

On Korean pro-form *kuleh*: variation in extractability and size of ellipsis

Korean has a pro-form *kuleh* 'so' which can appear in place of various projections. It can occur in place of vP, TP and a small clause, as given in (1), (2) and (3), respectively. (The grammatical subject of (2) is *kkoch* 'flower,' and *Kwanak-san* 'Kwanawk Mountain' is a Major Subject base-generated above TP.)

- (1) John-i [vP Mary-lul ttayli]-n-ta. Bill-to [vP kuleh]-n-ta.
John-NOM Mary-ACC hit-PRES-DECL Bill-also kuleh-PRES-DECL
'John hits Mary. Bill does so too.'
- (2) Kwanak-san-i [TP yesnal-ey kkoch-i manhi pi-ess-ess]-ta.
Kwanak-mountain-NOM past-at flower-NOM much bloom-PERF-PAST-DECL
Pukhan-san-to [TP kuleh]-ta.
Pukhan-mountain-also kuleh-DECL
'(In) Kwanak Mountain, flowers bloomed a lot in the past. (In) Pukhan Mountain, too.'
- (3) Al-un *Jo-lul_i* [_{SC} *t_i* chencay-lo] po-n-ta. Ed-to *Jo-lul* [_{SC} kuleh]-key po-n-ta.
Al-TOP Jo-ACC genius-LO see-PRES-DECL Ed-also Jo-ACC kuleh-KEY see-PRES-DECL
(Lit.) 'Al sees Jo (as) a genius. Ed sees Jo so too.' Ed sees Jo as a genius too.

Extraction is possible from within the projection which *kuleh* replaces, when it corresponds to 'smaller' constituents such as vP (ex (4)-(5)) or a small clause (ex (3)). Unaccusative and passive subjects can appear external to *kuleh* as in (4), and (5) shows that an object can be topicalized. In (3), the raised subject *Jo* can appear external to *kuleh*. This suggests that *kuleh* has internal structure, and ellipsis is involved. I assume that *kuleh* is inserted at PF to support affixal tense morphology.

- (4) a. *hoswu-ka_i* (sunsikkaney) [vP *t_i* el]-ess-ko, *kang-to* [vP kulay]-ss-ta.
lake-NOM instantly freeze-PAST-CONJ river-also kuleh-PAST-DECL
'The lake froze (instantly), and the river did too.'
- b. *kochpyung-i_i* ai-tul-ey uyhey [vP *t_i* kkey-eci]-ess-ko, *mulpyung-to* [vP kulay]-ss-ta.
vase-NOM kid-PL-by break-PASS-PAST-CONJ water bottle-also kuleh-PAST-DECL
'The vase was broken by the kids, and the water bottle was too.'
- (5) A: *nwu-ka* *nwukwu-lul* *koylophi-ø-ni*?
who-NOM who-ACC bully-PRES-Q
'Who bullies whom?'
- B: *Mary-nun_i* John-i [vP *t_i* koylophi]-ø-ko, *Ann-un* Bill-i [vP kulay]-ø-yo.
Mary-TOP John-NOM bully-PRES-CONJ Ann-TOP Bill-NOM kuleh-PRES-DECL
'Mary, John harshly bullies (her) and Ann, Bill does so.'

Interestingly, extraction is prohibited when a 'bigger' constituent, TP, is elided. As shown in (6), the ACC-marked embedded object *i chayk* 'this book' cannot be extracted when *kuleh* appears in place of TP. (7) is an apparent counterexample. However, the ACC-marked nominal in (7) is not an embedded object, but rather a Major Subject base-generated at a position higher than TP (Yoon 2005). This is supported by the fact that only in (7), but not in (6), the embedded TP denotes a characteristic property of the ACC-marked nominal. The embedded object is a *pro* coindexed with the Major Subject. The data observed so far lead us to two contradictory statements: *kuleh* has internal structure, but it also lacks internal structure.

- (6) A: *na-nun i chayk-ul_i* [TP Mary-ka *t_i* cikum cip-eyse ilk-ko iss]-tako sayngkakha-n-ta.
I-TOP this book-ACC Mary-NOM now house-at read-PROG-COMP think-PRES-DECL
'I think that this book, Mary is reading (it) in the house now.'
- B: **na-nun i chayk-ul* [TP kuleh]-key sayngkakha-ci anh-nun-ta.
I-TOP this book-ACC kuleh-KEY think-CI NEG-PRES-DECL
'I don't think so about this book.'
- (7) A: *na-nun i chayk-ul_i* [_{CP} *t_i* [TP saramtul-i *pro_i* cohaha-n]-tako] sayngkakha-n-ta.
I-TOP this book-ACC people-NOM like-PRES-COMP think-PRES-DECL
'I think that this book, people like (it).'

B: na-nun *i chayk-ul_i* [_{CP} *t_i* [_{TP} *kuleh*]-key] sayngkakha-ci anh-nun-ta.
 I-TOP this book-ACC *kuleh*-KEY think-CI NEG-PRES-DECL
 ‘I don’t think so about this book.’

In this paper, I argue that the aforementioned contradiction receives a principled account by assuming that ellipsis is derivational. Aelbrecht (2010) argues that ellipsis is licensed via Agree and it occurs as soon as the licensing head is merged. Once the ellipsis occurs, the elided domain becomes frozen and is no longer accessible to further syntactic operation. This theory suggests that a potential ellipsis remnant can escape the elided domain only before a licensing head enters the derivation. In other words, extraction requires an ‘escape hatch’ between the licensing head and the elided domain. I claim that the structural configuration of ‘smaller’ ellipses (vP and a small clause) have this escape hatch, whereas the structural configuration of ‘bigger’ ellipsis (TP) does not.

I first suggest that the licensing head of *kuleh*-ellipsis is a positive polarity head (PolP) which is located at a clausal periphery. It triggers deletion of vP, TP and a small clause, and also subsequent insertion of *kuleh* at PF. Evidence comes from the fact that (i) *kuleh* can be used as an affirmative answer to a polar question (ex (8)) and (ii) the use of *kuleh* is marginal under polarity reversal (ex (9)).

- (8) A: Kwanak-san-i pom-mata kkoch-i manhi pi-nun-ka?
 Kwanak-mountain-NOM spring-every flower-NOM much bloom-PRES-Q
 ‘In Kwanak Mountain, do flowers bloom a lot every spring?’
 B: (amato/hwaksilhi) *kuleh*-ta.
 maybe/certainly *kuleh*-DECL
 ‘(Maybe/certainly) so.’

- (9) a. John-i cenyek-ul mek-ess-ta. Bill-to kulay-ss-ta.
 John-NOM dinner-ACC eat-PAST-DECL Bill-also *kuleh*-PAST-DECL
 ‘John ate dinner. Bill did too.’
 b. *?John-i cenyek-ul mek-ess-ta. Bill-un an kulay-ss-ta.
 John-NOM dinner-ACC eat-PAST-DECL Bill-TOP NEG *kuleh*-PAST-DECL
 ‘John ate dinner. Bill didn’t.’

As for *kuleh* corresponding to vP, I argue that there exists a phase, VoiceP, which serves as an escape hatch for extraction. The fact that voice mismatch is possible supports my claim that VoiceP is external to the elided domain (Merchant 2012). As a consequence, extraction is possible from within the ellipsis site. (10) illustrates how an object is extracted, as in unaccusative and passive subject movement.

- (10) a. [_{VoiceP} [_{vP} [... **obj**] v] Voice] (Object moves to Spec, VoiceP prior to ellipsis)
 \uparrow *kuleh* inserted at PF
 b. [_{CP} [_{PolP} [_{TP} [_{VoiceP} **obj**] [_{vP} [... *t_{obj}*] v] Voice]_{[E[INFL[_{uPol}]]]}] T] Pol] C] (ellipsis)
 escaped vP prior to ellipsis Agree

As for *kuleh* corresponding to TP, VoiceP is included within its elided domain. It therefore lacks an escape hatch, which makes extraction impossible. This is illustrated in (11).

- (11) [_{CP} [_{PolP} [_{TP} [_{VoiceP} [_{vP} [... **obj**] v] Voice] T] Pol]_{[E[INFL[_{uPol}]]]}] C] (ellipsis)
 \uparrow *kuleh* inserted at PF
 frozen within the ellipsis site licensor itself bears [E]

As for *kuleh* corresponding to a small clause, I first assume that the licensor, a Pol head, is absent within the small clause. Rather, it is located at a clausal periphery of a higher tensed clause. Therefore, a small clause subject can undergo subject-to-object raising prior to the merge of the Pol head.

- (12) [_{CP} [_{PolP} [_{TP} [_{VoiceP} **subj**] [_{vP} [_{vP} [_{KEYP} [_{SC} *t_{subj}*] **pred**] KEY]_{[E[INFL[_{uPol}]]]}] V] v] Voice] T] Pol] C] (ellipsis)
 \uparrow *kuleh* inserted at PF
 escaped SC prior to ellipsis Agree

References Aelbrecht, L. 2010. *The Syntactic Licensing of Ellipsis*. Amsterdam: John Benjamins// Merchant, J. 2012. Voice and Ellipsis. *Linguistic Inquiry* 44// Yoon, J., H. 2005. Raising and Major Arguments. A talk given at Workshop on Japanese Korean Linguistics, Kyoto University.