Also included are the verbs of appearance (*appear*, *disappear*) and verbs of happening (*happen*, *occur*). Verbs such as *die* which are inherently telic verbs of change of state, also belong to this type.

3) Continuation of a pre-existing condition verbs: Verbs of this type are nondynamic, but denote the continuation of a pre-existing condition. Verbs such as *stay*, *remain*, *last*, and *survive* belong to this type. These verbs are less dynamic than verbs of change of location/condition, but still have an implicit change component in that they imply the 'negation of change' (e.g., *remain* implies *not leaving*).

4) Existence of state verbs: These verbs are also nondynamic, but unlike the continuation of pre-existing condition verbs which implicitly incorporate the 'negation of change' in their semantics, these verbs do not contain any change component at all. This type includes three different sub-classes: (1) verbs referring to concrete states (*exist*, *belong*); (2) verbs referring to a simple position (*sit*, *lie*); and (3) verbs referring to abstract or psychological states

(*seem, suffice*).

5) Uncontrolled process verbs: This type of verbs includes various types of process verbs, whose common denominator is the lack of volitionality. Verbs of involuntary bodily function (*tremble, shiver, cough, sweat, sneeze, vomit*), verbs of emission of substances/light/sound/smell (*ring, shine, tick*), and weather verbs (*rain, thunder, snow*) are among the verbs of this type.

6) Controlled process- nonmotional & motional: These types of verbs normally denote agentive processes with volitionality. Their subjects is often a volitional initiator of the event. Nonmotional controlled process verbs are the verbs such as *work, play, and talk*, and motional controlled process verbs are the ones such as *run, march, swim* and *dance*. Motional controlled process verbs, in contrast to nonmotional controlled process verbs, denote manner of motion. The subject of motional verbs is affected by the verbs to a higher degree than that of nonmotional activities, because it is often an experiencer of the undirected change of location.

The distinction between the above seven types may offer some theoretically important questions. One of them would be, apart from any L2 inherent syntactic characteristics, and apart from the L1 transfer effect, how L2 learners respond to each type of intransitive verbs in their performances with various L2 constructions, including passive constructions.

### III. RESEARCH QUESTIONS AND METHODOLOGY

#### 1. Research Questions

The present study investigates whether and how semantic properties of intransitive verbs are related to the L2 overpassivization phenomenon. More specifically, this study asks whether the different semantic natures of intransitive verbs can be a possible source of the between-verb variation in L2 overpassivization errors. In the experimental study, I will ask:

1) whether Korean learners of English will make more passive errors with unaccusative verbs than with unergative verbs.

2) whether and how Korean learners of English will show different error rates depending on different semantic types identified in Sorace's unaccusative hierarchy (2000). That is, is the degree of difficulty in L2 English passive acquisition related to semantic properties of intransitive verbs?

3) whether and how the answers to the above two questions are differentiated depending on the learners' L2 proficiency. In other words, is there an observable difference in rates of overpassivization errors among L2 learners of different proficiency levels?

## 2. Participants

The participants in the experiment were 126 Korean-speaking students from a high school in South Korea. All the students were freshmen (10th grade), aged from 15 to 16. Sixty-two of them were male and 65 were female. They were all enrolled in advanced track English classes in their school.<sup>3)</sup> Based on their scores of the previous semester's English final exam, the participants were divided into two proficiency level groups: 61 students in the higher-level group and 65 students in the lower-level group.<sup>4)</sup>

## 3. Materials

A total of 26 passive sentences were created for the grammaticality judgment

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3) The school's freshmen English course adopted a two-track system in which students with above-average English proficiency were placed in the advanced track and students with below-average English proficiency in the normal track.

4) The division of the lower- and higher-level groups was based on the participants' relative rankings in the final exam taken in the previous semester, not on the standardized proficiency levels. This is the reason why the terms "higher" and "lower" are used instead of "high" and "low". Also note that all the participants were enrolled in the advanced track in their school English course, and thus, that the participants' English abilities are all above-average in their school standard.

test. Among them, 14 sentences were experimental sentences and 12 were distracters. The experimental sentences contained passive forms of seven semantically different types of intransitives, including both unaccusatives and unergatives. The unaccusative intransitive verbs were chosen from four semantic types, i.e., change of location, change of state, continuation of a pre-existing condition, and existence of state. The unergative intransitive verbs were from three different semantic types, i.e., uncontrolled process, controlled process-motional, and controlled process-nonmotional. Two verbs were selected from each of these seven semantic types, thus, totaling to 14 verbs. The experimental verbs used in the test were: change of location verbs (*arrive, leave*), change of state verbs (*appear, die*), continuation of pre-existing state verbs (*remain, stay*), existence of state verbs (*belong, exist*), uncontrolled process verbs (*cough, sweat*), controlled process-motional verbs (*jump, swim*), and controlled process-nonmotional verbs (*sing, talk*).

Examples of experimental sentences with *stay, belong, and talk* are given below. Note that all experimental sentences were grammatically incorrect.

- (8) a. They were stayed there because of heavy rain.  
b. We all know that Jane is belonged to the club.  
c. Jane was talked with her friend.

Because the purpose of the study was to see the effect of the semantic aspects of verbs on the L2 passive grammaticality judgment, other variables that might affect the grammaticality judgment were controlled: No alternating unaccusatives were included in the test items; the subjects of test verbs were all human; and the verbs' principal Korean translations do not include a passive morpheme.

The degree of difficulty of vocabulary and sentence structure used in the test was controlled to be easy enough for high school students to understand and process. This was to ensure that the participants' grammaticality judgments are not critically affected by their limited vocabulary knowledge and sentence processing ability. The distracters were all transitive verbs. Grammaticality of the test sentences was confirmed and agreed by two native speaker English instructors as appropriate.

#### 4. Procedure and Analyses

The students were given the grammaticality judgment test during one of their regular English classes. The test sentences were presented in a random order, and the students were instructed to indicate grammaticality of the sentences by marking O or X in front of each sentence. They were also asked to correct the ungrammatical part of the sentence when they marked X.

The students' responses only for the experimental sentences, not for distracters, were analyzed. Responses were considered correct only when proper corrections were made for the ungrammatical part of the sentence, thus, eliminating the possibility of gaining scores through wild guesses. Approximately twenty minutes were given to complete the test.

### IV. RESULTS AND DISCUSSION

Table 1 displays the overall percentage means of the correct responses on the grammaticality of the passive sentences with unergative and unaccusative verbs.

**TABLE 1**  
**Overall Responses on Unergative/Unaccusative Verbs**  
**(Percentage Means of Correct Responses)**

	Unergative	Unaccusative
Mean Percentage Correct (Standard Deviation)	25.26 (27.63)	15.57 (22.61)

As mentioned earlier, the unaccusative verbs include four semantic types, (change of location, change of state, continuation of a pre-existing condition, and existence of state) while the unergative verbs include three semantic types (uncontrolled process, controlled process-motional, and controlled process-nonmotional). The result showed that students performed better on the passivization of unergative verbs than of unaccusative verbs.<sup>5)</sup> In other words,

the students made more incorrect judgments on the passivization of unaccusative verbs than on that of unergative verbs.

Table 2 shows the percentage means of correct responses produced by the two proficiency level groups.

**TABLE 2**  
**Responses on Unergative/Unaccusative Verbs by Proficiency Level**  
**(Percentage Means of Correct Responses)**

	Unergative	Unaccusative
Higher-level group Mean (Standard Deviation)	39.07 (28.03)	26.63 (25.44)
Lower-level group Mean (Standard Deviation)	12.31 (20.04)	5.19 (12.86)

For both higher-level group and lower-level group students, grammaticality judgment was easier on the unergative passives than on the unaccusative passives.<sup>6)</sup> Table 3 shows the students' responses on the passivization of seven different semantic types of the intransitive verbs.

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5) Results of the paired sample t-test indicated that there was a statistically significant difference between the two classes,  $t=6.524$ ,  $p<.001$ .

6) Paired sample t-tests were run for each of the two proficiency groups. The results indicated that, for both the higher-level and lower-level groups, there was a significant difference between the two verbs classes: For the higher level group,  $t=5.364$ ,  $p<.001$ ; for the lower level group,  $t=3.853$ ,  $p<.001$ .

**TABLE 3**  
**Responses by Semantic Type and Proficiency**  
**(Percentage Means of Correct Responses)**

	CL	CS	CPS	ES	UP	CP-M	CP-NM	Total
Higher- Level	41.80 (41.01)	26.23 (34.89)	20.49 (33.39)	17.21 (30.11)	20.49 (27.95)	55.74 (39.89)	40.98 (39.27)	31.85 (37.74)
Lower- Level	7.69 (23.77)	4.61 (17.05)	3.85 (16.08)	4.61 (14.58)	3.85 (13.43)	20.77 (32.94)	12.31 (29.36)	8.24 (22.82)
Overall	24.21 (37.27)	15.08 (29.17)	11.90 (27.15)	10.71 (24.17)	11.90 (23.17)	37.70 (40.34)	26.19 (37.26)	19.67 (33.12)

( ): Standard Deviation

CL: Change of Location, CS: Change of State, CPS: Continuation of a Pre-existing State, ES: Existence of State, UP: Uncontrolled Process, CP-M: Controlled Process-Motional, CP-NM: Controlled Process-Nonmotional

As can be seen on the table, the participants' overall performance was very poor, responding correctly only 19.67 % of the time in total. This may be because the participants were asked to find out which part of the sentence was ungrammatical, without being provided with any choices to select. This kind of task might be very hard for the first-grade high school students.

ANOVAs were run with proficiency levels and semantic types as factors. Overall, the higher-level group students performed significantly better than the lower-level group students ( $F(1, 124)=141.85, p < .001$ ). That is, although the higher-level group students did not obtain high scores on their performance, their performance was clearly distinguishable from that of lower-group students.

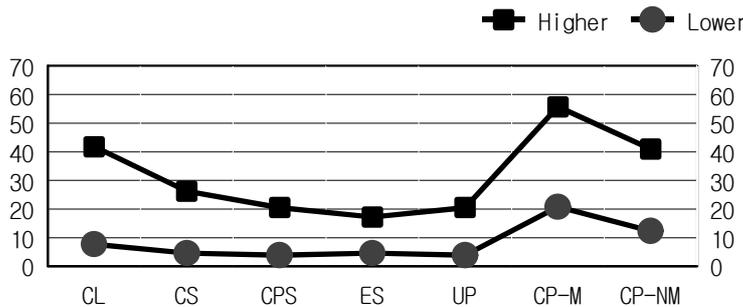
There was also a significant effect on the semantic type ( $F(6, 120)=15.18, p < .001$ ). The overall descending order of the mean scores on semantic types is: Controlled process-motional (CP-M) > Controlled process-nonmotional (CP-NM) > Change of location (CL) > Change of state (CS) > Uncontrolled process (UP) = Continuation of pre-existing state (CPS) > Existence of state (ES). A post-hoc analysis revealed that there was a statistical difference between the CP-M type and all other types, between the CP-NM type and all other types except the CL type, and between the CL type and the CPS, ES, UP types. There was no statistical difference between the CP-NM and CL types, between the CL and CS types, and among the CS, UP, CPS, and ES types. Duncan's post hoc analysis identified three homogeneous groups: CP-M ( $p=$

1.000); CP-NM and CL ( $p=.592$ ); and CS, UP, CPS, and ES ( $p=.289$ ). That is, overall, the CP-M type verbs were easiest; the CP-NM and CL type verbs were less easy, and the CS, UP, CPS, and ES type verbs were most difficult.

These results imply that the simple unaccusative-nergative distinction may not be enough as a predictor for L2 learners' overpassivization error rates. Recall that among the seven semantic types, CL, CS, CPS, and ES types are unaccusatives and UP, CP-NM, and CP-M types are unergatives. Contrary to the common belief that L2 learners acquiring passive constructions experience difficulty with only unaccusative verbs, and not with unergative verbs, our results found that students experienced considerable difficulty with the UP type verbs (an unergative), as much as with unaccusative verbs. Also, the difficulty with the CL type (an unaccusative) was not statistically different from the difficulty with the CP-NM type (an unergative).<sup>7)</sup>

Now let us turn to the responses on the verb types by two proficiency levels. For convenience of comparison, Figure 1 is provided, which illustrates the results on the seven semantic types by the lower- and higher-proficiency level participants.

**FIGURE 1**  
Responses by Proficiency Level



Although the two groups seem to share similar patterns in the above chart, differences existed between the two groups. The descending order of the mean scores by the lower-level group was: CP-M > CP-NM > CL > CS = ES >

7)  $p=.998$ , (according to Tucky's post hoc analysis)

CPS > UP. Among these, statistical difference was observed only between the CP-M type and the CL, CS, ES, CPS, UP types. There was no statistical difference among the six types, CP-NM, CL, CS, ES, CPS, and UP. Duncan's post hoc analysis indicated that all these six types belonged to the homogeneous group ( $p=.056$ ). The higher-level group's descending order was: CP-M > CL > CP-NM > CS > UP = CPS > ES. Duncan's post hoc analysis identified three homogeneous groups: CP-M ( $p=1.00$ ); CL and CP-NM ( $p=.899$ ); and CS, UP, CPS, ES ( $p=.205$ ). A notable difference between the higher- and lower-level groups was that, unlike the lower-level students who did not show any statistical difference in the error rates among the six types, CL, CS, CPS, ES, UP and CP-NM, the higher level students performed significantly better on the CL and CP-NM types than on the other four types. These interlanguage developments seem to suggest that it was easier for students to learn the grammaticality of the passives of the CL and CP-NM types than to learn that of the other four types. For the CP-NM type, the reason why the learning of its grammaticality on passives was easier can be explained in terms of the semantic properties that the verbs of this type carry: Since the CP-NM type verbs denote agentive processes with volitionality, a sentence with [+human subject] may easily be viewed as taking the active form.<sup>8)</sup> All the other semantic types except the CP-M type, do not have that high degree of agentivity and volitionality.

Still, a question arises in the case of the CL type. According to Sorace's (2000) unaccusative hierarchy, the CL type is the prototype unaccusative which is located on the highest end of the unaccusativity hierarchy. This gives the impression that the CL type would act differently from the CP-M and CP-NM types, which are located in the lowest end of the unaccusativity hierarchy, in its syntactic behaviors including the passivization. In addition, the CL type does not have the strong agentivity and volitionality that the CP-M and CP-NM types have. Our results showed, however, that higher-level L2 learners could identify the passive errors with the CL type verbs as easily as they could do with the

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8) This study does not attempt to provide an exact answer to the question of why students performed better on the CP-M type than on the CP-NM type. Some semantic reasons, however, can be considered. One possibility might be that somehow L2 learners associate concrete motion with higher agentivity, leading to the assumption that the CP-M type verbs match best with the active form when the subject is [+human].

CP-NM type. While no definitive answer to this question is sought here, it might be suggested that the high degree of dynamicity that the CL type carries have something to do with the learners' judgment on the passivization of this type. According to Sorace (2000), the CL type has the highest degree of dynamicity (see section II), and it is conceivable that the learners might have associated this dynamicity with action or movement. As verbs referring to action or movement are likely to be thought as having an active voice when the subject is [+animate], it might have been easier for the learners to avoid overpassivization errors with the CP type verbs. Further consideration and independent evidence would be needed, however, to prove the validity of this hypothesis.

## VI. CONCLUSION

In an attempt to test whether and how semantic properties of intransitive verbs can be related to the L2 overpassivization errors, this study investigated Korean high school students' grammaticality judgments on English passive sentences. The findings of the study can be summarized as the followings. First, the students made more incorrect judgments on unaccusative verbs than on unergative verbs. This result was consistent with the results of many previous studies which found that L2 overpassivization occurred mainly with unaccusative verbs (e.g., Hubbard 1983, 1994; Oshita, 1997; Zobl, 1989). Second, there was an effect of semantic type. Overall, the students found it easiest to identify passive errors on the CP-M type; the next easiest ones were the CP-NM and CL type. These results suggest that the simple dichotomy of the unaccusative and unergative does not suffice for the explanation of the between-verb variation among intransitives. Although the students' performances were better with the unergatives than with the unaccusatives on average, the analysis based on the finer semantic classification of intransitive verbs revealed that students did not perform equally well with all the unergative semantic types (CP-NM, CP-M, and UP types), nor equally badly with all the unaccusative semantic types (CL, CS, CPS, and ES types). Third, two interlanguage developmental patterns were identified. At lower proficiency,

no statistical difference was found among the students' grammaticality judgments on the six semantic types, CL, CS, CPS, ES, UP, and CP-NM. At higher proficiency, on the other hand, a difference was found between the CL and CP-NM types and the other four types (CS, ES, CPS, and UP types). To put these results together, the students seem to learn the intransitive verbs' nature of not allowing the passive voice in the following order: CP-M > CP-NM, CL > CS, ES, EPS, UP types. While further research is needed to find out the exact reason(s) why this order of acquisition is displayed, I suppose that the reason(s) would be related to the semantic nature of the verb. Recall that the present experiment was designed to exclude the intervention of other important variables that have been known to affect L2 overpassivization. The present study found that Korean high school students' responses on overpassivization were sensitive to the semantic types of the verb. While more studies are needed to see whether these results can be extended to L2 learners at college and/or higher educational levels and to L2 learners with different L1 backgrounds, the results of this study themselves have a pedagogical implication for secondary school teachers in Korea. Many scholars claimed (Hwang, 1999; Yip, 1994) that negative evidence is needed for successful acquisition of the grammaticality of the passivized intransitive verbs. That is because L2 input alone cannot tell the learners that passivized intransitives are ungrammatical. The results of the present study shed light on where the negative evidence is needed more. For example, the fact that high school students have difficulty with the UP type verbs as well as with unaccusative verbs tells educators that explicit teaching (including explicit focus on forms (e.g., Park, 2002)) is also needed for this type of verbs, not only for unaccusative verbs.

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## APPENDIX

### Grammaticality Judgment Test

Mark O if the sentence is grammatical and X if not. For ungrammatical sentences, please indicate which part is ungrammatical and correct the part.

1. The child was found in a small town.
2. The prisoners were carried by train.
3. Jane was jumped on the bed many times.
4. I was surprised at his sudden death.
5. John was arrived in Chicago three hours ago.
6. We all know that Jane is belonged to the club.
7. They were sung loudly because they were very happy.
8. Jane was talked with her friend yesterday.

9. My wife was not satisfied with anything.
10. The man was left for Chicago four days ago.
11. He was killed in Vietnam war.
12. Tom was swam in the river when I looked at him.
13. He made a speech and was asked many questions.
14. John was believed to be a good man.
15. Weather was not good yesterday and it was rained heavily.
16. They were remained silent when the teacher asked the question.
17. Jane was hit by a small ball.
18. He was touched on the shoulder by one of his friends.
19. We know that John and his family were existed in our town ten years ago.
20. They were stayed there because of heavy rain.
21. The men were ordered to go forward.
22. The prisoners were appeared in Chicago ten days after their escape.
23. He was called *Billy* by his friends.
24. She was died ten years after being released from the prison.
25. The judge was respected by all the people.
26. Tom was coughed many times because of the cold air.

**예시 언어(Examples in): English**

**적용가능 언어(Applicable Languages): English**

**적용가능 수준(Applicable Levels): Secondary**

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Received in Oct. 2006

Reviewed by Nov. 2006

Revised version received in Dec. 2006