Korean Nominalizer kes and Its Information Structure Properties Jong-Bok Kim and Peter Sells

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1. Introduction

The noun *kes* in Korean has a variety of uses, but in terms of its morphosyntactic properties, it can be classified either as a pure nominalizer, nominalizing a clause, or as a noun meaning 'fact' or 'thing'.

First of all, *kes* can nominalize a whole preceding S, highlighting the described event, as in (1) (cf. Jhang 1995, Sohn 2004):

(1) a	•	ku	ttay	sako-ka	na-n	kes-i-ya
		that	moment	t accident-NOM	A happen-PA	ST KES-COP-DECL
		'Th	e fact is	that at that mo	ment, an acc	ident happened.'
b		ku	yeca-ka	John-ul	manna-n	kes-i-ya
		that	woman-	NOM John-AC	C meet-PAST	Г KES-COP-DECL
		'Th	e fact is	that [that wom	an met John].'

The clausal complement of *kes* here is all presented as new information, as shown by the fact that these examples can be an appropriate answer to the question in (2):¹

(2) mwusun il-i-ni? what thing-COP-Q 'What happened?

The kes-phrase may present new information relative to a topic already given in the context:²

- (3) Today is a holiday, so why did Chelsoo go to school?
 - a. chelwsu-nun onul hyuil-i-nci moll-ass-ta Chelsoo-TOP today holiday-COP-COMP not.know-PAST-DECL 'Chelsoo did not know that today is a holiday.'
 - b. [chelwsu-nun onul hyuil-i-nci moll-ass-ten kes]-i-ess-ta [Chelsoo-TOP today holiday-COP-COMP not.know-PAST-RETR KES]-COP-PAST-DECL 'The fact is that Chelsoo did not know that today is a holiday.'

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¹See Hiraiwa and Ishihara (2002) for discussion of similar Japanese examples.

²The complementizer *-nci* in (3) is strictly speaking an interrogative complementizer, but the natural translation of the complement clause in English is as a declarative.

Although the subject *chelswu* is marked with the topic marker *-nun*, it is intuitively part of the information presented in this *kes*-construction, and hence we include it within the bracketed part. It is also quite possible for the subject to have the usual nominative marker (as in the examples in (1)).

Examples like (3)b represent a construction type that we will return to later in the paper; the main body of the paper focusses on other uses of *kes*, which look more like English clefts, or pseudoclefts, or perhaps inversions of one of these. However, it is important to keep structures like (1) or (3)b in mind, as differing constructions may have the same surface form.

One major point of our paper is that it is misleading to assume that Korean has anything like a true cleft or pseudocleft construction familiar from a language like English: it simply has copular constructions, and it has a way of nominalising clauses with *kes*. A representative example that looks cleft-like in some way is (4), from Lee and Ramsey (2000, 103), where a PP is related to a backgrounded clause:

 (4) [ilpon-i hanca-lul tuli-e ka-n kes]-un [Japan-NOM character-ACC take.in-COMP go-PAST KES]-TOP hankwuk-ulo-pwuthe-i-ess-ta Korea-direction-from-COP-PAST-DECL
 'Japan taking in Chinese characters was from (the direction of) Korea.'

Such examples are routinely accepted as clefts in the syntactic literature on Korean. For instance, Sohn (2004) presents the examples in (5) as clefts:³ We add our own similar examples in (6):

(5)	a.	[Mary-ka cengmallo cohaha-nun kes]-un chizukheyk-i-ta
		[Mary-NOM really like-PRES KES]-TOP cheesecake-COP-DECL
		'What Mary really likes is cheesecake.'
	b.	[chizukheyk-ul cengmallo cohaha-nun kes]-un Mary-i-ta
		[cheesecake-ACC really like-PRES KES]-TOP Mary-COP-DECL
		'Who really likes cheesecake is Mary.'
(6)	a.	[John-i phwu-n kes]-un ku mwuncey-i-ta
		[John-NOM solve-PAST KES]-TOP that problem-COP-DECL
		'What John solved is that problem.'
	b.	[ku mwuncey-lul phwu-n kes]-un John-i-ta
		[that problem-ACC solve-PAST KES]-TOP John-COP-DECL
		'Who solved that problem is John.'
G	1	

Such examples all have the form shown in (7), which actually looks more like an English pseudocleft than a cleft:

(7) $[_{NP}[_{S} \text{ 'clause' }] \text{ kes}]$ -TOP XP-copula

Here the XP in precopular position is somehow semantically related to the content of the clause-like modifier of *kes* in subject position. In our discussion below we sometimes refer to the precopular position as the 'focus' of the construction.

The *kes* phrase typically hosts the topic marker, and so describes given information against which the precopular XP presents new information:

 $^{^{3}}$ While examples like (5)a appear to be acceptable to all speakers, not all speakers find examples like (5)b with a 'subject focus', so to speak, so readily acceptable.

(8)
$$\begin{bmatrix} NP \begin{bmatrix} S & clause' \end{bmatrix} kes \end{bmatrix} - TOP \quad XP - copula \\ \dots \\ given \qquad new \end{bmatrix}$$

We will show that the only similarity between (8) and an English pseudocleft construction is that both have the given-new linear organisation.

We argue that this syntactic form can have (at least) 3 interpretations, which we will refer to initially as equational, predicational, and specificational. These interpretations are available in copular clauses, in general. We will investigate the information stucture properties in detail below, having first laid out some more of the relevant syntactic properties, in section 2.

It is also familiar from English syntax that some pseudoclefts can be inverted. The possibilities for inversion are highly restricted in Korean, due to the fact that the language has an overt topic marker. Literally flipping the major constituents in (8) leads to (9), with a topical subject and the *kes*-phrase in precopular position:

However, due to the overt topic marker, the XP must express given information, and the new information is presented by the *kes*-phrase. As we will show below, examples with this form are possible only under the equational interpretation of the matrix copular structure.

To preserve the information structure of (8), the initial XP must bear the nominative marker; with this case marker, it can express new information:

(10) XP -NOM $\begin{bmatrix} NP \\ S \end{bmatrix}$ (clause'] kes] -copula ...
new given

We show below that this structure also has only the equational interpretation.

2. Further Properties of kes-Constructions

In this section we present some other properties of constructions which have been classified in the literature as clefts in Korean. For ease of reference we call these generally '*kes*-constructions'.

First, Korean and Japanese also famously allow 'multiple clefts' (Hiraiwa and Ishihara 2002, Kim and Lee 2008, Cho et al. 2008) where multiple elements appear in the precopular position:

(11)	[mina-ka	ku	chayk-ul	sa-n	kes]-un	cak.nyen L.Aeyse-i-ta
	[Mina-NOM	that	book-ACC	buy-PAST	KES]-TOP	last.year L.ALOC-COP-DECL
	'Where/whe	en M	ina bought	that book	is last year	in L.A.'

Cho et al. (2008) argue that these have an analysis as 'amalgam clefts', and we follow their proposal. They show that amalgam clefts at the matrix level are not derived by movement – either of multiple constituents out of the host *kes*-clause, or by movement of a larger constituent containing the apparently clefted phrases – but from ellipsis in a copular clause taking the *kes*-clause as background (in the information structure sense). In their proposal, the example in (11) is derived by ellipsis of the greyed-out parts of the larger structure in (12):

(12) [mina-ka ku chayk-ul sa-n kes]-un [Mina-NOM that book-ACC buy-PAST KES]-TOP
[mina-ka ku chayk-ul cak.nyen L.A.-eyse sa-ss-ta] -i-ta
[Mina-NOM that book-ACC last.year L.A.-LOC buy-PAST-DECL]-COP-DECL
'Where/when Mina bought that book is Mina bought that book last year in L.A.'

These multiple clefts do not appear to have a syntactic derivation in which the focal part(s) must be moved out of the backgrounded constituent, to precopular position. The matching information (the greyed-out parts) is generated in both parts of the structure, and elided in the second part. If this general approach to the syntax is correct, the question arises as to how the information structure of such amalgam clauses is determined. At a very superficial level, *kes* marks the boundary between given and new information. The amalgam clefts show that the new information is not restricted by the syntax to being expressed in a single constituent.

A second interesting property of Korean is that it is possible to have a *wh*-word or -phrase in the precopular position, as in (13) from Kim and Lee (2008) (the copula is phonetically silent):

(13) [Sue-ka Bonn-eyse palphyoha-nun kes]-un encey-ya? [Sue-NOM Bonn-LOC present-PRES KES]-TOP when(-COP)-Q 'When is it that Sue is presenting in Bonn?'

What is important about such examples, and what is implicit in the English translation, is that the acceptability of *wh*-phrases implies a kind of cleft structure, rather than pseudocleft structure:

- (14) a. When is it [that Sue is presenting in Bonn]?
 - b. ??When is [when Sue is presenting in Bonn]?
 - c. Who is it [that met Sue]?
 - d. ??Who is [who met Sue]?

Thirdly, one aspect of the construction that has implicitly guided previous analyses is the formal status of *kes*; this, naturally, is a Korean-specific property. The word *kes* is an inanimate noun and is usually translated as 'fact' or 'thing'; yet in these copular constructions the precopular XP can be an animate-denoting NP (also see (5)b above), apparently substitutable for a noun like *salam* ('person'):

- (15) a. [John-i sa-n kes]-un mwues-i-ni? [John-NOM buy-PAST KES]-TOP what-COP-Q 'What is it that John bought?'
 - b. [John-i manna-n kes]-un nwukwu-i-ni? [John-NOM meet-PAST KES]-TOP who-COP-Q 'Who is it that John met?'
- (16) a. [i seysang-eyse ceyil alumtaw-un salam]-un nwukwu-ci?
 [this world-LOC most beautiful-PRES person]-TOP who-Q
 'Who is the most beautiful person in the world?'
 - b. [i seysang-eyse ceyil alumtaw-un kes]-un nwukwu-ci? [this world-LOC most beautiful-PRES KES]-TOP who-Q 'Who is the most beautiful in the world?'

- (17) a. [i pang-eyse ceyil ttokttokha-n salam]-un nwukwu-ci?
 [this room-LOC most smart-PRES person]-TOP who-Q
 'Who is the smartest person in this room?'
 - b. [i pang-eyse ceyil ttokttokha-n kes]-un nwukwu-ci? [this room-LOC most smart-PRES KES]-TOP who-Q 'Who is the smartest in this room?'
- (18) a. [ku il-ul ha-l swu iss-nun salam]-un ne-ppwun-i-ta [that work-ACC do-can-PRES person]-TOP you-just-COP-DECL 'The person who can do the work is just (=only) you.'
 - b. [ku il-ul ha-l swu iss-nun kes]-un ne-ppwun-i-ta [that work-ACC do-can-PRES KES]-TOP you-just-COP-DECL 'The one who can do the work is just (=only) you.'

In all these examples with *kes*, it appears that the precopular XP is formally syntactically removed from the clause modifying *kes*, where *kes* itself is a formal marker of the construction, as a kind of cleft. The reason for this analysis is that *kes* shows no sensitivity to animacy, which it otherwise does, in other contexts. In other words, *kes* in an example like (18)b could not be the referential inanimate noun *kes*, but must have some other use, just marking the construction.

Picking up on this distinction, Kang (2006) notes the asymmetry shown in (20)a–(20)b (relative to the lack of asymmetry in the by-now familiar examples in (19)). The second set of examples involves the inverted construction with the *kes*-phrase in precopular position (cf. (9)):

- (19) a. [John-i sa-n kes]-un i chayk-i-ta [John-NOM buy-PAST KES]-TOP this book-COP-DECL 'What John bought is this book.'
 - b. [John-i manna-n kes]-un ku yeca-i-ta [John-NOM meet-PAST KES]-TOP that woman-COP-DECL 'Who John met is that woman.'
- (20) a. i chayk-un [John-i sa-n kes]-i-ta (inanimate topic) this book-TOP [John-NOM buy-PAST KES]-COP-DECL 'This book is the one that John bought.'
 - b. *ku yeca-nun [John-i manna-n kes]-i-ta (animate topic) that woman-TOP [John-NOM meet-PAST KES]-COP-DECL 'That woman is the one who John met.'

Although (20)b is unacceptable, an acceptable example can be created, simply by putting the animate head noun *salam* in the precopular position, as in (21):⁴

(21) ku yeca-nun [John-i manna-n salam]-i-ta that woman-TOP [John-NOM meet-PAST person]-COP-DECL 'That woman is the person who John met.'

⁴The string in (20)b can be acceptable as focusing the whole event (cf. (1)), with the interpretation of ku yeca-nun 'that woman' as topical information – "As for that woman, the news is that John met her".

The acceptability of (21) shows that kes in (20)b must also be used as a true noun, with a referential interpretation, and hence it is incompatible with the meaning of yeca due to the clash in (in)animacy. If this is so, then why does kes in (19)b not have the same analysis?—Why is there no animacy clash?

Although (21) is grammatical, the information structure is different from (19)b. In (21) 'that woman' is given information, and the new information is somewhere in the precopular part, most likely by constrastive emphasis on John-i or manna-n. In order to present the subject NP as new information, it should have nominative case; yet the same pattern of acceptability emerges as in (20):

- (22) a. i chayk-i [John-i kes]-i-ta (inanimate subject) sa-n this book-NOM [John-NOM buy-PAST KES]-COP-DECL 'This book is the one that John bought.'
 - b. *ku yeca-ka [John-i manna-n kes]-i-ta (animate subject) that woman-NOM [John-NOM meet-PAST KES]-COP-DECL 'That woman is the one who John met.'

In order to express given information, the *kes*-phrase in these examples is used referentially, as suggested in the English translations. These are equational copular constructions with the new information in the subject position, but there is an animacy clash in (22)b.

Hence, only (19) does not show sensitivity to animacy, and the full explanation for the contrast in (20) lies in the fact that there are a variety of kes-constructions, which superficially look the same but which are distinguishable in terms of more subtle properties, as we investigate below.

3. **Copular constructions**

All of the kes-constructions that we are interested in have the copula as the matrix verb. Hence, it is important to understand the (information structure) properties of the copula as part of a study of kes. It is familiar from works such as Heycock and Kroch (2002) or Mikkelsen (2005) that there are a variety of copular constructions: equational, predicational, and specificational. Under each interpretation, the arguments typically have the referential properties shown in (23), from Mikkelsen (2008):

(23)	Copular Clauses	
(23)	Copular Clauses	

Interpretation	NP1	copula	NP2
equative	referential		referential
predicational	referential		non-referential
specificational	non-referential		referential

The properties in (23) do not exhaust all of the cases of kes-constructions, but they prove useful in showing just what extra properties of Korean grammar need to be accounted for. Before we look at the copular types in (23), we present more evidence for determining the referentiality of NP1.

3.1. Further Tests for Referentiality

The particular constructions discussed in this subsection force the kes-phrase subject to be referential, and are therefore incompatable with animate referents in the precopular position (such as (19)b). In other words, in copular constructions with kes-phrases, if the kes-phrase is used referentially, the properties of the overall construction are directly predictable from what we know about the copula – the interpretation must be equational or predicational. Later in the paper, we return to the most interesting set of examples, those with non-referential kes-phrases – these allow animates in the precopular position, and also multiple clefts (amalgam clefts).

3.1.1. Conjoined *kes*-phrases

It is possible to conjoin *kes*-phrases if they are used referentially:

- (24) a. [John-i sa-n kes]-kwa [Mary-ka ilk-un kes]-un motwu [John-NOM buy-PAST KES]-CONJ [Mary-NOM read-PAST KES]-TOP all kacca-i-ta fake-COP-DECL 'What John bought and what Mary read are all fake.' b. chayk-tul-i [John-i kes]-kwa [Mary-ka i sa-n ilk-un
 - b. I Chayk-tul-I [John-I Sa-II Kes]-Kwa [Mary-Ka IK-ull this book-PL-NOM [John-NOM buy-PAST KES]-CONJ [Mary-NOM read-PAST kes]-tul-i-ta KES]-COP-DECL 'These books are what John bought and what Mary read.'

As expected, such a coordinated phrase cannot have an animate referent:

(25) a. *[John-i cohaha-nun kes]-kwa [Mary-ka chotayha-n kes]-un [John-NOM like-PRES KES]-CONJ [Mary-nom invite-PAST KES]-TOP nay tongsayng-i-ta I brother-COP-DECL
'The one that John likes and that Mary invited is my brother.'

3.1.2. Future tense inside the *kes*-phrase

For some reason, future tense also forces a referential meaning. Consider first the pair of English examples in (26), where a is formed from a cleft, and b is not.

(26) a. What is it that you want to do? b. What do you want to do?

These seem like an unremarkable pair. However, in English, there is a clear asymmetry in the acceptability of the following future tense examples, for any V:

(27) a. ?*What is it that you will V tomorrow? b. What will you V tomorrow?

A search for the string in (27)a with a wild-card for 'V' on Google in July 2008 yielded 1 hit, while a search at the same time for (27)b yielded 416,000 hits. While there is a large amount of unusable data in simple string searches, the massive difference in these numbers can be taken as an indicator of the degraded status of the future cleft construction in (27)a.

In Korean, a *kes*-construction with a future form inside the modifying clause also yields a diagnostic about the construction types. The examples in (28) and (29) are all acceptable:

- (28) a. ne-nun nayil mwues-ul ha-keyss-ni? you-TOP tomorrow what-ACC do-FUT-Q 'What do you want to do tomorrow?'
 - b. [ney-ka nayil ha-l kes]-un mwues-i-ni? [you-NOM tomorrow do-FUT KES-TOP what-COP-Q 'What is it/the thing that you will do tomorrow?'
- (29) a. [John-i tayhak-eyse kongpwu ha-l kes]-un mwues-i-ni? [John-NOM university-at study-FUT KES]-TOP what-COP-Q 'What will John study at university?'

b. [John-i tayhak-eyse kongpwu ha-l kes]-un enu kwamok-i-ni? [John-NOM university-at study-FUT KES]-TOP which subject-COP-Q 'Which subject will John study at university?'

However, a *kes*-construction containing a future form cannot be used if the target referent is animate, as in (30)–(31), while present or past forms are generally acceptable:

- (30) a. *[ku mwuncey-lul phwu-l kes]-un John-i-ta [that problem-ACC solve-FUT KES]-TOP John-COP-DECL 'Who will solve that problem is John.'
 - b. [ku mwuncey-lul phwu-eya ha-nun kes]-un John-i-ta [that problem-ACC solve-must-PRES KES]-TOP John-COP-DECL 'Who must solve that problem is John.'
- (31) a. ?[John-i pangmwun ha-n kes]-un Mary-i-ta [John-NOM visit-PAST KES]-TOP Mary-COP-DECL 'Who John visited is Mary.'
 - b. ?*[John-i pangmwun ha-l kes]-un Mary-i-ta [John-NOM visit-FUT KES]-TOP Mary-COP-DECL 'Who John will visit is Mary.'

We do not understand the reason for this behaviour with the future tense; yet clearly the effect is that the future form in the *kes*-clause forces *kes* to be interpreted in its true nominal form, meaning 'fact' or 'thing', and therefore incompatible with an animate focal referent.

3.2. Equational

The equational use of the copula identifies two expressions of the same semantic type, regardless of whether they are referring (nominal) expressions or not (Heycock and Kroch 2002, Mikkelsen 2008). In this use both subject and precopular XP either are or describe the same object. Due to this property, the construction is invertible. In the translations, the new information is shown in italics.

- (32) a. [John-i ceyil cohaha-nun hoysa tonglyo]-nun i salam-i-ta [John-NOM most like-PRES company colleague]-TOP this person-COP-DECL 'John's favourite colleague is *this person*.'
 - b. i salam-un [John-i ceyil cohaha-nun hoysa tonglyo]-i-ta this person-TOP [John-NOM most like-PRES company colleague]-COP-DECL 'This person is *John's favourite colleague*.'

The equational construction is truly invertible in the sense that the information structure of (32)a can be maintained with the reversed order, as long as the subject *i salam* is marked with the nominative rather than topic marker. With prosodic focus on the subject, (33) has the same information structure as (32)a (*this person* is the new information):

(33) i salam-i [John-i ceyil cohaha-nun hoysa tonglyo]-i-ta this person-NOM [John-NOM most like-PRES company colleague]-COP-DECL '*This person* is John's favourite colleague.'

However, the strict inversion of (32)b is unacceptable:

(34) ??[John-i ceyil cohaha-nun hoysa tonglyo]-ka i salam-i-ta [John-NOM most like-PRES company colleague]-NOM this person-COP-DECL 'John's favourite colleague is this person.'

The patterns here are identical to those reported for simple copular constructions, for example in the work of Heycock and Kroch (2002) or Mikkelsen (2005):

- (35) Who is John's favourite colleague?
 - a. John's favourite colleague is *this person*. \sim (32)a
 - b. *This person* is John's favourite colleague. \sim (33)
- (36) Who is this person?
 - a. This person is John's favourite colleague. \sim (32)b
 - b. *??John's favourite colleague* is this person. \sim (34)

The inverted examples are only acceptable when the subject presents new information that specifies the individual described by the precopular part.

It is also possible to create such equational uses with *kes*-phrases:

- (37) a. [John-i sa-n kes]-un i chayk-i-ta [John-NOM buy-PAST KES]-TOP this book-COP-DECL 'What John bought is *this book*.'
 - b. i chayk-i [John-i sa-n kes]-i-ta this book-NOM [John-NOM buy-PAST KES]-COP-DECL '*This book* is what John bought.'

And a similar pattern can be seen in the pair of equational examples in (38):

- (38) a. [ney-ka hay-ya ha-nun kes]-un [software-lul mence cwumwunha-nun [you-NOM do-COMP must-PRES KES]-TOP [software-ACC first order-PRES kes]-i-ta KES]-COP-DECL
 'What you must do (to solve your problem) is *order the software first.*'
 - b. [software-lul mence cwumwunha-nun kes]-i [ney-ka hay-ya ha-nun [software-ACC first order-PRES KES]-NOM [you-NOM do-COMP must-PRES kes]-i-ta KES]-COP-DECL
 'Order the software first is what you must do.'

The inverted structure in (38)b has the new information in subject position, parallel to (33); presenting the first phrase in (38)a as new information in the inverted structure is unacceptable, as in (34).

(39) ??[ney-ka hay-ya ha-nun kes]-i [software-lul mence cwumwunha-nun [you-NOM do-COMP must-PRES KES]-NOM [software-ACC first order-PRES kes]-i-ta KES]-COP-DECL
'What you must do is order the software first.'

3.3. Predicational

Mikkelsen (2008) describes several properties of predicational uses of the copula – the most important being that the subject is referential, and the precopular position is non-referential.⁵ The precopular part describes a property of the entity denoted by the subject.

An example like (40)a might look like a cleft of some kind, but in fact it is a predicational use of the copula – the predicative NP *kacca* is not referential. Due to this property, the construction cannot be inverted as in (40)b:

- (40) a. [John-i ceyil cohaha-nun kes]-un sasil(-un) kacca-i-ta [John-NOM most like-PRES KES]-TOP really fake-COP-DECL 'What John likes most is in reality a fake.'
 - b. ??kacca-nun/ka [John-i ceyil cohaha-nun kes]-i-ta fake-TOP/NOM [John-NOM most like-PRES KES]-COP-DECL

The distribution of referential properties indicates that (41)a-b are not predicational constructions, due to the unacceptability of (41)c. When the *kes*-phrase is forced to refer, as in (41)c, it cannot have an animate referent; compare this with the acceptability of (42) with an inanimate referent. From this, it follows that the *kes*-phrases in (41)a-b do not refer (to an animate individual) – the English 'translations' are not reliable guides.

(41)	a.	[John-i kyelhon ha-n kes]-un Mina-i-ta
		[John-NOM marry-PAST KES]-TOP Mina-COP-DECL
		'The one who John married is Mina.'
	b.	[John-i kyelhon ha-n kes]-un alumtaw-un yeca-i-ta
		[John-NOM marry-PAST KES]-TOP beautiful-PRES woman-COP-DECI
		'The one who John married is a beautiful woman.'
	c.	*[John-i kyelhon ha-n kes]-un alumtap-ta
		[John-NOM marry-PAST KES]-TOP beautiful-DECL
		'The one who John married is beautiful.'

(42) [John-i sa-n kes]-un acwu pissa-yo
[John-NOM buy-PAST KES]-TOP very expensive-LEVEL
'What John bought is very expensive.'

Mikkelsen (2008) also notes that in a predicational use, the copula can be replaced by the verb *become*. While (43)a and especially (43)b might taken to be predicational cleft-like uses, the total unacceptability of (43)d shows that the *kes*-phrase in these constructions does not refer.

- (43) a. [John-i kyelhon ha-n kes]-un Mina-i-ta[John-NOM marry-PAST KES]-TOP Mina-COP-DECL'The one who John married is Mina.'
 - b. [John-i kyelhon ha-n kes]-un uysa-i-ta [John-NOM marry-PAST KES]-TOP doctor-COP-DECL 'The one who John married is a doctor.'

⁵Some tests for determining the predicational or referential status of the an XP in precopular position, in Japanese, can be found in Komagata (1996).

- c. Mina-nun uysa-ka toy-ess-ta Mina-TOP doctor-NOM become-PAST-DECL 'Mina became a doctor.'
- d. *[John-i kyelhon ha-n kes]-un uysa-ka toy-ess-ta
 [John-NOM marry-PAST KES]-TOP doctor-NOM become-PAST-DECL
 'The one who John married became a doctor.'

Hence, in the predicational construction, the *kes*-phrase is used referentially and must have an inanimate referent. The predicational construction introduces or involves no new referents, but simply provides more descriptive content about the subject. Hence if Mary became a doctor, it makes no (literal) sense to talk about the doctor who Mary became.

3.4. Specificational

In specificational copular clauses the precopular XP is referential while the subject is not: it provides a description. As Mikkelsen (2008) summarizes, the classic specificational use is providing a list of one or more items which answer a question described by the subject of the construction, as in (44):

- (44) a. What I need to buy is a hammer and nails.
 - b. Where Sam went for vacation is The Canaries.
 - c. [ku mwuncey-lul phwu-eya ha-nun kes]-un John-i-ta [that problem-ACC solve-must-PRES KES]-TOP John-COP-DECL 'Who must solve that problem is John.'

Examples like (44)c can be considered to be specificational in Korean, for the *kes*-phrase is not used referentially (due to the animate focus of the overall construction). In this case, the precopular XP *John* is referential, but this in itself is not the crucial aspect of the construction. In terms of file-card semantics, which we present in more detail below, the *kes*-phrase in (44)c describes a certain state of the file, and the precopular part presents new information which provides the file with what we call 'descriptive update'. The difference with the predicational use is that the predicational use adds a new condition to an existing file card; in contrast, the specificational use adds (at least) one file card.

3.5. Descriptive Update

With 'descriptive update' in mind, what kind of copular construction does (4) involve?

(4)	[ilpon-i	hanca-lul	tuli-e	ka-n	kes]-un	
	[Japan-NON	A character-AC	C take.in-CC	MP go-PAS	г kes]-top	
	hankwuk-ulo-pwuthe-i-ess-ta					
	Korea-direc	ction-from-COI	P-PAST-DEC	L		
	'Japan takii	ng in Chinese o	characters w	as from (the	direction of) Korea.'	

It seems reasonable in this example that the *kes*-part does not refer, so this would suggest a specificational interpretation. However, as the XP in the precopular position is not an NP, it itself does not obviously refer. It does, though, provide new information relative to what is given in the *kes*-part, what we have characterised as 'descriptive update'. The amalgam cleft examples are also of this type.

(11) [mina-ka ku chayk-ul sa-n kes]-un cak.nyen L.A.-eyse-i-ta
 [Mina-NOM that book-ACC buy-PAST KES]-TOP last.year L.A.-LOC-COP-DECL
 'Where/when Mina bought that book is last year in L.A.'

It is not obvious what other kind of information structure analysis could be given to examples like this.

3.6. Summary

The properties of copular constructions that we focussed on above are summarized here, slightly modifying the original outline from Mikkelsen's work:

(45)

	subject is referential	construction is reversible
equational	optionally	yes
predicational	yes	no
specificational	no	no
descriptive update	no	no

We will refer to the last two interpretations here as 'Updating'.

4. Syntax or Information Structure?

Kang (2006) presents a syntactic account of the contrast in the examples in (19–20), repeated below. She frames her proposal in terms of the category of *kes*, claiming that *kes* is either C or N, and therefore heads a CP in some cases and an NP in others:

(46) a.	[John-i sa-n	kes] _{CP} -un i	chayk-i-ta
	[John-NOM buy-F	PAST KES]-TOP thi	s book-COP-DECL
	'What John boug	ht is this book.'	

- b. i chayk-un [John-i sa-n kes]_{NP}-i-ta (inanimate topic) this book-TOP [John-NOM buy-PAST KES]-COP-DECL 'This book is what John bought.'
- (47) a. [John-i manna-n kes]_{CP}-un i yeca-i-ta [John-NOM meet-PAST KES]-TOP this woman-COP-DECL 'Who John met is this woman.'
 - b. *i yeca-nun [John-i manna-n kes]_{NP}-i-ta (animate topic) this woman-TOP [John-NOM meet-PAST KES]-COP-DECL 'This woman is who John met.'

Her idea is very simple: as a complementizer, *kes* creates a CP structure which does not represent animacy, and hence such a *kes*-phrase can be compatible with any referent in the precopular position. In its other category, *kes* creates an NP with the feature [-animate], coming from the lexical specification of *kes*, and hence this is incompatible with an animate subject, as in (47)b.

Kang's account makes certain further predictions, not considered in her paper. If the two possibilities of CP or NP exist in the grammar, we can also see that (48)b will be ungrammatical on the analysis shown, but not (48)a, due once again to a clash in animacy in the latter example:

- (48) a. [John-i sa-n kes]_{NP}-un i chayk-i-ta 'What John bought is this book.' (predicted to be acceptable)
 - b. *[John-i manna-n kes]_{NP}-un i yeca-i-ta
 'What John met is this woman.' (predicted to be unacceptable)

However, the existence of these alternatives raises more questions which are problematic for Kang's proposal: What is the difference between (46)a and (48)a? And why can there not be an analysis of (47)b with the animacy-free CP in the precopular position? This would be the analysis in (49):

(49) *i yeca-nun [John-i manna-n kes]_{CP}-i-ta (animate topic) this woman-TOP [John-NOM meet-PAST KES]-COP-DECL 'This woman is who John met.'

The example is unacceptable on the intended interpretation (cf. footnote 4), yet the syntactic analysis shown in (49) should be fully grammatical.

There is no evidence for the categorial ambiguity of *kes* as N or C – it shows no evidence of being a C, syntactically. For example, canonical CPs in Korean headed by *ko* may not host case markers, while all phrases headed by *kes* host a case marker (unless it is supplanted by the topic marker *-nun*).

 (50) Mina-ka [John-i uysa-ka toy-ess-ta]-ko(*-ka/*-lul) Mina-NOM [John-NOM doctor-NOM become-PAST-DECL]-COMP(*-NOM/*-ACC) sayngkakha-n-ta think-PRES-DECL
 'Mina thinks that John became a doctor.'

Verbs in Korean do not take a prenominal ending form before true complementizers, as seen in (50), while a verb immediately preceding *kes* must necessarily be in the prenominal form.

In summary, the C analysis of *kes* can work descriptively, as we do not expect C to be categorized for animacy. But there is no morpho-syntactic support for such a syntactic analysis – quite the opposite in fact – and, in addition, such a proposal appears to generate (49), incorrectly.

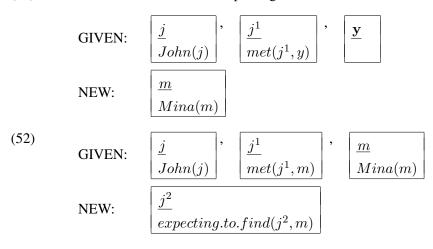
5. Information Structure in kes Constructions

5.1. File Card Semantics

An account in terms of file card semantics (see e.g., Vallduví 1992, Engdahl and Vallduví 1996) provides a useful view of the information structure properties that we consider to be crucial. Kuboň (1999) presents a detailed formalisation of file-card semantics.

For indices for variables we use x and y, and for constants we use alphabetic characters from b to w (for referents from 'this book' to 'that woman'). Each card has its index, underlined at the top, then a condition. The boldface y on the card indicates which index/card is to be updated. From the first sentence, the information structure in (51) is updated and becomes the GIVEN information for the second sentence, as shown in (52). Cards j, j^1 and j^2 provide conditions on the referent, j.

(51) John met Mina. He was expecting to find her.



Similarly to (51), for the Korean example in (53), if it has the same given-new articulation, we expect the same kind of update in the file:

(53) [John-i manna-n kes]-un Mina-i-ta [John-NOM meet-PAST KES]-TOP Mina-COP-DECL

Note that *kes* itself does not refer to anything here – it does not have its own file card. It simply marks the partition between the given information and the new information. We take this to be formally a kind of specificational construction: the new information provides the answer to the question of who John met, which we characterise as 'descriptive update'. Intuitively, it is John's card that is updated.

Consider now the examples from the introduction, in (5):

- (5) a. [Mary-ka cengmallo cohaha-nun kes]-un chizukheyk-i-ta [Mary-NOM really like-PRES KES]-TOP cheesecake-COP-DECL 'What Mary really likes is cheesecake.'
 - b. [chizukheyk-ul cengmallo cohaha-nun kes]-un Mary-i-ta [cheesecake-ACC really like-PRES KES]-TOP Mary-COP-DECL 'Who really likes cheesecake is Mary.'

Korean speakers have the intuition that it is easy to continue the discourse with Mary as the topic with either example, but it is only easy to continue with *cheesecake* in (5)a. In (5)a the initially most salient referent is Mary, and the second referent which is created is *cheesecake*, and this updates the information of the event. As an animate NP, Mary would naturally be the more salient of the two, but in this example *cheesecake* is the new information, and hence it has some salience.

The three interpretations of kes-phrases in copular clauses can be informally characterised:

- (54) a. Predicational use: The *kes*-phrase refers, therefore it has a file card. This is the primary file card whose index gains extra descriptive content.
 - b. Equational use: The *kes*-phrase refers, therefore it has a file card. There is a separate file card with descriptive content, and its index is equated with that of the *kes*-phrase.
 - c. Specificational use: The file is updated with descriptive content, and adds a new file card with a new index.

For the predicational use, consider (42), repeated here:

(42) [John-i sa-n kes]-un acwu pissa-yo [John-NOM buy-PAST KES]-TOP very expensive-LEVEL 'What John bought is very expensive.'

In the interpretation, there is a file card corresponding to the thing that John bought, and the index of that card receives the further information *very expensive*. Slightly simplifying and modifying Kuboň's notation, we can represent the file as follows, which gets updated to the state in (56):

(55)
GIVEN:
$$\frac{j}{John(j)}$$
, $\frac{j^{1}}{bought(j^{1}, y)}$, $\frac{\mathbf{y}}{thing(y)}$
NEW: $\frac{y^{1}}{very.expensive(y^{1})}$

The final file simply has the 4 cards shown in (55).

For the equational use, consider (37), repeated here:

- (37) a. [John-i kes]-un i chayk-i-ta sa-n [John-NOM buy-PAST KES]-TOP this book-COP-DECL 'What John bought is this book.'
 - b. kes]-i-ta i chayk-i [John-i sa-n this book-NOM [John-NOM buy-PAST KES]-COP-DECL 'This book is what John bought.'

The new information here is 'this book', which can be inverted into the subject position as in (37)b. Formally, in Kubon's system, the card with new information becomes a secondary card relative to the primary card representing given information: if the given information is on card y, then the new information on card y^1 , and this means they both describe the same entity.

) GIVEN: $\left[\frac{j}{John(j)}\right]$, $\left[\frac{j^1}{bought(j^1, y)}\right]$, $\left[\frac{\mathbf{y}}{thing(y)}\right]$ "There is something_y that was bought by John" NEW: $\begin{bmatrix} \underline{b} \\ book(b) \end{bmatrix}$, $\begin{bmatrix} \underline{b^1} \\ b^1 \rightarrow \mathbf{y} \end{bmatrix}$ "This book_b has the same_y referent"

We encode the fact that the two referents are identical by the notation $b^1 = y$. As *this book* is taken to refer to a book b, we use that constant for the index of the card(s), and so after the new information is processed, the file has the following structure:

(57)
$$\underline{j}_{John(j)}$$
, $\underline{j}_{bought(j^1, y)}^1$, $\underline{y}_{thing(y)}$, $\underline{b}_{book(b)}$, \underline{b}_{1-y}^1

We have the formal condition $b^1 = y$ to show the 'equational' nature of the construction.

In the Updating type of construction, as long as constraints on copular clauses are satisfied, any kind of descriptive update can be provided. In (58), a PP is providing the new information:

(58)[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.'

In the interpretation for this example, we have the cards shown in (59), and a new card j^2 is created to host the new information:

(59)
GIVEN:
$$\boxed{\underline{j}}_{John(j)}$$
, $\boxed{\underline{j^1}}_{met(j^1,m)}$, $\underline{\underline{m}}_{Mary(m)}$
NEW: $\boxed{\underline{j^2}}_{at(p,met(j^2,m))}$, $\boxed{\underline{p}}_{park(p)}$

The new information here is relative to John – a location where he did something is added, along with descriptive content for that location.

In summary, we have suggested the following mechanisms for updating files:

- (60) a. Predicational: Add a condition to a card with an index of **x**.
 - b. Equational: Add a new card with index y to a file containing x and equate the two indices.
 - c. Updating: Add a new card with index y to a file containing x and add descriptive information to the file.

5.2. Constraints on Information Update

Given that there is a general construction which simply allows descriptive update, an adverbial element also can be focused. Some speakers only allow this if the adverbial is categorically a nominal, such as *ecey* as in (61)a, but not *chenchenhi* as in (61)b.

- (61) a. [John-i Mary-eykey senmwul-ul cwu-n kes]-un [_{NP}ecey]-i-ta [John-NOM Mary-DAT present-ACC give-PRES KES]-TOP [yesterday]-COP-DECL 'It is yesterday when John gave Mary a present.'
 - b. %[John-i talli-n kes]-un [Advchenchenhi]-i-ta [John-NOM run-PRES KES]-TOP [slowly]-COP-DECL '(lit.) The way John ran is slowly.'

Yet some speakers accept examples like (61)b. And some speakers show a broader pattern of acceptance in the precopular position (cf. Cho et al. 2008), allowing in principle any clause-level constituent, or any sequence of constituents, as in (11), repeated here:⁶

(11) [mina-ka ku chayk-ul sa-n kes]-un cak.nyen L.A.-eyse-i-ta
 [Mina-NOM that book-ACC buy-PAST KES]-TOP last.year L.A.-LOC-COP-DECL
 'Where/when Mina bought that book is last year in L.A.'

Clearly an example like this cannot have an interpretation that is predicational or equational – if it did, the subject *kes*-phrase would have to refer, and there would be two predicates or equative phrases related to it. However, the simple notion of descriptive update fits the example perfectly. The information up to *kes* is given, and the rest is new. Most likely Mina is the most salient referent, and her card would be the primary one in the update. This is shown in (62):

(62)	GIVEN:	$\begin{bmatrix} \underline{m} \\ Mina(m) \end{bmatrix},$	$\boxed{\frac{m^1}{bought(a)}}$	$m^1, b)$,	$ \begin{bmatrix} \underline{b} \\ book(b) \end{bmatrix} $
	NEW:	$\frac{m^2}{time(x, bought})$	$t(m^2,b))$, x		ear(x),
		$\boxed{\frac{m^3}{at(l, bought(m}$, ³ , <i>l</i>))	$ \begin{array}{c} \underline{l} \\ L.A. \end{array} $	(l)	

However, descriptive update does not extend to subparts of clause-level constituents. Examples like those in (63) where a numeral quantifier provides the update, are not acceptable:

⁶One possibility, which we do not pursue in this version, is to adopt a slightly more "neo-Davidsonian" view, and assume that what we are calling descriptive update here actually provides more information about the event. Hence (11) would mean that the given event of Mina buying a book is further specified as having been last year and in L.A. As it stands, our analysis is that it is *Mina*'s file cards that are updated, in this example.

- (63) a. *[John-i chayk-ul sa-n kes]-un [sey kwen]-i-ta
 [John-NOM book-ACC buy-PAST KES]-TOP [four volume]-COP-DECL
 'What John bought books was four.'
 - b. *[John-i salam-ul manna-n kes]-un [sey myeng]-i-ta [John-NOM person-ACC meet-PAST KES]-TOP [four person]-COP-DECL 'What John met people was four.'

Finally, we return to the contrast above in (47):

- (47) a. [John-i manna-n kes]-un i yeca-i-ta
 [John-NOM meet-PAST KES]-TOP this woman-COP-DECL
 'Who John met is this woman.'
 - b. *i yeca-nun [John-i manna-n kes]-i-ta (animate topic) this woman-TOP [John-NOM meet-PAST KES]-COP-DECL 'This woman is who John met.'

In contrast to (47)a, the following examples are bad. In (64)a the new information does not correctly specify the given information (which is *this woman*), as discussed above in section 3.2. The relative informativity of the *kes*-phrase and the precopular XP means that examples with these phrases only work if the *kes*-phrase is given and the other phrase is new. And in (64)b, the *kes*-phrase is necessarily referential and therefore the examples involve a clash of animacy.

- (64) a. *[John-i manna-n kes]-i i yeca-i-ta [John-NOM meet-PAST KES]-NOM this woman-COP-DECL 'Who John met is this woman.'
 - b. *i yeca-ka [John-i manna-n kes]-i-ta this woman-NOM [John-NOM meet-PAST KES]-COP-DECL 'This woman is who John met.'

If this analysis is right, we predict that (65)a should be unacceptable yet (65)b should be fine, as there is no animacy clash. The predictions are correct:

- (65) a. ??[John-i sa-n kes]-i i chayk-i-ta [John-NOM buy-PAST KES]-NOM this book-COP-DECL 'What John bought is this book.'
 - b. i chayk-i [John-i sa-n kes]-i-ta this book-NOM [John-NOM buy-PAST KES]-COP-DECL 'This book is the one that John bought.'

Hence, the remaining question is why does (47)b lack an interpretation where the subject, *i yeca* is given, with new information provided by the *kes*-phrase? In that case, the *kes*-phrase would have to have a referent, the referent of the XP in precopular position, and that referent would be inanimate, clashing with 'this woman'.

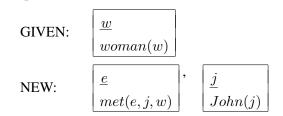
And in fact, the string in (47)b is acceptable, but as a construction which presents the event as new information (see footnote 4). In this case, we take the *kes*-phrase to introduce a card relating the the whole event. This means that there is a generalisation about the precopular position:⁷

⁷It may be that the correct statement of (66) is that any and every precopular XP introduces a card; this depends on how adverbs are treated (see e.g., (61)) and whether they have file cards, an issue we do not tackle here.

(66) A *kes*-phrase in precopular position always introduces a file card.

And the interpretation of (47)b is as follows:

(67)



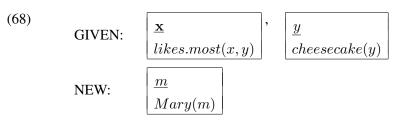
In summary, the *kes*-phrase in (47)b has to have its own card. If it is taken to be "the thing that John met", there is a clash of animacy; however, it may be taken to be the meeting event, in which case the example is acceptable, as shown in (67).

5.3. *wh*-phrases in precopular position

We return now to the analysis of *wh*-phrases cooccurring with *kes*-phrases. In order to motivate what we propose, first consider again the examples in (5):

- (5) a. [Mary-ka cengmallo cohaha-nun kes]-un chizukheyk-i-ta [Mary-NOM really like-PRES KES]-TOP cheesecake-COP-DECL 'What Mary really likes is cheesecake.'
 - b. [chizukheyk-ul cengmallo cohaha-nun kes]-un Mary-i-ta [cheesecake-ACC really like-PRES KES]-TOP Mary-COP-DECL 'Who really likes cheesecake is Mary.'

The file cards for (5)b are given in (68):



We are expecting to update x, the first argument of *likes most*, and we do this by introducing *Mary*. The file is updated into the state in (69):

(69)	<u>m</u>	,	<u>y</u>	,	$\underline{m^1}$
	likes.most(m,y)		cheese cake(y)		$Mary(m^1)$

Now, wh-phrases can appear in the precopular position of kes-constructions:

- (70) a. [John-i sa-n kes]-un mwues-i-ni? [John-NOM buy-PAST KES]-TOP what-COP-Q 'What is it that John bought?'
 - b. [John-i manna-n kes]-un nwukwu-i-ni? [John-NOM meet-PAST KES]-TOP who-COP-Q 'Who is it that John met?'

What is the information structure of (70)b? Assuming that the example presupposes that John met someone, then the relevant new information will be the descriptive content about that person. The asked-for information is indicated by the boldface **wh**:

(71)
GIVEN:
$$\underline{j}_{John(j)}$$
, $\underline{j^1}_{met(j^1, wh)}$
NEW: $\underline{\mathbf{wh}}$

In other words, further information about **wh** should be provided. Note that the *kes*-phrase here has no referent, as the construction is the Updating one.⁸

If we reverse the syntax and put the *kes*-phrase in precopular position, it is forced to refer (to have a file card). The expectation is then that any animate-referring *wh*-phrase will be bad in subject position, as there will be an animacy clash with the *kes*-phrase in precopular position. This expectation is borne out, either with a simple *wh*-phrase like *nwukwu* or a 'D-linked' one like *enu salam*:

- (72) a. *nwukwu-ka [John-i manna-n kes]-i-ni? who-NOM [John-NOM meet-PAST KES]-COP-Q 'Who is the one that John met?'
 - b. *enu salam-i [John-i manna-n kes]-i-ni? which thing-NOM [John-NOM meet-PAST KES]-COP-Q 'Which person is the one that John met?'

These are bad because the *kes*-phrase is used referentially, and hence there is an animacy clash. If we switch in inanimate *wh*-phrases, to avoid the animacy clash, an interesting pattern emerges:

- (73) a. ??mwues-i [John-i sa-n kes]-i-ni? what-NOM [John-NOM buy-PAST KES]-COP-Q 'What is the thing that John bought?'
 - b. ?i kes-tul-cwung mwues-i [John-i sa-n kes]-i-ni? this thing-PLU-among what-NOM [John-NOM buy-PAST KES]-COP-Q 'Among these things, what is the thing that John bought?'
 - c. enu kes-i [John-i sa-n kes]-i-ni? which thing-NOM [John-NOM buy-PAST KES]-COP-Q 'Which thing is the thing that John bought?'

We know that the precopular part must refer to 'the thing that John bought', as given information. The interpretations of the English translations roughly parallel the Korean – (73)a is rather unnatural. The use of *mwues/what* is concerned with a very rough grain of specificity, and no necessary link to the current discourse or context, while of course *enu kes/which one* asks for the identity of one member of an already-given set.

This suggests to us that whenever new information is presented (or asked for) in the subject position in Korean, marked with nominative, then it has to be anchored in the context in some way – either as being one member of a given set, or as a deictically anchored phrase such as 'this book' in (65)b. The examples in (73) progressively approach this desideratum.

⁸The acceptable examples in (14) also seem to have the property of requiring descriptive update.

6. Conclusion

We have proposed here that *kes* is morphosyntactically a noun in all of its uses, and that Korean examples with *kes* in them sometimes look like English clefts or pseudoclefts due to common informationstructure properties. When marked with the topic marker *un*, *kes* may refer to an inanimate entity, or it may not refer at all, and simply mark the boundary between given and new in an Updating example. When marked with nominative case, *kes* necessarily refers to an inanimate entity, presenting it as new information. And in precopular position, *kes* either refers to an inanimate entity or to an event.

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