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## Local and Flexible Distributivity and the Korean Non-nominal Plural Marker *tul*

# Local and Flexible Distributivity and the Korean Non-nominal Plural Marker *Tul*

Chonghyuck Kim\*

## 1 Two Types of *tul*: Nominal tul vs. Non-nominal *tul*

Every language is equipped with some means of marking plurality. Presumably, morphological plural markers such as English *s* are the most well known examples of “marking plurality”. Although no two plural markers have exactly the same functions, they seem to have more or less the same functions. For instance, they are known to combine with nominal categories, not with other categories, and pluralize the nominal categories that they attach to. Like many other languages, Korean is also equipped with the plural marker *tul*. However, the Korean plural marker *tul* has a peculiar usage, as well as the usual usage as a plural marker, that sets it apart from all other plural markers. This paper examines this particular use of *tul* that exhibits exotic properties. My aim is to articulate core properties of *tul* that present non-trivial challenges to a theory of plurality and provide a solution to these challenges. Since what I have to say in this paper is not related to all cases of *tul* but to some particular cases of *tul*, I will distinguish two uses of *tul* and justify the distinction from the outset.

As a plural marker, *tul* attaches to a nominal predicate or a pronoun to pluralize it, as shown in (1).

- (1) Ny-tul-i            ku haksayng-tul-ul    ttayly-ess-ny?<sup>1</sup>  
You-Pl-Nom    that student-Pl-Acc    hit-Pst-Q?  
'Did you guys hit those students?'

When *tul* attaches to the pronoun *ny* and the object *ku haksaying* in (1), their singular readings disappear. This is a typical use of plural markers commonly observed in many languages.

Surprisingly, however, *tul* can also optionally appear outside a nominal phrase, as illustrated in (2).

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\*I would like to thank Satoshi Tomioka, Benjamin Bruening, and Christine Brisson for their insightful comments and criticisms.

<sup>1</sup>Abbreviations used: Acc=Accusative, Cl=Classifier, Comp=Complementizer, Cop=Copular, Dat=Dative, Dc=Declarative, Gen=Genitive, Hon=Honorific Marker, Loc=Locative, Nom=Nominative, Pl=Plural Marker, Poss=Possessive, Q=Question Marker, Pres=Present, Pst=Past, Top=Topic Marker.

- (2) a. Ku haksayng-tul-i Chelswu-(lul)-(tu)l manna-ss-ta.<sup>2,3</sup>  
 That student-Pl-Nom Chelswu-(Acc)-Tul meet-Pst-Dc  
 ‘Those students met Chelswu.’
- b. Ku haksayng-tul-i i ay-tul-eykey-(tu)l phyency-lul ponayessta.  
 That student-Pl-Nom this child-Pl-Dat-(Tul) letter-Acc sent  
 ‘Those students sent a letter/letters to these children.’

Note the position of the boldfaced *tu*l’s in (2) with respect to case markers and compare it to that of the underlined *tu*l’s. The boldfaced *tu*l’s follow case markers such as *lul* and *eykey*, while the underlined *tu*l’s precede them. It is unlikely that the boldfaced *tu*l is simply a positional variant of the underlined *tu*l, i.e., a plural marker displaced from its normal position inside a nominal phrase to its surface position. The double plural marking on the indirect object of (2b) shows that the boldfaced *tu*l has its own identity and deserves a separate treatment. Also, if we switch around the accusative marker *lul* and *tu*l in (2a), as shown in (3), the sentence becomes distinctively odd, unless *those students* met many people with the same name *Chelswu*.

- (3) Ku haksayng-tul-i Chelswu-tul-ul manna-ss-ta.<sup>4</sup>  
 That student-Pl-Nom Chelswu-Pl-Acc meet-Pst-Dc  
 ‘Those students met Chelswus.’

As the translation shows, the meaning of (3) is no longer the same as that of (2a). In this case, *tu*l is used as a normal plural marker. Note that ***tu*l** in (2), in contrast, does not pluralize what it attaches to.

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<sup>2</sup>In order to make them easy to identify, I underline nominal tul and boldface non-nominal **tu**l, which appears outside a nominal domain.

<sup>3</sup>When *tu*l follows the accusative marker *lul*, speakers prefer to drop the accusative marker for some reason that I do not understand. When the case marker is dropped, *tu*l on an NP becomes ambiguous between the two uses of *tu*l, which is disambiguated by context.

<sup>4</sup>Song (1997) reports that *tu*l preceding *lul* can also be interpreted as a non-nominal *tu*l. However, there are many cases where Song’s report does not hold. (3) is one of them. It is true, though, that there *are* cases where Song’s report apparently holds. The question then becomes how it is possible for *tu*l preceding a case marker to have a non-nominal interpretation in these cases. Although this is an important issue to explore, I cannot discuss it for space reasons. Let me just point out that what Song reports in the relevant cases can be derived by the assumption that *tu*l preceding case markers is always a normal plural marker and the alleged non-nominal reading can be derived by [collective NP]-[collective NP] interpretation. This assumption accounts for the oddness of (3).

(2) only partially shows the ability of *tul* to appear outside a nominal domain. In fact, *tul* can even appear on what we usually consider to be non-pluralizable categories such as PP, Adv(P), VP, and CP, as illustrated in (4).

- (4) Ku haksayng-*tul*-un tosekwan-eyse-(***tul***) yelshimhy-(***tul***)  
 that student-Pl-Top library-Loc-Tul laboriously-Tul  
 kongpwu-hay-ss-ta(?***tul***).  
 study-do-Pst-Dc-Tul  
 ‘Those students studied hard at the library.’

It is not immediately clear whether *tul* appears on a phrasal category, as I just mentioned, or on a head level category in (4). However, the position of *tul* relative to the case markers in (2) suggests that *tul* attaches to phrase level categories. Based on the differences noted above and following standard assumptions in the Korean literature (Kim 1994, Park and Sohn 1993, Song 1997, and others), I will treat the two cases of *tul* separately and call the underlined *tul* nominal *tul* and the boldfaced ***tul*** non-nominal *tul*. Further differences between the two will be presented as we discuss the properties of non-nominal *tul* below.

Given the distinction between nominal *tul* and non-nominal *tul*, I articulate core properties of non-nominal *tul* in the next section that presents non-trivial challenges to a standard theory of plurality/distributivity. In section 3, a semantic and syntactic proposal is made for *tul*, and the challenges introduced in section 2 are explained. I argue that the exotic properties of non-nominal *tul* follow from the proposal that *tul* is not a standard D-operator, but a distributive presuppositional element with a built-in anaphor, and therefore does not pose a threat to the standard theory of distributivity. Section 4 concludes the paper.

## 2 Challenges

Non-nominal *tul* presents various challenges to a theory of plurality. Among these, the following are the core facts that need to be explained.

### 2.1 Distributivity Puzzle (Local and Flexible Distributivity):

Those who have investigated or even mentioned the semantic aspects of non-nominal *tul* (see Kim 1994, Lee 1991, Moon 1995, Park and Sohn 1993, Song 1997) all agree that *tul* is an overt distributive marker or something that is licensed by a distributive operator. Let us consider the sentences in (5), which are taken from Moon (1995).

- (5) a. Yel-myeng-uy ay-tul-i nwunsalam-ul-**tul** mantul-ess-ta.  
 Ten-Cl-Poss child-Pl-Nom snowman-Acc-Tul make-Pst-Dc  
 ‘Ten children made a snowman each.’ (necessarily, ten snowmen)
- b. Yel-myeng-uy ay-tul-i nwunsalam-ul mantul-ess-ta.  
 Ten-Cl-Poss child-Pl-Nom snowman-Acc make-Pst-Dc  
 ‘Ten children made a snowman.’ (possibly, ten snowmen.)

Note that the two sentences are exactly the same except *tul* on the object. Moon reports that non-nominal *tul* triggers a distributive interpretation in (5a) and, as a result, *ten children* must have made *ten snowmen* in total, as indicated in the translation. In contrast, *ten children* in sentence (5b) could have made *from one to up to ten snowmen* in total. Moon’s judgment that (5a) has the distributive reading is correct, but I find the claim that the distributive reading is the only reading of (5a) too strong. Indeed, I can get a collective reading in (5a), contrary to Moon’s claim. For the moment, let us ignore my judgment and accept Moon’s judgment, at least until we see an example to support my judgment, as there are apparently many people who agree with Moon. Kim (1994) in fact provides a formal denotation for *tul* in (6) to capture the distributive sense associated with *tul*.

- (6)  ${}^D\text{VP} = \lambda x \forall y [\text{atomic-i-part-of}(y, x) \rightarrow \text{VP}(y)] \quad (\text{tul} = {}^D)$

The denotation in (6) is the standard denotation for a D-operator. *Tul* takes a VP and distributes it over the individual parts of a plural subject. If we apply (6) to the VP predicate of (5a) (neglecting the compositional process), we get the denotation in (7a), which can be paraphrased as (7b).

- (7) a.  $\forall y [\text{atomic-i-part-of}(y, \text{ten children}) \rightarrow \text{made a snowman}(y)]$   
 b. Ten children made a snowman each.

The distributive denotation given for *tul* in (6) successfully captures the distributive reading reported in (5a). Since the application of the D-operator is optional in (5b), we get either a collective (one snowman for the ten children) or a distributive reading (one snowman per child).<sup>5</sup>

As Song (1997) points out, however, the denotation in (6) does not quite accurately capture the distributive sense associated with *tul*. Song observes

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<sup>5</sup>I ignore the subgroup readings such as ‘ten children made five snowmen’, since the derivation of these readings are not at the heart of the discussion. There are many ways to capture these readings, though. For instance, Schwarzschild’s (1996) theory of distributivity with *cover* is well suited for the purpose.

that native speakers find a subtle difference between the following sentences, which are based on Song's (1997) sentences.

- (8) a. ay-tul-i           mwul yak-(ul)(-**tu**l)           cal   masy-ess-ta.  
       child-Pl-Nom    water medicine-Acc(-Tul)   well   drink-Pst-Dc  
       'The children drank liquid medicine well.'
- b. ay-tul-i           mwul yak-ul           cal(-**tu**l)   masy-ess-ta.  
       child-Pl-Nom    water medicine-Acc   well(-PL)   drink-Pst-Dc  
       'The children drank liquid medicine well.'

The two sentences are exactly the same except for the placement of *tu*l; *tu*l is on the object in (8a), but on the adverb in (8b). This difference corresponds to a subtle meaning difference between the two sentences. Consider Song's comment below on their meaning difference.

The position of EPM [Extrinsic Plural Marker = non-nominal *tu*l] dictates exactly what is to be distributed individually over the plural subject nominal. So, the distribuand [what is distributed over the individual parts of a plural argument] is none other than what was drunk in [(8a)], whereas in [(8b)] it is the manner of the action specified.

(Song 1997:218)

Put differently, the position of *tu*l indicates what is distributed over the individual parts of a plural argument. Then, what *tu*l distributes over the individual parts of the subject is not a whole VP (*global distribution*), but the phrase it combines with (*local distribution*). In the denotation of (6), where the whole predicate is globally distributed over the parts of a plural subject, this subtle meaning difference is lost.

In fact, the global distributivity in (6) wrongly excludes a collective reading from a predicate ambiguous between collective and distributive interpretation. Let us reconsider (5a). It is certainly true that the distributive reading is strong in (5a). Contrary to Moon and Kim's claim, however, it is possible to get the collective reading (one snowman for the ten children), as I mentioned earlier. Given the denotation of *tu*l in (6), they would predict (5a) to be incompatible with *together* in line with English (9).

- (9) #Each of the ten children *together* made a snowman.

(5a), however, turns out to be compatible with *hamkkey* 'together', as shown in (10a), while the Korean equivalent of (9) is bad as expected, as shown in (10b).

- (10) a. Yelmyeng-uy ay-tu-i *hamkkey* nwunsalam-ul-**tu**l mantulessta.  
 Ten-Poss child-Pl-Nom together snowman-Acc-Tul made  
 ‘The ten children made a snowman together.’  
 b. #Yelmyeng-uy ay-tu-i *kakkak hamkkey* nwunsalam-ul mantulessta.  
 Ten-Poss child-Pl-Nom each together snowman-Acc made  
 ‘#Each of the ten children made a snowman together.’

In fact, the global distribution in (6) consistently fails to cover a certain class of sentences containing plurality seeking predicates (commonly known as collective predicates). Consider sentence (11) with the verb *meet*.

- (11) Chelswu-wa Younghee-nun ecey tosekwan-eyse-**tu**l manna-ss-ta.  
 Chelswu-and Younghee-Top yesterday library-Loc-Tul meet-Pst-Dc  
 ‘Chelswu and Younghee met in the library yesterday.’

The verb *meet* inherently requires a plural subject, as shown in (12).

- (12) #Chelswu-ka tosekwan-eyse manna-ss-ta.  
 Chelswu-Nom library-Loc meet-Pst-Dc  
 ‘#Chelswu met in the library.’

However, the global distributive denotation in (6) oddly requires (11) to be equivalent to the ungrammatical sentence in (13).

- (13) #Chelswu-nun ecey tosekwan-eyse mann-ass-ko  
 Chelswu-Top yesterday library-Loc meet-Pst-and  
 Younhee-to ecey tosekwan-eyse mann-ass-ta.  
 Y.-even yesterday library-Loc meet-Pst-Dc  
 ‘#Chelswu met in the library yesterday and Younghee met in the li-  
 brary yesterday.’

One might claim that the compatibility of *tu*l with a collective predicate such as *meet* does not show that *tu*l is not a standard D-operator, especially given the fact that a collective predicate such as *meet* is compatible with the quantifier *every*, as shown in (14).

- (14) Everybody meet in the library.

In a recent paper, Brisson (2003) convincingly shows that a collective predicate such as *meet* has a subcomponent as part of its meaning which is compatible with the standard D-operator. According to this proposal, (14) is grammatical since the collective verb *meet* has a meaning component that a



standard D-operator such as the one in (6) can take and distribute over the individual parts of the subject. One may want to account for the Korean collective sentences in (11) in a similar fashion without giving up the idea that *tul* is a standard D-operator. However, the distributive sense associated with *tul* is much more liberal. Collective achievement predicates such as ‘elect’ and stative collective predicates such as ‘be a big group’ are arguably known to lack a meaning component that the standard D-operator can take and distribute over the individual parts of a subject, as shown in (15b) and (16b). But even in these cases, Korean *tul* is possible as shown in (15a) and (16a).

- (15) a. Wury-pan haksayng-tul-i Chelswu-lul pancang-ulo-**tul** ppopassta.  
Our-room student-Pl-Nom Chelswu-Acc president-as-Tul elected  
‘The students in my room elected Chelswu as president.’  
b. #Everybody in my room elected John as president.
- (16) a. Ku haksayng-tul-un ecey-kkaci-**tul** kun gwurwup-i-ess-ta  
That student-PL-Top yesterday-until-TUL big group-cop-pst-dc  
‘Those students were a big group/team until yesterday.’  
b. #Everybody was a big group until yesterday.

In other words, even in the contexts where a D-operator is predicted to be unavailable, as in (15) and (16), *tul* is possible and we get a distributive sense. Furthermore, an extension of Brisson’s analysis would have a difficulty in capturing the local distributive sense associated with *tul*. The salient meaning I get in (15a) is that each student participated in electing *Chelswu* as president. (16a) means that each of the students is part of a big-group-state that existed until yesterday. These distributive senses contributed by *tul* are hard to capture with the standard D-operator. The standard D-operator takes a predicative part of the assertion (a VP or its sub-part) and distributes it over the individual parts of a subject. However, the distributive sense associated with *tul* is extremely flexible. In sentences with real collective predicates, it does not even seem to take the predicative part of the assertive content of the sentences. In fact, in cases like (15) and (16), if *tul* had taken the predicative parts of the assertive contents of the sentences to distribute over the subjects, they would have resulted in ungrammatical sentences. In these cases, the distributive predication cannot come from the assertive contents of the sentences but something else.

To sum up, the denotation previously proposed for *tul* in (6) has a problem. It fails to capture the local distributive sense of *tul* that Song (1997) observes and incorrectly precludes the compatibility of *tul* with collective predicates.

## 2.2 Compositionality: Non-Adjacency, Ubiquity, Optionality, and Type

Another challenge *tul* poses is the fact that *tul* need not be adjacent to its plural antecedent. Let us consider (17) for example.

- (17) Ay-tul-i                      mwul yak-ul                      cal(-**tul**)                      masy-ess-ta.  
 Child-Pl-Nom    water medicine-Acc    well(-PL)    drink-Pst-Dc  
 ‘The children drank liquid medicine well.’

The subject *the children* is not adjacent to the adverb *well* that *tul* attaches to. We nonetheless need to find a way to connect the two elements if the notion of local distributivity is to be captured. This non-adjacency between *tul* and its antecedent poses a challenge to compositional semantics.

Furthermore, as shown in (18), *tul* can combine with phrases of different semantic types. What is more, it can *optionally* appear *more than once* in a single sentence.

- (18) Ku haksayng-tul-un    ecey(-**tul**)                      Chelswu-lul(-**tul**)                      manna-ss-ta.  
 That student-Pl-Top    yesterday-Tul    Chelswu-Acc-Tul    meet-Pst-Dc  
 ‘Those students met Chelswu yesterday.’

This optional, ubiquitous, and type-flexible nature of *tul* poses another challenge to compositional semantics.

## 2.3 C-Commanding Plural Antecedent and Local Dependency

The final core characteristic of *tul* we need to account for is the fact that it requires a plural c-commanding antecedent, as shown in (19).

- (19) a. Chelswu-ka-(**\*?tul**)                      ku ay-tul-ul                      manna-ss-ta.  
 Chelswu-Nom-Tul                      that child-Pl-Acc                      meet-Pst-Dc  
 ‘Chelswu met those children.’  
 b. Wury tamimsensayngnim-kkeyse                      cip-ey-(**\*?tul**)                      ka-si-ess-ta.  
 Our teacher-Nom(Hon)                      home-to-Tul                      go-Hon-Pst-Dc  
 ‘Our teacher went home.’

*Tul* in (19a) is bad since the potential plural antecedent, the object, does not c-command *tul*. (19b) shows that neither the singular subject NP nor the possessor *wury* can antecede *tul*. This means that a dependency must be formed between *tul* and its plural antecedent.

The dependency between *tul* and its antecedent is subject to a further constraint. That is, it must be local. A plural NP and *tul* must be clausemates, as shown in (20).

- (20) a. \*Ku ay-tul-un [nay-ka ceil-**tul** hyenmyenghata-ko] malhayssta.  
 That child-PI-Top I-Nom most-Tul wise-Comp said  
 ‘The children said that I am the wisest student.’  
 b. \*?Na-nun [ku haksayng-tul-i yepputa-ko] ecey-**tul** malhayssta.  
 I-Top that student-PI-Nom pretty-Comp yesterday-Tul said  
 ‘I said yesterday that those students are pretty.’

So far, I have identified three core facts associated with non-nominal *tul*. A proper theory of *tul* should provide an explicit account for (i) how *tul* brings up a distributive sense, which is local and flexible enough to be compatible with collective predicates; (ii) how it is compositionally related to the distributivity/plurality of a non-adjacent antecedent and how it can appear on several constituents of different sorts in a single clause; and (iii) why it requires a local c-commanding plural antecedent. None of the previous studies that I am aware of have proposed an analysis that can handle all of these facts simultaneously<sup>6</sup>. In the next section, a proposal is made to fill this gap.

### 3 Proposal and Analysis

#### 3.1 Proposal

I propose that *tul* selects a phonetically unrealized bound variable anaphor  $\phi_i$  and the complex  $\phi_i+tul$  adjoins to any type of phrasal category indicated as XP, as shown in (21).

- (21)
- 
- ```

  graph TD
    XP1[XP] --- XP2[XP]
    XP1 --- phi_tul["phi_i+tul"]
  
```

As an anaphor,  $\phi_i$  is subject to the Binding Condition A. As for the meaning of *tul*, I propose the denotation in (22), which is a partial identity function.

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<sup>6</sup>There are many accounts available in the Korean literature that have been proposed to explain the properties of non-nominal *tul*. I do not review these accounts in this paper. See Kim (2005) for a detailed critique of these accounts.

(22)  $\leftarrow tul \rightarrow = \lambda x: |x| > 1. [\lambda f \in D_{\tau}: \exists R. \forall z. z \leq x \rightarrow R(f)(z). [f]]$  for any type  $\tau$ .

The bound variable anaphor  $\phi_i$  which is coindexed with a plural antecedent always saturates  $x$  in (22), as the first argument to combine with *tul*. Notice that the bound anaphor  $\phi_i$  can combine with *tul* only when its antecedent is plural, as the cardinality of  $\phi_i$  is required to be more than one ( $|x| > 1$ ). Plugging  $x$  into *tul* returns a partial identity function  $\lambda f \in D_{\tau}: \exists R. \forall z. z \leq x \rightarrow R(f)(z). [f]$ . There are two things to note here. First, the variable  $f$  in the denotation of *tul* is not fixed in type (not typed). This type flexibility allows it to combine with phrases of different semantic types. Positing an untyped variable is not new (see Krifka 2004). Second, as an identity function,  $\lambda f \in D_{\tau}: \exists R. \forall z. z \leq x \rightarrow R(f)(z). [f]$  combines with the denotation of an XP and returns the same denotation as its value. Notice that the result of the semantic composition of the phrase XP and  $\phi_i + tul$  in (21) ends up being the same XP. For instance, if we plug *Chelswu* into  $\lambda f \in D_{\tau}: \exists R. \forall z. z \leq x \rightarrow R(f)(z). [f]$ , what we get as the output is *Chelswu* again and *Chelswu*, as usual, composes with other elements of the sentence in which it occurs.

Being an identity function does not mean that *tul* does not do anything. Although the part  $\exists R. \forall z. z \leq x \rightarrow R(f)(z)$  in the denotation of *tul* does not affect the truth condition of a sentence in which it appears, it imposes or induces what is known as a presupposition on a sentence. This condition can be roughly stated as in (23).

(23) There must be a certain relation  $R$  that holds between every individual member of the plural antecedent coindexed with  $\phi$  and XP.

The distributive sense associated with *tul* comes from this presupposition. A speaker would attach *tul* to an XP only when there is a contextually salient relation between every member of  $\phi$  and XP. This has the effect of distributing XP (not the whole VP) over the individual parts of the plural antecedent.

## 3.2 Analysis

### 3.2.1 Locality Condition and C-Commanding Plural NP Requirement

As *tul* contains/selects a bound variable anaphor  $\phi$ , which is subject to Condition A, it must be c-commanded by an antecedent in a local domain. If the antecedent does not c-command *tul*, as in (19a), or is too far from *tul*, as in (20a), the sentence is rendered ungrammatical.

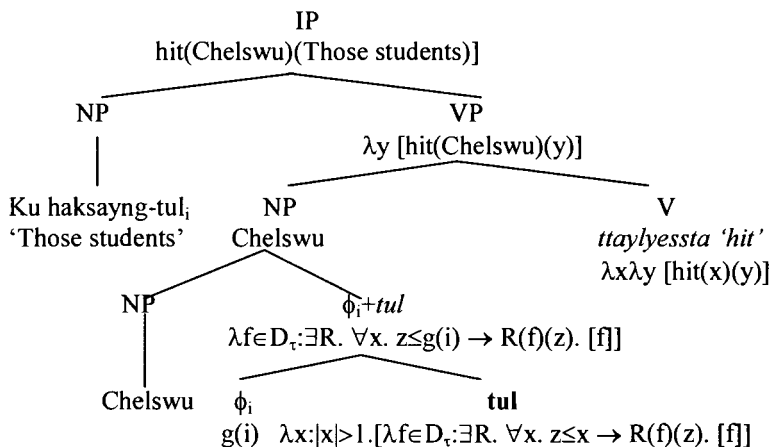
A singular argument cannot serve as an antecedent of the anaphor  $\phi$ , as its cardinality is required to be more than one by  $\lambda x:|x|>1$ . This accounts for the ungrammaticality of (24).

- (24) \*Chelswu-ka yelshimhy-**tul** kongpwu-hay-ss-ta.  
 Chelswu-Nom laboriously-Tul study-do-Pst-Dc  
 ‘Chelswu studied hard.’

### 3.2.2 Compositionality

Under the proposed analysis, compositionality is not a problem at all. Recall that *tul* is an identity function. As an identity function, it does not affect the computation of a sentence in which it appears. That is, computation of a sentence with *tul* is exactly the same as the one without *tul*. To illustrate the point, a sample derivation is given in (25).

- (25) Ku haksayng-**tul**-i Chelswu-lul-**tul** ttayly-ess-ta.  
 That student-Pl-Nom Chelswu-Acc-Tul hit-Pst-Dc  
 ‘Those students hit Chelswu.’



The composition proceeds without any difficulty. The non-adjacency between *tul* and its antecedent is only superficial due to  $\phi_i$ . Notice also that multiple occurrences of *tul* are not a problem to compositionality. This is because the proposed denotation for *tul* contains an identity function. Also, the optional nature of *tul* falls out straightforwardly from the proposed analysis. Since *tul*, as a presuppositional element, is semantically contentful

and treated as an adverbial element, it is correctly predicted to be optional. It is entirely a matter of the speaker's decision whether to use *tul* or not in a sentence. The type flexible and ubiquitous nature of *tul* is also predicted.  $f$  in the denotation of *tul* is not typed. This type flexibility allows it to combine with phrases of different semantic types. So, as far as the composition is concerned, the proposed denotation is successful.

### 3.2.3 Local and Flexible Distributivity

Let me now turn to show how the local and flexible distributivity associated with *tul* is captured. A local (sister) relation is established between *tul* and an antecedent via the anaphor  $\phi$ . They are adjacent in a sense. So, the distributivity is properly restricted to a plural antecedent and a *tul*-phrase.

The presupposition part  $\lambda f \in D\tau: \exists R. \forall x. z \leq x \rightarrow R(f)(z)$  of *tul* is responsible for the flexible distributive sense associated with *tul*. Let me take a concrete example and show how the proposal works. Consider (26).

- (26) Ku salam-tul-i Chelswu-ekey-*tul* ton-ul cwu-ess-ta.  
 That person-Pl-Nom Chelswu-Dat-Tul money-Acc give-Pst-Dc  
 'Each of those people gave money to Chelswu (salient meaning).'

A salient reading of sentence (26) is a global distributive reading "each of those people gave money to Chelswu". *Tul* imposes the presupposition in (27).

- (27) There is some relation between *each of those people* and *Chelswu*.

That is, the speaker presupposes that there is some relation between *each of those people* and *Chelswu* when he utters a sentence like (26). The relation 'give-money-to' which can be obtained from the distributive interpretation of the sentence 'Each of those people gave Chelswu money.' satisfies the presupposition in (27). As a result, *tul* leads to a global distributivity. This is why *tul* is often connected to a distributive interpretation of a sentence. However, *tul* does not always induce a distributive interpretation. For instance, sentence (26) is compatible with a collective situation where there is some money and those people, as a group, gave the money to Chelswu. In this situation, the relation 'gave-money-to' cannot serve as a value for the  $R$  of the presupposition, since this will contradict the collective situation as shown in (28).

(28) a. *Presupposition*:

Each of those people gave money to Chelswu.

‡ *Contradict*

b. *Assertion*:

There is some money and those people, as a group, gave the money to Chelswu.

Notice, however, the presupposition in (27) does not require ‘gave-money-to’ as a value for R. All it requires is that there is some relation between *each of those people* and *Chelswu*. A salient relation such as ‘participate in giving money’ relation, which does not contradict the truth of (26), satisfies this presupposition, giving rise to (29).

(29) Each of those people participated in giving money to Chelswu.

The meaning in (29) seems to be exactly what native speakers understand in the envisaged collective situation.

Now consider an unambiguously collective predicate like *meet* in (30).

(30) Ku haksayng-tu-i tosekwan-eyse-*tul* manna-ss-ta.  
 That student-PI-Nom library-Loc-Tul meet-Pst-Dc  
 ‘Those students met in the library.’

The predicate of the sentence *meet* cannot serve as the value for R, since this would lead to the odd presupposition in (31):

(31) *Presupposition*

#Each of the students met in the library.

A salient relation such as ‘participate in a meeting’ relation, which does not contradict the assertive meaning of (30), satisfies the presupposition, giving rise to (32).

(32) Each of those students participated in a meeting at the library.

The flexible distributivity falls out from the hypothesis that *tul* is a presuppositional element with a relational variable R whose value is contextually determined. Since it is always possible to come up with a distributive relation between a *tul*-phrase and its antecedent even in a collective situation, *tul* is correctly predicted to be compatible with all kinds of collective predicates.

## 4 Conclusion

The properties of *tul* pose a serious threat to a standard theory of plurality (distributivity), but this is true only when we equate *tul* with a standard D-operator such as the one in (6). Under the proposed analysis, which claims that *tul* is not an overt realization of the D-operator, *tul* is not a threat to the standard theory of distributivity. The exotic properties of *tul* follow from the proposal that *tul* is a distributive presuppositional element with a built-in anaphor.

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