The Transferability of Verbal Subcategorization Properties*

Borim Lee & Ki-jeong Lee (Wonkwang University, Hanyang University)

Lee, Borim & Lee, Ki-jeong. 2004. The Transferability of Verbal Subcategorization Properties. The Linguistic Association of Korea Journal, 12(2), 167-184. This study aims to further the knowledge of transfer in the second language learning process. Error analysis of the data obtained from an experiment is conducted in the verbal subcategorization frames involving preposition errors. The main purpose of this study is to investigate the importance of the elicitation methods for obtaining data. Results of the experiment strongly support that varied elicitation methods are crucial in the results of the experiments on language acquisition and that the results from differing methods are not entirely comparable. This study also examines the factors facilitating transfer. In order for transfer to operate, it is argued that reliable primary data in L2 input have to make learners perceive enough similarities in L1 and L2 structures at the abstract level in the lexicon. A notion of universal reasonableness principle is suggested as another facilitating condition for transfer.

Key Words: transfer, verbal subcategorization, elicitation methods, errors

1. Introduction

The phenomenon of language transfer in the field of second language(L2) acquisition has attracted strong attention from many researchers until recently (Selinker, 1992; Schachter, 1992; Odlin, 1989; Jarvis 1998).¹⁾ While

^{*} This paper was supported by Wonkwang University in 2002. This paper was supported by Hanyang University in 2003. The authors thank the reviewers for their valuable comments and suggestions.

¹⁾ In this study, we did not distinguish the notions between acquisition and learning hypothesized by Krashen (1983). If the conscious vs. subconscious distinction is true for the characterization of learning vs. acquisition, the phenomenon discussed

some researchers have argued that there is virtually no constraint in transfer (e.g., Thomason & Kaufman, 1988), others have contended that the extent of the constraints are considerable. Dulay, Burt, and Krashen (1982) considered transfer involving either morphology or syntax to be minimal. This study addresses the issue of transferability and attempts to identify when and how it occurs. Previous studies on this subject have dealt almost exclusively with Indo-European languages. More studies involving non-Indo-European languages should be able to contribute to a better understanding of the subject. This study was designed to meet the need and it deals with the problem of transferability of the subcategorized properties of different verbs through an error analysis of Korean learners of English.

English and Korean have little in common regarding the structure of the verb phrase. While Korean is an SOV (subject-object-verb) language and uses postpositions, English is an SVO language using prepositions. In many cases, the Korean verbs subcategorized for postpositional phrases are considered parallel to the English prepositional phrases ((1a) and (1b)). Likewise, the Korean verbs requiring NPs with accusative markers are compared to the English transitive verbs requiring direct NPs((1c) and (1d)).

The following figures illustrate the structural identification of verb phrases between Korean (L1) and English (L2) (Rules for VP expansion were constructed only for the structures discussed in this study):

in the present study should be learning.

Based on transfer hypothesis, Korean learners of English are expected to have more difficulty when the verbs with the same meaning have different VP subcategorizations in two languages. The most critical difficulty will occur when the verbs in English which are subcategorized for PP are matched to those in Korean which need NP((1b) and (1c)), and when English verbs which take NP correspond to Korean verbs which are subcategorized for PstP((1d) and (1a)).

In this study an experiment consisting of two tests was conducted to test the hypothesis of transfer in verbal subcategorization. Based on the results of the experiment, it is proposed that transfer is a constructive process linked to the structure of the learner-grammar lexicon (Adjémian, 1983). Also, the conditions on transfer will be discussed together with the importance of the elicitation methods for obtaining the data. At the end, a model of the lexicon will be proposed to account for the transfer errors discussed in this study.

The organization of this paper is as follows. Experiments conducted for this study are laid out in section 2, and the results are presented and discussed in section 3. Finally, the conclusion and implications of this study are provided in section 4.

2. Design of the Experiment

The subjects for this study were 60 students from W university and

H university who had no experiences of studying English outside Korea at the time of the experiment. The subjects were randomly divided into three subgroups (20 subjects in each group) and given a test that consists of an identical preliminary test of 10 multiple-choice questions and a different type of main test of 25 questions. The purpose of the pretest was to prove that there was no significant differences in the proficiency levels between the groups. The 25 questions in the main test included 10 sentences where L1 and L2 structures are identical and 15 sentences where L1 and L2 structures disagree. We considered different the VPs that are subcategorized for semantically distinct pre-/post-positions in two languages. The sentences with translations and the prepositions used in the test are provided in the appendix.

The 25 questions in the main test were based on the same English sentences but presented in a different type of test to each group of subjects. Providing the same questions in different types of tests was designed to test the hypothesis that diverse methods can lead to differing results. The three types of the test were:

- (2) a. fill-in-the-blank type with L1 translation
 - b. fill-in-the-blank type with no translation
 - c. grammaticality judgment type

The fill-in-the-blank type tests in (2a) and (2b) were given to the subjects with instructions to complete the sentences with the appropriate English prepositions or to mark them with "X" when they thought nothing was needed. Twelve prepositions from which the subjects pick an answer were provided once at the top of each test sheet. They are to, of, in, into, at, on, upon, for, with, from, about, and by. For the first group, Korean translation for each English sentence, which is provided in the appendix, was given to check the effect of the presence or absence of the L1 translation. In the judgment test, grammatical and ungrammatical sentences were given in random order, and the subjects were told that their decisions were to be made according to the particular prepositions and their absence or presence. The subjects were asked to mark the sentences which

they thought correct in English with "O", to mark incorrect ones with "X". The sentences used in the main test can be first divided into two types according to VP properties, i.e., VPs where English and Korean are equal and those where the two languages differ.

3. Results and Discussion of the Experiment

3.1. Pretest

The identical pretest given to all groups of subjects showed that there was no significant difference in the proficiency level of each group. A statistical test was performed to examine the statistical significance between group means. The correct means for groups 1 and 2 were exactly same (70% correct) and that for the third group was a bit lower (67.5%). However, the statistical test showed that there were no such significant differences between groups: the significance point is .773 at the $p \le .05$ level. This result means that the proficiency levels of the three subject groups are considered approximately same.

| === | Groups | Mean | SD | F | Sig. | |
|-----|---------|------|------|------|------|--|
| _ | 1(n=20) | .700 | .117 | | | |
| | 2(n=20) | .700 | .159 | .259 | .773 | |
| | 3(n=20) | .675 | .097 | | | |

Table 1. Results of pretest

3.2. Elicitation methods

In many experimental studies of language learning, the problem of how the data are elicited is apt to be ignored. However, the comparison between studies is often infelicitous because the studies employ different types of data elicitation methods. Gass (1983, p. 71) notes that we must therefore

question whether the results of studies using different elicitation methods are truly comparable (are true replications) or whether the comparison is a nonparallel one.

This problem is directly addressed in the experiment conducted in this study. Let us first consider the results of the main test comparing three groups. The mean of correct answers for each group is provided in Table 2. A statistical test was carried out on the results and it reported that there existed a significant difference between groups. Post hoc tests performed on the mean difference of each pair of the groups also showed that the mean differences were significant at the p<.05 level (specifically, .012 between Groups 1 and 2, .012 between Groups 2 and 3, and .048 between Groups 1 and 3).

Groups Mean SD F Sig. 1(n=20).600 .490 *000 2(n=20).508 .500 14.944 3(n=20).676 .468

Table 2. Comparison of three groups

Group 3 who took the judgment test obtained the highest mean score and it is easily understandable considering that the test was a true or false type test. The comparison of Group 1 and Group 2 is more striking because both took the fill-in-the-blank type test, but a difference in the presence (Group 1) vs. absence (Group 2) of Korean translations. The result implies that the subjects did better when L1 information was given.

To understand the observed difference better, we focused on the results between Groups 1 and 2. We first divided the questions into two types depending on whether or not English and Korean VP subcategorization properties are equal. Results are shown in Table 3.

| Groups | L1&L2 | Mean | SD | t | Sig. | |
|---------|--------------|------|------|-------|-------|--|
| 1(n=20) | L1=L2 | .715 | .453 | 4.358 | *000 | |
| | $L1 \neq L2$ | .523 | .500 | 4.308 | | |
| 2(n=20) | L1=L2 | .585 | .494 | 2.829 | .005* | |
| | L1≠L2_ | .457 | .499 | 2.029 | .003+ | |

Table 3. Function of L1 and L2 agreement

A t-test performed on the results shows that L1 and L2 agreement variable causes significant difference in both groups at p<.01. This result means that subjects obtain better scores when L1 and L2 structures are parallel. This finding tends to support the prediction made by the traditional contrastive analysis that L2 learners have difficulty in the structures where L1 and L2 differ.

Finally, in order to see if there exists any difference in the percentage of transfer errors depending on whether or not L1 translations were provided, we calculated the frequency of transfer errors in all errors. The answers considered as transfer in this study are provided in the appendix at the end of each sentence. The result showed that Group 1 (with L1 translations) made 76 transfer errors out of a total of 200 errors, whereas Group 2 made 71 transfer errors out of a total of 246 errors.²⁾

²⁾ As a reviewer pointed out, some English structures used in the questionnaire may be translated in more than one way in Korean. In these cases, we cannot be certain which interpretation the subjects had in mind when they were answering the questions, especially with those in Group 2 for whom no translations were given. The authors admit this problem but consider the effect to be minimal in this study focusing on the issue of varied elicitation methods. We hope that future comparable studies free of this problem will verify the accuracy of the analysis of the present study.

 Groups
 Frequency transfer
 Percent all errors

 1
 76
 200
 38.0

 2
 71
 246
 28.9

Table 4. Frequency of transfer errors

This results in an approximately 9% difference in the percentage of transfer errors between the two groups, which seems to be a considerable difference. Unfortunately, this frequency difference was reported to be technically impossible to be tested for its statistical significance. One factor which might contribute to the disparity could be that the subjects did not know what the verbs in the test meant when the translations were not given. However, it is not likely that the differences in this result have nothing to do with the differences in the methods used. We then tentatively propose that the presence of L1 translations of the sentences seems to make subjects transfer their L1 structure more readily.

From the above observations, it is apparent that the methods of elicitation for obtaining the data are crucial in the results of the experiments on language acquisition and that the results from differing methods are not entirely comparable.

3.3. Characterization of transfer

In the preceding subsections, an attempt was made to empirically identify the existence of transfer errors. In this section the most important subject, namely a proper characterization of transfer in the case of verbal subcategorization restrictions, will be addressed.

It has been a widely accepted idea that transfer of L1 structures is just a performance strategy that learners resort to when they are forced to produce while there are still gaps in their knowledge of L2, and/or when there is not enough time for monitor to operate to mend the errors (Dulay, Burt, & Krashen, 1982; Krashen, 1983).

On the contrary, Adjémian (1983) contends that, in the case of lexical properties, transfer is linked to the structure of the learner-grammar

lexicon, and is not simply a performance strategy. Adjémian's model of the lexicon included lexical rules representing lexical relatedness (Jackendoff 1975) as well as idiosyncratic properties of lexical items. Therefore, non-native learners of a language should learn both properties in the L2 lexicon. Lexical transfer involves transfer of underlying lexical properties. and it is possible only after a parallel between L1 and L2 lexicon has been established by learners involving (functional) properties of lexical items, and the lexical rules relating them. In this sense, Adjémian says that this notion of transfer is compatible with the hypothesis formation view of L2 acquisition.

In order to resolve the controversy on the characterization of transfer, a grammaticality judgment test can be used. Krashen (1983) claims that the L1 rule is simply a production strategy, and predicts that performers would not utilize L1 rules in making grammaticality judgments. He cites some studies on this issue but concludes that the question is still open because the studies show contradictions with one another (Schachter, Tyson, & Diffley 1976; Gass, 1980; Ioup & Kruse, 1977).

The results of this grammaticality judgment test used in this study show that L1 rules seem to influence the subjects' judgment. Out of 25 grammaticality judgment test questions, 12 were made grammatical(GR) and 13 ungrammatical (un-GR). Table 5 compares the mean correct score of the judgment test between grammatical and ungrammatical sentences. The result shows that the subjects had more difficulty in identifying ungrammatical sentences than grammatical sentences and the difference is statistically significant at p<.05.

Table 5. Mean correct score of judgment test

| Types | Mean | SD | t | Sig. | | |
|-------|------|------|-------|-------|--|--|
| GR | .725 | .447 | 2.256 | 201 | | |
| un-GR | .631 | .484 | 2.200 | .024* | | |

With an assumption that the variable of L1 and L2 parallelism may also play a role in judgment, we compared the cases where L1 and L2 agree with those where the two languages differ. Out of 12 grammatical

sentences, 5 were made parallel to L1 structure. Likewise, 5 sentences out of 13 ungrammatical sentences were made parallel to L1 structure. Table 6 summarizes the result.

| Types | L1&L2 | Mean | SD | t | Sig. |
|-------|--------------|------|------|-------|-------|
| GR | L1=L2 | .770 | .423 | 1 210 | .188 |
| | $L1 \neq L2$ | .693 | .463 | 1.319 | |
| un-GR | L1=L2 | .710 | .456 | 2.103 | .036* |
| | $L1 \neq L2$ | .581 | .495 | 2.103 | ٠٥٥٥٠ |

Table 6. L1 and L2 agreement in judgment

This result shows that in the case of grammatical sentences, whether L1 and L2 agree or disagree doesn't seem to make a significant difference in the mean correct score (.188). On the other hand, the L1 and L2 agreement variable causes a significant difference in the case of ungrammatical sentences (.036).

Especially interesting is the considerable low score for ungrammatical sentences where L1 and L2 structures differ. There are 8 sentences falling into that category. By design, four of these sentences were formulated ungrammatical without any relation to L1, and the remaining four were formulated using Korean subcategorization restrictions for the verbs. The actual sentences are as follows:

- (3) a. Sentences reflecting Korean structure (KS)
 - *The girl is **engaged with** John.
 - *The man entered into the classroom.
 - *I hope X your success.
 - *The young man greeted to me on the street.
 - b. Sentences not related to Korean structure (NKS)
 - *It consists in several things.
 - *She could now count of a regular salary.
 - *The man married to a rich woman.
 - *Dr. Smith operated of the patient.

As summarized in Table 7, subjects showed a higher percentage of incorrect responses for the sentences in (3a: 47.5%) than for those in (3b: 36.2%). In other words, subjects made the error of considering an ungrammatical sentence as grammatical when it reflects their native language structure. We regard this type of error as a transfer error.

| Types | | | uency | Percent | | |
|-------|------|---------|-----------|---------|-----------|--|
| | | correct | incorrect | correct | incorrect | |
| KS | (80) | 42 | 38 | 52.5 | 47.5 | |
| NKS | (80) | 51 | 29 | 63.8 | 36.2 | |

Table 7. Frequency of transfer errors in judgment

Although the result is tentative due to a small number of tokens for each case, we interpret this result as a suggestion that L1 knowledge is indeed utilized in determining the grammaticality of L2 sentences. Also, it is indirect evidence that transfer is more than a production strategy. One restriction at this point is that this result may not be true of all kinds of transfer. For example, the studies on grammaticality judgments of relative clauses show contradictions (Gass, 1980; Ioup & Kruse, 1977). The finding here strongly suggests that further studies are needed in this field.

3.4. Further discussion

In the preceding subsections, the existence of lexical transfer received strong empirical support from the results of the experiment. Let us now consider a couple of factors that can facilitate transferability.

Kellerman (1977, 1979) has shown that learners' actual transferability of a form can depend in part on how likely they think it to be acceptable in L2, or their perception of L1- L2 distance. That is, the transferability of an L1 form depends on how marked its use in their own L1 appears to them. Kellerman's (1977) study using idioms showed that what was considered semantically transparent and language neutral was more likely to be transferred. On the other hand, Adjémian (1983) claimed that transfer was possible wherever learners perceived parallelism between L1 and L2. This

implies that learners' knowledge of L2 also contributes to transferring their acquired knowledge of L1. Andersen (1983) also noted that L1 transfer interacted with the process of generalizing structure from the L2 input.

Based on the findings of the above studies, we are proposing a factor that seems to facilitate transferability. The verb phrase structures with subcategorization properties examined in this study are quite productive structures in both English and Korean. We also note that transfer seems more likely when the semantic entities of lexical items, in this case verbs, and their subcategorization frames are more logical and reasonable. Based on this observation, we assume that a notion of reasonable universality serves as a condition on transfer.

To test this hypothesis, a language survey involving ten native speakers from ten different languages was conducted. The survey consisted of three of the English sentences used in the experiments including the verbs "enter, marry, discuss" and their subcategorization requirements. The informants (most of whom were students who were studying linguistics at a university in the United States) were told to translate the sentences into their native languages, and to give glosses for each morpheme. The following is a table of the results. Ten languages that participated in the survey are English, German, Arabic, French, Spanish, Korean, Japanese, Thai, Nepali, and Bengali. In the table, "--" indicates no subcategorization is necessary, whereas " $\sqrt{}$ " means one or more morphemes are needed that have corresponding meanings to the English prepositions such as 'in, into,' with,' or 'about, on' for the verbs 'enter,' 'marry,' and 'discuss', respectively.

| | Table 6. It crossinguistic survey | | | | | | | | | |
|---------|-----------------------------------|----|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | Eg | Gr | Ar | Fr | Sp | Kr | Jр | Th | Np | Bg |
| enter | | | \checkmark | √ | | √ | | | √ | |
| marry | | | \checkmark |
| discuss | | | | | | 1 | 1/ | | | 1/ |

Table 8. A crosslinguistic survey

The result from the language survey shows that many languages use pre-/post-positional subcategorization properties for the verbs in question

with an exception of the verb 'discuss.' And the meanings of the morphemes used have equivalent meanings across languages. This suggests that there may be a reasonable universality principle underlying the semantics of those verbs and their subcategorization frames. Therefore, we propose that this principle serves to facilitate the learners to make the transfer errors of inserting unnecessary prepositions in this type of English sentence.3)

Before we conclude, Richards' (1971) notion of analogy may be worth consideration. Richards (1971) claims that learners make an error like *We discussed about it by analogy to a sentence like We talked about it. This claim is supported by a result of the current experiment since 12 out of 14 subjects (in Groups 1 and 2) who made the error *We discussed about it also produced the sentence We talked about it. We consider that this notion of analogy can also be understood in terms of contributing to the increase of reliable primary data in L2 input so that transfer of verbal subcategorization frames is facilitated.

4. Conclusion

This study attempted to further the knowledge of transfer in the second language learning process through an error analysis. The error category was restricted to the verbal subcategorization frames. This study investigated the importance of the elicitation methods that are used in many experimental researches to obtain data base. Results of the current experiment comparing three different elicitation methods strongly support that different methods are crucial in the results of the experiments on language acquisition and that the results from varied methods cannot be directly compared as they are. Additionally, a principle of universal

³⁾ Holmes (1977) reports learner forms by English learners of French where the transferred L1 property is by no means semantically reasonable. For instance, English learners produce *entrer 'enter' instead of the correct and allegedly reasonable entrer dans 'enter into' and *écouter à (listen to) instead of écouter NP 'listen NP'. Since transfer occurs when the universal reasonableness principle is not satisfied, we suggest that this principle only serves as a condition for transfer in terms of making transfer more favorable.

reasonableness was proposed as an additional condition for transfer to take place. The function of analogy in the L2 input data was understood as another variable facilitating L1 transfer.

Clearly, the issues raised in this study need further research. Research dealing with related issues using data from natural speech would especially be of value since the data in the present study were obtained from written materials only.⁴⁾ Also, the fact that the subjects involved in this study have received formal instruction of English in their native countries indicates that a comparable research using subjects who have learned English in a natural environment should be able to contribute to a better understanding of the issues.

Appendix

A. Sentences used in the pretest

- 1. John bowed to his teacher.
- 2. Her father died of cancer.
- 3. Tom met Mary in the library.
- 4. I've been waiting for you for two hours.
- 5. The man opened the door for me.
- 6. My grandfather did not approve of my father's marriage.
- 7. Ron was expecting an important letter from Italy.
- 8. Did he object to the proposal?

⁴⁾ The authors obtained a 12-page transcript of a video-taped conversational session between a Korean and an American graduate student who was conducting a research on Korean-American interaction. From the speech of the Korean speaker, we isolated the sentences where Korean and English VP properties differ, and which involved the subcategoriation frames of the verbs.

⁽i) *...soviet Union armies entered into our nations...

⁽ii) *...cause I'm supported from Korean government...

⁽iii) ...United State have very **different from** the business society...

Two sentences out of the three involve errors, which reflect Korean subcategorization properties.

- 9. I'd like to ask a favor of you.
- 10. On the ninth we went to our brother's at Birmingham.
- B. Sentences used in the main test

Type 1: English = Korean

1. I talked about the book with my teacher.

(나는 선생님과 그 책에 대해서 이야기했다.)

2. Everyone participated in the meeting.

(모두 회의에 참석했다.)

3. The books belong to me.

(그 책들은 내 소유이다.)

4. My mother came into my room.

(어머니가 내 방으로 들어오셨다.)

5. When you are young you dream about all sorts of things.

(젊을 때에는 온갖 종류의 것들에 대하여 꿈꾸는 법이다.)

6. May I use your telephone?

(전화를 사용해도 될까요?)

7. We **celebrated** his birthday.

(우리는 그의 생일을 축하했다.)

8. The man killed his brother.

(그 남자는 형을 죽였다.)

9. I couldn't see her in the crowd.

(군중 속에서 나는 그녀를 보지 못했다.)

10. He hit the burglar on the head with a candlestick.

(그는 촛대로 강도의 머리를 쳤다.)

Type 2: English ≠ Korean

("T" means transfer error(s); "Ø" indicates no preposition.)

11. It consists of several things.

(T = with)

(그것은 여러 개로 구성되어 있다.)

12. **Thanks for** doing that for us yesterday. (T = about)

(어제 저희들을 위해서 그것을 해주신 것에 대해서 감사드립니다.)

| 13. The girl is engaged to John. | T) | = | with) |
|--|-----|----|--------------|
| (그녀는 존과 약혼한 사이이다.) | | | |
| 14. My wife and children depend on me. | (T | = | to) |
| (아내와 아이들은 나에게 의존하고 있다.) | | | |
| 15. She could now count on a regular salary. | (T | = | to) |
| (그녀는 이제 고정적인 월급에 의지할 수 있었다.) | | | |
| 16. I was listening to the radio. | (T | = | Ø) |
| (나는 라디오를 듣고 있었다.) | | | |
| 17. Dr. Smith operated on the patient. | (T | = | Ø) |
| (닥터 스미스는 그 환자를 수술했다.) | | | |
| 18. Someone is knocking on the door. | (T | = | Ø) |
| (누군가 문을 두드리고 있다.) | | | |
| 19. I hope for your success. | T) | = | Ø) |
| (당신의 성공을 바랍니다.) | | | |
| 20. Most universities insist on an interview before they | acc | ep | t a student. |
| | (T | = | Ø) |
| (대부분의 대학들은 학생의 입학을 허가하기 전에 면접을 | 요. | 73 | 한다.) |
| 21. The man entered the classroom. | (T | = | to/into) |
| (그 남자는 교실로 들어갔다.) | | | |
| 22. They discussed their problem. | (T | = | about/on) |
| (그들은 자기들의 문제에 대해서 토론했다.) | | | |
| 23. The young man greeted me on the street. | T) | = | to) |
| (그 젊은이는 길에서 나에게 인사했다.) | | | |
| 24. The man married a rich woman. | T | = | with) |
| (그 남자는 돈 많은 여자와 결혼했다.) | | | |
| 25. Philip decided not to mention his cold. | T) | = | about/on) |
| (필립은 자기가 감기에 걸린 사실에 대해서 언급하지 않기 | 로 | 결 | 정했다.) |
| | | | |

C. Twelve prepositions used for the test to, of, in, into, at, on, upon, for, with, from, about, by

References

- Adiémian, C. (1983). The transferability of lexical properties. In S. Gass & L. Selinker (Eds.), Language transfer in language learning (pp. 250-268). Rowley, Mass.: Newbury House.
- Andersen, R. W. (1983). Transfer to somewhere. In S. Gass & L. Selinker (Eds.), Language transfer in language learning (pp. 177-201). Rowley, Mass.: Newbury House.
- Dulay, H., Burt, M., & Krashen, S. (1982). Language two. Oxford: Oxford University Press.
- Gass, S. (1980). An investigation of syntactic transfer in adult second language learners. In R. Scarcella & S. Krashen (Eds.), Research in second language acquisitions (pp. 132-141). Rowley, Mass.: Newbury House.
- Gass, S. (1983). Language transfer and universal grammatical relations. In S. Gass & L. Selinker (Eds.), Language transfer in language learning (pp. 69-82). Rowley, Mass.: Newbury House.
- Holmes, G. (1977). The problem of anglicized French at the university. Canadian Modern Language Review, 33(4), 520-531.
- Ioup, G., & Kruse, A. (1977). Interference versus structural complexity as a predictor of second language relative clause acquisition. In C. Henning (Ed.), Proceedings of the second language research forum.
- Jackendoff, R. (1975). Morphological and semantic regularities in the lexicon. *Language*, 51, 637-671.
- Jarvis, S. (1998). Conceptual transfer in the interlingual lexicon. Bloomington: Indiana Univesity Linguistics Club.
- Kellerman, E. (1977). Towards a characterization of the strategies of transfer in second language learning. Interlanguage Studies Bulletin 2: 58-145.
- Kellerman, E. (1979). Transfer and non-transfer: where are we now. Studies in second language acquisition, 2(1), 37-58.
- Krashen, S. D. (1983). Newmark's 'ignorance hypothesis' and current second language acquisition theory. In S. Gass & L. Selinker

- (Eds.), Language transfer in language learning (pp. 135-153). Rowley, Mass.: Newbury House.
- Odlin, T. (1989). Language transfer: cross-linguistic influence in language learning. New York: Cambridge University Press.
- Richards, J. (1971). A noncontrastive approach to error analysis. *English language teaching*, 25, 204-219.
- Schachter, J. (1992). A new account of language transfer. In S. Gass & L. Selinker (Eds.), *Language transfer in language learning* (pp. 32-46). Amsterdam: Benjamins.
- Schachter, T., Tyson, A., & Diffley, F. (1976). Learner intuitions of grammaticality. *Language learning*, *26*, 67-76.
- Selinker, L. (1992). Rediscovering interlanguage. London: Longman.
- Thomason, S., & Kaufman, T. (1988). Language contact, creolization, an genetic linguistics. Berkeley: University of California Press.

Borim Lee
English Department
Humanities, Wonkwang University
344-2 Shinyong-dong
Iksan, 570-749 Jeonbuk, Korea

Phone: 82-63-850-6875

Email: brlee@wonkwang.ac.kr

Ki-jeong Lee

Department of English Language and Literature Humanities, Hanyang University 17 Haengdang 1 dong, Sungdong-ku

Seoul, 133-791 Korea

Phone: 82-2-2290-0777 Email: kjlee@hanyang.ac.kr

Received: 29 Mar, 2004 Revised: 25 May, 2004 Accepted: 7 Jun, 2004