

WORKING PAPERS

IN

LINGUISTICS

The notes and articles in this series are progress reports on work being carried on by students and faculty in the Department. Because these papers are not finished products, readers are asked not to cite from them without noting their preliminary nature. The authors welcome any comments and suggestions that readers might offer.

Volume 43(1)
January
2012

DEPARTMENT OF LINGUISTICS
UNIVERSITY OF HAWAI'I AT MĀNOA
HONOLULU 96822

An Equal Opportunity/Affirmative Action Institution

DEPARTMENT OF LINGUISTICS FACULTY
2012

Victoria B. Anderson
Andrea Berez
Derek Bickerton (Emeritus)
Robert A. Blust
Lyle Campbell
Kenneth W. Cook (Adjunct)
Kamil Deen
Patricia J. Donegan (Co-Graduate Chair)
Katie K. Drager
Emanuel J. Drechsel (Adjunct)
Michael L. Forman (Emeritus)
John H. Haig (Adjunct)
Roderick A. Jacobs (Emeritus)
William O'Grady
Yuko Otsuka
Ann Marie Peters (Emeritus, Co-Graduate Chair)
Kenneth L. Rehg (Chair)
Lawrence A. Reid (Emeritus)
Amy J. Schafer
Albert J. Schütz, (Emeritus, Editor)
Jacob Terrell

ACQUISITION OF THE DISTRIBUTIVE MEANING OF THE EXTRINSIC PLURAL MARKER IN KOREAN

CHAE-EUN KIM

The Korean marker *-tul* is generally taken to be a plural marker, although some argue that it indicates distributivity as well. The present study investigates whether *-tul* carries a plural meaning, a distributive meaning, or both in child and adult Korean. The findings indicate that children who are acquiring Korean rarely accept the distributive meaning, even when appropriate contextual support for the distributive interpretation is readily available. By contrast, adults show straightforward evidence of knowing the distributive meaning of *-tul*. The experimental results show that while Korean adults treat *-tul* as a plural and distributive marker, children (under the age of 8) treat *-tul* exclusively as a plural marker.

1. INTRODUCTION. Korean has an unusual plural marker for the morphological expression of number. This morpheme *-tul* may appear after a noun phrase as a plural marker, but it is optional (Corbett 2000; Kwon and Zribi-hertz 2004). But *-tul* may also occur on other categories and it is here that Korean *-tul* is special.¹ Recent research on the Korean plural marker *-tul* has begun to demonstrate that *-tul* has the function of indicating distributivity (see the discussion below) as well as plurality (An 2007; Kang 1994; Kim 1994; Kuh 1987; Lardiere 2009; Park 2008; Unterbeck 1996). This paper investigates whether Korean adults and children are able to comprehend the distributive meaning of sentences containing *-tul*; it is an effort to fill a gap in our relatively limited understanding of child acquisition of morphosyntactic lexical items of *-tul*.

2. MORPHOLOGICAL POSITION OF *-TUL*. The Korean marker *-tul* appears in two distinct usages: it can occur as a typical plural morpheme, immediately following a countable noun inside any case particles or postpositions as in (1a), or it can be optionally attached to other categories including noun, adverbial, verbal, or prepositional phrases as in (1b) (Kuh 1987; Lardiere 2009; Song 1997).

- (1) a. Sey-myeng-uy sensayngnim-tul-i haksayng-eykey chak-ul cwu-ess-ta.
 three-CL-GEN teacher-IPM-NOM student-DAT book-ACC give-PST-DECL
 ‘Three teachers gave a book to students.’
- b. Sey-myeng-uy sensayngnim-tul-i haksayng-eykey-tul chak-ul cwu-ess-ta.
 three-CL-GEN teacher-IPM-NOM student-DAT-EPM book-ACC give-PST-DECL
 ‘Three teachers each gave a book to students.’
 ‘Three teachers each gave a book to a student.’

The former (1a) is called “intrinsic *-tul* (henceforth IPM)” and the latter in (1b) “extrinsic *-tul* (EPM).” IPM *-tul* pluralizes the element to which it attaches and occurs immediately adjacent to the noun. EPM *-tul* does nothing but adds a distributive meaning, and occurs outside of case particles or postpositions. Furthermore, EPM can be optionally concatenated to a nominal, verb, adverbial, or postpositional phrase and in all cases, a distributive reading arises,² as seen in table 1 (An 2007; Lardiere 2009; Park 2008; Song 1975; Song 1997).

¹ Consider the following example:

Salam-tul-i ku ai-eykey-[] ton-ul-[] manhi-[] cwuesseyo-[].
 Person-PL-NOM the child-DAT money-ACC a lot give-PST-REG
 ‘People gave the child a lot of money.’

The subject *salam-tul* is marked as plural. The subject need not be marked with an overt *-tul*, but must be interpreted as a plural, because Korean allows for optional plural marking. Also, the plural marker *-tul* can naturally appear at any of the points indicated by [].

² There is some disagreement over the possible positions of EPM. In addition, some scholars (Kuh 1987; Lee 1991) suggest that the plural marker can never be positioned after the case marker. However, here, I will use the term IPM for *-tul* suffixed to the noun root (inside of the case marker) and EPM for *-tul* positioned after the case

TABLE 1. Summary of IPM and EPM

Intrinsic plural marker (IPM)	-Attaches to nouns -Occurs inside case maker
Extrinsic plural marker (EPM)	-Attaches to nouns, adverbs, verbs, etc. -Occurs outside case marker

3. DISTRIBUTIVITY OF EPM. Distributives routinely mark the separation of members of a group, whether entities, events, qualities, or locations (Corbett 2000). Thus, a distributive marking on nouns has a primary function: it may spread each of the considered entities denoted in a sentence over various locations, times, or events.³ EPM *-tul* indicates that the constituent to which it is attached is interpreted with a distributive reading, as shown by the contrast between (2a) and (2b):

- (2) a. *Namca-tul-i phwungsen hana-lul sasseyo.*
 Man-PL(IPM)-NOM balloon one-ACC bought-REG
 ‘The men bought a balloon.’
- b. *Namca-tul-i phwungsen hana-lul-tul sasseyo.*
 Man-PL(IPM)-NOM balloon one-ACC-PL(EPM) bought-REG
 ‘Each of the men bought a balloon.’

In (2a) and (2b), *namca* is the subject, *phwungsen hana* is the object, and *sa-* is the verb. Note that the subject in both sentences is marked with IPM, and is therefore plural. There are two situations associated with (2a): (1) The men bought just one balloon together, or (2) Each of the men bought a balloon (distributive). In this sense, the sentence without *-tul* may entail a distributive meaning as well as a collective meaning. However, sentence (2b) with *-tul* suffixed to the direct object nominal can never be used to encode a collective meaning. The semantic function of EPM of the direct object nominal in (2b) is to indicate that the entities that were bought are distributed over the multiple agents. Because of the presence of EPM after *hana-lul* ‘one’, the sentence can only report a situation in which each of the men bought a balloon, because ‘balloon’ is specified as a distributive plural. Thus, the sentence with *-tul* marking the object constituent has only a distributive reading (Lardiere 2009; Song 1997).

4. STUDY 1: CORPUS ANALYSIS. In order to establish the frequency of EPM in Korean adult spontaneous speech and determine which categories are preferred to host EPM, a corpus study was conducted. The Sejong Corpus (579,996 spoken and 928,694 written words) was examined, and all instances of *-tul* attached to case markers were identified. As seen in table 2, the frequency of using EPM is higher in spoken data than in written data. Furthermore, EPM tends to attach to nominalized verbs, complementizers, and postpositions. However, irrespective of what the host is, EPM occurs rarely in both written and spoken Korean.

TABLE 2. Frequency of EPM *-tul*

	Written Data	Spoken Data
Nominalized verb	0/928,694 (0%)	3/579,996 (0.000005%)
Adverb	3/928,694 (0.000003%)	18/578,996 (0.0003%)
Complementizer	5/928,694 (0.000005%)	10/578,996 (0.00001%)
Postposition	0/928,694 (0%)	8/578,996 (0.00001%)

marker. Consequently, EPM is always attached to the end of the entire phrase, after the case marker (Lardiere 2009: 205ff.).

³ It has been known that a distributive interpretation is semantically more complex than a collective interpretation. Researchers in child language acquisition (Berent et al. 2008, and the references cited there) have captured the fundamental semantic distinction between collective and distributive interpretations of English universal quantifiers (i.e., *each, every*). Berent et al. (2008) in particular found that the children were more accurate in their acceptance of collective than distributive interpretations.

5. STUDY 2: A GRAMMATICALITY JUDGEMENT TASK. A 5-point Likert scale test was conducted, asking 20 Korean adults which category would be the most natural and common among four categories hosting EPM in Korean sentences. Participants read 12 different stories in which the distributive reading was involved. Each target sentence had EPM on different categories (dative, accusative, adverb, and complementizer). After reading the stories, they were asked to rate on a 5-point Likert scale how natural the sentences were. Results demonstrated that for all 20 Korean adults, placing EPM after the dative case markers was the most natural and tended to allow a distributive meaning. According to the results from 20 native speakers of Korean, the sentences hosting EPM after accusative case markers were the second most natural sentences, followed by adverb and complementizer, as in table 3 below. Thus, the position of EPM was limited to the dative case marker for the experiment.

TABLE 3. Average rating of the naturalness of sentences with EPM

Categories hosting EPM	Naturalness of sentences (out of 5)
Dative	3.7
Accusative	2.7
Adverb	1.7
Complementizer	1.3

6. ACQUISITION OF EPM

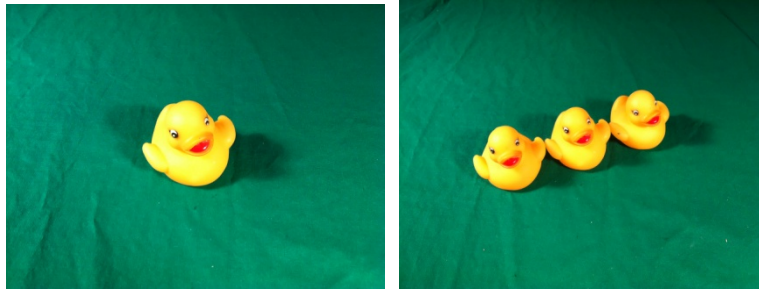
6.1 STUDY 3: A PICTURE VERIFICATION TASK. The plural morphology system in Korean is different from other languages with obligatory plural marking, such as English. English-speaking children, thus, have acquired the basic interpretation of plural morphology by around age 3 (Brown 1973; Nakano et al. 2009). For Korean, however, the morpheme *-tul* has interesting implications for acquisition because it is optional (Nakano et al. 2009). I conducted two experiments showing how Korean children interpret the noun with the plural morpheme *-tul*. I asked (1) whether children and adults interpret this morpheme as associated with more-than-one interpretation, and (2) whether a bare noun phrase can be interpreted as both a singular noun and a plural noun. The reason two experiments were needed is as follows: the fact that *-tul* is optional may cause a delay in the acquisition of this morpheme compared to English. We need to establish if children understand the more-than-one meaning. Otherwise, if they fail on *-tul* tests, we don't know if it is because of plurality or distributivity. Also, if children cannot interpret the distributive meaning of *-tul*, but can interpret the plurality of *-tul* then it can be said that the distributive reading is semantically marked in early language acquisition. Also, for Korean children, the morpheme *-tul* may only have the function of plurality.

6.1.1 METHOD: PICTURE VERIFICATION TASK. The 4 target sentences contained a bare noun phrase and 4 target sentences containing noun with IPM *-tul*. All eight experiments used the sentence-picture verification task (Roberts et al. 1994). The subject had to decide whether the sentence was a true or false description of the picture.

6.1.2 PARTICIPANTS. 20 Korean adults and 20 Korean children (aged 5;3-6;9, mean age = 6;4) participated in the experiment.

6.1.3 PROCEDURE. Participants were shown the picture on the left in figure 1 and asked to answer whether the sentence (3a) is true or false. Note that (3a) contains no *-tul*, and should therefore be ambiguous between plural or singular—that is, they should accept (3a) with both pictures. Participants then saw the picture on the right in figure 1 and heard the same sentence. The results showed that children interpret a bare noun as both singular (100%) and plural (100%). The children regarded Korean word *oli* 'duck' as meaning both one duck and ducks, just as adults did. Thus, for Korean children, the bare noun can have either a singular or plural meaning.

FIGURE 1. A sample set of pictures used in a picture verification task



- (3) a. Yekie oli-ka nol-ko iss-e-yo.
 Here duck-NOM play-PRG-REG
 ‘Here, the duck/the ducks is/are playing.’
 b. Yekie oli-tul-i nol-ko iss-e-yo.
 Here duck-PL-NOM play-PRG-REG
 ‘Here, the ducks are playing.’

While they looked at the pictures in figure 1, both children and adults were asked to judge whether the sentence (3b) was correct. Note that in (3b) *oli* ‘duck’ has *-tul* attached to it, inside the case marker (i.e., IPM). The results show that children overwhelmingly accepted the sentence with IPM *-tul* when it referred to a plural picture (96% acceptance). They barely accepted the noun with *-tul* as indicating a singular picture (4% acceptance). This shows that children age 6 to 7 are adultlike in their interpretation of the morpheme *-tul* when it is inside the case particle. Adults rejected N+*-tul* for a singular interpretation 100% of the time and accepted it for a plural interpretation 100% of the time.

6.2 STUDY 4: A TRUTH-VALUE JUDGEMENT TASK. This experiment aims to test whether EPM *-tul* has a distributive meaning. The experiment was conducted with Korean adults and children to examine their interpretation of the distributive marker *-tul*.

6.2.1 METHOD. Twenty-five Korean native speaking children (11 males and 14 females), aged 5;3 to 6;8 (mean age = 6;3) participated in this study; 20 adult native speakers (11 males and 9 females) of Korean also participated in this study. It employed a Truth-Value Judgment Task (Crain and McKee 1985; Crain and Thornton 1998). Participants were presented with short stories at the end of which a puppet appeared on the screen and made a one-sentence statement about what they thought happened in the story. Each participant was instructed to judge whether the puppet’s statement was true or false by putting a yellow sticker on a score sheet for the correct answer, or a red one for the wrong answer. Then they were asked to justify their choice. All sessions were administered individually with the experimenter. The experimental sessions lasted about 20–30 minutes.

The experiment manipulated the presence of EPM after the dative case marker in a sentence. There were two conditions: distributive and non-distributive. Six sets of pictures in a distributive context were used. Each set of pictures consisted of a base picture, which introduced six characters (three agents, three themes, and three recipients) and their events (see below for examples of each). In a non-distributive condition, six sets of pictures with three agents, one theme, and three recipients were used. Each child was presented with 26 stories in total: two-warm-ups, 12 criticals, and 12 fillers. The 24 test items were arranged in two pseudo-randomized orders to create two lists, which were evenly distributed among the participants. The stories were presented on a laptop computer to the participants with pictures via PowerPoint. The children heard the story accompanied by pictures, and a puppet produced an utterance describing the result. The participants gave a true/false judgment. Each test sentence occurred in only one of two contexts.

6.2.2 DISTRIBUTIVE AND NON-DISTRIBUTIVE CONTEXTS. Distributive depictions portray a one-to-one match between members of the agent set and members of the theme set. For example, in one distributive scenario, three teachers gave one soccer ball to each of three turtles. The complete script of this scenario and the corresponding picture are shown in below in figure 2.

FIGURE 2. A sample set of experimental and picture of distributive context (translation from Korean)



The three turtles play soccer with their friends every Saturday. However, they have difficulty in practicing because they don't have a soccer ball. Their teachers, Monkey teacher, Sheep teacher, and Dinosaur teacher found that they didn't have a soccer ball, and they decided to buy one very good soccer ball, and were supposed to give the ball to the three turtles. However, they changed their mind because it is a better idea that each of the teachers buy one ball and give it to each of the turtles. So Monkey teacher gave one soccer ball to Yellow turtle, Sheep teacher gave one to Brown turtle, and Dinosaur teacher gave one to Green turtle.

TABLE 4. A sample set of test items in each condition.

With EPM	sensayngnim-tul-i teacher-IPM-NOM	sey three	kepuki-eykey- <u>tul</u> turtle-DAT- <u>EPM</u>	kong-ul ball-ACC	cwu-ess-eyo. give-PST-REG
	'Teachers gave the soccer ball to three turtles.'				
Without EPM	sensayngnim-tul-i teacher-IPM-NOM	sey three	kepuki-eykey turtle-DAT	kong-ul ball-ACC	cwu-ess-eyo. give-PST-REG
	'Teachers gave the soccer ball to three turtles.'				

Two types of sentence structures (with EPM and without EPM) were used, and each type was tested in two contexts (one true and one false). EPM after the dative case marker distributes the event/action to mean that each of teachers gave one ball to each turtle. Hence, the semantic function of EPM on the indirect object nominal is to distribute the action of giving the ball to one turtle, demonstrating multiple instances of the action. In a non-distributive scenario, three teachers gave one soccer ball to three students. In this context, the sentence with EPM should be false, since EPM gives makes the sentence a strong distributive interpretation. The script and the picture are indicated in figure 3. For the distributive context, the sentence with EPM after the dative case is true; however, the same sentence is false in the non-distributive context. A sample set of test items is presented in table 4.

FIGURE 3. A sample set of experimental and picture of non-distributive context (translation from Korean)



The three turtles play soccer with their friends every Saturday. However, they have difficulty in practicing because they don't have a soccer ball. Their teachers-Monkey teacher, Sheep teacher, and Dinosaur teacher-knew their story and each of them decided to buy a soccer ball, and was supposed to give one ball to each of the turtles. However, they changed their mind because it is a better idea to buy one very good ball and give it to three turtles jointly.

6.2.3 PREDICTIONS. As seen in table 5, if children know that EPM has the function of distributivity, we expect them to judge the sentence with EPM as true in the distributive context, but they should reject the sentence with EPM in the non-distributive condition. However, for the sentences without EPM, the answer can be more flexible since the sentence without EPM can be interpreted in two ways: both a distributive and a non-distributive meaning.

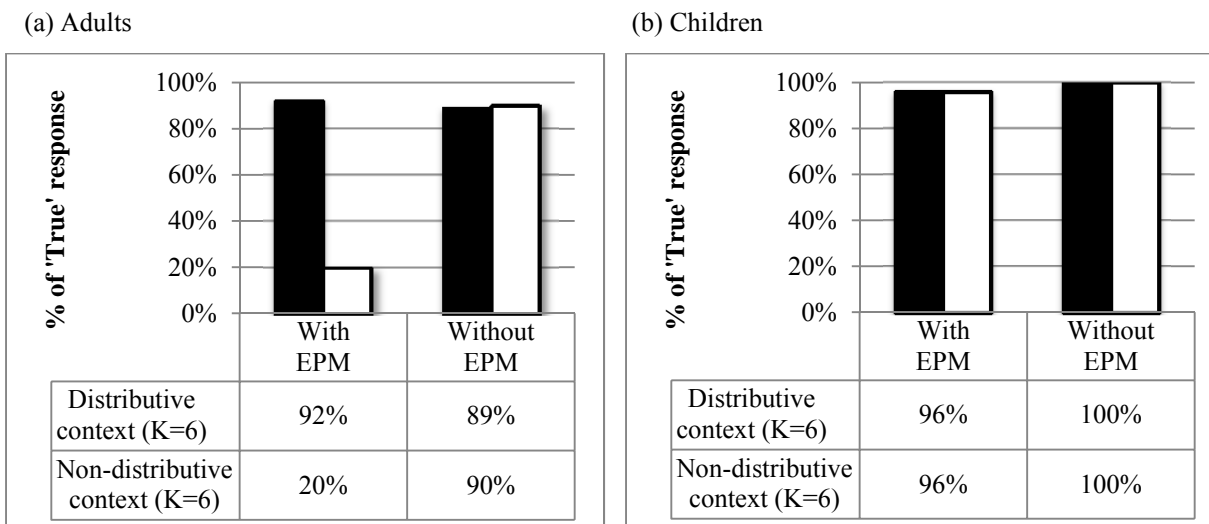
TABLE 5. A summary of condition and predicted responses.

	+Distributive	-Distributive
+EPM	True	False
-EPM	True/False	True/False

6.2.4 RESULTS. The adults interpreted sentences with EPM as having a distributive meaning, indicated by their acceptance of +EPM sentences in distributive contexts, and their rejection of +EPM sentences in non-distributive contexts. As seen in figure 4(a), Korean adults accept sentences with EPM 92% of the time in a distributive context but only 20 % of the time in a non-distributive context. A paired t-test was performed on the adults' results to compare mean percentage acceptance of the target sentence with EPM between the two contexts (distributive vs. non-distributive), revealing a significant difference $t(19)=2.25$; $p<0.0001$. In contrast, figure 4(b) presents the results of children on how they interpreted the distributive meaning of EPM. In both the distributive and the non-distributive contexts, children accepted the target sentence with EPM, shown by the high percentage of true response. Children robustly accept sentences with *-tul* for both a distributive context (96%) and a non-distributive context (96%). There was no yes-bias, because all children responded appropriately to filler items including mismatch conditions (12 fillers, 98% of accurate rate).

7. GENERAL DISCUSSION. The Korean morpheme *-tul* has two primary functions, as noted earlier: (1) plural marker and (2) distributive marker. The present study investigates how Korean-speaking adults and children interpret sentences with EPM. As expected, the results show that adults understand the two functions of *-tul* (plural marker and distributive marker). However, children who are acquiring Korean rarely accept the distributive meaning, even when appropriate contextual support for the distributive interpretation is readily available. Based on the results of the experiment, it is concluded that five- and six-year-old children have difficulty interpreting the distributive meaning of EPM. First and foremost, the

FIGURE4. % of 'True' response of Korean adults and children



Note. K represents the number of items

present findings provide evidence to indicate that the children simply consider *-tul* as a plural marker even if it used as EPM. We can discuss these finding in terms of the nature of children's initial hypotheses for bound morphemes: The default hypothesis is that each morpheme marks a single semantic category, and complex combinations such as distributivity and plurality on a single morpheme are initially dispreferred. In a nutshell, before children can interpret the distributive meaning of *-tul*, they overgeneralize *-tul* as a marker of plurality.

Although the sentence has EPM, it is possible to have a collective meaning, which might be more accessible to Korean children than other interpretations. The children in this study differed from the adults in their more limited access to distributive interpretations of sentences with EPM. The results in the present study support the hypothesis that the distributive interpretation is marked in early language acquisition. It is similar to the conclusion of Berent et al. (2008), which suggests that distributive interpretations have more costly derivations than collective interpretations. Greater preference for collective interpretations in the children group in our study supports this idea. Also, it can be argued that EPM has complexities of semantic representation. It plays an important role in delaying the acquisition of this morpheme function.

For future studies, it is worth considering whether the order of IPM and EPM matters. If this is the case, an interpretation that the sentence with EPM has a distributive reading can be explained by an incremental sentence processing. Two sentences (4a) and (4b), have the same meaning, but the only difference is the arrangement of IPM and EPM in the sentences.

(4) a. Sensayngnim-tul-i sey kepuki-eykey-tul kong-ul cwu-ess-eyo.
 teacher-IPM-NOM three turtle-DAT-EPM ball-ACC give-PST-REG
 'Teachers gave the soccer ball to three turtles.'

b. Sey kepuki-eykey-tul sensayngnim-tul-i kong-ul cwu-ess-eyo.
 Three turtle-DAT-EPM teacher-IPM-NOM ball-ACC give-PST-REG
 'Teachers gave the soccer ball to three turtles.'

Sentence (4b) starts with the dative case including EPM and follows with the sentential subject with IPM. If this sentence lacks a strongly distributive interpretation, as does sentence (4a), then the distributive interpretation can be seen as influenced by the sentential subject with IPM. However, if (4b) has a

distributive interpretation, the meaning of EPM itself determines the distributive reading no matter where it is positioned in the sentence. These questions must be left for future study.

REFERENCES

- AN, YOUNG-RAN. 2007. Korean *-tul* and English *all*. *Linguistics Student Organization Working Papers in Linguistics* 7:1–16.
- BROWN, ROGER. 1973. *A first language: The early stage*. Cambridge: Harvard University Press.
- BERENT, GERALD P., RONARD, R. KELLY, JENFFREY E. PORTER, and JUDITH FONZI. 2008. Deaf learner's knowledge of English universal quantifiers. *Language Learning* 58:401–37.
- CHOMSKY, NOAM. 1981. *Lectures on government and binding*. Dordrecht: Foris Publication.
- CORBETT, Greville G. 2000. *Number*. Cambridge, UK: Cambridge University Press.
- CRAIN, STEPHEN, and CECILE MCKEE. 1985. The acquisition of structural restrictions on anaphora. In *Proceedings of NELS* 15:94–110. GLSA, University of Massachusetts, Amherst.
- KANG, BEOM-MO. 1994. Plurality and other semantic aspects of common nouns in Korean. *Journal of East Asian Linguistics* 3:1–24.
- KIM, CHONGHYUCK. 2005. The Korean plural marker *-tul* and its implications. The University of Delaware PhD dissertation.
- KIM, YOOKYUNG. 1994. A non-spurious account of 'spurious' Korean plurals. In *Theoretical issues in Korean linguistics*, ed. by Young-Key Kim-Renaud, 303–23. Stanford, CA: Center for the Study of Language and Information.
- KUH, HAKAN. 1987. Plural copying in Korean. *Harvard Studies in Korean Linguistics* 2:39–50.
- KWON, SONG-NIM, and ANNE ZRIBI-HERTZ. 2004. Number from a syntactic perspective: Why plural-marking looks 'truer' in French than in Korean. *Empirical Issues in Formal Syntax and Semantics* 5:133–58.
- LARDIERE, DONNA. 2009. Some thoughts on the contrastive analysis of features in second language acquisition. *Second Language Research* 25:173–227.
- LEE, HAN-GYU. 1991. Plural marker copying in Korean. *Harvard studies in Korean linguistics* 4:513–28.
- NAKANO, NAO, HYE SUN PARK, and CRISTINA SCHMITT. 2009. A comparative study on the acquisition of plural morphemes in Japanese and Korean. Paper presented at Tokyo Conference on Psycholinguistics.
- PARK, SO-YOUNG. 2008. Plural marking in classifier languages: A case study of the so-called plural marking *-tul* in Korean. *Toronto Working Papers in Linguistics* 28:281–95.
- ROBERTS, MAXWELL J., DAVID J. WOOD, and DAVID J. GILMORE. 1994. Article: The sentence-picture verification task: Methodological and theoretical difficulties. *British Journal of Psychology* 85:413–32.
- SOHN, HO-MIN. 1999. *The Korean language*. Cambridge, UK: Cambridge University Press.
- SONG, JAE-JUNG. 1997. The so-called plural copy in Korean as a marker of distribution and focus. *Journal of Pragmatics* 27:203–24.
- SONG, SEOK-CHOONG. 1975. Rare plural marking and ubiquitous plural marker in Korean. *Proceedings of the Annual Meeting of the Chicago Linguistics society* 11:536–46.
- SUH, EUGENIA. 2008. The usage and interpretation of Korean *-tul* plural by heritage language speakers. In *Proceedings of the Second Language Research Forum*, ed. by Melissa Bowles, Rebecca Foote, Silvia Perpiñán, and Rakesh Bhatt, 239–51. Somerville, MA: Cascadilla Proceedings Project.
- UNTERBECK, BARBARA. 1996. The unorthodox category of number in Korean. Paper presented at the International Association for Korean Language Education Conference, Seoul, Korea.
- YIM, CHANGGUK. 2002. The morphology of event plurality in Korean. *Harvard Studies in Korean Linguistics* 9:669–82.

chaeun@hawaii.edu