

A Pragmatic Account of the Relative Readings in Korean Superlatives*

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1 Introduction

It is well known that certain ambiguities arise in nominal superlatives: absolute reading and relative reading. These readings are shown in (1). In the absolute reading (1a), the cakes' sizes are compared within a set of relevant cakes in a relevant context. In the relative readings (1b) and (1c), the comparison class is determined by either *John* or *Mary*. In this paper, I refer to the element that determines the comparison class as *focus*.

- (1) John bought the largest cake for Mary.
- a. Absolute reading: John bought Mary the cake that is larger than any other relevant cake.
 - b. Relative reading: John bought a larger cake for Mary than anyone else did.
 - c. Relative reading: John bought a larger cake for Mary than he did for anyone else.

There are two main approaches to these superlative ambiguities. The

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Scope theory (Heim 1985, 1999; Szabolcsi 1986) accounts for these different readings as a matter of different LF positions of *-est*. The Pragmatic theory (Farkas and Kiss 2000; Sharvit and Stateva 2002), on the other hand, maintains that *-est* always stays inside the DP and that the ambiguities arise from different pragmatic specifications of the comparison class.

In this paper, I follow the standard semantics of the superlative morpheme *-est* in (2) (Heim 1999).

$$(2) \llbracket -est \rrbracket = \lambda C_{\langle e, t \rangle} \lambda D_{\langle d, \langle e, t \rangle \rangle} \lambda x_e \exists d [D(d)(x) \wedge \forall y [y \in C \wedge y \neq x \rightarrow \neg D(d)(y)]]$$

-est(C)(D) is defined iff (i) $x \in C$, and (ii) $\forall y [y \in C \rightarrow \exists d [D(d)(y)]]$

Pancheva and Tomaszewicz (2012) observe that in addition to the readings in (1), there is an additional type of relative reading—the DP-internal focus relative reading—which is available in (some) Slavic languages and not in English. For example, Polish allows a reading where the comparison class is determined by *cake*, as in (3).

- (3) Jan kupił Marii naj-drozsze ciastko. [Polish]
 Jan bought for-Mary est-expensive cake
 ‘John bought Mary a more expensive cake than anything else he bought her.’

They derive this reading by 1) movement of the focused element (*cake*) followed by 2) movement of the DegP [*-est* C] to tuck below the focused NP. Crucially, they argue that DP-internal *-est* cannot associate with DP-internal focus (see Pancheva & Tomaszewicz 2012 and Tomaszewicz 2015 for details.) In English, definite articles, which are obligatory with superlatives, block *-est* movement out of the DP. This renders the DP-internal focus relative reading unavailable in English. In Polish, on the other hand, *naj-* (the Slavic counterpart of *-est*) may scope outside of the DP as in the Scope theory and associate with DP-internal focus. The same can be said about Slavic languages such as Bulgarian and Macedonian in the absence of the definite article in superlatives.

In this paper, I examine the range of relative readings available in Korean, which is also an article-less language like many Slavic languages. In Section 2, I show that the DP-internal focus relative reading is in fact unavailable in Korean nominal superlatives. In Section 3, I argue that the structure of Korean nominal modifiers blocks Korean *kacang/ceyil* ‘-est’ from moving to the main clause level. Thus, the relative readings available in Korean must be derived by pragmatic mechanisms. In Section 4, I further examine the relationship between the size of nominal modifiers and degree movement by looking at different behaviors of Korean and Japanese. Section 5 concludes.

2 A Puzzle: The Unavailability of the DP-internal Focus Relative Reading in Korean

Korean, like Polish, is an article-less language and does not need a definite determiner in superlative constructions. (4) is a typical example of the Korean superlative construction. Korean uses either the independent superlative morphemes *kacang* or *ceyil* for superlatives. I gloss these as EST throughout the paper and assume the same semantics with English *-est*.

- (4) Chelswu-ka [kacang/ceyil yeppu-n kkos-ul] sa-ss-ta.
 Chelswu-NOM -EST pretty-ADJ flower-ACC buy-PAST-DECL
 ‘Chelswu bought the prettiest flower.’

- (5) [[*kacang/ceyil*]] = [[*-est*]] (= (2))

Unlike Polish, however, Korean does *not* allow the DP-internal focus relative reading in adnominal superlatives. This holds for both quality and quantity superlatives. Let us first examine the quality superlatives. The quality adnominal superlative in (6) is ambiguous between the absolute reading (6a) and the DP-external focus relative readings (6b) and (6c), but the DP-internal focus relative reading (6d) is not present.

- (6) Chelswu-ka Yenghi-eykey [kacang/ceyil pissa-n] keyik-ul
 Chelswu-NOM Yenghi-DAT -EST expensive-ADJ cake-ACC
 sa-cwu-ess-ta.
 buy-give-PAST-DECL
 ‘Chelswu bought Yenghi the most expensive cake.’
- ‘Chelswu bought Yenghi the cake that was more expensive than any other (relevant) cake.’ (Absolute Reading)
 - ‘Chelswu bought Yenghi a more expensive cake than any other (relevant) person did.’ (DP-External Focus Relative Reading)
 - ‘Chelswu bought Yenghi a more expensive cake than he bought for any other (relevant) person.’ (DP-External Focus Relative Reading)
 - *‘Chelswu bought Yenghi a more expensive cake than any other (relevant) thing he bought her.’ (DP-Internal Focus Relative Reading)

Adverbial superlatives, on the other hand, allow the reading where *cake* is compared with other relevant alternatives: (7b).

- (7) Chelswu-ka kheik-ul [kacang/ceyil pissa-key]
 Chelswu-NOM cake-ACC -EST expensive-ADV
 sa-ss-ta.
 buy-PAST-DECL
 ‘Chelswu bought cake the most expensively.’

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- a. 'Chelswu bought cake for a higher price than anyone else did.'
- b. 'Chelswu bought cake for a higher price than any other product he bought.'

Quantity superlatives exhibit the same pattern. In adnominal quantity superlatives, the DP-internal focus relative reading is impossible. Korean quantity superlatives are formed by using the morpheme *manh-* 'many/much'. (8) and (9) are examples where the DP-internal focus relative readings are unavailable.

- (8) Chelswu-ka [kacang/ceyil manh-un] nonmwun-ul
 Chelswu-NOM -EST many/much-ADJ article-ACC
 ilk-ess-ta.
 read-PAST-DECL
 'Chelswu read the most articles.'
- a. 'Chelswu read more articles than anyone else did.' (DP-External Focus Relative Reading)
 - b. *'Chelswu read more articles than any other (relevant) thing he read.' (DP- Internal Focus Relative Reading)
- (9) Chelswu-ka [kacang/ceyil manh-un] U2-uy album-i
 Chelswu-NOM -EST many-ADJ U2-GEN album-NOM
 iss-ta.
 have-DECL
 'Chelswu has the most albums of U2.'
- a. 'Chelswu has more albums of U2 than anyone else does.' (DP-External Focus Relative Reading)
 - b. *'Chelswu has more albums of U2 than any other band.' (DP-Internal Focus Relative Reading)
 - c. *'Chelswu has more albums of U2 than any other product of U2.' (DP-Internal Focus Relative Reading)

The readings unavailable in adnominal superlatives become available in non-adnominal superlatives: (10b) and (11b-11c)¹.

- (10) Chelswu-ka nonmwun-ul [kacang/ceyil manh-i]
 Chelswu-NOM article-ACC -EST much-ADV
 ilk-ess-ta.
 read-PAST-DECL
 'Chelswu read articles the most.'
- a. 'Chelswu read more articles than anyone else did.'

¹ These readings become more salient when accompanied by prosodic focus on the focused element.

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- b. 'Chelswu read more articles than any other (relevant) thing he read.'
- (11) Chelswu-ka U2-uy album-i [kacang/ceyil manh-ta].
 Chelswu-NOM U2-GEN album-NOM -EST many-DECL
 'Chelswu has U2's albums the most.'
- a. 'Chelswu has more albums of U2 than anyone else does.'
 b. 'Chelswu has more albums of U2 than any other band.'
 c. 'Chelswu has more albums of U2 than any other product of U2.'

To summarize, Korean, unlike Polish and like English, does not allow the DP-internal focus relative reading in adnominal superlatives. This cannot, however, be attributed to the definite article because Korean is an article-less language². The crosslinguistic facts are summarized in (12). In Bulgarian and Macedonian, the definite article is optional in superlatives. In these languages, the DP-internal focus relative reading is available only in the absence of the definite article.

(12) Summary of the crosslinguistic facts

	Definite article in superlatives	DP-internal focus relative reading
English	present	unavailable
Polish	absent	available
Bulgarian/Macedonian	present	unavailable
	absent	available
Korean	absent	<i>unavailable</i>

Given the crosslinguistic facts, it may seem puzzling at first glance that Korean does not allow the DP-internal focus relative reading. In the following section, I propose that *kacang/ceyil* '-est' cannot scope out of the nominal phrase because of the syntax of Korean nominal modifiers and that the Pragmatic theory is needed to account for the relative readings in Korean.

3 The Size of Adjectival Modifiers and the Availability of *-est* Movement

3.1 The Structure of Attributive Adjectives in Korean

M.-J. Kim (2002) argues that Korean noun-modifying adjectives are predicates (stative verbs) inside relative clauses. Below I summarize some of the arguments she provides. First, adjectives can modify a noun only when follo-

² Whether Korean nominals have a D projection or not is irrelevant to the current argument, as the structure of nominal modifiers, instead of D, plays a crucial role in rendering *-est* movement impossible in Korean (Section 2).

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wed by *-n* which is the relative clause marker. (13) is an example of a noun modified by a relative clause and (14) is a noun modified by an ‘adjective’. These two have analogous syntactic structures.

(13) [e₁ ecey ttena]-n₁ namca
 yesterday left-REL man
 ‘the/a man who left yesterday’

(14) [e₁ yeppu]-n₁ yeca
 pretty-REL woman
 ‘the/a pretty woman’

Also, attributive adjectives can take overt tense marking as in (15b).

(15) a. ce [e₁ yeppu-Ø]-n₁ yeca
 that pretty-PRES-REL woman
 ‘that woman who is pretty’
 b. ce [e₁ yeppu-ess]-ten₁ yeca
 that pretty-PAST-REL woman
 ‘that woman who used to be/was pretty’

Next, compare (16) and (17). When used predicatively, Korean ‘adjectives’ occur without the copular verb *-i*, in contrast to English adjectives. This, according to Kim, suggests that Korean ‘adjectives’ are inherently verbs.

(16) a. * ce yeca-ka yeppu-i-ta.
 that woman-NOM pretty-COP-DECL
 b. ce yeca-ka yeppu-ta.
 that woman-NOM pretty-DECL
 ‘that woman is pretty’

(17) a. *That woman pretty.
 b. That woman is pretty.

Lastly, Korean ‘adjectives’ do not inflect for comparison, which is one of the diagnostics for adjectivehood. The morpheme *te* ‘more’ is used for comparison in both ‘adjectival’ comparatives and verbal comparatives, as in (18a) and (18b).

(18) a. Mali-ka Susan pota te yeppu-ta.
 Mary-NOM Susan than more pretty-DECL
 ‘Mary is prettier than Susan’
 b. Mali-ka Susan pota Jeni-lul te chohaha-n-ta.
 Mary-NOM Susan than Jenny-ACC more like-PRES-DECL
 ‘Mary likes Susan more than (she likes) Jenny.’

I adopt this claim and henceforth assume that Korean noun-modifying adjectives are inside relative clauses.

3.2 *-est* Movement is Not Available in Korean Adnominal Superlatives

Szabolcsi (1986) suggests that superlative movement is (finite) clause-bounded. Consider (19), where the relative reading is unavailable for (19b) but available for (19a). That is, (19a) has a reading where John wants to get higher score than anyone else. (19b), however, does not have the reading in which the score that John said he got was higher than the score anyone else said he got.

- (19) a. John wants [PRO to get the highest score]. (non-finite complement)
 b. John said [that he got the highest score]. (finite complement)

Considering that Korean ‘adjectives’ are relative clauses, we expect *kacang/ceyil* ‘-est’ to be trapped inside the relative clause, and therefore, within the DP. In (20), for example, *kacang/ceyil* cannot QR because it is inside a finite clause. In other words, the relative readings cannot be derived by QR of *-est* as in the Scope theory. This, then, explains why the DP-internal focus relative reading is unavailable in Korean adnominal superlatives, as this reading is derived by movement of the focused element and the degree morpheme (Pancheva & Tomaszewicz 2012).

- (20) Chelswu-ka Yenghi-eykey [_{D/NP}[_{CP} kacang/ceyil pissa-n]
 Chelswu-NOM Yenghi-DAT EST expensive-REL
 keyik-ul] sa-cwu-ess-ta.
 cake-ACC buy-give-PAST-DECL
 ‘Chelswu bought Yenghi the cake that is the most expensive.’

Instead, I propose that the relative readings in Korean are derived by pragmatic specifications of the comparison class based on the single LF in (21).

- (21) [Chelswu Yenghi-to [_{D/NP}[_{CP} [_{DegP-est} C] expensive] cake] bought]

When the comparison class is specified as in (22a) and (22b), the DP-external focus relative readings of (20), shown in (23a) and (23b) (= (6b) and (6c)) are obtained, respectively.

- (22) a. C = {the cake that Chelswu bought Yenghi, the cake that Mina bought Yenghi, the cake that Jimin bought Yenghi, ...}
 b. C = {the cake that Chelswu bought Yenghi, the cake that Chelswu bought Mina, the cake that Chelswu bought Jimin, ...}

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(23) DP-External Focus Relative Readings

- a. 'Chelswu bought Yenghi a more expensive cake than any other (relevant) person did.' (DP-External Focus Relative Reading)
 b. 'Chelswu bought Yenghi a more expensive cake than he bought for any other (relevant) person.' (DP-External Focus Relative Reading)

In adverbial superlatives, on the other hand, nothing blocks the movement of *kacang/ceyil*. Therefore, the reading where *cake* is focused ((24b)) becomes available as the QR-ed *kacang/ceyil* is able to associate with *cake*.

- (24) Chelswu-ka kheik-ul [_{AdvP} kacang/ceyil pissa-key]
 Chelswu-NOM cake-ACC -EST expensive-ADV
 sa-ss-ta.
 buy-PAST-DECL

'Chelswu bought cake the most expensively.'

- a. 'Chelswu bought cake for a higher price than anyone else did.'
 b. 'Chelswu bought cake for a higher price than any other product he bought.'

Another crucial piece of evidence for the Pragmatic theory comes from the fact that Korean allows a relative reading where the comparison class is determined by an element that is not a clausemate with *-est*. For example, (25) has a reading where the focused element is *Chelswu*, which is clearly in a separate clause from *kacang/ceyil*, let alone the structure of the nominal modifier. This reading is in (25b)³.

- (25) Chelswu-ka [_{CP} Yenghi-ka [_{D/NP}[_{CP} kacang/ceyil nop-un]
 Chelswu-NOM Yenghi-NOM -EST high-REL
 cemsu]-lul pat-ass-ta-ko] malhay-ss-ta.
 score-ACC get-PAST-DECL-COMP say-PAST-DECL

'Chelswu said that Yenghi got the highest score.'

- a. Chelswu said that Yenghi got a higher score than anyone else got.
 b. The score that Chelswu said Yenghi got is higher than the score(s) that anyone else said she got. (i.e. Chelswu ranks highest in terms of how high a score one said Yenghi got.)

The Scope theory is unable to account for how focus association can occur across a clause boundary. The Pragmatic theory accounts for this simply by specifying the comparison class as in (26).

- (26) C = {the score that Chelswu said Yenghi got, the score that Mina said Yenghi got, the score that Jimin said Yenghi got, ... }

³This reading becomes more salient with prosodic focus on *Chelswu*.

3.3 A Note on Topics and Focus Marking

It has been suggested based on examples like (27) that focus is not necessary for relative readings (Szabolcsi 1986; Heim 1999).

- (27) a. We should console the girl who got the fewest letters.
(Szabolcsi 1986)
- b. How does one win this contest?
- By putting the tallest plant on the table. (Heim 1999)

However, in Korean, focus seems to be playing an important role in making the relative readings possible. Compare (28) and (29). When the subject *Chelswu* is marked with nominative case as in (28), the relative reading comparing Chelswu with other individuals is readily available. Such reading, however, disappears when Chelswu is marked with a topic marker as in (29)⁴.

- (28) Chelswu-ka kacang/ceyil pissa-n keik-ul
Chelswu-NOM -EST expensive-REL cake-ACC
sa-ss-ta.
buy-PAST-DECL
a. 'Chelswu bought the most expensive cake.'
b. 'Chelswu bought a more expensive cake than any other relevant person did.'

- (29) Topic marker *-(n)un*: relative reading unavailable
(Context: Yesterday, Chelswu got up early to prepare for his son's birthday party. Chelswu went to the toy store and bought a present, and Chelswu went to the flower shop to arrange flowers. And then, he went to the bakery and...)
Chelswu-nun kacang/ceyil pissa-n keik-ul
Chelswu-TOP -EST expensive-REL cake-ACC
sa-ss-ta.
buy-PAST-DECL
a. 'Chelswu bought the most expensive cake.'
b. *'Chelswu bought a more expensive cake than any other relevant person did.'

However, the relative reading is not entirely impossible with the topic marker. It becomes available when the topic-marked DP receives a contrastive reading, as in (30).

- (30) Contrastive reading of *-(n)un*: relative reading available
(Context: Bill, John, and Chelswu each bought cakes for Mary's birthday party. Bill and John, running low on cash, bought relatively small,

⁴This observation has also been made by Lyu (2004).

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cheap cakes. On the other hand, ...)

Chelswu-nun kacang/ceyil pissa-n keik-ul
 Chelswu-TOP -EST expensive-REL cake-ACC
 sa-ss-ta.
 buy-PAST-DECL

- a. 'Chelswu bought the most expensive cake.'
 b. 'Chelswu (in contrast to other people) bought a more expensive cake than any other relevant person did.'

This seems to suggest that topics are not compatible with F-marking, which introduces alternatives. In case of contrastive topic, however, an alternative set is available (e.g. {*Bill, John*} in (30)), thereby making it possible to F-mark *Chelswu*.

4 Differences between Korean and Japanese

In previous sections, I argued for a Pragmatic theory for Korean superlatives. For Japanese, however, the Scope theory has been proposed (Aihara 2009, Shimoyama 2014). In this section, I examine the differences between Korean and Japanese with regards to the size of nominal modifiers and the availability of degree quantifier movement.

Japanese allows overt displacement of *ichiban* '-est' as in (31b), in which case the relative reading becomes the only available interpretation (Aihara 2009).

(31) Japanese

- a. *Absolute/relative readings possible*
 John-ga ichiban takai yama-ni nobot-ta.
 John-NOM most high mountain-to climb-PAST
- b. *Only relative reading possible*
 Ichiban John-ga takai yama-ni nobot-ta.
 most John-NOM high mountain-to climb-PAST
 'John climbed the highest mountain.'

Korean, on the other hand, never allows displacement of *kacang/ceyil* '-est': (32).

(32) Korean

- * kacang/ceyil John-i nop-un san-ul
 -EST John-NOM high-REL mountain-ACC
 ol-lass-ta.
 climb-PAST-DECL
 'John climbed the highest mountain.'

Based on (31), Shimoyama (2014) argues that Japanese adjectives are not

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scope islands for degree quantifiers, and therefore are not relative clauses. Aihara (2009) and Shimoyama (2014) both suggest that the Scope theory of superlatives is necessary for Japanese. Therefore, as expected, Japanese does not allow a relative reading of an NP contained in an embedded finite clause (Aihara 2009). For example, (33b) is an impossible reading in Japanese, in contrast to Korean (25).

- (33) Mako-ga [CP Hanako-ga [D/NP mottomo/ichiban taka-i
Mako-NOM Hanako-NOM -EST high-I
tokuten]-o tot-ta to] it-ta.
score-ACC get-PAST that say-PAST
'Mako said that Hanako got the highest score.' (Aihara 2009)
- a. Mako said that Hanako got a higher score than anyone else got.
b. *The score that Mako said Hanako got is higher than the score that anyone else said she got. (i.e., Mako ranks highest in terms of how high a score one said Hanako got.)

Such differences between Korean and Japanese show that the noun modifiers in the two languages are of different sizes: in Korean, they are finite clauses with a T projection whereas in Japanese, they lack a finite TP and CP layer. This difference has consequences for the range of relative readings available in each language. Furthermore, it can be argued that even two languages as similar as Korean and Japanese employ different mechanisms for relative readings of superlatives: for Japanese, the scope mechanism is necessary whereas in Korean, pragmatic mechanisms are needed. (34) summarizes the differences between the two languages.

(34) Differences between Korean and Japanese

	Overt displacement of <i>-est</i>	Status of adjectives	Relative reading of non-clausemate	Position of <i>-est</i>	What brings about relative readings?
Korean	*	scope island for <i>-est</i> QR (finite clause)	✓	DP-internal	Pragmatics
Japanese	✓	<i>not</i> a scope island for <i>-est</i> QR (<i>not</i> a finite clause)	*	can be DP-external	Scope

5 Conclusion

In this paper, I examined the range of relative readings available in Korean adnominal superlatives. Despite the absence of the definite article, it does not allow the DP-internal focus relative reading that is available in Slavic languages. I proposed that Korean *-est* cannot scope out of the DP due to the syntax of noun-modifying adjectives in Korean. Korean ‘adjectives’ are relative clauses and thus are scope islands for degree quantifiers. Hence, *-est* always stays DP-internal and makes the DP-internal focus relative reading unavailable. A further consequence of this analysis is that the Scope Theory cannot explain the range of DP-external focus relative readings available in Korean. In addition, I showed that in Korean, focus association of *-est* is available even across a clause boundary and that the information structure (topic/focus) plays an important role in the relative reading. These provide further support for the Pragmatic Theory.

This study shows that different types of *-est* scope islands are involved in Korean and English. More importantly, this study suggests that there are cross-linguistic differences regarding the mechanisms involved in superlative ambiguities. Even Korean and Japanese, which are very similar in many other respects, seem to employ different mechanisms: scope for Japanese and pragmatics for Korean. Such observations call for a broader cross-linguistic study of superlatives and their implications for the superlative theories.

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