

Parsing cleft constructions in Korean: An HPSG approach*

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Kim, Jong-Bok, Emily Bender, and Francis Bond. 2013. Parsing cleft constructions in Korean: An HPSG approach. *Linguistic Research* 30(3), 517-537. We present a classification and analysis of Korean cleft constructions with the formative KES. This HPSG analysis assimilates the structures as much as possible to other uses of KES and the copula in Korean, and is formalized precisely enough to support implementation (in future work) in a broad-coverage grammar.

Keywords *kes*, (psuedo)cleft, in-situ focus, HPSG, Korean

1. Introduction

Cleft constructions are employed to mark a certain constituent as a discourse prominent element. In this respect, Korean has at least two main types of clefts, psuedocleft and inverted psuedocleft, respectively (see, among others, Jhang (1995), Sohn (2004), and Kim and Yang (2010)):

- (1) [John-i ___i ilk-un kes-un] [sose]i-i-ta
John-NOM read-MOD KES-TOP novel-COP-DECL
'What John read is a novel.'
- (2) [i chayk]i-i palo [John-i ___i ilk-un kes]i-i-ta
this book-NOM very John-NOM read-MOD KES-COP-DECL
'This book is the very one that John read.'

These two types of cleft consist of a cleft clause, a pivot XP, and the copula verb.

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The pseudocleft in (1) consists of a cleft clause with the missing object coindexed with the precopula expression *sošel* ‘novel’ whereas the inverted pseudocleft in (2) has the nominative phrase *i chayk* ‘this book’ as the pivot XP coindexed with the missing object in the following cleft clause. In these two clefts, the pivot XP is linked to the content of the cleft clause introduced by *kes*, though the exact semantic function is different.

In addition to these two, there is another type of cleft construction (see Kim and Sells (2011) for Korean and Hiraiwa and Ishihara (2012) for Japanese):

- (3) kuttay [[John-i CIP-EY o-n] kes]-i-ess-ta
 moment John-NOM home-LOC come-MOD KES-COP-PAST-DECL
 ‘It is at the very moment that John came home.’

In this kind of in-situ focus cleft (with no word order change), the whole clause is headed by the expression *kes*, followed by the copula verb. The focused element in-situ typically carries a prosodic prominence (e.g. *cip-ey*), but when no expression has the prominence, the whole clause functions as a focus.

Previous work on Korean cleft constructions has not been precise enough to support implementation in computational grammars, being either purely descriptive (e.g., Kim and Sells (2011)) or based on movement-type analyses that lack sufficient formal foundations (e.g., Sohn (2004)). In this paper, we examine the basic properties of the three different types of Korean cleft constructions and provide a constraint-based analysis suitable for implementation in an HPSG grammar that can be used for both parsing and generation.

2. Syntactic and semantic properties of the cleft constructions

2.1 Grammatical properties of *kes*

As noted, all Korean clefts are introduced by the expression *kes*, roughly corresponding to English *what*. In traditional grammar (e.g., Sohn (1994)), the expression *kes* is taken to be a bound noun in terms of morpho-syntactic category.

It combines with either a specifier or a sentential complement:

- (4) *(i) kes-kwa *(ce) kes
 this thing-CONJ that-thing
 ‘this thing and that thing’
- (5) *(nay) kes-i *(ne) kes-pota khu-ta
 my thing-NOM your thing-more big-DECL
 ‘(Lit.) My thing is bigger than your thing.’
- (6) *(John-i talli-nun) kes-ul moll-ass-ta
 John-NOM run-MOD KES-ACC not.know-PAST-DECL
 ‘(We) didn’t know that John was running.’

As noted here, *kes* in (4) and (5) refers to a nonhuman entity. When *kes* refers to an individual, its reference value can be a nonanimate or a nonhonored human being as in *elin kes* ‘a childish one’. The expression *kes* in (6) refers to the proposition denoted by the clause. This hints that there are at least two different types of *kes*: one referring to an entity (or thing) and the other functioning as pronoun denoting an event.

Evidence that indicates that *kes* is a nominal expression includes the fact that it can be replaced by a common noun:

- (7) [John-i ___ cohaha-nun kes / konchwung]-un camcali-i-ta
 John-NOM like-MOD KES / insect-TOP dragonfly-COP-DECL
 ‘What/The insect that John likes is the dragonfly’
- (8) camcali-ka [John-i ___ cohaha-nun kes / konchwung]-i-ta
 dragonfly-NOM John-NOM like-MOD KES / insect-COP-DECL
 ‘The dragonfly is what/the insect that John likes.’

The pragmatic effects of *kes* differ from that of ordinary nouns, but syntactically, it appears to be interchangeable with them, at least in some uses.

Sohn (2004) and Kang (2006) have suggested that *kes* is a complementizer. However, a canonical complementizer like *-ko* does not host grammatical case markers (NOM or ACC) as in (9) whereas all phrases headed by *kes* in the equative cleft do as in (10):

- (9) [John-i ku sasil-ul molunta-ko-(**lul*)] malhayessta
 John-NOM the fact-ACC not.know-COMP-ACC said
- (10) [John-i ___ sa-n kes]-i palo i chayk-i-ta
 John-NOM buy-MOD KES-NOM very this book-COP-DECL

Evidence from coordination also indicates that *kes* is a noun-like expression. The conjunction marker *-wa/kwa* conjoins only NPs, not Ss:

- (11) [sensayngnim]-kwa [haksayngtul]-i hamkkey ttena-ss-ta
 teacher-CONJ student-NOM together leave-PAST-DECL
- (12) *[John-unchayk-ul ilk]-kwa [Mary-nun nolay-lul pwulessta]
 John-TOP book-ACC read-CONJ Mary-TOP song-ACC sang
 ‘(Int.) John read books and Mary sang a song.’

Both types of pseudoclefts allow coordination, using the nominal coordination marker, which would be unexpected if *-kes* were a CP:

- (13) [John-i sa-n kes]-kwa [Mary-ka ilk-un kes]-un motwu
 John-NOM buy-MOD KES-CONJ Mary-NOM read-MOD KES-TOP all
 kacca-i-ta
 fake-COP-DECL
 ‘What John bought and what Mary read are all fake.’
- (14) i chayk-tul-i [John-i sa-n kes]-kwa [Mary-ka
 this book-PL-NOM John-NOM buy-MOD KES-CONJ Mary-NOM
 ilk-un kes]-tul-i-ta
 read-MOD KES-COP-DECL
 ‘These books are what John bought and what Mary read.’

Further evidence can be found from floating quantifier properties. In general, the antecedent of a floating quantifier (or floated numeral classifier) needs to be within the same clause as illustrated in (15).

- (15) namca-tul-un [yeca-tul-i sakwa-lul mek-ess-ta-ko]
 man-PL-TOP woman-PL-NOM apple-ACC eat-PAST-DECL-COMP

sey myeng-i sayngkakhay-ess-ta
 three CL-NOM think-PAST-DECL
 ‘As for men, three thought women ate apples.’

The possible antecedent of the floating quantifier *sey myeng-i* ‘three CL-NOM’ here cannot be the closer one *yeca-tul-i* ‘women-PL-NOM’ in the embedded clause.

However, floating quantifiers outside the cleft clause can be interpreted as belonging inside it:

(16) [John-i sa-n kes-i] **sey kay-(ka)** kacca-i-ta
 John-NOM buy-MOD KES-NOM threeCL-NOM fake-COP-DECL
 ‘As for the things John bought, three are fake.’

We take this as evidence that the antecedent of *say kay-ka* in (16) counts as being in the same clause as the noun it attaches to. If *kes* is a noun, it is part of the higher clause. If it is a C, however, then the only possible antecedent of *say kay-ka* is the missing argument of the lower clause, which is ungrammatical.

The evidence reviewed so far strongly supports an analysis of *kes* as a nominal element, even in clefts. In particular, it appears to be a nominal expression which takes a clausal complement.

A complication arises from the fact that *kes* can also refer to a situation or event as in the following (Chung and Kim, 2003; Kim, 2009):

(17) [John-i sakwa-lul mek-un kes-ul] moll-ass-ta
 John-NOM apple-ACC eat-MOD KES-ACC not.know-PAST-DECL
 ‘(He) didn’t know that John ate an apple.’

Here the argument of predicate ‘not.know’ is the sentence introduced by *kes*. This may make *kes* look similar to the English complementizer *that*, but it still has nominal properties. Note the accusative case marker. Thus we propose that in these uses, *kes* denotes a proposition identified with its sentential complement. Another property of this type of *kes* example is that there is no missing element in the clausal complement here. This parallels to what we observe in the in-situ focus cleft (3), leading us to assume that the *kes* expression in the in-situ focus cleft does not

refer to an entity or an individual, but is linked instead to an event.

2.2 Syntactic properties of pseudoclefts

A canonical cleft example involves the copula verb and its two arguments: the clause marked by *kes* and the XP (or ‘pivot’). The *kes*-clause represents given or discourse-old information and has a syntactically missing element. This missing element is identified with the XP, which in turn bears the information structural role of focus.

When the pivot is the second (or internal) argument of the copula (i.e., in precopula position), it can be either an argument or an adjunct, and it optionally takes a postposition (Kim and Yang, 2010) when the semantic case is dative:¹

- (18) [John-i Mary-lul manna-n kes]-un [kongwen-(eyse)]-i-ta
 [John-NOM Mary-ACC meet-MOD KES]-TOP park-(at)-COP-DECL
 ‘It was at the park that John met Mary.’
- (19) [John-i senmwul-ul pat-un kes-un] [wupyen-(ulo)]-i-ta
 John-NOM present-ACC receive-MODKES-TOP mail-(by)-COP-DECL
 ‘The way John received a present is by mail.’

Nominal adverbials or PP adjuncts can also fill the pivot (focus) position in this type of pseudocleft:²

¹ As a reviewer suggests, the optionality of the postposition in the pivot position is limited as shown in the following:

- (i) [John-i ppang-ul calu-n kes]-un [kkal-*(lo)]-i-ta
 John-NOM bread-ACC cut-MOD KES-TOP knife-with-COP-DECL
 ‘It was with the knife that John cut the bread.’

² However, true adverbs like *chenchenhi* ‘slowly’ cannot be focused in either pseudoclefts or inverted pseudoclefts:

- (i) *John-i talli-n kes-un [chenchenhi]-i-ta
 John-NOM run-MOD KES-TOP slowly-COP-DECL
 ‘(lit.) The way John ran was slowly.’
- (ii) *[chenchenhi]-ka John-i talli-n kes-i-ta
 slowly-NOM John-NOM run-MOD KES-COP-DECL

- (20) John-i Mary-lul manna-n kes-un [ecey]-i-ta
 John-NOM Mary-ACC meet-MOD KES-TOP yesterday-COP-DECL
 ‘It is yesterday when John met Mary.’
- (21) John-i Mary-lul manna-n kes-un [siksa-lul ha-ko
 John-NOM Mary-ACC met-MOD KES-TOP meal-ACC do-COMP
 nase]-i-ta
 after-COP-DECL
 ‘It is after having a meal when John met Mary.’

Inverted pseudoclefts, in contrast, do not allow PP adjuncts or adverbials in the focus position, with or without the postposition:

- (22) *[tosekwan-(eyse)]-ka John-i Mary-lul manna-n
 library-at-NOM John-NOM Mary-ACC meet-MOD
 kes-i-ta
 KES-COP-DECL
 ‘(int.) It is at the library that John met Mary.’
- (23) *[ecey]-ka John-i Mary-lul manna-n kes-i-ta
 yesterday-NOM John-NOM Mary-ACC meet-MOD KES-COP-DECL
 ‘(int.) It is yesterday that John met Mary.’

This indicates that unlike the (regular) pseudoclefts, inverted pseudoclefts allow only NP arguments to serve as the XP focus.

The gapped element in the cleft clause can be in the embedded clause, allowing a long-distance dependency relationship between the gap and the linked XP:

- (24) [John-i [Mary-ka ___ cohahanta-ko]
 John-NOM Mary-NOM like-COMP
 sayngkakha-nun kes]-un i kulim-i-ta
 think-MOD KES-TOP this picture-COP-DECL
 ‘What John thought Mary likes is this picture.’
- (25) i kulim-i [John-i [Mary-ka ___ cohaha-n-ta-ko]
 this picture-NOM John-NOM Mary-NOM like-PRES-DECL-COMP
 sayngkakha-nun kes]-i-ta

think-MOD KES-COP-DECL
 ‘This picture is what John thought Mary likes.’

In both cases, the pivot phrase *i kulim* ‘this picture’ is linked to the object of the embedded clause. This pivot XP, however, cannot be an adjunct in the embedded clause, implying that adjuncts do not participate in the long-distance dependencies in this construction.

We can further observe that just like relative clauses, clefts observe the complex noun phrase constraint (CNPC, see (Jhang, 1995):

- (26) [[John-i __ piphanha-n] kes-un] ku nonmwun-i-ta
 John-NOM criticize-MOD KES-TOP the article-COP-DECL
 ‘What John criticized is the article.’
- (27) [[John-i [Mary-ka __ piphanha-yess-ta-ko]
 John-NOM Mary-NOM criticize-PASS-DECL-COMP
 saygakha-n] kes-un] ku nonmwun-i-ta
 think-MOD KES-TOP the article-COP-DECL
 ‘What John thinks Mary criticized is the article.’
- (28) *[[John-i [[__ ssu-n] salam-ul] piphanha-n] kes-un]
 John-NOM write-MOD person-ACC criticize-MOD KES-MOD
 ku nonmwun-i-ta
 the article-COP-DECL
 ‘(lit.) What John criticized the person who wrote __ was the article.’

We take this as further evidence that *kes* is a nominal element. As in (27), *kes* can be linked to the object of the embedded complement clause, but not to the object within the complex NP as in (28).

2.3 Properties of the in-situ focus cleft

Unlike the two pseudocleft clauses, the in-situ (eventive) focus cleft appears to nominalize a whole preceding S, highlighting an event (see Hiraiwa and Ishihara (2012) for similar facts in Japanese):

- (29) [ku ttay] [sako-ka na-n] kes-i-ya
 that moment accident-NOM happen-MOD KES-COP-DECL
 ‘It is at that moment that an accident happened.’
- (30) [ku yeca-ka John-ul manna-n] kes-i-ya
 that woman-NOM John-ACC meet-MOD KES-COP-DECL
 ‘The fact is that [that woman met John].’

Such an event cleft cannot be used in the beginning of a new discourse:

- (31) A: cal iss-ess-e?
 well exist-PAST-Q
 ‘How have you been?’
- B: Mary-ka tola o-ass-e
 Mary-NOM return come-PAST-DECL
 ‘Mary came back.’
- B’: #Mary-ka tola o-n kes-i-ya
 Mary-NOM return come-MOD KES-COP-DECL
 ‘It is that Mary came back.’

This kind of cleft construction conveys the meaning of ‘cause, reason, explanation, or consequence’, focusing the information in the cleft clause. Notice that there is no syntactic gap in the cleft clause. The clause also is all presented as new information, as can be attested by the fact that these examples can be an appropriate answer to a question like *What happened?*³

Unlike in pseudoclefts and inverted pseudoclefts, the *kes* in event clefts cannot be replaced by a common noun:

- (32) ku ttay sako-ka na-n kes / *iyu-i-ta
 the moment accident-NOM occur-MOD KES / reason-COP-DECL

³ Any phrase within the cleft clause can have a narrow focus interpretation with a phonological prominence on it.

(i) kuliko nase HYUNG-I os-ul twici-nun kes-i-ess-ta
 and then brother-NOM clothes-ACC search-MOD KES-COP-PAST-DECL
 ‘And then my BROTHER was searching for the clothes.’

‘At the moment, the accident occurred.’

- (33) kuliko nase hyung-i os-ul twici-nun kes /
 and after brother-NOM clothes-ACC search-MOD KES /
 *swunkan-i-ess-ta
 moment-COP-PAST-DECL
 ‘And then, brother was searching the clothes.’

In addition, event clefts induce a freezing effect in that no element can be extracted out of the *kes*-marked clause. For example, relativization is disallowed:

- (34) *kulikonase __ os-ul twici-nun kes-i-n hyung
 and then clothes-ACC search-MOD KES-COP-MOD brother
 ‘(int.) the brother who it is that searches for the clothes after that’

We take this as further evidence that regardless of whether *kes* combines with an incomplete sentence as in pseudoclefts or with a complete sentence in the in-situ focus examples, the expression is a nominal one forming a complex nominal structure.

2.4 Interpretations of pseudoclefts

Since we treat *kes* as the nominal head, the pseudocleft and inverted pseudocleft constructions will have the following templates, respectively:⁴

- (35) a. [[...]s *kes*]_{NP-TOP} ... XP-COP-DECL
 b. XP-NOM [[...]s *kes*]_{NP-COP-DECL}

What this implies is that the cleft is just a type of copula constructions involving the *kes* expression. Korean copula constructions can be classified into three different types, just as similar English copular constructions can (Higgins, 1979; Heycock and Kroch, 2002; Mikkelsen, 2011):

⁴ The topic marker in the cleft clause here can be marked with nominative, but this would mark the cleft clause as representing new information.

- (36) a. Predicational:
 i moca-nun kacca-i-ta
 this hat-TOP fake-COP-DECL
 ‘This hat is fake.’
- b. Equative:
 Chelswu-ka palo ku salam-i-ta
 Chelswu-NOM very that person-COP-DECL
 ‘Chelswu is that very person.’
- c. Specificational:
 nay-ka manna-n salam-un Chelswu-i-ta
 I-NOM meet-MOD person-TOP Chelswu-COP-DECL
 ‘The person I met is Chelswu.’

In the predicational copula in Korean, the pre-copular element predicates a property of the subject. The equative copula equates the referents of the two surrounding expressions. Hence the subject in both of these interpretations is referential. Finally, with the specificational copula, the subject expression sets up a variable and the pre-copular expression ‘specifies’ the value for this variable.

The same three different uses are observed in the pseudocleft constructions. Observe the predicational uses first:

- (37) [John-i ___ ceyil cohaha-nun kes]-un sasil acwu
 [John-NOM most like-PRES KES]-TOP in.fact very
 ssakwuley-i-ta
 cheap-COP-DECL
 ‘The one John likes most is in fact very cheap.’

Here *acwu ssakwuley-i-ta* ‘really cheap’ is predicative, and this means that there must be some referent of the subject of this predication - a subject headed by the noun *kes*. Though the clause is a pseudocleft-like example, it involves a copula. The predicative phrase *ssakwuley* ‘cheap’ is not referential, supported from the fact that the example cannot be inverted as in (38):

- (38) *ssakwulye-nun/ka [John-i ceyil cohaha-nun kes]-i-ta

cheap-TOP/NOM [John-NOM most like-PRES KES]-COP-DECL

The equative use of the pseudocleft (or copula) identifies two expressions of the same semantic type (Heycock and Kroch, 1999, 2002; Mikkelsen, 2011). Due to this property, the construction is invertible. Consider the following examples:⁵

- (39) [John-i ilk-un kes]-un i chayk-i-ta
 [John-NOM read-PAST KES]-TOP this book-COP-DECL
 ‘What John read is this book.’
- (40) i chayk-i [John-i ilk-un kes]-i-ta
 this book-NOM [John-NOM read-PAST KES]-COP-DECL
 ‘This book is what John read.’

The precopular information in (39) is ‘this book’, which can be inverted into the subject position as in (40). The equative construction is invertible and there is no constraint on the information structure either: the subject can represent either given or new information. With prosodic emphasis on the subject, (40) has the same information structure as (39) (*i chayk* ‘this book’ is the new information). What this means is that inverted pseudoclefts are just equative uses where the *kes*-marked clause is in the pre-copular position, and the focused element is the subject.

Examples like (41) represent a typical specificational use:

- (41) [John-i Mary-lul manna-n kes]-un kongwen-eyse-i-ta
 [John-NOM Mary-ACC meet-PAST KES]-TOP park-at-COP-DECL
 ‘It was at the park that John met Mary.’

The cleft clause in the subject position introduces a variable (the place where John met Mary), and this value is identified by the expression *at the park*. It has been observed that the subject of the specificational copular clauses, specifying who (or what) someone (or something) is, sets up a variable and the complement of the copula provides the value for that variable (Mikkelsen, 2011). This follows from an important property of the specificational use of the copula: it has fixed information

⁵ (39) can also have a specificational reading when the subject cleft clause represents old information.

structure. English specificational copula sentences place an information-structure restriction on the postcopular NP (Heycock and Kroch, 2002):

- (42) A: Who was the culprit (John or Bill)?
 B: The culprit was JOHN.
- (43) A: What was John? (Was John the culprit or the victim?)
 B: *The CULPRIT was John.

The NP in complement position cannot represent given information in the specificational use of the copula and in the pseudocleft construction. The same restriction seems to hold in Korean too. Consider the following exchange:

- (44) A: *sophuthuweye-lul mence cwumwunhayeya hay?*
 software-ACC first order-CONN do
 ‘Do I have to order the software first?’
- B: *#[ney-ka hay-ya ha-nun kes]-i*
 [you-NOM do-CONN must-PRES KES]-NOM
 [sophuthuweye-lul mence cwumwunha-nun kes]-i-ta
 [software-ACC first order-PRES KES]-COP-DECL
 ‘*What you must do is order the software first.*’

In (44), the nominative marked subject is intended to be linked to NEW information whereas the precopular expression is GIVEN, as set up by the prior question. As the information structure order is NEW-GIVEN, the example is highly unnatural on a specificational interpretation. However, the example (45), in which the subject is linked to the previous context while the precopular represents new information, is felicitous since it obeys the information structure condition.

- (45) A: *nay-ka mwues-ul hay-ya ha-ci?*
 I-NOM what-ACC do-CONN do-QUE?
 ‘What should I do?’
- B: *[ney-ka hay-ya ha-nun kes]-un [software-lul mence*
 [you-NOM do-CONN must-PRES KES]-TOP [software-ACC first
 cwumwunha-nun kes]-i-ta

order-PRES KES]-COP-DECL
 ‘What you must do is *order the software first.*’

This contrast implies that the difference between specificational and predicational use comes from the fact that the predicational use adds descriptive content to the context (add new information), about an existing referent, and in contrast, the specificational use offers the value for the variable denoted by the *kes*-marked clause.

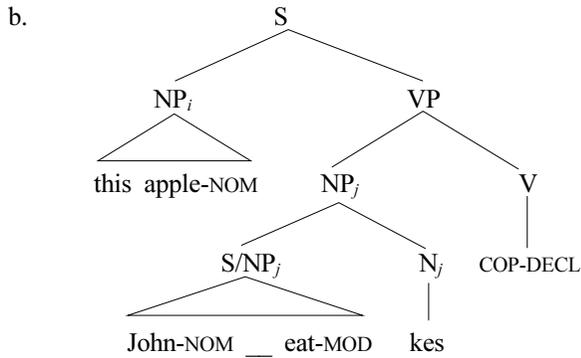
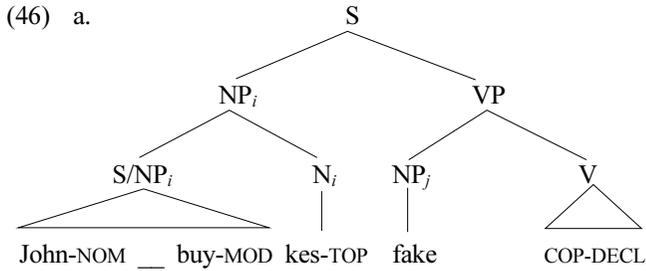
We have so far seen some main grammatical properties of the three different types of cleft constructions in Korean, which any theoretical approach needs to address. Syntactically, the three types belong to a family of copula constructions, obligatorily involving the copula verb. There is a semantic (unbounded) linkage between the missing element in the *kes*-marked clause and the pivot XP in pseudoclefts and inverted pseudoclefts. The expression *kes* serves as a mediator between these two expressions. In terms of their uses, the pseudocleft has three different interpretations, while the inverted one has just one use. There are also information-structure related constraints in the specificational uses.

We believe that proper treatments of the Korean cleft constructions need to recognize the grammatical properties of the three different types of cleft constructions in the language. In what follows we sketch a constraint-based analysis, which we believe can serve as the basis of implementation in a broad-coverage grammar.

3. A constraint-based analysis

3.1 Syntax and semantics of pseudoclefts and inverted pseudoclefts

In terms of the syntactic structures of the pseudocleft and inverted pseudocleft constructions, it is clear that the copula selects two syntactic arguments. The main difference between pseudoclefts and inverted pseudoclefts is the position of the *kes* headed cleft clause and the pivot XP. Consider the structure of the pseudocleft and inverted sentences, respectively (Kim, 2008; Kim and Yang, 2010):



In the *kes*-marked clauses of both (46a) and (46b), the missing element is first identified with the expression *kes*, thus the resulting NP carries the same index value.

The next question is how to compose the meaning of the constructions. This has to do with the properties of the copula. It is a general property of the Korean copula that structural cases (GCASE: NOM or ACC) are disallowed on its complement, though semantic cases may appear. This is captured with the constraint on the feature GCASE in (47):

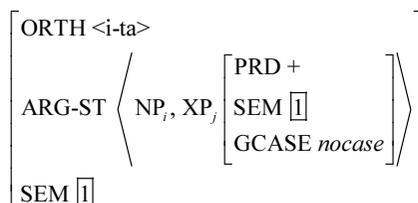
(47)

$$\left[\begin{array}{l} \text{ORTH} \langle \text{-ta} \rangle \\ \text{ARG-ST} \langle \text{NP, XP}[\text{GCASE } \textit{nocase}] \rangle \end{array} \right]$$

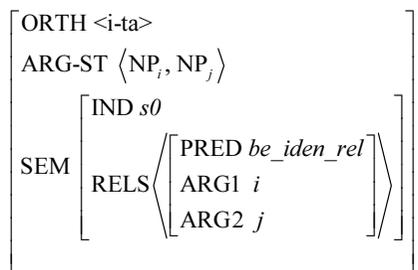
The constraints in (47) are shared across all uses of the copula, but we need to posit separate lexical entries for the predicative and equative uses.⁶ The predicative

copula is itself semantically empty, and simply raises the semantics of its predicative complement. The equative copula, on the other hand, introduces a relation taking both of its syntactic arguments as semantic arguments. This relation is analogous to the identity operator posited by Heycock and Kroch (2002).

(48) a. Predicational Copula:



b. Equative Copula:



As for the specificational use, we do not introduce another lexical entry since its meaning can be derived from the equative use. As we have discussed, the inverted pseudocleft induces only an identity reading since the first NP is a nominal, referential expression while the precopular XP is an NP headed by the expression *kes*. In contrast, the specificational use has the first NP headed by *kes*, introducing a variable, while the precopular XP gives us the value for this variable. In keeping with the general Minimal Recursion Semantics (Copestake et al., 2005) approach of using underspecification wherever possible, we posit only one lexical entry for the copula that serves both the specificational and equative uses. This entry introduces a predicate *be_iden_rel* which relates the indices of *kes* and the XP. The relationship

⁶ These entries will be used for both pseudocleft and non-pseudocleft sentences.

between the two indices can be either equality (equative use) or specification, depending on whether the underspecified relation introduced by *kes* is interpreted as referring to a specific entity or to a ‘variable’ in the *kes*-clause.

What this implies is that when the first argument of the copula is headed by *kes*, we may have both predicational and specificational readings:

- (49) [John-i ilk-un kes]-un chayk-i-ta
 [John-NOM read-PAST KES]-TOP book-COP-DECL
 ‘What John read is a book.’
- (50) [John-i Mary-eykey cwun-n kes]-un i chayk-i-ta
 [John-NOM Mary-ACC give-PAST KES]-TOP this book-COP-DECL
 ‘What John gave Mary is a book.’

In terms of syntactic structures, the two look alike, but (49) has a predicational interpretation (the bare NP *chayk* cannot be inverted) while (50) induces a specificational reading, partly because of the semantic properties of the precopular expression with the determiner *i*. That is, in (49), the NP with no determiner just denotes a property of book, not a specific book, while in (50) it refers to a specific book.⁷

The identity function approach of the specificational use can also account for examples like the following:

- (51) [wul-ko iss-nun kes]-un John-i-ta
 cry-COMP be-PRES KES-TOP John-COP-DECL
 ‘It is John that is crying.’

Since the expression *kes* refers only to an inanimate individual, we cannot directly link *kes* with *John*. The identity relation of the copula verb will just ensure that there is a semantic ‘identity’ relation between the person ‘x’ who is crying and the person ‘y’ denoted by the expression *John*. There is thus no conflict in the reference of *kes*.

⁷ The bare NP in the language can of course refer to a specific entity with proper context.

3.2 Syntax and semantics of the in-situ focus

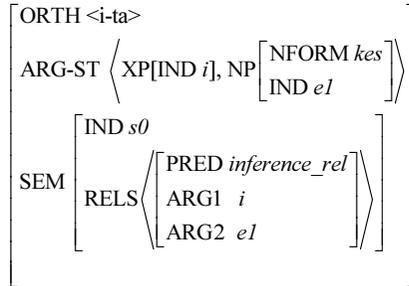
As noted earlier, the in-situ cleft construction is a construction where the entire matrix clause is headed by *kes* followed by the copula. One thing to note is that *kes* in this case is different from the one in (inverted) pseudocleft constructions in that the clause it combines with has no missing expression. In this sense, it behaves like a nominalizer (or a complementizer).

Even though the *kes* here nominalizes the whole sentence, search of the Sejong Corpus (<http://www.sejong.or.kr/eindex.php>) with about 120 million words shows us that the in-situ focus cleft commonly is preceded by a temporal or reason adverb that introduces this cleft clause.

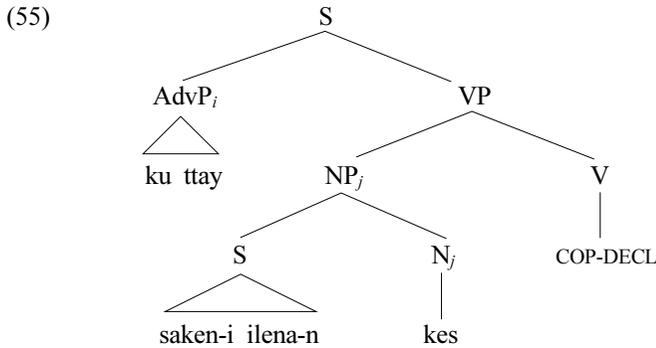
- (52) ku ttay cenki-ka tul-e o-n kes-i-ta
 the moment light-NOM enter-CONN come-MOD KES-COP-DECL
 ‘At the moment, it is that the light comes on.’
- (53) ku mal-ey hyung-i hwa-ka na-n kes-i-ta
 the saying-at brother-NOM anger-NOM occur-MOD KES-COP-DECL
 ‘At the saying, it is that the brother gets angry.’

Similar to English examples like *It is then that Tom ate the big apple*, such an in-situ focus does not occur without supporting context. It appears that the in-situ focus cleft sentence is interpreted based on the speaker’s prior knowledge. This semantic relation can be ‘cause, conclusion, reason, or explanation’. Following Kim and Sells (2011), we assume that such relations are subtypes of the semantic relation ‘inference’. That is, the interpretation of this construction is inferred from the speaker’s prior knowledge. To reflect these properties, we assume that the copula here is minimally different from the copula in the predicational or identificational cleft in that the first argument is an unrealized *pro* element linked to the speaker’s prior knowledge (Kim and Yang, 2010).

(54) In-situ focus copula:



This lexical entry tells us that the two arguments selected by this peculiar copula are eventively related by the semantic relation *inference_rel*. Even though the first argument functions as *pro* and thus will not be realized in syntax, the argument is linked to the cleft clause by this semantic/pragmatic relation. Note that since the subject can be pro-dropped in the language and the lexical entry places no restriction on the subject, we may generate a structure like the following:



In this structure, the AdvP *ku ttay* ‘the moment’ functions as the subject of the copula and is optional.

4. Conclusion

In this paper, we have explored a range of data involving the formative *kes*, among

which we find the following types of constructions: (i) cases where *kes* is simply an ordinary nominalization, (ii) pseudo-clefts, (iii) reverse pseudo-clefts, and (iv) in-situ focus constructions. We have proposed to account for (ii)-(iv) via lexical entries for the copula. The entries required for (ii) and (iii) underspecify the distinction between specificational and equative cases, and furthermore are the same entries that are required for other specificational and equative uses of the copula. The in-situ focus construction is the only one shown to require special treatment. These analyses are all couched within HPSG and designed to be implementable within a broad-coverage grammar for Korean.

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