Production Errors of Counterfactual Conditionals in the Korean-English Interlanguage*

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[Abstract]

This paper has conducted a cross-sectional experiment to elicit English counterfactual conditionals from 55 adult Koreans. The data were documented according to production mode (writing and speaking), proficiency level (HIGH or LOW), tense and aspect (past, present, and future). Although no difference was evident between writing and speaking, a positive relationship was found between English proficiency and grammaticality of English counterfactuals. Since HIGH outperformed LOW, it can be assumed that as the English proficiency improves, the grammaticality of English counterfactuals tends also to improve. Furthermore, although English proficiency is improved, *if*-clause would always be difficult for all three counterfactual tenses. *If*-clause of the future counterfactuals is expected to be most problematic, the past being the second most problematic. It is concluded that when adult Koreans produce English subjunctive (hypothetical and counterfactual) conditionals, they are likely to fail to yield the modals in *if*-clause that indicates hypotheticality and counterfactuality in the grammatical structure. Hence, intended

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hypotheticality or counterfactuality can only be semantically inferred from the context.

Key Words: counterfactual conditional, hypothetical conditional, subjunctive mood, if-clause, L2 acquisition

1. Introduction

Subjunctive conditionals expressing hypothetical or counterfactual events may not be a great challenge in the acquisition of Korean language because the straightforward attachment of clausal conditional markers take care of them. In Korean, the conditional marker in the *if*-clause (i.e. conditional clause) is simply realized as *-myen* 'if', while the main clause (i.e. result clause) bears a clausal ending marker *-(u)ltende* 'would', (Yeom 2004, Lee 2009, Noh 2009). However, subjunctive conditionals in English are a different story because those structures involve a radical change with tense and aspect in *if*-clause and main clause (Celce-Murcia & Larsen-Freeman 1999, Hewings 2005).

For this difference between two languages, Korean learners of English as a second language (L2) experience a rote training of memorizing the combinations of subjunctive conditionals according to past, present, and future references (Kang 2007). Nevertheless, subjunctive conditionals in English still seem to be a difficult structure to produce at a satisfactory rate of accuracy for Koreans (Jung, Yang, & Yu 2005, Kim 2007, Park 2010, Ko 2013).

This paper examines production errors of subjunctive conditionals in English as produced by Korean learners (i.e. Korean-English interlanguage). The errors will be

categorized according to *if*-clause vs. main clause, written data vs. spoken data, advanced level vs. beginning level, and past, present, future tenses. Previous studies have already reported similar data, but gaps were noticed. Although the difficulty in acquiring subjunctive conditionals is evident, it has not been clearly studied which clause is more difficult between *if*-clause and main clause. If subjunctive conditionals are difficult and subject to errors, it is interesting to find out not only the percentage of correct output, but also the most commonly-occurring error types. Here, the latter may be the fossilized types of subjunctive conditionals for adult Korean learners of English.

Subjunctive conditionals have been studied primarily in writing situations (Jung, Yang, & Yu 2005, Kim 2007, Park 2010) or in speaking situations (Ko 2013). Nevertheless, no previous studies have elicited subjunctive conditionals in writing and speaking situations at the same period of time from the same participants, which this paper also aims for. Another particular goal of this paper is to meticulously document the data of subjunctive conditionals to understand the behaviors of Korean learners of English in order to report an individual discrepancy in subjunctive conditionals in the Korean-English interlanguage. For doing so, the independent variables are English proficiency (HIGH, LOW), English subjunctive conditional tense (past, present, future), clause type (*if*-clause, main clause), and production mode (written, spoken).

2. Conditional Sentences in English and Korean

According to Celce-Murcia and Larsen-Freeman (1999), English conditional sentences rank the fifth that teachers find the greatest difficulty in English grammar

teaching. Also, the same difficulty has been reported in the field of English teaching in Korea (Jung, Yang, & Yu 2005, Kang 2007, Kim 2007, Park 2010). In essence, English conditional sentences are not simple structures, but consist of dual clauses: *if*-clause (subordinate or conditional clause) and main clause (result clause).

English learners must learn not only the relevant tenses but also the use of auxiliary verbs, both in positive and negative sentences. Since Korean does not have the same kind of linguistic system as English conditional sentences (Yeom 2004, Lee 2009, Noh 2009), it is not an easy task for Korean learners of English to produce grammatically correct conditional sentences in the Korean-English interlanguage.

Moreover, even native speakers of English sometimes use incorrect forms of English conditional sentences, or misunderstand the exact meaning of those sentences (Bailey 1989). Celce-Murcia and Larsen-Freeman (1999) report that English conditional sentences are almost impossible to arrange into a complete classification. However, summarizing from Celce-Murcia and Larsen-Freeman (1999) and Hewings (2005), this paper focuses on subjunctive (imaginative) conditional sentences in English.

According to Reilly (1986) and Celce-Murcia and Larsen-Freeman (1999), these types of conditionals are the ones that probably cause the greatest difficulty among other conditionals. Previous literature on the acquisition of conditional sentences have primarily dealt with these types of conditionals (Alberding 2004, Jung et al. 2005, Kang 2007, Kim 2007, Park 2010, Ko 2013 on L2 English; Chou 2000, Wu 2010 on L2 Chinese). Before introducing the two subtypes of subjunctive conditional sentences in English, the structure of Korean conditionals of the same kinds is discussed first below.

2.1 Subjunctive conditional sentences in Korean

As in (1), to express factual conditionals and future conditionals in Korean, the conditional marker *-myen* or *-tamyen* is attached at the end of *if*-clause (Yeom 2004, Noh 2009, Lee 2009 for the latest discussion). This strategy of conditional marking in Korean can be not so much different from the English one that inserts the conditional marker *if* in the front of *if*-clause.

(3) a. *ippali-ka namwu-ese ttelecin-**tamyen**, kyeul-i ta wass-ta*
leave-Nom tree-from fall-Dec-**IF** winter-Nom all has-come
'If leaves fall from the tree, winter is around the corner.'
(generic factual conditionals)

b. *emma-ka cip-ul tolpo-**myen**, appa-nun chip-e ton pele-on-ta*
mom-Nom home-Acc take-care-**IF**, dad-Nom home-to money make-DEC
'If mom takes care of home, dad makes money for home.'
(habitual factual conditionals)

c. *etwun kwulwum-i cikem hanwul-ul tepko-it-**tamyen**, pi-ka ssottapu-lke-ta*
dark cloud-Nom now sky-Acc cover-Prog-**IF**, rain-Nom pour-will-Dec
'If dark clouds are covering the sky now, it's going to pour down.'
(implicit inference factual conditional)

d. *cena-ka cikem ulli-**myen**, mwen-ka kwuphanke twulimep-ta*
phone-Nom now ring-**IF**, something-Nom urgent must-Dec
'If the phone rings at this time, it must be something very urgent.'
(explicit inference factual conditional)

e. *ne-y nonmwun-i kkwuna-**myen**, uli-nun han-dal-gan yeheng-halke-ta*
you-Poss thesis-Nom finish-**IF**, we-Nom one-month-for travel-will-DEC
'If you finish your thesis, we will travel for a month.'
(strong future conditional)

f. *ne-y nonmwun-i kkwuna-kyetoen-**tamyen**, uli-nun han-dal-gan yeheng-halke-ta*
you-Poss thesis-Nom finish-happen-**IF**, we-Nom one-month-for travel-DEC
'If you should finish your thesis, we will travel for a month.'
(weakened future conditional)

However, a person sometimes needs to express a truth to be untrue, a fact to be unreal, or a future event to be impossible, and then necessary conditionals must be hypothetical or counterfactual. For doing so, in Korean, the relevant marker *-ltente* stating such conditionals must be attached at the end of main clause. With simply attaching the marker at the end of all examples in (1), those conditionals turn to be all imaginative, as in (2).

(2) a. *ippali-ka namwu-ese ttelecin-**tamyen**, kyoul-i was-**sultente***
leave-Nom tree-from fall-Dec-**IF** winter-Nom has-come-**IMG**
'If leaves fell from the tree, winter could be around the corner.'

b. *emma-ka cip-ul tolpo-**myen**, appa-nun chip-e ton pele-**oltente***
mom-Nom home-Acc take-care-**IF**, dad-Nom home-to money make-**IMG**
'If mom took care of home, dad could make money for home.'

c. *etwun kwulwum-i hanwul-ul tepko-it-**tamyen**, pi-ka ssotta-**pultente***
dark cloud-Nom sky-Acc cover-Prog-**IF**, rain-Nom pour-will-**IMG**
'If dark clouds should cover the sky, it would be going to pour down.'

d. *cena-ka cikem ulli-**myen**, mwen-ka kwuphanke twulimep-**sultente***
phone-Nom now ring-**IF**, something-Nom urgent must-**IMG**
'If the phone rang at this time, it could be something very urgent.'

e. *ne-y nonmwun-i kkwuna-**myen**, uli-nun han-dal-gan yeheng-**haltente***
you-Poss thesis-Nom finish-**IF**, we-Nom one-month-for travel-will-**IMG**
'If you were to finish your thesis, we would travel for a month.'

f. *ne-y nonmwun-i kkwuna-kyetoen-**tamyen**, uli-nun han-dal-gan yeheng-**haltente***
you-Poss thesis-Nom finish-happen-**IF**, we-Nom one-month-for travel-**IMG**
'If you should happen to finish your thesis, we would travel for a month.'

In Korean, subjunctive conditionals can be simply achieved by attaching the marker *-ltente* at the end of ordinary factual conditionals and future conditionals. However, the strategy to produce subjunctive conditionals in English involves no such marker as in Korean. Rather, tense and aspect are drastically altered to express imaginative events and states (Athanasidou & Dirven 1997, Hewing 2005). Yet, Bak (2009) argues that these conditional markers such as *-myen*, *-damyen*, *-ltente* in Korean cannot only be used for subjunctive conditionals. In other words, Korean itself may not have the same counterfactual conditional system that resembles the one in English, or Korean may be void of the syntactic system for subjunctive conditionals.

2.2 Subjunctive conditional sentences in English

Subjunctive conditionals in English can be naturally narrowed down into two subtypes depending on the degree of possibility. Simply, when an event or a state has a possibility to occur in the world, but the speaker imagines that the event or the

state is *unlikely yet possible* to occur, a hypothetical conditional is produced. Let's say that the speaker imagines the negative quality of *if*-clause to the maximum to express *absolute impossibility* of any occurrence of the event or the state, and then a counterfactual conditional is produced. A noticeable characteristic of subjunctive (i.e. hypothetical and counterfactual) conditionals in English is that the past feature or morpheme must appear both in *if*-clause and in main clause (Bybee 1998, Radford 2009).

2.2.1 Hypothetical conditionals: present and future

These conditionals are used when the speaker knows that an event can occur but imagines that it is unlikely to occur at a given time. Hence, they are mainly used for the present and the future hypothetical conditionals. Hypothesizing the past for the opposite results can only be achieved by using counterfactual conditionals dealt in the following subsection 2.2.2.

(3) a. If I <u>lived</u> in Gangnam, I <u>would enjoy</u> a different fashion.
(present hypothetical)
b. If I <u>should live</u> in Gangnam, I <u>would enjoy</u> a different fashion.
(future hypothetical)
c. If I <u>were to live</u> in Gangnam, I <u>would enjoy</u> a different fashion.
(future hypothetical)

To hypothesize the present situation in (3a), the verb *live* in the *if*-clause bears a past tense, not a present tense. On the other hand, a hypothetical auxiliary *would* in a past tense is inserted in the main clause. In (3b) and (3c), the future situation is hypothesized in two ways. Although the main clause is the same as for the present hypothetical conditional in (3a), the hypothetical auxiliary in the *if*-clause is different:

One is to insert the hypothetical auxiliary *should* in the past tense in (3b), and the other is to insert the unusual first-person past plural *be*-verb *were* in (3c).

2.2.2 Counterfactual conditionals: past and present

Counterfactual conditionals are used to imagine otherwise impossibilities of the past or the present event or fact. Counterfactual conditionals cannot be really used for the future because an absolute impossibility of a future event cannot be determined in the present time. It means that we cannot know the result of a future event, but we can only speculate the result, as in (4).

(4) a. If you had walked to work, you could have avoided the accident.
(past counterfactual)
b. If Gandhi were alive, he could get the Nobel Peace Prize.
(present counterfactual)

To hypothesize the otherwise situation in the past, *if*-clause must meet two requirements within the verb phrase: the past tense *-ed* and the past perfective marker *had* must be present, as in (4a): *If ... had walked*. Main clause must also meet three featural requirements: the hypothetical auxiliary in the past tense like *would*, *could*, *should*, or *might*, the present perfective marker *have* (not past perfective marker *had*), and the past tense *-ed*: *... could have avoided*. The conditional in (4b) is counterfactual in the sense that it is not possible for the deceased Gandhi to be alive at present. Nevertheless, the conditional in (3c) is hypothetical because to live in Gangnam for the speaker is not absolutely impossible in this case, but is *unlikely yet possible*. The hypothetical conditional and the counterfactual conditional structures are the same.

Yet if one believes that Gandhi's dead body was missing and could still be alive

at present in somewhere India at the age of nearly 100, he cannot say (4b), but he would say as in (5) as a future conditional. Because of the auxiliary *should* in the *if*-clause, Gandhi is assumed to be not dead.

(5) If Gandhi should be alive, India could be a more equal nation.
(future hypothetical)

2.2.3 Other counterfactual conditionals

Other than those mentioned just above, there are rare or less frequently-used types of counterfactual conditionals. Some of these conditionals can also be expressed with hypothetical and counterfactual conditionals, so the meanings are the same but the structures are different by fronting the auxiliary in *if*-clause as eliminating *if*.

(6) a. Should ~~IF~~ I live in Gangnam, I would enjoy a different fashion.
(future hypothetical)
b. Were ~~IF~~ I to live in Gangnam, I would enjoy a different fashion.
(future hypothetical)
c. Had ~~IF~~ you walked to work, you could have avoided the accident.
(past counterfactual)
d. Were ~~IF~~ Gandhi alive, he could get the Nobel Peace Prize.
(present counterfactual)

Some other kinds of exceptional counterfactual conditionals that have not mentioned earlier are listed below.

(7) a. If it be a joke, I would be surprised. (present hypothetical)
b. If you be Jesus, I would be Buddha. (present counterfactual)
c. I wish Tom were agirl,notaboy. (present counterfactual)

d. I wished you had kept thepromise. (past counterfactual)

e. (~~If you had~~) No regular exercises, you could die early. (present hypothetical)

f. (~~If you should have~~) No regular exercises, you could die early. (future hypothetical)

Although the counterfactual conditionals in (7) are of great interest to understand, structural description and semantic implication are beyond the purpose of the present thesis. At present, this paper is interested, among other types of conditionals, in those counterfactual conditionals discussed in (3) and (4) because these conditionals have peculiar tense systems from the rest of the conditionals and because these tense systems are so complex that Korean learners of English have a great difficulty to master them.

3. Literature Review

3.1 Typological universals and L1 studies

According to typological universals (Comrie 1986, Wierzbicka 2007), conditionals with low hypotheticality expressing future reference are the most basic types. Bowerman (1986) reports that L1 children seem to respect the typological universal on conditionals, and acquire more basic types first such as factual and future conditionals. Reilly (1986) finds out an early appearance of Present Generic type followed by Future Predictive type around the age of three and a quite late emergence of counterfactuals. Athanasiadou and Driven (1997) note Future Predictive type to be the most prototypical conditional. For L1 children, factual and future

conditionals are easier to acquire than subjunctive conditionals expressing hypotheticality or countfactuality. In other words, there is a continuum of hypotheticality among the three (factual, future, counterfactual) conditionals in (8).

(8) a. If leaves fall from the tree, winter is around the corner.
(factual conditional)
b. If you finish your thesis, we will travel for a month.
(future conditional)
c. If I lived in Gangnam, I would enjoy a different fashion.
(counterfactual conditional)

In (8), the conditionals expressing low hypotheticality such as the factual conditional in (8a) and the future conditional in (8b) are on one side of the continuum, and the conditionals expressing high hypotheticality such as the counterfactual conditional in (8c) on the other side of the continuum.

In a more recent L1 acquisition study, Crutchley (2004) employed a picture-description method to elicit counterfactual conditionals from 799 UK children of 6- to 11-years old. The most commonly-occurring type structures, although some are ungrammatical, are listed in (9).

(9) a. If she'd shut the door, the rabbit wouldn't have escaped.
b. If she didn't let the rabbit out, the rabbit wouldn't have run away.
c. If she hadn't of let the rabbit out, it wouldn't have got out.
d. If the girl would have put her rabbit in the cage, this wouldn't have happened.
e. If she didn't leave the rabbits' cage open, the rabbit wouldn't run away.

Crutchley documents an early grammatical use of counterfactual conditionals as those in (9) at the age of 6 and a gradual increase of the target structure as children

aged. Although children tacitly 'know' the systematicity of combining *if*-clause and *would*-clause, adult-like manner on the use of counterfactual conditionals cannot be acquired even from some 11-year-old children. One criticism of her study can be that the selection of verb types seems to have been random. Her results could have been different if she had maintained to employ the same types of verb categories: regular/irregular, transitive/intransitive, etc.

What can be concluded from the studies related to conditional universals is that (1) factual conditionals and future conditionals are easier and acquired early and (2) counterfactual conditionals pose difficulties even for L1 children at the age of 11. Unlike the experimental setting, children may have greater difficulties with counterfactual conditionals in the contextualized, real-life language situations.

3.2 Psycholinguistics studies

In psycholinguistics studies, Thompson and Byrne (2002) report from a paper-and-pencil grammaticality judgment task that the default representation of conditionals is the one that represents only the true antecedent and true consequent contingencies; that is, types of factual conditionals rather than counterfactual conditionals were the easiest. They further claim that these two types of (factual and future) conditionals arise from different interpretations of the conditional statement, and are influenced by different variables.

Santamaría, Espino, and Byrne (2005) further support the findings in a priming experiment of the ways that factual conditionals and counterfactual conditionals are processed differently with respect to allowing alternative possibilities out of the conditionals. That is, their participants were more actively checking for other possible interpretations when they were given counterfactual conditionals.

De Vega, Urrutia, and Riffo (2007) gave participants counterfactual conditionals such as “If Mary had won the lottery, she would have bought a Mercedes car” or factual conditionals such as “Because Mary won the lottery, she bought a Mercedes car”, embedded in short narratives. Reading-times showed that readers were immediately sensitive to the special status of counterfactual information. That is, when a new story was given in a counterfactual structure, the readers took a longer time to determine the meaning compared to when a new story was given in a factual structure. New information becomes less accessible in counterfactual than in factual stories. These results suggest that counterfactual events are momentarily represented but are later suppressed and the readers’ attention goes back to previous events in the story.

In an eye-movement study, Ferguson and Sanford (2008) report that when participants were given a counterfactual world context, they immediately regressed back in the text to make sense of the anomaly. That is, meaning a counterfactual conditional would take a longer time to comprehend and figure out the intention. According to eye-movement measures of total reading-time and number of fixations, the primary reason for delaying was likely to be the use of the modal verb *would*, which requires the reader to accept some events as a usual or repeated behavior under given conditions.

Overall, psycholinguistics studies produce findings that counterfactual conditionals are processed differently from factual conditionals and cause a delay because the reader goes to back the earlier information or refers to the real-world situation.

3.3 Korean learners of L2 English

Counterfactual conditionals are usually taught in the advanced grammar class for

the 3rd graders in middle school, and again during high school. A personal belief as English teachers and researchers is that Korean learners of English only have a mere, formulaic concept of counterfactual conditionals, and hardly produce grammatical forms in their writing and speaking. Celce-Murcia and Larsen-Freeman (1999) mention in their grammar book that English L2 learners struggle with subjunctive conditionals like *If I had the money, I would take a vacation*, because the learners think that the tense in the sentence refers to past time, *not* present time; actually, the correct interpretation refers to past time. Let us see some of the main previous studies on the acquisition of conditionals by Korean learners of English.

Jung et al. (2005) and Park (2010) examined errors in college learners' English compositions, focusing on the use of tense and counterfactual conditionals. In Jung et al.'s study, thirty learners participated in both the controlled and the free writing sessions, translated 32 Korean sentences into English, and described their activities in the past, present, and future tenses. Jung et al. counted the number of correct expressions of tense and conditionals in the writings and two native speakers graded each writing. Their results showed that, in the controlled writing, the students used 44% of tense and conditionals correctly. The majority of the errors were attributed to the intralingual (i.e. L1-related) ones. In the free writing, the accuracy rate was higher, 91%. The reason this accuracy seems quite high may be that the participants had probably known that they would examine English counterfactual conditionals.

Park (2010) investigated the use of subjunctive conditionals in Korean college L2 learners' writing. The data consisted of 45 college writing stories. Using the data, the frequency and the distribution of subjunctive conditionals were examined. And the use of subjunctive conditionals was coded. Park showed (a) a high frequency of subjunctive conditionals in argumentative writing; (b) factual conditionals being most frequently-occurring conditionals; and (c) L2 learners resorting to subjunctive

conditionals to repeat the preceding text as a cohesive device. Park's finding supports the aforementioned psycholinguistic studies that the reader takes a longer time to interpret counterfactual information by referring to preceding information. Preference of different conditionals according to English proficiency has not been reported.

Kim (2007) carried out a grammatical judgment task and reports the process of Korean college learners' acquiring subjunctive conditionals. To research this, Kim proposed three agendas: (a) correlations between the English ability and the acquisition of English subjunctive conditionals; (b) differences in the acquisition of English subjunctive conditionals according to gender; and (c) differences in the acquisition of English subjunctive conditionals according to English proficiency. The participants were 36 female and 37 male, and they answered the questionnaires of 40 questions about subjunctive conditionals. Kim concluded that there was no significant difference in the acquisition of English subjunctive conditionals according to gender, but the acquisition of English subjunctive conditionals was different among advanced-, intermediate- and low group. In the same line with Kim (2007), this paper further investigates the effect of English proficiency on the acquisition of subjunctive conditionals, and the acquisition difference between *if*-clause and main clause and between written data and spoken data.

Ko (2013) reports on the acquisition of conditionals by Korean/Spanish L2 learners of English in different proficiency levels: high and low. An experiment with production and comprehension was performed in order to explore (a) input frequencies, (b) grammatical complexities, and (c) L1 influence on the acquisition of conditionals. The results suggest that conditionals with lower hypotheticality (that is, possibility to occur) are acquired before than those with higher hypotheticality. That is, factual and future conditionals are easier than subjunctive conditionals. Influence of instruction, on the other hand, was also found, especially in the production data of

the higher-level L2 learners. Even though there were no differences in the acquisition order of conditionals between the two groups of learners with different L1 backgrounds (that is, Spanish and Korean), the influence of L1 conditionals was also found.

Kang (2007) is not an experimental study, but suggests teaching implications on English subjunctive conditionals. Kang argues that the difficulties of subjunctive conditionals arise from tense and time. The lack of future tense in English gave rise to a discrepancy between tense and time. The complexity arising from this discrepancy made the teaching and learning of subjunctive conditionals a lot more difficult. Kang concluded that learners need to understand that future time can sometimes be expressed even by past tense in subjunctive conditionals in particular. A regret is that Kang should have discussed whether the learners would have greater difficulties in *if*-clause or main clause and in a writing or a speaking situation.

4. Research

This paper investigates three research questions with the relevant justification. The independent variables are English proficiency (HIGH, LOW), English subjunctive conditional tense (past, present, future), clause type (*if*-clause, main clause), and production mode (written, spoken).

(1) Is there a relationship between English proficiency and grammaticality of English past, present, and future counterfactuals? In other words, this paper plans to find out if Korean learners of English in different proficiency levels produce different frequencies of errors according to the counterfactuals in

different time references.

(2) Is there a difference in grammaticality between *if*-clause and main clause? This question has not been dealt in depth in previous studies, except for a brief remark from a psycholinguistics study (Ferguson & Sanford 2008) that the tense marker *would* causes a longer time to comprehend and figure out the meaning. Al-Khawalda (2013) comments that both clauses in a conditional sentence cause difficulties. This paper plans to compare *if*-clause and main clause to find out which clause is more problematic or demonstrates more errors for Korean learners of English.

(3) Is there a difference in error frequencies between written data and spoken data? Previous studies report the findings either from written data or spoken data, but have never carried to elicit written data and spoken data simultaneously. This paper plans to elicit both written data and spoken data from the same learners using the same counterfactuals at the same period of time. The structure will be the same, but the words will be different.

The participants were Korean learners studying English as a foreign language. First, a writing experiment was conducted to collect written data, and two weeks later, a speaking experiment was conducted to collect spoken data. The number of participants for the writing experiment was 58, and 55 out of them attended the speaking experiment. This paper analyzes the data of these 55 participants (mean age=20.6, SD=1.77). They also filled out the questionnaire that collects other relevant bio-information and questions about English learning experiences. The participants were divided into two levels based on their TOEIC scores: HIGH (*N*=31, average=828) and LOW (*N*=24, average=628).

To collect data, a cross-sectional written and oral translation method was chosen,

and unrealistic situations were designed in the following way: (1) Counterfactual sentences had to refer to past, present, and future events. (2) The same counterfactuals in negation should be designed. And, (3) not only *if*-clause but also main clause had to be prepared. To avoid the usual personal pronouns like *I* or *you*, proper names were selected like *Gandhi*, *Obama*, *Gollum*, *Julianne*, or *Superman* as the subject of *if*-clause. A-B-C types of irregular verbs (*hide*, *wear*, *ride*, *steal*, *go*) were used because regular verbs are difficult to judge when used in a past form or in a past participle (e.g. *study-studied-studied*). Hence, out of possible juxtapositions for verb-phrase combination, irregular transitive verbs were used for *if*-clause and irregular intransitive verbs were used for the main clause. Counterfactuals used to elicit written data and spoken data are in Table 3 overleaf.

All six sentences were shuffled to make three versions to minimize the ordering effect. With the six sentences, six fillers and six other factual conditionals for warming-up were added to make a set of total eighteen questions. For the speaking experiment, a set of video clips were designed with fifteen scenes lasting a time-period of 5 minutes and 28 seconds, which were shuffled to produce three different versions (Version A, Version B, Version C). The video clip was shown on a computer monitor, and the scene had a different response time according to the difficulty and length of the token sentence.

Table 3. Counterfactual sentences used in the experiment (translated into English)

past	POS	1. If Gandhi had stolen money, he would have hidden in the forest.
	NEG	2. If Gollum had not stolen the ring, he would not have hidden in the cave.
present	POS	3. If Julianne were wearing the clothes, she would fly in the sky.
	NEG	4. If Superman were not wearing the clothes, he would not fly in the sky.
future	POS	5. If Obama would ride a UFO, he would be able to go to Mars soon.
	NEG	6. If Obama would not ride a UFO, he would not be able to go to moon.

1. 만약 간디가 돈을 훔쳤었다면 숲 속에 숨었을 텐데. (money, steal, forest, hide)
2. 만약 골룸이 반지를 **안** 훔쳤었다면 동굴에 **안** 숨었을 텐데. (ring, steal, cave, hide)
3. 만약 지금 쥴리앤이 저 옷을 입고 있다면 하늘을 날 텐데. (clothes, wear, fly, sky)
4. 만약 지금 슈퍼맨이 옷을 **안** 입고 있다면 하늘을 **못** 날 텐데. (clothes, wear, fly, sky)
5. 만약 내일 오바마가 UFO를 탄다면, 화성으로 금방 갈 텐데. (ride, Mars, soon, go)
6. 만약 내일 오바마가 UFO을 **안** 탄다면 달에 가지 **못** 할 텐데. (UFO, ride, moon, go)

Once the participants were asked to fill out the front part first for bio-information, they had to stop without going to the next page. Then, with a given time of 10 minutes, they quickly started to translate the sentences. Three different versions were used to minimize the ordering effect. They were allowed to go back to earlier sentences to make corrections. After collecting the written data, the oral (Korean into English) translation task was announced to take place two weeks later, to let the participants forget the counterfactual grammar. Furthermore, it was intentionally informed that the oral translation task would examine pronunciation, accuracy, intonation, and accent taking place in conversational settings.

During the oral translation task, the participants sat in front of a computer monitor, and given to them was the same version of the oral translation material that

matched their written translation tasks (A for A, B for B, C for C). After a brief introduction of the task procedure, the participants clicked the start button. Each participant spent approximately 5.5 minutes.

5. Data

A nonparametric procedure of the IBM SPSS Statistics 20 was used for the statistical calculation to test the hypotheses (Larson-Hall 2010), and other orthographic representations followed the suggestions made in the American Psychological Association (2011).

Hypothesis 1: First, the written data are analyzed. For the *if*-clause, the total number of the correct response (hence, GOOD) for HIGH is 52/186 (28.0%) and the total number of GOOD for LOW is 34/144 (23.6%). Although the percentage difference is 4.4% (28.0% minus 23.6%), the actual number of the token sentences is large (186 for HIGH and 144 for LOW) so that 4.4% cannot be overlooked. The McNemar test result reveals that there exists a significant difference between HIGH and LOW in the grammaticality of *if*-clause for written data (z=–4.796, $p \leq .005$). For main clause, the total number of GOOD for HIGH is 160/186 (86.0%) and the total number of GOOD for LOW is 94/144 (65.3%). The percentage difference is 20.1% (86.0% minus 65.3%), which seems to be a large difference. The statistical result shows that there also exists a difference between HIGH and LOW for main clause (z=–7.071, $p \leq .005$). At this point, we can conclude that HIGH in general outperformed LOW in the grammaticality of *if*-clause and main clause for written data.

Next, the spoken data are analyzed. The total number of GOOD for HIGH is

51/186 (27.4%) and the total number of GOOD for LOW is 35/144 (24.3%). The statistical result reveals that there exists a difference between HIGH and LOW (z=–4.000, $p \leq .005$), although the percentage difference was merely 3.1% (27.4% minus 24.3%). For the main clause, the total number of GOOD for HIGH is 161/186 (86.6%) and the total number of GOOD for LOW is 91/144 (63.2%). The percentage difference is 23.4% (86.6% minus 63.2%). The statistical results show that there exists a difference between HIGH and LOW in the grammaticality of main clause for spoken data (z=–7.280, $p \leq .005$).

For Hypothesis 1, there is a relationship between English proficiency (HIGH vs. LOW) and grammaticality of English counterfactuals both in writing and speaking situations although the difference is more significant for main clause than for *if*-clause.

Hypothesis 2: To compare *if*-clause and main clause, the written data are analyzed first, and then the spoken data. The grammaticality of *if*-clause and main clause for HIGH is examined. For all three tenses, HIGH performed better in main clause than in *if*-clause (z=–5.831, $p \leq .005$ for the past; z=–5.000, $p \leq .005$ for the present; z=–7.000, $p \leq .005$ for the future). Just like for HIGH, LOW performed better for main clause than for *if*-clause (z=–3.317, p=.001 for the past; z=–3.873, $p \leq .005$ for the present; z=–5.831, $p \leq .005$ for the future). It is apparent that main clause seems much easier than *if*-clause for all counterfactuals for written data irrespective of proficiency levels. The types of verbs being transitive or intransitive could have played a role.

Next, the spoken data are analyzed. For all three tenses of counterfactuals, the participants in HIGH performed better for main clause than for *if*-clause by looking at the raw numbers of GOOD (z=–6.083, $p \leq .005$ for the past; z=–4.472, $p \leq .005$ for the present; z=–7.280, $p \leq .005$ for the future). LOW performed better in the grammaticality of main clause than of *if*-clause (z=–4.359, p=.001 for the past; z=–

4.583, $p \leq .005$ for the present; $z = -5.099$, $p \leq .005$ for the future).

For Hypothesis 2, there is a difference between the grammaticality between *if*-clause and main clause both in writing and speaking situations, and *if*-clause of the future counterfactuals is most problematic.

For Hypothesis 3: To compare the grammaticality of *if*-clause for written data and spoken data, HIGH performed better at producing grammatical *if*-clauses for written data than for spoken data in the past and future counterfactuals (32.3% vs. 25.8% for the past and 14.5% vs. 8.1% for the future). However, it was the opposite for the present (37.1% vs. 48.4%). According to the McNemar test, significant differences were detected for the past and future both with the same value ($z = -2.000$, $p = .046$), but it was close to the chance level. For the present, HIGH performed far better for spoken data than for written data ($z = -2.646$, $p = .008$). When combining all tenses of GOOD *if*-clauses to simply compare written data (52/186, 28.0%) and spoken data (51/186, 27.4%), no difference was detected ($z = -1.000$, $p = .317$). For LOW, although the percentage differences are apparent between written data and spoken data (35.4% vs. 27.1% for the past, 27.1% vs. 35.4% for the present, 8.3% vs. 10.4% for the future), the statistics shows no strong differences between the two data. The past and present show a slight difference both with the same value ($z = -2.000$, $p = .046$). For the future, no difference between two data was present ($z = -1.000$, $p = .317$). When combining all tenses of GOOD *if*-clauses to compare written data (34/144, 23.6%) and spoken data (35/144, 24.3%), no significant difference was detected ($z = -1.000$, $p = .317$).

For the grammaticality of *if*-clause, it is likely that no distinguished difference exists between written data and spoken data, and the phenomenon is the same for HIGH and LOW. For the grammaticality of main clause for written data and spoken data, it seems that the differences are not strongly noticeable (87.1% vs. 85.5% for

the past, 77.4% vs. 80.6% for the present, 95.2% vs. 93.5%). The McNemar test reveals no significant difference for all tenses of main clause (z=–1.000, p=.317 for the past; z=–1.414, p=.157 for the present; z=0.000, p=1.000 for the future). When combining all tenses of GOOD main clauses for written data (94/144, 65.8%) and for spoken data (91/144, 63.2%), no significance is evident for LOW (z=–1.732, p=.083). For LOW, the picture is a little different from HIGH. First, since the percentage of GOOD for the present is the same (58.3%), there is no difference between two types of data (z=0.000, p=1.000). However, percentage differences are evident for the past (58.3% vs. 66.7%) and for the future (79.2% vs. 64.6%). According to the statistical results, a slight difference is detected for the past (z=–2.000, p=.046), but a difference is detected for the future (z=–2.646, p=.008). Overall, for the grammaticality of main clause, no difference exists between written data and spoken data both for HIGH and LOW.

For Hypothesis 3, no differences exist in the grammaticality of main clause as well as *if*-clause between written data and spoken data.

To sum. As the learner improves English proficiency, his grammaticality of English counterfactuals would also improve. However, *if*-clause of the future counterfactuals is expected to be most problematic; the past being the next most problematic. The learner does not have any difficulty with main clause, and it is expected to be usually grammatical. The grammaticality would be similar both in the writing situation and in the speaking situation. The assumption that the learner would perform better in the former situation than in the latter situation seems to be not supported.

6. Summary and Conclusion

This paper has conducted a cross-sectional experiment to elicit English counterfactual conditionals from 55 adult Koreans. Data were documented according to production mode (writing, speaking), proficiency level (HIGH, LOW), tense and aspect (past, present, future). The findings are as follows:

Although no difference was evident between writing and speaking, a positive relationship was found between English proficiency and grammaticality of English counterfactuals. Since HIGH outperformed LOW, it can be assumed that as the proficiency of English improves, the grammaticality of English counterfactuals will also improve. Furthermore, the correct grammaticality of subordinate clause (*if*-clause) cannot be expected in the spontaneous Korean-English interlanguage.

Although English proficiency is improved, *if*-clause would always be difficult for all three counterfactual tenses. *If*-clause of the future counterfactuals is expected to be most problematic; the past being the second most problematic. Korean learners of English would very likely fail a past counterfactual such as *If you had walked to work*, but instead settle with a simple past tense such as *If you walked to work*, which then becomes a present counterfactual. More problematic was the *if*-clause of future counterfactual, as the past modal was dropped. It is expected that adult Koreans would fail to produce a future counterfactual such as *If I should go to Mars* or *If I were to go to Mars*, but very likely to drop the past modal and utter *If I will go to Mars*. Main clause does not seem to pose a serious problem, and is expected to be usually grammatical. Although English proficiency is improved, grammaticality of the conditionals would be similar both in the writing situation and in the speaking situation.

The concluding remark is that when adult Koreans produce English subjunctive

(hypothetical and counterfactual) conditionals, they are likely to fail to yield the modals in *if*-clause that indicates hypotheticality and counterfactuality in the grammatical structure. Hence, intended hypotheticality or counterfactuality can only be semantically inferred from the context.

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국문초록

한국인 영어 화자의 영어 가정법 오류 연구

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본 실험 논문에서는 55명의 한국인 성인 영어 학습자로부터 영어 반사실적 조건절 자료를 수집한 후 분석하였다. 자료는 쓰기와 말하기, 영어능력, 시제별로 분류하여 통계처리 하였다. 그 결과 쓰기와 말하기는 유의미한 차이를 보이지 않았지만 학습자의 영어능력과 반사실적 조건절의 문법성에는 긍정적인 관계가 있음을 밝혀냈다. 즉 영어능력이 향상됨에 따라 영어 반사실적 조건절의 문법성 또한 향상된다는 결과이다. 주절과 종속절인 if-절을 비교할 경우 특히 후자인 if-절이 매우 어려웠고 거의 비문법적이었다. 그중에서도 미래시제 if-절이 가장 어려웠으며 그 다음이 과거시제 if-절이었다. 그러므로 한국인 영어학습자가 영어 반사실적 조건절을 무의식적으로 표현할 경우 if-절 조동사 도출 과정 오류 발생이 거의 항상 예상이 된다. 이는 쓰는 상황이나 말하는 상황이나 차이가 없다. 결론은 한국인 영어학습자가 의도하는 반사실적 혹은 가정적 상황은 문법적으로 오류가 있기에 문맥에서 적절하게 해석 될 수밖에 없을 것이다.

주제어 : 반사실적 조건, 가상적 조건, 가정법, if-절, 제2외국어 습득

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