

# **On the Position of Adnominal Adjectival Expressions in Korean**

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## **On the Position of Adnominal Adjectival Expressions in Korean\***

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This paper aims to evaluate Cinque's (2010) universal theory of adjectival noun modification by applying it to Korean. Along the way, I identify the syntactic positions of various adjectival expressions in the language, a topic that has received little attention in the literature. The central claim is that, on the whole, Korean fits in with some of the typological generalizations made on adjectival categories, but morpho-syntactically complex adjectival expressions display greater syntactic and semantic versatilities than what Cinque's theory allows for, and hence a more flexible analysis such as Larson's (1998, 2000) would be more suitable for the Korean case.

Key words: direct vs. indirect noun modifiers, adjectives, relative clauses, adjective ordering restrictions

### **1. Introduction**

Adnominal adjectival expressions are noun (N) dependents which are presumably not required by grammar. Yet their syntax and semantics have been proven to provide an important probe into the internal structure of DP. For example, it has been found that adjectives (ADJs) tend to occur following demonstratives and numerals across languages (see, e.g. Greenberg 1963; Hawkins 1983; Dryer 1992; Cinque 2005) and, furthermore, when multiple adjectival expressions co-occur modifying the same N, they tend to occur in certain orders. In a nutshell, what Sproat and Shih (1988, 1990) call 'direct N modifiers' occur closer to the N they modify, and what they call 'indirect N modifiers' such as relative clauses (RCs) occur farther away from it (e.g. Whorf 1945; Bolinger 1967; Larson 1998, 2000; Bouchard 2002; Cinque 1994, 2005, 2010). Notably, such ordering restrictions are seen to hold irrespective of the position of ADJs relative to the head N. To illustrate, the linear order of post-nominal ADJs in Romance languages mirrors that of pre-nominal ADJs in Germanic languages (see Cinque 2010 and

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references there) and this has been taken to suggest that ordering restrictions on ADJs reflect syntactic hierarchy, rather than mere precedence (see Sproat & Shih 1990; Cinque 2010).

Various attempts have been made to account for such typological generalizations on adjectival expressions (e.g. Larson 1998, 2000; Bouchard 2002; Svenonius 2008; Cinque 1994, 2005, 2010; Ramaglia 2010). Among them, Cinque (2010) offers the most thorough universal theory of N modifiers currently available. Yet his analysis is based largely on the data drawn from Romance and Germanic languages. Hence it remains to be seen whether it works equally well for other language families or types, e.g. non-Indo-European, head-final, and/or more ‘free’ constituent-order languages. In addition, there is the need to compare it with other existing analyses of N modifiers such as Larson’s (1998, 2000), which apparently yields comparable results but via a simpler and more flexible formal mechanism.

Given this state of affairs, this paper aims to evaluate Cinque’s (2010) theory of ADJs by applying it to Korean, an East Asian, head-final, and scrambling language. Along the way, I identify the syntactic positions of various adjectival expressions in Korean, a topic that has received little attention in the literature. Korean makes an interesting testing ground for evaluating any theory of ADJ because it allegedly lacks an open class of ADJ (see, e.g. Martin 1992; Suh 1996; Yu 1998; Maling & Kim 1998; Kim 2002) and this raises the question of how it may express various types of adjectival meaning. Korean presents an additional challenge because all its adnominal categories occur pre-nominally, and hence it is not easy to discern true adjective phrases (APs) from reduced RCs, unlike the case with Romance and Germanic languages, in which true APs have a distinct syntactic status, either linearly or hierarchically. Finally, Korean lacks true determiners and this makes it difficult to identify the exact syntactic positions of adnominal expressions inside DP, in comparison to determiner-languages like English, German, and Italian.

The central claim of this paper will be that adjectival expressions in Korean, in particular morpho-syntactically complex ones, display greater syntactic and semantic versatilities than what Cinque’s theory allows for, and hence a more flexible formal analysis such as Larson’s (1998, 2000) would be more suitable for the Korean case. To pave the road for making this claim, in what follows, I first briefly review Cinque’s theory of adjectival expressions and compare it with Larson’s (§2). I then present an inventory of major adjectival classes in Korean (§3). This will be followed by examining how Korean behaves with regard to well-established typological generalizations on adjectival categories across languages, how Cinque’s analysis fares with the Korean facts, and what the DP structure containing various adjectival expressions in Korean may look like (§4). I conclude the paper with a brief summary and implications for future research (§5).

## **2. Cinque’s (2010) theory of ADJ vs. Larson’s (1998, 2000)**

In accounting for the universal tendencies exhibited by adjectival N modifiers mentioned in the introduction, Cinque essentially takes the same position as Sproat and Shih (1988, 1990)

and assumes that there is iconicity between the morpho-syntactic complexity of an adjectival expression and its semantics. That is, morpho-syntactically simplex adjectival expressions carry direct modificational (Mod) semantics, and morpho-syntactically complex ones carry indirect Mod semantics. Unlike his predecessors, however, Cinque offers a more comprehensive formal analysis of direct and indirect N modifiers. More concretely, he states that direct Mod meaning encompasses non-intersective, attributive, non-restrictive, individual (I)-level, modal, absolute, evaluative, and N-dependent interpretations, whereas indirect Mod meaning encompasses intersective, restrictive, stage (S)-level, relative, epistemic, discourse-anaphoric, and N-independent interpretations. He further claims that DP structure contains various functional projections (FPs) dedicated to different types of adnominal semantics and while so-called direct N modifiers, i.e. ‘true APs’ in his terms, merge with FPs immediately above NP, indirect N modifiers, i.e. reduced RCs (RRCs) and full-fledged RCs (FRCs), merge with FPs that are located much higher in the DP structure. He also hypothesizes that more than one FP of the same type can be projected, and hence multiple adnominal elements may co-occur within the same DP, as illustrated by the English DP *my big, white, old mansion*. The upshot of his proposal is schematically represented in (1).

- (1) Universal nominal structure involving adjectival modification (Cinque 2010:25):  
 [DP [FP2 FRC [FP2 RRC [FP1 AP1 [FP1 AP2 [NP N]]]]]]  
                                 Indirect Mod                                Direct Mod

Cinque’s theory provides an elegant account for why seemingly identical ADJs in English and in other languages may receive different interpretations depending on their syntactic positions. To illustrate, consider (2). Here, capitalization indicates phonological stress.

- (2) Context: Speaker is looking at a cloudy night sky.  
 VISIBLE visible stars include Capella and INVISIBLE visible stars include Sirius.  
 (adapted from Larson 1998)

In the above example, the unstressed *visible*, which occurs closer to the N *stars*, describes inherent, attributive properties of individuals; on the other hand, the stressed *visible* and *invisible*, which occur farther away from the N, describe temporary, intersective properties of the stars under description (see Larson 1998, 2000; and Larson & Takahashi 2007 for further discussion). Under Cinque’s analysis, such correlation between the semantics of an ADJ and its relative proximity to the head N is expected because N modifiers occurring closer to an N are true APs whereas those occurring far-away from it are disguised RCs.

Turning now to comparing Cinque’s (2010) theory of N modifiers with Larson’s (1998, 2000), even though the former builds on the latter, there are several non-trivial differences between them. First, while Cinque attempts to account for cross-linguistic facts by relying heavily on syntactic devices such as language-specific ‘roll-up’ movements (for details, see

his work), Larson resorts to a more semantically-driven mechanism. Second, unlike Cinque, who assumes that all adjectival expressions are base-generated above the NP level and have fixed syntactic positions, Larson hypothesizes that some adjectival expressions may (freely) occur in the ‘inner’ space of an NP as well as in the ‘outer’ space thereof, and their semantics varies accordingly. To be more specific, when an adjectival expression occurs in the inner space of NP, it receives a direct Mod interpretation; when it occurs in the outer space of NP, it receives an indirect Mod interpretation, regardless of whether it precedes or follows the head N. This idea hinges on the assumption that the generic operator (Gen) in the sense of Chierchia (1995) is present at the NP level, and this operator binds any adjectival expression occurring inside the NP level, consequently making it carry intensional, N-dependent semantics; when an adjectival expression is located in the outer space of NP, it will not be bound by Gen, so it carries extensional, N-independent semantics. Larson’s analysis is sketched in (3), where XP stands for any type of adjectival modifier, and ‘Γ’ stands for Gen.

- (3) Larson’s proposal on adjectival N modification:  
 [DP XP<sub>5</sub> [[XP<sub>3</sub> [<sub>NP</sub> Γ XP<sub>2</sub> XP<sub>1</sub> N]] XP<sub>4</sub>]]  
 Indirect Mod      Direct Mod      Indirect Mod

With this theoretical background put in place, we turn now to introducing major adjectival classes in Korean.

### 3. An inventory of major adjectival expressions in Korean<sup>1</sup>

Korean has four major classes of adjectival expressions at the word level<sup>2</sup> if we focus on their morphological make-up, while excluding N compounding cases, as listed in (4).

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<sup>1</sup> In transcribing Korean data, the Yale Romanization is adopted and the following abbreviations are used: Acc: accusative case; Adn: adnominal marker; Conn: connective; Cop: copula; Dat: dative case; Decl: declarative sentential ending; Fut: future; Gen: genitive case; Imprf: imperfective aspect; Nom: nominative case; N.Pst: non-past tense; Prf: perfective aspect; Pst: past tense; Rtro: retrospective marker; Top: topic.

<sup>2</sup> Korean also has a plethora of prefixes that would correspond to APs in other languages, as exemplified below. But such cases will not be considered here.

- (i) a. **kup**-cengke  
 abrupt-stop  
 ‘an abrupt stop’  
 b. **tay**-cethayk  
 large-mansion  
 ‘a large mansion’

- (4) Major adnominal adjectival classes in Korean:
- (i) class 1: what are called attributive determinatives
  - (ii) class 2: expressions ending in the suffix *-cek*
  - (iii) class 3: expressions ending in the suffix *-un*
  - (iv) class 4: full-fledged RCs

N compounding is highly productive in Korean. Furthermore, some adjectival Ns carry attributive semantics. But they do not form a uniform class, as shown in (5), and thus they are excluded from the present discussion.

- (5) a. hankwuk      kwukki                      (N compound: thematic)  
       South.Korea    national.flag  
       ‘South Korea’s national flag’
- b. yuhyeng      mwunhwacay            (N compound: attributive)  
       form.having    treasure  
       ‘national treasures that exist in some form (e.g. temples, towers, scriptures)’
- c. kkos        minam                      (N compound: idiomatic)  
       flower        handsome.man  
       ‘a very handsome man that looks almost like a woman’

In the next four subsections, I introduce each of the major adjectival classes in Korean, starting with attributive determinatives.

### 3.1 Attributive determinatives

What are called attributive determinatives in traditional grammar (e.g. Suh 1996; Sohn 1999; Mok 2002) are of native Korean (NK) or Sino-Korean (SK) origin, i.e. borrowed from Classical Chinese.<sup>3</sup> Notably, these lexemes form a closed class. Moreover, all of them are mono-morphemic words which can stand alone: e.g. *say* ‘new’ (NK), *hyen* ‘present’ (SK), *cen* ‘former’ (SK), *yec* ‘old/former/long’ (SK), *cwu* ‘primary/chief’, and *swun* ‘pure/complete’ (SK).

Exactly why such words are called attributive determinatives (ATT-DETs) is unknown (at least to my knowledge), but I conjecture that it is due to the combination of two factors. First, the semantics of some ATT-DETs has something to do with attributing properties to Ns, as shown in (6a), but most of them are concerned with establishing a temporal relation, as shown in (6b), or ‘intensifying a determiner meaning’ (a term borrowed from Bolinger 1967), as shown in (6c).

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<sup>3</sup> A large proportion of the lexicon in Korean is of SK origin. According to Sohn (1999:86), roughly 60% of Contemporary Korean lexemes are of SK origin.

- (6) a. **say** moca  
 new hat  
 ‘a new hat’  
 b. **yec** chinkwu  
 long.ago friend  
 ‘an old friend (a person who was a friend a long time ago)’  
 c. **cwu** mokcek  
 primary purpose  
 ‘the primary purpose’

Second, the words that belong to the ATT-DET category never occur predicatively, regardless of their semantics, as shown in (7). That is, they only perform an attributive function.

- (7) a. \*Ku moca-nun **say**-(i)-Ø-ta.  
 that hat-Top **new**-(Cop)-N.Pst-Decl  
 Int. ‘That hat is new.’  
 b. \*Ku chinkwu-wa-uy wuceng-un **yec**-i-Ø-ta.  
 that friend-with-Gen friendship-Top **old**-(Cop)-N.Pst-Decl  
 Int. ‘The friendship with that friend is old (is an old one).’

### 3.2 Adjectival expressions ending in *-cek*

Quite a number of adjectival expressions in Korean are formed by adding the SK suffix *-cek*<sup>4</sup> to bi-morphemic lexemes of SK origin which are typically bound morphemes. For space reasons, here and below, I will call adjectival expressions ending in *-cek* ‘cek-expressions’ for short. To illustrate *cek*-expressions and their internal make-up, consider (8).

- (8) a. cam.ceng-**cek** kyellon  
 temporally.decided-**CEK** conclusion  
 ‘a tentative conclusion’  
 a’. \*cam.ceng (bound root)  
 b. mayng.mok-**cek** salang  
 blind.goal-**CEK** love  
 ‘a blind love’  
 b’. \*mayng.mok (bound root)

*Cek*-expressions have several properties that separate them from ATT-DETs. First of all, they are morphologically more complex in that they are comprised of a bi-morphemic root

<sup>4</sup> This suffix shares the same origin as *-de* in Mandarin but it has a far more limited distribution and function.



and the suffix *-cek*. Secondly, unlike ATT-DETs, *cek*-expressions form an open class. Relatedly, their semantics is not confined to adding temporal or determiner-like meanings to their head N, as can be gleaned from the English translations for the data given in (8). Lastly, when co-occurring with the copular verb *i-*, they can freely occur in predicative position, as shown in (9).

- (9) a. I kyellon-un **cam.ceng-cek-i-Ø-ta.**  
 this conclusion-Top temporally.decided-CEK-Cop-N.Pst-Decl  
 ‘This conclusion is tentative.’
- b. Ku-uy salang-un **mayngmok-cek-i-ess-ta.**  
 he-Gen love-Top blind-CEK-Cop-Pst-Decl  
 Lit. ‘His love was blinded.’

Taken together, these properties suggest that *cek*-expressions are more like lexical categories, whereas ATT-DETs are more like functional categories.

Before proceeding, I should remark that in terms of syntactic distribution, *cek*-expressions behave like nominal expressions, even though they have adjectival semantics. The reason for drawing this conclusion is that when occurring predicatively, *cek*-expressions must co-occur with the copular verb *i-* ‘to be’, and this property is shared by predicative nominals in Korean, as shown in (10)-(11). Notably, putative ADJs in Korean (i.e. those ending in the suffix *-un* when occurring pre-nominally) cannot co-occur with the copular verb *i-*; instead, they require the light verb *ha-* ‘to do’, as shown in (12), or just occur by themselves, as shown in (13).

- (10) Predicative use of a *cek*-expression:  
 Mina-uy salang-un mayng.mok-cek-\*(i)-Ø-ta.  
 M.-Gen love-Top blind.goal-CEK-(Cop)-N.Pst-Decl  
 ‘Mina’s love was blind.’
- (11) Predicative use of a nominal:  
 Mina-nun haksayng-\*(i)-Ø-ta.  
 M.-Top student-(Cop)-N.Pst-Decl  
 ‘Mina is a student.’
- (12) Predicative use of a putative ADJ in Korean I:  
 a. Mina-nun yu.myeng-\*(ha)-Ø-ta.  
 M.-Top possessing.fame-(do)-N.Pst-Decl  
 ‘Mina is famous.’  
 b. \*Mina-nun yu.myeng-i-Ø-ta.  
 M.-Top possessing.fame-Cop-N.Pst-Decl  
 Int. ‘Mina is famous.’

- (13) Predicative use of a putative ADJ in Korean II:  
 Mina-nun pay.kophu-(\*i/\*ha)-Ø-ta.  
 M.-Top stomach.starve-(Cop/do)-N.Pst-Decl  
 ‘Mina is hungry.’

### 3.3 Adjectival expressions ending in the suffix *-un*

Adjectival expressions ending in the adnominalizing suffix *-un*<sup>5</sup> have been treated as syntactic ADJs by traditional grammarians as well as some modern day linguists who believe that Korean has an open class of ADJ (e.g. Choy 1971; Yu 1998; Sohn 1999; Kang 2005, 2006; cf. Mok 2002:73) (for this reason, I sometimes refer to them as putative ADJs, as I have done in the preceding subsection). Thus, not surprisingly, they form an open class. Furthermore, *un*-suffixation is a highly productive operation that can apply to lexemes of native or foreign origin.

The fact that adjectival expressions ending in *-un* (henceforth *un*-expressions for short) may derive from native or loan stems already sets them apart from *cek*-expressions. But they have additional properties that make them stand out when compared to ATT-DETs or *cek*-expressions. First, while both ATT-DETs and *cek*-expressions cannot be modified by the prototypical degree adverb (DegAdv) *maywu* ‘very’, despite the fact that compatibility with DegAdv is a hallmark of the ADJ category in human language (e.g. Kennedy & McNally 2005), all *un*-expressions can be. To see this, compare the data given in (14)-(16).

- (14) DegAdv *maywu* modifying ATT-DETs:<sup>6</sup>  
 a. \***maywu** say moca  
     very new hat  
     Int. ‘a very new hat’

<sup>5</sup> Depending on the ending of the stem it is attached to, the suffix *-un* may be phonetically realized as *-un* or *-n*: if the preceding stem ends with a consonant, it is realized as *-un*; if not, it is realized as *-n*.

<sup>6</sup> Some (though not all) ATT-DETS may be modified by the DegAdv *acwu* (a NK word meaning ‘very’), as shown below. What matters for the present purposes, however, is that they are incompatible with *maywu* (not to mention other DegAdv), in sharp contrast with *un*-expressions.

- (i) a. **acwu** say moca  
       very new hat  
       ‘a very new hat’  
     b. **acwu** yec nolay  
       very old song  
       ‘a very old song’  
     c. \***acwu** cwu mokcek  
       very primary purpose  
       ‘a very primary purpose’

- b. \***maywu** yec chinkwu  
 very old friend  
 Int. ‘a very old friend’
- (15) DegAdv *maywu* modifying *cek*-expressions:<sup>7</sup>
- a. \***maywu** kyengcey-cek kayhyek  
 very economy-CEK renovation  
 Int. ‘a/the very renovation pertaining to economy’
- b. \***maywu** mayng.mok-cek salang  
 very blind.goal-CEK love  
 Int. ‘a very blind love’
- (16) DegAdv *maywu* modifying *un*-expressions:
- a. **maywu** ppalkah-**n** cipwung  
 very red-Adn roof  
 ‘a very red roof’
- b. **maywu** noph-**un** kenmwul  
 very high-Adn building  
 ‘a very tall building’

Second, while *cek*-expressions behave like nominal categories as exemplified in (10)-(13), *un*-expressions behave like verbal categories: some of their stems are headed by the light verb *ha-* or the copular verb *i-* and moreover, their roots can not only occur predicatively without any further morpho-syntactic device but also inflect for tense/aspect marking, as illustrated below.

- (17) a. chongmyeng-**ha-n** haksayng (attributive use of an *un*-expression)  
 brilliance-do-Adn student  
 ‘a brilliant student’
- b. ku haksayng-un chongmyengha-**yess-ta** (predicative use of an *un*-expression)  
 that student-Top be.brilliant-Pst-Decl  
 ‘That student was brilliant.’
- (18) a. ppalkah-**n** cipwung (attributive use of an *un*-expression)  
 red-Adn roof  
 ‘a red roof’

<sup>7</sup> *Cek*-expressions can serve as the roots of *un*-expressions, as shown in (20), and not surprisingly, in such cases, the entire *un*-expression can be compatible with *maywu*, as shown below.

- (i) **maywu** kyengcey-**cek-i-n** kayhyek  
 very economy-CEK-Cop-And renovation  
 ‘a very economical renovation’

- b. Ku cipwung-un ppalkah-ess-ess-ta. (predicative use of an *un*-expression)  
 that roof-Top red-Prf-Pst-Decl  
 ‘That roof used to be/had been red.’

Third, *un*-expressions have a different semantics from *cek*-expressions: while *cek*-expressions may bear a thematic relation to the head N or describe properties pertaining to it, *un*-expressions carry intersective/predicative semantics. To see this, consider (19) and (20): while the NP in (19) denotes a renovation of the economy itself or a renovation of something that will impact the economy, the NP in (20) denotes a renovation that is economical, i.e. something that is not costly.<sup>8</sup>

- (19) kyengcey-**cek** kayhyek (cek-expression)  
 economy-CEK renovation  
 Reading 1: ‘a renovation of the economy’  
 Reading 2: ‘a renovation pertaining/related to the economy’
- (20) kyengcey-**cek-i-n** kayhyek (un-expression)  
 economy-CEK-Cop-Adn renovation  
 ‘an economical renovation’  
 Impossible reading: ‘a renovation pertaining/related to the economy’

Lastly, as must be obvious from the data presented thus far, *un*-expressions are morpho-syntactically more complex than *cek*-expressions (and ATT-DETs, by transitivity). Further evidence for their greater morpho-syntactic complexity comes from the fact that they can even embed a clausal structure, as exemplified below.

- (21) a. [pay-**ka** maywu/mahni kophu-]-**n** haksayng  
 [stomach-Nom very/a lot starve-]-Adn student  
 ‘a very hungry student’ (Lit. ‘a student whose stomach is very starving’)
- b. Ku haksayng-un [pay-**ka** maywu/mahni kophu-∅-ta].  
 that student-Top [stomach-Nom very/a lot starve-N.Pst-Decl]  
 ‘That student is very hungry.’ (Lit. ‘As for that student, his/her stomach is starving.’)
- (22) a. [khi-**ka** maywu khu]-**n** yeca  
 [height-Nom very big]-Adn woman  
 ‘a very tall woman’ (Lit. ‘a woman whose height is big’)
- b. Ku yeca-nun [khi-**ka** maywu khu-ess-ta].  
 that woman-Top [height-Nom very big-Pst-Decl]  
 ‘That woman was very tall.’ (Lit. ‘As for that woman, her height was big.’)

<sup>8</sup> I thank an anonymous reviewer for drawing this semantic difference to my attention.

The fact that *un*-expressions can embed clausal structures suggests that some of them may be better treated as some sort of RC. An RC analysis is appealing since it can let us account for why they may modify nominals even though their roots morphologically behave like verbal categories, as shown in (17)-(18). If we are to pursue this line of analysis, then, we need to confront the question of whether *un*-expressions constitute reduced RCs or full-fledged ones. I take up this question after introducing full-fledged RCs in the next subsection.

### 3.4 Full-fledged RCs

Full-fledged RCs (FRCs) in Korean are marked by the suffix *-un* or its morphophonemic variants (e.g. *-n*, *-l*) and hence a proper subset of them happens to have the same ending as what I call *un*-expressions here, i.e. what have been traditionally analyzed as adnominal ADJs in Korean.

The fact that some FRCs have the same surface form as putative ADJs has caused much confusion in differentiating ADJs from RCs in Korean (or vice versa). To prevent or minimize such confusion, I suggest that what I call FRCs need to exhibit one of the following properties. First, they can embed transitive clausal structures with syntactic subjects and syntactic objects. Second, they can have their own tense/aspect/mood (TAM) interpretations, independently of the embedding clause. Third, their TAM marking can be overtly realized on the relativizing suffix.

It should also be noted at this juncture that the way Korean marks the TAM of an embedded clause is somewhat complicated. To illustrate, the null morpheme ‘ $\emptyset$ ’ indicates non-past/imperfective tense/aspect in the matrix clause but indicates past/perfective tense/aspect in the embedded clause, as shown in (23). Here and throughout, ‘*e*’ signifies the gap that is co-indexed with the head N of an RC.

- (23) a. Na-nun Mina-ka choh- $\emptyset$ -ta. (non-past, non-embedded clause)  
 I-Top M.-Nom like-N.Pst-Decl  
 ‘I like Mina.’
- b. [Chelswu-ka *e<sub>i</sub>* caknyen-ey sakwi- $\emptyset$ ]-**n** yeca<sub>*i*</sub> (perfective/past RC)  
 [C.-Nom \_\_\_ last.year-Loc date-Prf]-Adn woman  
 ‘The woman that Chelswu dated last year’

Furthermore, depending on whether the embedded clause’s predicate is semantically more verbal (e.g. active, dynamic, imperfective) or adjectival (e.g. stative, non-dynamic, perfective), an apparently identical morpheme may carry different TAM information. To see this, consider first the data in (24), which contain verbal RCs. What is inside the parentheses indicates the TAM of the RC at hand.

- (24) a. [Chelswu-ka  $e_i$  yocum sakwi-**n**-]-**un** yeca<sub>i</sub> (imperfective/present)  
 [C.-Nom \_\_\_ these.days date-Imprf-]-Adn woman  
 ‘The woman that Chelswu is dating these days’
- b. [Chelswu-ka  $e_i$  caknyen-ey sakwi-**Ø**-]-**n** yeca<sub>i</sub> (perfective/past)  
 [C.-Nom \_\_\_ last.year-Loc date-Prf-]-Adn woman  
 ‘The woman that Chelswu dated last year’
- c. [Chelswu-ka  $e_i$  yecen-ey sakwi-**ess-te**-]-**un** yeca<sub>i</sub> (pluperfect)  
 [C.-Nom \_\_\_ before-Loc date-Pst-Rtro-]-Adn woman  
 ‘The woman that Chelswu had dated a long time ago’
- d. [Chelswu-ka  $e_i$  kyelhonha-]-**l** yeca<sub>i</sub> (irrealis/future)  
 [C.-Nom \_\_\_ marry-]-Adn.Future woman  
 ‘The woman that Chelswu will marry’

Consider now the data in (25), which illustrate more adjectival RCs. These RCs differ from those in (24) in that they contain intransitive predicates. In addition, in this data set, the null morpheme plus *-un* cluster indicates non-past tense, rather than past tense, and the *-ess-te-un* sequence indicates past tense, rather than pluperfect (i.e. past in the past). Nevertheless, it is clear that the adjectival RCs in (25) bear TAM marking, just like the verbal RCs in (24). Thus, we can posit that they contain a full-fledged clausal structure, which is projected at least up to the Tense Phrase (TP) level.

- (25) a. [ $e_i$  cipwung-i ppalkah-**Ø**-]-**un** cip<sub>i</sub> (non-past/present)  
 [\_\_\_ roof-Nom red-N.Pst-]-Adn house  
 ‘a house whose roof is red’
- b. [ $e_i$  masumssi-ka chakha-**ess-te**-]-**n** yeca<sub>i</sub> (past)  
 [\_\_\_ heart-Nom good-Pst-Rtro-]-Adn woman  
 ‘a/the woman who was good-hearted’ (Lit. ‘a/the woman whose heart was good’)
- c. [aphulo  $e_i$  ttoktokha-]-**l** ai<sub>i</sub> (irealis/future)  
 [later.on \_\_\_ smart-]-Adn.Future kid  
 ‘a kid who will be/become smart later on’

Having introduced FRCs in Korean, we turn now to taking up the question left unanswered in the preceding subsection, namely, whether *un*-expressions are reduced RCs (RRCs) or FRCs. I submit that they are RRCs. Support for this idea comes from the fact that their tense is indeterminate and their temporal interpretations co-vary with the TAM of the embedding clause. To illustrate, consider the sentences in (26), which contain what I analyze as *un*-expressions here: when the embedding clause has imperfective/habitual aspect, as in (26a), the *un*-expression embedded inside only engenders a generic/non-specific interpretation. When the embedding clause has perfective or episodic aspect, as in (26b), the same *un*-expression may have a generic/non-specific interpretation (Reading 1) or a non-generic/specific interpretation (Reading 2),

but importantly, in either case, the *un*-expression's tense is bound by the embedding clause's tense, as indicated by the English translations.

- (26) a. Chelswu-nun [hwa(-ka) na-]-n salam-hanthey  
 C.-Top [anger(-Nom) come.out-]-And person-Dat  
 chincelha-∅-ta.  
 be.kind-Imprf-Decl  
 'Chelswu is kind to (any) angry people.'
- b. Chelswu-nun [hwa(-ka) na-]-n salam-hanthey chincelha-ess-ta.  
 C.-Top [anger(-Nom) come.out-]-Adn person-Dat be.kind-Prf-Decl  
 Reading 1: 'Chelswu was kind to (any) person/person had the property of being habitually angry at that time.'  
 Reading 2: 'Chelswu was kind to some (specific) person/people who was/were angry at that time.'<sup>9</sup>

For comparison, consider the sentences in (27)-(28). They show that indisputably full-fledged RCs have their own tense and thus they are not temporally bound by the embedding clause, although they can be (we revisit the interpretive difference between (26b) and (27) in §4).

- (27) Chelswu-nun [ $e_i$  hwa-ka na-**ess-te**-]-n salam-hanthey  
 C.-Top [\_\_\_ anger(-Nom) come.out-Prf-Rtro-]-Adn person-Dat  
 chincelha-**ess**-ta.  
 be.kind-Prf-Decl  
 Reading 1: 'Chelswu was kind to some (specific) person who was angry at that time.'  
 Reading 2: 'At some past time  $t_1$ , Chelswu was kind to some (specific) person who was angry at some other past time  $t_2$ , where  $t_2$  precedes  $t_1$ .'
- (28) Chelswu-nun [Minswu-ka  $e_i$  sakwi-**n**-]-**un** yeca $_i$ -lul salangha-**ess**-ta.  
 C.-Top [M.-Nom \_\_\_ date-Imprf-]-Adn woman-Acc love-Prf-Decl  
 Reading 1: 'Chelswu loved the woman Minswu was dating at that time.'  
 Reading 2: 'Chelswu loved the woman Minswu is dating now.'

<sup>9</sup> A reviewer claims that the RC in (26b) can be analyzed as instantiating a resultative construction and its time may be construed as being extended to speech time, making the entire sentence mean 'Chelswu was kind to some specific person who is angry now.' But for me and for my informants, such reading may only obtain if the RC is converted to a FRC with an overtly realized temporal (and a demonstrative) expression, as shown below.

- (i) Chelswu-nun [**cikum** hwa-ka na-∅ iss-n-]-un  
 C.-Top [**now** anger-Nom come.out-Conn exist-Imprf-]-Adn  
 (**ce**) salam-hanthey chincelha-**ess**-ta.  
 (that) person-Dat be.kind-Prf-Decl  
 'Chelswu was kind to (that) person who is angry now.'

The foregoing shows that while FRCs in Korean contain their own TAM structures, *un*-expressions lack them. In the light of their verbal/clausal properties introduced in §3.3, then, *un*-expressions can be best treated as RRCs. This analysis accords well with our finding that, unlike *cek*-expressions, they seem to have inherently predicative semantics, as observed in (19)-(20). We discuss additional consequences of this analysis in §4.

### 3.5 Summary

This section has introduced four major adjectival classes in Korean. These four classes have been shown to differ in their morpho-syntactic complexity: those introduced earlier have a lower degree of morpho-syntactic complexity than those introduced later, as schematized in (29). It has also been uncovered that the more morpho-syntactically simplex an adjectival expression is, the less predicative it is: for example, morphologically simple ATT-DETs can never occur predicatively, whereas morphologically more complex *cek*-expressions can be made to occur in predicative position. Finally, while *cek*-ending expressions have nominal properties, *un*-ending expressions have verbal properties and thus they can be better treated as RRCs, rather than prototypical APs.

- (29) Degree of morpho-syntactic complexity of adjectival expressions in Korean:  
 Full-fledged RCs > *un*-expressions > *cek*-expressions > ATT-DETs  
 Clausal                      Verbal              Nominal                      Functional  
 Predicative   ←—————→      Attributive

With these preliminary findings under our belts, we turn now to investigating whether the four major adjectival classes in Korean are subject to any relative ordering restrictions and whether there is any correlation between their morpho-syntactic complexities and their semantics. In this process, we also discuss which between Cinque's (2010) and Larson's (1998, 2000) theories of N modifiers might be better suited to account for the Korean facts.

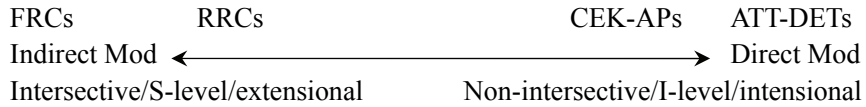
## 4. Direct vs. indirect N modification in Korean and the position of adjectival expressions

Given the cross-linguistic research on adjectival categories briefly surveyed in the introduction (e.g. Whorf 1945; Bolinger 1967; Sproat & Shih 1988, 1990; Larson 1998, 2000; Bouchard 2002; Cinque 1994, 2005, 2010), what we have found in §3 leads us to make two predictions on adjectival expressions in Korean. One prediction is that if Korean is a typologically well-behaving language, then, the adjectival expressions low on Hierarchy (29) will carry a direct/N-dependent/non-intersective/I-level/intensional Mod meaning whereas those higher on the hierarchy will carry a more indirect/N-independent/intersective/S-level/extensional Mod meaning, as schematically depicted in (30). To save space, from now on, I refer to *cek*-



expressions as ‘CEK-APs’ and *un*-expressions as ‘RRCs’ sometimes, assuming that the proposed analysis of *un*-expressions given in §3.4 is correct.

(30) Prediction on direct vs. indirect modification in Korean:



The other prediction is that since Korean is a head-final language, if there is a perfect correspondence between form and meaning, then, morphologically simplex adjectival categories will occur closer to the head N and morphologically complex ones will occur farther away from it, as given in (31).

(31) Prediction on the relative ordering between adjectival expressions in Korean:

FRC > RRC > CEK-AP > ATT-DET > (compound) N

When we zoom in on the facts, these two predictions are borne out but only partly so. First of all, when an ATT-DET and a CEK-AP co-occur, sometimes, the CEK-AP precedes the ATT-DET, as expected, but other times, the reversed order may obtain, as shown in (32)-(33).

(32) a. *hyen* [kyengcey cengchayk] (ATT-DET > compound N)  
 present [economy policy]  
 ‘the present economic policy’

b. *sengkong-cek* [kyengcey cengchayk] (CEK-AP > compound N)  
 success-CEK [economy policy]  
 ‘a/the successful economic policy’

c. ?**sengkong-cek** *hyen* [kyengcey cengchayk] (CEK-AP > ATT-DET)  
 success-CEK present [economy policy]  
 ‘the successful economic policy of the present time’

d. \**hyen* **sengkong-cek** [kyengcey cengchayk] (ATT-DET > CEK-AP)  
 Int. ‘the successful economic policy of the present time’

(33) a. *say* cengchayk (ATT-DET > N)  
 new policy  
 ‘a new policy’

b. *hapli-cek* cengchayk (CEK-AP > N)  
 rational policy  
 ‘a/the rational policy’

c. ?*say* **hapli-cek** cengchayk (ATT-DET > CEK-AP)  
 new rational policy  
 ‘a/the new rational policy’

## d. \*hapli-cek say cengchayk (CEK-AP &gt; ATT-DET)

Since CEK-APs are morphologically more complex, the apparent free variation between ‘ATT-DET > CEK-AP’ and ‘CEK-AP > ATT-DET’ leads us to conclude that (at least) in Korean, the morpho-syntactic complexity of an adjectival expression may not always determine its surface position relative to other elements inside the same DP.

Now the question is what may govern the ordering between a CEK-AP and an ATT-DET. That is, why is it that sometimes ‘CEK-AP > ATT-DET’ is preferred but other times ‘ATT-DET > CEK-AP’ is preferred? In answer to this question, I suggest that the choice between the two possible orders has to do with whether the ATT-DET at hand carries a definite meaning or not. By way of illustration, the ATT-DET *hyen* ‘present’ carries a [+definite] meaning and thus the entire nominal *hyen kyengcey cengchayk* ‘the present economic renovation’ in (32d) acts like a definite description. This is evidenced by the fact that, as shown in (34), the ATT-DET *hyen* cannot co-occur with the demonstrative (DEM) *ku* ‘that’, regardless of their relative ordering.

- (34) a. ku/hyen [kyengcey cengchayk] (DEM/ATT-DET > compound N)  
           that/present [economy policy]  
           ‘that/the present economic policy’  
       b. \*ku hyen [economy policy] (DEM > ATT-DET > compound N)  
       c. \*hyen ku [economy policy] (ATT-DET > DEM > compound N)

Being a (disguised) definite description, the nominal *hyen kyengcey cengchayk* ‘the present economic policy’ can only have a non-restrictive modifier, and that modifier has to occur outside its projection, taking scope over it. Consequently, ‘CEK-AP > ATT-DET’ order obtains, as shown in (32c).

When it comes to the ATT-DET *say* ‘new’, I posit that it is not inherently [+definite], so in order to carry a [+definite] meaning, it has to co-occur with the DEM *ku* ‘that’. This is evidenced by the fact that, unlike *hyen*, *say* is compatible with *ku*, as shown in (35a), and furthermore, it cannot occur preceding *ku*, as shown in (35b).

- (35) a. ku **say** cengchayk (DEM > ATT-DET > N)  
           that new policy  
           ‘that new policy’  
       b. \***say** ku cengchayk (ATT-DET > DEM > N)

Given this, we can assume that the nominal *say cengchayk* is [–definite], so it can contain an adnominal modifier that restricts its head N’s denotation. This explains why the CEK-AP *haplicek* ‘rational’ may occur below *say*, as shown in (33c). But if the same nominal *say cengchayk* obtains the [+definite] feature by virtue of co-occurring with the DEM *ku*, then, the seemingly identical CEK-AP can take on the semantics of a non-restrictive modifier, so can

occur above the ATT-DET, thereby taking scope over it, as shown in (36).

- (36) **Ku hapli-cek** say cengchayk (DEM > CEK-AP > ATT-DET > N)  
 that rational new policy  
 ‘that new policy, which is rational’

When we turn our attention to RRCs (i.e. *un*-expressions), typological generalizations on N modifiers lead us to predict that they will occur preceding both ATT-DETs and CEK-APs because they are morpho-syntactically more complex than both classes of adjectival expressions. This prediction is borne out, as shown in (37)-(38).

- (37) a. pwuphayha-n **hyen** cengkwon (RRC > ATT-DET)  
 corrupt-Adn present regime  
 ‘the corrupt present regime’  
 b. \***hyen** pwuphayha-n cengkwon (ATT-DET > RRC)<sup>10</sup>
- (38) a. nollawu-n **kwahak-cek** palkyen (RRC > CEK-AP)  
 surprise-Adn science-CEK discovery  
 ‘A surprising scientific discovery’  
 b. \***kwahak-cek** nollawu-n palkyen (CEK-AP > RRC)

RRCs’ morpho-syntactic complexity also leads us to predict that they will always carry indirect/N-independent/intersective/S-level/relative interpretations. Interestingly, however, this prediction is not borne out. To see this, consider first (39): as observed by Kang (2006), the RRC *kasicekin* can denote either an enduring/I-level or a temporary/S-level property, unlike its CEK-AP counterpart *kasicek* ‘visible’, which can only receive an enduring/I-level reading.

- (39) a. Antlomeyta-nun **kasi-cek-i-n** pyel-i-ta. (RRC)  
 Andromeda-Top visible-Cop-Adn star-Cop-Decl  
 Reading 1: ‘The Andromeda is an inherently visible star.’ (enduring property)

<sup>10</sup> An anonymous reviewer claims that, sometimes, an *un*-expression may occur following an ATT-DET and to make this case, he/she states that the following datum is grammatical but according to my Korean informants, it is entirely ungrammatical.

(i) \*hyen sengkong-cek-i-n [kyengcey cengchayk] (ATT-DET > RRC)  
 present success-CEK-Cop-Adn [economy policy]  
 Int. ‘the successful economic policy of the present time’

My own judgment is that the above example may be acceptable if there is a pause after the ATT-DET. Given this, I suspect that the reviewer’s judgment might have been based on a ‘parallel modification’ case, which is well-known to be exempt from adjective ordering restrictions across languages (for details, see Sproat & Shih 1988, 1990).

Reading 2: ‘The Andromeda is among the stars visible (tonight).’ (temporary property)

b. Antlomeyta-nun **kasi-cek** pyel-i-ta. (CEK-AP)

Andromeda-Top visible star-Cop-Decl

‘The Andromeda is an inherently visible star’ (enduring property)

(Adapted from Kang 2006:159, ex.(37))

Relatedly, although it has gone unnoticed in the literature, RRCs stemming from subjective predicates can receive either an N-dependent/intensional/‘reference-modifying’ construal in the sense of Bolinger (1967) or an N-independent/extensional/deictic/‘referent-modifying’ construal in the sense of Bolinger (1967). For example, depending on the discourse context, *ttwienan*- ‘remarkable’ in (40) can be interpreted as ‘remarkable as a doctor’ or ‘remarkable as something else (e.g. a chess player)’.<sup>11</sup>

(40) Changki sihap-ey **ttwiena-n** uysa-ka han-myeng

Chess tournament-Loc remarkable-Adn doctor-Nom one-Cl

iss-ess-ta.

exist-Prf-Decl

Reading 1: ‘At the chess tournament, there was a doctor who is remarkable as a doctor.’

Reading 2: ‘At the chess tournament, there was a doctor who was remarkable as a chess player (or as something else).’

In a similar vein, depending on context, RRCs may receive so-called absolute as well as relative interpretations, as exemplified below.

(41) Mina-ka **kacang noph-un** san-ul olla-ess-ta.

M.-Nom most high-And mountain-Acc climb-Pst-Decl

Reading 1: ‘Mina climbed the highest mountain, i.e. Mt. Everest.’ (absolute reading)

Reading 2: ‘Mina climbed the mountain that is the highest among the ones under discussion, e.g. Mt. Jili (located in South Korea).’ (relative reading)

Such systematic ambiguities exhibited by *un*-expressions strongly suggest that they cannot be invariably treated as semantically indirect N modifiers, contrary to Kang (2006). If

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<sup>11</sup> According to an anonymous reviewer, the first reading of (40) comes about when there is a pause before *ttwienan* and the other reading comes about when there is no pause before it, making it easier to talk about an individual who is good at (playing) chess games. From what I have investigated, however, the ambiguity reported here arises even when such phonological variables are controlled for.

they are indeed some type of RCs, as argued here, then, their syntactic status will also pose a challenge for Cinque's (2010) analysis, since under his analysis, RRCs cannot take on direct adnominal semantics, which encompasses non-intersective, I-level, intensional, and absolute interpretations according to him.

FRCs do not display the same kind of ambiguity as RRCs do. Nevertheless, they present a similar problem: as noted by Larson and Takahashi (2007), in Korean and other unrelated languages such as Turkish, Mandarin, and Japanese, when an FRC with an I-level predicate and an FRC with a S-level predicate occur in a row modifying the same N, there is a remarkably strong tendency that the first FRC occurs more adjacent to the N than the second FRC. Interestingly, when two FRCs with the same type of predicates occur in a row, no such restriction holds. To illustrate, consider the following set of paradigms, which are taken from Larson and Takahashi (2007) (their examples (6), (7), and (8), respectively).

(42) Two I-level RCs in a row:

- a.  $[\text{RC}_1 e_i \text{ khi-ka } \text{ khu-}\emptyset\text{-n } [\text{RC}_2 e_i \text{ tampay-lul } [ \text{ } \_ \text{ height-Nom big-N.Pst-}]\text{-And } [ \text{ } \_ \text{ tobacco-Acc phiwu-n-}]\text{-un } \text{ salam}_i\text{-un } \text{ Chelswu-i-}\emptyset\text{-ta.}$   
 $\text{inhale-Imprf-}]\text{-And } \text{ person-Top } \text{ C.-Cop-N.Pst-Decl}$   
 Int. 'The person who smokes who is tall is Chelswu.' ( $\text{RC}_1 > \text{RC}_2$ )
- b.  $[\text{RC}_2 e_i \text{ tampay-lul phiwu-n-}]\text{-un } [\text{RC}_1 e_i \text{ khi-ka khu-}\emptyset\text{-}]\text{-n } \text{ salam}_i\text{-un } \text{ Chelswu-i-}\emptyset\text{-ta.}$  ( $\text{RC}_2 > \text{RC}_1$ )

(43) Two S-level RCs in a row:

- a.  $[\text{RC}_1 \text{ nay-ka } e_i \text{ ecey } e_i \text{ manna-}\emptyset\text{-}]\text{-n } [ \text{ } \_ \text{ I-Nom yesterday } \_ \text{ meet-Prf-}]\text{-Adn}$   
 $[\text{RC}_2 e_i \text{ socwu-lul masi-ko } \text{ iss-te-}]\text{-n } \text{ salam}_i\text{-un } \text{ Chelswu-i-}\emptyset\text{-ta.}$   
 $[ \text{ } \_ \text{ soju-Acc drink-Conn exist-Rtro-}]\text{-Adn } \text{ person-Top } \text{ C.-Cop-N.Pst-Decl}$   
 'The person who I met yesterday who was drinking soju (a traditional Korean alcoholic beverage) is Chelswu.' ( $\text{RC}_1 > \text{RC}_2$ )
- b.  $[\text{RC}_2 e_i \text{ socwu-lul } \text{ masi-ko } \text{ iss-te-}]\text{-n } [\text{RC}_1 \text{ nay-ka } e_i \text{ ecey manna-}\emptyset\text{-}]\text{-un } \text{ salam}_i\text{-un } \text{ Chelswu-i-}\emptyset\text{-ta.}$  ( $\text{RC}_2 > \text{RC}_1$ )

(44) An I-level RC and an S-level RC in a row:

- a.  $[\text{RC}_1 \text{ nay-ka } e_i \text{ ecey } \text{ manna-}\emptyset\text{-}]\text{-n } [ \text{ } \_ \text{ I-Nom } \_ \text{ yesterday } \text{ meet-Prf-}]\text{-Adn}$   
 $[\text{RC}_2 e_i \text{ phyengso } \text{ tampay-lul } \text{ phiwu-n-}]\text{-un } [ \text{ } \_ \text{ usually } \text{ cigarette-Acc } \text{ smoke-Imprf-}]\text{-Adn}$   
 $\text{ salam}_i\text{-un } \text{ Chelswu-i-}\emptyset\text{-ta.}$   
 $\text{ person-Top } \text{ C.-Cop-N.Pst-Decl}$   
 'The person who I met yesterday who usually smokes is Chelswu.'  
 ( $\text{RC}_{\text{S-level}} > \text{RC}_{\text{I-level}}$ )

- b. \*<sub>[RC2 e<sub>i</sub> phyengso tampay-lul phiwu-n-]-un</sub>  
<sub>[RC1 nay-ka e<sub>i</sub> ecey manna-∅-]-n salam<sub>i</sub>-un Chelswu-i-∅-ta.</sub>  
(RC<sub>I-level</sub> > RC<sub>S-level</sub>)

The above data show that one cannot equate all FRCs as semantically indirect N modifiers, as Cinque (2010) does. They also suggest that there may be two distinct positions for FRCs in Korean, one in the inner space of NP and one in the outer space thereof, as Larson and Takahashi (2007) speculate, capitalizing on Larson’s (1998, 2000) analysis of English ADJs.

To summarize the discussion thus far, we can conclude that the position of each adjectival class in Korean is not fixed; rather, their position is determined by the way in which nominal meanings are derived, along with other factors including constraints on linear ordering, which may be partly phonological in nature. In light of this conclusion, then, capturing the syntax and the semantics of Korean adjectival categories may require combining Cinque’s (2010) syntactic analysis of N modifiers with Larson’s (1998, 2000) more semantically oriented analysis. That is, what we need is an analysis which captures the correlation between the morpho-syntactic complexity of an adjectival expression and its surface position but still has some room for flexibility.

In an effort to offer such an analysis, I claim that except for ATT-DETs, in principle, any adjectival N modifier in Korean may occur in the inner or outer space of NP but their syntactic positions affect their interpretations. The reason is that an NP hosts the generic operator ‘ $\tau$ ’, as suggested by Larson (1998, 2000), so the NP-level serves as the demarcating line between direct and indirect adnominal semantics. I posit that ATT-DETs have little syntactic freedom because they exhibit properties of functional categories, as observed in §3.1. On this assumption, I further hypothesize that ATT-DETs are base-generated at the boundary between the NP-internal and the NP external-space. To articulate what I have in mind, I propose that a DP with various types of N modifiers in Korean is formed in the following manner.

First, the head N, which may or may not be a compound N, merges with a CEK-AP. The resulting nominal may merge with an ATT-DET if they are semantically compatible, and the ATT-DET closes the NP because of its functional nature. As for a non-intersective/I-level/intensional RC, I hypothesize that it is adjoined to NP, so is still under the scope of ‘ $\tau$ ’; it is highly unlikely to be below an ATT-DET, given the data below.

- (45) a. <sub>[RC e<sub>i</sub> cal.sayngki-∅-]-n</sub> **say** namca-chinkwu<sub>i</sub>-lul  
<sub>[ \_\_ handsome-N.Pst-]-Adn new boy-friend-Acc</sub>  
 sokayha-l-kkey.  
 introduce-Fut-Decl.Informal  
 ‘Let me introduce my new handsome boyfriend.’ (RRC > ATT-DET)
- b. \***say** <sub>[RC e<sub>i</sub> cal.sayngki-∅-]-n</sub> namca-chinkwu<sub>i</sub>-lul sokayha-l-kkey.  
(ATT-DET > RRC)

At the NP-external level, a non-restrictive CEK-AP may be added to the structure, but given the data in (46), its merge site has to be somewhere above NP but below a DEM.

- (46) a. Ku **hapli-cek** say cengchayk (DEM > **CEK-AP** > ATT-DET > N)  
 b. \***hapli-cek** ku say cengchayk (**CEK-AP** > DEM > ATT-DET > N)  
 Int. ‘that new policy, which is rational’

Now, when a DP contains an intersective/S-level/extensional RRC, given the data below, the merge site for the RRC has to be above a non-restrictive CEK-AP and below a DEM.

- (47) a. Ku **sengkong-cek-i-n** hapli-cek say cengchayk  
 (DEM > **RRC** > CEK-AP > ATT-DET)  
 b. \*Ku hapli-cek **sengkong-cek-i-n** say cengchayk  
 Int. ‘that new policy, which is rational and successful’  
 (DEM > CEK-AP > **RRC** > ATT-DET)

Finally, when a DP contains an unambiguously non-restrictive RC, the RC always occurs to the left of a possessor (POSS) or a DEM, regardless of whether it is a FRC or an RRC, as shown in (48). So I posit that non-restrictive RCs are adjoined to a DP.

- (48) a. [<sub>RC</sub> **Minsu-ka** *e<sub>i</sub>* **senmwulha-Ø-]-n Mina-uy ku kapang<sub>i</sub>  
 [ M.-Nom \_\_\_ give-Prf-]-Adn M.-Gen DEM bag  
 ‘that red bag of Mina’s, which Minsu gave her’ (**FRC** > POSS > DEM > N)  
 b. **ppalka-n** ku kapang  
 red-Adn that bag  
 ‘that bag, which is red’ (**RRC** > DEM > N)**

In sum, then, the basic adnominal structure in Korean will look like (49).<sup>12</sup> Note that in reality, no DP will ever contain all these modifiers simultaneously, so what is given here is meant to indicate the approximate position an N modifier occupies inside a DP.

- (49) Proposal for the basic adnominal structure in Korean:  

$$[\text{DP RC } [\text{DP } [\text{Poss/DEM } [\text{RC } [\text{CEK-NP } [\text{NP } \Gamma \text{ RC } [\text{NP } \text{ATT-DET } [\text{CEK-NP } [\text{N N}]]]]]]]]]]$$

<sup>12</sup> To keep things manageable, this structure does not include numerals (NUMs) and classifiers (CLs) even though they may occur prenominaly in Korean. The reason for their exclusion is that, in Korean, NUMs and CLs frequently occur as floated quantifiers (FQs), as shown in (40), and moreover, sometimes their FQ occurrences are strongly preferred, as noted by an anonymous reviewer (see also Lee 2000).

Needless to say, the analysis just outlined merits further justification and elaboration. That said, it seems to be a promising line to pursue for several reasons. First, it lets us account for why morpho-syntactically complex N modifiers which take on the form of RRCs may carry non-intersective/N-dependent/subjective Mod semantics in Korean, as shown in (40)-(41).

Second, it enables us to explain why even FRCs may have to occur in closer proximity to the head N if they contain I-level predicates, as illustrated by (44).

Third, although the present analysis permits both RRCs and FRCs to occur inside NP, it still gives us a way to explain their differences in engendering generic interpretations. To illustrate, recall that (26b) can be true even if Chelswu was kind to any angry people at that time whereas (27) can only be true if Chelswu was kind to some specific person/people who was/were angry at some particular time. Under our analysis, (26b) receives a generic interpretation because the RRC *hwaka nan* ‘angry’ lacks its own TAM, so the generic operator inside the NP can bind the situation variable in its denotation; (27) cannot receive a generic interpretation, by contrast, because the perfective aspect on the RC makes it describe a temporally bound set of eventualities and this makes generic quantification inapplicable.

Fourth, the idea promoted here that indirect (e.g. N-independent, deictic, or extensional) Mod semantics vs. direct (e.g. N-dependent, generic, or intensional) Mod semantics correlates with the NP-external vs. NP-internal position of an adjectival expression is bolstered by systematic semantic differences between argument DPs and predicative nominals. To exemplify, consider (50) in comparison with (40). In (40), the RRC *ttwienan* occurs inside a DP argument; in (50), it occurs inside a predicative nominal, and while the RRC (40) can describe either an N-dependent property (i.e. being remarkable as a doctor) or a N-independent property that is salient in the discourse context (e.g. being remarkable as a chess player), the seemingly identical RRC in (50) can only describe a N-dependent property.

- (50) Chinho-nun [ttwiena-n uysa]-i-ess-ta.  
 C.-Top [remarkable-And doctor]-Cop-Pst-Decl  
 Reading: ‘Chinho was a doctor who was remarkable as a doctor.’  
 Impossible reading: ‘Chinho was a doctor who was remarkable as a chess player.’

Consider now the discourse in (51). Here, what would be the predicative nominal in (50) occurs as the subject of a specificational sentence, overtly containing the DEM *ku*. Notice that *ttwienan* can now receive either a direct or an indirect Mod interpretation. Under the present analysis, the semantic ambiguity of this RRC is expected because the subject position of specificational sentences is presumably a DP (or something structurally bigger than a predicative nominal), so there are two possible positions for the RRC, i.e. somewhere inside of the NP and somewhere outside of it, as depicted in (52).



- (51) Etten uysa-ka changki-ey cham ttwiena-ess-ta.  
 some doctor-Nom chess-at very remarkable-Pst-Decl  
 Lit. ‘Some doctor was very remarkable at chess.’  
 [Ku ttwiena-n uysa]-nun Mina-uy namphyen-i-ess-ta.  
 [that remarkable-Adn doctor]-Top M.-Gen husband-Cop-Pst-Decl  
 Reading 1: ‘That doctor who is/was remarkable as a chess player was Mina’s husband.’  
 Reading 2: ‘That doctor who is/was remarkable as a doctor was Mina’s husband.’
- (52) a. [DP ku [NP [RC ttwiena-n] uysa]] (NP-internal modification)  
 b. [DP ku [RC ttwiena-n] [NP uysa]] (NP-external modification)

Notably, the present analysis receives additional support from the fact that English exhibits a similar correlation. As exemplified in (53), when the ADJ *remarkable* occurs inside a predicative nominal, it only receives subsective, N-dependent, or reference-Mod semantics, but when the same ADJ occurs inside an argument DP, it can have intersective, N-independent, or referent-Mod semantics, as well as subsective, N-dependent, or reference-Mod semantics.

- (53) a. John is a remarkable doctor  
 Reading:  $\sqrt{\text{remarkable}}$  as a doctor/\*remarkable as a chess player.  
 b. At the recent chess game, a remarkable doctor participated.  
 Reading:  $\sqrt{\text{remarkable}}$  as a doctor/ $\sqrt{\text{remarkable}}$  as a chess player.

## 5. Conclusion

In Korean, adnominal adjectival expressions carrying direct Mod semantics in the sense of Sproat and Shih (1988, 1990) occur closer to the head N, and those carrying indirect Mod semantics occur father away from it. This makes Korean look like a well-behaving language. But morpho-syntactically complex N modifiers can sometimes carry direct Mod semantics and when they do, they must occur close to the head N, paralleling the behavior of morpho-syntactically simplex N modifiers. Taken together, these findings suggest that positing a fixed position for each type of adjectival expression, as Cinque (2010) does, will not work for Korean. Hence a more flexible analysis in the spirit of Larson (1998, 2000) would be a more promising line to pursue. This conclusion implicates that the ability to express direct Mod meaning is not confined to ‘true’ ADJs, so even without an open class of ADJ, a language may still be able to express various adnominal meanings (see Svenonius 2008 for a similar conclusion independently drawn on the basis of several typologically unrelated languages). Finally, our analysis of ATT-DETs suggests that DP structure may contain an NP-internal functional category with a [–definite] feature. Interestingly, Cinque (2008) posits a similar functional category called dP, although he assumes that it is located above NP and his analysis

is based on the behavior of RCs in languages unrelated to Korean. It may turn out that Cinque's dP and the functional category hosting ATT-DETs are of the same kind, but investigating this matter will have to be left for the future.

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