The Usage and Interpretation of Korean *-tul* 'Plural' by Heritage Language Speakers

Eugenia Suh
University of Toronto

1. Introduction

Many heritage language speakers (henceforth, HLS) are also simultaneous bilinguals: speakers who are exposed to two languages from birth – a heritage ("home") language (e.g., Korean) and the official ("society") language of the country they are raised in (e.g., English). These speakers often become unbalanced bilinguals; although they become fully proficient in English, the development of their heritage language suffers at the onset of schooling (Lynch 2003, Grosjean 1994, Merino 1983). Errors in the heritage language are generally attributed to L1 attrition and incomplete acquisition. HLS vary from individual to individual in proficiency in their heritage language, and several factors appear to affect the maintenance of their heritage language, such as their level of exposure to English or their level of exposure to their heritage language (Valdés 2005, Montrul 2004; Jia 1998 for second language learners). HLS are similar to L2-ers with respect to certain types of errors they make, yet even then do not necessarily make them to the same degree (Kim, Montrul, and Yoon 2005, Montrul 2004, Montrul 2002). L1 attrition/incomplete acquisition appears to affect interface-related (e.g., discourse-pragmatics) properties, rather than purely syntactic ones (Montrul 2002, 2004, 2006). Given these characteristics of HLS, the Korean plural marker *-tul* is a particularly interesting topic of study for this group of speakers, and one that has not been investigated before.

The usage of *-tul* 'plural' is restricted by discourse-pragmatic- and syntax-related factors, unlike the plural marker *-s* in English, which is obligatory to make count nouns plural. Since *-tul* is more restricted than *-s*, it appears that negative evidence would be necessary in order for HLS to use *-tul* appropriately. However, most HLS do not receive very extensive formal instruction.

In the present study we explore the following questions:

(1) As adults, are HLS sensitive to the distribution of *-tul*, even if they are not instructed that *-tul* is unlike English *-s*?
(2) Will HLS omit *-tul* (as a reflection of their lack of mastery of the morpheme, as L1 children appear to do (Borer and Rohrbacher 2002)), will they overgenerate it (due to transfer from English), or will they create their own rules for the distribution of *-tul* (i.e., something unlike English or Korean)?
(3) Do HLS have more difficulty with the semantic requirements on *-tul* or the syntactic restrictions?
(4) Is there a difference in the production and interpretation of *-tul* by HLS?

In the following section, we will examine the specific differences between English *-s* 'plural' and Korean *-tul*. Section 3 discusses previous research, and the participants and methodology of the present

study are discussed in the following two sections. Section 6 presents the results of the experiment and Section 7 concludes the paper.

2. Plural marking: English *-s* vs. Korean *-tul*

The use of *-tul* as a marker of plurality in Korean is quite common in discourse; thus, it is roughly equivalent to plural *-s* in English. However, there are variable intuitions on the acceptability or obligatoriness of *-tul* in certain contexts, and these are generally not well understood. The consensus appears to be that whereas English *-s* is obligatory on all count nouns, *-tul* is only obligatory on nouns that are specific (Sohn 1999) (either via context (5) or via the addition of demonstratives (Chang 1996) (6)). *-Tul* is preferred with human nouns (7), and is optional on nouns that have classifiers (CL) (8).

(5) Haymi-ka   motwu-lul towa-cwu-l swu eps-ess-nuntey,
Haemi-NOM all-ACC   help-give-L able not-PST-but

    ai-tul-un   towa-cwu-ess-ta.
    child-PL-CONTR help-give-PST-DECL
    'Haemi couldn't help everyone, but she did help the children.'

(6) Haymi-ka **ku ai-#(tul)**-ul   towa-cwu-ess-ta.
Haemi-NOM that child-#(PL)-ACC help-give-PST-DECL
'Haemi helped the/those children.'
Without *-tul*: 'Haemi helped the/that child.'

(7) Hyenswu-ka   **chinkwu-(tul)**-ul manna-ss-ta.
Hyun-Soo-NOM   friend-(PL)-ACC   meet-PST-DECL
'Hyun-Soo met his/some friends.'

(8) Minwu-ka   **salam-(tul) ney myeng**-ul   manna-ss-ta.
Min-Woo-NOM human-(PL) four CL-(*PL)-ACC meet-PST-DECL
'Min-Woo met four people.'

The use of *-tul* in the above situations could mislead the HLS into attributing to *-tul* the same distribution as that of plural *-s* in English. However, unlike *-s*, *-tul* is dispreferred with animal and inanimate nouns (9) and is disallowed on CL (both postnominal (10) and prenominal[1] ones (11)) (compare with English *five **cup-s** of coffee*) and on nouns with cardinal numbers (and no CL)[2] (12) (compare with English *two **student-s***).

(9) Hyenswu-ka   **inhyeng/khokkili-(#tul)**-ul   pwa- -ss-ta.
Hyun-Soo-NOM doll/elephant-(PL)-ACC   see-PST-DECL
'Hyun-Soo saw elephants.'

(10) Minwu-ka   **salam**-(tul) ney **myeng-(*tul)**-ul manna-ss-ta.
Min-Woo-NOM human-(PL) four CL-(*PL)-ACC   meet-PST-DECL
'Min-Woo met four people.'

(11) Minwu-ka   tases **mali-(*tul)-uy kay**-(tul)-ul khiwe-ss-ta.
Min-Woo-NOM five   CL-(*PL)-GEN dog-(PL)-ACC raise-PST-DECL
'Min-Woo raised four dogs.'

---

[1] CL can occur prenominally if they have the genitive Case marker *-uy* attached to them, but it is most common for CL to occur in postnominal position (Martin 1992).
[2] The CL can optionally be dropped on human nouns.

(12) Minwu-ka   tases **chinkwu-(#tul)**-ul shilmang   shikye-ss-ta.
      Min-Woo-NOM five friend-(#PL)-GEN   disappointment make-PST-DECL
      'Min-Woo disappointed five friends.'

The above data, along with the optional *-Ø* marking of plurality in non-specific contexts, make *-tul* a difficult morpheme to master. The appropriateness of *-Ø* or *-tul* in plural contexts is summarized in Table 1. HLS who are strongly influenced by their English grammar are expected to underuse *-Ø* and overuse *-tul*.

Table 1.
Summary of acceptability of *-∅* and *-tul* in various plural contexts

Context	Elements of Nominal Phrase	-∅	-tul	
Neutral Nouns	Human N-(∅/ TUL)	✓	✓ (preferred)	
	Animal N-(∅/ TUL)	✓	✓ (but, dispreferred)	
Specific Nouns	N-(∅/ TUL)	#	✓	
	Dem-N-(∅/ TUL)	#	✓	
Counted Nouns	Postnominal CL: N-(∅ TUL) Card-CL-(∅ TUL)	✓	✓ (on N)	* (on CL)
	Prenominal CL: Card- CL-(∅ TUL)-GEN N-(∅ TUL)	✓	* (on CL)	✓ (on N)
	No CL; Prenominal Card: Card-N-(∅ TUL)	✓	# (on N)	

In addition to the contexts discussed above, *-tul* can also attach to non-nominal elements, such as verbs (13) and adverbs to create a distributive reading.

(13) Chinkwu-(tul)-i **nolle-tul**   ka-ss-ta.
      friend-(PL)-NOM play- PL?   go-PST-DECL
      '(My/your/his/her/their) friends (each) went out to play.'

Most linguists analyze non-nominal *-tul* as a separate morpheme from nominal *-tul* (Sohn 1999[3]); but non-nominal *-tul* still poses an extra learning burden on HLS.

2.1 Syntactic Assumptions

I analyze the syntactic structure of sentences containing *-tul* within the framework of Minimalism (Chomsky 1995). Following Ghomeshi (2003), I assume the existence of several layers in the full nominal projection. English nominal phrases can be separated into DPs, CardPs, NumPs, and NPs. CardPs are headed by cardinal numbers such as *two* and NumPs are headed by number marking such as *-s*. In Korean, I assume that there are also KPs[4], headed by Case markers, and ClPs, which are headed by CL. Phrases are only projected as necessary; the structures for a bare[5] noun (14), a specific noun (15), and a postnominal classifier (16) are given below.

---

[3] Sohn (1999) refers to this type of *-tul* as "particle *-tul*", and the nominal *-tul* as "suffix *-tul*".
[4] I assume that KPs replace DPs in Korean (Jo 2000, Suh 2005a).
[5] I consider nouns without any extra morphology, other than Case marking, to be "bare" nouns.

(14)

```
                    KP
                   /  \
               NumP    K
              /   \    -ul
            NP    Num  'ACC'
           /\      |
       chinkwu    -tul
       'friend'   'PL'
       'friends'
```

(15)

```
                      KP
                     /  \
                 NumP    K
                /   \    -ul
              NP    Num  'ACC'
             /  \    |
         DemP⁶   N  -tul
         /\      |   'PL'
        ku      ai
       'that'  'child'
       'the/those children'
```

(16)

```
                    KP
                   /  \
                ClP    K
               /  \    |
          CardP   Cl  -lul
          /  \    |   'ACC'
        NP   Card mali
       /\     |   'CL'
      kay   tases
     'dog'  'five'
     'five dogs'
```

If Korean *-tul* occupies the same syntactic position (i.e., head of NumP) as English *-s*, how do HLS deal with the distribution of *-tul*?

3. Previous Research

Very little research has been conducted on plural marking in Korean from an acquisitional/psycholinguistics perspective. However, the correct use of *-tul* is connected to the correct (structural) use of classifiers. With respect to classifiers, Lee and Lee (2002) tested the validity of the Numeral Classifier Accessibility Hypothesis (Animate human > Animate non-human > Shape > Function) in Korean in 23 Korean-English bilingual children aged 9 years old to 12 years old.[7] An oral elicited production task using pictures revealed that the children had acquired the proper syntactic representation of classifier structures. However, the children overgeneralized the general classifier *kay* 'inanimate CL', and their order of acquisition of classifiers other than *myeng* 'human CL' and *kay* 'inanimate CL', did not follow the predictions of the Numeral Classifier Accessibility Hypothesis. Lee and Lee (2002) hypothesized that the frequency of particular classifiers in the children's environment influenced their familiarity with, and consequently, their production of, certain classifiers.

---

[6] I assume that DemP occurs in the specifier position of an NP (Suh 2005b).

[7] These children were born in Korea, lived in English-speaking countries for four and a half to ten years, and subsequently moved back to Korea, six months prior to testing.

Lee (2006) conducted a similar experiment with 88 L2 adult learners of Korean (L1: English). The results of an oral elicited production task and a point-to-a-picture comprehension task showed again that the predictions of the Numeral Classifier Accessibility Hypothesis did not hold in Korean. Lee (2006) also concluded that these results could be attributed to the frequency of particular classifiers. These studies highlight the importance of testing high frequency classifiers if we want to determine whether HLS have correctly acquired the structure of classifiers. However, these studies were limited to the semantics of the classifiers and did not test the interaction of classifiers and *-tul*.

With respect to plurals in Korean, Kang (2002) investigated the interpretation of bare plurals by 59 English children aged 4;5 to 7;5 (mean age: 5;8) and 62 Korean children aged 4;3 to 7;7 (mean age: 5;6) in English and Korean, respectively. The results of an oral truth value judgment task with pictures showed that children interpreted bare plural constructions as being equivalent to sentences with universal quantifiers. However, this study did not test the use of *-tul* in contexts other than bare plurals.

The most relevant study to the present one is Shin and Milroy's (1999) study on twelve 6-7 year old sequential bilinguals who had first been exposed to Korean[8], and subsequently learned English when they entered the school system in New York City. Shin and Milroy investigated the children's acquisition of plural marking in both English and Korean. One of their tasks was an elicited production task, where the children were shown a picture of an object and asked to name it. They were then shown a picture with two of the same object and asked to name them. This task was designed to elicit plural marking and was completed in one language and then the other. The children had difficulty marking the plural on nouns in English, using *-s* only very rarely. Shin and Milroy (1999) attributed the children's errors to the infrequency of *-tul* on Korean nouns, although *-tul* is not used infrequently, as discussed in section 2.

The children also had difficulty marking number appropriately – both singular and plural – on nouns in Korean. Their data is given below in (17)-(20) (Shin and Milroy's (6-9)).

(17) swupak   han kay
      watermelon   one CL
      'one watermelon'

(18) swupak   hana
      watermelon   one
      'one watermelon'

(19) *han kay swupak
       one CL   watermelon
      'one watermelon'

(20) ? han swupak
      one   watermelon
      'one watermelon'

They made errors with the word order of Korean, as in (20), using a form that Shin and Milroy considered to be a "borrowing" from English, since Cardinal number-Noun is the usual word order for English and is a word order error[9] that monolingual Korean-speaking children do not make. The sequential bilinguals also overused the generalized (default) inanimate CL *kay*, which is also an error that monolingual children make, but at earlier stages of acquisition. Thus, we can see that the children in Shin and Milroy's study had difficulty acquiring both the semantic and syntactic restrictions on the CL and in marking plurality correctly. Given the results of the sequential bilinguals, it is unclear

---

[8] The children were either US-born Korean children or immigrants from Korea. One child was from Argentina and another had spent time living in Mexico prior to the United States.

[9] It is an error here because none of the object nouns were human nouns. (18) is not a word order error, but is fairly uncommon, except in lists. (19) is an error because the genitive Case marker *-uy* is missing.

whether simultaneous bilinguals would show an advantage in their acquisition of plural marking and CL.[10]

4. Participants

For the present study, 14 HLS of Korean born in Canada[11] and 15 native speakers (NS)[12] were tested. The HLS were 19-29 yrs. old (mean age: 24.2 years old) and did not have very much, if any, formal instruction[13] (mean: 3.6 years)[14]. They were divided into a low proficiency (henceforth, low HLS) and a high proficiency group (henceforth, high HLS) based on their scores on a Korean cloze test (Kim and Montrul 2004a, 2004b).[15]

Table 2.
Cloze Test Results of HLS and Native Speakers (NS)

Group	n	M (SD)	Range	Median
HLS	14	0.53 (0.14)	0.25 – 0.70	0.55
NS	15	0.92 (0.07)	0.75 – 1.00	0.90

The NS were born and raised in Korea and were in Canada at the time of testing. Their ages ranged from 19-52 years old (mean age: 25.7 years old), and their mean age of arrival was 24.1 years old. Their length of stay in Canada ranged from 2 months to 7 years (mean length of stay: 1.5 years) and their self-reported proficiency in English ranged from "beginner" to "advanced".

5. Methodology

The experiment consisted of two paper-and-pencil tasks and instructions were given in English for the HLS and in Korean for the NS in order to ensure that all participants clearly understood the tasks.[16] The first task was an elicited production task designed to determine the speakers' production of *-tul*. Subjects were given a question prompt and then expected to fill in the blanks and complete sentences with the object noun and verb provided, adding any extra morphology as required. 8 neutral nouns (4 human and 4 animal nouns) (21), 8 specific nouns (i.e., nouns with demonstratives) (22), and 8 counted nouns (i.e., nouns with CL) (23) were elicited with different prompts. Examples are given below.

---

[10] In Montrul's (2002) study on Spanish tense and aspect, early child (age of exposure to English: 4 to 7 years old) L2 learners and simultaneous bilinguals performed similarly (although differently from monolinguals and late child (age of exposure to English: 8 to 12 years old) L2 learners).

[11] One speaker immigrated to Canada at the age of 6 months.

[12] These speakers are technically Korean-dominant sequential bilinguals, but to easily distinguish them from the HLS (i.e., English-dominant simultaneous bilinguals), I will call them "native speakers".

[13] This information was obtained via a language background questionnaire (Steele 2002).

[14] Any instruction generally consisted of sporadic attendance in heritage language classes.

[15] The cloze test consisted of a short reading passage, with 20 morphemes omitted. Participants were asked to correctly select the missing morpheme from a list of three choices. The test was designed to test the participants' reading ability and their awareness of certain areas of grammar, such as verb conjugations and correct use of Case markers, etc, as well as their vocabulary.

[16] I followed Dekydtspotter et al. (1997) in providing instructions and contextual paragraphs in the language that the participants were most comfortable with in order to ensure that the participants understood the contexts enough to judge the acceptability of the test sentences appropriately.

(21) Yumi-ka nwukwu-lul manna-ss-ni? (haksayng) (mannata)
    Yumi-NOM who-ACC meet-PST-Q (student) (to meet)
    'Who did Yumi meet?'

    Yumi-ka _____.
    Yumi- NOM
    'Yumi….'

(22) Yeki-se mues-ul hal-kka? (kaykwuli) (capta)
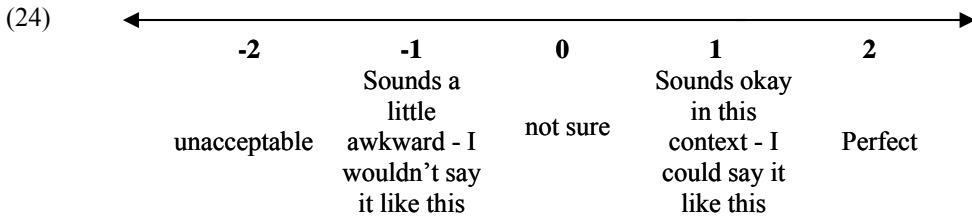   here-AT what-ACC do- Q (frog) (to catch)
    'What should (I) do here?'

    _____.

(23) (pyengali) (khiwuta)
    (chick) (raise)

    Yumi-ka _____.
    Yumi-NOM

The second task was an acceptability judgment task which measured speakers' acceptance of sentences with, or without, *-tul* in specific and counting contexts. The former context consisted of nouns with demonstratives, where *-tul* was attached to the noun; the latter context consisted of nouns with postnominal CL, where *-tul* was attached to the CL. Participants were presented with 20 short paragraphs in English (or Korean, for the NS) (as per Dekydtspotter et al. 1997), each followed by a test sentence in Korean (25). The test sentence was rated in the given context on a 5-point Likert scale ranging from -2 to 2 (24). There were two versions of the task and the sentences were randomized and counterbalanced for *-tul*.

(24)

	-2	**-1**	**0**	**1**	**2**
	unacceptable	Sounds a little awkward - I wouldn't say it like this	not sure	Sounds okay in this context - I could say it like this	Perfect

(25)   Yesterday my son Dong-Yup spent the whole afternoon running around our backyard with a net. After five hours, he came in and proudly said to me,

"Nay-ka   napi   yeses   mali-lul   capa-ss-e!"   _____
I-NOM   butterfly six   CL-ACC   catch-PST-DECL   (rating)
'I caught six butterflies!'

The results of the experiment will be discussed in the following section.

6. Results

6.1 Elicited Production

6.1.1 Human nouns and animal nouns in neutral contexts

For the bare nouns in neutral contexts, where *-tul* is optional, the results were initially calculated separately for human and animal nouns. However, there was wide interspeaker variation, and no strong preference for the use of *-tul* with human nouns was attested, contrary to the literature.[17] Paired-samples t-tests were highly significant only for the high HLS (t=-3.591, p=.016), who actually overused *-tul* with animal nouns. The results are summarized below.

Table 3.

Production of *-tul* with Neutral Nouns: Human Nouns vs. Animal Nouns

		Context			
		Human Nouns		Animal Nouns	
Group	n	-∅	*-tul*	-∅	*-tul*
Low HLS	8	0.62	0.38	0.72	0.28
High HLS	6	0.46	0.54	0.24	**0.76**
NS[18]	12	0.57	0.43	0.65	0.35

6.1.2 Nouns with demonstratives in specific contexts

For the specific nouns with demonstratives, where *-tul* is required, there was interspeaker variation in all of the groups, and there was no effect of context (low HLS: t=-1.964, p=.097; high HLS: t=-0.089, p=.933; NS: t=.231, p=.821). The NS did not produce *-tul* very often in either context, which may have been due to a task effect. Since the pictures only depicted plural entities, the NS may have felt no need to distinguish in number (i.e., naming the *kind* of object shown may have been sufficient in their minds). Surprisingly, the low HLS performed similarly to the NS in not producing *-tul* very often, and the high HLS surpassed the NS' usage of *-tul*, as is shown in Table 4.

---

[17] Given that nouns without *-tul* are ambiguous between singular and plural readings, it is possible that the NS did not feel the need to specify the plurality of the nouns in the neutral noun context. They may have felt it sufficient to merely identify the object depicted in the picture, given that all of the pictures showed plural contexts. Alternating pictures of singular entities with plural entities may show whether the results of the current study show a trend to drop the plural marking even for human nouns, or whether the results are due to an experimental design flaw.

[18] One participant did not produce bare nouns at all, one did not produce human bare nouns in appropriate sentences, and yet another participant did not produce animal bare nouns in appropriate sentences.

Table 4.

Production of *-tul* with Neutral Nouns and Specific Nouns

		Context			
		Neutral Nouns (bare N)		Specific Nouns (Dem N)	
Group	n	-∅	*-tul*	-∅	*-tul*
Low HLS	7[19]	0.67	0.33	0.48	0.52
High HLS	6	0.35	**0.65**	0.40	0.60
NS	15	0.61	0.39	0.62	0.38

6.1.3 Nouns with CL in counting contexts

The participants used the different counting constructions discussed in section 2 in this portion of the task; however, some patterns emerged in the groups' preferences in choice of construction. NS predominantly used prenominal CL, which may have been an effect of the prompt, which contained a prenominal CL, or an effect of focussing the cardinal. HLS produced mostly postnominal CL. Only HLS dropped CL[20], which we can consider to be structure transfer from English (compare with *two apples*), and those who dropped CL had difficulty inflecting the cardinal properly[21]. The distribution of the constructions produced and the use or omission of *-tul* by each group is given below.

Figure 1.

Production of *-tul* in Various Counting Contexts
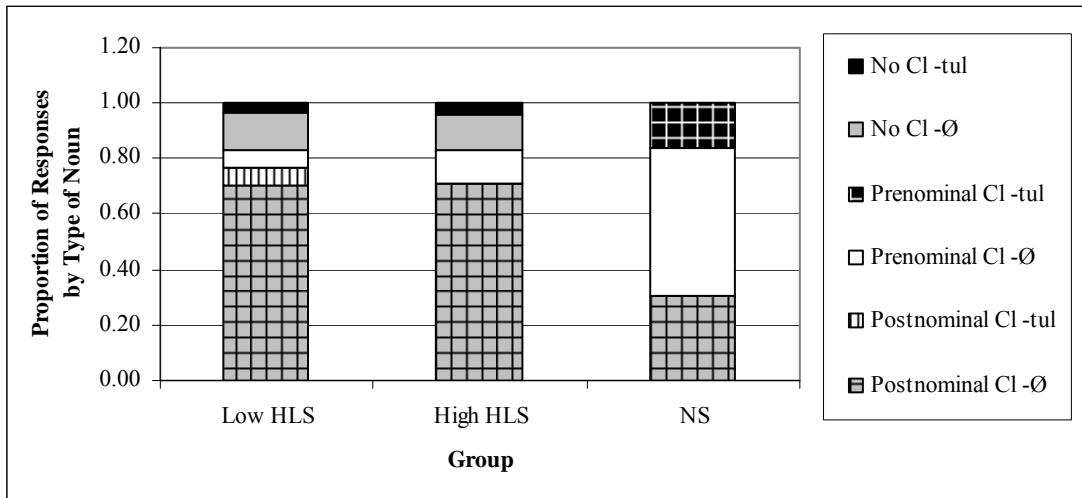
In the counting contexts, there was low production of *-tul* across all groups. The NS never used *-tul* on CL, or on nouns with postnominal CL, but optionally used *-tul* on nouns with prenominal CL, as expected. One low HLS categorically used *-tul* in all (plural) contexts, including on the CL, but all other HLS never used *-tul* when CL were present (i.e., not even on nouns with prenominal CL, unlike the NS). HLS who dropped the CL sometimes also added *-tul* on the noun, which is further evidence of transfer from English. The results are summarized in Table 5.

---

[19] One participant never produced nouns with demonstratives in the specific contexts.

[20] HLS also had difficulty in using the correct CL; they overgeneralized common CL such as *kaci* 'type/kind CL', *kay* 'thing CL', and *myeng* 'human CL'.

[21] When modifying nouns, cardinal numbers under 'five' are "shortened" by dropping the last segment. For example, *hana* 'one' becomes *han* 'one' when modifying a noun.

Table 5.
Production of -*tul* in Counting Contexts

Group	n	Postnominal CL: N Card- CL -(∅/*tul*)		Prenominal CL: Card- CL -Gen N-(∅/*tul*)		No CL: Card N		Overall -*tul* Usage Across All Contexts
		-∅	-*tul*	-∅	-*tul*	-∅	-*tul*	
Low HLS	8	0.92 (45/49)	0.08 (4/49)	1.00 (4/4)	0.00 (0/4)	0.82 (9/11)	0.18 (2/11)	0.09 (6/64)
High HLS	6	1.00 (34/34)	0.00 (0/34)	1.00 (6/6)	0.00 (0/6)	0.75 (6/8)	0.25 (2/8)	0.04 (2/48)
NS	15	1.00 (36/36)	0.00 (0/36)	0.77 (64/83)	0.23 (19/83)	--- (0/0)	--- (0/0)	0.16 (19/119)

Although the HLS did not produce -*tul* very often in any of the contexts (neutral, specific, and counting), their dramatic drop in the use of -*tul* when CL were present indicates they, except for the one low HLS, were aware of the syntactic restriction on -*tul*. We will now look at the results of the acceptability judgment task in order to determine if the results corroborate the conclusions from the elicited production task.

6.2 Acceptability Judgment

In the acceptability judgment task there were several highly significant effects: specific contexts by group interactions ($F_{2,26}$=12.010, p<.001), counting contexts by group interactions ($F_{2,26}$=8.046, p=.002), and specific contexts by counting contexts interactions ($F_{1,26}$=31.894, p<.001). No other effects were significant. The means for each context are shown below in Figure 2.

Figure 2.
Mean Acceptability Ratings for Nouns with or without -*tul* in Various Contexts
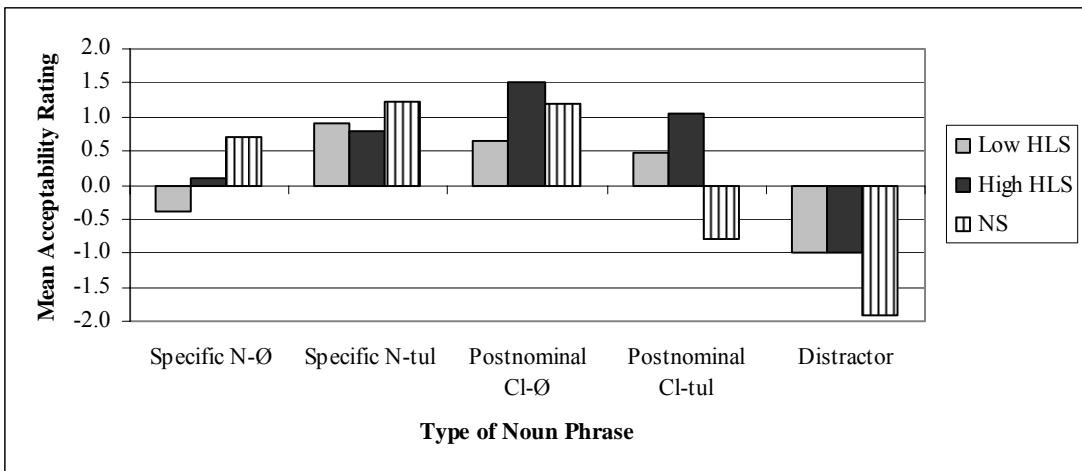
All groups discriminated between sentences with or without -*tul* in the specific contexts, but responded differently in the counting contexts. The NS gave higher ratings to sentences with -*tul* on specific nouns and -∅ on CL, but the mean ratings were not as high as expected (1.2 for both). Surprisingly, 20% of the NS gave positive scores to sentences with postnominal CL with -*tul*, which could be evidence of

language change in progress.[22] The low HLS had a strong preference for *-tul* in specific contexts (see Table 6); unlike the NS, the sentence was considered to be ungrammatical if *-tul* was not present. However, they only had mediocre acceptance of any sentence with CL, regardless of the absence or presence of *-tul*, so no preference was evidenced in the counting contexts. The high HLS had a preference for *-tul* in specific contexts, but still readily accepted sentences with or without *-tul* on CL in counting contexts and the correlation between their responses in the latter context was significant (r=.825, p=.043). Thus, it appears that *-tul* was optional on postnominal CL for this group.

Table 6.

Discrimination Scores for Acceptability Judgments

Group	n	Discrimination Scores (Δ=*-tul* – *-Ø*)		Pass Min. Requirement (= |0.5| difference)[23]?	
		Specific Context	Counting Context	Specific Context	Counting Context
Low HLS	8	1.3	-0.2	Y	N
High HLS	6	0.7	-0.5	Y	(Y)
NS	15	0.5	-2.0	Y	Y

Contrary to the results of the elicited production task, the results on the acceptability judgment task showed clearer evidence of transfer from English with the low HLS and less with the high HLS, and the NS performed in a manner that supported the literature on *-tul*, although their preference for *-tul* in specific contexts was not as high as expected. The results of the experiment will be re-examined in light of the questions posed in (1)-(4) in the following section.

7. Discussion and Conclusion

With respect to question (1), from the elicited production task, we can see that the HLS were sensitive to the distribution of *-tul*, but only in counting contexts. In the acceptability judgment task, the HLS were sensitive to *-tul*, but only in the specific contexts. Since the HLS did not overgenerate *-tul* across the board, both tasks show that HLS treated *-tul* differently depending on the context in which it appeared.

Question (2) investigated how HLS used or interpreted *-tul*. In the elicited production task, the low HLS unexpectedly undergenerated *-tul* overall and the high HLS overgenerated *-tul* (especially with animal nouns). However, the NS also did not perform as expected on this task, except in the counting contexts. In the acceptability judgment, the low HLS were even stricter (than NS) on the necessity of *-tul* in specific contexts and *-tul* was optional or obligatory on CL (also unlike NS). The high HLS performed like NS in the specific contexts, but not in the counting contexts, where they treated *-tul* as being optional on CL. Thus, we can see that the way the HLS treated *-tul* differed according to their proficiency in Korean; the low HLS were more influenced by English.[24]
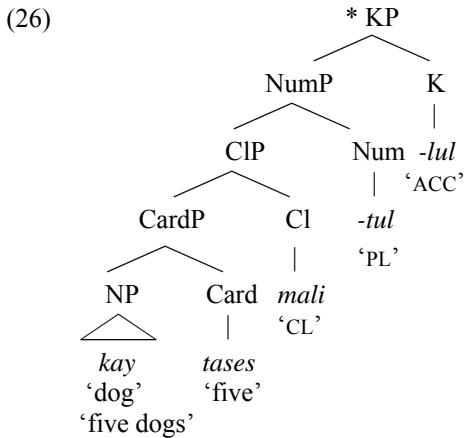
In terms of the relative difficulty in the semantic requirements vs. the syntactic restrictions on *-tul* from the elicited production task we can see that the HLS had more difficulty with the semantic requirements. They showed no preference for *-tul* with human nouns or specific nouns, but they correctly produced *-tul* less in counting contexts. In the acceptability judgment task, the HLS appeared to have more difficulty with the syntactic restrictions on *-tul*. This contradicts previous findings of

---

[22] Alternatively, the results may have been influenced by the NS' exposure to, and proficiency in, English. Regardless, given the absence of *-tul* on classifiers produced by the NS in the elicited production task, it is highly unlikely that HLS speakers receive input from native speakers where *-tul* is attached to the classifier. Thus, the fact that certain NS gave positive ratings to sentences with *-tul* on classifiers cannot be used to explain the HLS' acceptance of these sentences.

[23] I took a difference of \|0.5\| in the means within any particular context to be an indication of nouns (or CL) being treated differently with respect to *-tul*.

[24] The results are similar to that of Montrul (2004), where lower proficiency HLS had greater difficulty in Spanish subject and object expression.

literature on L1 attrition/incomplete acquisition, where discourse-pragmatic properties were found to be more likely to undergo attrition (vs. pure syntax) (Montrul 2002, 2004, 2006). The HLS appear to be placing NumP incorrectly immediately above the ClP (26) rather than above the NP, presumably due to transfer from English, where plural marking occurs on "classifiers" (e.g., measure words such as *box-es*) in measure phrases.

(26)

```
                              * KP
                           /       \
                       NumP         K
                      /    \        |
                   ClP      Num  -lul
                  /   \      |   'ACC'
              CardP    Cl   -tul
             /    \     |   'PL'
          NP      Card mali
         / \       |   'CL'
       kay       tases
      'dog'      'five'
      'five dogs'
```

The final question addressed whether there would be a difference in the HLS' production and interpretation of *-tul*. The low HLS did not produce *-tul* very often in the specific contexts in the elicited production task, despite having a strong requirement for *-tul* in these contexts in the acceptability judgment task. With the high HLS, we can see that despite their low production of *-tul* in the counting contexts of the elicited production task, *-tul* was actually optional on CL for them in the acceptability judgment task. Thus, the nature of the task greatly affected HLS' usage of *-tul*. A truth value judgment task would help in ensuring that HLS know that nouns without *-tul* can be used to refer to plural nouns.

A limitation of the present study is the small sample size. However, the findings of the present study highlight the complexity in determining the knowledge that HLS hold with respect to their heritage language, and the importance in using different tasks to tap into this knowledge, and it is likely that a larger sample size could show the same trends evidenced in this study. The results indicate that although HLS are aware that *-tul* is not as obligatory on plural nouns as English plural *-s*, there is a disparity in the HLS' interpretation and actual production of *-tul*, and these are affected by their proficiency in Korean. The lower proficiency HLS' additional difficulty in producing CL and their corresponding structures also seem to have affected their ability to judge sentences with *-tul* on CL appropriately. The variation in the NS' responses also shows the importance of further research, particularly on the language input that HLS receive and are exposed to.

References

Borer, Hagit and Bernhard Rohrbacher. 2002. Minding the absent: arguments for the full competence hypothesis. *Language Acquisition* Vol. 12, No. 2, 123–175.

Chang, Suk-Jin. 1996. *Korean*. Amsterdam, Netherlands: John Benjamins.

Dekydtspotter, Laurent et al. 1997. The interpretive interface in L2 acquisition: the process-result distinction in English-French interlanguage grammars. *Language Acquisition* Vol. 6 No.4, 297–332.

Ghomeshi, Jila. 2003. Plural marking, indefiniteness, and the noun phrase. *Studia Linguistica* Vol. 57, No. 2, pp. 47–74.

Grosjean, François. 1994. In *The Encyclopedia of Language and Linguistics*, Vol. 3, 1656–1660. Oxford: Pergamon Press.

Jia, Gisela Xiangdong. 1998. Beyond Brain Maturation: The Critical Period Hypothesis in Second Language Acquisition Revisited. Doctoral dissertation, New York University.

Jo, Mi-Jeung. 2000. Nominal Functional Categories in Korean: A Comparative Study with Languages with DP. *Studies in Generative Grammar, Vol. 10, No. 2,* 427–451.

Kang, Hye-Kyung. 2002. Bare plurals of quantification. *Studies in Generative Grammar, Vol. 12, No. 2,* 291–308.

Kim, Ji-Hye and Silvina Montrul. 2004a. Binding interpretations in Korean heritage speakers. *Proceedings of the 28th Annual Boston University Conference on Language Development*. Somerville, MA: Cascadilla Press, pp. 307–317.

Kim, Ji-Hye. and Silvina Montrul. 2004b. Second language influence on first language attrition: interpretation of Korean binding system. *Proceedings from the 10th [2003] Harvard International Symposium on Korean Linguistics (Harvard ISOKL-2003),* Seoul: Hanshin Publishing, pp. 86–98.

Kim, Ji-Hye, Silvina Montrul, and James Yoon. 2005. Binding interpretations by Korean heritage language speakers and L2 learners of Korean. *Online Supplement to the Proceedings of the 29th Annual Boston University Conference on Language Development.* (http://www.bu.edu/linguistics/APPLIED/BUCLD/supp29.html).

Lee, Dami. 2006. Markedness and L2 acquisition of numeral classifiers. *Icwungenehak* [Bilingualism] Vol. 13, 153–169.

Lee, Dami and Kwee-Ock Lee. 2002. The acquisition of Korean numeral classifiers by Korean/English bilingual children. *Journal of Korean Language Education* Vol. 13, No. 1, 265–278.

Lynch, Andrew. 2003. The relationship between second and heritage language acquisition: notes on research and theory building. *Heritage Language Journal* Vol. 1, No. 1.

Martin, Samuel E. 1992. *A Reference Grammar of Korean: A Complete Guide to the Grammar and History of the Korean Language*. Rutland, VT: Charles E. Tuttle Company.

Merino, Barbara J. 1983. Language loss in bilingual Chicano children. *Journal of Applied Developmental Psychology* Vol. 4, 277–294.

Montrul, Silvina. 2002. Incomplete acquisition and attrition of Spanish tense/aspect distinctions in adult bilinguals. *Bilingualism: Language and Cognition* Vol. 5, No. 1, 39–68.

Montrul, Silvina. 2004. Subject and object expression in Spanish heritage speakers: a case of morphosyntactic convergence. *Bilingualism: Language and Cognition* Vol. 7, No. 2, 125–142.

Montrul, Silvina. 2006. On the bilingual competence of Spanish heritage speakers: syntax, lexical-semantics and processing. *International Journal of Bilingualism* Vol. 10, No. 1, 37–69.

Shin, Sarah J. and Lesley Milroy. 1999. Bilingual language acquisition by Korean schoolchildren in New York City. *Bilingualism: Language and Cognition* Vol. 2, No. 2, 147–167.

Sohn, Ho-Min. 1999. *The Korean Language*. Cambridge: Cambridge University Press.

Steele, Jeffrey. 2002. Representation and Phonological Licensing in the L2 Acquisition of Prosodic Structure. Doctoral dissertation, McGill University.

Suh, Eugenia. 2005a. The nominal phrase in Korean: the role of D in a "determiner-less" language. *Toronto Working Papers in Linguistics* Vol. 25: *Niagara Linguistics Society Conference Proceedings,* 10–19.

Suh, Eugenia. 2005b. The structure of nominal phrases in Korean. *Harvard Studies in Korean Linguistics XI.* Seoul: Hanshin Publishing, pp. 775–88.

Valdés, Guadalupe. 2005. Bilingualism, heritage language learners, and SLA research: opportunities lost or seized? *The Modern Language Journal* Vol. 89, No. 3, 410–426.

Selected Proceedings of the 2007 Second Language Research Forum

edited by Melissa Bowles, Rebecca Foote, Silvia Perpiñán, and Rakesh Bhatt

Cascadilla Proceedings Project   Somerville, MA   2008

Ordering information

Orders for the library binding edition are handled by Cascadilla Press.
To place an order, go to www.lingref.com or contact:

Cascadilla Press, P.O. Box 440355, Somerville, MA 02144, USA
phone: 1-617-776-2370, fax: 1-617-776-2271, e-mail: sales@cascadilla.com

Web access and citation information

This entire proceedings can also be viewed on the web at www.lingref.com. Each paper has a unique document # which can be added to citations to facilitate access. The document # should not replace the full citation.

This paper can be cited as:

Suh, Eugenia. 2008. The Usage and Interpretation of Korean -tul 'Plural' by Heritage Language Speakers. In *Selected Proceedings of the 2007 Second Language Research Forum*, ed. Melissa Bowles, Rebecca Foote, Silvia Perpiñán, and Rakesh Bhatt, 239-251. Somerville, MA: Cascadilla Proceedings Project.

or:

Suh, Eugenia. 2008. The Usage and Interpretation of Korean -tul 'Plural' by Heritage Language Speakers. In *Selected Proceedings of the 2007 Second Language Research Forum*, ed. Melissa Bowles, Rebecca Foote, Silvia Perpiñán, and Rakesh Bhatt, 239-251. Somerville, MA: Cascadilla Proceedings Project. www.lingref.com, document #1748.