

RESEARCH

Partitive descriptions in Korean

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This paper examines Korean partitive constructions to investigate the typology of the partitive structure. In Korean, a quantifier precedes the nominal in a non-partitive, but it follows the nominal in a partitive. The relative order between a quantifier and its associated nominal indicates that a quantifier in Korean partitive does not function as a NP adjunct but takes a DP as its argument. I argue that Korean postnominal (floating) quantifier constructions can be interpreted as partitives or pseudo-partitives/quantitatives because a postnominal (floating) quantifier denoting a PART-OF relation can occur with a kind-denoting DP as well as a definite DP. I also propose that a quantifier denoting a PART-OF relation is associated with the argument of a verb via composition with a verbal predicate in the floating quantifier construction. This approach can provide an account for several idiosyncratic properties of floating quantifier constructions, which are difficult to capture under the assumption that a floating quantifier construction is derived by moving a quantifier away from its associated nominal.

Keywords: partitives; pseudo-partitives; floating quantifiers; classifier languages

1 Introduction

Most studies of partitives have focused on English or other European languages in which partitives are marked by a preposition equivalent to *of* in English. As exemplified in (1) and (2), the preposition *of* occurs between a definite DP and a quantifier or a quantifier plus measure noun in English partitive.

- (1) He ate *two of my apples*.
- (2) He drank *two bottles of the wine*.

The preposition *of* is claimed to play an important role in the partitive construction. It is assumed not only to express a partitive or PART-OF relation but also to be responsible for the Partitive Constraint that requires the complement of the preposition *of* to be definite (Barwise & Cooper 1981; Ladusaw 1982; Hoeksema 1984; 1996; Barker 1998; Ionin et al. 2006; *inter alia*). According to this approach, the partitive *of* distinguishes “real” partitives from like *two bottles of wine* and like *two apples*.

This paper will examine Korean quantifier constructions in order to investigate the typology of partitives. Korean is a classifier language in which a noun cannot directly combine with a numeral without a classifier, i.e., an item specifying a unit of measurement.¹ Both count and mass nouns occur with a numeral quantifier, which is composed of a numeral and a classifier, as in (3) and (4). No structural difference exists between pseudo-partitives and quantitatives in Korean.

¹ Nouns referring to humans and body-parts can combine directly with numerals without classifiers.

(3) twu kay-uy sakwa
two CL-GEN apple
'two apples'

(4) twu pyeng-uy wain
two CL-GEN wine
'two bottles of wine'

Partitive constructions have rarely been discussed in Korean linguistics, possibly due to the belief that a partitive meaning is expressed by a "separation construction" (Koptjevskaja-Tamm 2001) or a "semi-partitive" (Hoeksema 1984), which in English occurs with *among* and *out of*. In Korean separation constructions, a nominal referring to a 'whole' occurs as an adjunct, followed by *cwung* 'among/between' and the source-oriented locative particle *eyse* 'from,' as in (5).

(5) haksayng ney myeng cwung-eyse twu myeng-i tachy-ess-ta.
student four CL among-from two CL-NOM get hurt-PST-DEC
'Among the four students, two got hurt.'

Separation constructions are distinguishable from typical partitives in which a quantifier is used to pick out a part of a set or substance. Korean separation constructions do not require the presence of a quantifier to denote a part of a set. As in (6), a common or proper noun can occur with the partitive adjunct introduced by *cwung-eyse* 'from among.' Note that quantifier *twu myeng* 'two CL' in (5) can also occur with a noun, as in (7).

(6) a. ku haksayng-tul cwung-eyse [hankuk haksayng]-i tachy-ess-ta.
that student-PL among-from [Korea student]-NOM get hurt-PST-DEC
'Among those students, a Korean student got hurt.'

b. ku haksayng-tul cwung-eyse [Cheli-wa Juni]-ka tachy-ess-ta.
that student-PL among-from [Cheli-CONJ Juni]-NOM get hurt-PST-DEC
'Among those students, Cheli and Juni got hurt.'

(7) ku haksayng-tul cwung-eyse [nam-haksayng twu myeng]-i tachy-ess-ta.
that student-PL among-from [male-student two CL]-NOM get hurt-PST-DEC
'Among those students, two male students got hurt.'

Moreover, the Korean separation construction cannot be used to describe a part of the substance denoted by a mass noun, as in (8). The expression *cwung-eyse* 'among-from' is only compatible with a nominal denoting a set of individuated or distinct elements.²

(8) ??Cheli-nun i wain cwung-eyse twu can-ul massy-ess-ta.
Cheli-TOP this wine among-from two CL-ACC drink-PST-DEC
'Cheli drank two glasses of this wine.'

² A mass noun can occur with *cwung-eyse* 'among-from' when the substance is interpreted as an object made up of discrete divisive elements with the help of a classifier, as in (i)

(i) ku-nun wain tases can cwung-eyse twu can-ul massy-ess-ta.
he-TOP wine five CL among-from two CL-ACC drink-PST-DEC
'He drank two out of the five glasses of wine.'

Now the question arises whether Korean has a partitive construction. Several scholars have claimed that Korean floating quantifier construction may be such a construction (Christina Kim 2005; Keun Shin 2007; Jong-Bok Kim 2013). Suppose there were a dozen apples on the table. Cheli ate two of them. In this situation, a Korean speaker could utter (9).

- (9) Cheli-ka [thakca wi-ey iss-te-n sakwa]-lul (cayppali) twu kay
 Cheli-NOM [table above-LOC exit-RT-REL apple]-ACC (quickly) two CL
 mek-ess-ta.
 eat-PST-DEC
 ‘Cheli quickly ate two of the apples on the table.’

Sentence (9) is a floating quantifier construction in which the quantifier does not form a constituent with its preceding host nominal, as seen by the fact that the adverbial ‘quickly’ can occur between the numeral quantifier and the host.

Unlike separation constructions, proper names or common nouns cannot be used instead of floating quantifiers to signal a partitive interpretation, as in (10).³ Floating quantifiers can convey a partitive meaning with a mass noun, as in (11).⁴

- (10) a. *ku haksayng-tul-i [Cheli-wa Juni] tachy-ess-ta.
 that student-PL-NOM [Cheli-CONJ Juni] get hurt-PST-DEC
 ‘Among those students, Cheli and Juni got hurt.’
 b. *ku haksayng-tul-i [nam-haksayng (twu myeng)] tachy-ess-ta.
 that student-PL-NOM [male-student (two CL)] get hurt-PST-DEC
 ‘Among those students, (two) male students got hurt.’
 c. ku haksayng-tul-i twu myeng tachy-ess-ta.
 that student-PL-NOM two CL get hurt-PST-DEC
 ‘Four of those students got hurt.’
- (11) Cheli-ka i wain-ul [twu can] massy-ess-ta.
 Cheli-NOM this wine-ACC [two CL] drink-PST-DEC
 ‘Cheli drank two glasses of this wine.’

Korean floating quantifier constructions therefore correspond more closely to partitives in English and other European languages, in which a quantifier is used without a noun to refer to a part of a set of substance. Unlike English partitives, however, Korean floating quantifier constructions do not contain any overt marker expressing a PART-OF relation or corresponding to the preposition *of*. Furthermore, Korean floating quantifier constructions do not obey the Partitive Constraint. They can be interpreted in the manner of either English partitives or pseudo-partitives, as shown in (12).

³ (10a) and (10b) may become acceptable when they are interpreted as appositive constructions in which ‘those students’ refers to ‘Cheli and Juni’ in (10a) and ‘two male students’ in (10b).

⁴ Note that partitivity can express improper partitivity when partitives contain universal quantifiers such as *all of the students* and *both of them*. Korean separation constructions are not compatible with universal quantifiers, unlike floating quantifier constructions, as in (i) and (ii). This difference also shows that floating quantifier constructions are more closely related to partitives than separation constructions.

(i) *ku haksayng-tul cwung-eyse [motwu/cenpwu]-ka tachy-ess-ta.
 that student-PL among-from [all/all]-NOM get hurt-PST-DEC
 ‘(Lit.) Among those students, all got hurt.’

(ii) ku haksayng-tul-i [motwu/cenpwu](-ka) tachy-ess-ta.
 that student-PL-NOM [all/all](-NOM) get hurt-PST-DEC
 ‘All of those students got hurt.’

- (12) Cheli-ka wain-ul twu can masy-ess-ta.
 Cheli-NOM wine-ACC two CL drink-PST-DEC
 ‘Cheli drank two glasses of wine/two glasses of the wine.’

Close examination reveals that the distinction between partitives and non-partitives is signaled by the relative order between a quantifier and its associated nominal in Korean. As exemplified in (13), a numeral quantifier can either precede or follow its associated nominal. (13a) and (13b) will be referred to henceforth as prenominal quantifier construction and postnominal quantifier construction, respectively. Notice that floating quantifiers also follow their associated nominals.⁵ Unlike prenominal quantifier constructions, postnominal and floating quantifier constructions are partitive constructions (Keun Shin 2007).

- (13) a. Cheli-ka [twu kay-uy sakwa]-lul mek-ess-ta.
 Cheli-NOM [two CL-GEN apple]-ACC eat-PST-DEC
 ‘Cheli ate two apples.’
 b. Cheli-ka [sakwa twu kay]-lul mek-ess-ta.
 Cheli-NOM [apple two CL]-ACC eat-PST-DEC

Focusing on numeral quantifiers, this paper attempts to examine Korean partitive constructions and shed some light on the cross-linguistic variations in the partitive structure.

The organization of the paper is as follows: Section 2 will show that postnominal and floating quantifier constructions are partitive constructions and discuss their important characteristics, which cannot be accounted for under the assumption that a postnominal quantifier undergoes some syntactic movement in the floating quantifier construction. Section 3 will propose formal analyses for postnominal and floating quantifier construction. Based on my previous work (Keun Shin 2007; 2009), a postnominal quantifier will be analyzed as denoting a PART-OF relation and take either a definite DP or a kind-denoting DP as its argument. I will argue that a quantifier denoting a PART-OF relation is semantically construed with the DP argument of a verb via its composition with a verbal predicate in the floating quantifier construction. Section 4 will summarize the conclusions.

2 Characteristics of Korean partitive constructions

It is often claimed in the syntactic literature that postnominal and/or floating quantifier constructions are derived from prenominal quantifier constructions by syntactic movement (Wan Chae 1983; Young-Hee Kim 1983; Myung-Kwan Park & Keun-Won Sohn 1993; Kiyong Choi 2001; See Watanabe 2006 for Japanese, *inter alia*).⁶ In this section, I will show that postnominal and floating quantifier constructions are partitives whose properties cannot be accounted for under such a derivational analysis. I will also discuss the shortcomings of a uniform approach to postnominal and floating quantifier constructions.

2.1 Korean partitives: postnominal and floating quantifier constructions

In Korean, a head-final language, nouns follow their modifiers such as adjectives and genitives, and the word order among modifiers is flexible, as shown in (14). If modifiers are nouns, the genitive case *-uy* is often attached to them.

⁵ For convenience the term “postnominal quantifiers” will be reserved for postnominal non-floating quantifiers only.

⁶ Japanese has quantifier constructions corresponding to Korean prenominal, postnominal, and floating quantifier constructions. Previous studies cited in this paper include some important analyses of Japanese quantifier constructions.

- (14) a. Emma-ka [[ai-uy] [chakawun] son]-ul cap-ass-ta.
 mom-NOM [[kid-GEN] [cold] hand]-ACC grab-PST-DEC
 ‘The mom grabbed the kid’s cold hand’
- b. Emma-ka [[chakawun] [ai-uy] son]-ul cap-ass-ta.
 mom-NOM [[cold] [kid-GEN] hand]-ACC grab-PST-DEC

Prenominal quantifiers pattern with other NP modifiers (Keun Shin 2007; 2009). Prenominal quantifiers also precede nouns, and they are marked with the genitive case. They can occur before or after adjectives, as in (15). Thus, they can be analyzed as NP modifiers, as in (16) (Keun Shin 2007; 2008; 2009).

- (15) a. ?Cheli-ka [[chakawun] [twu pyeng-uy] wain]-ul masy-ess-ta.
 Cheli-NOM [[cold] [two CL-GEN] wine]-ACC drink-PST-DEC
 ‘Cheli drank two bottles of cold wine.’
- b. Cheli-ka [[twu pyeng-uy] [chakawun] wain]-ul masy-ess-ta.
 Cheli-NOM [[two CL-GEN] [cold] wine]-ACC drink-PST-DEC

- (16) [NP twu -uy [NP]]
 two CL-GEN

However, postnominal and floating quantifiers are different from prenominal quantifiers. They follow rather than precede their associated nominals, and genitive case is not attached to them. Of course, this word order difference and lack of genitive marking can be explained under syntactic derivational analyses assuming that prenominal and postnominal/floating quantifier constructions have the same underlying structures (Wan Chae 1983; Young-Hee Kim 1983; Myung-Kwan Park & Keun-Won Sohn 1993; Kiyong Choi 2001; See Watanabe 2006 for Japanese, *inter alia*). However, under such derivational accounts, we cannot expect that prenominal and postnominal/floating quantifier constructions differ in terms of what counts as the head of the structure, but as we see below, they do. In prenominal quantifier structures, the associated nominal is the head, while in postnominal/floating quantifier structures, the numeral quantifier serves as the head. This difference can be demonstrated by selectional restrictions differences. For example, (17a) is ungrammatical because [twu pyeng-uy wain] always refers to wine and the verb ‘break’ cannot take it as its argument. In the prenominal quantifier construction, the numeral quantifier is always interpreted as modifying the associated mass nominal. In the corresponding postnominal and floating quantifier constructions in (17b) and (17c), however, the verb ‘break’ imposes its selectional restrictions on the classifier of the numeral quantifier, which can be used as a common noun meaning ‘bottle.’ The object in (17b) and (17c) can be interpreted as ‘two bottles filled with wine.’

- (17) a. ??Cheli-ka [twu pyeng-uy wain]-ul kkayttuly-ess-ta.
 Cheli-NOM [two CL-GEN wine]-ACC break-PST-DEC
 ‘Cheli broke two bottles of wine.’
- b. Cheli-ka [wain twu pyeng]-ul kkayttuly-ess-ta.
 Cheli-NOM [wine two CL]-ACC break-PST-DEC
- c. Cheli-ka [wain]-ul [twu pyeng] kkayttuly-ess-ta.
 Cheli-NOM [wine]-ACC [two CL] break-PST-DEC

Postnominal/floating quantifier constructions also differ from prenominal quantifier constructions in terms of the monotonicity constraint (Nakanishi 2004; 2007; Keun Shin 2007; 2009). The monotonicity constraint was originally proposed to explain why

different types of measure phrases occur in English pseudo-partitives and attributive measure constructions, as illustrated in (18) and (19) respectively (Krifka 1989; 1998; Schwarzschild 2002; 2006).

- (18) a. three liters of (the) water, three pounds of (the) grapes, three bottles of (the) water
 b. *fifty degrees-Celsius of (the) water, *one liter of (the) bottle, *six-carats of (the) gold
- (19) a. fifty degree-Celsius water, one-liter bottle, six-carat gold
 b. *three-liter water, *three-pound grape, *three-bottle water

A measure property is said to be monotonic if it tracks a part-whole relation in the domain given by the associated nominal (Schwarzschild 2002; 2006). Partitives and pseudo-partitives are formed with such a monotonic measure function. For example, the volume measurement in *three liters of (the) water* is monotonic: if the quantity of water is three liters, every proper subpart of the water has a volume less than three liters. On the other hand, the temperature measurement used in the attributive measure construction is a non-monotonic measure function. If the temperature of water is fifty degree-Celsius, it is not necessary that proper parts of it will have lower or higher temperatures than fifty degree-Celsius.

Unlike prenominal quantifier constructions, Korean postnominal and floating quantifier constructions are subject to the monotonicity constraint. For example, *il lithe* ‘one liter’ can occur in all three types of quantifier constructions, as in (20), whereas *osip tossi* ‘fifty degree-Celsius’ can occur only in prenominal quantifier constructions, as in (21). In other words, postnominal and floating quantifier constructions are monotonic constructions in which numeral quantifiers are required to track part-whole relations.

- (20) a. Cheli-ka [il lithe-uy mwul]-ul masy-ess-ta.
 Cheli-NOM [one liter-GEN water]-ACC drink-PST-DEC
 ‘Cheli drank one liter of water.’
- b. Cheli-ka [mwul il lithe]-lul masy-ess-ta.
 Cheli-NOM [water one liter]-ACC drink-PST-DEC
- c. Cheli-ka [mwul]-ul [il lithe] masy-ess-ta.
 Cheli-NOM [water]-ACC [one liter] drink-PST-DEC
- (21) a. Cheli-ka [osip tossi-uy mwul]-ul masy-ess-ta.
 Cheli-NOM [fifty degree-GEN water]-ACC drink-PST-DEC
 ‘Cheli drank fifty-degree water.’
- b. *Cheli-ka [mwul osip tossi]-lul masy-ess-ta.
 Cheli-NOM [water fifty degree]-ACC drink-PST-DEC
- c. *Cheli-ka [mwul]-ul [osip tossi] masy-ess-ta.
 Cheli-NOM [water]-ACC [fifty degree] drink-PST-DEC

To sum up, postnominal and floating quantifier constructions structurally distinguish them from prenominal quantifier constructions. Unlike prenominal quantifiers, postnominal and floating quantifiers do not behave as NP modifiers. They can be interpreted as nominal heads on which a verb can exercise its selectional restrictions. Furthermore, both postnominal and floating quantifier constructions are partitive constructions that abide by the monotonicity constraint, distinct from prenominal quantifier constructions that are not constrained by it.

2.2 Differences between postnominal and floating quantifier constructions

Though postnominal and floating quantifier constructions are similar with respect to the monotonicity constraint, they also differ in important ways. One difference is that a floating quantifier forces a non-specific or indefinite reading in Korean, while this is not the case in postnominal quantifier constructions (Beom-Mo Kang 2002; Christina Kim 2005; Keun Shin 2008; Jong-Bok Kim 2013; See Watanabe 2006 for Japanese). In (22a), which is a postnominal quantifier construction, the object can refer to any two bicycles or two specific bicycles, but in (22b), with a floating quantifier, it can be interpreted only as indefinite.

- (22) a. Cheli-nun [cacenke twu tay]-lul ssakey sa-lyeko ha-n-ta.
 Cheli-TOP [bicycle two CL]-ACC cheap buy-intending do-PRE-DEC
 ‘Cheli intends to buy two bicycles/the two bicycles cheap.’
- b. Cheli-nun [cacenke]-lul ssakey twu tay sa-lyeko ha-n-ta.
 Cheli-TOP [bicycle]-ACC cheap two CL buy-intending do-PRE-DEC
 ‘Cheli intends buy two bicycles/#the two bicycles cheap.’

Note that the nominal associated with the floating quantifier is case-marked (cf. 22b), while case-marking is attached to the entire constituent including the quantifier in the postnominal construction (cf. 22a). Assuming that case-marked nominals are used as full-fledged DPs of argumental type, this implies that floating quantifiers combine with DPs, while postnominal quantifiers combine with NPs (Kiyong Choi 2001; Beom-Mo Kang 2002; Heejeong Ko 2007). Under this assumption, it has been claimed that the floating quantifier construction cannot have a specific reading because a floating quantifier is always associated with a kind-denoting DP (Beom-Mo Kang 2002; Keun Shin 2008).

However, this claim faces empirical problems. As mentioned earlier, a floating quantifier can occur with a specific or definite nominal. In fact, the object in (22b) can also be interpreted as ‘two of the bicycles’ in an appropriate context, referring to two bicycles out of the bicycles already mentioned or presupposed in the discourse. Furthermore, not only floating quantifiers but also postnominal quantifiers can occur with full DPs such as *ku-ke* ‘those,’ as in (23).

- (23) (Situation: Only three apples had been left in a refrigerator)
- a. Cheli-ka [ku-ke twu kay/sey kay]-lul mek-ess-ta.
 Cheli-NOM [that-thing two CL/ three CL]-ACC eat-PST-DEC
 ‘Cheli ate two of those/ those three (lit. the three of those).’
- b. Cheli-ka [ku-ke]-lul twu kay/#sey kay mek-ess-ta.
 Cheli-NOM [that-thing]-ACC two CL/ three CL eat-PST-DEC
 ‘Cheli ate two of those /#those three.’

Note that (23b), the object must be interpreted as indefinite despite the fact that the floating quantifier is associated with the definite DP *ku-ke* ‘that thing.’ This indefinite reading has to do with proper partitivity. In (23), *sey kay* ‘three CL’ refers to the improper part of denoting the set of three apples, and it is not felicitous in the floating quantifier construction. In other words, when a numeral quantifier occurs with a nominal denoting a specific set or substance, the postnominal quantifier construction can have either a proper partitive reading or an improper partitive reading, but the floating quantifier construction has only a proper partitive reading. In (23b), the floating quantifier must refer to some subpart of the nominal denotation, inducing the indefinite interpretation of the object.⁷

⁷ The term “specific” is different from the one that Enç (1991) and Diesing (1992) use for partitive constructions. Diesing (1992) uses term “specific indefinites” for (indefinite) proper partitives such as [_{DP} *three of the students*]. I am reserving the term “specific” for DP descriptions that are used by a speaker to refer to a particular entity specifically and can be characterized in terms of referentiality (Donnellan 1966; Fodor & Sag 1982).

Sentences (24) and (25) also show that a proper partitive reading is obligatory for floating quantifier constructions (Jong-Bok Kim 2013).⁸ Sentence (24b) is pragmatically anomalous if it has a proper partitive reading. The proper partitive reading presupposes the existence of more than ten fingers and this is inconsistent with the common knowledge that a human possesses only ten fingers. Similarly, the oddness of sentence (25b) can be accounted for by the proper partitive constraint of a floating quantifier construction: the presupposition that Cheli has more than two parents does not conform to our commonly held beliefs. Indeed, (25b) becomes acceptable in a situation in which Cheli, after his marriage, calls his parents-in-law as well as his own parents as *pwumonim* ‘parents.’

- (24) a. Cheli-ka kapcaki [sonkalak yel kay]-lul phyelchyepoi-ess-ta.
Cheli-NOM suddenly [finger ten CL]-ACC spread out-PST-DEC
‘Cheli spread out his ten fingers.’
- b. ??Cheli-ka sonkalak-ul kapcaki yel kay phyelchyepoi-ess-ta.
Cheli-NOM finger-ACC suddenly ten CL spread out-PST-DEC
- (25) a. Cheli-ka [pwumonim twu pwun]-ul han-tongan mosi-ko
Cheli-NOM [parent-ACC two CL]-ACC a while-during take care-CONJ
sal-ass-ta.
live-PST-DEC
‘Cheli lived with his two parents and took care of them for a while.’
- b. ??Cheli-ka pwumonim-ul han-tongan twu pwun mosi-ko
Cheli-NOM parent-ACC a while-during two CL take care-CONJ
sal-ass-ta.
live-PST-DEC

Christina Kim (2005) argues that the specificity difference between postnominal and floating quantifier constructions is due to the Specificity Condition of Chomsky (1973) and Fiengo & Higginbotham (1981), prohibiting the extraction out of specific DPs and accounting for the contrast between (26a) and (26b) below.

- (26) a. Who did you see a picture of?
b. *Who did you see that picture of?

Under the assumption that the floating quantifier construction is derived from the postnominal quantifier construction by moving the numeral quantifier outside a DP and right-adjoining it to the DP, as in (27), Christina Kim (2005) proposes that the floating

⁸ Cf. Jong-Bok Kim (2013) explains the unacceptability of (24b) and (25b) by analyzing a floating quantifier as a focus marker that introduces the quantity information as new information. He argues that the floating quantifiers are not felicitous in (24b) and (25b) because the information that the floating quantifier gives us is not new but is understood by the conventional implicature. However, the floating quantifier construction is felicitous even when the quantity information is already given in a context:

- (i) A: Cheli-ka mwues-ul sey kay mek-ess-ni?
Cheli-NOM what-ACC three CL eat-PST-INT
‘Cheli ate three of what?’
- B: Cheli-ka sakwa-lul sey kay mek-ess-ta.
Cheli-NOM apple-ACC three CL eat-PST-DEC
‘Cheli ate three of the apples.’

quantifier construction can have only a non-specific reading because a quantifier cannot extract out of a specific DP.⁹

(27) $[_{DP} [_{DP} [ku-kes t_i]-lul] [_{DP} twu kay]_i]$

The quantifier movement approach therefore captures the fact that a floating quantifier triggers a non-specific or proper partitive reading even when it is associated with the definite. Given that floating quantifiers are right-adjoined to the DP, this quantifier movement approach can also explain why floating quantifiers cannot precede the host DPs, as in (28).

- (28) a. Cheli-ka [sakwa]-lul twu kay mek-ess-ta.
 Cheli-NOM [apple]-ACC two CL eat-PST-DEC
 ‘Cheli ate two apples.’
 b. ??Cheli-ka twu kay [sakwa]-lul mek-ess-ta.
 Cheli-NOM two CL [apple]-ACC eat-PST-DEC

Considering that Korean is a head final language in which adjunction is to the left, however, the rightward adjunction of the floating quantifier in (27) seems to be very stipulative. It is also difficult to explain why floating quantifiers are only associated with arguments, not with adjuncts, as exemplified in (29). In (29), the numeral quantifier *twu cang* ‘two CL(sheet)’ is related to the adjunct nominal *swuken* ‘towel,’ and the floating quantifier construction is not acceptable. The contrast between (29a) and (29b) is puzzling if a floating quantifier is the constituent that moves on the right side of its associated DP.

- (29) a. Cheli-ka thakca-lul [swuken twu cang]-ulo takk-ass-ta.
 Cheli-NOM table-ACC [towel two CL]-INST clean-PST-DEC
 ‘Cheli cleaned the tables with two towels (quickly).’
 b. ??Cheli-ka thakca-lul swuken-ulo twu cang takk-ass-ta.
 Cheli-NOM table-ACC towel-INST two CL clean-PST-DEC

Christina Kim (2005) claims that a quantifier always forms a DP constituent with its associated case-marked nominal and cannot be separated from it. This claim is not empirically grounded. As in (30), an adverb can occur between a floating quantifier and the host nominal.

- (30) Cheli-ka sakwa-lul cayppali twu kay mek-ess-ta.
 Cheli-NOM apple-ACC quickly two CL eat-PST-DEC
 ‘Cheli ate two apples quickly.’

Heejeong Ko (2005; 2007) proposes an alternative adnominal approach. She claims that a floating quantifier is adjoined to the host DP but can be separated from it by moving the DP from the argument position and leaving the quantifier behind, as represented below.

⁹ Watanabe (2006) makes a similar claim. He argues that a non-specific reading of the floating quantifier construction results from the movement of a case-marked nominal to Spec of D [-specific], as schematically illustrated in (i), under the assumption that the floating quantifier construction is derived from the prenominal quantifier construction, which is in turn derived from the postnominal quantifier construction.

(i) $[_{DP} cacenke-lul_i [_{QP} twu tay [_Q t_i [Q]]] D_{[-specific]}]]$

A nonspecific reading is obligatory in a floating quantifier construction because a host nominal must move overtly to Spec of D [-specific] in order to move outside a DP. In this analysis, we can get both specific and non-specific readings in postnominal quantifier constructions because associated nominals are not overtly raised to Spec of D in those constructions.

- (31) Cheli-ka [_{VP} sakwa-lul_i [_{VP} cayppali [_{VP} t_i twu kay] mek-ess-ta]].
 Cheli-NOM apple-ACC quickly two CL eat-PST-DEC

This DP movement analysis can solve some problems with the above quantifier movement approach, but some problems continue to persist. Heejeong Ko (2005; 2007) also argues that a floating quantifier is a DP adjunct.¹⁰ Contrary to her claim, a floating quantifier never forms a syntactic constituent with the host DP. A floating quantifier and the host DP can neither be coordinated by the conjunction *-(k)wa* nor pseudo-clefted (Chung-Kon Shi 2000; Kiyong Choi 2001; Keun Shin 2006; 2007; Jong-Bok Kim 2013), unlike the postnominal quantifier and its associated DP, as exemplified in (32) and (33). Sentences (32a) and (33a) are wrongly predicted to be grammatical if a quantifier remains adjoined to the associated DP and does not undergo movement.

- (32) a. *Cheli-ka [sakwa-lul twu kay]-wa [bay-lul sey kay] mek-ess-ta.
 Cheli-NOM [apple-ACC two CL]-CONJ [pear-ACC three CL] eat-PST-DEC
 ‘Cheli ate two apples and three pears.’
 b. Cheli-ka [sakwa twu kay]-wa [bay sey kay]-lul mek-ess-ta.
 Cheli-NOM [apple two CL]-CONJ [pear three CL]-ACC eat-PST-DEC
- (33) a. *Cheli-ka mek-un kes-un [sakwa-lul twu kay]-(i)-ta.
 Cheli-NOM eat-REL thing-TOP [apple-ACC two CL]-(COP)-DEC
 ‘What Cheli ate is two apples.’
 b. Cheli-ka mek-un kes-un [sakwa twu kay]-(i)-ta.
 Cheli-NOM eat-REL thing-TOP [apple two CL]-(COP)-DEC

In addition, the adnominal approach cannot explain why the floating quantifier fails to be related to the subject ‘guest’ even though they are immediately adjacent to each other in (34a). A floating quantifier must precede both the transitive verb and the object in order to be associated with the subject, as the contrast between (34b) and (34c) shows (Keun Shin 2006).¹¹

- (34) a. ??wain-ul sonnim-i twu pwun masy-ess-ta.
 wine-ACC guest-NOM two CL drink-PST-DEC
 ‘Two guests drank wine.’
 b. *sonnim-i wain-ul twu pwun masy-ess-ta.
 guest-NOM wine-ACC two CL drink-PST-DEC
 c. sonnim-i twu pwun wain-ul masy-ess-ta.
 guest-NOM two CL wine-ACC drink-PST-DEC

¹⁰ To be precise, Heejeong Ko (2005; 2007) argues that caseless floating quantifiers are adnominal modifiers, while case-marked floating quantifiers are adverbials. This paper only focuses on caseless floating quantifiers.

¹¹ When a floating quantifier is associated with the subject, the object cannot intervene between the quantifier and the host nominal, as in (34b). In contrast, when a floating quantifier is associated with the object, the subject can occur between the quantifier and the host, as in (i).

(i) wain-ul sonnim-i twu pyeng masy-ess-ta.
 wine-ACC guest-NOM two CL drink-PST-DEC
 ‘Guests drank two bottles of wine.’

This word order restriction is known as the subject/object asymmetry in the Japanese/Korean linguistics literature (Fukushima 1991; Chung-Kon Shi 2000; Kook-Hee Gil 2001; Beom-Mo Kang 2002; Heejeong Ko 2005; Miyagawa & Arikawa 2007, *inter alia*). The subject/object asymmetry comes from the more general distributional fact that a floating quantifier can be associated with the subject only if it precedes both the transitive verb and the object (Keun Shin 2006).

Another difference between postnominal and floating quantifier constructions is that floating quantifiers are not compatible with individual-level predicates that do not have episodic readings (See Fukushima 1991; Nakanishi 2007 for Japanese). As shown in (35a) and (36a), floating quantifier constructions can occur with the stage-level predicate ‘be sick,’ but not with the individual-level predicate ‘be smart.’ This semantic restriction is hard to capture under the assumption that a floating quantifier is a DP adjunct. Note that both types of predicates can occur in postnominal quantifier constructions, as in (35b) and (36b).

- (35) a. ??namhaksayng-i twu myeng yengliha-ta.
 male student-NOM two CL be smart-DEC
 ‘Two male students are smart.’
 b. [namhaksayng twu myeng]-i yengliha-ta.
 [male student two CL]-NOM be smart-DEC
- (36) a. namhaksayng-i twu myeng aphu-ta.
 male student-NOM two CL be sick-DEC
 ‘Two male students are sick.’
 b. [namhaksayng twu myeng]-i aphu-ta.
 [male student two CL]-NOM be sick-DEC

To summarize the discussion so far, unlike prenominal quantifier constructions, postnominal and floating quantifier constructions are partitive constructions that are subject to the monotonicity constraint. However, floating quantifier constructions also display several idiosyncratic properties that cannot be easily explained under the assumption that a floating quantifier adjoins to its host DP: (i) a floating quantifier does not form a syntactic constituent with the host DP; (ii) it obligatorily has an indefinite or proper partitive reading; (iii) it is only associated with the argument of a verbal predicate; (iv) it cannot be related to the subject in front of a transitive verb; (v) it imposes restrictions on verbal predicates.

3 Structures of Korean partitives

In this section, I will discuss how a partitive interpretation arises in the postnominal quantifier construction and explain how this construction can be also interpreted as a pseudo-partitive or a quantitative.¹² Then I will extend this approach to floating quantifier constructions and account for the idiosyncratic properties of floating quantifiers discussed in the preceding section.

3.1 Postnominal quantifier constructions

Given that a numeral quantifier behaves as an NP modifier in the prenominal quantifier construction, it can be treated as a modifier of type $\langle\langle e, t \rangle, \langle e, t \rangle\rangle$, as defined in (37) (Keun Shin 2007; 2009). In (37), $\text{OBJECT}(x) = 2$ means that x consists of 2 atoms which are inanimate objects.¹³

¹² My analysis of the postnominal quantifier presented in Section 3.1 is based on my previous work (Keun Shin 2007; 2009).

¹³ It is claimed that all nouns are mass nouns in a classifier language and this is why classifiers are required to combine numerals with nouns (Chierchia 1998; Nakanishi 2004; Kwon & Zribi-Hertz 2004). However, it is reported that there is a distinction between count and mass nouns in a classifier language (see Beom-Mo Kang 1994; Chonghyuck Kim 2008; Keun Shin 2009 for Korean). Krifka (1995) argues that non-classifier languages are different from classifier languages in terms of the semantics of numerals. In a non-classifier language like English, a numeral has a nominal argument position in the lexicon and directly combines with a noun; in a classifier language, a numeral lacks such a nominal argument position and it always requires the presence of a classifier to combine with a noun. Adopting Krifka’s claim, I assume that a numeral is incorporated into a classifier, forming a numeral quantifier in Korean (Keun Shin 2007).

It should be also noted that different classifiers are used for different types of nouns. The classifier *kay* in (37) is used with a noun denoting an inanimate concrete object. It cannot occur only with human or other animate nouns. A classifier not only allows a numeral to combine with a noun, but also semantically interacts with a noun.

$$(37) \quad \llbracket \text{twu kay} \rrbracket = \lambda P \lambda x [P(x) \wedge \text{OBJECT}(x) = 2]$$

The prenominal quantifier in (37) corresponds to the English numeral quantifier *two* in *the two apples*, which is also analyzed to be of type $\langle\langle e, t \rangle, \langle e, t \rangle\rangle$ (Verkuyl 1981; Krifka 1999; Landman 2003).

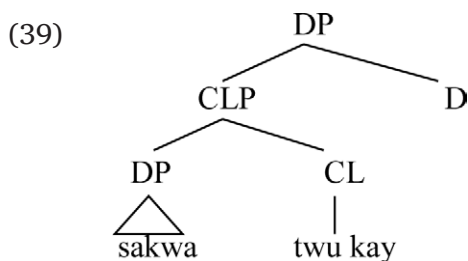
Postnominal quantifiers differ from prenominal quantifiers in that they occur with DPs and track part-whole relations, as we have seen in (20), (21) and (23). In my previous work (Keun Shin 2007; 2009), I proposed that in postnominal constructions, a numeral quantifier is of type $\langle e, \langle e, t \rangle \rangle$, taking a DP of type e as its argument, as represented in (38).

$$(38) \quad \llbracket \text{twu kay} \rrbracket = \lambda x \lambda y [y \leq x \wedge \text{OBJECT}(y) = 2]$$

The postnominal quantifier in (38) is different from the prenominal quantifier in (37) in two respects. First, the numeral quantifier in (38) turns an individual argument of e into a property of $\langle e, t \rangle$ which can be measured. This can be done by standard shifting functions parallel to *ident* or *pred* (Partee 1986; Chierchia 1998). Second, the postnominal quantifier in (38) expresses not only a quantity but also a PART-OF relation. It shifts a DP to a property that has a part-whole structure so that a measure can be used monotonically. Depending on the semantics of a classifier, therefore, \leq expresses either an individual or material PART-OF relation. In (38), \leq indicates an individual PART-OF relation because the classifier *kay* is used to count inanimate objects.

It may be worth mentioning that Korean postnominal quantifier corresponds to the combination of a numeral quantifier of type $\langle\langle e, t \rangle, \langle e, t \rangle\rangle$ and the preposition *of* in English partitives and pseudo-partitives according to the claim that the preposition *of* denotes a PART-OF relation and has a type-shifting function in English partitives and pseudo-partitives: *of* converts a kind into a property in *two bottles of wine* (Carlson 1977; Chierchia 1998) and turns a definite DP denoting an individual into a property in *two of the apples* (Barwise & Cooper 1981; Ladusaw 1982; Barker 1998). Therefore, it can be assumed that Korean postnominal quantifier is derived from the prenominal quantifier by combining it with a null element corresponding to the partitive *of*.

In the postnominal quantifier construction, a numeral quantifier denoting a PART-OF relation takes a DP complement, forming a Classifier Phrase (CLP) headed by a classifier into which a cardinal number is incorporated, as illustrated in (39).



When the postnominal quantifier combines with the kind-denoting *sakwa* ‘apple’ of type e in (40), it shifts \cap_{APPLE} into a property and selects its subset, as translated in (40).¹⁴ (40) denotes a property that is true of subsets of the set of all apples in a world, which consist of two atoms.

¹⁴ The kind-denoting ‘apple’ of type e is assumed to be derived from a property by Chierchia’s (1982; 1998) nominalization operator (\cap) mapping a property to a kind individual.

$$(40) \quad \llbracket \text{sakwa twu kay} \rrbracket = \lambda y [y \leq \cap \text{APPLE} \wedge \text{OBJECT}(y) = 2]$$

The CLP of type $\langle e, t \rangle$ in (40) ultimately combines with D, and $[\text{DP } \text{sakwa twu kay}]$ is interpreted as either ‘two apples’ or ‘the two apples,’ depending on the definiteness of D.

There is no or little meaning difference between the prenominal quantifier in (37) and the postnominal quantifier in (38) when the postnominal quantifier is associated with a kind-denoting DP and has a quantitative interpretation.¹⁵ Unlike the prenominal quantifier, however, the postnominal quantifier can combine with a definite DP. When *sakwa* ‘apple’ is a definite DP that is derived by means of the iota operator (ι) that maps a property to the largest individual satisfying that property in a given context, $[\text{CLP } \text{sakwa twu kay}]$ can be interpreted as a partitive ‘two of the apples,’ as translated in (41).

$$(41) \quad \llbracket \text{sakwa twu kay} \rrbracket = \lambda y [y \leq \iota \text{APPLES} \wedge \text{OBJECT}(y) = 2]$$

When a postnominal quantifier is associated with a mass noun, they can be interpreted as either English pseudo-partitive or partitive. For example, in (42), the object can be interpreted as ‘(the) two bottles of wine’ or ‘(the) two bottles of the wine.’ The object obtains a pseudo-partitive meaning if *wain* denotes a kind; it gets a partitive meaning if *wain* is a definite DP denoting a contextually given referent.

$$(42) \quad \begin{array}{l} \text{Cheli-ka} \quad [\text{wain twu pyeng}]\text{-ul mas-ess-ta.} \\ \text{Cheli-NOM} \quad [\text{wine two CL}]\text{-ACC drink-PST-DEC} \\ \text{‘Cheli broke (the) two bottles of (the) wine.’} \end{array}$$

In derivational analyses, the nominal is the head in both prenominal and postnominal structures, but in my analysis that assumes no movement, what is on the right edge is the head, and so prenominal and postnominal structures differ in headness. This approach can also capture the semantic difference between the prenominal and postnominal quantifier constructions below.

$$(43) \quad \begin{array}{l} \text{a. } ??\text{Cheli-ka} \quad [\text{twu pyeng-uy wain}]\text{-ul kkayttuly-ess-ta.} \\ \quad \text{Cheli-NOM} \quad [\text{two CL-GEN wine}]\text{-ACC break-PST-DEC} \\ \quad \text{‘Cheli broke two bottles of wine.’} \\ \text{b. } \text{Cheli-ka} \quad [\text{wain twu pyeng}]\text{-ul kkayttuly-ess-ta.} \\ \quad \text{Cheli-NOM} \quad [\text{wine two CL}]\text{-ACC break-PST-DEC} \end{array}$$

Under the assumption that a prenominal quantifier is an NP modifier, it is correctly predicted that a verb always imposes its selectional restrictions on the associated nominal,

¹⁵ Prenominal quantifier constructions tend to be used in formal contexts or in writings; they are hardly used in colloquial speech. For example, when the speaker tries to buy 10 apples from a fruit store, she/he will use the postnominal quantifier construction as below (Song-Hwa Han 1999). Prenominal quantifier construction is awkward in this situation.

- (i) a. (Song-Hwa Han 1999: 283)
 ??acwumma, yel kay-uy sakwa cwu-sey-yo.
 missus, ten CL-GEN apple give-SH-POL
 b. acwumma, sakwa yel kay cwu-sey-yo.
 missus, apple 10 CL give-SH-POL
 ‘Missus, please give me 10 apples.’

and the verb ‘break’ is not acceptable in (43a). In the postnominal quantifier construction, the numeral quantifier serves a syntactic head taking the DP ‘wine’ as its complement. Thus, it can be argued that (43b) is acceptable when *pyeng* is interpreted as a nominal head rather than a classifier head (Keun Shin 2007; 2009).

3.2 Floating quantifier constructions

Not only postnominal quantifier constructions but also floating quantifier constructions are partitive constructions in Korean in which a numeral quantifier is associated with a DP and expresses a PART-OF relation. As discussed in Section 2.2, however, floating quantifier constructions have several idiosyncratic properties that cannot be explained under the assumption that a quantifier forms a constituent with its associated nominal and undergoes a movement in a floating quantifier construction.

It is noted that a floating quantifier forms a constituent with a verb rather than its associated DP (Hong-Shik Yi 1996; Chung-Kon Shi 2000; Kiyong Choi 2001; Jong-Bok Kim 2013). They can be substituted by the pro-form *kuleh-ta* ‘do so-DEC,’ as shown in (44). (44) entails that two male students were absent.

- (44) yehaksayng-i twu myeng kyelsek-hay-ss-ko, namhaksayng-to
 female student-NOM two CL absence-do-PST-CONJ, male student-also
 kuleh-ta.
 do so-DEC
 ‘Two female students were absent, and two male students were absent too.’

By adopting Dowty & Brodie’s (1984) idea that a floating quantifier functions as an adverbial, I propose that Korean floating quantifier combines with a verbal predicate and relates a quantifier denoting a PART-OF relation to the argument of a verb.¹⁶ The Korean floating quantifier functions as a transitive verb (TV) modifier of $\langle\langle e, \langle e, t \rangle \rangle$, $\langle e, \langle e, t \rangle \rangle$ or VP modifier of $\langle\langle e, t \rangle$, $\langle e, t \rangle$ as defined in (45) where P is a variable of type $\langle e, \langle e, t \rangle \rangle$.

- (45) a. TV modifier: $\llbracket \text{twu kay} \rrbracket = \lambda P \lambda x \lambda y \exists z \llbracket [z \leq x \wedge \text{OBJECT}(z) = 2] \wedge P(z)(y) \rrbracket$
 b. VP modifier: $\llbracket \text{twu kay} \rrbracket = \lambda P \lambda x \exists z \llbracket [z \leq x \wedge \text{OBJECT}(z) = 2] \wedge P(z) \rrbracket$

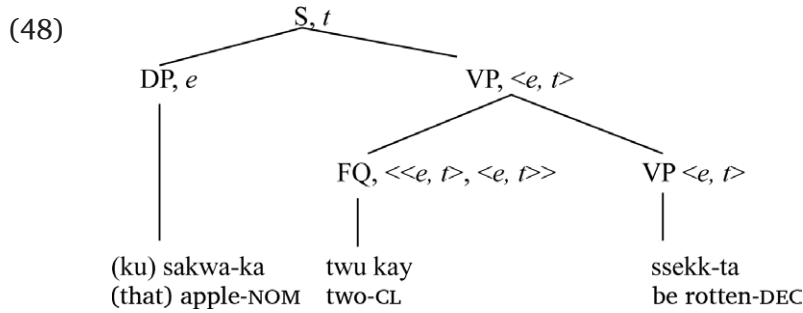
Therefore, the floating quantifier is not different from the postnominal quantifier in that it denotes a PART-OF relation of an entity. Their difference lies in how such a quantifier is construed with the DP: a floating quantifier is semantically associated with the DP via its composition with a verbal predicate.

A floating quantifier can be related to either a subject or an object, depending on whether it combines with a TV or a VP. For example, sentences (46) and (47) are translated as in (48) and (49) respectively.

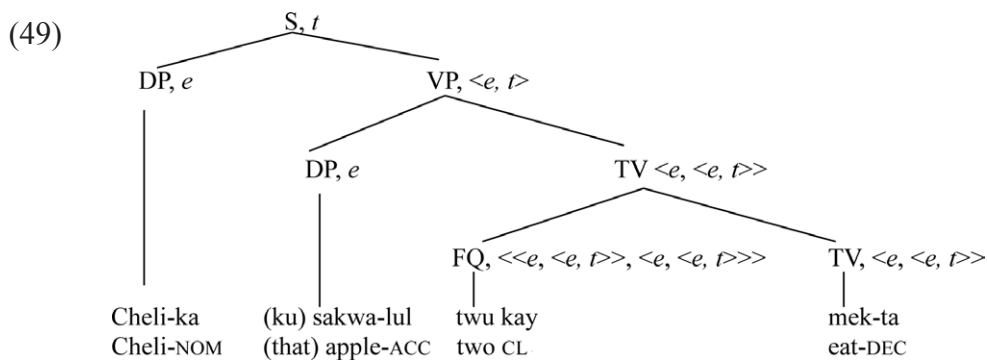
- (46) (ku) sakwa-ka twu kay ssekk-ess-ta.
 (that) apple-NOM two CL be rotten-PST-DEC
 ‘Two of the apples were rotten.’

- (47) Cheli-ka (ku) sakwa-lul twu kay mek-ess-ta.
 Cheli-NOM (that) apple-ACC two CL eat-PST-DEC
 ‘Cheli ate two of the apples.’

¹⁶ Dowty & Brodie (1984) analyzed English floating quantifier *all* as an adverbial functor that relates a VP denotation to a DP denotation.



- $\llbracket \text{ssekkta} \rrbracket = \lambda v[\text{BE ROTTEN}(v)]$
- $\llbracket \text{twu kay ssekkta} \rrbracket = \lambda x \exists z [z \leq x \wedge \text{OBJECT}(z) = 2 \wedge \text{BE ROTTEN}(z)]$
- $\llbracket \text{sakwaka twu kay ssekkta} \rrbracket = \exists z [z \leq \iota \text{APPLE} \wedge \text{OBJECT}(z) = 2 \wedge \text{BE ROTTEN}(z)]$



- $\llbracket \text{mekta} \rrbracket = \lambda v \lambda w[\text{EAT}(v)(w)]$
- $\llbracket \text{twu kay mekta} \rrbracket = \lambda x \lambda y \exists z [z \leq x \wedge \text{OBJECT}(z) = 2 \wedge \text{EAT}(z)(y)]$
- $\llbracket \text{sakwalul twu kay mekta} \rrbracket = \lambda y \exists z [z \leq \iota \text{APPLE} \wedge \text{OBJECT}(z) = 2 \wedge \text{EAT}(z)(y)]$
- $\llbracket \text{Chelika sakwalul twu kay mekta} \rrbracket = \exists z [z \leq \iota \text{APPLE} \wedge \text{OBJECT}(z) = 2 \wedge \text{EAT}(z)(\text{CHELI})]$

In (48) and (49), the floating quantifier combines with a verb, forming a complex predicate taking the host DP as its argument. It can be understood that the postnominal quantifier *twu kay* in (38), which is repeated in (50), saturates its internal argument position with *sakwa* ‘apple’ after it combines with a verb in the floating quantifier construction.

$$(50) \quad \llbracket \text{twu kay} \rrbracket = \lambda x \lambda y [y \leq x \wedge \text{OBJECT}(y) = 2]$$

The meaning of the floating quantifier construction in (49) can therefore be conveyed by the corresponding postnominal quantifier construction.

One key difference between floating and postnominal quantifier constructions is that only a proper partitive reading is possible in floating quantifier constructions. According to the definitions in (45), when the floating quantifier combines with a verbal predicate, the argument of the verb, associated with the quantifier, is bound by the existential quantifier representing an indefinite interpretation. In other words, the floating quantifier requires that a partitive – the semantic combination of the DP and the quantifier – be interpreted as indefinite. There is a meaning difference between definite and indefinite partitives. Compare (51a) and (51b).

- (51) a. Bill's daughters lived together. The three of them got married on the same day.
 b. Bill's daughters lived together. Three of them got married on the same day.

In (51a), the definite partitive *the three of them* can express improper partitivity: Bill has three daughters and all of them got married on the same day. On the other hand, (51b) presupposes that Bill has at least four daughters. The indefinite partitive *three of them* must denote a proper part of the entity denoted by Bill's daughters. If an indefinite partitive requires a proper partitive reading, it is predicted that the improper partitive reading is not felicitous in (49) because the partitive 'two of the apples' must be interpreted as indefinite.

Given that a floating quantifier relates a quantifier denoting a PART-OF relation to the argument of a verb, it is correctly predicted that a floating quantifier is only associated with the argument of a verb. Following the predicate-modifier approach, the numeral quantifier *twu cang* in (52) combines with the TV 'clean,' and hence it is semantically connected with the internal argument of a verb, i.e., 'table,' as translated in (53). Sentence (52) is not acceptable because *cang* 'sheet' is not an appropriate classifier for counting tables.

- (52) ??ku-ka thakca-lul swuken-ulo twu cang takk-ass-ta.
 he-NOM table-ACC towel-INST two CL clean-PST-DEC
 'He cleaned the tables with two towels.'

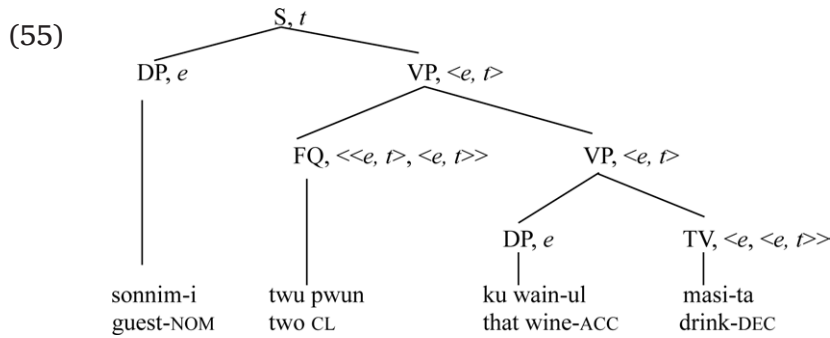
- (53) $[[\text{twu cang takk-ta}]] = \lambda x \lambda y \exists z [z \leq x \wedge \text{SHEET}(z) = 2 \wedge \text{CLEAN}(z)(y)]$

Recall that a floating quantifier can be associated with the subject in a transitive sentence only when it precedes both the verb and the object (Keun Shin 2006):

- (54) a. sonnim-i twu pwun ku wain-ul masy-ess-ta.
 guest-NOM two CL that wine-ACC drink-PST-DEC
 'Two guests drank the wine.'
 b. *sonnim-i ku wain-ul twu pwun masy-ess-ta.
 guest-NOM that wine-ACC two CL drink-PST-DEC

This word order restriction can be explained under the assumption that a floating quantifier can combine with both TV and VP.¹⁷ A floating quantifier in front of a transitive verb is interpreted as a TV modifier. Hence, as illustrated in (49), the floating quantifier that combines with the transitive verb is associated with the unsaturated internal argument of the verb, i.e., the object. Sentence (54b) is ruled out since the non-human object 'wine' is not a suitable host for the numeral quantifier *twu pwun* that is used for counting humans. A floating quantifier must combine with a VP in order to relate the quantifier to the subject, as illustrated in (55). The predicate-modifier approach makes a correct prediction that the subject-associated floating quantifier must precede the object of a transitive verb.

¹⁷ It should be noted that sentence (54b) becomes acceptable when the floating quantifier is focused (Beom-Mo Kang 2002; Heejeong Ko 2007; Jong-Bok Kim 2013). Steedman (1996) suggests that focus or particular information can induce a non-standard composition in a categorical grammar framework. If focus allows a floating quantifier of type $\langle\langle e, t \rangle\rangle$, $\langle e, t \rangle$ to combine with a transitive verb via function composition – not via function application, it can explain how the focused quantifier *twu pwun* in (54b) can be associated with the external argument of the transitive verb.



- a. $\llbracket \text{masita} \rrbracket = \lambda v \lambda w [\text{DRINK}(v)(w)]$
- b. $\llbracket \text{wainul masita} \rrbracket = \lambda w [\text{DRINK}(\iota \text{WINE})(w)]$
- c. $\llbracket \text{twu pwun wainul masita} \rrbracket = \lambda x \exists z [z \leq x \wedge \text{PERSON}(z) = 2 \wedge \text{DRINK}(\iota \text{WINE})(z)]$
- d. $\llbracket \text{sonnimi twu pwun wainul masita} \rrbracket = \exists z [z \leq \cap \text{GUEST} \wedge \text{PERSON}(z) = 2 \wedge \text{DRINK}(\iota \text{WINE})(z)]$

The predicate-modifier approach can also capture the fact that a floating quantifier always follows its associated DP in a sentence, as in (56). The key to explaining the ungrammaticality of (56) is that a floating quantifier is connected to the unsaturated argument of a verb.

- (56) ??sonnim-i twu pyeng ku wain-ul masy-ess-ta.
 guest-NOM two CL that wine-ACC drink-PST-DEC
 ‘Guests drank two bottles of that wine.’

A floating quantifier can be construed with the object when it combines with a transitive verb whose internal argument is not saturated. This means that the floating quantifier *two pyeng* preceding the object ‘that wine’ is associated with the external argument of the verb ‘drink’ by modifying the VP, as exemplified in (55). Sentence (56) is not felicitous because guests cannot be counted in terms of *pyeng*. (57) is the translation of sentence (56).

- (57) $\exists z [z \leq \cap \text{GUEST} \wedge \text{BOTTLE}(z) = 2 \wedge \text{DRINK}(\iota \text{WINE})(z)]$

The predicate-modifier analysis has a potential to explain restrictions on verbal predicates in floating quantifier constructions. Floating quantifier constructions sound odd when they contain an individual-level predicate that describes a permanent property of the subject.

- (58) ??namhaksayng-i twu myeng yengliha-ta.
 male student-NOM two CL be smart-DEC
 ‘Two male students are smart.’

Since a floating quantifier is a predicate-modifier, it seems plausible that a floating quantifier can have effects on the choice of the predicate. Kratzer (1995) argues that stage-level predicates and individual-level predicates differ in argument structure; stage-level predicates have an event argument, whereas individual-level predicates lack this argument. If an event argument is included in the argument structure of a verbal predicate, the resistance of individual-level predicates in floating quantifier constructions can be accounted for by claiming that a floating quantifier affects an event argument as well as a participant argument.

4 Conclusions

In Korean, the distinction between partitives and non-partitives are made by the relative order between a quantifier and its associated nominal. Unlike prenominal quantifier constructions, postnominal constructions are partitives in which numeral quantifiers track part-whole relations. Given that Korean is a head-final language, the word order between a quantifier and the nominal within a DP indicates that a postnominal quantifier does not function as an NP modifier but as a head denoting a PART-OF relation and taking a DP as its argument. Korean postnominal quantifier constructions can also be interpreted as pseudo-partitives, or quantitatives. I have argued that this is because a postnominal quantifier can be associated with a kind-denoting DP as well as a definite DP referring to a specific set or substance.

Korean floating quantifier constructions are also partitive constructions but display several idiosyncratic properties which cannot be easily captured under the assumption that a postnominal quantifier moves away from the associated nominal in the floating quantifier construction. By adopting Dowty & Brodie's (1984) adverbial approach, I have proposed that Korean floating quantifier combines with a verb and relates a quantifier denoting a PART-OF relation to the argument of a verb. In other words, Korean floating quantifiers quantify over individual variables which are arguments of verbal predicates, forcing indefinite interpretations. This approach can explain why an indefinite or proper partitive reading is obligatory in the floating quantifier construction and other syntactic and semantic differences between postnominal and floating quantifier constructions.

Abbreviations

ACC = accusative, CL = classifier, CONJ = conjunction, COP = copular, DEC = declarative, GEN = genitive, INT = interrogative, POL = polite, PST = past, PL = plural, REL = relativizer or adnominal modifier, SH = subject honorific, TOP = topic

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Competing Interests

The author has no competing interests to declare.

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