# Semantic Aspects in L2 English Overpassivization\*

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Kim. Jung-Tae. 2007. Semantic Aspects in L2 English **Overpassivization.** The Linguistic Association of Korea Journal, 15(4), 55-76. In an attempt to see how semantic aspects of the verb and subject affect the rate of erroneous L2 passivization of unaccusative verbs, the present study investigated 78 Korean college students' grammaticality judgment on English passive sentences. The results of the study showed that 1) the semantic type of unaccusative verbs is related to the degree of difficulty that L2 learners experience when judging grammaticality of passive forms of the unaccusative verbs; 2) the semantic type of the subject affects L2 learners' grammaticality judgments on passivized sentences; and 3) there was an interaction effect between the semantic type of the verb and the semantic type of the subject. It is argued that L2 overpassivization is a highly complicated phenomenon which cannot be explained without involving the effects of the semantic aspects of the verb and its subject, and the interaction of those two factors.

Key Words: passive errors, overpassivization, unaccusative, interlanguage

# 1. Introduction

#### 1.1. L2 Overpassivization with Unaccusative Verbs

It has been widely reported that learners of L2 English often produce inappropriate passive forms with intransitive verbs. Consider the following examples in (1).

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(1) a. \*You are arrived in the eternity city. (Oshita, 2000)
b. \*Most People are fallen in love and marry with somebody. (Zobl, 1989)
c. \*My mother was died when I was just a baby. (Zobl, 1989)

The examples in (1) are some of the overpassivization errors with intransitive verbs made by the learners of L2 English. These errors have been observed with various L1 backgrounds: Learners' L1s in the literature include Arabic (Zobl, 1989), Chinese (Balcom, 1997), Dutch (Kellerman, 1978), Italian (Oshita, 1997), Japanese (Hirakawa, 1995), Korean (Ju, 2000), Spanish (Schachter & Hart, 1979), Thai (Zobl, 1989) and Turkish (Can, 2000). Overpassivization has been particularly noticeable among upper-intermediate, advanced, and even higher proficiency learners (Hubbard & Hix, 1988; Ju 2000; Yip, 1995).

Since Hubbard (1983), it has been generally accepted that the L2 overpassivization phenomenon is related to a class of verbs known as unaccusatives: Most of the L2 overpassivization errors occur with unaccusative verbs (Balcom, 1995, 1997; Hubbard, 1983, 1994; Yip, 1995; Zobl, 1989). Unaccusative verbs are one of the two types of intransitive verbs: unergative and unaccusative verbs. Perlmutter (1978) was the first the distinction between the unergatives to propose and unaccustives. According the distinction is determined to him. semantically but manifested syntactically. Roughly speaking. unaccusative verbs usually denote existence, appearance, change of states and location with nonagentive subjects while unergative verbs denote process with agentive subjects. Verbs like exist, happen, die, fall and arrive belong to the former and verbs like jump, talk, swim and sing belong to the latter. The distinction of the two classes of verbs, however, is not immediately obvious because both usually occur in identical syntactic environments as shown in (2).

(2) a. The man *died*: unaccusativeb. The man *talked*: unergative

At the argument structure level, the difference between (2a) and (2b) is quite clear. The subject 'The man' in (2a) is originally projected in the verb's object position and raised to the subject position, while 'The man' in (2b) is originated in the subject position and remains in the same position. (3a) and (3b) show their syntactic representations.

- (3) a. The man<sub>i</sub> [v<sub>P</sub> died  $t_i$ ]: unaccusative
  - b. The man  $[v_P \text{ talked}]$ : unergative

According to Yip (1994, 1995), unaccusatives are more susceptible to overpassivization errors because the learners' interlanguage incorrectly assumes unaccusatives as transitive verbs which can be passivized under the normal passivization rule of English.<sup>1)</sup>

### 1.2. Between-verb Variation among Unaccusative Verbs

An interesting observation regarding L2 overpassivization with unaccusative verbs is that the passivization errors do not apply to all unaccusatives uniformly. That is, all the unaccusative verbs are not subject to the equal error rates. For instance, Ju (2000) reported that Korean learners of English performed much worse on the unaccusative verb *disappear* than on the unaccusative verb *happen* in grammaticality judgment on the passivization of these verbs. A number of other studies (e.g., Balcom, 1997; Hwang, 2001; Montrul, 2004; No & Chung, 2006) also showed that there were substantial discrepancies among unaccusative verbs in their susceptibility to passivization errors.

Researchers have tried to identify what causes this variation among unaccusatives. One of the reasons is related to the distinction between the two subclasses of unaccusative verbs, alternating and non-alternating unaccusatives. Alternating unaccusatives have transitive

<sup>&</sup>lt;sup>1)</sup> Balcom (1997) and Zobl (1989), unlike Yip (1994, 1995), hypothesize that overpassivization is related to the learners' knowledge of the lexical rule by which the postverbal NP is raised to a subject position. According to this hypothesis, the 'postverbal NP movement rule' is incorrectly associated with the passivization, leading the learners to passivize the unaccusative verb phrases.

counterparts while non-alternating unaccusatives do not have such counterparts. For example, verbs like *open, close, break* and *increase* are alternating unaccusatives as they have a transitive counterpart. Note that both the sentences 'The door opened' (*open*: unaccusative intransitive verb) and 'John opened the door' (*open*: transitive verb) are grammatical sentences. On the other hand, verbs like *occur, appear,* and *happen* are non-alternating unaccusatives as they do not have a transitive counterpart. ('The accident occurred'/\*'John occurred the accident'). Verbs like *open* can be passivized when they are used as transitives and have a specific agent (e.g. 'The door was opened by John') but cannot be passivized when it is used as an unaccusative (\*'The door was opened smoothly because John had oiled the hinges').

It has been known that L2 learners make more overpassivization errors with alternating unaccusatives than with non-alternating unaccusatives (Balcom, 1997; Hirakawa, 1995). The reason seems quite obvious when considering that the alternating unaccusative is not morphologically distinguishable from its transitive counterpart. Due to the existence of the transitive form of the verb, which can be legitimately passivized, the learners may wrongly hypothesize that the alternating unaccusatives can be passivized like transitive verbs. Non-alternating unaccusatives, on the other hand, may be free of this type of confusion, causing less trouble for L2 learners.

L1 transfer might be another reason for the between-verb variation among unaccusatives in L2 overpassivization. Although some scholars (e.g., Yip, 1994, 1995; Ju, 1997) claimed that L1 transfer is not the direct reason for the overpassivization errors since the overpassivization phenomenon occurs cross-linguistically regardless of the learner's L1, there were studies suggesting that the transfer of L1 morphology is a possible cause of different error rates among unaccusatives. For example, No & Chung (2006) tested whether Korean college students' grammaticality judgment on the passivization of English unaccusative verbs is affected by the presence or absence of the passive morphemes in Korean translation of each verb. Results of their study showed that the learners are more likely to accept the passivized unaccusative verbs when their Korean translations contain a passive morpheme than when they do not. For instance, Korean learners make more overpassivization errors with the verb 'disappear', whose Korean translation *sara-ci-ta* includes a passive morpheme -ci-, than with the verb 'arrive', whose Korean translation *dochakha-ta* does not contain any passive morpheme. Therefore, L1 influence plays a role in causing different error rates among unaccusatives.

In the above, two factors were considered as reasons for different rates of overpassivization errors among unaccusatives: the presence or absence of a transitive counterpart of the unaccusative verb (distinction between alternating vs. non-alternating unaccusatives); and the presence or absence of a passive morpheme in the learner's L1 translation of the unaccusative verb (L1 influence). Still, questions may be asked about whether these are the only causes for the different error rates. If the variation exists even within a group of the verbs that share the same characteristics with regard to the two known causes mentioned above. then it would mean that other causes for the between-verb variation exist. For example, for a group of L2 unaccusative verbs which are both non-alternating and without a passive morpheme in their L1 translations, one can examine if there are substantial differences in passive error rates among the verbs. If such differences indeed exist, then it will imply that there must be other factor(s) affecting the error rates.

The present study examines two other factors as possible causes for the different error rates among unaccusatives: the semantic aspects of the verb and the semantic aspects of the subject of the verb. We will also ask whether these two factors interact to affect L2 overpassivization error rates.

The next section provides a brief theoretical background explaining the semantic aspects of the unaccusative verbs and those of the subjects. The detailed research questions of this study will also be presented in the next section.

# 2. Theoretical Backgrounds and Research Questions

### 2.1. Semantic Classification of Unaccusative Verbs

Sorace (1993a, b, 2000) claims that unaccusative verbs fall into semantically definable subtypes with different degrees of unaccusativity. That is, even among unaccusative verbs, some verbs have higher unaccusativity than others. The following hierarchy was suggested by Sorace.

(4) Unaccusativity hierarchy of the subtypes of unaccusative verbs

Change of Location Verbs > Change of State Verbs > Continuation of a Pre-existing State Verbs > Existence of State Verbs

According to the above hierarchy, the change of location verbs are characterized as having higher unaccusativity than the change of state verbs, change of state verbs higher than the continuation of a pre-existing state verbs, and the continuation of a pre-existing state verbs higher than the existence of state verbs. The unaccusativity here is related to the aspectual and thematic dimension of the verb. That is, the level of unaccusativity is decided in the light of the level of telicity (aspectual dimension) and agentivity (thematic dimension) that each verb carries. Telicity is the property that makes situation telic (with an inherent endpoint) or atelic (with no inherent endpoint).

Based on Romance and Germanic language data, Sorace argues that semantic differences among unaccusative verbs are reflected morphologically. In some of the Romance and Germanic languages, unaccusative verbs placed higher in the proposed hierarchy tend to be consistent in their perfective auxiliary selection (always choosing the 'be' verb as an auxiliary) while the verbs placed lower in the hierarchy tend to be inconsistent in their auxiliary selection (choosing between the 'be' verb and 'have' verb).

In Sorace (2000), each subtype of the unaccusative verbs is described

in the following way. Change of location verbs are the verbs that involve a concrete displacement from one point in space to another and have the highest degree of dynamicity and telicity. This type includes such verbs as *arrive, fall,* and *leave.* In Romance and Germanic languages, these verbs are consistent in their choice of auxiliary 'be' across languages. Sorace gives examples from Italian, French, Dutch, and German showing that these verbs always take the 'be' verb of the language as an auxiliary regardless of other aspectual features contributed by the sentence in which the verbs appear. For this type of verb, agentivity of the subject does not affect auxiliary choice with these verbs as shown in the following Italian example.

- (5) a. Maria è caduta apposta per farch spaventare (agentive) Maria is fallen on purpose to make-us scare 'Maria fell on purpose to scare us.'
  - b. Il Bicchiere è caduto dal tavolo (nonagentive) the glass is fallen from-the table 'The glass fell from the table'

(Sorace, 2000; 864)

Change of state verbs denote a change of state other than a telic change of location. These verbs include verbs of appearance (*appear*, *disappear*), verbs of happening (*happen*, *occur*), verbs of directed motion (*rise, descend*), and internally caused verbs of change of state (*become, wilt, bloom, decay*). These verbs of change of state encode telicity to variable degrees. According to Sorace, most verbs in this class are characterized by inferable, rather than overtly expressed, telicity. Compared to verbs of change of location, these verbs show more variation in their auxiliary selection (*be or have*) both within individual languages and across languages.

Continuation of pre-existing state verbs include the verbs such as *stay, remain, last,* and *survive,* which denote continuation of existing condition. These verbs are less dynamic than verbs of change of

location or verbs of change of state, but still have an implicit change component in their semantics. That is, although they imply a kind of static state, it is not the final stage of the event, but rather the implicit point of departure of the change. Sorace observes that, unlike verbs of change of location or change of state, these verbs are sensitive to the agentivity of the subject in their auxiliary selection.

Existence of state verbs are nondynamic and, unlike continuation of pre-existing state verbs, they do not involve the 'change' component at all. This class includes verbs referring to concrete states (*be, exist, belong*), positional verbs denoting simple position (*sit, lie, etc.,*) and verbs referring to an abstract or psychological state (*seem, suffice, please*). These verbs display the largest variation in auxiliary selection.

#### 2.2. Research Questions

The different semantic properties of the above four types of unaccusative verbs may affect the processes and results of L2 acquisition of the constructions involving those verbs. One question that will be asked in the present study is how L2 learners respond to each subtype of unaccusative verbs in their grammaticality judgment on the passive forms of those verbs. A similar question was asked by Kim (2006) for subtypes of all intransitive verbs, but the focus was rather given to the validity of the distinction between the unaccusative and unergative verbs in L2 passive error analysis.

The above question may be incorporated with the question of the semantic properties of the subject of the verb. One interesting point in Sorace's (2000) observation is that some types of verbs are more sensitive to the agentivity of the subject than others in their auxiliary selection. A question may be asked whether the similar observation can be made in L2 overpassivization phenomenon with unaccusative verbs. That is, one can ask whether L2 learners' grammaticality judgment on L2 overpassivization is affected by the agentivity of the subject of the verb, and if the answer is yes, whether or how the level of acceptance (or rejection) on overpassivized constructions is differentiated depending

on the four semantic types of the verbs. If certain types of verbs are more sensitive to the semantics of the subject than others, then, it would mean that there is an interaction effect between the semantic type of the verb and the semantic type of the subject in the learners' interlanguage related to L2 passivization.

In fact, some studies suggested that the agentivity of the subject affects L2 learners' grammaticality judgment of overpassivized sentences. Croft (1995), Ju (2000), and No and Chung (2006) observed that more problems were caused with inanimate subjects, which generally have lower agentivity, than with animate subjects, which have higher agentivity. According to them, learners tend to think that animate subjects do not go well with passive voice because they are typically suppressed in the passive voice. Learners were less suspicious of the grammaticality of overpassivized sentences when the subjects of the verbs were inanimate. No attempt has been made so far, however, to investigate whether different types of unaccusative verbs work differently with the semantic properties of the subject.

The present study investigates whether and how the semantic nature of an unaccusative verb and that of a subject work as possible sources of the between-verb variation in L2 overpassivization phenomenon. More specifically, the following three questions were set up as research questions.

1) How will Korean learners of L2 English respond to each semantic type of unaccusative verbs in their grammaticality judgment on the passive forms of these verbs? That is, is the degree of difficulty in L2 English passive acquisition affected by semantic properties of unaccusative verbs?

2) How will Korean learners of L2 English respond to the subjects with different semantic properties in their grammaticality judgment on the passive forms of unaccusative verbs? That is, is the degree of difficulty in L2 English passive acquisition affected by the semantic type of the subject of the verb?

3) Will there be an interaction effect between the semantic type of the verbs and semantic type of the subject (of the verb)? That is, is the degree of difficulty in L2 English passive acquisition affected by the interaction between the semantic nature of the verb itself and that of its subject?

Other known sources of between-verb variation (i.e., presence or absence of a transitive counterpart, L1 transfer effect) will be controlled as much as possible in our experimental study, which will be presented in the next section.

## 3. Methodology

#### 3.1. Participants

The participants in the study were 78 Korean speakers of L2 English in South Korea. They were all undergraduate students majoring in English in a university, ranging in age from 19 to 28, and in grade from sophomore to senior. Twenty-nine of them were male and 49 were female. Although not every participant has scores from standardized tests, the TOEIC scores provided by some participants were used as a reference suggesting the participants' overall English proficiency level. Judging from the TOEIC scores, and considering that the participants were all English majors, it was roughly assumed that their proficiency level was approximately high-intermediate on average. Of course, this does not necessarily mean that all participants belong to a homogeneous proficiency group.

#### 3.2. Materials

The participants were given a grammaticality judgment test, which consisted of 36 passive sentences. Among the 36 sentences, 24 sentences were experimental sentences and 12 were distracters. The experimental sentences included passive forms of four different types of unaccusative verbs, i.e., change of location (CL type), change of state (CS type), continuation of pre-existing state (CPS type), and existence of state verbs (ES type). The distracters were passive sentences with transitive verbs. Therefore. experimental sentences were all grammatically incorrect while distracters were all grammatically correct. For the experimental sentences, two verbs were selected from each of the four semantic types. These verbs were carefully chosen in order not to include two kinds of verbs: 1) alternating unaccusatives; and 2) unaccusatives whose principal Korean translations include a passive morpheme. We excluded those verbs because we wanted to control the variables known to affect the grammaticality judgment on the L2 passive forms (alternating vs. non-alternating distinction, L1 transfer effect) and see only the effect of the semantic aspects of verbs.

With each experimental verb, three sentences were created with different types of subject. Three semantically different types of subject were used in this study: human (H), auto-movable object (AMO), and non-auto-movable object (NAMO) types. Human subjects were the ones with high agentivity while object (or non-human) subjects were the ones with low agentivity. Object subjects were of two types, auto-movable and non-auto-movable. The auto-movable type subjects were the means of transportation such as *cars, trains,* and *planes* that can be easily associated with high dynamicity. The non-auto-movable type subjects were those that have low dynamicity per se, including such nouns as *gift, house, tree, etc.* 

Examples of the CL verb type experimental sentences with three different subject types are given in (6).

- (6) a. All those people were arrived in Chicago 3 days ago. (H)
  - b. The train was arrived in the station without delay. (AMO)
  - c. The gift was arrived in his house at 8 am. (NAMO)

Table 1 shows the distribution of the 24 experimental sentences and the verbs used for each verb type.

<u> </u>	Distribution	of Experimental	Sentences	and Employed Verbs
Verb types		Subject types	Davalaria i seratar	
	Н	AMO	NAMO	Employed verbs
CL	2	2	2	arrive, depart
CS	2	2	2	appear, become
CPS	2	2	2	stay, remain
ES	2	2	2	exist, belong
Total	8	8	8	

The structures and vocabulary of the test sentences were controlled so that the degrees of difficulty of all the test sentences were approximately the same: All sentences were simple sentences with only one verb and vocabulary was easy enough for a college student to understand and process. The test sentences were presented in a random order.

#### 3.3. Procedure

The grammaticality judgment test was given to the participants during one of their classes. The participants were instructed to mark the grammaticality of each sentence as quickly as possible. They were also required to correct the ungrammatical part of the sentence in case they mark a sentence as ungrammatical. The participants' responses were counted as correct only when proper corrections were made for the ungrammatical part of the sentence. No time limit was set for this test, but most participants finished the test within twenty minutes. Analyses on the participants' responses were conducted only for the experimental sentences, and not for distracters.

# 4. Results and Discussion

A total of 1,872 responses (24 experimental items by 78 participants) were gathered and analyzed. Table 2 shows percentage means of the

correct responses on the grammaticality of the passive sentences with the semantically different verb types and subject types.

Grammaucanty of Unaccusative Passive Sentences					
	Verb Type				
Subject Type	CL	CS	CPS	ES	Total
Н	60.96	65.38	66.67	51.92	61.22
	(48.96)	(47.73)	(47.29)	(50.12)	(48.76)
AMO	53.21	64.10	43.21	36.54	49.04
	(50.06)	(48.12)	(49.56)	(43.81)	(50.03)
NAMO	27.56	58.33	56.41	42.95	46.31
NAMO	(44.83)	(49.46)	(49.75)	(49.66)	(49.90)
Total	47.22	62.61	55.13	43.80	52.19
	(49.98)	(48.44)	(49.79)	(49.67)	(49.97)
			,		

Table 2. Percentage Means of the Correct Responses on the Grammaticality of Unaccusative Passive Sentences

( ): Standard Deviation

The participants responded correctly 52.19% of the time in total. The overall descending order of the percentage means on the verb type was: change of state (CS: 62.61%), continuation of pre-existing state (CPS: 55.13%), change of location (CL: 47.22%), and existence of state (ES: 43.80%) type. The overall descending order on the subject type was: human (H: 61.22%), auto-movable object (AMO: 49.04%), and non-auto-movable object (NAMO: 46.31%). In order to see whether these descending orders are statistically meaningful, an ANOVA was run with the verb type and subject type as factors.

There was a significant effect on the verb type (F=13.97, p<.001). A post hoc analysis revealed that statistical differences exist between the CL and CS types, between the CS and ES types, and between the CPS and ES types. No difference was found among the CL, ES and CPS types and between the CPS and CS types. Duncan's post hoc analysis identified three homogeneous groups: the ES and CL types; the CPS type; and the CS type. That is, the ES and CL type verbs were most difficult for the participants to identify the ungrammaticality of the passivized forms; the CPS type verbs were less difficult; and the CS

type verbs were easiest.

Next, we examined eight individual verbs in order to see whether the above typological analysis soundly reflects the participants' responses to the individual verbs. Figure 1 illustrates the participants' responses to each of the eight verbs.

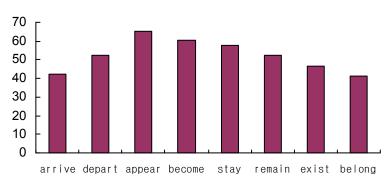


Figure 1. Percentage Means of the Correct Responses to Each Individual Verb

For the verbs that belong to the CL and ES types (arrive, depart, exist, belong), the mean scores were clustered between 41% and 52% (arrive-41.31%, depart-52.14%, exist-46.58%, belong-41.03%). For the verbs that belong to the CPS type (stay, remain), the mean scores were clustered between 52% and 58% (stay-57.69%, remain-52.56%). For the verbs that belong to the CS type (appear, become), the mean scores were clustered between 60% and 65% (appear-64.96%, become-60.26%). This clustering effect implies that the result of our typological analysis reasonably reflects the participants' responses to the individual verbs: the distinction of the three homogeneous groups (the CL & ES group, the CPS group, and the CS group) was confirmed by the distribution of the individual verbs.

Our results with the verb type showed that the change of location verbs and the existence of state verbs are more prone to passive errors

than the change of state and continuation of pre-existing state verbs. The theoretical significance of this order, however, is unclear at present. One might have expected that the verbs with higher unaccusativity are more prone to passive errors. Considering that only unaccusative verbs, not unergative verbs which are low in their unaccusativity, are subject to heavy overpassivization errors, it may be possible to conjecture that the level of unaccusativity is related to the susceptibility to passive errors. This expectation, however, was not proved in our study. In our study, no substantial difference was found in their susceptibility to passive errors between the CL and ES types, which, in Sorace's unaccusativity hierarchy, were placed in two far ends. The CS type, which was located on the second highest in the hierarchy, was least susceptible to passive errors. Therefore, Sorace's unaccusativity hierarchy does not predict the order of susceptibility to L2 passive errors, at least, for the Korean learners of English. Still, the theoretical contribution of our study is not negligible, as it found that the rate of L2 passive error is sensitive to the semantic type of verbs.

Now let us turn to the reponses on the subject types. Again, the ANOVA analysis showed that there was a significant main effect on the subject type (F=16.59, p $\leq$ .001). A post hoc analysis revealed that statistical difference existed between the H and AMO types, and between the H and NAMO types. No such difference was found That is, there was statistical between the AMO and NAMO types. difference only between the human (H) and non-human (AMO & NAMO) subject types. It means that the participants rejected overpassivized sentences more easily when the subject of the verb was a human than when it was not a human. This result was consistent with the results of the other studies reporting that inanimate subjects caused more problem than animate subjects for L2 learners' grammaticality judgment on overpassivized sentences (e.g., No & Chung, 2006). Animated subjects (human or animal) are generally associated with high agentivity. In our study, because of the high agentivity of the human type subject, the participants may have thought that the human type subjects did not match well with the passive voice,

correctly rejecting the overpassivized sentences with a human subject. In this sense, the result of our study appears to confirm the L2 learners' overall tendency to relate the subject with high agentivity to the active voice, and the subject with low agentivity to the passive voice. The interpretation of the result on the subject type, however, needs to be further elaborated as we found an interaction effect between the verb type and subject type.

Our analysis indicated that there was a significant interaction effect between the verb type and subject type (F=6.06, p<.001). The existence of the interaction effect requires a closer examination on the relationships between the two types, as it means that the participants' responses on the subject types were different depending on the verb types. In order to examine the interaction effect, an ANOVA was conducted for each verb type with the subject type as a factor.

Table 3.	Results	OF ANON	As with the Subject Type as a Factor
Verb type	F	р	Significant differences found between:
CL	20.6	.000	H and NAMO; AMO and NAMO
CS	.938	.392	None (no significant difference)
CPS	9.77	.000	H and AMO; AMO and NAMO
ES	3.822	.023	H and AMO; H and NAMO

1.1 .1

Table 3 shows the interactions between the verb type and subject type. For the ES type verbs, for example, significant differences were found between the human subject type (H) and non-human subject types (AMO and NAMO) and no difference was found between the two non-human subject types. On the other hand, for the CS type verbs, the participants' responses were statistically same for all three subject types.

In fact, the subject-verb type interactions shown in Table 3 are quite complicated, making it difficult for us to draw any simple generalization. In order to explain the interactions, we may have to consider each individual verb type's semantic properties more closely in relation with the properties of the subject types. For the CL type verbs, for

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example, the mean score was particularly low on the NAMO type (27.56%) compared to the other two types of subjects (60.96% for the H type and 53.21% for the AMO type) (see Table 2). Table 3 indicates that for the CL type verbs, there was no statistical difference between the H and AMO types while the NAMO type was different from both the H and AMO types. This means that the participants accepted overpassivized CL type verbs dramatically more when the subject was a non-auto-movable object. In other words, change of state verbs were more sensitive to the subject's auto-movability (i.e., dynamicity) than to the animacy (i.e., agentivity). While we do not try to offer any definitive answer to the question of why this kind of interaction occurs here, a suggestion may be given. When a CL type verb is used, the L2 learners tend to think that those subjects that cannot change locations by their own power (so, low dynamicity) need to be passivized. On the other hand, those subjects that can change their locations by their own power (so high dynamicity) need not be passivized. Thus, for the CL type verbs, dynamicity, rather than agentivity, of the subject may decide the L2 learners' susceptibility to overpassivization errors. Of course, in order for the validity of this suggestion to be proven, more comprehensive investigation should be made, including the comparisons of the interaction patterns of the other verb types. In the present study, we will not attempt to provide explanations for all the observed interaction patterns, but will leave the work for future research.

### 5. Conclusion

By investigating Korean college students' grammaticality judgments on English passive sentences, the present study tried to answer three research questions as to how semantic aspects of unaccusative verbs and their subjects affect the L2 overpassivization errors. Answers to the three questions found in the study may be summarized in the following way.

First, the semantic type of unaccusative verbs is related to the degree of difficulty that L2 learners experience when judging grammaticality of

their passive forms. Overall, the students found it most difficult to identify the passive errors on the ES and CL types. The CPS type was less difficult, and the CS type was easiest. Although Sorace's unaccusativity hierarchy could not provide a direct answer to the reason why this order of difficulty is shown, the result of the present study strongly suggests that the semantic nature of the verbs is somehow related to the between-verb variation among unaccusative verbs in L2 overpassivization phenomenon.

Second, the semantics of the subject clearly affects L2 learners' grammaticality judgments. Overall, the students recognized ungrammaticality of the passivized verbs more easily when the subject of the verbs was human than when it was non-human (auto-movable objects and non-auto-movable objects). These results may be taken as evidence showing that, overall, agentivity of the subject has an effect on the passive errors: L2 learners tend to think that a subject with a high agentivity does not go well with passive voice. Caution is needed for this generalization, however, as the interaction effect exists between the semantics of the verb and that of the subject.

Third, there was an interaction effect between the verb type and subject type. The complicated patterns of this interaction made it difficult to draw any simple generalization. While further research is needed to find out what exactly causes these interaction patterns, the existence of this complex interaction indicates that L2 overpassivization is a highly complicated phenomenon, which cannot be explained without involving semantic interactions of the verb and its subject.

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#### Appendix

Grammaticality Judgment Test

- 1. Unfortunately, the last flight to Paris was canceled.
- 2. All those people were arrived in Chicago 3 days ago.
- 3. The sky was covered with heavy clouds.
- 4. Last night, some prisoners were appeared on the roof.
- 5. The gift was arrived in his house at 8 am.
- 6. The party was canceled because of the bad weather.
- 7. The building was belonged to Mr. Trump, a famous millionaire in the USA.
- 8. During rainy days, the students were stayed in the building.
- This type of house was existed even five hundred years ago in Russia.
- 10. The ground was covered with a mixture of grasses.
- 11. The tree was stayed there even after the strong storm.
- 12. All of sudden, three airplanes were appeared in the sky.
- 13. The missing child was discovered in the forest after three days.
- 14. After the warning bell, only two cars were remained in the parking lot.
- 15. Tom's friends were departed for Chicago 4 hours ago.
- 16. Another huge lake was discovered in Arizona.
- 17. Surprisingly, those people were existed in this mountain area even five hundred years ago.
- 18. Only five houses were remained standing in the town after the strong storm.
- 19. The plane was departed from the LA international Airport.
- 20. Because of his warm and gentle personality, John was missed by many people.
- 21. John and Mary were become to friends.
- 22. The car was belonged to John until last December.
- 23. John was hit hard in the face.
- 24. Rome was become the capital of the empire.

- 25. Our tour was departed from the central train station on Sunday.
- 26. He was covered in a large white blanket.
- 27. The hospital was hit with heavy artillery fire.
- 28. John was remained in the country after the end of the war.
- 29. The car was become very famous among the customers.
- 30. The train was arrived in the station without delay.
- 31. My car was hit by a trailer in the intersection.
- 32. Automobiles were existed in this country 100 years ago.
- 33. To my surprise, his house was appeared on the television show.
- 34. His car was discovered in a remote place two days ago.
- 35. During the construction of the new garage, the cars were stayed in the street.
- 36. At that time, John was belonged to the school football team.

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