

L2 Acquisition of Raising Revisited: The Role of the Experiencer Phrase*

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Choe, Jinsun. (2018). L2 acquisition of raising revisited: The role of the experiencer phrase. *The Linguistic Association of Korea Journal*, 26(2), 21-38. This study presents two experiments with native Korean-speaking adults, the results of which concern the role of the experiencer phrase in their acquisition of English raising constructions. In the first experiment, 101 Korean learners of English were asked to identify the null infinitival subjects in English raising constructions containing a medial or a fronted experiencer phrase. The results showed that the participants' performance was better when the experiencer was moved to the beginning of the sentence. The second experiment, an acceptability judgment task with twenty-eight Korean-speaking adults, demonstrated that an experiencer phrase is not permitted in Korean raising constructions, regardless of its position. This suggests that the results of the first experiment do not reflect the influence of L1 grammar. Thus, the L2 learners' difficulty with medial experiencer phrases may be better explained by the notion of intervention effects reported in previous works, rather than by L1 transfer.

Key Words: subject-to-subject raising, experiencer, intervention effects, second language acquisition

1. Introduction

Previous first language (L1) acquisition studies have reported that English raising constructions, such as (1), present a great challenge for English-speaking children, with adult-like comprehension emerging around the age of seven (e.g.,

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Hirsch, Orfitelli, & Wexler, 2007).

(1) Raising construction: The boy seems to the girl to be happy.

While the NP *the boy* in (1) is semantically interpreted as the subject of the embedded verb phrase *to be happy*, it is syntactically realized as the matrix subject of the sentence. It is for this reason that raising constructions are typically regarded as constructions involving movement where the NP ‘raises’ from the subject position in the lower clause to the higher subject position (e.g., Rosenbaum, 1967; Postal, 1974). Children’s difficulty with this construction has often been accounted for in terms of the medial experiencer (*to the girl* in (1)); namely, that the intervening NP disrupts the semantic link between the matrix and embedded subject positions (e.g., Orfitelli 2012; Choe & Deen, 2016). Similarly to these L1 acquisition findings, Choe (2016) argued that second language (L2) learners also exhibit this difficulty with raising constructions, and that both L1 and L2 learners are subject to the same factor, intervention effects, stemming from the presence of an intervening experiencer phrase. Yet, the task employed in Choe’s (2016) study to test L2 learners was the same one that had been used with L1 (English-speaking) children, and that task may not have been an ideal way to test adult L2 learners. Furthermore, in order to account for L2ers’ difficulty with English raising, it is crucial to consider the influence of their L1 grammar. However, no study has yet investigated the grammatical status or acceptability of Korean raising constructions with an experiencer.

The present study, therefore, aims to address the shortcomings of previous studies and extend the scope of this line of research by exploring how Korean learners of English comprehend English raising constructions with an experiencer and whether these learners depend on their L1 knowledge in the process. To this end, the following research questions are asked in two experiments, respectively: (i) How do Korean learners of English understand raising constructions with an experiencer? (ii) How acceptable or unacceptable are Korean raising constructions when there is an experiencer? The outline of the paper is as follows. Section 2 reviews previous studies on the acquisition of raising and discusses their shortcomings. Section 3 describes the first experiment which tested Korean learners’ comprehension of English raising constructions, and Section 4 presents

the second experiment, an acceptability judgment task on Korean raising constructions. Lastly, Section 5 discusses the findings and concludes the paper.

2. Previous Studies on Acquisition of Raising

Several studies have investigated the acquisition of raising constructions in L1 children. It is generally agreed that young children lack adult-like knowledge of the raising sentence with an experiencer, as in (2a) (e.g., Hirsch, Orfitelli, & Wexler, 2007; Hirsch & Wexler, 2007; Hirsch, 2011). However, Choe and Deen (2016) observed that children's purported difficulty with raising is significantly reduced when the experiencer is fronted to the beginning of the sentence, as in (2b).

- (2) a. John seems to Mary to be happy.
 b. To Mary, John seems to be happy.

Based on this pattern of results, they suggest that the difficulty associated with raising constructions cannot be attributed to children's underdeveloped syntactic abilities, as has previously been suggested by Borer and Wexler (1987). Rather, they argue that the difficulty has to do with having to move the NP past the intervening argument (i.e., the experiencer), and that this difficulty arises from performance limitations in children (cf. Hyams & Snyder, 2005; Friedmann, Belletti, & Rizzi, 2009; Orfitelli, 2012)

This line of proposal was taken one step further by Choe (2016) who tested Korean learners of English on English raising constructions and found that the learners' performance parallels the results of L1 children. That is, the L2 learners showed better performance in understanding (2b) than (2a), as did L1 English-speaking children. However, in testing L2ers, Choe (2016) used the same task that had been employed to test L1 children. The task was a Truth-Value Judgment Task (Crain & McKee, 1985; Crain & Thornton, 1998) where participants were presented with a context story and were invited to judge the truth value of the statement which is presented at the end of each context story. While this task has been widely used in acquisition studies, there are a couple

of reasons why it raises some concerns about whether the task was suitable for L2 learners in this particular case. First of all, the context stories were presented all in English, and they may have been too long and complex for L2 learners, especially the low-level learners, to understand.¹⁾ Furthermore, since the task was originally designed to test children, there were only four critical items included in the study. Finally, another shortcoming of this study, outside of the task, is that L1 transfer was not considered as the source of the L2 learners' performance on English raising constructions. If it is the case that Korean allows a fronted experiencer (3b), but not an intervening experiencer (3a) in raising constructions, then L2ers' difficulty with an intervening experiencer and their improved performance with a fronted experiencer would not necessarily reflect the same challenge faced by L1 children. Instead, the L2ers' performance would easily be explained by the effect of L1 Korean transfer.

(3) a. Korean raising construction with a medial experiencer:

John-i Mary-hanthey hayngpokha-n kes kath-ta.
 John-Nom Mary-Dat happy-Rel.pres Nml seem-Decl
 'John seems to Mary to be happy.'

b. Korean raising construction with a fronted experiencer:

Mary-hanthey John-i hayngpokha-n kes kath-ta.
 Mary-Dat John-Nom happy-Rel.pres Nml seem-Decl
 'To Mary, John seems to be happy.'

Therefore, it is crucial to establish the grammatical status of Korean raising constructions with an experiencer, in order to draw any firm conclusion about the influence of L1 on L2 acquisition. That is, how acceptable are these constructions to native Korean speakers? This issue was addressed in Experiment 2 below, but let us first present Experiment 1 which investigated Korean learners' comprehension of English raising sentences, along with the methodological improvements from previous research.

1) This was, in fact, acknowledged as one of the shortcomings in Choe (2016), who notes that the stories had to be long and complex in order to satisfy the felicity condition of the Truth-Value Judgment Task.

3. Experiment 1

3.1. Participants

A total of one hundred and eleven native speakers of Korean who learned English as a second language were recruited from a university in Seoul, Korea (age 19-23, mean = 20.8). As the experiment employed a mixed-design with one between-participants factor, the participants were assigned to one of the two conditions: (i) the Medial experiencer condition (54 L2ers), which involved raising constructions in which the experiencer occurred between the raising predicate and the embedded clause, and (ii) the Fronted experiencer condition (57 L2ers), which tested raising constructions where the experiencer was placed at the beginning of the sentence. Then, the participants were divided into two groups based on their scores of the English C-test (Schulz, 2006), an independent measure to examine their English proficiency. This was the C-test used in Choe (2016), and we applied the same range to divide the L2ers into the intermediate-level (20-29) and low-level (10-19) groups. The ten participants who failed to score within these ranges (by scoring either higher than 29 or lower than 10) were removed from the analysis, and thus, the data below are from the remaining one hundred and one participants, shown in Table 1 and 2.

Table 1. C-test scores of the L2ers in Medial condition

Group	<i>n</i>	C-test scores (max=40)		
		<i>M</i>	<i>SD</i>	Range
Intermediate-level group	27	23.6	2.60	20-29
Low-level group	24	16.0	1.60	10-19

Table 2. C-test scores of the L2ers in Fronted condition

Group	<i>n</i>	C-test scores (max=40)		
		<i>M</i>	<i>SD</i>	Range
Intermediate-level group	22	24.6	3.30	20-29
Low-level group	28	14.4	2.80	10-19

3.2. Procedure

The participants completed an offline questionnaire containing forty multiple-choice questions. Participants heard a one-sentence statement for each multiple-choice question, and they were asked to choose one correct answer out of two or three options. The one-sentence statement was the test sentence which was presented in English, along with the answer options, but the multiple-choice questions were given in Korean. The multiple-choice question asked about the agent or the theme of the action described in the statement (see the next section for an example of the test sentence, the question, and the answer options). After the questionnaire, each participant completed the C-test.

3.3. Materials

For each main condition (Medial experiencer or Fronted experiencer), there was a total of forty test sentences (i.e., one-sentence statement) which consisted of ten critical items and thirty fillers. For the critical items, two types of constructions were used: unraised constructions and raised constructions. As for the raising verb, two verbs, *seem* and *appear*, were used. An example of critical items for each condition and construction are presented below, paired up with the multiple-choice question and its answer options.

(4) a. Medial experiencer-Unraised

Test sentence: It seems to Mary that John is crying.

Q: Who seems to be crying? (presented in Korean)

A: A. Mary B. John

b. Medial experiencer-Raised

Test sentence: Steve seems to Julie to be alone.

Q: Who seems to be alone? (in Korean)

A: A. Steve B. Julie

(5) a. Fronted experiencer-Unraised

Test sentence: To Jennifer, it appears that Helen is rich.

Q: Who seems to be rich? (in Korean)

A: A. Jennifer B. Helen

b. Fronted experiencer-Raised

Test sentence: To Ben, Lisa appears to be studying.

Q: Who seems to be studying? (in Korean)

A: A. Ben B. Lisa

3.4. Results and Discussion

The L2ers' performance is presented in Figure 1 in the form of the mean accuracy by Condition (Medial experiencer and Fronted experiencer) and Construction (Unraised and Raised). A mixed-model 2x2 ANOVA revealed an interaction effect between Condition and Construction ($F(1,99)=256.29$, $p < .001$), along with the main effects of each factor. This interaction effect was driven by the significant effect of Condition only for the Raised construction ($t(99)=-16.25$, $p < .001$), indicating that L2ers have difficulty understanding raising constructions with a medial experiencer, while they fared well with other constructions.

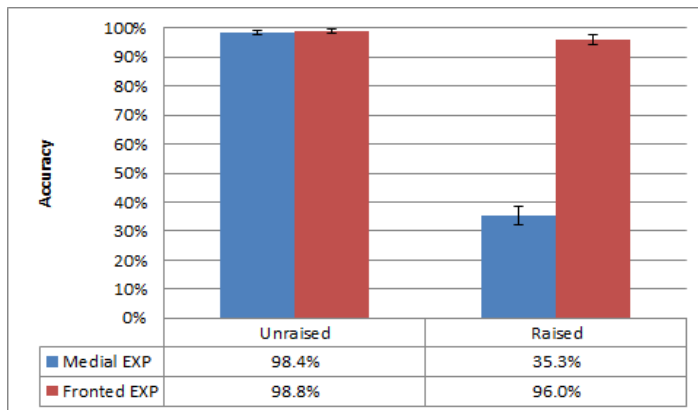


Figure 1. Mean accuracy by condition and construction

Next, Figure 2 shows the L2ers' performance on the Raised construction, broken down by their proficiency level. A between-subjects 2x2 ANOVA was conducted this time to compare the mean accuracy scores across the four L2 groups. A main effect of Condition was found ($F(1, 97)=9.40$, $p < .001$), showing that the L2ers were better at comprehending raising constructions with a fronted

experiencer than those with a medial experiencer, but there was neither a main effect of Proficiency or an interaction of the two factors.

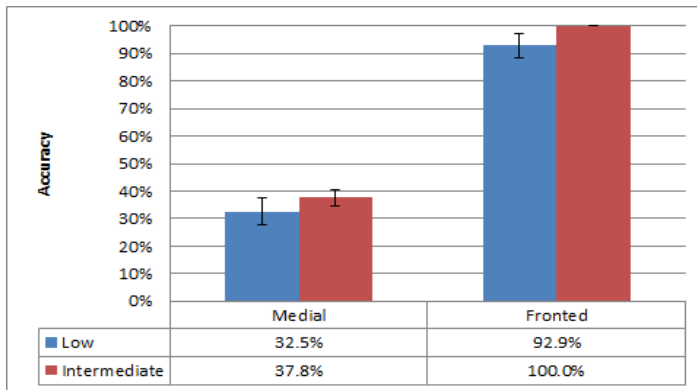


Figure 2. Mean accuracy by proficiency level on Raised

To further assess whether the mean accuracy in each condition was significantly different between the two proficiency groups, pairwise comparisons were carried out. The results revealed a significant difference between the low-level and the intermediate-level groups for the Fronted condition ($t(48)=214$, $p = .037$), but no such difference was observed in the Medial condition ($p > .1$). In other words, while the intermediate-level group showed better performance than the low-level group in understanding raising constructions where the experiencer was fronted to the beginning of the sentence, there was no effect of proficiency for the constructions in which the experiencer was placed between the raising verb and the embedded clause.

In summary, the results of Experiment 1 confirms and extends the findings of Choe's (2016) study to the lower-level learners as well, which is that L2ers, in general, have difficulty understanding raising sentences with a medial experiencer while their performance greatly improves when the experiencer is moved to the beginning of the sentence. However, what needs to be addressed now is to find where this difficulty comes from. To this end, Experiment 2 was conducted with native Korean speakers to investigate the acceptability of Korean raising sentences containing an experiencer.

4. Experiment 2

4.1. Participants

Twenty-eight native Korean speakers (17 females and 11 males) were recruited for Experiment 2. All participants were in their 20s and were undergraduate students at a university located in Seoul, Korea. None of them had participated in Experiment 1.

4.2. Procedure

The participants were presented with a written questionnaire and were asked to provide the acceptability ratings for each test item (sentence) in Korean, using a 5-point Likert scale (1=very unnatural, 2=somewhat unnatural, 3=neutral, 4=somewhat natural, 5=very natural). They were instructed to use their first intuitive reactions to respond to each sentence and not to go back to the previous sentence. There was no time limit, but it took them approximately 15-30 minutes to complete the task.

4.3. Materials

Each participant was presented with a total of 100 sentences, among which twenty-five were critical items and seventy-five were control items. The critical items were further divided into five conditions depending on the type of construction (unraised vs. raising), the presence of the experiencer (presence vs. absence) and the position of the experiencer for the raising construction (medial vs. fronted). Each condition contained five items, and all the critical items were distributed across five lists in a Latin square design. For raising constructions, subject honorification properties and licensing of negative polarity items (NPIs) were used as evidence for raising (e.g., Brown, 2015; Choe, 1988; Choe, 2004; Sohn, 1999; Um, 2010). Specifically, for each raising condition, there were two items showing honorific agreement between the matrix subject and the matrix predicate *-kathhta*, and three items satisfied the NPI clause-mate condition in which the matrix subject NPI is licensed by the negative morpheme in the same matrix clause. Example sentences for each condition are presented below:

(6) a. **Condition 1: Unraised without an experiencer**

kyoswunim-kkeyse pikonhasi-n kes kath-ta
 professor-Hon.nom tired-Hon-Rel.pst Nml seem-Decl
 'It seems that the professor is tired.'

b. **Condition 2: Unraised with an experiencer**

na-hanthey kyoswunim-kkeyse pikonhasi-n kes
 I-Dat professor-Hon.nom tired-Hon-Rel.pst Nml
 kath-ta
 seem-Decl
 'It seems to me that the professor is tired.'

c. **Condition 3: Raising without an experiencer**

kyoswunim-kkeyse pikonhasi-n kes kath-usi-ta
 professor-Hon.nom tired-Hon-Rel.pst Nml seem-Hon-Decl
 'The professor seems to be tired.'

d. **Condition 4: Raising with a medial experiencer**

kyoswunim-kkeyse na-hanthey pikonhasi-n kes
 professor-Hon.nom I-Dat tired-Hon-Rel.pst Nml
 kath-usi-ta
 seem-Hon-Decl
 'The professor seems to me to be tired.'

e. **Condition 5: Raising with a fronted experiencer**

na-hanthey kyoswunim-kkeyse pikonhasi-n kes
 I-Dat professor-Hon.nom tired-Hon-Rel.pst Nml
 kath-usi-ta
 seem-Hon-Decl
 'To me, the professor seems to be tired.'

In order to set the criteria for the acceptability of the critical items, two types of control items were included: forty-five acceptable sentences and thirty unacceptable sentences. Among acceptable sentences, fifteen sentences contained an experiencer argument or a dative case-marked argument.

4.4. Results and Discussion

The distribution of Likert scale ratings for each critical and control condition

is presented as percentages (%) in Table 3 and in Figure 3 as a diverging stacked bar chart.

Table 3. Distribution of Likert scores (1–5) by Condition (%)

Condition	1	2	3	4	5
Crit. 1: Unraised w/o EXP	0.0	1.4	12.9	31.4	54.3
Crit. 2: Unraised w/ EXP	75.0	20.7	1.4	1.4	1.4
Crit. 3: Raising w/o EXP	4.3	10.0	15.7	30.0	40.0
Crit. 4: Raising w/ Medial EXP	87.9	11.4	0.0	0.7	0.0
Crit. 5: Raising w/ Fronted EXP	85.0	14.3	0.7	0.0	0.0
Control: Acceptable	3.4	5.2	10.2	27.7	53.6
Control: Unacceptable	78.2	13.9	3.0	1.4	3.5

(1=very unnatural, 2=somewhat unnatural, 3=neutral, 4=somewhat natural, 5=very natural)

In Figure 3, the y-axis lists the five critical conditions and two control conditions, and the x-axis represents the percentage of each Likert score for the given condition. The percentage of ‘natural’ answer options are shown to the right of the zero line in a blue color, and the percentage of ‘unnatural’ answer options are shown to the left in a red color. The ‘neutral’ responses are split down in the middle and are shown in a gray color.

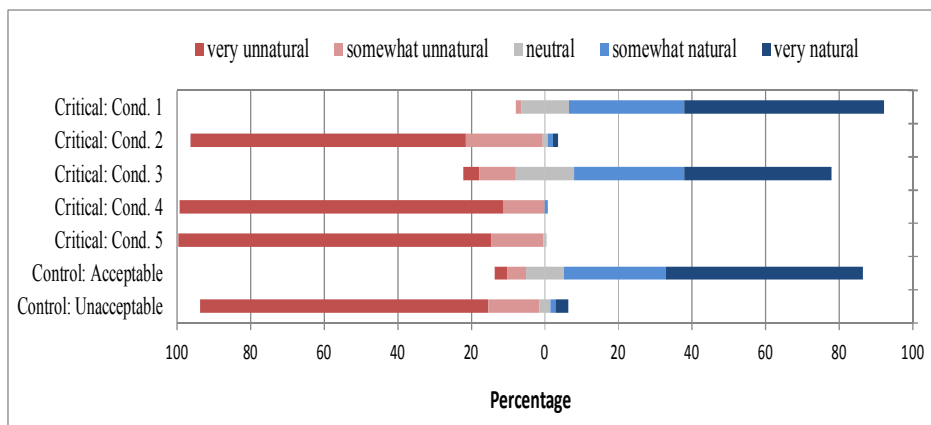


Figure 3. Distribution of Likert scores in a bar chart (%)

Thus, the more the bar extends to the right, the more the sentences in the given condition were rated as acceptable, and the more the bar shifts to the left, the more they were deemed as unacceptable. As illustrated in Figure 3, the first and third critical conditions show patterns similar to that of acceptable sentences, with responses primarily located in the ‘natural’ answer options, indicating that *-kes kathita* constructions without an experiencer are highly acceptable. However, the four red bars suggest that all the *-kes kathita* constructions containing an experiencer (critical conditions 2, 4, and 5) were found to be unacceptable regardless of the type (unraised vs. raising) or the position of the experiencer (medial vs. fronted).

Next, the mean acceptability ratings of the first two critical conditions ((1) unraised without an experiencer and (2) unraised with an experiencer) are compared against those of control items in Figure 4. Participants were most likely to accept unraised sentences only when those sentences did not contain an experiencer.



Figure 4. Mean Ratings by Condition (Unraised vs. Control)

Finally, the participants’ mean ratings are compared between the three raising conditions ((3) Raising without an experiencer, (4) Raising with a medial experiencer, (5) Raising with a fronted experiencer) and control items. As illustrated in Figure 5, it was only the raising sentence without an experiencer that was judged similarly to acceptable items. The last two critical conditions - raising sentences with a medial and a fronted experiencer were in fact regarded as worse than unacceptable items.

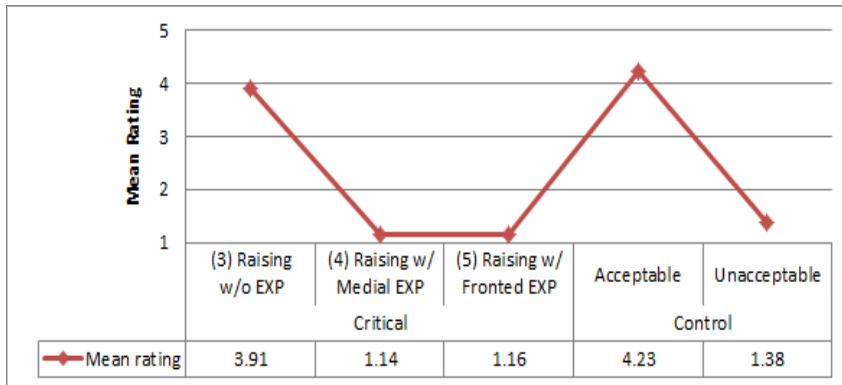


Figure 5. Mean Ratings by Condition (Raising vs. Control)

These results were confirmed by statistical analyses as well. The post-hoc tests of a one-way repeated measures ANOVA revealed that there were no differences between the sentences without an experiencer (Condition 1 & 3) and acceptable items ($ps > .1$), and between the unraised sentences with an experiencer and unacceptable items ($p > .1$). While there was a difference between raising sentences with an experiencer and unacceptable items ($p < .001$), it merely suggests that those raising sentences were judged to be more unnatural than typical unacceptable sentences. Crucially, there were no significant differences among the three critical conditions with an experiencer (Condition 2, 4, and 5; all $ps > .1$). In summary, the results of the acceptability judgment task demonstrated that most native Korean-speaking adults found the *-kes kathata* construction unacceptable when it included an experiencer, regardless of the type of the construction (unraised or raising) or the position of the experiencer (medial or fronted).

5. General Discussion and Conclusion

The present study investigated L1-Korean L2-English learners' comprehension of English raising constructions containing an experiencer as in (7a) and (7b), with a focus on the role of the experiencer phrase.

- (7) a. Raising with a medial experiencer:
 Mary seems to John to be working.
 b. Raising with a fronted experiencer:
 To John, Mary seems to be working.

The results from the questionnaire in the first experiment revealed that sentences like (7a) were problematic for the L2ers, and that the learners were better at correctly identifying the referent of the null infinitival subjects in raising constructions when the experiencer was located at the beginning of the sentence (7b) than when it was between the matrix and embedded subject positions (7a). Such findings are consistent with previous L1 and L2 research on raising (e.g., Hirsch, Orfitelli, & Wexler, 2007; Choe, 2016), but they provide a more reliable basis for concluding that L2ers' difficulty with raising parallels that of L1 children, as the task employed in the present study was more appropriate for L2ers, along with more lower level learners of English participating and more critical items included. However, these results may be easily explained by the influence of the L1 grammar, rather than intervention effects, as previously has been claimed. Thus, this possibility was explored in the second experiment by conducting an acceptability judgment task with native Korean speakers on Korean raising constructions. The results revealed Korean speakers' tendency to accept bi-clausal *-kes kathhta* constructions when raising movement was involved, but when those constructions contained an experiencer, either a medial or a fronted, most participants judged them to be unacceptable. In other words, Korean does not permit raising constructions with an experiencer, irrespective of its location, whereas English allows raising constructions with either an intervening or a fronted experiencer. These results, in turn, indicate that L2ers' performance on raising constructions, or rather the significant difference observed in their performance on (7a) and (7b), cannot be accounted for by their L1 knowledge, as both constructions (raising with a medial or a fronted experiencer) are illicit in their L1 Korean.²⁾ Thus, we are

2) As pointed out by anonymous reviewers, it should be noted that Korean does seem to permit the following constructions that have a similar meaning to *-kes kathhta* constructions.

- (i) a. John-i Mary-eykey ttokttok-hay poi-n-ta.
 John-Nom Mary-Dat smart-CP seem-Pres-Decl

now in a better position to argue for the critical role of the experiencer on L2 acquisition of raising; that L2ers' difficulty with raising reflects that both L1 and L2 learners are subject to the same intervention effects created by the presence of the intervening experiencer between the raised NP and its original position.

The findings of this study contribute to broadening our understanding of which factors may influence Korean learners' acquisition of English raising constructions, as well as of intervention effects in general. Yet, there are some limitations to be acknowledged and noted for future studies. First, while the multiple-choice questionnaire may have been better for the L2ers than the Truth-Value Judgment Task used previously, they are both offline studies, and thus, they are not appropriate to tap into the learners' real-time processing of raising constructions. It seems necessary to carry out the future studies by using online tasks, such as a self-paced reading task or a task that measures reaction time of judgments. Second, there was no effect of proficiency level for the medial experiencer condition in Experiment 1, but this may be because the study included only low-level and intermediate-level learners. In order to see the developmental trajectory of L2ers concerning the acquisition of the construction in question, it is important to have more data from a number of advanced learners as well in the future.

'John seems to Mary to be smart.'

- b. Mary-eykey John-i ttoktok-hay poi-n-ta.
 Mary-Dat John-Nom smart-CP seem-Pres-Decl
 'To Mary, John seems to be smart.'

However, as both constructions (*poi-ta* constructions with a medial experiencer (ia) and a fronted experiencer (ib)) are allowed in Korean, this does not weaken the argument of the paper that L1 grammar is not responsible for the difference observed in L2ers' performance in Experiment 1. That is, even if *poi-ta* constructions are those that correspond to English raising constructions for the L2 participants, then there still should be no difference in how they comprehend two different types of English raising constructions (7a) and (7b) under the influence of L1 grammar, since both constructions are licit (this time) in Korean. In fact, they should be able to comprehend well both types of English raising constructions - the one with a medial experiencer and the one with a fronted experiencer. However, they do not; the results of Experiment 1 has shown that L2ers comprehend the one with a fronted experiencer better than the other. Thus, such results cannot be accounted for by their L1 knowledge, and it is the notion of intervention effects that seems to play a key role in this asymmetrical performance of L2ers.

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