

D+CP:

Korean *kes*-clauses and Reference to Propositional Content*

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1 *Kes*-clauses

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We're going to focus on “nouny” Korean clauses that are headed by *kes*. They combine with a range of predicates, including surprisingly, *believe*.

- (1) Kibo-nun [Dana-ka i chayk-ul ilk-ess-**ta**-nun **kes**-ul] mit-ess-ta.
K.-TOP D.-NOM this book-ACC read-PST-DEC-ADN *kes*-ACC believe-PST-DEC
'Kibo believed that Dana read this book.' (Shim & Ihsane, 2015: (5b))

Roadmap

§1 introduces Korean *kes*-structures and describes the morpho-syntactic ingredients that allow a non-factive interpretation.

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§2 presents novel elicitation data showing that non-factive *kes*-clauses must describe propositions that have been previously asserted in some conversation.

§3 argues that *kes*-clauses don't denote propositions but rather refer to **definite descriptions of assertion events** that carry propositional content.

- The account builds on Kim's (2009) work on other types of *kes*-clauses, unifying *kes*-clauses.
- When (non-factive) propositional attitude verbs embed *kes*-clauses it becomes a response stance verb (Catell 1978), following the lead of (Kastner 2015).
- We model response-stance verbs as reporting relations between discourse moves à la Anand and Hacquard (2014)

§4 addresses the broader question of what a “referential” proposition is and whether we see reflections in English.

2 Korean *kes*-clauses: background

Korean has a number of embedding strategies. The two we focus on here are clauses headed by the complementizer *ko* (2) and those nominalized by *kes* (3):

- (2) Na-nun [kay-ka swukecey-lul ta ha-yess-ta-**ko**] mit-e.
 I-TOP he-NOM homework-ACC all do-PST-DEC-*ko* believe-DEC
 ‘I believe that he finished his homework.’
- (3) Na-nun [kay-ka swukecey-lul ta ha-yess-ta-nun **kes**-ul] mit-e.
 I-TOP he-NOM hmwrk-ACC all do-PST-DEC-ADN *kes*-ACC believe-DEC
 ‘I believe that he finished his homework.’

kes in (3) is a bound form, and many refer to it as *nunkesul* (Shim and Ihsane 2011)

- The adnominal marker *-(n)un* ADN is a feature of nominal modification generally and appears with CP complement of nouns *and* relative clauses modifying nouns (Sells and Kim 2017).
- Unlike *ko*, it can (and must) take a case marker (*-ul* ACC).
- Not synchronically a full-fledged noun, but is translated often as “thing”.
- Variouslly called a nominalizer (Kim 1984, Jo 2003), pronoun (Chung 2002, Lee 2006), or complementizer (Jhang 1994). See Chae (2007). Nominalizer seems most appropriate to us.
- Obligatorily embedded (Yoon 2013):

- (4) *Lee-ka hoyngryengha-ss-ta-nun **kes**-ul
 Lee-NOM embezzle-PST-DEC-ADN *kes*-ACC
 (*Intended*: ‘The fact, claim that Lee embezzled.’) (Yoon 2013: (12))

M-J Kim’s 3 types of *kes*-constructions

The internally-headed relative clause (IHRC) construction:

- (5) John-un [totwuk-i tomangka-n-un **kes-ul**] cap-ess-ta.
J.-TOP thief-NOM run.away-IMPF-ADN *kes*-ACC catch-PSST-DEC.
‘John caught the thief that was running away.’ (Kim 2009: (1))

The perception construction:

- (6) John-un [totwuk-i tomangka-n-un **kes-ul**] po-ess-ta.
J.-TOP thief-NOM run.away-IMPF-ADN *kes*-ACC see-PST-DEC
‘John saw (the event) of the thief running away.’ (Kim 2009: (2))

The factive construction:

- (7) John-un [totwuk-i tomangka-n-un **kes-ul**] al-ess-ta.
J.-TOP thief-NOM run.away-IMPF-ADN *kes*-ACC know-PST-DEC
‘John knew (the fact) that the thief was running away.’ (Kim 2009: (3))

Kim (2009) gives a compositional, largely unified account of *kes*-clauses where *kes* denotes individuals of different sorts, e.g. ordinary individuals (5), events (6) or facts (7).

2.1 Factive *vs.* Non-factive *kes*-clauses

When embedded by verbs like *mit* ‘believe’, *kes*-clauses of the shape explored by Kim (2009) are still factive (S-S Kim 2011, Shim and Ihsane 2015).

- (8) Kibo-nun [Dana-ka i chayk-ul ilk-un **kes-ul**] mit-ess-ta, #kulente
K.-TOP D.-NOM this book-ACC read-ADN NMLZ-ACC believe-PST-DEC but
sasil-un Dana-nun i chayk-ul ilk-ci anh-ass-ta.
fact-TOP D.-TOP this book-ACC read-NEG-PST-DEC
‘Kibo believed (the fact) that Dana read this book, #but D. didn’t read it.’
(Shim and Ihsane 2015: 140(15a))

It indeed has the flavour of a factive presupposition: projects out of negation:

- (9) Kibo-nun [Dana-ka i chayk-ul ilk-un **kes-ul**] mit-ciahn-ess-ta,
K.-TOP D.-NOM this book-ACC read-ADN NMLZ-ACC believe-NEG- PST-DEC
#kulente sasil-un Dana-nun i chayk-ul ilk-ci anh-ass-ta.
but fact-TOP D.-TOP this book-ACC read-NEG-PST-DEC
‘Kibo didn’t believe (the fact) that Dana read this book, #and in fact D. didn’t read it.’
(Shim and Ihsane 2015: 140(15b))

Declarative+*kes* (complex form): non-factive

Kim (2011) and Shim and Ihsane (2015) show that adding a **declarative marker** *ta* (also found in main clauses, e.g. (9), (10)) to a *kes*-clause results in a **non-factive** meaning under *mit* ‘believe’ (10).¹

- Embedded clauses with *ta-kes* are often translated with *the claim that* or “what people say/think” (Kim 2011: (10b), Shim and Ihsane 2015: 122(5b)).

- (10) Kibo-nun [Dana-ka i chayk-ul ilk-ess-**ta**-nun **kes**-ul] mit-ess-ta,
K.-TOP D.-NOM this book-ACC read-PST-DEC-ADN NMLZ-ACC believe-PST-DEC
kulente sasil-un Dana-nun i chayk-ul ilk-ci anh-ass-ta.
but fact-TOP D.-TOP this book-ACC read-NEG-PST-DEC
‘Kibo believed that Dana read this book, but D. didn’t read it.’

Alternatively, *mit* ‘believe’ can embed a clause marked by *ko* rather than *kes* (11), again resulting in **non-factivity**.

- (11) Kibo-nun [Dana-ka i chayk-ul ilk-ess-**ta-ko**] mit-ess-ta, kulente sasil-un
K.-TOP D.-NOM this book-ACC read-PST-DEC-*ko* believe-PST-DEC but fact-TOP
Dana-nun i chayk-ul ilk-ci anh-ass-ta.
D.-TOP this book-ACC read-NEG-PST-DEC
‘Kibo believed that Dana read this book, but D. didn’t read it.’

Our elicited data support Shim and Ihsane’s observations about factivity.

- For a false ϕ , *kes*-only (12a) was infelicitous but *ta-kes* (12b) and *ta-ko* (12c) were accepted.²

- (12) *Context:* Kibo’s stupid friend Dana told him that Sydney is the capital of Australia. Kibo missed the day of class where the children learned that Sydney is not the capital of Australia.
- a. #Kulayse acikto Kibo-nun [Sydney-ka Australia-uy swuto-i-n **kes**-ul]
so still K.-TOP S.-NOM A.-GEN capital-COP-ADN NMLZ-ACC
mit-e.
believe-DEC
#‘Kibo still believes (the fact) that Sydney is the capital of Australia.’
- b. Kulayse acikto Kibo-nun [Sydney-ka Australia-uy swuto-**la**-nun **kes**-ul]
so still K.-TOP S.-NOM A.-GEN capital-DEC-ADN NMLZ-ACC
mit-e.
believe-DEC
‘Kibo still believes (the claim) that Sydney is the capital of Australia.’

¹As Shim & Ihsane (2015) point out, clauses with *yukamsuleweha* ‘regret’ only have a factive interpretation. This suggests that while choice of embedded morphology may drive factivity with verbs like *mit* ‘believe,’ other verbs lexically impose factivity on their complements.

²In (12b) and (12c), *ta* is realized as *la* for reasons unrelated to the present discussion.

- c. Kulayse acikto Kibo-nun [Sydney-ka Australia-uy swuto-**la-ko**] mit-e.
 so still K.-TOP S.-NOM A.-GEN capital-DEC-*ko* believe-DEC
 ‘Kibo still believes that Sydney is the capital of Australia.’

Another demonstration:

- (13) a. #[Toli-ka cip-ul sa-n **kes-un**] sasil-i an-i-ta.
 Toli-NOM house-ACC buy-ADN NMLZ-TOP fact-NOM NEG-COP-EC
 ‘That Toli bought a house is not true. (*Kes* only)
- b. [Toli-ka cip-ul sa-ss-**ta**-nun **kes-un**] sasil-i an-i-ta.
 T.-NOM house-ACC buy-PST-DEC-ADN NMLZ-TOP fact-NOM NEG-COP-DEC
 ‘That Toli bought a house is not true. (*Ta + kes*)

Summary of factivity under *mit* ‘believe’

Factive:

φ-kes

Non-factive:

φ-ta-kes, φ-ta-ko

-ta is needed in clauses that complement content nouns like *claim/news/rumour* independently (14) and (15).

- (14) Mina-ka posek-ul hwumchi-ess-*(**ta**)-nun somwun/sosik/cwucang.
 Mina-NOM jewelry-ACC steal-PAST-DECL-ADN rumour/news/claim
 ‘the rumour/news/claim that Mina stole the jewelry.’ (Kim 2011: (4a,b))

So the fact that *kes* clauses need *-ta* when non-factive is not too surprising. But here’s what is...

3 New discoveries! An assertion requirement

Despite patterning together with respect to their non-factivity, however, clauses of the shape ϕ -*ta-kes* and ϕ -*ta-ko* are not interchangeable.

- Differences not addressed by Shim & Ihsane (2015) or other authors above.
- We show that ϕ -*ta-kes* is only felicitous if ϕ has been asserted in a (local) conversational context.
 - What is “familiar” (definite?) with *ta-kes* is **an event of assertion**.

A asserts: ϕ

B: *I believe* ✓ ϕ -*ta-kes*; ✓ ϕ -*ta-ko*

- (15) **A:** Na-nun swukecey-lul ta ha-yess-e. Pakk-ey naka nola-to toy?
 I-TOP homework-ACC all do-PST-DEC outside-at go play-also can
 ‘I finished my homework. Can I go outside and play?’
- B:** An toy. **A:** Na-lul an mit-e?
 not can I-ACC not believe-INT
 ‘No.’ ‘Don’t you believe me?’
- B1:** Um. Na-nun [ney-ka swukecey-lul ta ha-yess-**ta-nun kes-ul**] mit-e.
 Yes. I-TOP you-NOM homework-ACC all do-PST-DEC-ADN NMLZ-ACC believe-DEC
 Haciman cikum-un cenyek siksa sikan-i-ya.
 but now-TOP evening meal time-COP-DEC
 ‘Yes, I believe that you finished your homework. But it’s dinner time.’
- B2:** Um. Na-nun [ney-ka swukecey-lul ta ha-yess-**ta-ko**] mit-e. Haciman
 Yes. I-TOP you-NOM homework-ACC all do-PST-DEC-*ko* believe-DEC but
 cikum-un cenyek siksa sikan-i-ya.
 now-TOP evening meal time-COP-DEC
 ‘Yes, I believe that you finished your homework. But it’s dinner time.’

A does not assert ϕ

B: *I believe* ✗ ϕ -*ta-kes*; ✓ ϕ -*ta-ko*

- (16) **A:** Cyoni-nun pakk-ey naka nola-to toy?
 J.-TOP outside-at go play-also can
 ‘Can Johnny go outside and play?’
- B1#** Um. Na-nun [kay-ka swukecey-lul ta ha-yess-**ta-nun kes-ul**] mit-e.
 Yes. I-TOP he-NOM hmwrk-ACC all do-PST-DEC-ADN NMLZ-ACC believe-DEC
 #‘Yes, I believe that he finished his homework.’
- B2:** Um. Na-nun [kay-ka swukecey-lul ta ha-yess-**ta-ko**] mit-e.
 Yes. I-TOP he-NOM homework-ACC all do-PST-DEC-*ko* believe-DEC
 ‘Yes, I believe that he finished his homework.’

Even if ϕ is part of a polar question (therefore salient, given, etc.) that's not sufficient to license *ta-kes*.

A: polar question(ϕ)

B: *believe* ✗ ϕ -*ta-kes*; ✓ ϕ -*ta-ko* (not shown)

(17) **A:** Johnny-nun swukcey-lul ta ha-yess-ni?
 J.-TOP homework-ACC all do-PST-Q
 'Has Johnny finished his homework?'

B:#Na-nun [Johnny-ka swukcey-lul ta ha-yess-**ta**-nun **kes**-ul] mit-e.
 I-TOP J.-NOM homework-ACC all do-PST-DEC-ADN NMLZ-ACC believe-DEC
 #'I believe that Johnny finished his homework.'

B2: Na-nun [Johnny-ka swukcey-lul ta ha-yess-**ta-ko**] mit-nun-ta.

This may be a point of contrast between Korean *ta-kes* clauses and certain other structures described as having a familiarity requirement.

- Frey, Meinunger, and Schwabe (2016) citing Sudhoff (2003) show that a polar question is sufficient to license German 'familiar' clauses with sentential proform *es*.

(18) **A:** Ist Lea krank? **B:** Max behauptet **es**, dass sie krank ist.
 is Lea ill Max claims it that she ill is
 'Is Lea ill?' 'Max claims it that she is ill.'
 (Schwabe, Frey, and Meinunger 2016: (4))

Propositional anaphora generally allows reference to the "partitioning" propositions in a polar question (basically the proposition we hear) (Krifka 2013, Snider 2017)

(19) Did Barb go to the party? Because Nancy told me that (and she's unreliable).
 #*that*: Did Barb go to the party? / whether... ??
that: Barb went to the party.
 #*that*: Barb didn't go to the party.

However we model restrictions on propositional anaphora, "*kes*-anaphora" is stricter.

A: NEG (ϕ)

B: *believe* ✗ ϕ -*ta-kes*; ✓ ϕ -*ta-ko* (not shown)

(20) **A:** Kibo has certainly heard in his geography class that Toronto is not the capital of Canada...

A: ...#Kulayto Kibo-nun [Toronto-ka Canada-uy swuto-**la**-nun **kes**-ul]
even.so K.-TOP T.-NOM C.-GEN capital-DEC-ADN NMLZ-ACC
mit-e.
believe-DEC

‘Even so, Kibo still believes that Toronto is the capital of Canada.’

Han’s Comment, p.c.: “This sounds really odd to me, if Kibo has never heard anybody tell him that Toronto is the capital of Canada.”

ta-kes does not require direct quotation

In (21), *ta-kes* is licit even though A had previously asserted she had eaten peas, which only **entails** ϕ that she has eaten vegetables.

(21) *Context:* B has a rule that A must eat vegetables before having cake.

A: I ate peas! Can I have cake now?

B: No, you can’t. **A:** But why? Don’t you believe me?

B: Na-nun [ney-ka yachae-lul mek-ess-**ta**-nun **kes**-ul] mit-e...
I-TOP you-NOM veg.-ACC eat-PST-DEC-ADN NMLZ-ACC believe-DEC
‘I believe that you ate vegetables (but the cake’s not ready).’

Reported discourses

- (22) **A:** I know that Johnny told his mom that he finished his homework and...
B: Johnny-uy emma-nun [ku-ka swukcey-lul ta ha-yess-**ta**-nun **kes**-ul]
J.-GEN mom-TOP he-NOM homework-ACC all do-PST-DEC-ADN NMLZ-ACC
mit-nun-ta.
believe-PRES-DEC
'Johnny's mom believes that he finished his homework.'
- (23) **A:** Johnny told me—but hasn't said anything to his mother—that he finished all his homework. Do you believe him?
B: I don't know, but Johnny's mother went into his room and saw several completed assignments...
B:#Kulayse Johnny-uy emma-nun [Johnny-ka swukcey-lul ta ha-yess-**ta**-nun
so J.-GEN mother-TOP J.NOM homework-ACC all do-PST-DEC-ADN
kes-ul] mit-e.
NMLZ-ACC believe-DEC
'So Johnny's mother believes that Johnny finished his homework.'
Comment: "I feel that Johnny's mom herself must have heard the claim that Johnny finished the homework."

Another demonstration:

Context: *Sue saw John sneaking around the cash register. She came to believe he stole money. Meanwhile, unbeknownst to Sue, the head office noticed that money was missing given that things didn't add up in the accounting books from Sue and John's branch. Unbeknownst to Sue, the accountant at the head office claimed in a meeting with all the executives that John (known otherwise as a misfit) stole money at that branch.*

- (24) #Sue-nun [John-i ton-ul hwumchi-ess-ta-nun **kes-ul**] mit-ess-ta
 Sue-TOP John-NOM money-ACC steal-PAST-DEC-ADN NMLZ-ACC believe-PAST-DEC
 'Sue believed (kes) that John stole money.'
- (25) #Sue-nun [John-i ton-ul hwumchi-ess-ta-nun **cwucang-ul**] mit-ess-ta
 Sue-TOP John-NOM money-ACC steal-PAST-DEC-ADN claim-ACC believe-PAST-DEC
 'Sue believed the claim that John stole money.'
- (26) Sue-nun [John-i ton-ul hwumchi-ess-ta-**ko**] mit-ess-ta
 Sue-TOP John-NOM money-ACC steal-PAST-DEC-ADN-COMP believe-PAST-DEC
 'Sue believed that John stole money.'

So is *ta-kes* just like “claim”? Well, kinda. But that's interesting because:

- *kes* means “thing” and certainly nothing about things (or *kes* elsewhere, i.e. IHRCs) requires a “claim” interpretation?
 - Indeed, *thing* is a good word for propositional content (Moltmann 2013, Elliott 2016), often in combination with a quantifier, and it doesn't imply a claim was made:

- (27) [In above context]
 Sue and the accountant believe something/the same thing—namely that John stole money.

- Korean has other content nouns like *ilon* ‘theory’ that don't carry an assertion requirement:

Context: *There are two ideas about the information leak: that a civil servant leaked it or that a spy hacked into the computer. Sue has never spoken to anyone about it though—or even heard about these theories from other people. Nonetheless,*

- (28) Sue-nun [kanchep-i khemphyute-lul haykkhingha-yess-ta-nun **ilon-ul/#kes-ul**] mit-nun-ta.
 Sue-TOP spy-NOM computer-ACC hack-PAST-DEC-ADN theory-ACC/NMLZ-ACC believe-PRES-DEC
 'Sue believes the theory/#kes that a spy hacked the computer'

Kes can head clauses that refer to a range of things, so why couldn't *kes* stand in for *ilon* ‘theory’ or something like it without the assertion requirements of *claim*?

Aside: Is *ta-kes* like a reportative marker?

Our claim that ϕ -*ta-kes* presupposes a previous assertion event of ϕ recalls presuppositional characterizations of reportative expressions in German and Tagalog (Sauerland and Schenner 2007, Fabricius-Hansen and Sæbø 2004, Schwager 2010).

- Elements like German *sollen* and Tagalog *daw* “induce a presupposition that the prejacent has been asserted” (Schwager, 2010: 238).

However, while the meanings can be described similarly, *ta-kes* differs from reportatives.

- Whereas reportatives introduce this presupposition, the presupposition in Korean arises through semantic contributions of independent markers *ta* and NMLZ, neither of which can itself be characterized as a reportative.
- Whereas reportatives can occur as main clauses that express assertions, Korean *ta-kes* clauses cannot (4).

4 Towards an account of reference to asserted content

In the formal account sketched below, ϕ -*ta-kes* **presupposes prior assertion** of ϕ (or consistent propositional content) by virtue of the individual contributions of *-ta* and *kes*.

Preview:

- *-ta* composes with ϕ to denote events of assertion of the propositional content of ϕ .
- When *kes* is added, the entire *ta-kes* clause denotes a definite description of the embedded assertion event (predicted extension of other event uses of *kes*-clauses), thereby deriving the assertion requirement.
- *ta-kes* renders verbs like *believe* similar to response stance verbs (e.g. *agree*) and thereby derives the felicity conditions on its use.

4.1 Basics of Kim (2009)

Our account is in the spirit of Kim's (2009) largely unified account of three structures with *kes*: IHRCs (29a), perception (29b) and factive clauses (29c).

- (29) a. John-un [totwuk-i tomangka-n-un **kes-ul**] cap-ess-ta.
John-TOP thief-NOM run.away-IMPF-ADN NMLZ-ACC catch-PST-DEC
'John caught the thief that/while he was running away.'
- b. John-un [totwuk-i tomangka-n-un **kes-ul**] po-ess-ta.
John-TOP thief-NOM run.away-IMPF-ADN NMLZ-ACC see-PST-DEC
'John saw (the event) of the thief running away.'
- c. John-un [totwuk-i tomangka-n-un **kes-ul**] al-ess-ta.
J.-TOP thief-NOM run.away-IMPF-*adn* NMLZ-ACC know-PST-DEC
'John knew (the fact) that the thief was running away.'

Kim (2009) proposes that *kes* relates the embedded clause to a salient individual and/or situation standing in some relation to it.

- This develops the analysis of IHRCs in Kim (2007), which in turn developed from previous work on Japanese IHRCs (Hoshi 1995, Shimoyama 1999).

We give a distillation of Kim (2009), which departs from the original at points.

***Kes* gives definite descriptions of individuals or events**

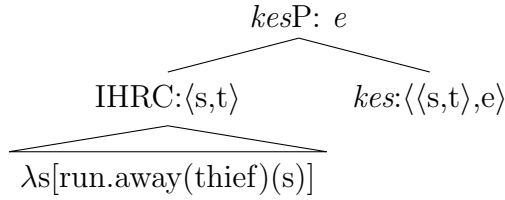
- *Kes* takes the embedded clause (set of events or situations p) as argument and returns a definite description (30).³

$$(30) \quad \llbracket kes \rrbracket = \lambda p \iota x. \mathbf{R}(p)(x)$$

where x is in the domain of ordinary individuals or events

As in Kim (2009), \mathbf{R} is the relation that determines what sort of individual/situation is returned by *kes*. (See also Grosu and Landman (2012) for an event-based approach.)

- $$(31) \quad \begin{array}{ll} \text{a.} & R_{agent} = \lambda p' \lambda x'. \exists s[p'(s) \ \& \ Agent(x')(s)] \\ \text{b.} & R_{theme} = \lambda p' \lambda x'. \exists s[p'(s) \ \& \ Theme(x')(s)] \end{array}$$
- (32) John-un [totwuk-i tomangka-n-un **kes-ul**] cap-ess-ta.
 John-TOP thief-NOM run.away-IMPF-ADN NMLZ-ACC catch-PST-DEC
 ‘John caught the thief that/while he was running away.’



- $$(33) \quad \begin{array}{ll} \text{a.} & \llbracket kes \rrbracket = \lambda p. \iota x [R_{agent}(p)(x)] \\ & = \lambda p. \iota x [\lambda p' \lambda x'. \exists s[p'(s) \ \& \ Agent(x')(s)]](p)(x) \\ & = \lambda p. \iota x [\exists s[p(s) \ \& \ Agent(x)(s)]] \\ \\ \text{b.} & \llbracket kesP \rrbracket = \lambda p. \iota x \exists s[p(s) \ \& \ Agent(x)(s)](\lambda s'. \text{run-away}(\text{thief})(s')) \\ & = \iota x \exists s[\text{run-away}(\text{thief})(s) \ \& \ Agent(x)(s)] \\ & \rightsquigarrow \text{the thief} \end{array}$$

Kim shows that \mathbf{R} can exhibit great flexibility in IHRCs.

- In (34), *kes* returns an individual, the dirt, which is **part of a result state** associated with the embedded clause in (34).
- In (35), *kes* can “sum” up various individuals in the IHRC.

- (34) Jinho-un [paci-ka teleweci-un **kes-ul**] takkanay-ss-ta
 J.-TOP pants-NOM got.dirty-ADN NMLZ-ACC wipe.out-PST-DEC
 ‘The pants got dirty and J. wiped the dirt off the pants.’

³For Kim, *kes* takes as argument the trace left by LF movement of the embedded clause. She also separates definiteness from *kes*, but we have built definiteness in.

- (35) Jinho-nun [koyangi-ka cwi-lul coch-ko iss-n-un kes]-ul capassta.
 J.-TOP [cat-NOM mouse-ACC chase-COMP COP-IMPF-REL NMLZ]-ACC caught.
 ‘A cat was chasing a mouse & J. caught the {cat/mouse/**mouse & cat**}.’

- I won’t show you how M-J Kim derives this, but it does demonstrate the necessity of eventualities in the computation of IHRC referents.

Important: R can also just pick out the event

- (36) *Perception construction*
- a. John-un [totwuk-i tomangka-n-un **kes**-ul] po-ess-ta.
 John-TOP thief-NOM run.away-IMPF-ADN NMLZ-ACC see-PST-DEC
 ‘John saw (the event) of the thief running away.’
- b. $R_{id} = \lambda p' \lambda s'. p'(s')$
- c. $\llbracket kesP \rrbracket = \iota s[run-away(thief)(s)]$

Constraining R: One way to constrain R would be to say that the individual x/s must refer to a (possibly non-proper) **mereological part** of the event described by p: individuals in the event or result state, or in the case of perception the event itself.

4.2 A proposal for *ta-kes*

Crucial observation: In relative clauses (both external and internal (not shown) embedded declarative *-ta* introduces a separate level of embedding—‘people say that’:

- (37) a. [Chelswu-ka na-eykey allye cwu-n] somwun
 C.-NOM I-DAT tell-ADN rumor
 ‘the rumor_i that Chelswu told me t_i’
- b. [Chelswu-ka na-eykey allye cwu-ess-**ta**-nun] somwun
 C.-NOM I-DAT tell-PST-DEC-ADN rumor
 = ‘the rumor_i that (people say that) Chelswu told me t_i’
 ≠ ‘the rumor_i that Chelswu told me t_i’ (S-S Kim 2011: 13a,b)
- (38) a. John-i cohaha-nun kangaci-ka cwuk-ess-ta
 John-NOM like-ADN dog-NOM die-PAST-DEC
 ‘The dog John liked died.’
- b. John-i cohaha-yess-ta-nun kangaci-ka cwuk-ess-ta
 John-NOM like-PAST-DEC-ADN dog-NOM die-PAST-DEC
 ‘The dog that people say/it is said John liked died.’

A thought: While the effect in (38) and (37) deserve fuller exploration⁴, we would like to suggest that *-ta*-clauses can denote a property of events of assertion of *p* in *kes* clauses and relative clauses.

Promissory note: I will return to what *-ta* does in other environments.

The denotation for *-ta* here is exactly Hacquard’s (2006) denotation for the ASSERT operator.

$$(39) \quad \llbracket -ta \rrbracket = \lambda p \lambda e. e \text{ is an event of asserting } p$$

In (37b) and (38b) we suggest that the event argument gets closed off by an \exists .

$$(40) \quad \text{the dog } \lambda x. \exists e [e \text{ is an event of asserting that John liked } x]$$

In the *kes* construction, the event property is fed to a definite determiner/*kes*.⁵

- In (41), the R in *kes* is valued by R_{id} , the R in perception constructions.

$$(41) \quad \begin{array}{l} \text{Na-nun } [\textit{kesP} \text{ Johnny-ka swukcey-lul } \textit{ta} \text{ ha-yess-}\mathbf{ta}\text{-nun } \mathbf{kes}\text{-ul}] \text{ mit-e.} \\ \text{I-TOP} \quad \text{J.-NOM} \quad \text{homework-ACC all do-PST-DEC-ADN NMLZ-ACC believe-DEC} \\ \text{‘I believe that Johnny finished his homework.’} \end{array}$$

$$(42) \quad R_{id} = \lambda p' \lambda s'. p'(s')$$

(43) A very informal composition:

- $\llbracket ta \rrbracket (\textit{that Johnny finished his homework})$
 $= \lambda e. e \text{ is an event of asserting } \textit{that Johnny finished his homework}$
- $\llbracket kes \rrbracket = \lambda p. \iota s [R_{id}(p)(s)]$
 $= \lambda p. \iota s [p(s)]$
- $\llbracket kesP \rrbracket = \iota s [s \text{ is an event of asserting } \textit{that Johnny finished his homework}]$
 $\rightsquigarrow \text{the event of asserting that Johnny did his homework}$
- $\llbracket (42) \rrbracket \rightsquigarrow \text{I believe } [\iota s [s \text{ is an event of asserting } \textit{that Johnny finished his homework}]]$

\rightarrow the (unique) event relative to a context, of course

Accounting for the data

(44) *Prior event of assertion: ✓ ta-kes*

A: I finished my homework...don’t you believe me?

B: Na-nun [ney-ka swukecey-lul ta ha-yess-**ta**-nun **kes**-ul] mit-e.
 I-TOP you-NOM homework-ACC all do-PST-DEC-ADN *kes*-ACC believe-DEC
 ‘Yes, I believe (the claim) that you finished your homework. But...’

⁴Why dimension of meaning is contributed?

⁵An **alternative** might be to take *-ta* as giving a presupposition that ϕ has been asserted—which must be satisfied in the belief-worlds of the matrix subject (Karttunen 1974). See Uegaki (2016) for similar conditions in English *John believes the rumour that Mary left which Bill circulated*. We do not yet see how that would characterize the difference between *-ta* under *kes* vs. under *ilon* ‘theory’. We are open to exploring this alternative though.

(45) *No prior event of assertion: #ta-kes*

A: Can Johnny go outside and play?

B: #Na-nun [kay-ka swukecey-lul ta ha-yess-**ta**-nun **kes**-ul] mit-e.
I-TOP he-NOM hmwrk-ACC all do-PST-DEC-ADN *kes*-ACC believe-DEC
#‘Yes, I believe (the claim) that he finished his homework.’

Questions won’t provide the asserted event:

(46) **A:** Johnny-nun swukcey-lul ta ha-yess-ni?
J.-TOP homework-ACC all do-PST-Q
‘Has Johnny finished his homework?’

B: #Na-nun [Johnny-ka swukcey-lul ta ha-yess-**ta**-nun **kes**-ul] mit-e.
I-TOP J.-NOM homework-ACC all do-PST-DEC-ADN NMLZ-ACC believe-DEC
#‘I believe that Johnny finished his homework.’

B2: Na-nun [Johnny-ka swukcey-lul ta ha-yess-**ta-ko**] mit-nun-ta.

But what does it mean to *believe* an event? We need that ingredient now to account for the rest of the data.

4.3 Response Stance *believe* in Korean

Proposal: When *believe* embeds an assertion event, it is a **Response Stance verb**.

A classification:

- Kiparsky and Kiparsky (1970), Hooper and Thompson (1973), **Cattell (1978)**, Hegarty (1992), Anand and Hacquard (2009, 2014), Kastner (2015).

I ***Response stance:*** Embedded clause refers to familiar idea.

Alice **agreed/admits/confirmed** [that Ron called].

II ***Volunteered stance / non-factive:*** Embedded clause introduces new idea.

Alice **believed/says/assumed/feels/thought** [that Ron called].

III ***Non-stance / factive:*** Embedded clause refers to a fact.

Alice **remembered/regretted/knows/forgot** [that Ron called].

Response stance complements are “familiar” or presupposed:

- Hegarty (1992): the familiarity requirement is satisfied when such complements express common knowledge or a point of current discussion in the reported discourse.

(47) Alice agreed/admits/confirmed [that Ron called]...
#...but no one had said that Ron called.

- De Cuba (2007), Kastner (2015): Hungarian and Hebrew response-stance verbs prefer to embed clauses that exhibit nominal morphosyntactic properties, namely nominal proforms and clause-taking determiners.

Korean response-stance verbs prefer *ta-kes* over *ta-ko* complements:

- (48) a. Na-nun [Lee-ka wa-ss-**ta**-nun **kes**-ey] tonguyha-n-ta.
I-TOP L.-NOM come-PST-DEC-ADN *kes*-at agree-PRES-DEC
‘I agree (with the claim) that Lee came.’
- b. Na-nun [Lee-ka wa-ss-**ta**-nun **kes**-ul] incengha-n-ta.
I-TOP L.-NOM come-PST-DEC-ADN *kes*-ACC acknowledge/accept-PRES-DEC
‘I acknowledge/accept that Lee came.’
- c. Na-nun [Lee-ka wa-ssa-**ta**-nun **kes**-ul] pwuinha-n-ta.
I-TOP L.-NOM come-PST-DEC-ADN *kes*-ACC deny/reject-PRES-DEC
‘I deny/reject that Lee came.’

Anand and Hacquard (2014) describe a number of response and volunteer stance verbs (*claim*, *agree*, *etc.*) as reporting discourse moves whose goal is to update a **reported common ground** CG_R .

- (49) $\llbracket claim \rrbracket^{c,w,g} = \lambda p \lambda e. [\text{claim}'(e,w)$
 $\quad \& \forall w' \text{ compat. with Goal}(e) [\forall w'' \in CG_R(w') [p(w'')]]]$
 (Anand and Hacquard 2014: 73)

This gives us tools to codify the requirements on a response stance verb like *agree*: it’s not about *putting* something into the common ground, like *claim*, but about believing something—modeled as an assertion event—that is IN the (reported) common ground.

Shifty verbs: *believe* and Korean *mit* ‘believe’ can be coerced into a response stance verb, especially with a source argument:

(50) Sally believed **him** that Johnny finished his homework.

The response stance version of *believe/mit* describes a discourse move: it reports the acceptance of (the propositional content of) another (given) discourse move into the attitude holder’s beliefs.

(51) **Sketch of denotation for response-stance *believe***

e is a eventuality of x believing e' in w if:

There is a discourse D in w s.t.

- (i) e and e' are discourse moves in D
- (ii) the common ground of D is CG_R
- (iii) goal(e') is to update the **content**(e)(w) to CG_R
- (iv) $Dox(x)(w) \subseteq CONTENT(e)(w)$

$$Dox(x)(w) = \{w' : w' \text{ is compatible with what } x \text{ believes in } w\}$$

$$CONTENT(e)(w) = \{w' : w' \text{ is the informational content of } e \text{ in } w\}^6$$

This will ensure that the claim is made in a discourse of which the attitude holder is a participant:⁷

- (52) **A:** Johnny told me—but hasn't said anything to his mother—that he finished all his homework. Do you believe him?
B: I don't know, but Johnny's mother went into his room and saw several completed assignments...
B: #Kulayse Johnny-uy emma-nun [Johnny-ka swukcey-lul ta ha-yess-**ta**-nun
so J.-GEN mother-TOP J.NOM homework-ACC all do-PST-DEC-ADN
kes-ul] mit-e.
NMLZ-ACC believe-DEC
'So Johnny's mother believes that Johnny finished his homework.'
Comment: "I feel that Johnny's mom herself must have heard the claim that Johnny finished the homework."

Note that this does not require that the holder believe the content of *in virtue of* the claim in D, and this is a welcome prediction.

(53) **The Spy Example, continued:**

Context: Sue has come to believe that the leak is a computer hacking by a spy through her own deduction. Now Sue is watching TV at home with her sister, when a FOX News analyst says: "In my opinion, the leak was the result of a spy hacking the computer". Sue's sister asks what Sue thinks about this. Sue says:

- (54) Na-nun [kanchep-i khemphyute-lul haykkhingha-yess-ta kes-ul] mit-nun-ta.
I-TOP spy-NOM computer-ACC hack-PAST-DEC NMLZ-ACC believe-PERS-DEC
'I believe that a spy hacked the computer.'

- There are interesting questions here about whether Sue and her sister are part of the discourse that the FOX news analyst is.
- But (54) does show that the attitude holder does not have to believe the *kes*-clause *in virtue of* believing the claim; they could already hold that belief, as the account predicts.

⁶See Hacquard 2006, Kratzer 2013 on the informational mode of content projection.

⁷Uegaki's (2016) use of presuppositions generated by content nouns/content shifters may offer an alternative to these data. See earlier footnote.

4.4 *-ta* in other contexts

The proposal may extend to root declarative *-ta*

- (55) kutul-un mokcek-ul chukwuha-yess-**ta**.
they-TOP objective-ACC pursue-PAST-DEC
‘They pursued their objective.’

- Hacquard (2006) argues that an assert operator in Root clauses in English introduces an event tied to the speaker.
- See Krifka (2011) for how assertion events like this can be used as speech acts

But what about other embedded instance of *-ta*?

- under Ns like *theory* or *news*, or the complementizer *ko*, *-ta* doesn’t imply an assertion event

- (56) Toli-ka ttena-ss-ta-nun sosik
Toli-NOM leave-PAST-DEC-ADN news
= ‘the news that Toli left’
≠ ‘the news that people say that Toli left’

In English, speech *verbs* are often commandeered to describe non-factual content.⁸

- (57) the news/theory **says** that Toli left

Interim speculation: *-ta* is bleached under certain Ns (and *ko*) like English habitual/generic *says* in (57).

- A bleached *-ta* is not available under *kes* because *kes* needs to refer to an actual event or individual that bears a part relation with the event described by the clause (recall above constraint on R in *kes*-constructions).
- So *kes* is forced to describe an assertion event when it combines with a *-ta* clause.
- This connects the IHRC and perception use of *kes* to its non-factive complement use, as was our goal.

⁸Verbs of speech are of course often bleached to become complementizers.

5 Conclusions

When clauses refer, they might not refer to propositions or even to propositional content directly, but to **discourse events** that carry propositional content.

- Korean *ta-kes* clauses are best understood as denoting definite descriptions of a discourse event (an assertion) that carries propositional content.
- When *ta-kes* is present, Korean *mit* ‘believe’ behaves like a response stance verb, reporting a discourse move: the uptake of a proffering, not the proffering itself (Anand and Hacquard, 2014).

Why is it surprising or interesting?

- Because *ta-kes*-clauses *could* have referred to content that was *not* previously asserted (e.g. like *thing* or *theory*).
- We took it as a confluence of what *kes* needs (an event or event part) and what *-ta* can deliver (an assertion event).
- We might ask, though, where else is reference to propositions/propositional content parasitic on reference to events of asserting that content. Propositional Anaphora?

Appendix: Response stance *believe* in English?

ECM vs. Finite complement in English (Borkin 1984):

- response stance *believe*: #ECM

- (58) The doctor has told Sam that his cat has an illness
... but Sam won't believe that she is sick.
... #but Sam won't believe her to be sick. (adapted from Borkin 1984:83)
- (59) Sam thoroughly examined the cat,
... but he doesn't believe that she is sick.
...but he doesn't believe her to be sick.

Borkin (1984:83): “[ECM] describe a self-initiated, original perception or opinion **rather than the recognition of the truth of a proposition formed by someone else.**”

Finite CP is “ambiguous” between the two (like *ko* clauses).

- Perhaps English CPs (and *ko*) provide (a non-definite) an assertion event
- ECM lacks the functional layer for this.
 - Or perhaps it lacks a D-layer?

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