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Korean Learners' Interpretation of English Locative PPs with Manner of Motion Verbs*

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The present study investigated Korean learners' knowledge on the range of possible interpretations of English locative PPs with manner of motion verbs, and considers whether learners can arrive at a superset L2 grammar on the basis of positive L2 input. Unlike Korean, some English locative PPs occurring with manner of motion verbs (such as in *John jumped on the bed*) are ambiguous as they can be interpreted as either directional or locational. Thirty Korean learners of English in three distinct groups (Advanced EFL-only group; Intermediate-EFL-only group; and ESL-experienced group) participated in an experimental study, along with a control group of nine native speakers of English. The results of the study showed that 1) Korean learners, overall, tended to interpret English locative PPs as only locational, failing to recognize the ambiguity between the directional and locational readings in the target structure; 2) For the learners who experienced only the EFL context, even highly proficient learners, as well as intermediate level learners, failed to acknowledge the ambiguity; 3) The learners who experienced the ESL context for an extended period of time could identify the target reading to some extent, although they still could not reach the native-like competence. From these results, it is argued that robustness of positive evidence, not simply its availability, is critical in the acquisition of the superset L2 targets like the present one.

[interpretation/subset/prepositional phrase/manner of motion verbs]

I. INTRODUCTION

In English, some prepositions such as *in, on,* and *behind* are ambiguous between

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locational and directional readings when they occur with a manner of motion verb.

(Jackendoff, 1983, 1990; Levin & Repoport, 1988). Consider the following English examples in (1).

(1) a. Mike jumped in the pool.
b. Mike jumped on the bed.
c. Mike ran behind the wall.
d. Mike swam inside the cave.

For (1a), two readings are possible. In one reading, it means 'Mike was already in the pool where he was engaged in jumping activities.' and in the other reading, it means 'Mike was outside the pool (probably on the edge of the pool) and he jumped into the pool.' Thus, the prepositional phrase *in the pool* can be interpreted either as locational or as directional. Likewise, *on the bed* in (1b) can be either the location of Mike's jumping (locational reading) or the goal of Mike's jumping (directional reading). Similarly, in (1c) and (1d), *behind the wall* and *inside the cave* can be either the location or goal of *Mike's running* and *swimming*, respectively. Of course, not all English prepositional phrases (PPs) are interpreted ambiguously with manner of motion verbs. PPs headed by the prepositions such as *onto*, *into*, and *to* are unambiguously directional with manner of motion verbs, as shown in (2).

(2) a. Mike jumped onto the bed.
b. Mike ran into the room.
c. Mike swam to the bank.

In contrast, Korean locative PPs appearing with manner of motion verbs are never ambiguous between directional and locational readings.

(3) a. Mike-nun chimdai-wi-eyse ttwui-ess-ta.
Mike-Top bed- on- at jump-Pst-Dec
'Mike jumped on the bed' (locational reading only)

b. Mike-nun dongkul-an-eyse heyemch-ess-ta.
Mike-Top cave- inside-at swim-Pst-Dec
'Mike swam in the cave' (locational reading only)

Unlike their English counterparts in (1b) and (1d), *chimdai-wi-eyse* 'on the bed' in (3a) and *dongkul-an-eyse* 'inside the cave' in (3b) can only denote a location where the motion has occurred, and cannot have a directional reading.

Thus, English locative PPs with manner of motion verbs allow either locational or directional readings, while their Korean counterparts allow only a locational reading.* This difference between Korean and English in the range of possible interpretations of locative PPs may suggest that native speakers of English and native speakers of Korean have established different morpho-syntactic mechanisms in their L1s with regard to this construction. These different mechanisms may pose a problem when a speaker of one language attempts to learn the other's language. For Korean learners of English to be completely 'native-like' English speakers, they must possess the knowledge that some English locative PPs allow a different range of interpretation from their Korean counterparts.

The present study investigates Korean learners' knowledge on the range of possible interpretations of English locative PPs with manner of motion verbs, and considers the issues concerning what determines the acquisition of such knowledge. Especially, as English and Korean hold a superset-subset relationship regarding the possible interpretations of the locative PPs, questions will be asked about whether the availability, or robustness, of positive evidence is critical in the L2 acquisition of such knowledge. Concrete research questions will be set up after looking at the current theoretical issues on the L2 acquisition in the subset-superset relation, then the results of an experimental study, which is designed to provide answers to the research questions, will be reported.

II. THEORETICAL BACKGROUNDS AND RESEARCH QUESTIONS

1. Syntactic Explanations for English and Korean Locative PPs with Manner of Motion Verbs

As shown in (1) and (3), there is an asymmetry between English and Korean in the range of possible interpretation of locative PPs. In this study, I will adopt Inagaki's (2001, 2002) account of the asymmetry within the framework of a syntactic approach to argument structure. Although Inagaki's account was based on the observation of the contrast between Japanese and English manner of motion verbs, I assume that the same account may apply to the contrast between Korean and English.

Inagaki (2002) noticed that unlike English, Japanese locative PPs are unambiguously locational with manner of motion verbs, the same case as in Korean.

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* In Korean, only goal PPs headed by *(eu)ro* 'toward' can occur with manner of motion verbs, allowing a directional reading.

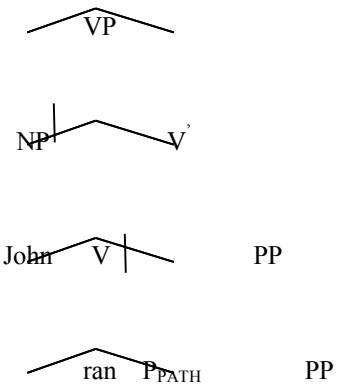
(4) a. John-wa kabe-no usiro-de hasitta.
John-Top wall-Gen back-at ran
'John ran behind the wall' (locational)

b. John-wa puuru-no nake-de tonda
John-Top pool-Gen inside-at jumped
'John jumped in the pool.' (locational)

The Japanese sentence in (4a) can be interpreted only as 'John was behind the wall, where he was running.'(locational reading), but not as 'John ran from somewhere to behind the wall.' (directional reading). Note that in English, both interpretations are possible. Likewise, only the locational reading is possible for *puuru-no nake-de* 'in the pool' in (4b).

Hale & Keyser (1993, 1997) suggest that primitive semantic notions derive from the structural relations of lexical categories and their projections. In the spirit of Hale & Keyser, Inagaki (2001, 2002) proposed that English and Japanese are taking different incorporation patterns in the syntactic representation of a motion event. The following shows the incorporation pattern of English manner of motion verbs with PPs proposed by Inagaki. The representation of the argument structure of a motion event itself is based on Talmy (1985).†

(5) English argument structure for manner of motion verbs with PPs



† The structures given in (5) and (6) are the LRS (Lexical Relational Structure) representations of a motion event at the lexical-syntax (l-syntax) level. As opposed to the syntactic structure at the sentential-syntax (s-syntax) level, the LRS is the argument structure reflecting primitive semantic notions.

P_{PLACE} NP

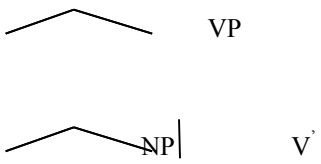
behind the wall

'John ran behind the wall.'

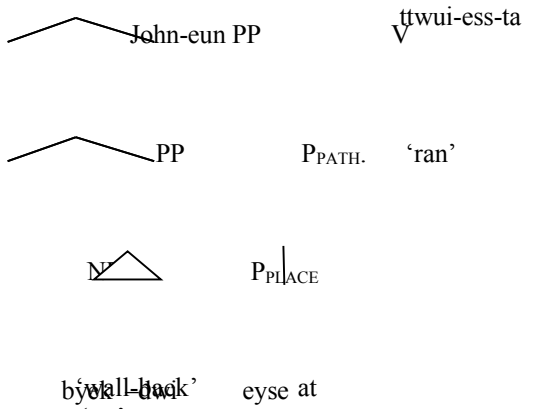
PATH and PLACE are primitive semantic notions. PATH is an event where something moves to somewhere (directional) and PLACE is an event where a motion has ended in a place (locational). In English, PLACE P incorporates into PATH P, thus allowing some locative prepositions to denote a PATH event. This incorporation entails ambiguity between the directional reading (PATH) and the locational reading (PLACE) for some English PPs. Some other English prepositions have a morphological reflex of the PATH preposition 'to' (*to, into, onto*), producing only a directional reading. Inagaki argues that, unlike English, Japanese does not have the incorporation of PLACE P into PATH P.

As Japanese and Korean exhibit the identical syntactic-semantic phenomenon with respect to the use and interpretation of manner of motion verbs with PPs, I assume that the same contrast in incorporation between English and Japanese may also account for the difference between English and Korean.‡ In the present study, I assume the following structure for Korean manner of motion verbs with PPs, in which PLACE P does not incorporate into PATH P.

(6) Korean argument structure for manner of motion verbs with PPs.



‡ Inagaki's (2001) original proposal for Japanese argument structure included the incorporation of PATH P into V in order to account for the case where Japanese goal PPs are used with directed-motion verbs (such as *go*, *come, enter*). While the same linguistic phenomenon occurs in Korean, and thus, the same argument structure can be proposed for Korean, I will limit our discussion to the use and interpretation of manner of motion verbs.



'John-eun byek-dwi-eyse ttwui-ess-ta'
John-Top wall-back-at ran-Pst-Dec
'John ran behind the wall.' (locational)

In the above example, the PP *byek-dwi-eyse* 'behind the wall' appearing with a manner of motion verb cannot be directional as PLACE P does not incorporate into PATH P in Korean. Therefore, for Korean learners of English to acquire the directional interpretation of English PPs with manner of motion verbs, they must know the L2 argument structure that allows the incorporation of PLACE P into PATH P, which does not exist in their L1.

2. Subset-Superset Relation and Positive Evidence in L2 Acquisition

A subset grammar is a grammar with more restrictions compared to a less restrictive grammar which may be called a 'superset' grammar. The subset principle (Berwick, 1985) claims that children acquiring a native language initially assume the most restrictive grammar (a subset grammar) before they test whether the grammar of the language can be extended to a less restrictive one. If children initially assume a superset grammar, they would, then, need to narrow its scope to the target grammar in case the target grammar is a subset. For this to happen, children would need negative evidence. Considering the scarcity of negative evidence in the natural language learning environment, children who initially assume the superset grammar would rarely receive input that directly disconfirms the initial assumption. On the other hand, if children initially assume the subset grammar,

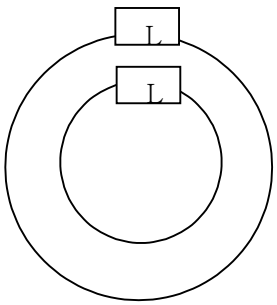
the target grammar can be constructed on the basis of positive evidence only. For example, if children learning English initially assume a grammar that allows only NP + PP for the dative structure (prepositional dative) and construct sentences such as (7a), then they would be able to avoid producing ungrammatical sentences like (7b).

(7) a. Mike explained the situation to John.
b. * Mike explained John the situation.

To acquire the extended grammar in which some English verbs such as 'offer' and 'give' allow NP + NP complements (double-object dative), learners will simply need positive evidence such as 'Mike offered him the job.', and will learn the cases where the double-object dative structure is permitted. Here, the grammar that allows only the prepositional dative structure is a subset grammar whereas the grammar that allows both the prepositional and double-object dative structures is a superset grammar.

The subset principle also offers theoretical insight for second language acquisition research. White (1991) considered two situations where there is a partial overlap between the L1 and L2 in the argument structure properties. The first situation is the case where target properties in the L2 constitute a subset of the corresponding properties in the L1. This case is illustrated in Figure 1.

FIGURE 1
Subset L2-Superset L1 Relation



This situation causes difficulty in L2 acquisition, because all input data L2 learners receive are consistent with their L1 grammar, and consequently, the learners will assume that the L2 grammar is identical to their L1 grammar with regard to the target properties. In this case, without negative evidence, learners are likely to transfer their L1 to L2 without restriction, and produce L2 sentences that conform to their L1 grammar, but not to

the L2 grammar. Some studies in L2 argument structure acquisition confirm the existence of this difficulty (Izumi & Lakshmanan, 1998; Juffs, 1996; White, 1987, 1991). White (1987, 1991), for example, examined native English speakers' acquisition of French dative constructions. Unlike English which allows both prepositional and double-object dative structures, French allows only the prepositional datives as shown in (8).

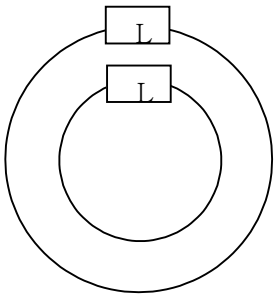
(8) a. Jean a donné le livre à Marie.
Jean gave the book to Marie
"Jean gave the book to Marie"

b. *Jean a donné Marie le livre.
Jean gave Marie the book

Therefore, French grammar involving the dative construction forms a subset grammar of the English counterpart. White observed that native English speakers learning French accepted ungrammatical sentences like (8b) as grammatical even after years of exposure to French, confirming the expected difficulty caused by the transfer of L1 dative constructions.

The second situation is the opposite of the first case: L2 grammar constitutes a superset of L1 grammar. Figure 2 illustrates this relation.

FIGURE 2
Subset L1-Superset L2 Relation



Two conflicting possibilities were suggested for this situation. The first possibility is that L2 learners are able to notice the new properties from the L2 input, and arrive at the L2 grammar on the basis of positive evidence (Inagaki, 2001; Mazurkewich, 1984). The second possibility is that the partial overlap between the L1 and the L2 misleads L2 learners to assume that the grammars of the two languages are the same, resulting in the

unsuccessful incorporation of the new L2 properties into the interlanguage grammar (Inagaki, 2002; Montrul, 2001; Sorace, 1993).

Experimental studies testing the second situation so far have produced mixed results. For example, Mazurkewich (1984) studied French-speaking learners' acquisition of the English dative construction. The study reported that, initially, French speakers rejected double-object dative forms of English (e.g., *John gave Mary the book*), which are ungrammatical in their L1. However, as they became more proficient in English, they increasingly accepted English double-object dative forms, supporting the hypothesis that L2 learners can arrive at the L2 grammar on the basis of positive evidence.

On the other hand, Montrul's (2001) study supported the second possibility. She examined Spanish speakers' acquisition of transitivity alternation in English. While Spanish does not allow a transitivity alternation, English does. Sentences in (9) show that a transitivity alternation is possible for English manner of motion verbs when there is a PP, and (10) shows that it is not the case in Spanish.

(9) English (transitivity alternation allowed)

a. The soldiers marched.
b. The captain marched the soldiers to the tents.

(10) Spanish (transitivity alternation not allowed)

a. Los soldados marcharon.
The soldiers marched
b.* El capitán marchó a los soldados hasta el campamento.
The captain marched the solders to the tents

Spanish constitutes a subset of English as English allows both intransitive and transitive use for some type of motion verbs while Spanish allows only intransitive use for the same type of verbs. Montrul reports that majority of intermediate level Spanish learners of English failed to accept forms like (9b) as grammatical. She interpreted this result as showing that the partial fit between the L1 and L2 argument structures misguided the learners to believe that the L2 verbs act same as the L1 verbs, and that the positive input was not sufficient to lead the learners' reanalysis of the argument structure of the L2 verbs.

Inagaki's (2002) study also supported the second possibility. Inagaki explored whether Japanese learners of English can recognize the ambiguity of English locative prepositional phrases occurring with manner of motion verbs. As we have seen in the previous section with examples in (4), Japanese locative PPs have unambiguously locational reading when

appearing with manner of motion verbs, constituting a subset of English grammar. Inagaki tested 35 university freshmen majoring in social welfare in Japan with a written picture-matching task. The task involved ambiguous English sentences with a pair of pictures for each sentence, one showing a directional reading and the other a locational one. Subjects were asked to indicate which picture the sentence corresponded to, or whether it could mean both of the pictures. The result showed that the predominant response of the subjects was to choose the picture that corresponds to the locational reading. Inagaki interpreted this result as suggesting that the directional interpretation of English prepositions is not robust enough in the input, thus, failing to guide Japanese learners of English to reanalyze L1-based assumption of the L2 argument structure.

3. Research Questions

The mixed results of the studies in the subset L1-superset L2 case require further consideration on the use of positive input in L2 acquisition. While some studies (e.g., M Mazurkewich, 1984) support that L2 learners can arrive at the L2 grammar on the basis of positive input, others (e.g., Inagaki, 2002; Montrul, 2001) seem to say the opposite. Conflicting results of these studies, however, may be better understood as we consider the robustness of the input, not just the availability of the input. While Mazurkewich's (1984) target structure was English double-object datives, which are common and relatively frequent in English, Montrul (2001) and Inagaki (2002)'s targets were transitive alternation and ambiguity of locative PPs with manner of motion verbs of English, respectively, which are less common and frequent in the input. L2 learners may need more or different context of exposure to these target argument structures to incorporate these into their interlanguage grammar.

In Inagaki's (2002) study, subjects were all university freshmen with intermediate level English proficiency who had learned English only in EFL context in Japan.§ However, when the learners' proficiency and the context of exposure are limited, strong claims cannot be made about how successful positive evidence is, especially for the marked properties like ambiguity of locative PPs in English. Considering Mazurkewich's (1984) study in which the French speakers increasingly acquired English double-object forms as they became more proficient in English, proficiency level of subjects seems to be an important factor in this type of research.

The present study examines whether learners can arrive at a superset L2 grammar on the basis of positive L2 input by testing L2 learners with varied proficiency levels and with

§ All of Inagaki's (2002) subjects had learned English in a formal instruction setting in Japan and none of them had stayed in an English-speaking country for more than one month.

different experiences in the context of exposure. Specifically it asks the following questions:

1. Compared to the native speakers of English, will Korean learners of English have difficulty recognizing the range of possible interpretations of English locative PPs with manner of motion verbs?
2. For the learners who have experienced only the EFL context, does their English proficiency level correlate with their ability to recognize the target readings? That is, as learners become more proficient in English in the EFL context, can they learn superset L2 grammar related to the English locative PPs?
3. Does learners' experience of the ESL context for an extended period of time affect their recognition of the target reading? That is, can the intensive exposure to the natural input lead to better acquisition of superset target grammar related to the English locative PPs?**

III. METHOD

1. Subjects

Thirty native speakers of Korean participated in the study along with a control group of nine native speakers of English. All Korean subjects except three were undergraduate and graduate students of a university in Korea majoring in English language and literature (undergraduate students) and English education (graduate students in the graduate school of education). The three other students were non-English majors. Korean speakers were divided into three experimental groups: ESL-experienced group; Advanced EFL-only group; and Intermediate EFL-only group. The ESL-experienced group consisted of six undergraduate and graduate students who have an experience of living in an English-speaking country for more than one year in their adolescence. Ages of the subjects in the ESL-experienced group ranged from 21 to 38. They were exposed to the ESL context when their ages were between 10 and 18, and their average year of exposure in the ESL context was 2;9 years.

The two EFL-only groups consisted of undergraduate and graduate students who had not lived in an English-speaking country more than six months. The advanced EFL-only group consisted of eleven highly advanced English learners whose TOEIC scores are over

** One of the main differences between the EFL and ESL contexts assumed in this paper is the amount of natural input that may force learners to analyze the relation between the form and meaning.

850, and the intermediate EFL-only group consisted of thirteen intermediate level English speakers whose TOEIC scores range between 650 and 800.†† ‡‡ Ages of the subjects in the two Korean EFL groups ranged from 20 to 48. The control group was composed of nine native speakers of English, all of whom were English instructors at the same university, aged between 28 and 42.

2. Materials and Procedure

A written picture-matching task was used in the study. (See Appendix A for an example). There was a total of 20 questions including 10 test items and 10 distracters. Each test item was an English sentence containing a locative PP with a manner of motion verb which allows both locational and directional readings (e.g., *Mary jumped on the bed*). Two pictures were given with a test sentence, one depicting a directional reading of the sentence (Picture A) and the other depicting a locational reading (Picture B). Then, there were three options to choose from: 'Picture A only', 'Picture B only', and 'Either Picture A or B'. Subjects were instructed to read the sentence and choose one from the three options that best depicts the meaning of the sentence. The test items included six manner of motion verbs (*jump, crawl, walk, swim, run*, and *flew*) in the past tense, and six prepositions (*in, under, on, behind, inside*, and *above*). Distracters included eight unambiguous sentences (e.g, *Mike swam to the island.*) and two structurally ambiguous sentences (e.g., *John hit the man with an umbrella.*). The test items and distracters were randomly ordered. The format of this written picture-matching was adopted from Inagaki (2002). In addition to the picture-matching test, a background information questionnaire was used to get the data on the subjects' English proficiency (TOEIC score), experiences of living overseas, and other relevant information.

The written picture-matching test and the background information questionnaire were presented to the subjects either during one of their class hours or individually in their free time. Subjects were given a short explanation on what they were expected to do before they began the task. No time limit was set for the task.

IV. RESULTS AND DISCUSSION

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†† Forty-nine Korean students were initially screened for the participation of the study. Among them, students who had not taken the TOEIC and whose TOEIC score is either lower than 650 or between 800-850 were excluded.

‡‡ Admittedly, the distinction between 'advanced' and 'intermediate' groups is rather arbitrary here. Relatively high standard was set for the 'advanced' group in order to see whether highly proficient English learners can reach the marked superset target grammar.

Table 1 contrasts Korean learners' and native English speakers' responses on the written picture-matching task. Note that the responses of all Korean subjects in three Korean experimental groups were totaled and averaged here for the purpose of comparison with the native English speakers.

TABLE 1

Percent Means of the Responses by Korean Learners and Native English Speakers

	Locational Only	Directional Only	Locational / Directional
Korea learners of English	72.33 (21.12)	15.67 (15.01)	12.00 (16.90)
Native English Speakers	11.11 (10.54)	17.78 (9.72)	71.11 (16.16)

( ): Standard Deviation

Korean learners predominantly chose the 'location only' interpretation for English locative PPs with manner of motion verbs (72.33%). English native speakers, on the other hand, chose the 'either locational or directional' interpretation in most cases (71.11%). The results suggest that Korean learners, overall, have difficulty in recognizing the possibility of directional reading of English locative PPs with manner of motion verbs.

Responses by the individual groups are presented in Table 2.

TABLE 2

Percent Means of the Responses by Each Group

	Locational Only	Directional Only	Locational / Directional
Intermediate EFL-only	76.15 (18.05)	14.62 (10.50)	9.23 (12.56)
Advanced EFL-only	80.91 (19.73)	14.55 (13.68)	4.54 (8.20)
ESL-Experienced	48.33 (11.69)	20.00 (25.30)	31.67 (23.17)
Native English Speaker	11.11 (10.54)	17.78 (9.72)	71.11 (16.16)

( ): Standard Deviation

The two EFL-only groups chose the 'locational only' reading in most cases (Intermediate EFL-only group, 76.15%; Advanced EFL-only group, 80.91%), and ESL-experienced group chose the reading in about half of the responses (48.33%). The native speakers of English, on the other hand, selected 'either locational or directional' in most cases. One way-ANOVA conducted on the selection rate for the 'locational only' response showed that significant differences exist among the groups ($F=37.852$, $p<.001$). A post hoc analysis revealed that the ESL-experienced group chose the 'locational only' reading significantly less than the two EFL-only groups did, while there was no statistically meaningful difference between the two EFL-only groups.§§ The ESL-experienced group's selection of the 'locational only' reading, however, was significantly higher than that of the native control group.*** Statistical differences among groups were also confirmed on the selection rate for the 'either locational or directional (locational/directional)' reading ($F=43.284$, $p<.001$). The ESL-experienced group chose the locational/directional reading significantly more often than the two EFL-only groups did, while no significant difference existed between the two EFL groups (ESL-experienced, 31.67%; Intermediate EFL-only, 9.23%; Advanced EFL-only, 4.54%).††† Significant difference was also found between the ESL-experienced group and the native control group on the selection rate of the locational/directional reading (ESL-experienced group, 31.67 % vs. Native control group, 71.11%).‡‡‡ To sum, analyses on subjects' selection rates for the 'locational only' and the 'locational/directional' readings identified three homogeneous groups: the intermediate EFL-only group and the advanced EFL group; the ESL-experienced group; and the native control group.

The results, firstly, show that the advanced EFL-only learners are no better than the intermediate EFL-only learners in recognizing the ambiguity of English locative PPs. In fact, the advanced EFL-only learners recognized the ambiguity in only about 5% of the responses. This means that even learners with high English proficiency failed to acquire the L2 superset grammar when they learned English only in the EFL context. Secondly, the learners who experienced the ESL context in their adolescence could acquire the target grammar to a certain extent, distinguishing themselves from the EFL-only learners,

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§§ Tuckey HSD was used for the post hoc analysis. ESL-experienced group vs. Intermediate EFL-only group, p= .008; ESL-experienced group vs. Advanced EFL-only group, p=.002; Intermediate EFL-only group vs. Advanced EFL-only group, p= .893.

*** ESL-experienced group vs. native control group, p=.001.

††† ESL-experienced group vs. Intermediate EFL -only group, p= .017; ESL-experienced group vs. Advanced EFL-only group, p=.004; Intermediate EFL-only group vs. Advanced EFL-only group, p= .859.

‡‡‡ ESL experienced-group vs. native control group, p=.000.

although they couldn't reach the same degree of competence as the native English speakers possess. That is, the L2 learners' experience of the extensive exposure to the natural input could lead to some degree of success in recognizing the L2 superset grammar regarding the locative PPs.

We can consider why Korean EFL learners failed to recognize the directional interpretation of the target structure regardless of the level of their English proficiency. First, the English locative PPs with a directional reading are relatively infrequent in the L2 input available to Korean EFL learners. While Korean EFL learners depend heavily on school textbooks and non-native instructors for their L2 input, it is conjectured that few examples of locative PPs with the directional reading are provided through those sources in Korea. Second, even though Korean speakers encounter English locative PPs with the directional reading, they are likely to misanalyze them as locational. Because there is no morphological difference between directional locative PPs and locational locative PPs, the relevant input may simply be used as positive evidence for locational locative PPs. Considering that the L2 input is filtered through the L1 grammar, learners are likely to think that all locative PPs have only the locational reading. Correcting this misanalysis may not be easy because semantically the directional context is not clearly distinct from the locational context. For example, for the sentence *Mike jumped on the bed*, when Mike jumped onto a bed from the outside of the bed (directional reading), the end-point of the motion will be 'on the bed,' the same end-point as the locational reading. Therefore, the misinterpretation may not cause a serious communication breakdown or incomprehension, misguiding the learners to believe that their initial assumption is correct.

The fact that the ESL-experienced learners performed better than the EFL-only learners did on the experimental task seems to suggest that robustness of positive evidence plays a role in the L2 acquisition of the superset argument structure like the present one. The ESL context may have provided the learners with more frequent opportunities to encounter the relevant input, and with more compelling situations where they are forced to reanalyze the initial misanalysis.

The interpretation of our results becomes complicated, however, when we consider that the ESL-experienced learners' performance on the task was still incomplete, compared to the native English speakers' performance. That is, the native-like competence of the target grammar was not achieved even for those who had been exposed to positive evidence in the ESL environment. Nonetheless, this result should not be interpreted as saying that L2 learners cannot arrive at a superset L2 grammar on the basis of the positive input even in the ESL setting. The fact that some exposure to the ESL context helped the learners develop a certain degree of L2 competence clearly tells us that learners' interlanguage can be developed on the basis of positive input in the ESL setting. In this sense, robust positive input is critical in acquiring L2 superset grammar. The present result, then, may better be

understood as saying that our subjects' exposure to the ESL context was not sufficient, either in its length or intensiveness, or in both. Considering the positive evidence for the present target grammar is infrequent and misleading both morphologically and contextually, the learners may have needed more extensive exposure to natural input in order to become completely native-like. Four of the six subjects in the ESL-experienced group in our study had lived in the ESL setting for only about twelve to eighteen months. (Two others lived for more than five years.), and this time of exposure might be practically too short for them to reach the full competence of the target grammar. An independent study with more subjects with ESL experience may be needed to identify the exact source(s) of the difficulty.

V. CONCLUSION

The present study asked what determines the L2 acquisition of the superset grammar by testing three different Korean learner groups' knowledge on the range of possible interpretations of English locative PPs with manner of motion verbs. The target grammar system involved an argument structure that allows an incorporation of PLACE P into PATH P, producing ambiguity between the directional and locational readings for locative PPs, while the learners' L1 argument structure does not allow such an incorporation.

Answers to our research questions can be summarized as follows. First, Korean learners of English have difficulty recognizing the ambiguity between the directional and locational readings in English locative PPs with manner of motion verbs. Korean learners, overall, tended to interpret English locative PPs as only locational. This interpretation may be caused by the initial L1 transfer triggered by the partial fit between the L1 and the L2, which has not been reanalyzed in the subsequent course of acquisition. Second, for the learners who have experienced only the EFL context, their English proficiency level did not affect their ability to recognize the target reading. Even learners with high English proficiency failed to acknowledge the target reading, suggesting that the simple availability of the L2 input is not enough for the acquisition of the superset target. Third, learners who experienced the ESL context for an extended period of time could identify the target reading to some extent, indicating that the robustness of the L2 input does matter in the acquisition of this type of target. Their incomplete acquisition, however, seems to imply that the acquisition of this type of target grammar may need more extensive exposure than our subjects in the ESL group experienced.

The results of the present study suggest that the acquisition of the directional reading of English locative PPs is very difficult for Korean learners because the target reading is not robust enough in the input to lead to a reanalysis of the L1-based interlanguage.

Especially in the EFL environment, low frequency of the target reading in the input and the lack of clear morphological and contextual cues enlightening the target reading may have made the learners' acquisition very difficult. A pedagogical implication for the EFL classes in Korea, then, is that an explicit instruction or negative evidence is needed for this type of target. Positive effect of explicit instruction on some complex L2 properties has been well reported (e.g., Ellis, 1993; Hulstijn, 1995; Levin & Rappaport, 1995; Lim, 2003; Oshita, 1997; Park, 2002). Teachers may explicitly teach their students that English locative PPs can have a directional reading when used with manner of motion verbs. While exploration of more effective methods of teaching the target reading is left to future research, the present study strongly implies that the directional reading of English locative PPs is difficult to acquire if learners depend only on positive evidence available in the EFL context.

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APPENDIX A

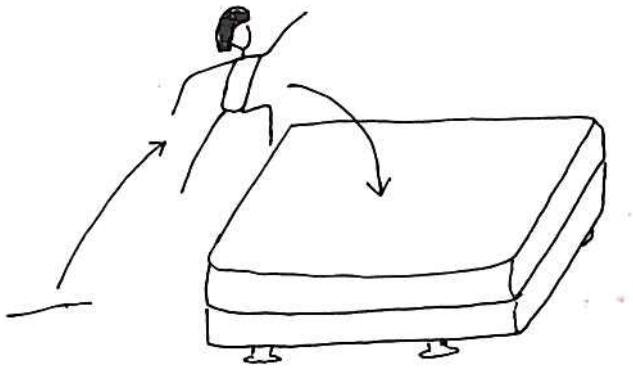
Example Test Item

Read the following sentence and choose its possible interpretation(s)

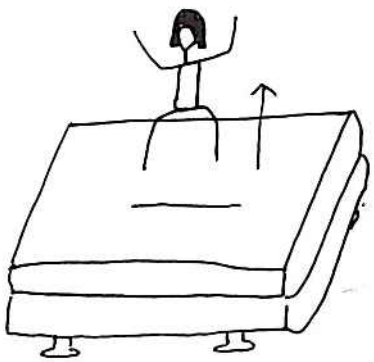
Mary jumped on the bed.

1. Picture A only 2. Picture B only 3. Either Picture A or Picture B

Picture A.



Picture B.



APPENDIX B

Test Sentences Used in the Experiment

Mike jumped in the pool.
John walked behind the house.
Mary jumped on the bed.
John swam behind the wall.
John ran in the room.
Mike swam under the bridge.
Mary ran behind the wall.
The bird flew above the mountain.
Mary walked inside the room.
Sam crawled under the table.

Examples in: English: English
Applicable Languages: English
Applicable Levels: Secondary/College

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