Chapter 7

A focus construction: Quantifier Float (QF)

7.1   Introduction

The aim of this chapter is to give a focus structure-based account of Korean Quantifier-Float (QF) constructions within the RRG framework. The QF construction along with its case markers, primarily NOM *-i/-ka* or ACC *-ul/-lul*[1] attached to the Q, has been a vexing problem for researchers who, especially, limit themselves to syntactic (structural) accounts. However, the nature of the floating quantifier seems to involve not only syntax, but also semantics, and pragmatics. Focusing on the pragmatic motivation of the Floating Quantifier, I will first prove that the NP-external QF such as *haksayngtul-i 3-meyng,* [NXQ][2], is a special kind of 'focus construction' being used among eight different ways of Q-constructions for marking the Q under the scope of the AFD[3]. Second, the reference-tracking of the Q will be accounted for in terms of the 'FAH'. Finally, the case markers on the Q will be handled in a similar way to case copy, but not the "surface case copy" *per se* as in Shibatani (1977), but the 'pragmatic case (focus) copy' of its referent nominal that is known in this thesis as the neutral TOP/FOC marker KA, and the neutral focus marker LUL.

The chapter is structured as follows: Section 7.2 presents data and questions to be investigated in this chapter. Section 7.3 introduces a classification of Korean Q-constructions; there appear to be eight of them, and just two of them are classified as a true QF construction.

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[1]Henceforth, KA and LUL, respectively.
[2]'X' means any kind of intervening constituents, e.g. case markers, between the referent N and its Q.
[3]For instance, the Q is unactivated (or new) information if introduced for the first time in the context.

Section 7.4 deals with my proposal, together with some empirical evidence. Lastly, section 7.5 concludes this chapter.

7.2 The Data & Questions

The following four questions will be dealt with in this chapter:

(i) What triggers QF?; what can or cannot 'launch' the QF?; is there something like 'floating domain'?
(ii) How does the Q keep track of its referent N?
(iii) Why are there cases attached to the Q?
(iv) How do we formally represent QF in RRG?

The basic, and presumably the most common, Q-construction in Korean consists of two parts: a structure containing a Q^4 and a nominal which it quantifies, that is, [Q-uy N] 'Q-GEN N' as exemplified in (1a) below. In contrast, (1b) and (1c) illustrate the typical QF structure, [NXQ].

(1) a. [[2-myeng]-uy   [haksayng]]-i   o-ass-ta.
         2-CL-GEN   student-NOM   come-PST-DEC
         'Two students came.'

     b. Haksayng-i   2-myeng   o-ass-ta.
        student-NOM   2-CL   come-PST-DEC
        'Two students came.'

     c. Chelswu-ka   haksayng-ul   2-meyng   manna-ss-ta.
        C.-NOM   student-ACC   2-CL   meet-PST-DEC
        'Chelswu met two students.'
        The first question that undoubtedly comes to mind is 'what triggers the Float?', and

how does the QF differ from the non-floating, NP-internal Q-constructions? Going further

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[4]The Q will be further classified as consisting of two parts: i.e., [Numeral + Classifier].

along the same line of reasoning, what can or cannot launch the Q?, and is there something like a 'floating domain' outside of which it cannot float?' For instance, why does the pre-nominal Q of (1), [Q-uy N], of the NP structure, appears to the right of the referent N, to IPV (Immediately Pre-verbal Position) in the QF of (1b&c)?: for instance, the referent N *haksayng* 'student' is separated from the Q *2-myeng* '2-CL' by the NP boundary marked by KA in (1b) and by LUL in (1c);[5] and both the Qs float over the referent Ns. As for the floating domain, the following examples from Nakamura (1997:276) will be dealt with in this chapter. The relevant question for these data is how we can account for the existence of a floating domain as illustrated by the following sentences.

(2)   a. Haksayng-i   3-myeng   chayk-ul   ilk-ess-ta.
              student-NOM 3-CL   book-ACC   read-PST-DEC

        b.* Haksayng-i   chayk-ul   3-myeng   ilk-ess-ta.
              student-NOM book-ACC   3-CL   read-PST-DEC
              'Three students read the book.' (Host = student)

(3)   a. Haksayng-i   3-myeng   keli-eyse   ttwuy-n-ta.
              student-NOM 3-CL   street-LOC   run-PRES-DEC

        b.* Haksayng-i   keli-eyse   ecey   3-myeng   ttwuy-ess-ta.[6]
              student-NOM street-LOC   yesterday 3-CL   run-PST-DEC
              'Three students ran down the street yesterday.' (Host = student)

(4)   a. John-i   haksayng-eykey   3-myeng   chayk-ul
              J.-NOM   student-DAT   3-CL   book-ACC
              cwu-ess-ta.
              give-PST-DEC

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[5]Case markers such as NOM *-i/-ka*, ACC *-ul/-lul*, and DAT *-eykey/-hanthay* are always NP-external in Korean; they cannot occur in the NP-internal structure.
[6]The acceptability of this sentence may increase if the Q has the NOM case on it. But it is not so with (3.b).

b.* John-i   haksayng-eykey   chayk-ul   3-myeng
     J.-NOM   student-DAT   book-ACC   3-CL
     cwu-ess-ta.
     give-PST-DEC
     'John gave a book to three students.' (Host = student)

(5)   a. Haksayng-i   chayk-ul   3-kwen   ilk-ess-ta.
          student-NOM   book-ACC   3-CL   read-PST-DEC

       b. Chayk-ul   haksayng-i   3-kwen   ilk-ess-ta.
          book-ACC   student-NOM 3-CL   read-PST-DEC
          'The student read three books.' (Host = book)

(6)   a. Yelmay-ka   2-kay   palam-ey   tteleci-ess-ta.
          fruit-NOM   2-CL   wind-DAT   fall-PST-DEC

       b.? Yelmay-ka   palam-ey   2-kay   tteleci-ess-ta.
          fruit-NOM   wind-DAT   2-CL   fall-PST-DEC
          'Two piece of fruit fell down with the wind.' (Host = fruit)

As seen in (2b), the Q of the agent *haksayng* 'student' cannot float to the right over

the patient[7] *chayk* 'book'. (3b) displays the same kind of Q which cannot float over the

locative *keli-eyse* 'down the street' either. It is also true that the Q of the benefactive

haksayng 'student' of (4b) is not able to float over the patient *chayk* 'book'. We see this

pattern continue even in the case of a scrambled sentence like (5b): for instance, the Q has

floated over the agent *haksayng* 'student'. Finally, (6b) tells us that the Q may not float over

the causer *palam* 'wind'.[8]

The second kind of question then is: how can the Q be linked to its referent N when,

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[7]Although I am using thematic role terms such as agent or patient (theme), here, my account for the reference tracking of the FQ does not rely on the thematic relation; but rather on the FAH as will be clear later. Therefore, the more relevant term for *haksayng* 'student' is rather the 'rational human N' and for *chayk* 'book' a 'concrete thing' in the FAH in (64) below.
[8]But (7b) is a little awkward to the present author, if not unacceptable.

as often happens, either there is more than one potential referent N or other constituents intervene in addition to KA and LUL attached to the referent Ns? The following examples need to be accounted for.

(7)   a. Kay-ka   koyangi-lul   3-mali   cocha-ss-ta.
           dog-NOM   cat-ACC   3-CL   chase-PST-DEC
           'The dog chased the three cats.' (*'Three dogs chased a cat.')

       b. Ku cikkong-i   sonkalak-i   kikyey-ey   3(-i)   cali-ess-ta.[9]
           the worker-NOM finger-NOM   machine-LOC   3-NOM   cut-PST-DEC
           'Three fingers of the worker were cut on the machine'.
           (*The fingers of three workers were cut on the machine.)

       c. Haksayng-tul-ul sonye-tul-i   3-myeng   kkot-ul   cwu-ess-ta.
           students-PL-ACC girl-PL-NOM   3-CL   flower-ACC give-PST-DEC
           preferred: 'The girls gave flowers to the three students'.
           dispreferred: 'Three girls gave flowers to the students'.

For instance, (7a) shows that the Q *3-mali* '3-CL' makes reference to the patient *koyangi* 'cat' instead of the agent *kay* 'dog'. (7b) represents a passive in which the patient *sonkalak* 'finger' which is the subject of this passive sentence is the real host of the Q '3' rather than the possessor *cikkong* 'worker' or the locative *kikyey* 'machine'. Finally, (7c) exhibits a preference for the benefactive *haksayng* 'student' over the agent *sonye* 'girl' in tracking the reference of the Q *3-myeng* '3-CL.

The third question is why KA and LUL can overwhelmingly launch QF on which the case of its host (optionally) gets copied, while other cases are either banned (Y.-H.-Kim (1984)) or at least markedly low in acceptability (dative).[10] For instance, in (8a) below, when

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[9]Taken from Gerdts (1985:55).
[10]Presumably, we may have to distinguish two things. It is one thing to be able to launch the QF and another for a Q to copy the case of its host N. As for the former, it seems not limited to only NOM, ACC since other

the referent N *haksayng* 'student' is marked by the GEN case, then it cannot be copied on the

Q as seen in (8b). In contrast, when the N is marked by KA as in (9a), then KA can be copied

on the Q in (9b). In a similar vein, in (10a), if the referent N *elinai* 'child' takes the dative,

then it cannot be copied on the Q as seen in the ungrammaticality of (10b). However, if the

DAT case of (10b), *elinan-eykey* 'child-DAT' is shifted into LUL, *elinai-lul* 'child-ACC' in

(11b), then it can be copied on the Q.

(8)   a. 3-myeng-uy   haksayng-uy   cha-ka   o-ass-ta.
          3-CL-GEN   student-GEN   car-NOM come-PST-DEC
          'Three students's car came'.

    b.* Haksayng-uy   3-myeng-uy   cha-ka   o-ass-ta.

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cases seems also able to launch Q such as DAT, LOC, ablative, allative and so forth.

(1)   Dative QF
       Nay-ka elinai-eykey   3-meyng   yenge-lul   kaluchi-ess-ta.
       I-NOM child-DAT   3-CL   English-ACC   teach-PST-DEC
       'I taught English to three children.'
(2)   Locative QF
       Chinkwu-tul-i   cipangtosi-ey   3-kuwntay   san-ta.
       friend-PL-NOM   localcity-LOC   3-CL   live-DEC
       'Friends live at three (different) cities.'
(3)   Ablative QF
       Yenghi-nun   chinkwu-tul-hanthayse   3-myeng   kkot-ul   pat-ass-ta.
       Y.-TOP   friend-PL-ABL   3-CL   flower-ACC   receive-PST-DEC
       'Yenghi has received flowers from 3 friends.'
(4)   Allative QF
       Kongmwuwuen-tul-i   cipangtosi-ey   3-kwuntay   phakyentoy-ess-ta.
       officer-PL-NOM   local.city-ALL   3-CL   dispatch-PASS-PST-DEC
       'Officers has been dispatched to three local cities.'

In regard to being able to launch QF, Y.-H. Kim (1984) proposes that there is an acceptability hierarchy among NPs: "Subj•DO > IO•Locative > Commitative > Comparative•Instrument", which says basically that it is not true all cases are equally acceptable in forming QF. That is, Subject & Direct object are the most unmarked cases forms when they cooccur with QF, but, though possible, Comparative•Instrument are least unmarked case forms when they cooccur with QF.

    By contrast, in regard to Q's being able to copy the case of its host N, it is overwhelmingly NOM and ACC which copy the case on the Q. Therefore, all above sentences, (1) - (4), become unacceptable if each of the floated Q copy its host N's semantic cases. Y.-H. Kim (1984) also made the similar claim.

student-GEN   3-CL-GEN   car-NOM come-PST-DEC

(9)   a. 3-myeng-uy   haksayng-i   cha-ka   o-ass-ta.
           3-CL-GEN   student-NOM   car-NOM come-PST-DEC
           'Three students' car came'.

       b. Haksayng-i   3-myeng-i   cha-ka   o-ass-ta.
           student-NOM   3-CL-NOM   car-NOM come-PST-DEC

(10)   a. Nay-ka   3-myeng-uy   elinai-eykey   yenge-lul   kaluchi-ess-ta.
           I-NOM   3-CL   child-DAT   English-ACC teach-PST-DEC
           'I taught English to three child.'

       b.* Nay-ka   elinai-eykey   ecey   3-meyng-eykey[11]
           I-NOM   child-DAT   yesterday 3-CL-DAT
           yenge-lul   kaluchi-ess-ta.
           English-ACC teach-PST-DEC

(11)   a. Nay-ka   3-myeng-uy   elinai-lul   yenge-lul   kaluchi-ess-ta.
           I-NOM   3-CL   child-ACC   English-ACC teach-PST-DEC

       b. Nay-ka   elinai-lul   ecey   3-meyng-ul   yenge-lul
           I-NOM   child-ACC   yesterday 3-CL-ACC   English-ACC
           kaluchi-ess-ta.
           teach-PST-DEC

       'I taught English to three children.'

In my analysis, the cases on the Q will be dealt with in accordance to the 'Surface Copy Theory' of Shibatani (1977), but my analysis will be a little different, that is, what the Q copies is not the surface form *per se*, but the focus statuses that the referent N would get if it were in the AFD (actual focus domain). The ungrammaticality of the following sentences in (12) is a piece of evidence which demonstrates that semantic cases other than NOM and ACC do not allow case copying on the floated Q.

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[11]It may be marginally acceptable if there is a long pause between *elinan-eykey* 'child-DAT' and *ecey* 'yesterday'. But then, they could not be treated as a single constituent any more.

(12) a.* Nay-ka   elinai-eykey   3-meyng-eykey   yenge-lul   kaluchi-ess-ta.
         I-NOM   child-DAT   3-CL-DAT   English-ACC   teach-PST-DEC
         'I taught English to three children.'

      b.* Chinkwu-tul-i   cipangtosi-ey   3-kuwntay-ey   san-ta.
         friend-PL-NOM   localcity-LOC 3-CL-LOC   live-DEC
         'Friends live at three (different) cities.'

      c.* Yeghi-nun   chinkwu-tul-hanthayse   3-myeng-hanthayse   kkot-ul
         Y.-TOP   friend-PL-from   3-CL-from-from   flower-ACC
         pat-ass-ta.
         receive-PST-DEC
         'Yenghi has received flowers from 3 friends.'

      d.*   Kongmwuwuen-tul-i   cipangtosi-ey   3-kwuntay-ey
         officer-PL-NOM   localcity-to   3-CL-to
         phakyentoy-ess-ta.
         dispatch-PASS-PST-DEC
         'Officers has been dispatched to three local cities.'

(13a) is a dative sentence where the dative is copied on the FQ *3-meyng* '3-CL' such that it

is now ungrammatical. Likewise, the locative FQ in (13b) is ungrammatical. And the ablative

FQ in (13c) and the allative FQ in (13d) are ungrammatical either following the same reason.

   Apart from the above ungrammatical sentences, there is another piece of evidence

which tells us that it is necessary for the Q to copy its host N's case that the case should be

the neutral focus marker KA or LUL.

(13)   Chelswu-ka   ecey   swulcip-ey-lul 3-kot**-ey/-lul/-ey-lul**[12]
        C.-NOM   yesterday bar-LOC-ACC   3-place*-LOC/ACC/-LOC-ACC
        ka-ess-ta.
        go-PST-DEC   'Chelswu went to three bars yesterday.'

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[12]Here, of two options, that is, ACC or LOC-ACC, ACC alone is more preferred.

(13) is a case-stacking sentence where the semantic locative is stacked with the neutral focus

marker LUL in a row. As shown, however, when the FQ copies its host N's case, it should

be either the LUL alone, or the whole thing, i.e., *-ey-lul* 'LOC-ACC', not just the semantic

locative *-ey* alone.

The fourth and final question to be dealt with is: how do we formally represent the

layered structure of the QF construction in the syntax? This representation will be done in

terms of an important strength of the RRG operator projection: the Q is treated as one of the

NP operators that is separated from the constituent projection, without concern for

intervening constituents.

7.3   The Classification of Korean Q-constructions

For Japanese Q-constructions, Downing (1984), (1985), (1986), (1993) has marshaled

a great deal of data from a wide range of written and oral texts in support of her pragmatic

and semantic constraints on various Q-constructions. Especially, Downing (1984) presents

a syntactically distinct 'eight-way Q-construction' based on the overall syntactic environments

in which Q-constructions occur. In this way, two super-categories are identified according

to the relative position of Q with respect to the quantified N. There are NP-internal, and NP-

external Q-constructions. The following Table 1 is a clasification of Korean Q-constructions

adapted and revised from Downing (1984)'s "eight-way syntactic classification of Japanese

Q-constructions."

Table 1. Eight-way Syntactic Classification of Korean Q-constructions
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Type		Position of Q	Pattern
NP-internal		Prenominal Q	Q-uy N
			QN
		Postnominal Q	N-uy Q[13]
			NQ
NP-external	Locally NP-external	Postnominal Q	NXQ
			NXQX[14]
		Prenominal Q	QXN
	S-External Q	Q endogenously external to a main clause	$[...Q...]_{RC}$ N
		Q external to a main clause	$[...N...]_S$, $[...Q...]_S$

Q = Numeral quantifier; N = Head noun of a relative clause; no = Attributive marker; X = Any arbitrary intervening constituents; RC = Relative clause; S = Sentential boundary

Although I will not go talk about the Japanese examples of Downing's eight-way Q-construction, it is an intriguing discovery that Korean appears to have the same number of Q-constructions, except for two patterns: one, [N-no Q][15], which seems to be missing in Korean, and the other, [NXQX], which seems to be missing in Japanese instead.

I will go over each of the Korean equivalent Q-constructions while comparing those, if need be, with the Japanese analogs as Downing classifies them.

   [Q-uy N]
(14) [Twu-meyng-uy haksayng-i] o-ass-ta.
   2-CL-GEN   student-NOM come-PST-DEC

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[13]Japanese only.

[14]Korean only.

[15]The attributive marker *no* of Japanese, as glossed here by Kim (1995), draws my attention. According to her, "the particle *no* plays a variety of functions in sentences; Possessive as in *san nin no hon* ('the book owned by the three people'); Attributive as in *sizin no Frost* (Mr. Frost, the poet' or 'Mr Frost, who is a poet'); Partitive as in *zyogakusei no zen'in* ('all of the female students'), and the grammatical function of Subject as in *Harumi no kikoku sita koto* ('the fact that Harumi returned to her home country'). Linguists like Martin and Kuno recognize Attributive *no* as an adnominal form of the cupular *de aru* or *da*." (Kim, 1995:241). Later in my analyses for the formal representation of the QF in Korean, I will claim that in fact, the GEN marker *-uy* of [Q-uy N] is an adnominal form for a nominal NP operator such as Q, albeit it has the same formal identity with the normal GEN marker as in *Chelswu-uy sacin* ('Chelswu's picture').

'Two students came.'

[QN]
(15) [Twu   haksayng-i]   o-ass-ta.
     2   student-NOM   come-PST-DEC
     'Two students came.'

[NQ]
(16) [Haksayng   twul-i]   o-ass-ta.
     student   2-NOM   come-PST-DEC
     'Two students came.'

[NXQ]
(17) Haksayng-i   onul   twu-meyng   o-ass-ta.
     student-NOM   today   2-CL   come-PST-DEC
     'Two students came today.'

[NXQX]
(18) Haksayng-i   onul   twu-meyng-i   o-ass-ta.
     student-NOM   today   2-CL-NOM   come-PST-DEC
     'Two students came today.'

[QXN]
(19) Han-meyng-to   onul   haksayng-i   o-ci   an-h-ass-ta.
     1-CL-even   today   student-NOM   come   NEG-do-PST-DEC
     'Even one student did not come today.'

[...Q...]_{RC} N
(20) [Nay-ka   kekise   hana-lul   sa-n]   khemphwute-ka   kocanna-ss-ta.
     I-NOM   there   1-ACC   buy-REL   computer-NOM   break-PST-DEC
     'One computer that I bought there broke down.'

[...N...]_S, [...Q...]_S
(21) Sil-i   iss-ni?   i cip-ey-nun   han-kadak-to   ep-e.
     String-NOM   exist-Q   this house-DAT-TOP 1-CL-even   exist.not-DEC
     'Don't you have a ball of string? - Not even a piece!'

(14) is one of the more common Q-forms, if not the most common, among all of the

Q-forms in Korean. In this respect, it is considerably analogous to Japanese [Q-no N].[16] And

(15) is a variation of (14), showing an N immediately following Q in order to form a unitary

NP. The *twu* 'two' of (14) and (15) is construed as the adjectival form of the numeral *twul*

'two', as in (16); so, (15) would be chosen when the classifier of (14) is not employed. The

patterns in both (14) and (15) come under the "prenominal Q" of the NP-internal Q.

In contrast, the postnominal Q type of (16) is semantically different from the

prenominal Q types of (14) and (15). Consider the following:

(22) Ku sako-lo   [5-meyng-uy pwusangca]-ka   sayngki-ess-ta.
     that accident-by   5-CL-GEN   injured.person-NOM emerge-PST-DEC
     'There were five injuries in the accident.'

(23) Ku sako-lo   [pwusangca   5-meyng]-i   sayngki-ess-ta.
     that accident-by   injured.person   5-CL-NOM   emerge-PST-DEC
     'There were five injuries in the accident.'

(24) Ku sako-lo   pwusangca-ka   5-meyng(-i)   sayngki-ess-ta.
     that accident-by   injured.person-NOM 5-CL(-NOM)   emerge-PST-DEC
     'There were five injuries in the accident.'

Many native speakers would take (22), [Q-uy N], to be analogous to (24), [NXQ],

but not to (23), [NQ]. As Kim (1996:206) accurately describes its Japanese analogs, (22) and

(24) have an "indefinite-nonspecificity" reading, whereas (23) has an "indefinite-specificity"

reading. (23) sounds as if the speaker somehow knew that there would be a specific group

of people who would get involved in an accident ahead of time. In other words, the speaker

has some specific information about the NP, but the speaker does not share it with the hearer

at the time of utterance. By contrast, in (22), the referent referred to as 'injuries' is indefinite-

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[16]According to Downing (1984), the [Q-no N] is predominant (45.8%) in modern Japanese.

nonspecific in the sense that the speaker would not be able to tell who such people are. Based on these semantic difference, Kim (1996) diagnoses (22) and (24) as two distinct types of the Q-construction both syntactically and semantically.

While all of (14), (15), and (16) pertain to the NP-internal type of Q-constructions, the examples in (17) to (21) pertain to the NP-external (or QF) type in the sense that they allow an intervening X, which can be a number of categories: namely, case markers such as KA and LUL; the focus particles such as *-to* 'too', *-man* 'only', *-cocha* 'even'; or adverbs like *cikum* 'now'; or other permissible case-marked NPs.

(17), [NXQ], is typical of the Korean QF in which the Q is separated from the referent N by the case marker KA, and the adverb *onul* 'today'. As said before, this type has almost the same semantic readings as the basic form (14), [Q-uy N]: that is, the 'indefinite-nonspecific' reading explained in (22) and (24) above. Apart from this semantic identity, however, Kim (1996:225-228) as well as Downing (1993), reports very important (pragmatic) differences between the two types: [Q-uy N] vs. [NXQ].

First, it has a 'rhematic reading', according to Kim (1996), "[which] the type [NXQ] is a unique device specializing in introducing new information into discourse when a referent N is being mentioned for the first time, somewhat comparable to the *there*-insertion construction in English." Second, QF, [NXQ], is interpreted as having a partitive reading. Downing (1996:73) exemplifies this reading as rephrased in the Korean analogue as follows.[17]

(25)   Apphe ka-ten   2-tay-uy   cha-ka   caphi-ess-ta.

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[17]Of course, there is a danger of applying Downing's Japanese example directly to Korean, but as far as this particular example is concerned, the corresponding Korean sentence does indeed have the same reading.

      front   go-REL(past) 2-CL-GEN   car-NOM be.catch-PAST-DEC
      'The two cars ahead (of us) were caught.'

(26)   Apphe ka-ten   cha-ka   2-tay(-ka)   caphi-ess-ta.
       front go-REL(past) car-NOM   2-CL-NOM   be.caught-PAST-DEC
       'Two of the cars ahead (of us) were caught.'

The [Q-uy N] in (25) displays the 'exhaustive reading'; namely, there was a total of two cars ahead of us, whereas the QF in (26) gives the 'partitive reading' in that there were more than two cars ahead of us, and only two cars were caught (by the police). Third, as Kim (1996) reports, there is a "straw man" reading associated with QF, but not with [Q-uy N].

(27)   Na-nun   1-pwun-uy   ton-to   ep-ta.
       I-TOP   1-CL-GEN   money-even   not.have-DEC
       'I do not have any money at all.'

(28)   Na-nun   ton-i   1-pwun-to   ep-ta.
       I-TOP   money-NOM   1-CL-even   not.have-DEC
       'I do not have any money at all.'

Unlike (27), the QF of (28) has a reading in which the numeral 'one' accompanying the focus particle -to 'even' in categorical negation represents a semantic 'straw man,' which is interpreted as being a crucial number for categorical negation. In addition, (27) is a straightforward report of a simple proposition that 'I have no money'; whereas (28) carries not just the message in (27) but also an additional implication that I have no intention of giving my money to you even though I have it. Largely, this straw man reading bears on a corroboration between the QF construction and the special focus particle -to 'even'.

The [NXQX], (18), appears unique to Korean. Semantically, it appears to be closer to the indefinite-nonspecific reading of the QF, [NXQ], in (17), than the indefinite-specific

[NQ] in (16). Importantly though, two observations must be made. First, the second case marker on the Q, *twu-myeng-i* 'two-CL-NOM' of (18), has to be explained.[18] Second, the grammatical nature of the host of these two case markers is not the same, i.e. the referent N is always the real argument of the main verb, and the Q is not an argument but an NP operator to the host (referent) N.

The [QXN], (19), is essentially a variation of the typical QF, [NQ] in (17). The difference between the two forms is the position of the Q, before or after the referent N. The prenominal Q in the type [QXN] is always accompanied by a pause immediately after it. One thing worthy of note in this type [QXN], is that unlike other QFs, KA and LUL-marked Q cannot occur in this prenominal position, as illustrated in (29a) below, only the focus particles like *-to* 'even' or 'too', *-man* 'only' can so occur.

(29) a.* [1-meyng-i   onul   haksayng-i]   an   o-ass-ta.
          1-CL-NOM   today student-NOM   NEG   come-PST-DEC

      b. Haksayng-i   onul   1-meyng-i   an   o-ass-ta.
          student-NOM today   one-CL-NOM   NEG   come-PST-DEC
          'One student did not come today.'

      c.* Chelswu-ka   1-meyng-ul   haksayng-ul   mot   manna-ass-ta.
          C.-NOM   1-CL-ACC   student-ACC   NEG   meet-PST-DEC

      d. Chelswu-ka   haksayng-ul   1-meyng-ul   mot   manna-ass-ta.
          C.-NOM   student-ACC   1-CL-ACC   NEG   meet-PST-DEC
          'Chelswu did not meet one student.'

[18]In a way, it functions as a disambiguator.

(30) a. [1-meyng-to   onul   haksayng-i]   an   o-ass-ta.
        1-CL-even   today   student-NOM   NEG   come-PST-DEC
        'Even one student did not come today.'

     b. Haksayng-i   onul   1-meyng-to   an   o-ass-ta.
        student-NOM   today   1-CL-even   NEG   come-PST-DEC

     c. Chelswu-ka   1-meyng-to   haksayng-ul   mot   manna-ass-ta.
        C.-NOM   1-CL-even   student-ACC   NEG   meet-PST-DEC

     d. Chelswu-ka   haksayng-ul   1-meyng-to   mot   manna-ass-ta.
        C.-NOM   student-ACC   1-CL-even   NEG   meet-PST-DEC
        'Chelswu did not meet even one student.'

A simple generalization would be as follows. In a QF like the [NXQ] in (17), or its variant the [QXN] in (19), the referent N must precede the Q, if NOM or ACC are attached to the Q as in (29b), or in (30d). But if focus particles (FP)like -to 'too' or 'even', -man 'only' are attached to the Q, then all of the four combinations, i.e., [N-NOM, X, Q-FP], [N-ACC, X, Q-FP], [Q-FP, X, N-NOM], and [Q-FP, X, N-ACC] are acceptable as seen in (30). Based on these observations, I would claim that the Qs that are attached by the focus particles are not operators for their, otherwise, referent N, but they are independent adverbs, always accompanied by a pause such that they can principally go everywhere just like other adverbs.

The sentences in (17), (18), and (19) are instances of the "locally NP-external" in the sense that they are still within the same clause, whereas (20) and (21) are clause-external Q-constructions. In (20), the Q is in the relative clause, and the referent N is the head of that relative clause, so that the N and the Q pertain to two different syntactic domains. Kim (1996:234) characterizes it "with reference to the N in the base NP, the position of Q is external, but 'inwardly external' or 'endogenously' - that is, Q is separated from the N in the

relative clause." And she mentions that "the present analysis of QXN inside relative clauses explains why the head noun in this type of the Q-construction is interpreted as carrying 'new' information. The function of the relative clause containing an endogenous Q resembles some aspects of the presentational *avoir*-cleft construction in French discussed by Lambrecht (1988:149-150)".

Finally, (21), [...N...]$_S$, [...Q...]$_S$, is the sentence-external Q-construction where the referent N *sil* 'string' and its numeral quantifier *han-kadak* 'one-CL' relate to each other across sentential boundaries.[19]

7.4   Previous Studies

7.4.1   The Surface Case Copy Account: Shibatani (1977)

Shibatani (1977) exclusively deals with my third question: which kind of case can, or cannot launch the QF. While drawing on the need for a clear distinction between 'grammatical relations' (such as SU (subject) or DO (direct object) of Relational Grammar (RG), Perlmuter & Postal (1974)), and 'surface cases' (NOM or ACC), he claims that it is not the former, but the latter that can launch the QF.

First of all, he accurately draws our attention to the fact that there are cases where the grammatical subject and the surface NOM fall apart; namely, some NOM-marked NPs cannot trigger Honorification and Reflexivization, which is otherwise anticipated for the grammatical relation, SU. First, let us consider the honorification test in Japanese.

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[19]The final two patterns will not be dealt with in this thesis, because the Q and the referent N do not compose a single NP constituent.

(31)   Yamada   sensei   no   okusan ga   owakai
       Y.   professor GEN   wife NOM   Hon-young
       'Prof. Yamada's (exalted) wife is young.'

(32)   Yamada   sensei ga   okusan ga   owakai.
       Y.   professor NOM   wife NOM   Hon-young.
       'It is Prof. Yamada whose (exalted) wife is young.'

(31) is a GEN construction, and (32) is the well-known double NOM construction treated as transformed via "subjectivization" (Kuno 1980). In terms of grammatical relations, the newly made subject (first NOM-marked NP) must now agree with the honorific word *owakai* '(exalted) wife'; but, it is not the newly NOM-marked Yamada *sensei* 'professor', but it is the original NOM-marked *okusan* 'wife' toward which the speaker's deference is directed. The same kind of generalization is also made with reflexivization.

(33)   Yamada sensei no musuko ga   zibun ni   unzarisite i-ru.
       Y.   prof. GEN   son NOM   self DAT   disgusted be-PRES
       'Prof. Yamada's son is disgusted with himself.'

(34)   Yamada sensei ga   musuko ga   zibun ni   unzarisite i-ru.
       Y.   prof. NOM   son NOM   self DAT   disgusted be-PRES
       'It is Prof. Yamada whose son is disgusted with himself.'

(35) * Yamada sensei$_i$ ga   musuko ga   zibun$_i$ ni   unzarisite i-ru.

(33) demonstrates that the reflexive *zibun* is coreferential with the subject *musuko* 'son', agreeing with what the Reflexivization rule would predict. Now (34) has the newly NOM-marked NP Yamada *sensei* 'Prof. *Yamada*', but it is still the original NOM-marked *musuko* who is coreferential with the reflexive pronoun *zibun* as the ungrammaticality of (35) proves.

Shibatani (1977) claims that it is surface case, and not grammatical relations that launches the QF since irrespective of the original- or newly-, all NOM-marked NPs can launch the QF as (36) verifies.

(36)   a. Sorerano   sannin no   sensei no   okusan ga wakai. (Shibatani 1977)
            those   three GEN   teacher GEN wife   NOM young
            'Those three teachers' wives are young'.
        b.* Sorerano   sensei no   sannin okusan ga wakai.
        c.* Sorerano   sensei no okusan no sannin   wakai.
            (O.K if interpreted as 'The three wives of the teacher are young'.)
        d. Sorerano   sannin no sensei ga okusan ga wakai.
            'It is those three teachers whose wives are young'.
        e. Sorerano   sensei ga sannin okusan ga wakai. (same as (36d))

(36b) and (36,c) indicate that, before the possessor of the GEN construction *sorerano sannin no sensei no ikusan* 'those three teachers' wives' is 'nominativized', the *sannin* 'three (person)' cannot float. Once it is nominativized, as in (36d), the Q can float, yielding the grammatical sentence in (36e).

The observations Shibatani (1997) made are also applicable to the Korean data, but he clearly misses, or did not answer other important questions surrounding QF that should be accounted for: what if there is more than one potential referent, and what if the two have different surface forms like the referent N with TOP and the Q with NOM or ACC? Even more importantly, why does the Q have to float, and why does the Q copy the case and so forth.

7.4.2 An Account in terms of Grammatical Relations: Gerdts (1985)

Gerdts (1985) made an attempt to challenge Shibatani (1977)'s Surface Case Copy

theory by applying it to Korean. She also pays a lot attention to the above second and third questions on how to keep track of the referent N, whether "it is the surface case copy or the grammatical relations", and the nature of case on Qs. As for the first question, she argues against Shibatani (1977), saying that it is the grammatical relations, subject and object, rather a copy of surface case. Two examples crucial for her arguments are the following.

(37)   Haksayng-i   sonyen-tul-ul   chayk-ul   seys-ul   cwu-ess-ta.
        student-NOM boy-PL-ACC   book-ACC   three-ACC   give-PST-DEC
        'The student gave the boys three books.'
        (*The student gave three boys the book.)

(7b)   Ku cikkong-i   sonkalak-i   kikyey-ey   seys-i   cali-ess-ta.[20]
        the worker-NOM finger-NOM   machine-LOC 3-NOM   cut-PST-DEC
        'The three fingers of the worker were cut on the machine'.
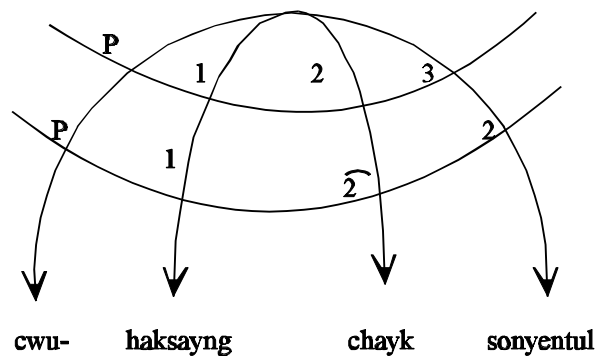   (*The fingers of three workers were cut on the machine.)

(37) has two potential (ACC-marked) referents for the Q '3', and clearly Shibatani (1977)'s Surface Case theory cannot handle it if nothing further is said. The same is true for (7b) which has two NOM-marked potential referents and the Q is floated over the LOC *kikyey* 'machine'.

However, besides correctly pointing out these problems, Gerdts (1985)'s account of the examples based on the notion of subject and object does not seem to be successful the ways she herself describes it. As for (37), relying on Perlmutter (1982)'s notion of "acting 2 (object)" that includes the 'final 2' (*sonyentul* 'boys') and the 'final 2 chômeur' (*chayk* 'books') at the same time, Gerdts (1985) says that it is not the 'final 2s' but rather the 'acting 2s' that sanction the QF in Korean. (37) is regarded as derived from the dative form

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[20]Taken from Gerdts (1985:55).

sonyentul-eykey through 3-TO-2 ADVANCEMENT.

Figure 1: Stratal Diagram of (37)

But an important question raise is why the theme NP *chayk* 'book' does not behave as a chômeur (a syntactically inert adjunct). It retains its Term status in (37) after 3-to-2 advancement applies: it is always the preferred one that sanctions the QF of (37) over the final 2 *sonyentul* 'boys'. RG predicts that the theme NP *chayk* 'book' should lose its term status after the recipient NP *sonyentul* 'boys' advances to 2, it should become a chomeur.

Another example that is crucial for Gerdts (1985)'s claim is so-called "raising sentence" as in (38) and (39) below. According to her, there are three acceptable NOM and ACC combinations among the four of them.

(38) John-i   haksayng-i   sey-i/*ul   chencay-lako   mit-ess-ta.
      J.-NOM   student-ACC   three-NOM/ACC   genius-CLM   believe-PST-DEC

(39) John-i   haksayng-ul   sey-i/-ul   chencay-lako   mit-ess-ta.
      J.-NOM   student-ACC   three-NOM/ACC   genius-CLM   believe-PST-DEC
      John believed that three students were geniuses.

Armed with such a sentence in (39), in which the referent *haksayng* 'student' and the Q *sey* '3' have distinct case markers, she claims that the cases on the Q which is an anaphor

in her analysis, is not a copy but a grammatical relation such as subject or direct object. But it must be pointed out that there is a problem with these data. The sentence in (39) where the referent N *haksayng-ul* with ACC, and the Q *sey-i* with NOM is, if not ruled out, low in its acceptability to many native speakers of Korean, including the present author. Importantly though, we have to ask ourselves what differences there are between NOM-NOM and ACC-ACC combinations in (38) and (39). For this matrix-coding structure, I would rather claim that the so-called "object-raising" is motivated by different types of focus structures, and syntactically there is no reason to posit direct object (ARG) status on the raised NP. The QF also follows this generalization; i.e. (38) is a NFS (narrow focus structure) where the referent N and the Q are in the AFD (actual focus domain) of the NFS, and (39) is a PFS (predicate focus structure) where the referent N and the Q are in the AFD of the PFS, respectively.

Finally, Gerdts (1985) presents (40) below where the referent N *chayk* 'book' is NUN -marked, but the Q *sye-kwen* is LUL-marked.

(40) Chayk-un,   nay-ka   3-kwen-ul   sa-ss-ta.
      book-TOP,   I-NOM   3-CL-ACC   buy-PST-DEC
      'As for books, I bought three.'

Again, according to Gerdts (1985), the Q requires, under the surface case analysis, an antecedent in the LUL case; under the grammatical relations account, *chayk* 'book' is a final object (then a surface topic) and thus sanctions an LUL-marked Q. On the one hand, she is correct in saying that the rigid Surface Case Copy theory cannot account for (40), but on the other hand, it could be better handled in my (focus) case copy theory. Namely, since what the Q copies is not the surface case but the focus case of its referent N. Since by definition the

QF must be in the AFD, it must copy the case that the referent N would get if it were in the AFD, as illustrated in (40).

In sum, even though it is worth mentioning that Shibatani (1977)'s Surface Case Copy theory cannot account for all of the data, it is also worth mentioning that Gertdt (1985)'s grammatical relations account also fails to account for the data. Later, I will explain those examples on the basis of the focality hierarchy: i.e, a PU less topical (or more focal) on the FAH tends to be the referent N of a floated Q. And the case on the Q will be accounted for by focus case copy rather than by the pure Surface Case Copy.

7.4.3   A Structural Account: Miyagawa (1989), Y.-J. Kwon (1991)

Miyagawa (1989)'s account of QF relies on the "mutual c-command requirement on predication" condition within the Principles & Parameters framework as follows.

(41)   Mutual C-command Requirement: For a predicate to be the predicate of a NP, the NP or its trace and the predicate or its trace must c-command each other.

In Miyagawa's analysis, the QF predicated of an NP (Williams 1989), and in order for an NP to sanction QF, the requirement in (41) must be observed. This requirement can account for a number of ungrammatical sentences, but not all of them.

(42)   a.   Haksayng-tul-i   3-myeng   [_{VP} wuysukhi-lul   masi-ess-ta]
             student-PL-NOM 3-CL   whisky-ACC   drink-PST-DEC
             Three students drank a bottle of whisky.

       b.* Haksayng-tul-i   [_{VP} wuysukhi-lul   3-myeng   masi-ess-ta]
             student-PL-NOM whisky-ACC   3-CL   drink-PST-DEC

Certainly (41) can account for the ungrammaticality of (42b) where the Q *3-myeng* cannot c-command the referent N *haksayng* 'student' due to the intervening maximal projection (VP), whereas in (42a), the two are in the mutual c-command relation.

According to him, it can also exclude the postpositional phrase from being able to sanction a QF since the NP within a PP cannot c-command a QF external to the PP as the tree in (43) and examples in (44) demonstrate.

(43)
```
                      VP
              _____|_____
             |        |        |
            PP        Q
          __|__
         |     |
        NP     P
```

(44) * Hito   ga   tiisani muta   kara   2-tu   kita.
      people NOM   small villages   from   2-CL   came.
      'People came from two small villages from.'

(45) * Gakuseitati wa   kuruma de   2-dai   kita.
      students   TOP   cars   in   2-CL   came.
      'Students came in two cars.'

(46) * Hanako wa   kooen e   2-tu   itta.
             TOP   parks to 2-CL   went
      'Hanako went to two parks.'

Passive and ergative verbs are similarly handled.

(47)   Yuube,   kuruma$_i$ ga   doroboo   ni   t$_i$ 2-dai nusum-are-ta.
       last night   cars   NOM   thief   by   2-CL   steal-PASS-past
       'Last night, two cars were stolen by a thief.'

(48)   Gakusei$_i$ ga   [$_{VP}$ ofisu   ni   t$_i$ 2-ri   kita]
       student   NOM   office   to   2-CL   came

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'Two students came to the office.'

In (47), the theme subject *kuruma* 'cars' is first base-generated within the VP and is moved to the subject position, leaving behind a trace. Thus, the mutual c-command relation is upheld between the trace and the Q *2-dai* '2-CL'. In a similar vein, in the ergative example (48), the trace of the *Gakusei* and the Q, *2-ri* '2-CL' hold a mutual c-command relation.

Kwon (1991)'s ECP analysis is specially designed to account for an example like (49) below.

(49) * Halmeni-nun   [$_{IP}$ 3-myeng-ul$_j$ [$_{IP}$ sonce-tul-i$_i$
      grandmother-TOP   3-CL-ACC   grandson-PL-NOM
      [$_{VP}$ t$_i$ t$_j$ chakha-tako]   mit-ess-ta.
                  good-CLM   believe-PST-DEC
      'The grandmother believed three grandsons to be good.'

(50)   a. The Empty Category Principle (ECP)
            A non-pronominal trace is properly governed.
        b. Proper Government (Lasnik and Saito)
            Only X^0 categories can be proper governors.
        c. Antecedent government and lexical government (Lasnik and Saito)
            (i) an antecedent governs B if A binds B, and B is subjacent to A.
            (ii) A lexically governs B if A c-commands B, and A assigns Case or theta-role to B.

(49) is ungrammatical. According to him, the trace t$_i$ left by the VP-internal subject is antecedent-governed by *soncatul*; whereas, the trace t$_j$ cannot be lexically governed, since lexical government follows from theta-marking; the verb *mit-* 'believe' in (49) does not theta-govern the Q *3-myeng* '3-CL' which acts like a predicate. Further, t$_j$ violates the condition against "short-distance" adjunction that Lasnik and Saito incorporate into the formulation of antecedent government; that is, the antecedent locally adjoined cannot antecedent-govern its

trace. As a result, t_j, the offending trace, cannot satisfy the ECP.

Although Kwon (1991)'s structural accounts seems to succeed in accounting for the ungrammaticality of (49), there is a better and very simple way of handling it in terms of the FAH. That is, (49) violates the [NXQ] word order of the QF; i.e. the Q cannot precedes its referent N within an AFD, since the focus element can only float to the right of the referent N according to the Preverbal Focus Universal Hypothesis of SOV languages (Kim 1985).[21] If a Q precedes its referent, then it becomes automatically one of the NP-internal Q-constructions, losing its focus status.

7.4.4   Semantic and Pragmatic Accounts: Downing (1993), Kim (1995)

Downing (1993) and Kim (1995) do not limit their analyses to syntax only, instead they try to look at the QF from as wide an angle as possible. Hence, the semantic and pragmatic characteristics of the QF are to a great extent incorporated into their studies.

The aforementioned taxonomy of Korean Q-constructions was largely dependant on Downing (1985)'s works, and Kim (1985) also provided other scholar's taxonomy of Japanese Q-constructions. The semantic and pragmatic characteristics of the QF are also explicated in both articles which I pointed out in section 7.3.

Apart from it, Downing (1993) made the following observations on the numeral quantifier position in Japanese which, taken as a whole, I found to be applicable to the

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[21]Preverbal Focus Universal Hypothesis.
> If a language is SOV in basic word order, and postpositional, and has the properties that the adjective precedes the noun and the genitive precedes the noun, then, the language has a Preverbal Focus mechanism in its grammar.

corresponding Korean data as well.

First, she calls our attention to the fact that Q-Float constructions are overwhelmingly intransitive subjects bearing the case marker *ga* (nominative) or direct objects bearing the case marker *o* (ACC); and goes on to say that the QF is in fact best characterized as an 'absolutive' construction. Of the QFs which do involve transitive subjects there is a construction in which a volitional agent carries out a punctual action which affects an individuated object. In (51) below, if the more focal NP, the patient 'white-house' is uncountable then, the Q is more likely associated with other NPs.

(51)   Cekkwun-i   3-myeng   white.house-lul   pokphaha-ss-ta.
        enemy-NOM   3-CL   white.house-ACC   bomb-PAST-DEC
        'Three enemies bombed White House.'

Second, according to Downing (1993), sentences like (52) are ungrammatical, although sentences like (53) are acceptable. She attributes the difference here to the fact that the quantified argument in the first sentence is a transitive subject, while in the second it is an intransitive subject of an 'unaccustive' predicate.

(52) * Chelswu-ka   [aitul-i   3-myeng   caki-uy   pizza-lul   mek-ess-tako]
       C.-NOM   children-NOM 3-CL   self-GEN pizza-ACC   eat-PAST-CLM
       sayngkakhan-ta.
       think-PRES-DEC
       'Chelswu thinks that three children ate his pizza.'

(53)   Chelswu-ka   [pay-ka   6-chek   chimmolha-ess-tako] sayngkakhan-ta.
       C.-NOM   ship-NOM six-CL   sink-PAST-COMP   think-PRES-DEC
       'Chelsu thinks that six ships sank.'

This contrast between (52) and (53) is a very important piece of evidence that tells us

that the QF is a focus construction, i.e. the QF of the embedded subject *aitul* 'children' in (52)

is highly sensitive to the pre-existing pragmatic peak[22] (agent) *Chelswu* of the matrix sentence,

whereas that of (53) is not for reasons that I will explain later in 7.5.2.

7.5   Proposal

7.5.1   QF is a Focus Construction

Two very important proposals will be made in order to account for the four questions

set forth at the onset of this chapter. First, unlike other researchers, my analysis takes the

word order to be a reflection of the focality hierarchy, that is, in QF, the Q is a focus marked

operator, not a predicate of the referent N, which must be present to the right of the referent

N due to the Pre-verbal Focus Hypothesis (PVF) (Kim 1985). Furthermore it can keep the

float right before an NP which is more focal than the referent N based on the FAH. Therefore,

it is always, except for the ones that are to the right of the Q, the highest-ranking focal N (or

the lowest ranking topical N) with which the Q is coreferential. Second, as to case on the Q,

it does not grammatical relations or is not a surface case, but it is the neutral and contrastive

focus marker KA or LUL that the Q optionally copies to disambiguate among its potential

referents.

Let me start with the first question: 'why does the Q float?' and 'why is there a

floating domain over which the Q cannot float?' Although, both Kim (1996) and Downing

(1984, 1985, 1993) correctly observe the fact that the QFs, in my analysis, the type 6, [NXQ]

and type 7, [NXQX] in Table 1 above, are used when new information is introduced for the

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[22]The lowest-ranking PU (pragmatic unit) according to the FAH in the PFD of a clause

first time, it is still not certain why the Q has to float to the right of the referent N instead of the left from which the QF would also distinguish itself from the NP-internal [Q-uy N], type 1.

As a first approximation, let me give some empirical evidence to prove that the QF is a specific focus construction among the eight Q-constructions of Korean in 7.3 above. I will then account for the 'floating domain' constraint based on the 'topicality hierarchy'.

Let us take into consideration the 'interrogative test' that I set up in 3.5 'A taxonomy of TOP/FOC structure packaging in Korean'. The following question types will be considered: yes-no, information, and alternative questions. Then other focus sensitive syntactic constructions will be applied to the QF construction to see how the Q behaves. First, the sentence (54) is a yes-no question, and by definition, the entire proposition questioned is presupposed in the context.

(54) a. 2-myeng-uy   haksayng-i   o-ass-ni?
          2-CL   student-NOM   come-PST-Q
          'Did two students come?'

      b. yey/anio.
          'Yes/No.'

(55) a.# Haksayng-i   onul   2-myeng(-i)   o-ass-ni?
          student-NOM   today 2-CL(-NOM)   come-PST-Q
          'Did two students come today?'

      b. yey/anio.
          'Yes/No.'

(56) a. Haksayng-i   onul   2-myeng(-i)   o-ass-ni?
          student-NOM   today 2-CL(-NOM)   come-PST-DEC
          'Did two students come today?'

b. Anio, 1-myeng(-i)   o-ass-eyo.
   No,   1-CL(-NOM) come-PST-DEC
   'No, one student came.'

Although I did not include all the Q-constructions in 7.3 above, almost all NP-internal

Q-constructions behave like (54), and all NP-external QF-constructions behave like (55). The

NP-internal Q of (54) displays that the proposition in (54a), is indeed presupposed in this

context, and the answer, in (54b), is felicitous. In striking contrast, the QF of (55) shows that

the question is infelicitous with the yes/no answer; it is only acceptable when it is responded

to by an answer in which the Q is an inactivated (new) information within a NFS. The

unacceptability of (55) tells us that the Q is sensitive to focus status.

Next, let us go over some of the 'information question' examples to investigate

whether or not the QF is sensitive to other types of focus structures.

(57) a. Cha-ka   myech-tay   kocangna-ss-tako?
         car-NOM   how.many-CL   break.down-QS
         'How many cars broke down?'

      b.# [Twu-tay-uy   cha-ka]   kocangna-ess-eyo.
           two-CL-GEN   car-NOM   break.dwon-PAST-DEC

      c. Cha-ka   twu-tay   kocangna-ess-eyo.
         car-NOM   two-CL   break.down-PAST-DEC
         'Two of them broke down.'

(57a) is intended to elicit a NFS answer, specifically, of 'how many' of the Q, and evidently,

(57b) tells us that the NP-internal Q is unacceptable, whereas the QF in (57c) is much higher

in acceptability. Furthermore, let us take a look at a PFS as follows.

(58) a. Cha-ka   ettehkey-toy-ess-tako?
          car-NOM   what-happen-PST-Q
          'What happend to the car?'
          (when the speaker does not know how many cars there are)

      b. Cha-nun   2-tay(-ka)   kocangna-ss-eyo.
          car-TOP   2-CL   break.down-PST-DEC
          'As for cars, two (of them) broke down.'

      c.# 2-tay-uy   cha-ka   kocangna-ss-eyo. (less preferable)
          2-CL-GEN   car-NOM   break.down-PST-DEC

The speaker is asking about *cha* 'car' apparently not knowing about the number of cars. And

(58) shows that (58b) where the Q occur after the referent form is acceptable, but (58c) is

not. The same generalization would apply to a SFS as follows.

(59) a. Mwusun   ill-i-ya?
          what   thing-COPULAR-DEC
          'What happened?'

      b.# Twu-tay-uy   cha-ka   motwu   kocangna-ess-e.
          two-CL-GEN   car-NOM both   break.dwon-PAST-DEC
          'Both cars broke down.' (Lit. Both two cars broke down.)

      c. Cha-ka   twu-tay   motwu   kocangna-ess-e.
          car-NOM   two-CL   both   break.down-PAST-DEC
          'Both cars broke down.'

(59) is intended to elicit a SFS answer, and here again (59c) of the post-nominal Q form is

more preferable over the pre-nominal Q form, (59b).

It is worth trying to see if it works in the same way as it does in transitive sentences

as well. But for convenience sake, I will provide just a PFS example in (60) below.

(60) a. Chelswu-ka   ettehkyeha-ss-tako?
          C.-NOM   how-PST-Q
          'What happened to Chelswu?'

      b. (Chelswu-un) [3-myeng-uy yeycatul-hanthay]   kkot-ul   cwu-ess-e.
          C.-TOP   3-CL-GEN   women-DAT   flower-ACC   give-PST-
                                                                     DEC
          '(As for Chelswu), he gave flowers to three women.'
          (Preferable, if the speaker already knows the women and how many there are)

      c. (Chelswu-un) yeycatul-hanthay 3-myeng   kkot-ul   cwu-ess-e.
          C.-TOP   women-DAT   3-CL(-DAT)   flower-ACC   give-PST-DEC
          '(As for Chelswu), he gave flowers to three women.'
          (Preferable, if the speaker does not the women, and how many they are yet.)

(60a) is intended to elicit a PFS answer. (60b, c, d) provide three potential answers

to the question. As seen above, (60b) which has the pre-nominal Q show that it is preferable

if the speaker already knows the woman and how many they are. In contrast, in (60c), the QF,

is preferable if the speaker does not know the number and how many they are.

The relative clause test of the taxonomy in chapter 3.5 also account for the fact that

the QF cannot occur in TOP position as (61) represents below.

(61) a. 2-myeng-uy   haksayngtul-i   cwu-n   senmwul
          2-CL-GEN   students-NOM   give-REL present
          'A present that two students gave.'

      b.* Haksayngtul-i   2-myeng(-i)   cwu-n   senmwul
          students-NOM   2-CL(-NOM)   give-REL   present

As demonstrated in chapter 3.5, a relative clause is in a TOP position cross-linguistically, all

things being equal. And as predicted, the QF cannot occur in the relative clause in (61b), but

the pre-nominal Q can.

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7.5.2   The FAH and Reference tracking: the Q refers to the most focal NP in the AFD

Having proved that the QF is a focus construction distinct from other Q-constructions,

let us now provide a focus structure-based account for the QF which differs from previous

studies such as Miyagawa (1989)'s structural (c-command) account or Shibatani (1977)'s

case copy approach, or Gerdts (1991)'s grammatical relations analysis.

The first question is: what triggers QF? The answer is simple. The Q's focus status

triggers the Float as we have seen with the examples which I provided in the previous section.

As for the subsequent question, i.e. what can or cannot launch the QF? It is overwhelmingly

NOM-, and ACC-marked NPs, but, as mentioned in footnote 94 in section 7.1, other semantic

cases seem also to be able to launch QF if the Q is in the AFD. Here, though they are formally

identical, it is important to distinguish pragmatic case KA and LUL from semantic case *ka* and

lul that are reserved at the semantic case layer for the Privileged Syntactic Argument (PSA)

and the second highest ranking macrorole, respectively. Shibatani (1977)'s example in (36)

is paralleled by the Korean analogues in (62).

(62)   a. Ce   3-myeng-uy   sensayng-uy   pwuin-i   celm-ta.
            Those 3-CL-GEN   teacher-GEN   wife-NOM   young-DEC
            'Those three teacher's wives are young.'
        b.* Ce   sensayng-uy   3-myeng   pwuin-i   celm-ta.
            Those teacher-GEN   3-CL   wife-NOM   young-DEC
        c. Ce   3-myeng-uy   sensayng-i pwuin-i   celm-ta.
        d. Ce   sensayng-i 3-myeng   pwuin-i   celm-ta.

As seen in (62a), the semantic GEN case of the referent N *sensayng-uy* 'teacher-

GEN' cannot launch QF in (62b). But once the semantic GEN shifts into the focus marker

KA of (62c), *sensayng-i* 'teacher-NOM', then it is now able to launch QF to the right of it

as (62d) demonstrates. Chapter 4 of this thesis is devoted to this GEN construction. I have provided evidence there that proves that the first KA of (62d) is a focus marker, and the second *ka* is the syntactic pivot (subject) of this sentence.[23]

The unresolved problems that were a serious problem to Shibatani's case copy hypothesis are ones that involve different case markings on the referent N and on its Q as follows.

(63)   a. Chayk-un,   nay-ka   syes-kwen-ul sa-ss-ta.
             book-TOP,   I-NOM   3-CL-ACC   buy-PST-DEC
             'As for books, I bought three.'

        b.* Chayk-un,   nay-ka   syes-kwen-un sa-ss-ta.
             book-TOP,   I-NOM   3-CL-TOP   buy-PST-DEC

        c.* Syes-kwen-ul/un chayk-un   nay-ka   sa-ess-ta.
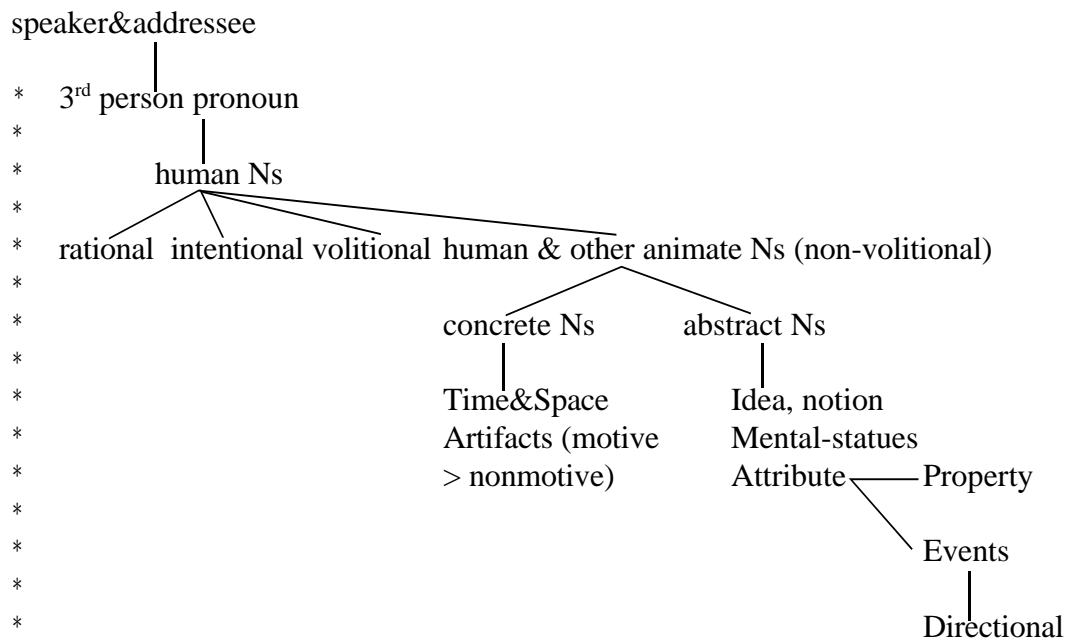   3-CL-ACC/TOP book-TOP   I-NOM   buy-PST-DEC

As Gerdts (1985) correctly points out, in (63a), the surface cases on the referent N and the Q can differ: the former can be marked with NUN and the latter with KA. However, it is equally important to note that the Q can also never copy NUN, as (63b) proves. What this mean is that the Q cannot copy NUN since by definition it is a focus element. In contrast, there is no such restriction on the referent N in that it can be either a FOC or TOP element depending on the context; if the referent N were NOT in the AFD, i.e. in the topic domain, then the Q would have different pragmatic cases, i.e. the referent N with NUN, and the Q with KA or LUL depending on the types of focus structure. In sum, what the Q carries is not

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[23]The same generalization applies to the neutral focus marker ACC.

the referent N's surface case *per se*, but a focus case marker, and it is necessarily in the AFD. (63c) further proves that the Q cannot precede its referent N (TOP) irrespective of LUL or NUN since by definition the more focal element must locate itself to the right of the less focal element according to the immediately preverbal focus (IPF) hypothesis.

The aforementioned statement automatically leads us to the question of the 'floating domain'. That is to say, the Q can float to the right of the referent N, but never to the right of the NP that is more focal than the Q's referent N. Accordingly, what is crucial in order to keep track of the Q's referent is to know which NP is more focal (or less topical) than which PU according to the FAH.

(64)   The Focality Accessibility Hierarchy (FAH) in the clause

```
speaker&addressee
           |
  *    3rd person pronoun
  *                 |
  *             human Ns
  *
  *    rational  intentional volitional  human & other animate Ns (non-volitional)
  *
  *                              concrete Ns        abstract Ns
  *                                  |                  |
  *                              Time&Space         Idea, notion
  *                              Artifacts (motive  Mental-statues
  *                              > nonmotive)       Attribute —— Property
  *
  *                                                             Events
  *                                                               |
  *                                                           Directional
```

```
        *                                                                      Manner
        *                                                                      Cause
        ∨                                                                      Frequency
)))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))))  >
```

In order to check if (64) can account for the question of the 'floating domain', let us

explore Nakamura (1997)'s examples reproduced here.

(3)   a. Haksayng-i   sey-myeng chayk-ul   ilk-ess-ta.
            student-NOM 3-CL   book-ACC   read-PST-DEC

        b.# Haksayng-i   chayk-ul   sey-myeng(-i) ilk-ess-ta.
            student-NOM book-ACC   3-CL(-NOM) read-PST-DEC
            'Three students read the book'. (Host = student)

(4)   a. Haksayng-i   sey-myeng keli-eyse   ttwuy-n-ta.
            studnet-NOM   3-CL   street-LOC   run-PRES-DEC

        b.# Haksayng-i   keli-eyse   ecey   sey-myeng ttwuy-n-ta.
            student-NOM street-LOC   yesterday 3-CL   run-PRES-DEC
            'Three students are running down the street yesterday'. (Host = student)

(5)   a. John-i   haksayng-eykey   sey-myeng chayk-ul
            J.-NOM   student-DAT   3-CL   book-ACC
            cwu-ess-ta.
            give-PST-DEC

        b.* John-i   haksayng-eykey   chayk-ul   sey-myeng
            J.-NOM   student-DAT   book-ACC   3-CL
            cwu-ess-ta.
            give-PST-DEC
            'John gave a book to three students'. (Host = student)

(6)   a. Haksayng-i   chayk-ul   sey-kwen   ilk-ess-ta.
            student-NOM   book-ACC   3-CL   read-PST-DEC

        b. Chayk-ul   haksayng-i   sey-kwen   ilk-ess-ta.
            book-ACC   student-NOM 3-CL   read-PST-DEC
            'The student read three books'. (Host = book)

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(7)  a.  Yelmay-ka          twukay          palam-ey          tteleci-ess-ta.
         fruit-NOM          2-CL            wind-DAT          fall-PST-DEC

     b.? Yelmay-ka          palam-ey        twu-kay           tteleci-ess-ta.
         fruit-NOM          wind-DAT[24]     2-CL             fall-PST-DEC
         'Two fruits fell down with the wind'. (Host = fruit)

In order to account for the unacceptability of (3b), we do not need to rely on a structural definition such as the 'mutual c-command requirement' since, according to the FAH, the artifact *chayk* 'book' is more focal (or less topical) than rational human N *haksayng* 'student', so the Q *3-myeng* '3-CL' cannot float over the *chakyk* 'book'.

The unacceptability of (4b) also can be accounted for by the hierarchy; i.e. the space (or locative) *keli-eyse* 'street' outranks in its focality the rational human N *haksayng* 'student' so that the Q cannot float over the more focal element. The same kind of relation also holds between the intentional (or volitional if not intentional) human N *haksayng* 'student' and the artifact *chayk* 'book' of (5b), i.e. the former is more topical (or less focal). The acceptability of (6b) may also confirm that the more focal NP, artifact *chayk* 'book' than the rational N *haksayng* 'student' contains the referent N of the floated Q *3-kwen* '3-CL'. Finally, (7) displays that why this sentence is awkward since the causal event *palam-ey* 'with the wind' which is more focal than the artifact N *yelmay* 'fruit' and intervenes between the referent N and the Q.

To answer the second question: how to track the referent N of the QF, let us first examine (37), (7b) and (7c) which represent a case having more than two potential referents

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[24]Here, the English gloss done by Nakamura (1997) is not acceptable to the present author, since *-ey* can be used for many instance in Korean.

reproduced here below.

(37)  Haksayng-tul-i    sonyen-tul-ul    chayk-ul     3(-ul)     cwu-ess-ta.
      students-PL-NOM boys-ACC          book-ACC     3(-ACC)   give-PST-DEC
      'The student gave the boys three books.'
      (*The student gave three boys the book.)

(7)   b.  Ku cikkong-i      sonkalak-i    kikyey-ey     3(-i)      cal-i-ess-ta.
          the worker-NOM  finger-NOM   machine-LOC 3(-NOM)   cut-PASS-PST-
                                                                    DEC

          'Three fingers of the worker were cut on the machine'.
          (*'The fingers of three workers were cut on the machine.')

      b´. Ku cikkong-i       3(-i)       sonkalak-i    kikyey-ey      cal-i-ess-ta.
          the worker-NOM  3(-NOM)   finger-NOM   machine-LOC cut-PASS-PST-
                                                                     DEC

          'The fingers of three workers were cut on the machine.'

      c.  Haksayngtul-ul     sonye-tul-i    3-myeng    kkot-ul       cwu-ess-ta.
          students-ACC      girls-PL-NOM    3-CL       flower-ACC  give-PST-DEC
          preferred: 'The girls gave flowers to the three students'.
          dispreferred: 'Three girls gave flowers to the students'.


      c´.*Sonyetul-i         kkot-ul        haksayngtul-ul     3-myeng   cwu-ess-ta.
          students-NOM      flower-ACC    students-ACC        3-CL       give-PST-DEC


(37) has two potential (ACC-marked) referents for the Q, but the primary choice for

the referent of the Q is always the artifact *chayk* 'book' rather than human N *sonyentul*

'boys'. This can be readily accounted for via the topicality hierarchy since regardless of their

being equally in the focus statues[25], as an inherent property, the artifact outranks the volitional

N *sonyetul* 'boys' in their focal statuses.

The passive sentence (7b) displays two potential (KA-marked) referents for the Q, but

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[25]LUL is treated here as the neutral focus marker shifted from the semantic case DAT in this thesis (chapter
5). Thus, in this example, all three are now in the AFD of the PFS.

the primary referent is the concrete N *sonkalak* 'finger' not its possessor *cikkong* 'worker'. As demonstrated in (7b´), the first NOM-marked possessor can also launch the Q. Researchers who solely rely on a structural account such as Miyagawa (1989) or Gerdts (1985) would surely have a heavy burden trying to formulate a fine-grained structural definition between those two NOM-marked NPs. But according to my 'Two Case Layers' Account, the reference-tracking of the Q operates on the pragmatic layer; and it is coreferential with the concrete N *sonkalak* 'finger' which is the highest-ranking focal element (or lowest- ranking topic element) to the left of the Q. By the same token, in (7b´), the NOM-marked (focus) possessor *cikkong* 'worker' is the highest-ranking focal element to the left of the Q.

(7c) represents the fact that it is tolerable for a more focal element, the intentional N *haksayngtul* 'students', to be preposed to the left of the less focal element, the rational N *sonyentul* 'boys'.[26] But (7c´) proves that it is not tolerable for a less focal NP, the intentional N *haksayngtul* 'student', to be postposed to the right of the more focal element, the concrete N *kkot* 'flower'.

Let us now turn to Miyagawa (1989)'s analysis based on a 'c-command requirement'. There appears to be three major problems for his analysis. The first problem involves the DAT case-marked NP which occur with verbs like *cwu-* 'give', *kaluchi-* 'teach', and *noh-* 'put' (when it occurs with an NP, not with an adverb). The second problem involves adverbs,

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[26]But once the Q copies the referent N's ACC, then it becomes unacceptable.
(1) #    Haksayngtul-ul    sonye-tul-i    3-myeng-ul    kkot-ul    cwu-ess-ta.
         students-ACC      girls-PL-NOM   3-CL-ACC      flower-ACC give-PST-DEC
         'The girls gave flowers to the three students'.

especially, which occur with case markers in Korean. Finally, the third problem is the QFs of

multiple case markings in general.

First, the dative NP of *cwu-* 'give', *kaluchi-* 'teach', and the Loc NP of *noh-* 'put'

cannot launch the Q if the Q copies the dative, even though they are subcategorized for by

these predicates; i.e. they are not PPs in the sense of Miyagawa.

(65)   a.* Chelswu-ka   haksayngtul-hanthay   ecey       3-myeng-hanthay
            C.-NOM        students-DAT      yesterday  3-CL-DAT
            chayk-ul      cwu-ess-ta.
            book-ACC     give-PST-DEC
            'Chelswu gave the books to three students.'

       b.  Chelswu-ka   haksayngtul-ul     ecey      3-myeng-ul
            C.-NOM        students-ACC   yesterday  3-CL-ACC
            chayk-ul      cwu-ess-ta.
            book-ACC     give-PST-DEC

(66)   a.* Nay-ka     elinai-hanthay ecey       3-meyng-hanthay      yenge-lul
            I-NOM     child-DAT     yesterday  3-CL-DAT           English-ACC
            kaluchi-ess-ta.
            teach-PST-DEC
            'I taught English to three children.'

       b.  Nay-ka     elinai-lul      ecey       3-meyng-ul        yenge-lul
            I-NOM     child-ACC     yesterday  3-CL-ACC         English-ACC
            kaluchi-ess-ta.
            teach-PST-DEC

(67)   a.* Nay-ka     sathang-ul     chayksang*ᵢ*-wuyey 3-kay*ᵢ*     noh-ass-ta.
            I-NOM     candy-ACC    desk        LOC      3-CL      put-PST-DEC
            'I put the candies on three desks.'
            (Okay, if 3-kay is coreferential with sathang 'candy')

(65) displays that the dative referent *haksayngtul* 'students' cannot launch QF; here, the

adverb *ecey* 'yesterday' should not matter in Miyagawa's analysis, since it is an adjunct which cannot block mutual c-command. And more importantly, the predicate *cwu-* 'give' subcategorizes for the DAT argument *haksayngtul* 'students', so it should be able to launch QF under Miyagawa (1989)'s assumption. The same generalization applies to the other two ditransitive verbs. In (66), although the predicate *kaluchi-* 'teach' subcategorizes for the DAT *elinai* 'child', it cannot launch the QF 3-*myeng* '3-CL'. The predicate *noh-* 'put' can either be transitive such as 'I put the candy down' or a ditransitive such as in (67). And in (67), the Loc *chayksang* 'desk' is subcategorized for by the predicate *noh-* 'put'; so, it should allow the QF 3-*kay* '3-CL', but it does not. Rather, it is okay if the QF is coreferential with the theme argument *sathang* 'candy'.

Strikingly, however, if the DAT-marked NPs become ACC-marked, as it is in the double accusative sentences of each (b) version of (65) and (66), then they are both amenable to launching QFs. This fact strongly supports my analysis that it is the focus status that can launch QF on which the case on the referent N is copied. Hence, KA, LUL shifted from DAT serve successfully for that purpose.[27]

The second kind of problem appears with Korean adverbial phrase. In Korean, many adverbs can be KA- and LUL-marked, and when they are the mutual c-command relation between a referent N and a QF is blocked since they are not semantic arguments of the predicate, which is not to be expected according to Miyagawa.

(68)    a.  Haksayngtul-i        2-myeng(-i)      2-pen-ul        o-ass-ta.

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[27]As investigated in chapter 5, topic/focalization in simple sentences, under my analysis, the first LUL-marked NP of (65b) and (66b) is the neutral focus marker (pragmatic case) shifted from dative (semantic case).

students-NOM　　2-CL　　　　　2-time-ACC　come-PST-DEC
　　　　　　'Two students came two times.'

　　　　b.* Haksayngtul-i　　2-pen-ul　　　2-myeng(-i)　o-ass-ta.
　　　　　　students-NOM　　2-time-ACC　2-CL　　　　come-PST-DEC

　　　　c.　Haksayngtul-i　　2-pen　　　　2-myeng(-i)　o-ass-ta.
　　　　　　students-NOM　　2-time　　　2-CL　　　　come-PST-DEC

(69) * Na-nun　　ku　　　mwuncey-lul　　totaychey-lul　2-kay　　　moluket-ta.
　　　　I-TOP　　those questions-ACC　on earth-ACC　2-CL　not.understand-DEC
　　　　'I on earth do not understand those two questions (among many questions).'

　　　　In (68a), the frequency adverb *2-pen-ul* '2-times-ACC' is case-marked, and the Q can occur to the right of the referent *haksayngtul* 'students'. In contrast, (68b) is ungrammatical, although the intervening adverb *2-pen-ul* is LUL-marked, but it is acceptable if the adverb is not LUL-marked as seen in (68c). There are two relevant questions to ask. First, unlike other semantic arguments, the adverb *2-pen* '2-times' is not subcategorized for by the predicate *o-* 'come' such that, under Miyagawa's analyses, it cannot block the Q from floating. Second, why does the sentence (68b), which has case on the adverb, is not acceptable, whereas (68c) that does not have case on the adverb is acceptable.

　　　　In a similar vein, (69) creates at least two important questions for Miyagawa (1989). First, if the LUL-marked adverb *totaychey* 'on earth' is indeed an adverb because it is not an argument subcategorized for by the predicate *molu-* not.understand', then (69) should be grammatical, but it is not. Rather, if the adverb is a real object due to its LUL-case, then the mutual c-command relation is expected with this ACC-marked adverb.

　　　　Both types of examples, (68) and (69) can be accounted for in my analysis in terms of the topicality hierarchy. First, when a frequency adverb like *2-pen* '2-times' in (68) is

marked by the neutral focus marker KA or LUL, then it becomes a focus element which is strong enough to outrank the theme argument *haksayngtul* 'student' that is the referent for the Q *2-myne*g '2-CL', according to the topicality hierarchy. The same is true for the emphatic adverb *totaychay* 'on earth' that is highly focal when marked by the LUL.

The third kind of problem involves Korean multiple NOM and ACC constructions such as (70) below where not only the theme, but also the benefactive argument becomes LUL-marked.

(70) * Chelswu-nun  haksayngtul-ul  chayk-ul  3-myeng  cwu-ess-ta.
       C.-TOP        students-ACC    book-ACC  3-CL     give-PST-DEC
     'Chelswu gave books to three students.'

(71)                    VP
         _____|_____
        /        /        \                \
      NP1      NP2          Q                V

According to Miyagawa's tree (71), because there are two "objects", it is difficult to find out why the Q must be coreferential with NP2 *chayk-ul* 'book-LUL' rather than NP1 *haksayngtul-ul* 'student-LUL' where both NPs c-command the Q. Of course, I can imagine that he would say the first NP is moved from another place, leaving a trace there, but the crucial question which can generally apply to the "movement" analysis is then 'why move?' 'Is there a justifiable syntactic reason to move?' If not, we do not have any reason to believe

that there is a trace left behind any where.

The same kind of question applies to his "ergative verb analysis" of (45) above. The question arising is why it has to move leaving a trace behind. If the question can not be answered, it would be difficult to believe there is a trace.

Lastly let us take a look at Downing (1993)'s complex sentence example reproduced as a Korean analog.

(72)  a.  Chelswu-ka   [3-myeng-uy  aitul-i        caki-uy     pizza-lul
          C.-NOM        3-CL-GEN     child-NOM     self-GEN    pizza-ACC
          mek-ess-tako]     sayngkakha-n-ta.
          eat-PST-CLM       think-PRES-DEC
          'Chelswu thinks that three children ate his pizza.'

      b.  Chelsu-ka     [6-chek-uy     pay-ka        chimmolha-ess-tako]
          C.-NOM        6-CL-GEN       ship-NOM      sink-PST-CLM
          sayngkakha-n-ta.
          think-PRES-DEC
          'Chelsu thinks that six ships sank.'

(73)  a.* Chelsu-ka     [aitul-i        3-myeng(-i)   caki-uy    pica-lul
          C.-NOM         child-NOM       3-CL(-NOM)   self-GEN   pizza-ACC
          mek-ess-tako]     sayngkakha-n-ta.
          eat-PST-CLM       think-PRES-DEC

      b.  Chelsu-ka      [pay-ka    6-chek(-i)        chimmolha-ess-tako]
          C.-NOM         ship-NOM   6-CL(-NOM)        sink-PST-CLM
          sayngkakha-n-ta.
          think-PRES-DEC

(72a) and (72b) are two normal NP-complement sentences of a Korean judgment verb like *sayngkakha-* 'think' or *mit-* 'believe'. And as we can see, the prenominal Q-constructions

co-occur with the NP-complement. However, strikingly, the QF constructions cannot cooccur with an NP complement.

There are at least two points to consider in these examples. One very important difference between (72) and (73) is that the embedded subject along with its Q of the former is not in the AFD, whereas that of the latter is in the AFD for a focus structure (e.g. NFS). Second, there is a bigger difference between (72a) and (73b); namely, the subject of the former is agent, whereas that of the latter is patient. Now let us take into consideration the FAH (64). Crucially, in terms of the hierarchy, the embedded subject (patient) *pay* 'ship' of (73b) does not outrank the matrix subject (agent) *Chelswu*, but the embedded subject (agent) *aitul* 'children' of (73a) does conflict with the matrix subject (agent) *Chelswu* resulting in two pragmatic peaks in a single PFD. This example strongly bears with my topicality account and thus the account is correct.

### 9.5.3   Pragmatic Case (focus) Copy

Let us turn to the third question: why are there cases on the Q? One question to be raised here is whether or not the NP-external [NXQ] and [NXQX] are the same kind of QF-constructions. As I explained above in 7.3, both the two Q-constructions are QF structure based on two observations. First, they are both NP-external as opposed to the NP-internal [Q-uy N], [NQ]. Second, although, the [NXQX] could be categorized as intermediate between the typical QF, [NXQ] and the 'indefinite-specificity' of [NQX], the overt NP boundary marked by a case marker between the referent N and the Q makes it more analogous to the typical QF, [NXQ]. Third, the case attached on the Q never behaves as a semantic case, i.e.

it does not mark an argument of a main verb but a numeral operator of the referent NP that is real host of the Q.

Now, the question remaining is what kind of cases are on the Q? Further crucial examples show how they are operating.

The problems remaining that were problematic to Shibatani's Case Copy hypothesis are ones that have different cases for the referent N and for its Q as (74) which is reproduced from (63) for convenience sake shows.

(74=63)a.  Chayk-un,    nay-ka       syes-kwen-ul  sa-ss-ta.
            book-TOP,    I-NOM        3-CL-ACC     buy-PST-DEC
            'As for books, I bought three.'

      b.* Chayk-un,    nay-ka       syes-kwen-un  sa-ss-ta.
            book-TOP,    I-NOM        3-CL-TOP     buy-PST-DEC

      c.* Syes-kwen-ul/un  chayk-un        nay-ka      sa-ess-ta.
            3-CL-ACC/TOP   book-TOP         I-NOM      buy-PST-DEC

As pointed out there, in (74a), the surface cases on the referent N and the Q can differ. And as seen in (74b) the Q can never copy NUN. Finally (74c) proves that the Q cannot precede its referent N (topic) irrespective of LUL or NUN marking.

## 7.5.4   A Formal Representation of QF in RRG

With regard to the formal representation of the QF, one thing to be noted is that the Q is not an argument but a numeral operator that modifies its referent N; i.e. it is a kind of NP operator just like definite, article, (or deictic), negation, and adjective etc. Importantly then, this fact gives rise to a fundamental understanding as to how the case markers, such as GEN,

NOM, and ACC attached to the Q are different from other normal semantic case markers assigned by the main predicate. As a matter of fact, they are treated in this section differently from other normal case markers.

First, let us talk about the GEN case. In Korean, the GEN case on the Q of the pre-nominal Q, [Q-uy N], is formally identical to the normal GEN construction like (75) below, taking into consideration that (75a) is a possessive construction and (75b) is a QF, respectively.

(75)    a.  Kim sensayngnim-uy      haksayngtul-i     o-ass-ta.
             K.    teacher-GEN          students-NOM    come-PST-DEC
             'Professor Kim's students came.'
    b.  2-myeng-uy       haksayngtul-i     o-ass-ta.
             2-CL-GEN      students-NOM    come-PST-DEC
             'Two students came.'

(75a) shows a normal GEN-construction where the first NP, *Kim sensayngnim* 'Professor Kim', functions as an independent NP. It can also be extended by other syntactic NP-internal operators, for instance, by an adjective such as ***khen Kim sensayngnim*** '**big** Professor Kim'. However, it is not possible with the GEN-marked prenominal Q, *2-myeng-uy* '2-CL-GEN' in (75b); i.e. it cannot have independent NP status. This observation leads us to the conclusion that the GEN attached to the prenominal Q, (75b), is not really a normal GEN case marker licensed by the head N *haksayngtul* 'students'.

To identify its grammatical nature, let us provide other NP operators to see how they modify their head noun.

(76)    Ce    [2  kwen]-uy     khu-n     chayk
         that   [2  CL]-GEN    big-MOD  book
         'Those two big books.'

The important point to be made in this example is that the adjective operator *khu-* 'big' takes the modifying suffix -*n* in order to modify the head noun, whereas the nominal Q *2-kwen* takes the GEN to modify the head noun *chayk* 'book'. That is to say, the GEN on the prenominal Q is a type of modifying suffix for the nominal operator itself not its case marker reserved for the independent GEN-marked NP as in (75a). These observations safely lead us to the following formal representation of the prenominal Q-construction within the RRG framework.

(77)    The layered structure of the NP (LSNP) with operators in Korean

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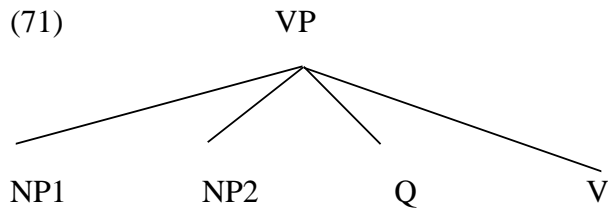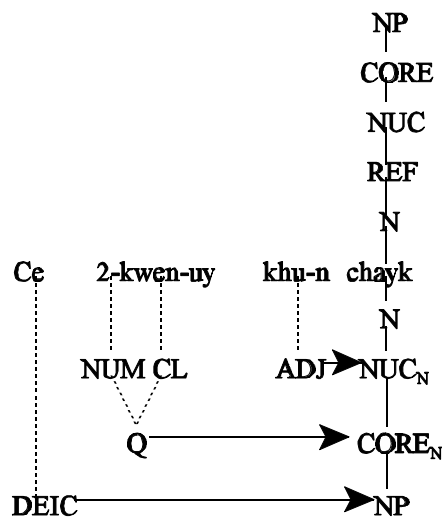                                    NP
                                    |
                                   CORE
                                    |
                                   NUC
                                    |
                                   REF
                                    |
                                    N
                                    |
   Ce      2-kwen-uy      khu-n chayk
                                    |
                                    N
                                    |
            NUM CL          ADJ→NUC_N
                                    |
                Q ─────────────→ CORE_N
                                    |
   DEIC ──────────────────────→ NP
```

As we can see from the representation, several points need to be explained. First, in RRG, operators are a distinct level of representation (operator projection) from that of

constituents such as predicates and their arguments (constituent projection) because they are qualitatively distinct from the constituents which modify the clause and its parts (NP). Second, NP operators include determiners (articles, demonstratives, and deictics), quantifiers, negation, classifier, and adjectival, nominal modifiers. Languages vary in choosing among those operators. For instance, Korean does not have an NP-level negation such as English 'no' as in 'no one'. Third, as we have seen, in Korean, the numeral plus the classifier behave as a single unit. And finally, the GEN marker attached to the Q is not the normal genitive of the NP, but it is a modifying suffix of the Q which happens to be a nominal form in Korean.

Let us now turn to a QF sentence to see how we can formally represent it within the RRG framework. The two basic sentences: the prenominal Q, [Q-uy N], and the QF of (78) and (79) are reproduced along with two different types of NFSs.

(78) a. Nwuka   o-ass-ni?
          Who   come-PST-Q
          'Who came?'

      b. [[2-myeng]-uy   [haksayngtul]]-i   o-ass-ta.
          2-CL-GEN   students-NOM   come-PST-DEC
          'Two students came.' (The speaker thinks that the number of students is not new or inactivated information to the addressee.)

(79) a. Haksayng-i   myech-myeng(-i)   o-ass-ni?
          student-NOM   how-many(-NOM)   come-PST-Q
          'How many students came?'

      b. Haksayng-i   2-myeng   o-ass-ta.
          student-NOM   2-CL   come-PST-DEC
          'Two students came.' (The speaker thinks that the number of students is the most crucial piece of information to the addressee.)

(78b) is intended to elicit a NFS in which the speaker thinks the number of students is not new

or inactivated information to the addressee, and thus, the subject *haksayng* 'student' of (78b)

is now a narrow-focus constituent. In contrast, in (79a), what is most important is how many

of the students came resulting in the QF in (79b).

(78b´) The formal representation of the layered structure of the prenominal Q-construction,

    [Q-uy N].

(79b´) The formal representation of the layered structure of the QF construction

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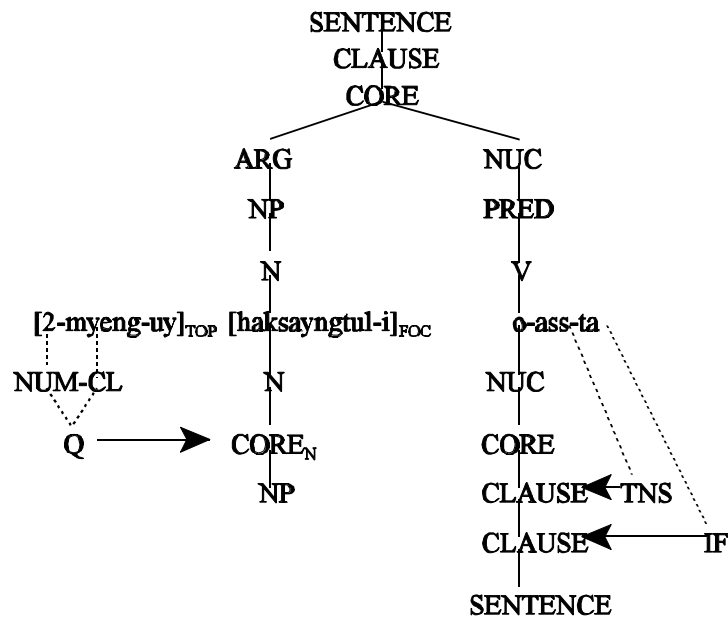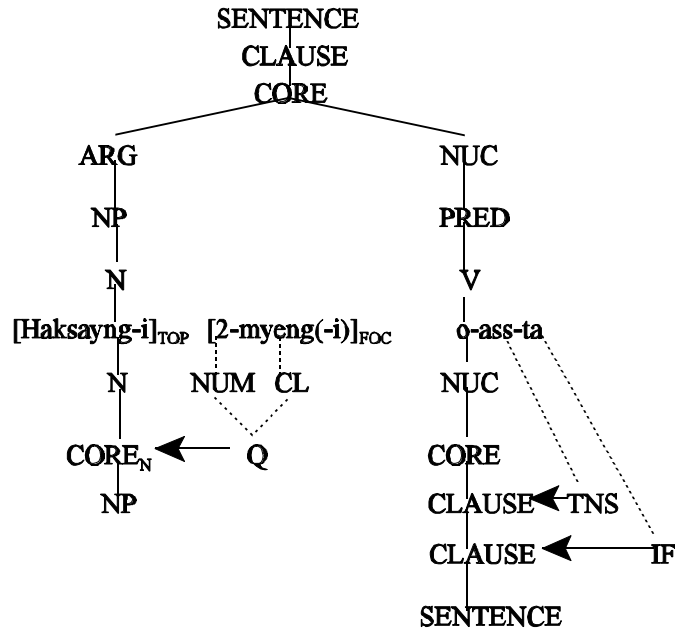                        SENTENCE
                         CLAUSE
                          CORE
                ARG                      NUC
                NP                       PRED
                 N                        V
     [Haksayng-i]ᴛᴏᴘ  [2-myeng(-i)]ꜰᴏᴄ   o-ass-ta
             N      NUM  CL              NUC
         COREɴ ◄─    Q                   CORE
          NP                            CLAUSE ◄ TNS
                                        CLAUSE ◄──── IF
                                        SENTENCE
```

   (78b´) is the formal representation of (78b), the prenominal Q-construction, and (79b´)

is that of (79b), the QF. (78b´) exhibits that the Q is preceding the head N, and it does not

bear on any focus statuses, whereas in (79b´), the QF *2-myeng* '2-CL' to the right of the

referent N *haksayng* 'student' is now a narrow focus constituent as an appropriate answer to

the wh-question of (79a).

7.6 Conclusion

   I have shown in this section that the QF is a special kind of 'focus construction' being

used among eight different kinds of Korean Q-constructions for marking the Q under the

scope of the AFD. Four questions were dealt with in this section. First what triggers the

Float? Second, how do we keep track of the Q's referent N? Third, why is there KA and LUL

on the Q, and finally how do we represent the QF?

The first question was accounted for by saying that the Q's focal status launches the Q to the right of the referent N. As for the second question, namely reference-tracking of the referent N, I proposed the FAH (focality accessibility hierarchy) which is closely related to the 'animacy hierarchy' proposed in Van Valin & Wilkins (1996). To account for the case markings, which are overwhelmingly KA and LUL on the Q, dative QF being unacceptable, I provided some evidence that exhibits the fact that they are copies of the referent N's focus case markers, which are the neutral focus marker KA and LUL respectively. Finally, I presented a RRG-based layered structure of the QF construction which provided an easier way of capturing the focus-based account of QF.