

Korean *tul* and English *all*

Young-ran An
Stony Brook University

1 Introduction

The Korean plural marker *tul* appears in two distinct usages. It can occur as a typical plural morpheme, immediately following a (pro)noun (underlined in (1b, d) and below). Or it can be optionally attached to other categories including adverbial, verbal, or prepositional phrases (boldfaced in (2) and below). The former is called “intrinsic *tul*” and the latter “extrinsic *tul*.”

- (1) a. haksayng-i sensayngnim-kkey cilmwun-ul hanta.
student-NOM teacher-DAT question-ACC do
‘The student asks a question to the teacher.’
- b. haksayng-tul.i sensayngnim-kkey cilmwun-ul hanta.
student-TUL.NOM teacher-DAT question-ACC do
‘The students ask a question to the teacher.’
- c. haksayng-i chayk-ul sassta.
student-NOM book-ACC bought
‘The student bought a book.’
- d. haksayng-i chayk-tul.ul sassta.
student-NOM book-TUL.ACC bought
‘The student bought books.’
- (2) a. haksayng-**tul**.i sensayngnim-kkey cilmwun-ul.**tul**
student-TUL.NOM teacher-DAT question-ACC.TUL

hanta.^{1,2}
do
‘The students ask a question to the teacher.’

¹ Extrinsic *tul* is also known as “non-nominal *tul*,” as opposed to nominal *tul* which I call here intrinsic *tul*.

² It is generally claimed that each of the extrinsic *tuls* is optional on its own. However, a declarative marker is less likely to take extrinsic *tul* than the other categories. Moreover, the more extrinsic *tuls* we have, the less natural the sentences become because they sound too redundant.

- b. haksayng-tu.i chayk-ul.**tu**l sassta.
 student-TUL.NOM book-ACC.TUL bought
 ‘The students bought a book.’

As seen in examples (1)-(2), intrinsic *tu* pluralizes the element to which it attaches, whereas extrinsic *tu* does not. In the literature, it has been claimed that extrinsic *tu* has several properties: (i) it carries a distributive sense; (ii) it does not obey compositionality; and (iii) it must be c-commanded by a plural subject within the same clause. However, I argue in this paper that these claims and generalizations are neither sufficient nor necessary for explaining the actual behavior of extrinsic *tu*. In fact, they are both too broad and too narrow to the extent that they are misleading.

In what follows, I first examine diverse data containing extrinsic *tu* in order to define its precise distribution. Section 3 provides the proposal of the paper with regard to the semantic and syntactic account of extrinsic *tu*. The last section recapitulates the paper and discusses the theoretical implications.

2 Distribution of extrinsic *tu*

With regard to the three major characteristics of extrinsic *tu* presented in the previous section, I first examine the issue of distributivity. The following examples illustrate the distributive reading that extrinsic *tu* triggers for the given sentences:

- (3) a. twu-myeng.uy haksayng-tu.i peyipe-lul
 two-CL.GEN student-TUL.NOM paper-ACC

 ceychwulhayssta.
 submitted
 ‘Two students submitted a paper.’
- b. twu-myeng.uy haksayng-tu.i peyipe-lul.**tu**l
 two-CL.GEN student-TUL.NOM paper-ACC.TUL

 ceychwulhayssta.
 submitted
 ‘Two students submitted a paper (each).’

Sentences (3a-b) are identical except for the use of extrinsic *tu* in (3b). With this extrinsic marker, (3b) is said to mean that each of the two students respectively submitted a paper of his or her own, whereas (3a) is ambiguous between a collective and distributive reading. That is, it can either mean that the two students submitted one coauthored paper, or that each of the two students submitted his or her own paper.

On the other hand, although it does apparently contribute distributivity, the extrinsic marker is clearly non-compositional. It can combine with an expression of any type while not contributing to the meaning of the expression it attaches to.

- (4) haksayng-tul.i sensayngnim-kkey(.tul) yelsimhi(-tul)
 student-TUL.NOM teacher-DAT(.TUL) intently(-TUL)
- cilmwun-ul(.tul) kyosil-eyse(.tul) ha-ko(.tul) issta.
 question-ACC(.TUL) classroom-in(.TUL) do-PROG(.TUL) are
 ‘The students are asking a question to the teacher intently in class.’

The extrinsic marker can be optionally concatenated with a nominal, verbal, adverbial, or prepositional phrase.³ However, it does not add any new meaning to the phrase. For instance, it does not give rise to the pluralizing effect for the phrase it attaches to, which the intrinsic counterpart would do when it attaches to a nominal.

The last property claimed of the extrinsic marker is that it must be c-commanded by a plural subject in a local clause. This implies that the existence of extrinsic *tul* can only be structurally licensed by a local subject c-commander.

- (5) a. ku haksayng-tul.un kyosil-eyse(.tul) coyonghi(-tul) issessta.
 that student-TUL.TOP classroom-in(.TUL) quietly(-TUL) were
 ‘The students kept quiet in the classroom.’
- b. ku haksayng-un kyosil-eyse(*tul) coyonghi(-*tul) issessta.
 that student-TOP classroom-in(.TUL) quietly(-TUL) were
 ‘The student kept quiet in the classroom.’
- (6) wuli sensayngnim-un yenkwusil-ey(*tul) keysita.
 our teacher-TOP office-in(.TUL) is
 ‘Our teacher is in the office.’

The extrinsic marker is licensed under the structural subject being plural as in (5a) as opposed to (5b) in which the subject is not plural. Extrinsic *tul* is not licensed in (6) because it is not c-commanded by a plural subject. The determiner *wuli* is plural, but it does not c-command the extrinsic marker.

- (7) a. yecaay-tul.i [nay-ka pan-eyse(*tul) ceil(-*tul) calsayngkyessta-ko]
 girl-TUL.NOM I-NOM class-in(.TUL) most(-TUL) handsome-COMP
- malhanta.
 say
 ‘The girls say that I am the most handsome in the class.’
- b. na-nun [nehuy-tul.i chakhata-ko] enceyna(-*tul) mitkoissta.
 I-TOP you-TUL.NOM good-COMP always(-TUL) believe
 ‘I always believe that you (pl.) are good.’

³ As seen in the given examples, when the extrinsic marker is attached to a nominal, it, unlike the intrinsic counterpart, appears after the case maker.

Extrinsic *tul* can only be licensed when the local plural subject c-commands it as shown in (7). Since the extrinsic marker does not appear locally with a plural subject, the use of extrinsic *tul* is ruled out in (7a-b). Therefore, the structural licensing condition for the extrinsic marker can be that it should be c-commanded by a plural subject in a local domain.⁴

However, the above characteristics are superficial descriptions that do not substantiate the essential behavior of the extrinsic marker. Furthermore, when we look at additional data we see that these characteristics are not even sufficient to capture the empirical distribution of extrinsic *tul*. In what follows I redefine the characteristics of extrinsic *tul*, based on a wider range of examples.

As for the distributive sense of extrinsic *tul*, we also find some examples that have extrinsic *tul* which are compatible with a collective reading.

- (8) a. namcaay-tul.i phiano-lul.**tul** han sikan-tongan nallassta.
 boy-TUL.NOM piano-ACC.TUL one hour-for carried.around
 ‘The boys carried the piano around for an hour.’
- b. yecaay-tul.i tteysmok-ul.**tul** mantulessta.
 girl-TUL.NOM raft-ACC.TUL built
 ‘The girls built a raft.’
- c. haksayng-tul.i pokto-ey.**tul** moyessta.
 student-TUL.NOM hallway-in.TUL gathered.
 ‘The students gathered in the hallway.’

The sentences in (8) do not only have a distributive reading in which one boy or girl or more did a relevant act, but they also have a collective reading in which every boy or girl did the relevant act, together. For example, (8b) can mean that each of the girls built a raft on her own, or that all the girls participated in building a single raft.⁵ The same sentence without the extrinsic marker will also be ambiguous between distributive and collective readings. Therefore, it is not true that extrinsic marker *tul* carries a distributive sense and it yields a distributive reading for the sentence in which it occurs.

- (9) a. twu-myeng.uy haksayng-tul.i peyipe-lul
 two-CL.GEN student-TUL.NOM paper-ACC

 ceychwulhayssta.
 submitted
 ‘Two students submitted a paper.’

⁴ This condition reminds us of the Binding Principle A which defines anaphors as being c-commanded by a (local) co-referential NP. In fact, some argue that the extrinsic *tul* of Korean is anaphor-like. I will go over this view in section 4, along with other approaches.

⁵ Of course, we can also posit a lot more different scenarios in which a distributive reading is induced, and I just gave one possible situation where each of the girls taking part in building a raft for herself.

- b. *twu-myeng.uy* *haksayng-tul.i* *peyipe-lul.tul*
 two-CL.GEN student-TUL.NOM paper-ACC.TUL
- ceychwulhayssta.*
 submitted
 ‘Two students submitted a paper.’

The aforementioned (3), which was claimed to give rise to distributivity when a sentence has the extrinsic marker, is reconsidered in (9). As it turns out, both (9a) and (9b) are ambiguous between collective and distributive readings. That is, (9b) is also compatible with a collective reading, not only with a distributive reading. It can mean that the two students submitted one paper together, or that each of the two students submitted his or her paper, respectively. It is the distributive reading that becomes more salient for a sentence when it has extrinsic *tul*, but the use of extrinsic *tul* does not prevent the sentence from having a collective reading. On the collective reading, extrinsic *tul* emphasizes the fact that the two students put an equal amount of effort into writing a joint paper.

With respect to the licensing by a local plural subject, we encounter examples which do not have a local plural subject, but do allow the extrinsic marker.

- (10) a. *nay-ka haksayng-tul.ekey* *ton-lul.tul* *cwuessta.*
 I-NOM student-TUL.DAT money-ACC.TUL gave
 ‘I gave money to the students.’
- b. *nay-ka haksayng-tul.ul* *cip-ulo.tul* *ponayssta.*
 I-NOM student-TUL.ACC home-to.TUL sent
 ‘I sent the students home.’
- c. *Swumi-ka ai-tul.ul* *kenkanghakey-tul* *khiwessta.*
 Swumi-NOM child-TUL.ACC healthily-TUL raised
 ‘Swumi raised the children healthily.’

(10) exemplifies the case in which there is no plural subject but a plural object. We also find examples in which some other element is overtly or covertly plural.⁶

- (11) *salam-tul.un,* *Minswu-ka* *manhi-tul* *mannassta.*
 person-TUL.TOP Minswu-ka many-TUL met
 ‘As for people, Chelswu met many.’
- (12) a. *Opi-ka* (*seonswu-tul.i*) *sillyek.i.tul* *cohta.*
 OB-NOM (player-TUL.NOM) ability-NOM.TUL good
 ‘OB (baseball team) is good at playing baseball.’

⁶ See some similar examples in Im (2005) and Lee (1992).

- b. haksayng-tul.uy kenkang-(tul.)i mopsi-tul nappacyessta.
 student-TUL.of health-(TUL.)NOM severely-TUL worsened
 ‘The students’ health got worse severely.’

In (11) the topic phrase is plural and it licenses the extrinsic marker on *manhi* ‘many.’ On the other hand, the intrinsic plural marker in Korean can be omitted in general. In (12a) the sentential subject *Opi* ‘OB,’ which is the only possible c-commander for the nominal containing the extrinsic marker, does not have an overt plural marker, but it implies plurality via its group meaning. Since it is a name of a baseball team, we can infer that there are players on the team, and we talk about their abilities of playing baseball, not of the group as a single unit. Thus the subject, through this plural meaning, will be a licenser for the extrinsic marker on *sillyek* ‘ability.’ In (12b) it is not the single health of the whole group of the students that got worse, but it is the health of each individual student in the group which got worse. Therefore, this covert intrinsic *tul* licenses extrinsic *tul* by c-commanding it.

These examples allow us to reconsider the traditionally claimed properties of extrinsic *tul*, which are repeated in (13):

- (13) a. Extrinsic *tul* carries a distributive sense.
 b. Extrinsic *tul* does not obey compositionality.
 c. Extrinsic *tul* must be c-commanded by a clausemate plural subject.

Given the counterexamples in (8-12), these properties are neither sufficient nor necessary to explain the true behavior of extrinsic *tul*. In addition to the traditionally defined properties and observations of the extrinsic marker, what we have found so far from the investigation of the data can be summarized as follows:

- (14) a. The contribution made by extrinsic *tul* is not necessarily distributivity.
 b. It is not compositional.
 c. It must be c-commanded by a plural element within a local domain.
 d. It can occur more than once in a clause.

Some of these properties are semantic, and some are syntactic. They can be divided as follows:

- (15) Semantics of extrinsic *tul*
 a. No distributive meaning but something else
 b. Non-compositionality
- (16) Syntax of extrinsic *tul*
 a. C-command by a plural NP
 b. Locality
 c. Poliplurality⁷

⁷ The term is accredited to Richard Larson.

In the subsequent sections, I provide a more accurate semantic and syntactic account for the described properties of the extrinsic marker.

3 Proposed analysis

We have observed that extrinsic *tul* is compatible both with collectivity and distributivity, but it contributes some distributivity-like meaning to the sentence. In this section, before going on to investigate the semantics of the extrinsic marker, we attempt to capture the contribution made by extrinsic *tul*. First, let us consider the following examples:

- (17) a. yehaksayng-tul.i hoswu-ey ttwuyetulessta.
 girl student-TUL.NOM lake-in jumped
 ‘The girls jumped in the lake.’
- b. yehaksayng-tul.i hoswu-ey.**tul** ttwuyetulessta.
 girl student-TUL.NOM lake-in.TUL jumped
 ‘**All** the girls jumped in the lake.’

The comparison of (17a) and (17b) reveals that extrinsic marker *tul* generates an “exhaustive or maximizing effect.”⁸ That is to say, (17a) can be felicitously uttered when there are some girls remaining who did not jump in the lake. In contrast, (17b) cannot be felicitous when there are some girls who did not jump in the lake. For it to be appropriately uttered, all the girls who are relevant to the context of the sentence must participate in the jumping-in-the-lake event.

Therefore, we can conclude that the reading we seem to obtain with the extrinsic marker, which was traditionally disguised in distributivity, turns out to be an exhaustive or maximizing effect. This effect arising from the use of the extrinsic marker is correctly captured via the expression *all* in English, which makes it possible to draw an analogy between Korean *tul* and English *all*. In the following section, I go into further detail about how Korean *tul* and English *all* behave in the same fashion.

3.1 Semantics of *tul*

On the way to discussing the similarity between the Korean extrinsic marker and English *all*, I first examine the behavior of English *all*, based on Brisson (2003), according to which the so-called universal quantifier *all* in English has a maximizing effect, as shown in the following contrast:

- (18) a. The girls jumped in the lake.
 b. **All** the girls jumped in the lake.

⁸ The term “exhaustive (exhaustivity) effect” is due to Richard Larson, and the term “maximizing effect” is attributed to Brisson (2003).

Exceptions are allowed to (18a), but not to (18b). This phenomenon may be ascribed to the fact that *all* is a universal quantifier. However, *all* is still different from the other universal quantifiers like *every* and *each* in that *all* can combine with a collective predicate, whereas *every* or *each* cannot.

- (19) a. **All** the boys carried the piano around for an hour.
 b. **Every** boy carried the piano around for an hour.
 (20) a. **All** the students gathered in the hallway.
 b. ***Every** student gathered in the hallway.

Since *every* only renders a distributive reading it cannot occur in a sentence that has only a collective reading, such as (20b) with the collective predicate *gather*. By contrast, *all* is compatible both with a distributive and collective reading, and that is why it can occur in either of the contexts, distributive or collective, as seen in (19-20).

As we saw in the preceding section, the Korean extrinsic marker is like English *all* in that it contributes the maximizing effect and it is compatible with both collective and distributive readings. Additionally, we already saw that the extrinsic marker can optionally attach to many different categories. When the extrinsic marker attaches to diverse categories within a sentence, it does not trigger a different meaning for the sentence. That is to say, all other things being equal, it gives rise to the same meaning no matter what category it attaches to, as in the following:

- (21) a. yehaksayng-tul.i.**tul** hoswu-ey ttwuyetulessta.
 girl student-TUL.NOM.TUL lake-in jumped
 ‘**All** the girls jumped in the lake.’
 b. yehaksayng-tul.i hoswu-ey.**tul** ttwuyetulessta.
 girl student-TUL.NOM lake-in.TUL jumped
 ‘The girls jumped **all** in the lake.’
 c. yehaksayng-tul.i hoswu-ey ttwuyetulko-**tul**-issta.⁹
 girl student-TUL.NOM lake-in jumping-TUL-are
 ‘The girls are **all** jumping in the lake.’

As the corresponding Korean and English sentences demonstrate in (21), we can conclude that Korean *tul* and English *all* behave the same in terms of non-compositionality, as well.

We also observed that the Korean extrinsic marker can occur more than once within the same sentence, while not triggering any difference in meaning from the sentence with a single occurrence of extrinsic *tul*. Example (4) is repeated here, and the examples of the poliplurality of English *all* are furnished by a Google search (12/15/2006).¹⁰

⁹ As mentioned before, while *ttwuyetulessta-tul* ‘jumped-TUL’ is not completely ruled out, it is much more natural to attach the extrinsic marker to the progressive form of the verb. I will leave this issue for future research.

¹⁰ I am currently examining corpora based on newspapers and phone conversations, in the hope

Korean tul and English all

- (22) haksayng-tul.i sensayngnim-kkey(.**tul**) yelsimhi(-**tul**)
 student-TUL.NOM teacher-DAT(.TUL) intently(-TUL)
- cilmwun-ul(.**tul**) kyosil-eyse(.**tul**) ha-ko(.**tul**) issta.
 question-ACC(.TUL) classroom-in(.TUL) do-PROG(.TUL) are
 ‘The students are asking a question to the teacher intently in class.’
- (23) a. ...**all** the celebrities are **all** dead thin.
 b. **All** the important issues were **all** resolved.

The data of both Korean *tul* and English *all*, investigated thus far, illustrate that they have identical properties, i.e. (i) maximizing effect, which contributes exhaustivity to the interpretation of a given sentence, (ii) compatibility with a distributive and collective context, and (iii) poli plurality.

With this finding in mind, we proceed to define the function of the extrinsic marker. We will begin the discussion by revisiting the examples presented in the preceding section. Example (8) is repeated below as (24).

- (24) a. namcaay-tul.i phiano-lul.**tul** han sikan-tongan nallassta.
 boy-TUL.NOM piano-ACC.TUL one hour-for carried around
 ‘The boys carried the piano around for an hour.’
- b. yecaay-tul.i tteysmok-ul.**tul** mantulessta.
 girl-TUL.NOM raft-ACC.TUL built
 ‘The girls built a raft.’
- c. haksayng-tul.i pokto-ey.**tul** moyessta.
 student-TUL.NOM hallway-in.TUL gathered
 ‘The students gathered in the hallway.’

As was already discussed, (24a-b) are compatible with a distributive or collective interpretation. However, (24c) can only have a collective reading. Although (24a-c) all have predicates which are compatible with a collective reading, the predicate *moyessta* ‘gathered’ in (24c) has only a collective reading. The use of the extrinsic marker cannot add a distributive reading, let alone invert the interpretation of the sentence into a distributive reading.

In sum, when a predicate is ambiguous between collective and distributive, the interpretation of the sentence is ambiguous between collective and distributive. However, when a predicate is not ambiguous, but only collective, then the interpretation of the sentence results in only a collective reading. Meanwhile, if the extrinsic marker is used in either of these kinds of sentences, it gives rise to the maximizing/exhaustive effect for the given sentence. In order to capture this pragmatic function of the extrinsic marker, we now go back to the analysis of English *all* which was determined to have the same properties of

that I can find more attested examples of multiple occurrences of *all*.

Korean extrinsic *tul*.

According to Brisson (2003), the only effect *all* has on the semantics of a sentence is to force the value of *Cov* to be a good fit. In the wake of Schwarzschild (1996), Brisson posits a context-dependent domain selection variable called *Cov* which is named after a cover of the universe of discourse. Formally, “X covers Y iff X is a set of nonempty subsets of Y.” In order to grasp this concept, let us consider the familiar contrast of *The girls jumped in the lake* and *All the girls jumped in the lake* (given in (18)) and their interpretations in Brisson’s terms:

- (25) $\forall x[x \in [Cov_i] \ \& \ x \subseteq [the.girls'] \rightarrow x \in [jumped.in.the.lake']]$
 $U = \{a, b, c, s, t, \{a,b\}, \{a,c\}, \{a,s\}, \{a, t\}, \{a,s,t\} \dots\}$
 $[the.girls'] = \{a,b,c\}$
 $J = \{ \{a\}, \{c\}, \{b,s,t\} \}$
 $K = \{ \{a\}, \{b\}, \{c\}, \{s,t\} \}$

As was discussed before, the sentence with *all* has the maximizing effect while the sentence without it does not. That is, if we posit a given universe U, a given set of girls, and some possible values, J and K, for *Cov* as in (25), then the assignment of value J will make the statement without *all* true, but not the other one. On the other hand, the assignment of value K will make both the statements true. The variable that allows the sentence containing *all* to be true is called a good-fitting cover. In this regard, variable K will be a good-fitting cover, and variable J will be an ill-fitting cover, with regard to the interpretation of the *all*-sentence.

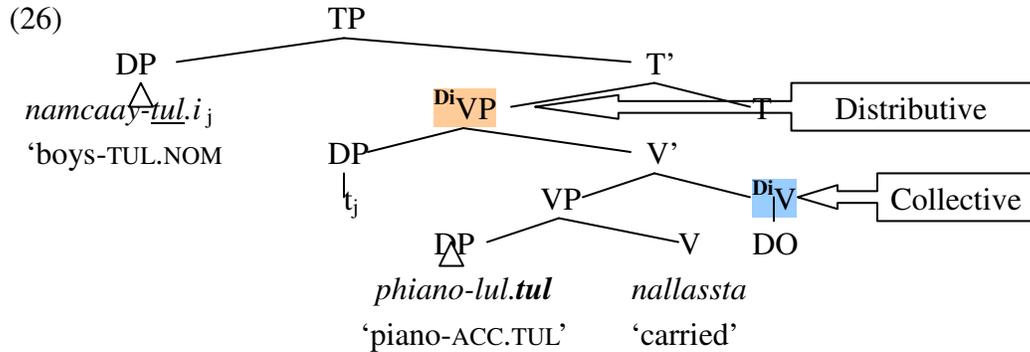
Hence, a sentence containing *all* needs a good-fitting cover which is contributed by *all* itself. Consequently, *all* has the “domain-adjusting meaning” that is not evaluated as part of the truth conditions but interacts with the context to limit the possible choices of *Cov*. As Brisson (2003: 142) puts it, “All has no ordinary translation, and a domain-adjusting meaning of $\lceil \lambda x^{gf}(Cov)(x) \rceil$.”¹¹ On the analogy of Korean *tul* and English *all* which has been argued for in this paper, the maximizing effect of the Korean extrinsic marker can also be captured through this translation rule. To conclude, extrinsic *tul* has a domain-adjusting meaning.

As for the distributivity in relation with *all*, Brisson proposes that *all* “interacts with the quantification introduced by the D operator¹² to rule out the nonmaximality that a D operator normally allows.” (2003: 141) In the same vein, since *all* is dependent on the D operator, *all* can be used wherever distributivity is allowed. Turning to Korean extrinsic *tul*, its identical behavior with English *all* makes it possible to suggest the same account for its semantics. That is to say, the

¹¹ Brisson stipulates that floated *all* is always construed with the subject DP, and marks a DP associated with *all* with superscript ^{gf} which stands for “good fit.” The symbol $\lceil \rceil$ was used by Brisson to orthographically mark that good fit is not evaluable as part of the truth conditions of the sentence, but interacts with the context to limit the possible choices of *Cov*.

¹² “D operator” is an implicit distributivity operator on the VP, which was posited to introduce universal quantification over the individual girls in the denotation of definite plural NP, *the girls* in the literature such as Link (1983) and Schwarzschild (1996), to name a few.

extrinsic marker rides on the D operator and its domain-adjusting meaning imposes the good fit requirement. Concerning the compatibility with the collective predicates, it is assumed that the so-called collective reading contains a hidden distributivity. A la Brisson, there are two possible insertion sites for the D operator, which are DO or a VP dominating DO.¹³ When a D operator is inserted on DO, the sentence yields a collective reading whereas when it is inserted on VP dominating DO, the sentence comes to have a distributive reading.



The sentence is rendered as that there is an event of carrying the piano, which has a complex DO subpart. This DO subpart is a plural event consisting of a separate DOing event for each one of the boys. What is intuitively correct about this interpretation is that it is asserted that there is a separate event of DOing for each individual boy even in the collective reading. On the other hand, the distributive reading is captured by putting the D operator on the VP, not on DO, as in (26). This sentence asserts that there is a separate carrying-the-piano event for each one of the boys, and it is exactly the distributive sense of the sentence.

Consequently, extrinsic *tul* is compatible with both collective and distributive readings, and all it contributes to the sentence is the maximizing/exhaustive effect. Now that we have characterized the semantics of extrinsic *tul*, we need to account for the syntactic licensing condition on the extrinsic marker.

3.2 Syntax of *tul*

In the previous section, it was observed that the extrinsic marker must be c-commanded by a plural element. To account for this syntactic fact, I adapt the framework proposed by Pesetsky and Torrego (2004, 2006, P&T henceforth). P&T introduce “Agree” based on “feature sharing,” which is defined as in the following:

¹³ In Brisson, the DO component is introduced as a kind of aspectual head, and it is licensed by the lexical head of the verb, collective verbs of activities and accomplishments, in particular.

- (27) Agree: Feature sharing version (P&T 2004: 4)
- (i) An unvalued feature F (a probe) on a head H at syntactic location α (F_α) scans its c-command domain for another instance of F (a goal) at location β (F_β) with which to agree.
 - (ii) Replace F_α with F_β , so that the same feature is present in both locations.
- (28) ... F_α [] ... F_β [] ... \Rightarrow ... F_α [3] ... F_β [3] ...

Distinct features that might undergo Agree are called “occurrences” of F , and they turn into “instances” of F under Agree, as in (28). While maintaining the feature sharing version of Agree, P&T suggest that the Valuation/Interpretability Biconditional (Chomsky 2000, 2001) should be abandoned, and there should be four types of features as follows:

- (29) Types of features (boldface = disallowed in Chomsky 2000, 2001)
- | | |
|--|---|
| uF <i>val</i> uninterpretable, valued | <i>iF</i> <i>val</i> interpretable, valued |
| uF [] uninterpretable, unvalued | iF [] interpretable, unvalued |

Equipped with this revised syntactic concept of Agree and types of features, we take the case of the extrinsic marker into consideration. The principal line of my argument is that a c-commanding intrinsic plural marker with iF []¹⁴ comes into an Agree relation with an extrinsic marker with $uF+gf$ ¹⁵ in which iF [] serves as a probe and $uF+gf$ as a goal. The mechanism can be summarized as in the following:

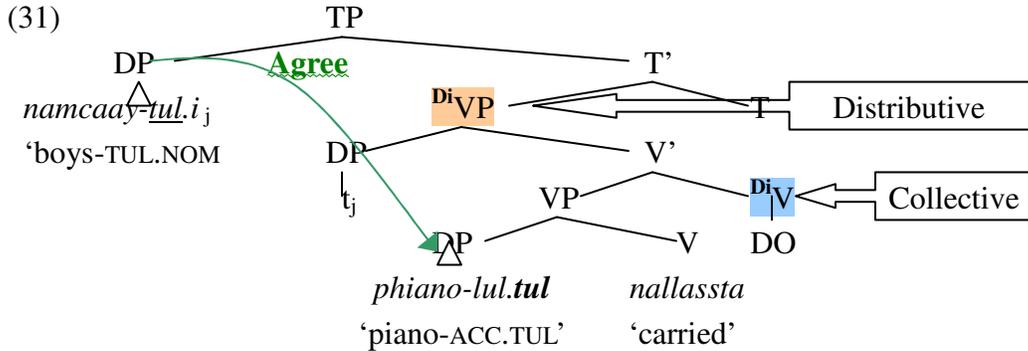
- (30) The relationship between intrinsic *tul* and extrinsic *tul*
- | | | | | | | | | | |
|-----|------------|-----|-----------|-----|---------------|------------|--------|---------------|--------|
| ... | Inttul | ... | Exttul | ... | \Rightarrow | ... | Inttul | ... | Exttul |
| | $iMax$ [] | | $uMax+gf$ | | | $iMax$ [3] | | $uMax+gf$ [3] | |

I assume that intrinsic *tul* is interpretable on a nominal element, but it is not valued when it comes to maximality/exhaustivity. On the other hand, the feature of maximality/exhaustivity is not interpretable on the extrinsic marker, but it is provided by this element in terms of the good-fit requirement. Therefore, this feature is valued on the extrinsic marker, albeit being uninterpretable *in situ*. When these two occurrences, $iMax$ and $uMax$, come into Agree, they come to share an identical feature value which is indicated with a number in the P&T framework, as in (30).

¹⁴ In accordance with the general notational convention, I use *i* for an interpretable feature and *u* for an uninterpretable feature. A la P&T, I use [] for a non-valued feature, and either *val* or the actual value for a valued feature.

¹⁵ Due to the semantic requirement for the interpretation of an element containing the extrinsic marker, I posit a feature value +gf which stands for “good fit,” which in turn imposes an exhaustive or maximal reading for the phrase that contains an extrinsically marked element.

The relationship, Agree between the intrinsic marker and extrinsic marker can be diagrammed as in the following:

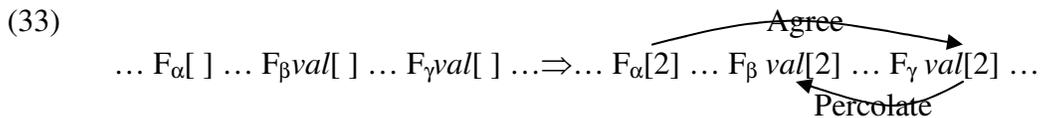


The two tree diagrams illustrate that the extrinsic marker is compatible with a collective and distributive reading, while giving rise to the maximizing/exhaustivity effect to the sentence.

One of the interesting syntactic facts about Korean *tul* and English *all* was that both of them can show up more than once within a sentence. Although a single occurrence of these elements is equivalent to their multiple occurrences in terms of semantics, we need to explain why the multiple occurrences are possible in the syntax.

- (32) *haksayng-tul.i kyosil-eyse.tul coyonghi-tul kongpwuhayssta.*
 student-TUL.NOM classroom-in.TUL quietly-TUL studied
 'The students studied quietly in the classroom.'

How can we account for this poliplurality of the extrinsic marker? Recall that I assumed that the extrinsic marker has an uninterpretable valued feature. Meanwhile, the unvalued interpretable feature of an intrinsic marker will probe the same kind of feature which has some value in its c-command domain. Then it will come into an Agree relation with the feature value (*uMax+gf*) of the lowest occurrence of the extrinsic marker. The intermediate occurrences of the same feature will automatically come into an Agree relation with the probe, via percolation, sharing the same feature value. Therefore, the Agree relationship can be schematized as in the following on analogy with P&T's (2004) feature sharing process, which could be iterative:



- (34) a. ... $F_\alpha[]$... $F_\beta[]$... \Rightarrow ... $F_\alpha[3]$... $F_\beta[3]$... (P&T 2004)
 b. ... $F_\alpha[3]$... $F_\beta[3]$... $F_\gamma val[]$... \Rightarrow ... $F_\alpha[3]$... $F_\beta[3]$... $F_\gamma val[3]$...

As in (33), all the features share an identical value, which will prevent any redundancy in meaning. Only the intrinsic plural marker is interpreted after spell-out, since the uninterpretable features on the extrinsic marker(s) delete at the interface with the semantics. Thus the maximizing/exhaustivity effect contributed by extrinsic *tul* will be construed over the nominal with the intrinsic marker, as is indeed the case in the data.

4 Conclusions

Over the past more than thirty years, many attempts have been made to tackle the recalcitrant problems posed by extrinsic *tul* in Korean. However, no one has so far suggested a satisfactory account for the behavior of extrinsic *tul*. Previous analyses of extrinsic *tul* can be divided into three general approaches, each of which suffers from a critical defect. The treatment of extrinsic *tul* as a distributive marker cannot capture the fact that the extrinsic marker is, in fact, compatible with a collective reading. The approach which regards extrinsic *tul* as a subject agreement marker fails to account for ample cases in which extrinsic *tul* is licensed by a non-subject element. Viewing extrinsic *tul* and an anaphor *caki* in Korean as identical commits a fatal error in many aspects, especially in that it does not take into account the fact that those two elements are truly and completely disparate in morphology, syntax, and semantics.

The analysis proposed in this paper captures the semantic and syntactic properties of *tul* in a more insightful, comprehensive, and explanatory fashion. In terms of semantics, the extrinsic marker produces the maximizing/ exhaustivity effect, which does not necessarily involve a distributive interpretation. It is non-compositional in the sense that it does not abide by the type theoretic means of composition. These semantic properties are captured in the parallel analysis of Korean *tul* and English *all*. That is, both Korean *tul* and English *all* render a domain-adjusting meaning to the sentence in which they occur. From the perspective of syntax, the extrinsic marker must meet the requirement of being c-commanded by a plural NP within a local domain. It can also show up in more than one position of a sentence, while not adding any further meaning to the case of its single occurrence. The former property was successfully accounted for using the feature sharing version of Agree of Pesetsky & Torrego (2004), and the latter was represented by the familiar mechanism of feature percolation.

Selected references

- Brisson, Christine. 2003. Plurals, *All*, and the Nonuniformity of Collective Predication. *Linguistics and Philosophy* 26: 129-184.
- Chomsky, Noam. 2000. Minimalist Inquiries. In *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*. Roger Martin, David Michaels and Juan Uriagereka (eds.) 89-156. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 2001. Derivation by Phase. In *Ken Hale: A Life in Language*. Michael Kenstowicz (ed.) Cambridge, Mass.: MIT Press.
- Chung, Daeho. 2003. Dummy *-Tul* in Gapping Construction. *Proceedings of the*

- Korean Generative Grammar Circle, Spring 2003*. pp. 75-83.
- Dowty, David. 1987. Collective Predicates, Distributive Predicates, and *All*. In F. Marshall (ed.). *Proceedings of the 3rd ESCOL*, Ohio State University, Ohio. pp. 97-115.
- Im, Hong-Bin. 1979. The Characteristics of Plurals and Pluralization. *The Collection of Treatises on Korean Linguistics [Hankwukhak Nonchong] 2*: 179-218. The Laboratory of Korean Linguistics at Kookmin University [Kookmin Tayhakkyo Hankwukhak Yenkwuso]. Reappeared in H. B. Im. 1998. *The In-depth Study of Korean Grammar [Kwuke Mwonpepyu Simchung] 2*: 515-548. Seoul: Taehaksa.
- Im, Hong-Bin. 2005. Pokswu Phyoci 'Tul'-kwa Sakenseng [The Plural Marker – *Tul* and Eventuality]. In *Reflection on the Korean Language [Wulimaleye Tayhan Sengchal]*. Seoul: Taehaksa. pp. 173-220.
- Kang, Beom-mo. 1994. Plurality and Other Semantic Aspects of Common Nouns in Korean. *Journal of East Asian Linguistics* 3-1: 1-24.
- Kim, Chonghyuck. 2004. On the Syntax and Semantics of Korean Non-nominal Plural marker *Tul*. Ms. The University of Delaware.
- Kim, Chonghyuck. 2005. *The Korean Plural Marker Tul and its Implications*. PhD. Dissertation. The University of Delaware.
- Kim, Yookyung. 1994. A Non-Spurious Account of 'Spurious' Korean Plurals. In *Theoretical Issues in Korean Linguistics*. Young-Key Kim-Renaud (ed.). pp. 303-323.
- Kwak, Eun-Joo. 2003. Interpretations of Plural Noun Phrases in Korean. *Journal of the Linguistic Society of Korea [Eoneohag] 35*: 3-38.
- Larson, Richard and Gabriel Segal. 1995. *Knowledge of Meaning: An Introduction to Semantic Theory*. Cambridge: MIT Press.
- Lee, Han-Gyu. 1991. Plural marker copying in Korean. In S. Kuno *et al.*, (eds.), *Harvard Studies in Korean Linguistics*, Vol. 4, 513-528, Seoul: Hanshin.
- Lee, Han-Gyu. 1992. *The Pragmatics and Syntax of Pragmatic Morphemes in Korean*. Seoul: Hanshin Publishing Co.
- Lee, Nam-Soon. 1982. "Singulars and Plurals" In *The Study of Korean Linguistics [Kukehak] 11*: 117-141. The Linguistic Society of Korean Linguistics [Kukehakhoi].
- Link, Godehard. 1983. The Logical Analysis of Plurals and Mass Terms: A Lattice-Theoretical Approach,' In Bauerle *et al.* (eds.), *Meaning, Use, and Interpretation of Language*, DeGruyter, Berlin.
- Miyagawa, Shigeru. 2005. Locality in Syntax and Floated Numeral Quantifiers in Japanese and Korean. To appear in *Proceedings of the 14th Japanese/Korean Linguistics Conference, CSLI*.
- Moon, Seung Chul. 1995. Plural Marker *Tul* is Subject to Principle A. *Harvard Studies in Korean Linguistics*, Vol 6, 355-369.
- Park, So-Young. 2006. The So-called Plural Marking *-Tul* and Distributivity. *Harvard Studies in Korean Linguistics* XI: 697-710.
- Pesetsky, David and Esther Torrego. 2004. The Syntax of Valuation and the Interpretability of Features. To appear in *Clever and Right: a Festschrift for Joe Emonds*. S. Karimi, V. Samiiian and W. Wilkins (eds.).
- Pesetsky, David and Esther Torrego. 2006. Probes, Goals and Syntactic Categories. To appear in *Proceedings of the Seventh annual Tokyo*

Young-ran An

- Conference on Psycholinguistics*. Y. Otsu (ed.).
- Roberts, Craige. 1987. *Modal Subordination, Anaphora, and Distributivity*. PhD. Dissertation, The University of Massachusetts, Amherst.
- Schwarzschild, Roger. 1996. *Pluralities*. Dordrecht: Kluwer.
- Song, Jae Jung. 1997. The So-called Plural Copy in Korean as a Marker of Distribution and Focus. *Journal of Pragmatics* 27: 203-224.
- Song, Seok Choong. 1975. Rare Plural Marking and Ubiquitous Plural Marker in Korean. *The Study of Linguistics [Ehak Yenkwu]* 11-1: 77-86. Seoul National University.
- Song, Seok Choong. 1993. *New Light on the Korean Grammar: Syntactic Structure and Semantic Interpretation [Hankwuke Mwonpepuy Say Comyeng]*. Seoul: Jisik Industry.
- Yim, Changguk. 2002. The Morphology of Event Plurality in Korean. In *Harvard Studies in Korean Linguistics IX*: 669-682.
- Yoon, James Hye Suk and Wooseung Lee. 2005. Conjunction Reduction and its Consequences for Noun Phrase Morphosyntax in Korean. Casadilla Proceedings Project.

Stony Brook University
Department of Linguistics
S-201 Social & Behavioral Sciences Bldg.
Stony Brook, NY 11794-4376

yoan@ic.sunysb.edu