The cross-linguistic influence of L1 Korean and L2 English in L3 Spanish syntactic processing[*]

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Abstract

This study investigates the effects of the previously acquired languages by Korean native speakers who learn Spanish as third language (L3), focused on the L3 syntactic processing of resultative predicate construction. The syntactic processing of resultative construction is very difficult for them and many Korean native speakers commit errors in its production. What is particularly noticeable in L3 productions is that resultative predicates are rarely used, whereas prepositional phrases or adverbs of *-mente* type are widely used. In the grammaticality judgment test and correction test performed in this study, it has been found that even learners who have good command of resultative predicate construction in L2 tend to rely more on L1 in L3 syntactic processing. Even though L3 is more similar to L2 and both of these languages are formally learned, the results show that L1 is preferred by Korean L3 learners as a source of syntactic transfer in the comprehension and production of Spanish resultative construction, which causes either positive transfer or negative transfer to L3.[1]

Keywords: absolute L1 transfer; syntactic processing; resultative predicate construction; metalinguistic knowledge; Korean learners of Spanish.

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1. Introduction

In the process of acquiring the target language as a foreign language there is an influence of the linguistic knowledge of previously acquired languages. The investigation of cross-linguistic influence has centered on the transfer of first language (L1) in the acquisition of a second language (L2) as a foreign language. Nowadays, it is common to learn additional languages in addition to the second language. Therefore, there have been many investigations in the literature of the effects of the L1 and L2 languages on L3 (Williams & Hammarberg, 1998; Hammarberg, 2001; Cenoz, 2001, 2003; Bardel & Falk, 2007; Bardel & Lindqvist, 2007, among others). In this study, I attempt to investigate the effects of the previously acquired languages (i.e., L1 Korean and L2 English) by Korean native speakers who learn L3 Spanish, focusing on the L3 syntactic processing. Specifically, I investigate the syntactic processing of resultative predicate construction based on the influence of background languages, since many Korean native speakers have difficulty in using them. Most Korean learners of Spanish as L3 acquire Korean as their native language and begin to learn English as L2 in primary education[1]. In this sense, I investigate how Korean native speakers produce Spanish sentences as L3 and what is the role of L1 and L2 in L3 learning. In particular, I analyze the influence of previously learned languages, observing the data of Korean university students whose specialty is Spanish.

I present the results of written test and grammaticality judgment test of the resultative construction. This study concludes that L1 is preferred by Korean L3 learners as a source of syntactic transfer in the comprehension and production of Spanish resultative construction.

2. Background

2.1. Previous studies

There are four models concerning syntactic transfer in learning L3: the absolute transfer of L1, the transfer of L2 acquired immediately before L3 learning, the positive or neutral transfer of any previously acquired languages and the transfer of a previous language that is typologically similar to L3.

The first model highlights that the transfer proceeds exclusively from L1 to L3 and the L1 even blocks the transfer from L2 to the L3 (Lozano, 2002; Jin, 2009; Na Ranong & Leung, 2009). This model proposes that the transfer occurs from L1 rather than L2, regardless of whether it is positive or negative. The second model, so-called L2 status factor, suggests the strong influence of the language that was acquired immediately before the learning of L3, that

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1   In this paper, L3 refers to the language currently being learned and L2 is a previously learned language.

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is, L2 (Bardel & Falk, 2007; Falk & Bardel, 2011). This model proposes that the influence of L2 is so predominant in the initial stage of acquisition of L3 that L2 prevents the positive transfer of L1 to L3. Third, the so-called Cumulative Enhancement Model proposes that the knowledge of all previously acquired languages favors the learning of L3 (Flynn, Foley & Vinnitskaya, 2004). This transfer model accounts for the positive or neutral influence of all previous languages, since a previously acquired language with different properties from the target language does not work negatively in the learning of L3. The fourth model is called Typological Primacy Model. It proposes that the syntactic transference in the acquisition of L3 depends on the similarity or typological proximity among previously acquired languages (Rothman, 2010, 2011; Rothman & Cabrelli Amaro, 2010).

2.2. Why are resultative constructions useful?

The resultative construction is interpreted as X_1 CAUSE [Y_2 BECOME Z_3]. In Spanish, the resultative predicate Z_3 establishes a secondary predication with its subject Y_2 which functions as a direct object in the matrix clause. For example, Spanish resultative construction is as follows.

(1) a. Juan pintó   la casa   roja.
    Juan paint-PAST the house   red
    'Juan painted the house red.'

  b. Marta   lavó   la camisa   bien lavada.
    Marta   wash-PAST   the shirt   well washed
    'Marta washed the shirt clean.'

In (1), *roja* 'red' and *bien lavada* 'well washed' are resultative predicates that express the final state of their own subjects *la casa* 'the house' and *la camisa* 'the shirt', respectively. This construction exists in both Korean (L1) and English (L2) as shown in (2).

(2) a. Inho-ka   cip-ul   pwulk-key   chilha-yess-ta.   (Korean)
    Inho-NOM   house-DO   red-KEY   paint-PAST-DEC
    'Inho painted the house red.'

  b. John painted the house red.   (English)

On the other hand, it is possible that Korean and English resultative construction can be formed with the resultative predicates that describe an unexpected result state caused by the action of the main verb, as shown in (3) and (4). An interesting property observed in Korean examples (2a) and (3) is that adjectives take a suffix *-key* in order to function as a resultative predicate.

(3) a. Inho-ka   kkangthong-ul   napcakha-key   twutulki-ess-ta.   (Korean)
    Inho-NOM   can-DO   flat-KEY   pound-PAST-DEC
    'Inho pounded the can flat.'

b. Yenghi-ka   sikthak-ul   kkaykkusha-key   takk-ass-ta.   (Korean)
   Yenghi-NOM   table-DO   clean-KEY   wipe-PAST-DEC
   'Yenghi wiped the table clean.'

(Son & Svenonius, 2008: 391)

(4) a. Inho pounded the can flat.   (English)

   b. Yenghi wiped the table clean.   (English)

(Son & Svenonius, 2008: 391)

However, the Spanish examples which correspond to those of (3) and (4) are ungrammatical.

(5) a. *Inho   martilleó   la lata   plana.
      Inho   hammer   the can   flat
      'Inho hammered the can flat.'

   b. *Yenghi   frotó   la mesa   limpia.
      Yenghi   wipe   the table   clean
      'Yenghi wiped the table clean.'

Note that Spanish resultative constructions can only be formed with pseudo-resultative predicates as shown in (1), which express the expected result state by the action of the main verb and emphasize the final state by adding a more advanced degree of result state that the main verb expresses (Demonte & Masullo, 1999). In order to express in Spanish the meaning of sentences (3) and (4), it is required to use expressions like *como consecuencia de* 'as a result' or adverbial clause connectors like *hasta que* 'until' as follows.

(6) a. Juan golpeó la lata y como consecuencia de ello, la lata se puso plana.
      'Juan pounded the can and as a result, the can became flat.'

   b. Marta frotó la mesa hasta que se puso limpia.
      'Marta wiped the table until it was clean.'

In sum, Spanish resultative construction is adequate to observe the type of syntactic transfer in Korean native speakers with the experience of learning the languages of L1 Korean and L2 English, since L1, L2 and L3 possess this construction and at the same time they have cross-linguistic variation (i.e., syntactic and morphosyntactic property).

3. Syntactic processing of Spanish as L3

3.1. Research question

In this paper, I analyze the data captured in the production of L3 Spanish learners who all speak Korean as native language and have already learned English as L2. It can be expected

that L2 is more likely to be transferred in L3 learning, because L3 is more similar to L2 than to L1 in terms of linguistic properties and the knowledge of a formally learned L2 has much in common with that of a formally learned L3. In this sense, my research question is as follows:

i) What about the syntactic processing of Spanish resultative construction by Korean L3 learners?

ii) As expected, is L2 preferred as a source of syntactic transfer by Korean L3 learners?

3.2. Methodology

3.2.1. Participants

A total of 84 Korean students majoring in Spanish language at a university in South Korea participated in this study. The participants consist of 36 students belonging to the second grade, 20 students belonging to the third and 28 students belonging to the fourth grade. Their ages range from 20 to 27 years old. All of the participants speak Korean as native language. They have the experience of formally learning English as a L2 for more than 10 years. In order to obtain the most objective results possible, I excluded students who have lived in the country where L2 and L3 are spoken for adjusting properly the learners' conditions.

3.2.2. Method

To investigate the influence of L1 and L2 to L3 Spanish, three tests were realized; one is to translate Korean resultative construction into L3 and another is to describe result states with L3 resultative predicate. The other is to judge the grammaticality of English and Spanish resultative construction and to correct a grammatically incorrect part of the sentence.

The first test is to describe result states presented in pictures in Spanish. 84 students participated in this test, 36 of them in the second grade, 20 in the third grade and 28 in the fourth grade. It was not allowed to consult the dictionary or anything else. The test was carried out in some classes under time limit. Concretely, the following examples were given to the participants.

(7) L3 Written test

※ Describe the following result state in Spanish.

a) Juan pintó la casa
_____.

b) He teñido los pantalones
_____.

c) Lavé la camiseta

_____.

d) Ella quemó la tostada

_____.

e) Marta frotó la mesa

_____.

f) Jorge gritó

_____.

In this test, I observe whether the participants can correctly produce the resultative con-struction with the adjectival predicate in L3 (i.e., (7a), (7b), (7c)) and, on the other hand, they recognize the interlingual difference in that the L1 and L2 can express (7d), (7e) and (7f) with the resultative adjectival predicate, while L3 cannot. I take a look at the type of syntactic transfer of the previously learned languages in written production.

The second test is to judge the grammaticality of English and Spanish examples of (8) and to correct a grammatically incorrect part. 71 students participated in this test, 33 of them in the second grade, 20 in the third grade and 18 in the fourth grade[2]. This test aims to exam-ine whether the learners correctly understand the use of resultative predicate of L2 English and L3 Spanish and whether L2's metalinguistic knowledge affects their grammaticality judgment ability of L3 sentences.

(8) Grammaticality judgment test of resultative construction in L2 and L3

> ※ If the following English and Spanish sentences are grammatically correct, mark it as correct. If not, mark it as incorrect.
> (i) English
> a) John painted the house redly.   (correct/incorrect)

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2   The participants in the second test are the same people who participated in the first experiment. However, three students in the first grade and ten students in fourth grade did not participate in the second experiment.

b) Marta washed the shirt cleanly.	(correct/incorrect)
c) I shouted myself hoarse	(correct/incorrect)
d) She wiped the table dry.	(correct/incorrect)
e) They hammered the metal flatly.	(correct/incorrect)
f) She laughed herself sick.	(correct/incorrect)
(ii) Spanish	
a) Juan pintó la casa roja.	(correct/incorrect)
b) Marta lavó la camisa limpiamente.	(correct/incorrect)
c) Yo grité ronco.	(correct/incorrect)
d) Ella frotó la mesa seca.	(correct/incorrect)
e) Ellos martillearon el metal planamente.	(correct/incorrect)
f) Ella se rió a sí misma enferma.	(correct/incorrect)

(8) is a very useful test to investigate the awareness of learners about resultative constructions and that it is able to demonstrate their L2 proficiency in these constructions.

For the results of this study to be valid, I collect additional data from a group of participants who correctly judged the grammaticality of English sentences in the second test, as well as correcting the errors correctly. Analyzing L3 syntactic processing of this group that has good command of the resultative predicate construction in L2 leads to draw conclusions about differential sources of transfer.

3.3. Results

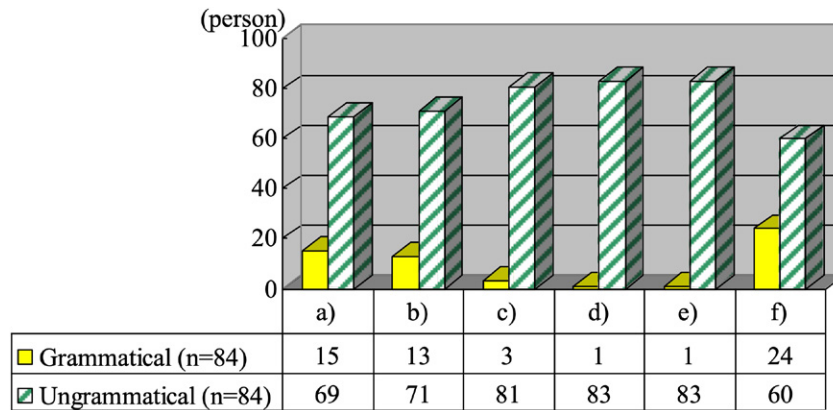### 3.3.1. Result analysis of written test

The results of syntactic processing observed through the first test (7) are illustrated in Figure 1, Figure 2 and Figure 3. Figure 1 shows the accuracy of the data written in L3 by the participants (n = 84).

Figure 2 and Figure 3 provide the detailed results in the written test of expressing the meaning of the resultative construction. Specifically, Figure 2 shows the percentage of participants that use the adjectival predicate in the test (7), regardless of grammaticality.
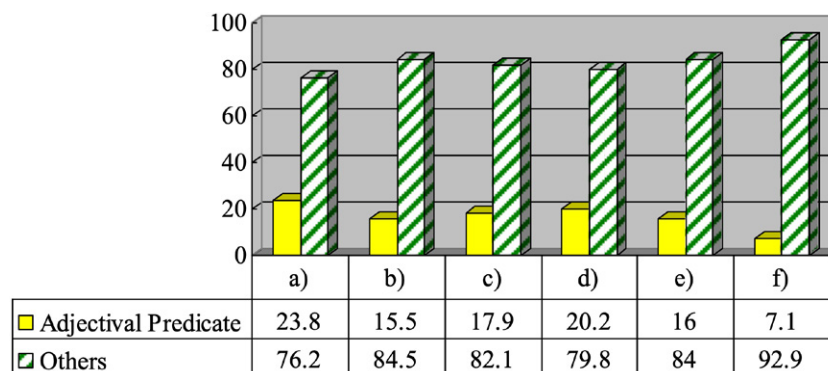
As for (7a) 23.8% of the participants produced the grammatical sentences with the adjectival resultative predicate *roja* 'red'. Only 15.5% of the participants used the adjectival resultative predicate *blancos* 'white' for (7b). Although 17.9% of the participants used the adjective *limpia* 'clean' for (7c), only 3 participants produced the grammatical sentences

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FIGURE 1

Accuracy scores (0-84) on the written test

	a)	b)	c)	d)	e)	f)
☐ Grammatical (n=84)	15	13	3	1	1	24
☑ Ungrammatical (n=84)	69	71	81	83	83	60

FIGURE 2

The rate of usage of adjectival predicate

	a)	b)	c)	d)	e)	f)
☐ Adjectival Predicate	23.8	15.5	17.9	20.2	16	7.1
☑ Others	76.2	84.5	82.1	79.8	84	92.9

with pseudo-resultative predicate such as *muy limpia* 'very clean'[3]. On the other hand, 20.2%, 16% and 7.1% of the participants used adjectival predicates for (7d), (7e) and (7f), respectively. Recall that using adjectival predicates for (7d), (7e) and (7f) makes the sentences ungrammatical in L3. As illustrated in Figure 2, most of the participants tend not to use the adjectival resultative predicate, but rather other expressions. Note that using other expressions for (7d), (7e) and (7f) does not mean that the participants make grammatical sentences, nor does it mean that they are aware of cross-linguistic variation (see Figure

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3   The adjectival resultative predicates, such as *muy limpia* 'very clean' o *bien lavada* 'well washed', which add a more advanced degree of result state to the meaning of the main verb *lavar* 'wash' o *limpiar* 'clean', should be used for (7c).

1). For reasons of clarity, I present in (9)-(14) some examples of translations preferred by many students for each sentence of (7).

(9) a. *Juan pintó la casa rojamente.
   'Juan painted the house red.'

   b. *Juan pintó la casa de rojo/ en rojo/ con color rojo[4].
   'Juan painted the house red.'

(10) a. *He teñido los pantalones de blanco/en blanco/con color blanco.
   'I dyed the pants white.'

   b. *He teñido los pantalones blancamente.
   'I dyed the pants white.'

(11) a. *Lavé la camisa limpiamente/completamente.
   'I washed the shirt clean.'

   b. *Lavé la camisa en limpio/con limpio.
   'I washed the shirt clean.'

(12) a. *Ella quemó la tostada completamente/oscuramente.
   'She burned the toast black.'

   b. *Ella quemó la tostada negra/oscura.
   'She burned the toast black.'

(13) a. *Marta frotó la mesa limpiamente.
   'Marta scrubbed the table clean.'

   b. *Marta frotó la mesa en limpio.
   'Marta scrubbed well the table.'

(14) a. *Jorge gritó roncamente.
   'He shouted hoarsely.'

   b. *Jorge gritó en ronco/por ronco.
   'He shouted in/by hoarse.'

   c. Jorge gritó hasta que se puso/estuvo ronco.
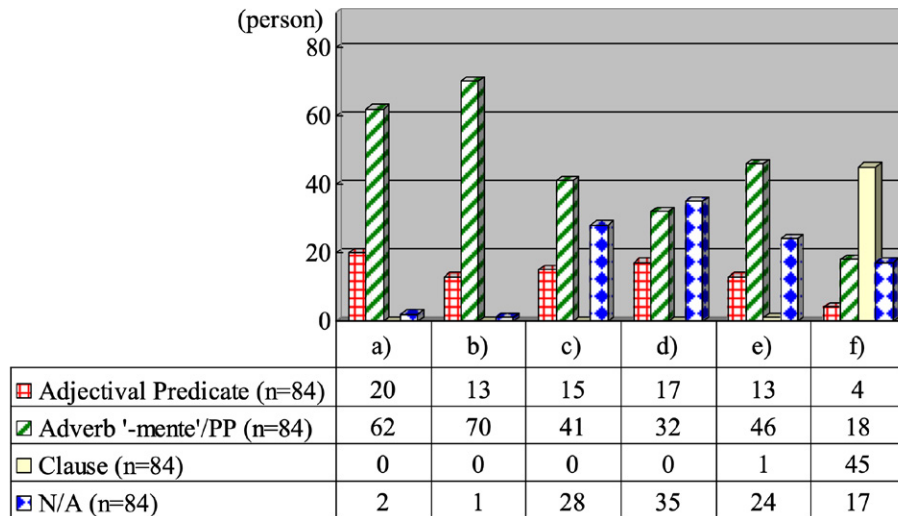   'He shouted until he was hoarse.'

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4   I marked (9b) and (10a) with '*' indicating that the sentence cannot have the meaning of result state. In other words, this sentence is grammatical in case the prepositional phrase is used as manner adverb that modifies the verb. Also I marked (12a) with '*' due to the absence of expression of result state.

The expression types used by the participants to describe the result state in the written test (7) are reported in Figure 3.

FIGURE 3

Usage scores (0-84) on the written test.
PP = prepositional phrase; N/A = No answer or No result state expression

	a)	b)	c)	d)	e)	f)
Adjectival Predicate (n=84)	20	13	15	17	13	4
Adverb '-mente'/PP (n=84)	62	70	41	32	46	18
Clause (n=84)	0	0	0	0	1	45
N/A (n=84)	2	1	28	35	24	17

It is worth noting that in L3 production for (7a) and (7c), most participants used the adverb *rojamente* 'redly', *limpiamente* 'cleanly' or prepositional phrases such as *de/en/con (color) rojo* 'in red', *en/con limpio* 'cleanly', etc., rather than using the pseudo-resultative predicate *roja* 'red' and *bien lavada* 'well washed'. For (7b), 70 of 84 participants used the prepositional phrases *de/en/con (color) blanco* 'in white' or the adverb *blancamente* 'whitely'. Only 13 participants used the pseudo-resultative predicate *blancos* 'white'. For (7d), 32 of 84 participants used the adverbs of *-mente* type such as *completamente* 'completely', *oscuramente* 'darkly', etc. Many participants did not express the result state. For (7e), 40 of 84 participants made sentences with adverbs of *-mente* type such as *limpiamente* 'cleanly', *blancamente* 'whitely', etc. For (7f), 18 of 84 participants used the adverb *roncamente* 'hoarsely' or ungrammatical prepositional phrases such as *en ronco, por ronco*, etc. It is also interesting that 45 participants used adverbial clauses like (14c) to translate (7f). This is the reason why the percentage of grammatical sentences in the written data for (7f) has increased to 28.6% (24 participants), as shown in Figure 1.

What is particularly noticeable in the L3 written productions is that resultative predicates are rarely used, whereas prepositional phrases or adverbs of *-mente* type are widely used. I used Chi-Square test to determine whether there is any significant difference between the observed frequencies of Figure 3 and the expected frequencies in the types used to express the result state. The results of the Chi-Square test are given as follows.

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TABLE 1

Chi-Square test for (7)

	TYPES FOR (7A)	TYPES FOR (7B)	TYPES FOR (7C)	TYPES FOR (7D)	TYPES FOR (7E)	TYPES FOR (7F)
Chi-Square	118.29 [a]	157.43 [a]	44.095[a]	36.857[a]	52.286[a]	42.381[a]
df	3	3	3	3	3	3
p-value	2.2e-16	2.2e-16	1.44e-09	4.933e-08	2.603e-11	3.331e-09

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 21.0.

The results of Chi-Square test were statistically significant, $\chi^2(3)$ = 118.29, p < .05 in (7a), $\chi^2(3)$ = 157.43, p < .05 in (7b), $\chi^2(3)$ = 44.095, p < .05 in (7c), $\chi^2(3)$ = 36.857, p < .05 in (7d), $\chi^2(3)$ = 52.286, p < .05 in (7e) and $\chi^2(3)$ = 42.381, p < .05 in (7f). The tendency of using four types to express the result state of (7) is different. Furthermore, I performed Chi-Square test on all items of (7) to see if participants used adverbial phrases or adjectives. The results also were statistically significant, $\chi^2(1)$ = 16.597, p < .05.

3.3.2. Result analysis of grammaticality test

The results of the second test concern the grammatical judgment of L2 and L3 resultative constructions as illustrated in Figure 4.

FIGURE 4

Accuracy of grammaticality judgment by language

	a)	b)	c)	d)	e)	f)
English (n=71)	50	29	27	48	28	23
Spanish (n=71)	35	9	30	38	12	31
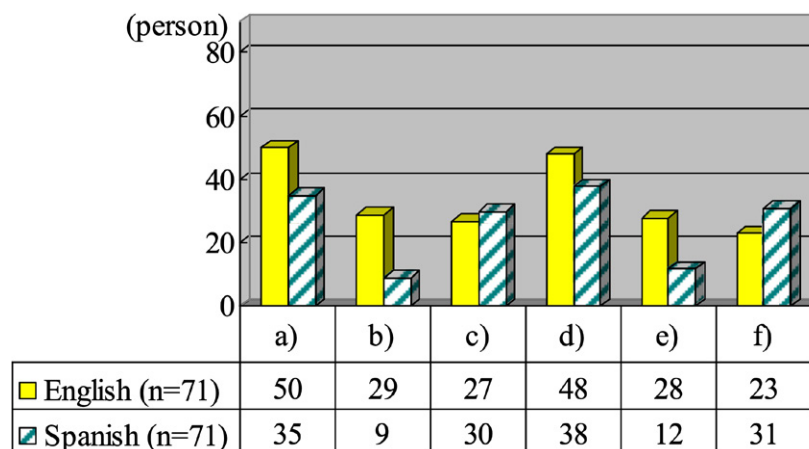
First, we can see that the English examples (a), (b) and (e) in (8i) are correctly judged to be ungrammatical by 50, 29 and 28 participants, respectively. The English examples (c), (d) and

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(f) in (8i) are correctly judged as grammatical by 27, 48 and 23 participants, respectively. Figure 4 shows that most of the participants are aware of resultative constructions of (a) and (d) in English and the examples (c) and (f) in which the reflexive pronoun is used are relatively difficult for the participants. Moreover, it is remarkable that almost all participants who correctly judged the grammaticality of English sentences correctly corrected the errors in the correction test performed in parallel with the grammaticality judgment test.

On the other hand, in the Spanish grammaticality judgment task, the accuracy rate for Spanish examples (a)-(f) of (8ii) was 35, 9, 30, 38, 12 and 31 participants, respectively. However, in fact, the number of learners who correctly judged the sentences correcting the wrong parts is very few. Concretely, the error was correctly corrected by 4 participants in case (b), by 1 participant in case (c), by 2 participants in case (d), by 1 participant in case (e) and by 0 participants in case (f)[5]. It should also be noted that in the case of (b) and (e) using -*mente* type adverbs, 87% and 83% of the participants misjudged that they were grammatical, and 58% and 46% responded that the adjectives *ronco* 'hoarse' and *seca* 'dry' used in (c) and (d) should be corrected with *roncamente* 'hoarsely' and *secamente* 'dryly'.

I performed a one-sample t-test to determine that the mean of the accuracy of English sentence judgment and the mean of the accuracy of Spanish sentence judgment were statistically significantly different from the hypothesized population mean, respectively. The difference between the sample mean of L2 accuracy (M = 2.89) and the hypothesized population mean (3.0) is not significantly different (p = .569), while the difference between the sample mean of L3 accuracy (M = 2.18) and the hypothesized population mean (3.0) are significantly different (p < .001). This result demonstrates that the participants have a higher level of metalinguistic knowledge of L2 resultative constructions than that of L3 resultative construction. I also compared the mean of the accuracy of English sentence judgment to that of the accuracy of Spanish sentence judgment using a paired-samples t-test. There was a significant difference in the scores for L2 accuracy (M = 2.89, SD = 1.66) and L3 accuracy (M = 2.18, SD = 1.10); t(70) = 3.03, p = 0.003. Therefore, we can say that the participants judged the grammaticality of L2 more correctly than the grammaticality of L3 and L2's metalinguistic knowledge is not fully activated in L3 syntactic processing.

3.3.3. Result analysis of a group with good command of resultative predicate construction in L2
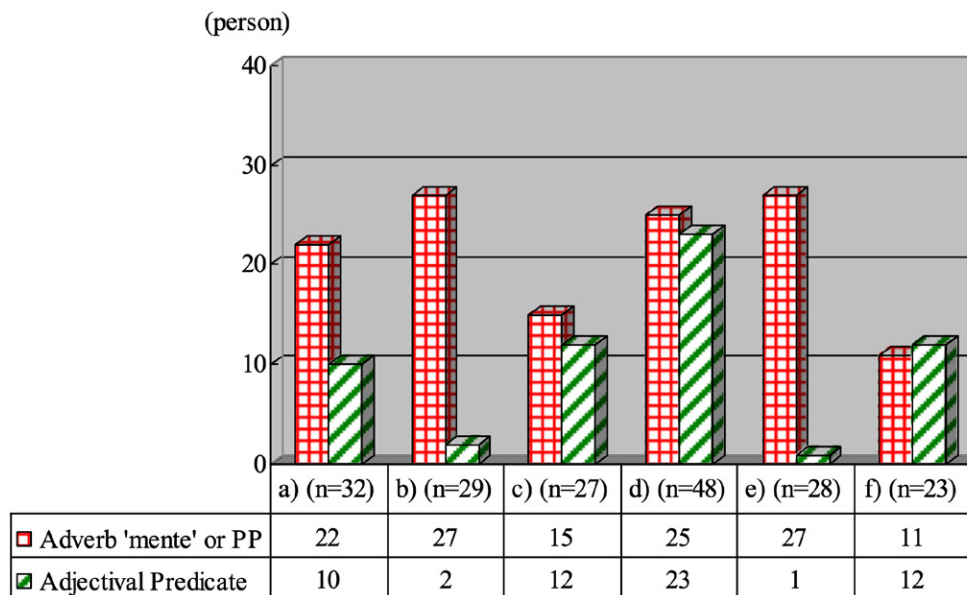
Let us turn to the correction test in which the participants correct a grammatically incorrect part. This test was performed in parallel with the grammaticality judgment test. Based on the result, another group was formed with participants who correctly judged the grammati-

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5   Of the Spanish sentences of (8ii), only the example (8ii-a) is grammatical.

cality of English sentences in the second test, as well as correcting the errors correctly, and additional data were collected from this group. This group consists of 32 participants for (8a), 29 participants for (8b), 27 participants for (8c), 48 participants for (8d), 28 participants for (8e) and 23 participants for (8f). The expression types used by this group in the second test to express the result state of Spanish sentences (8ii) are reported in Figure 5.

FIGURE 5
Usage scores on the Spanish correction test by high L2 proficiency group.
PP = prepositional phrase

	a) (n=32)	b) (n=29)	c) (n=27)	d) (n=48)	e) (n=28)	f) (n=23)
Adverb 'mente' or PP	22	27	15	25	27	11
Adjectival Predicate	10	2	12	23	1	12

In this test, we found very interesting results. 22 out of 32 participants who correctly corrected the English sentence (8i-a) with the adjectival predicate judged ungrammatical the Spanish sentence (8ii-a) containing the adjectival predicate *roja* 'red' and they changed it to the adverb *rojamente* 'redly' or the prepositional phrase *en rojo* 'in red'. 27 out of 29 participants who correctly corrected the English sentence (8i-b) with the adjectival predicate judged grammatical the Spanish sentence (8ii-b) with the adverb *limpiamente* 'cleanly'. Of the 28 participants who correctly changed (8i-e) to the adjectival predicate, 27 selected adverb *planamente* 'flatly' as the resultative predicate for Spanish sentence with the same meaning. Figure 5 shows that in five out of six Spanish sentences, more than half of the participants who used the adjectival predicate in each English sentence used adverbial phrases rather than adjectives.

I used Chi-Square test to determine whether there is any significant difference between the observed frequencies of Figure 5 and the expected frequencies in the types (i.e., adverb of -*mente* type and adjective) used to express the result state of Spanish sentences in (8ii). The results of the Chi-Square test are given as follows.

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TABLE 2

Chi-Square test for Figure 5

	TYPES FOR (8II-A)	TYPES FOR (8II-B)	TYPES FOR (8II-C)	TYPES FOR (8II-D)	TYPES FOR (8II-E)	TYPES FOR (8II-F)
Chi-Square	4.5 [a]	21.552[b]	0.3333[c]	0.0833[d]	24.143[e]	0.0435[f]
df	1	1	1	1	1	1
p-value	0.0339	3.444e-06	0.5637	0.7728	8.945e-07	0.8348

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 16.0.
b. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 14.5.
c. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 13.5.
d. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 24.0.
e. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 14.0.
f. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 11.5.

The results of Chi-Square test were statistically significant, $\chi^2(1)$ = 4.5, p < .05 in (8ii-a), $\chi^2(1)$ = 21.552, p < .05 in (8ii-b) and $\chi^2(1)$ = 24.143, p < .05 in (8ii-e). The tendency of using adverbial phrase and adjective to express the result state of (8ii-a), (8ii-b) and (8ii-e) is different. The results of Chi-Square test for (c), (d) and (f) of (8ii) were not statistically significant, $\chi^2(1)$ = 0.3333, p > .05 in (8ii-c), $\chi^2(1)$ = 0.0833, p > .05 in (8ii-d), $\chi^2(1)$ = 0.0435, p > .05 in (8ii-f). Furthermore, I performed Chi-Square test on all items of Figure 5 to see if participants used adverbial phrases or adjectives. The results also were statistically significant, $\chi^2(1)$ = 4.003, p < .05.

4. Discussion

Regarding the typological similarity, L2 English and L3 Spanish belong to the same Indo-European languages. In this sense, we can say that L3 is more closely related to L2 than L1 Korean. Furthermore, L2 is a language acquired immediately before L3 is learned. Given the logic of the Typological Primacy Model (Rothman, 2010, 2011; Rothman & Cabrelli Amaro, 2010) and the L2 status factor (Bardel & Falk, 2007, 2012; Falk & Bardel, 2010, 2011, among others), it can be predicted that Korean learners should use adjectival predicates more due to L2 transfer. Interestingly, however, the results of this study, contrary to this prediction, lead to the fact that L1 is preferred by Korean L3 learners as a source of syntactic transfer since many Korean native speakers produce adverbs of -*mente* type or prepositional phrases that modify the main verb instead of adjectival resultative predicates, as shown in the results of the tests conducted in this study (see Figure 3, 4 and 5). At least I have not found any evidence that L2's effects are significant in this study. I conclude that these results support a model of absolute L1 transfer (Lozano, 2002; Jin, 2009; Na Ranong & Leung, 2009).

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Concretely, Korean resultative predicate is formed adding a suffix -*key* to the adjective. The resultative predicates with the suffix -*key* tend to be understood by Korean learners as adverbs. This tendency is assumed to be because Korean suffix -*key*, like Spanish suffix -*mente*, is commonly used to make adverbs such as *ttatusha-key* 'warmly', *pparu-key* 'quickly', etc. In fact, Korean native speakers are much more familiar with using the suffix -*key* to derive adverbs than to form resultative predicates. Therefore, I argue that many Korean native speakers produce adverbs of -*mente* type or prepositional phrases that modify the main verb instead of adjectival resultative predicates, as shown in the results of the tests conducted in this study (see Figure 3). This phenomenon is considered as L1's negative transfer and an instance of overgeneration of -*mente* type adverb in L3 syntactic processing.

The question then arises as to why many participants translated (7f) into adverbial clauses instead of using an adverb of -*mente* type to express *swi-key* 'hoarse'. I argue that this phenomena lies in the fact that Korean resultative predicate *swi-key* is morphologically composed of the verb *swi-ta* 'be hoarse' and the suffix -*key*. Korean native speakers do not consider *swi-key* as adverb since it is impossible to derive an adverb by adding a suffix -*key* to the verb. Therefore, when they translate (7f) in L3, they resort to implicit L1 knowledge paraphrasing its meaning as adverbial clause. This result leads us to assume that L1 metalinguistic knowledge can positively affect L3 production in case the resultative predicate of L1 is morphologically composed of a verb and the suffix -*key*, since Korean native speakers paraphrase its meaning as adverbial clause resorting to the implicit L1 knowledge.

On the other hand, the participants have a higher level of L2's metalinguistic knowledge than that of L3 in resultative constructions, as shown in the results of the tests so far (see Figure 4). However, it turned out that L2's metalinguistic knowledge is not fully activated in L3 production. For the results to be valid, I collected additional data from a group of participants who has good command of the resultative predicate construction in L2 in that they correctly judged the grammaticality of English sentences and correctly corrected errors. Another important finding was captured from this group. Most of the participants of this group used -*mente* type adverbs when they produced some Spanish resultative constructions although they used adjectival predicates for English resultative constructions of the same meaning. This result supports that they tend to rely on L1 in L3 syntactic processing.

Moreover, these findings show that it is difficult that L2's metalinguistic knowledge formally learned in classroom and controlled by learners is transformed into an implicit metalinguistic knowledge that is automatically activated in L3 production. In this sense, it is necessary to educate L3 learners about the similarities and differences between the syntactic properties of L1, L2 and L3 through the parameters of universal grammar. This being so, metalinguistic knowledge of the background languages will become a linguistic knowledge which L3 learners place confidence in. This knowledge will play a significant role in syntactic transfer to the target language and can also help learners to process L3 sentences more efficiently.

5. Conclusions

The results of this study show that L1 is preferred by Korean L3 learners as a source of syntactic transfer in the comprehension and production of Spanish resultative construction. Even learners who correctly use resultative predicate in L2 tend to rely more on L1 in L3 syntactic processing. Concerning L3 syntactic processing of resultative construction, they tend to depend on L1, which causes either positive transfer or negative transfer to L3. These results demonstrate that when the learners produce difficult and unfamiliar sentences in L3, they seek to find a solution by resorting to more reliable language knowledge.

6. References

BARDEL, Camilla, & Ylva FALK, 2007: "The role of the second language in third language acquisition: The case of Germanic syntax", *Second Language Research* 23, 459-484.

BARDEL, Camilla, & Ylva FALK, 2012: "The L2 status factor and the declarative/procedural distinction" in Jennifer CABRELLI AMARO, Suzanne FLYNN & Jason ROTHMAN (eds.): *Third language acquisition in adulthood*, Amsterdam: John Benjamins, 61-78.

BARDEL, Camilla, & Christina LINDQVIST, 2007: "The role of proficiency and psychotypology in lexical cross-linguistic influence. A study of a multilingual learner of Italian L3" in Marina CHINI, Paola DESIDERI, Maria Elena FAVILLA & Gabriele PALLOTTI (eds.): *Atti del VI Congresso di Studi dell'Associazione Italiana di Linguistica Applicata*, Perugia: Guerra Editore, 123-145.

CENOZ, Jasone, 2001: "The effect of linguistic distance, L2 status and age on cross-linguistic influence in third language acquisition" in Jasone CENOZ, Britta HUFEISEN & Ulrike JESSNER (eds.): *Cross-linguistic influence in third language acquisition: Psycholinguistic perspectives*, Clevedon: Multilingual Matters, 8-20.

CENOZ, Jasone, 2003: "The successive effect of bilingualism on third language acquisition. A review", *International Journal of Bilingualism* 7, 71-87.

DEMONTE, Violeta, & Pascual José MASULLO, 1999: "La Predicación: Los Complementos Predicativos" in Ignacio BOSQUE & Violeta DEMONTE (eds.): *Gramática Descriptiva de la Lengua Española vol. 2*, Madrid: Espasa, 2461-2524.

FALK, Ylva, & Camilla BARDEL, 2010: "The study of the role of the background languages in third language acquisition: The state of the art", *International Review of Applied Linguistics in Language Teaching* 48, 185-220.

FALK, Ylva, & Camilla BARDEL, 2011: "Object pronouns in German L3 syntax: Evidence for the L2 status factor", *Second Language Research* 27, 59-82.

Flynn, Suzanne, Claire Foley & Inna Vinnitskaya, 2004: "The cumulative-enhancement model for language acquisition: comparing adults' and children's patterns of development in first, second and third language acquisition of relative clauses", *The International Journal of Multilingualism* 1, 3-16.

Hammarberg, Björn, 2001: "Roles of L1 and L2 in L3 production and acquisition" in Jasone Cenoz, Britta Hufeisen & Ulrike Jessner (eds.): *Cross-linguistic influence in third language acquisition: Psycholinguistic perspectives*, Clevedon: Multilingual Matters, 21-41.

Jin, Fufen, 2009: "Third language acquisition of Norwegian Objects: Interlanguage transfer or L1 Influence?" in Yan-kit Ingrid Leung (ed.): *Third language acquisition and universal grammar*, Clevedon: Multilingual Matters, 144-161.

Lozano, Cristóbal, 2002: "The interpretation of overt and null pronouns in non-native Spanish", *Durham Working Papers in Linguistics* 8, 53-66.

Na Ranong, Sirirat, & Yan-kit Ingrid Leung, 2009: "Null objects in L1 Thai-L2 English-L3 Chinese: An empirical take on a theoretical problem" in Yan-kit Ingrid Leung (ed.): *Third language acquisition and universal grammar*, Clevedon: Multilingual Matters, 162-191.

Rothman, Jason, 2010: "On the typological economy of syntactic transfer: Word order and relative clause attachment preference in L3 Brazilian Portuguese", *International Review of Applied Linguistics* 48, 245-274.

Rothman, Jason, 2011: "L3 syntactic transfer selectivity and typological determinacy: The typological primacy model", *Second Language Research* 27, 107-128.

Rothman, Jason, & Jennifer Cabrelli Amaro, 2010: "What variables condition syntactic transfer? A look at the L3 initial state", *Second Language Research* 26, 189-218.

Son, Minjeong, & Peter Svenonius, 2008: "Microparameters of Cross-Linguistic Variation: Directed Motion and Resultatives" in Natasha Abner & Jason Bishop (eds.): *Proceedings of the 27th West Coast Conference on Formal Linguistics*, Somerville, MA: Cascadilla Proceedings Project, 388-396.

Williams, Sarah, & Björn Hammarberg, 1998: "Language switches in L3 production: Implications for a polyglot speaking model", *Applied Linguistics* 19, 295-333.