

The Absence of the Adjective Category in Korean *

Minjoo Kim

University of Massachusetts-Amherst

This paper presents arguments that Korean lacks the category of Adjective. I claim that what have been traditionally analyzed as adjectives are stative verbs. I demonstrate that apparent noun-modifying adjectives in Korean are predicates inside relative clauses. The proposed analysis predicts that putative adnominal adjectives in Korean will only be interpreted intersectively. I show that this prediction is borne out. Confronted with the challenge that Korean abounds in non-intersective predicates like *skillful*, I propose new lexical entries for them and show that the new analysis can readily overcome the challenge.

Key words: adjectives, relative clauses, noun-modification, intersectives, non-intersectives, predicate conjunction

1. Introduction

What is the definition of adjectives? The literature suggests that it is extremely difficult to come up with a criterial definition for them (see Dixon 1982, Hamman 1991 and Beck 1999, among others). It appears that what works for one language does not necessarily work for the next language, whether it is a syntactic criterion (e.g., distribution), a morphological one (e.g., agreement and inflection), or a semantic one (e.g., gradability and quality-denoting, Wierzbicka 1986) (see Beck 1999 for a thorough and detailed literature review of different definitions of adjectives). Nonetheless, most authors seem to agree that adjectives are inherently noun-modifiers (Hamman 1991:658, Beck 1999:68-70 and Baker, in press).

Despite the difficulty with defining what it is, the Adjective class is assumed to be among the universal lexical categories (cf. Chomsky 1970, Baker, in press). As a matter of fact, native speakers of a language seem to have an intuitive idea about what count as adjectives as opposed to nouns and verbs. Yet several typological works on lexical classes report that quite a number of languages in the world have either a limited number of adjectives (e.g., Japanese, Hausa, and Bantu languages) or no open class of Adjective (e.g., Mandarin, Yurok, and Samoan) (see Dixon 1982). Beck (1999) makes an even stronger claim along these lines, by maintaining that languages with few or no adjectives are a "typological commonplace" and there is something "marked" about the Adjective class in comparison with the Noun and Verb classes.

Where does Korean fit in this picture? Traditional Korean grammarians (e.g., Choy 1971, Sohn 1996, and Sohn 1999) claim that Korean has a distinct category of Adjective. As they argue, adjectives in Korean apparently occur both attributively and predicatively, as shown in (1a) and (1b), respectively.¹

- (1) a. Ce **yeppu-n** yeca
 that pretty-REL² woman
 ‘that pretty woman’
 b. Ce yeca-ka **yeppu-ta**
 that woman-NOM pretty-DCL
 ‘that woman is pretty’

* I would like to thank Lisa Matthewson, Ellen Woolford, Barbara Partee, and Rudy Trouk for their valuable comments and suggestions. Thanks are also due to Hosuk Yoon for his help with the Korean data. All the remaining inadequacies are of course my own.

¹ For the transcription of the Korean data presented in the paper, the Yale Romanization has been adopted. For abbreviations, the following is used:

ACC: accusative case; CSL: casual style; DCL: declarative sentence; EVD: evidential mood; FML: formal style; NOM: nominative case; PERF: perfective aspect; PRES: present tense; PST: past tense; REL: relative clause marker; TOP: topic.

² I analyze the morpheme *-n* (or its allomorphs), which links an adjective and the noun it modifies, to be identical to the relative clause marker *-n*, and, hence, will gloss it as such all throughout the paper.

In recent years, the claim that Korean has the Adjective category has been questioned by several generative linguists (e.g., Maling and Kim 1998 and James Yoon personal communication). To the best of my knowledge, however, there has been no work published on this subject which offers clear evidence against the presence of the Adjective class in Korean.³

In this paper I attempt to show that Korean indeed lacks a distinct category of Adjective.⁴ By utilizing the standard definition of adjectives as noun-modifiers, I show that what has been traditionally analyzed as Adjective in fact belongs to Verb Class and that putative adnominal adjectives in Korean are predicates inside relative clauses (RCs).

The remainder of this paper is organized as follows. In Section 2, I briefly review how traditional grammarians distinguish adjectives from nouns or verbs. In Section 3, I argue against the traditional analysis by providing evidence against the presence of Adjective in Korean. Section 4 discusses the predictions of the new claim. This section particularly focuses on the function of adjectives as noun-modifiers and how Korean expresses diverse adjectival meanings such as "intersectivity" and "non-intersectivity" (Kamp 1975) in the absence of Adjective. Section 5 presents and discusses a problem that potentially challenges the new analysis: namely, the difficulty of expressing subsecutive or non-intersective meanings through the medium of RCs. I propose a new denotation for subsecutive predicates and show that the proposed analysis can readily overcome this challenge. Section 6 concludes the paper.

2. Traditional Criteria for Adjectives

Traditional Korean linguists such as Choy (1971), Suh (1996), and Sohn (1999) assume that Korean has a distinct lexical and syntactic category of Adjective.⁵ More recently, Yu (1999) maintains that Korean has various subclasses of adjectives, which are distinct from verbs.

How do traditional Korean linguists determine the adjectivehood of a lexical item? Most traditional grammarians rely on semantic criteria: if a lexical item describes the property or the state of an object, it is an adjective. Yet Sohn (1999) utilizes two morphological criteria to differentiate adjectives from nouns and verbs. First, he utilizes inflection for tense or aspect to distinguish adjectives from nouns, as shown in (2) (p. 209).

- (2)
- | | | | | |
|----|--|-----|--------|--------------------------|
| a. | Mali-nun | han | tongan | yeppu-ess-ess-ta |
| | M.-TOP | one | period | pretty-PERF-PST-DCL |
| | ‘Mary had been pretty for a while’ or ‘Mary used to be pretty’ | | | |
| b. | Mali-nun | han | tongan | sensayng-i-ess-ess-ta |
| | M.-TOP | one | period | teacher-COP-PERF-PST-DCL |
| | ‘Mary had been a teacher for a while’ | | | |
| c. | *Mali-nun | han | tongan | sensayng-ess-ess-ta |
| | M.-TOP | one | period | teacher- PERF-PST-DCL |

³ Martin (1992:88-89) classifies adjectives in Korean as "descriptive verbs". But he does not provide arguments for such a classification.

⁴ James Yoon pointed out to me that lexical items such as *say* 'new', *hen* 'old', *hes* 'useless', and *mayn* 'most' may constitute a small class of adjectives which occur only attributively, as shown in (i).

- (i)
- | | | | |
|----|---------------------|--------|---------|
| a. | say | cip | |
| | new | house | |
| b. | *ku | cip-un | say-ta. |
| | that | house | new-DCL |
| | ‘That house is new’ | | |

Standard Korean grammars list such lexical items under the rubric of "attributive determinatives" on the grounds that they are limited in number and behave differently than typical "adjectives" in Korean, because they do not occur predicatively (e.g., Suh 1996:567-571). Even if these words turn out to be real adjectives, they form such a small class that it would be hard to argue that Korean has an open category of Adjective. So Korean would fall together with languages such as Japanese and Hausa.

⁵ Suh (1996) notes, however, that, because adjectives in Korean refer to properties or states of objects, and yet pattern similarly with verbs, they can be classified as stative verbs. But he follows the traditional practice of lexical classification and thus assumes that there is a distinct class of Adjective, whose primary function is the predicative use, and whose secondary function is the attributive use (p. 726-727).

Paradigm (2) shows that adjectives can inflect for tense and aspect, whereas nouns cannot, unless they are attached by the copular verb *i-*.

Sohn notes that the property of inflection makes adjectives fall under the rubric of "Predicate", along with verbs (p. 209). But he claims that one can nevertheless distinguish adjectives from verbs, since these two categories take different non-past morphemes to mark declarative sentences: Verbal stems take the suffix *-nun* (or its allomorph *-n*), while adjectival stems take a zero morpheme (\emptyset), as illustrated in (3).

- (3) a. John-un ppang-ul **mek-nun-ta**
 J.-TOP bread-ACC eat-PRES-DCL
 'John eats bread'
- b. John-un holangy-ka **musep- \emptyset -ta**
 J.-TOP tiger-NOM scary-PRES-DCL
 'John is scared of tigers'

Sohn's second criterion does not seem to be a reliable diagnostic, however, because the morpho-syntactic and semantic nature of the morpheme *-nun* is not so clear-cut. Unlike Sohn, Suh (1996) strongly argues that the non-past form in Korean is morphologically zero (p. 232). His arguments become clearer when we try to attach various ending forms to the same sentences in (3). When the predicate ending changes into a casual or formal style, the morpheme *-nun* disappears from both the verbal stem *mek-* and the adjectival stem *musep-*, as shown in (4).

- (4) a. John-un ppang-ul **mek- \emptyset -ne**
 J.-TOP bread-ACC eat-N.PRES-DCL (CSL)
- a'. John-un ppang-ul **mek- \emptyset -supnita**
 J.-TOP bread-ACC eat-N.PRES-DCL (FML)
 'John eats bread'
- b. John-un holangy-ka **musep- \emptyset -ne**
 J.-TOP tiger-NOM scary- N.PRES-DCL (CSL)
- b'. John-un holangy-ka **musep- \emptyset -supnita**
 J.-TOP tiger-NOM scary- N.PRES-DCL (FML)
 'John is scared of tigers' (lit.: As for John, tigers are scary.)'

If Suh's analysis of the morpheme *-nun* is right, then it seems unreasonable to use the incompatibility with *-nun* as a diagnostic for identifying adjectives in Korean.

My objection to Sohn's second criterion suggests that it is not easy to differentiate adjectives from verbs in Korean. But we need more compelling evidence to believe that adjectives in Korean are indeed verbs. That being said, we now turn to Section 3, which presents arguments for the absence of Adjective class in Korean.

3. Why "Adjectives" in Korean are not Adjectives

This section offers arguments for the lack of a distinct class of Adjective in Korean. I draw on morphosyntactic facts around putative adjectives in Korean (KAs) and demonstrate that KAs are stative verbs.

The first argument that KAs are verbs comes from the fact that, when used predicatively, they must occur without copular verb *-i*, as shown in (5). Note that nominal predicates such as *haksayng* 'student' must co-occur with the copular verb, as shown in (6).

- (5) a. *Ce yeca-ka **yeppu-i-ta**
 that woman-NOM **pretty-COP-DCL**
- b. Ce yeca-ka **yeppu-ta**
 that woman-NOM **pretty-DCL**
 'that woman is pretty'

- (6) a. Ce yeca-ka **haksayng-i-ta**
 that woman-NOM **student-COP-DCL**
 ‘that woman is a student’
 b. *Ce yeca-ka **haksayng-ta**
 that woman-NOM **student-DCL**

If KAs are not adjectives but verbs, it is then not surprising that KAs take tense, aspect or mood marking, as shown in (7), although adjectives, characteristically, do not take such marking (Hamann 1991:658).

- (7) Mali-nun han ttay ttokttokha-ess-ess-tay
 M.-TOP one time smart- PERF-PST-EVD
 ‘I hear that Mary used to be smart’

The second argument that KAs are not adjectives comes from the fact that they lack noun-modifying (or adnominal) function, which is deemed to be one of the defining properties of the Adjective category across languages (see Hamann 1991:658, Beck 1999:68-69 and Baker, in press, among others). Beck argues that in order for a lexical item to belong to the Adjective class, it must be able to modify nouns "without any further measure". In other words, if a lexical item needs morpho-syntactic support such as the relative clause (RC) marker or the participial morphemes (e.g., *-ing*), then it is not an adjective. Verbs in English illustrate such a case, as shown in (8).

- (8) a. the boy [**who** is running].
 b. the **running** boy
 c. *the run boy

Given (1a) above, it may appear that KAs can modify nouns but close examination of their distribution suggests that they cannot modify nouns without further morphosyntactic measure, namely the morpheme *-n* (or its allomorphs), which is a relative clause marker in Korean, as shown in (9). (9b) is an instantiation of a nominal modified by a putative adjective, and (9a) is an instantiation of a typical RC containing an intransitive verb.

- (9) a. [e₁ ece ttena]-**n**₁ namca⁶ (*e* = an empty category)
 [yesterday left]-**REL** man
 ‘the/a man who left yesterday’
 b. [e₁ yeppu]-**n**₁ yeca
 [pretty]-**REL** woman
 ‘the/a pretty woman’

What the sentences in (9) reveal to us is that a RC containing an intransitive verb and a noun phrase containing an adnominal adjective have identical syntactic structures. This suggests that adnominal KAs should be treated as predicates inside RCs, rather than typical attributive adjectives.⁷

⁶ Note that, in Korean, tense and aspect marking on predicates inside RCs works slightly differently than that in declarative sentences: the relative marker *-n* varies depending on the tense/aspect of the RC, so the predicate inside a RC does not necessarily have to mark tense/aspect, as shown in (i).

(i) a. [e₁ Mali-lul salangha]-**ten**₁ namca
 [M.-ACC love]-**REL** (PAST) man
 ‘the man who loved (used to love) Mary’
 b. [e₁ Mali-lul mana]-**l**₁ namca
 [M.-ACC meet]-**REL** (FUTURE) man
 ‘the man who will meet Mary’

⁷ Kuno (personal communication) contends that the ability to modify nouns is not a reliable diagnostic to tell whether a lexical item in Korean is an adjective or not, because Korean is an agglutinative language whose

Additional support for the claim that adnominal KAs are predicates inside RCs comes from the fact that they can take tense/aspect-marking even when occurring as noun-modifiers, as shown in (10).

- (10) a. Ce *yeppu-Ø-n* *yeca*
 that pretty-**PRES-REL** woman
 ‘that pretty woman’
 b. Ce *yeppu-ess-ess-ten* *yeca*
 that pretty-**PERF-PST-REL** woman
 ‘that woman who used to be or was pretty’

Since the predicate *yeppu-* ‘pretty’ in (10) appears inside a noun phrase, it would not be possible for it to take tense/aspect-marking unless it is inside a clause. Since the examples in (10) represent noun phrases, the most likely candidate for this clause is a RC.

In a similar vein, it is important to note that some of the most common adjectives across languages such as *tall*, *short*, *good* and *bad* (Dixon 1982) are realized as multiple lexical items in Korean. Hence, the only way in which they can modify a noun is by occurring inside RCs, as shown in (11-12).

- (11) a. Ce *yeca-nun* *ki-ka* *ku-ta*
 that woman-TOP height-NOM big-DCL
 ‘That woman is tall’ (lit.: ‘As for that woman, her height is big’)
 b. Ce [*e*₁ *ki-ka* *ku*]-*n*₁ *yeca*
 that [height-NOM big]-REL woman
 ‘That tall woman’ (‘lit.: that woman whose height is big’)
- (12) a. Ce *yeca-nun* *maumssi-ka* *kop-ta*
 that woman-TOP heart-NOM pretty-DCL
 ‘That woman is nice’ (‘lit.: As for that woman, her heart is pretty’)
 b. Ce [*e*₁ *maumssi-ka* *kop*]-*un*₁ *yeca*
 that [heart-NOM pretty]-REL woman
 ‘that nice woman’ or ‘lit.: that woman whose heart is pretty’

The above paradigms suggest that in Korean, even the most basic and prototypical adjectives cannot modify nouns unless they occur inside RCs.

The arguments presented thus far strongly suggest that KAs are not adjectives. What category would they then belong to? I argue that given that they denote states and also inflect for tense/aspect, they are most likely to be stative verbs. Interestingly enough, the Korean grammars noted above either do not list a distinct category of Stative Verb (e.g., Sohn 1999) or they mention only in passing that “KAs could be viewed as stative verbs” like *al-* ‘to know’ or *memul-* ‘to stay’ (Suh 1996:726). I suspect that the lack of stative verbs in some Korean

predicates are bound morphemes. Hence, it is not surprising that, in Korean, an adjective can only modify a noun when it attaches to another morpheme.

But this line of thinking is problematic for the following reason. Suppose the agglutinative aspect of Korean is wholly responsible for KAs’ inability to directly modify nouns. But then it is puzzling why KAs are not free morphemes. Note that nouns in Korean, which can also be predicates, are free morphemes, and therefore they can directly modify another noun, as shown in (i).

- (i) a. Mali-nun **swuhak** **sensayng-i-ta**
 M.-TOP math teacher-COP-DCL
 ‘Mary is a math teacher’
 b. Mali-nun **yachay** **sicang-e** **ka-ess-ta**
 M.-TOP vegetable market-to go-PST-DCL
 ‘Mary went to the vegetable market’

In view of the fact that Korean has predicates that can stand alone, I conclude that the agglutinative aspect of Korean does not provide an argument against my claim.

grammars is not a sheer accident. I believe that this absence is due to the fact that a large portion of stative verbs in Korean has been misanalyzed as adjectives.⁸

To summarize, in this section, I have argued that, in Korean, what have been traditionally classified as adjectives are in fact stative verbs. I have provided four pieces of evidence in support of this claim. Most importantly, I have demonstrated that KAs fail the two most important diagnostics for adjectivehood: they take tense/aspect marking and cannot directly modify nouns and hence must appear as predicates inside RCs. In the next section, I discuss the predictions that fall out of this new analysis.

4. Predictions of the New Analysis

This section discusses some predictions of the new analysis. It particularly focuses on how Korean, in the absence of adjectives, expresses various adjectival meanings such as “intersective” and “non-intersective” (Kamp 1975, Kamp and Partee 1995, and Partee 1995).

The proposed analysis makes the following predictions. First, it predicts that every putative KA will be able to occur predicatively. Second, it predicts that putative KAs will not occur as resultative state or depictive predicates, since these are positions typically occupied by adjectives. In addition, the new analysis predicts that noun-modifiers containing putative KAs will only have intersective meanings, because they are RCs, which are standardly interpreted intersectively. In what follows, I discuss each of these predictions in detail.

4.1 Non-existence of non-predicative “adjectives” in Korean

One of the predictions of the proposed analysis is that if a lexical item cannot be used predicatively (but only attributively), it will not behave like a stative verb on the test of verthood. Such lexical items will behave like members of another category, namely Noun.

A typical example of adjectives that occur only attributively is *former*, as shown in (13).

- (13) a. A former senator
b. *A senator who was former.

The new analysis predicts that the lexical item corresponding to *former* in Korean will not be a stative verb. This prediction is borne out, because the Korean counterpart of *former* is *cen*, which is an attributive determinative in Suh’s (1996) classification, which can occur only attributively, as shown in (14).

- (14) a. **cen** sangwonuywon
 former senator
 ‘a former senator’

⁸ One might wonder why the “-ko *issta*” form, which roughly corresponds to “*be -ing*” in English, can co-occur with typical stative verbs like *al-* ‘to know’ and *salangha-* ‘to love’, but not with putative adjectives like *yepu-* ‘to be pretty’ in Korean, as shown in (i).

- (i) a. Na-nun ku sasil-ul **al-ko** **iss-ta**
 I-TOP the fact-ACC **know-ko** **exist-DCL**
 ‘Lit.: I’m in the state of knowing the fact’
 b. *Na-nun **yepu-ko** **iss-ta**
 I-TOP **pretty-ko** **exist-DCL**

The question is: if KAs are indeed stative verbs, why do they behave differently than “typical” stative verbs with respect to their co-occurrence with *-ko issta*? I believe that this is a non-trivial question which involves the syntax and semantics of the “-ko *issta*” construction, in addition to the lexical meanings of stative verbs in Korean. Although answering this question properly will go beyond the scope of this paper, I suspect that the answer might be rather straightforward. It may be the case that verbs like *al-* ‘know’ and *salangha-* ‘love’ are not stative verbs; if they were, then they would not combine with progressive-marking morphology, namely *-ko issta*.

In fact, I found support for this line of reasoning from other languages. First, my colleague Makoto Kadowaki pointed out to me that recent research on Japanese verbal meanings (Kindaichi 1950 and Ogihara 1998) shows that Japanese verbs corresponding to ‘to know’, ‘to love’, and ‘to live’ are not statives; rather, they are “instantaneous” verbs and hence can co-occur with *te iru*, which refers to states after culmination of events. In addition, Barbara Partee told me that verbs like ‘to know’ and ‘to understand’ in Russian and even in English can have both perfective and imperfective meanings, suggesting that their aspectual structures are quite complex.

- b. *ku sangwonuywon-un **cen-i-ta**
 the senator-TOP **former-COP-DCL**
 ‘Lit.: the senator was former’

4.2 Non-occurrence as resultative or depictive predicates

In the literature, among the characteristic properties of adjectives is their ability to occur as resultative state or depictive predicates (see Baker, to appear). The following examples from English illustrate this point.

- (15) a. I hammered the nail **flat**. (*flat* denotes a resultative state)
 b. I always drink milk **hot**. (*hot* denotes depiction)

The proposed analysis predicts that putative adjectives in Korean will not occur in resultative or depictive positions, because verbs typically do not occur in such positions, as shown in (16).

- (16) a. *I hammered the nail bend.
 b. *I always drink milk boil

This prediction is borne out. In Korean, resultative or depictive states are expressed by lexical items which have been analyzed as adverbs, involving the *-key* affixation, as shown in (17).

- (17) a. Na-nun mos-ul **napcakha-key** ttayli-ess-ta
 I-TOP nail-ACC **flat-AFF** hit-PST-DCL
 ‘I hammered the nail flat’
 b. Na-nun encena uwyuw-ul **ttukep-key** masi-n-ta
 I-TOP always milk-ACC **hot-AFF** drink-PRES-DCL
 ‘Lit. I always drink milk in a hot state’

The fact that, in Korean, resultative and depictive state positions are filled by some sort of adverbs, not by putative adjectives, seems to be a welcome result for the present analysis. But is it really? What makes adverbs in Korean occur in secondary predicates denoting resultative and depictive states, although they usually do not in other languages like English, as shown in (18)?

- (18) a. *I hammered the door **flatly**.
 b. *I drink milk **hotly**.

I argue that what occur in resultative/deictive state positions in Korean are verbs and that the affix *-key* is an aspectual marker, not an adverbializer. Notice that this affix can also occur on the secondary predicates in causative constructions, as shown in (19).

- (19) a. Na-nun John-lul **ttena-key** mantul-ess-ta
 I-TOP J.-ACC **leave-AFF** make-PST-DCL
 ‘I made John leave’
 b. Na-nun John-ul uwyuw-ul **masi-key** mantul-ess-ta
 I-TOP J.-ACC milk-ACC **drink-AFF** make-PST-DCL
 ‘I made John drink milk’

If *-key* is indeed an adverbializer, whose function is to change nouns or adjectives into adverbs, it then becomes curious why it can sometimes attach to adjectives but other times to verbs.

If we deny the traditional treatment of *-key*, however, and reanalyze it to carry an aspectual meaning such as causation or resultative/deictive states, along with the matrix verb, then the data in (17) and (19) can receive a uniform account. That is, the secondary predicates

in these sentences are verbs and the suffix *-key* on them brings in different aspectual meanings to seemingly identical syntactic structures. After all, these data seem to show that, in Korean, secondary predicate positions are filled by verbs taking an aspectual marker *-key*.

4.3 The intersective interpretations of relative clauses

Restrictive RCs are standardly analyzed as of type $\langle et \rangle$, which combine with their head nouns via *Predicate Modification or Conjunction* (cf. Quine 1960).⁹ Since the present analysis treats adnominal KAs as predicates inside RCs, they are predicted to have intersective meanings only. A comparison of a couple of English examples with their Korean counterparts illustrates this point.

Certain adjectives in English can be used both predicatively and attributively and, when used attributively, they can receive either intersective or non-intersective interpretations. For example, *beautiful* can have two interpretations, as shown in (21a) and (21b) (see Larson 1999).

(20) Olga is a beautiful dancer.

- (21) a. Olga is beautiful and is a dancer. (Intersective reading)
 b. Olga dances beautifully. (Non-intersective reading)

If *beautiful* modifies the noun *dancer*, an intersective reading obtains. If it modifies the event in which Olga dances, a non-intersective reading results.

The proposed analysis predicts that the Korean counterparts of adjectives like *beautiful* will unambiguously have intersective interpretations. This prediction is borne out. The Korean counterpart of *beautiful* can only be interpreted intersectively, as shown in (22a), and the non-intersective reading of the sentence (20) is expressed by an entirely different structure, as shown in (22b).

- (22) a. Olga-nun [_{e₁} alumta]-wun₁ mwuyong-su-i-ta
 Olga-TOP [beautiful]-REL dance-person-COP-DCL
 ‘Olga is beautiful and is a dancer’ (Intersective reading only)
 b. Olga-nun alumtap-key mwuyong-ha-n-ta
 Olga-TOP beautiful-AFF dance-do-PRES-DCL
 ‘Olga dances beautifully’¹⁰ (Non-intersective reading only)

Another important prediction of the new analysis is the absence of quantificational adjectives like *occasional* in Korean. Larson (1999) has argued that *occasional* can be directly predicated of (or quantify over) events introduced outside the noun phrase in which it occurs, as shown in (23).

(23) [_{DP} An occasional sailor] passed by.

If *occasional* takes scope over the sentence and hence quantifies over the set of events that the VP denotes, then (23) can be interpreted as something like (24a). On the other hand, if the adjective stays inside the noun phrase in LF, then an intersective reading (24b) results.

- (24) a. Occasionally, a sailor passed by.
 b. A person who occasionally sailed passed by.

⁹ Heim and Kratzer (1998:126) offers the following as a formal definition of *Predicate Modification*:

Predicate modification: If α is a branching node, $\{\beta, \gamma\}$ is the set of α 's daughters, and $[[\beta]]$ and $[[\gamma]]$ are both in $D_{\langle e, t \rangle}$, then $[[\alpha]] = [\lambda x. x: [[\beta]](x) = 1 \text{ and } [[\gamma]](x) = 1]$.

¹⁰ Under the proposed analysis of *-key* as an aspectual marker, *alumtap-key* in (22b) sentence can be analyzed as a secondary predicate denoting a depictive state. On this view, the sentence can be interpreted as ‘Olga dances beautifully’ or ‘When she dances, Olga is beautiful’.

The proposed analysis predicts that Korean will lack predicates corresponding to adjectives like *occasional* from English, because these adjectives are quantificational and hence cannot occur as predicates inside RCs, as shown (25).

(25) *John is a sailor who is occasional.

This prediction is also borne out. Korean lacks a lexical item that corresponds to *occasional*. Hence, the only way in which the two readings in (24) can be expressed in Korean is by using two entirely different structures.

- (26) a. Ttayttaylo senwon-i cinaka-ess-ta
 occasionally sailor-NOM pass.by-PST-DCL
 ‘Occasionally, a sailor passed by’
 *‘a person who occasionally sailed passed by’
- b. [e₁ ttayttaylo senwon-i-ess]-ten₁ salam-i cinaka-ess-ta
 [occasionally sailor-COP-PST]-REL person pass.by-PST-DCL
 ‘Someone who occasionally sailed passed by’

To summarize, in this section, I have discussed the predictions of the new analysis. First, the new analysis correctly predicts that adjectives like *former*, which cannot occur predicatively, will not be verbal predicates in Korean. It turned out that they belong to a small class of attributive determinatives. The second prediction was about the non-occurrence of putative KAs in resultative and depictive state positions, which are typically filled by adjectives. It turned out that these positions can be occupied by seeming adjectives in Korean, but they have to be marked by the affix *-key*, just like any Korean verbs occurring in secondary positions have to. This confirms to us that there is no distinction between verbs and putative adjectives in Korean. In addition, the new analysis correctly predicts that putative KAs will have only an intersective interpretation, since they occur as predicates inside RCs, which combine with their head nouns via predicate conjunction.¹¹

5. A Challenge for the New Analysis: presence of non-intersectives in Korean

The previous section deliberately omits discussion of one important subclass of predicates, namely non-intersectives or subsectives in Korean (e.g., *nunswukha-* 'skillful' *twyena-* 'excellent', *hwulwungha-* 'good' and *ssulmoep-* 'useless'). In this section, I discuss the problem that they pose for the current analysis. I show that this problem stems from incorrect assumptions about the lexical entries for subsectives, and hence, once we get the right denotations for them, it disappears. Typical examples of subsectives are adjectives like *skillful* and *good* in English. Subsectives are not intersective, because unlike intersective adjectives (e.g. *red*, *fat*, and *French*), they do not support the entailment pattern (27) (see Landman 2001:1).

¹¹ One might wonder whether Korean has so-called "modal" predicates (e.g., *alleged*, *arguable*, and *potential*), which state relations between possible world and time variables (see Kamp 1975 and Landman 2001, among others). Korean does have several of them but, interestingly enough, none of them behaves like a stative verb; they either consist of multiple lexical items, as shown in (i), or belong to a Noun class, as shown in (ii).

(i) [e₁ salinca-lo hyemuy(-lul) pat]-un₁ salam
 [murderer-as suspicion(-ACC) received]-REL person
 ‘a person alleged to be a murderer’
 (Lit.: ‘a murderer who received suspicion or allegation’)

(ii) camcaycek mwuncey
 potential problem

Example (i) shows that no direct translation of *alleged* is possible into Korean, while (ii) shows that *camcecek* 'potential' is a noun (note that lexical items ending with *cek* are all of Sino-Korean origin and classified as nouns). It is curious why none of the modal predicates in Korean is a stative verb.

Incidentally, Makoto Kadowaki pointed out to me that modal predicates in Japanese are also non-verbal predicates of Sino origin. It would be worth while to investigate whether there is any historical reason behind this phenomenon. I leave this task to further research.

- (27) a. John is a **skillful** teacher. (subsective)
 =/=> John is skillful and John is a teacher.
 b. John is a **fat** mathematician (intersective)¹²
 ==> John is fat and John is a mathematician.

The reason why subsectives fail this entailment pattern is because they do not refer to specific sets of things that have the same properties. For example, the adjective *skillful* in (27a) does not refer to a set of individuals that are skillful. It rather refers to individuals that are skillful at being something, which is in this case a mathematician. In contrast, intersectives denote specific sets of things. For example, *red* refers to a set of things that are red.

The proposed analysis predicts that Korean will not have nominal modifiers corresponding to subsective adjectives in English. This is because RCs are standardly interpreted intersectively and hence there will be a clash between subsective meanings and intersective meanings inside RCs.

To illustrate this point, let us consider the following syllogisms. Since intersective meanings can be carried over from one sentence to another, we can correctly predict (28) to have a valid conclusion.

- (28) a. John-un **ttwungttwungha-n** uysa-i-ta
 J.-TOP **fat-REL** doctor-COP-DCL
 ‘John is a doctor who is fat’
 b. John-un vayolin yencwuka-i-ta
 J.-TOP violin player-COP-DCL
 ‘John is a violin player’

 c. Kulemuro, John-un **ttwungttwungha-n** vayolin yencwuka-i-ta
 therefore, J.-TOP **fat-REL** violin player-COP-DCL
 ‘Therefore, John is a fat violinist’ (VALID)

If John is a doctor who is fat and John is a violinist, one can conclude from the premises that John is a fat violinist. Hence, we can conclude that the adjectival meaning of *fat* can be inherited from the premise to the conclusion in the syllogism.

When it comes to subsectives, however, we have a problem: given the validity of the argument (28), one would expect (29) to be valid as well, contrary to fact.

- (29) a. John-un **nungswukha-n** uysa-i-ta
 J.-TOP **skillful-REL** doctor-COP-DCL
 ‘John is a doctor who is skillful’
 b. John-un vayolin yencwuka-i-ta
 J.-TOP violin player-COP-DCL
 ‘John is a violin player’

 c. Kulemuro, John-un **nungswukha-n** vayolin yencwuka-i-ta
 therefore, J.-TOP **skillful-REL** violin player-COP-DCL
 ‘Therefore, John is a skillful violinist’ (INVALID)

This time the syllogism fails, because the fact that John is a skillful doctor does not entail that he is a skillful violinist.

The invalidity of (29) may seem to pose a problem for the current analysis. But, as a matter of a fact, this syllogism failure can be a problem for any analysis that deals with languages that allow subsective predicates to occur as predicates inside RCs. Notice that even

¹² Adjectives like *fat* can be considered vague, since depending on the comparison class, the degree to which one person is fat may vary. But this vague aspect of *fat* is not so important to our present purpose. Hence, I treat it like a non-vague intersective adjective.

in English, we get the same dichotomy between intersectives and subsectives, as shown in (30-31).

- (30) a. John is a doctor who is **fat**.
 b. John is a violinist.

 c. Therefore, John is a violinist who is **fat**. (VALID)
- (31) a. John is a doctor who is **skillful**.
 b. John is a violinist.

 c. Therefore, John is a violinist who is **skillful**. (INVALID)

How do we fix this problem? I suspect that what is responsible for the syllogism failures (29) and (31) is the peculiar semantics of non-intersective but subsective predicates.

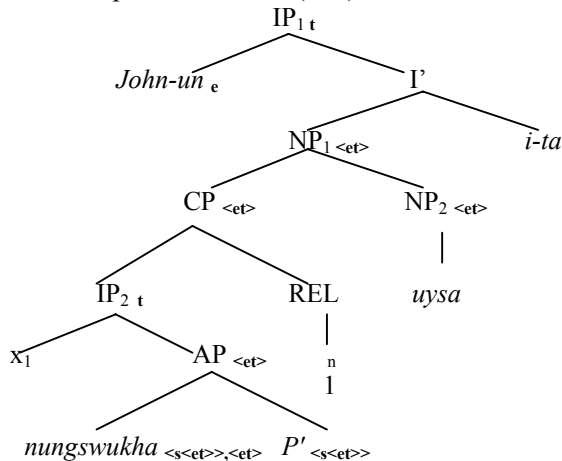
Siegel (1976, ch. 2) points out that some predicates have an "as a reading". Heim (1999) extends Siegel's idea to subsective or *skillful*-type adjectives in English and assumes that they always take an implicit argument of type $\langle et \rangle$, which is supplied by context. Along the lines of Heim, I propose (32) as the lexical entry for *nungswukha*- 'skillful'.¹³

- (32) $T(\text{skillful}) = \lambda P \lambda x [x \text{ is } P \ \& \ x \text{ is skillful as a } P]$
 (P is the implicit argument of the adjective and x is its external argument. P is a free variable, whose value is supplied by context.)

Now let us apply this new proposal to a Korean sentence containing a subsective predicate and see whether it gives a correct meaning for it. To illustrate, let us derive the truth-condition for the sentence (33a):

- (33) a. John-un [e₁ nungswukha]-n₁ uysa-i-ta
 John-TOP [skillful]-REL doctor-COP-DCL
 'John is a doctor who is skillful'

- b. LF representation of (33a):



- c. Deriving the truth-condition for (33a):
 $T(\text{skillful}) \equiv \lambda P \lambda x [x \text{ is } P \ \& \ x \text{ is skillful as a } P]$

¹³ See Landman (2001) for a slightly different approach. She posits that subsectives not only take individuals but also an ordered set of degrees.

$$T(AP) \equiv \lambda P \lambda x [x \text{ is } P \ \& \ x \text{ is skillful as a } P](P') \equiv \text{via } \lambda\text{-reduction} \\ \lambda x [x \text{ is } P' \ \& \ x \text{ is skillful as a } P']$$

$$T(IP_2) \equiv \text{via } \textit{Functional Application (FA)} \\ \lambda x [x \text{ is } P' \ \& \ x \text{ is skillful as a } P'](x_1) \equiv \text{via } \lambda\text{-reduction} \\ [x_1 \text{ is } P' \ \& \ x_1 \text{ is skillful as a } P']$$

At this point, we can assign a value to the free variable P . Suppose that in the given context, its value is a doctor. Then we would get,

$$[x_1 \text{ is a doctor and } x_1 \text{ is skillful as a doctor}]$$

Now we can work on the meaning of the whole relative clause:

$$T(CP) \equiv \text{via } PA \\ \lambda x_1 [x_1 \text{ is a doctor and } x_1 \text{ is skillful as a doctor}]$$

$$T(NP_2) \equiv \lambda y [y \text{ is a doctor}]$$

$$T(NP_1) \equiv \text{via } \textit{Predicate Modification (PM)} \\ \lambda x [\lambda x_1 [x_1 \text{ is a doctor and } x_1 \text{ is skillful as a doctor}](x) \ \& \ \lambda y [y \text{ is a doctor}](x)] \\ \equiv \lambda\text{-reduction} \\ \lambda x [x \text{ is a doctor and } x \text{ is skillful as a doctor and } x \text{ is a doctor}]$$

Finally, to saturate the variable x by plugging in **John**,

$$T(IP_1) \equiv \lambda x [x \text{ is a doctor and } x \text{ is skillful as a doctor and } x \text{ is a doctor}](\text{John}) \equiv \lambda\text{-reduction} \\ \equiv \text{John is a doctor and John is skillful as a doctor and John is a doctor.}$$

The truth-condition we have derived for sentence (33a) is relative to context in which it was uttered. The derived truth-condition seems to be compatible with a native speaker's intuition about what the sentence means.

Let us now consider a case where the value of P is a bit more context-bound than (33a). Imagine the following scenario: John is a doctor, and the other day he played a game of chess with someone. John was very good at playing it. Today someone was recalling the game and said (34).

- (34) Changki sihap-e nungswukha-n uysa-ka iss-ess-ta
 chess match-LOC skillful-REC doctor-NOM exist-PST-DCL
 'At the chess match, there was a skillful doctor'

Example (34) shows that, in the given context, the predicate *nungswukha-* 'skillful' can be interpreted as skillful at being a chess player, rather than being a doctor. In other words, the value of the implicit argument of the predicate is a chess player rather than a doctor. We obtain (35) as the truth-condition for the noun phrase *nungswukha-n uysa* in (34).

- (35) T(a doctor who is skillful)
 $\equiv \lambda x [x \text{ is a chess player and } x \text{ is skillful as a chess player and } x \text{ is a doctor}](\text{John})$
 $\equiv \text{via } \lambda\text{-reduction}$
 $\equiv \text{John is a chess player and John is skillful as a chess player and John is a doctor.}$

It seems that (35) is also compatible with a native speaker's intuition about the meaning of the sentence in the given context. Hence, I conclude that the new denotation for *nungswukha-* is on the right track.

Let us now go back to the syllogism failure in (29). Given the new denotation for *nungswukha*-type predicates, it is now clear what is responsible for the invalidity of argument. The problem stems from the fact that the implicit argument of *nungswukha*- in (29a) is different from that in (29c), the former being a doctor, and the latter being a violinist. Hence, the conclusion is bound to be invalid.

We can fix this syllogism failure by filling in the implicit arguments in the first premise and the conclusion, as shown in (36).

- (36) a. John-un **usay-lose** nungswukha-n uysa-i-ta
 J.-TOP **doctor-as** skillful-REL doctor-COP-DCL
 ‘John is a doctor who is skillful **as a doctor**’
- b. John-un vaiolin yencwuka-i-ta
 J.-TOP violin player-COP-DCL
 ‘John is a violin player’
-
- c. Kulemuro, John-un **usay-lose** nungswukha-n vaiolin
 therefore, J.-TOP **doctor-as** skillful-REL violin
 yencwuka-i-ta
 player-COP-DCL
 ‘Therefore, John is a violinist who is skillful **as a doctor**’ (VALID)

To summarize, in this section, I have demonstrated that the presence of subsective predicates in Korean does not pose a problem for an intersective analysis of RCs. I have shown that, by positing correct denotations for non-intersective but subsective predicates, we can keep their meanings intact even if they occur as predicates inside RCs.

6. Concluding Remarks

This paper presents evidence that Korean lacks a distinct category of Adjective. What have been traditionally analyzed as adjectives are really stative verbs, and those that seemingly occur attributively are predicates inside relative clauses. Despite the absence of adjectives, Korean has ways of expressing various adjectival meanings: it expresses intersective and subsective meanings through the medium of relative clauses and modal meanings by using nouns.

The present paper leaves two important questions. First, why do some languages have adjectives and some don't? Second, why do languages like English have both relative clauses and adjectives when the former can replace the latter, as is the case in Korean?

References

- Baker, Mark (in press). *Verbs, Nouns, and Adjectives: Their Universal Grammar*. Cambridge, UK: Cambridge University Press.
- Beck, David (1999). The typology of parts of speech systems: The markedness of adjectives. Doctoral Dissertation, University of Toronto.
- Choy, Hyen-Pay (1971). *Wuli Malpon* ('Our grammar'). Seoul: Jengumsa.
- Hamann, Conelia (1991). Adjectives. In Arnim von Stechow and Dieter Wunderlich (eds.), *Semantik: Ein Internationales Handbuch der Zeitgenossischen Forschung*. Berlin: Walter de Gruyter. 657-673.
- Dixon, Robert.M.W. (1982). *Where Have All the Adjectives Gone?* Berlin: Walter de Gruyter.
- Heim, Irene (1999). Class notes for Spring Seminar in Semantics, MIT.
- Heim, Irene and Angelika Kratzer (1998). *Semantics in Generative Grammar*. Malden, MA: Blackwell.
- Kamp, Hans (1975). Two theories about adjectives. In E. Keenan (ed.), *Formal Semantics of Natural Languages*, Cambridge University Press, pp.123-155.
- Kamp, Hans, and Barbara Partee (1995). Prototype theory and compositionality. *Cognition* 57: 29-191.
- Kindaichi, Haruhiko (1950). Kokugo dooshi no ichibunrui. *Gengo Kenkyuu* 15:48-63.
- Landman, Meredith (2001). Adjectival modification restricted. ms, University of Massachusetts, Amherst.
- Larson, Richard (1999). Lecture notes, LOT Winter School, Amsterdam.

Min-Joo Kim

- Maling, Joan and Soowon Kim (1998). Case assignment in the *siphta*-construction. In Ross King (ed.), *Description and Explanation in Korean Linguistics*. East Asia Program, Cornell University.
- Martin, E. Martin (1992). *A Reference Grammar of Korean*. Tokyo, Japan: The Charles E. Tuttle Company.
- Ogihara, Toshiyuki (1998). The ambiguity of the *-te iru* form in Japanese. *Journal of East Asian Linguistics* 7(2): 87-120.
- Partee, Barbara (1995). Lexical semantics and compositionality. In Lila Gleitman and Mark Liberman (eds), *An Invitation to Cognitive Science I: Language*, 311-360. Cambridge, MA: MIT Press.
- Quine, W.V.O. (1960). *Word and Object*. Cambridge, MA: MIT Press.
- Siegel, Muffy (1976). Capturing the Russian Adjective. Doctoral Dissertation, University of Massachusetts, Amherst.
- Sohn, Ho-Min (1999). *The Korean Language*. Cambridge, UK: The Cambridge University Press.
- Wierzbicka, Anna (1986). What's in a noun? (or: How do nouns differ from meaning from adjectives?). *Studies in Language* 10:353-389.
- Yu, Hyen-Kyeng (1998). A Study on Korean Adjectives. Doctoral Dissertation, Yensei University, Seoul, Korea.

Min-Joo Kim

Department of Linguistics
South College
University of Massachusetts, Amherst
Amherst, MA 01003
USA

(+1)(413) 545-0885

minjoo@linguist.umass.edu