A-Scrambling and Subjecthood in Korean: An Experimental Approach

James Hye-Suk Yoon
Department of Linguistics
University of Illinois, Urbana-Champaign
U. S. A.

`jyoon@illinois.edu`

Ji-Hye Kim*
Department of English Education
Korea National University of Education
Cheongju, Korea

`jkim@knue.ac.kr`

Abstract

The present study investigated whether the local/A-scrambling of non-subject NPs to clause-initial (a potential subject) position can turn them into controllers of subject properties such as Honorific Agreement and Plural Copying. The study was motivated by findings which showed that A-scrambled non-subjects can control some subject properties, such as reflexive binding, from the scrambled position. An experimental study was conducted with Korean native speakers using Magnitude Estimation to test the acceptability of the sentences with subjects and scrambled non-subjects functioning as the controller of these properties. Overall results revealed that scrambled non-subjects cannot control these subject properties, despite the fact that scrambling could have placed them in a subject position (SpTP). Implications of the findings for the research on subject properties in Korean and more generally are discussed.

1 Introduction: Scrambling in Korean

Since Saito (1985), it has been known that local scrambling in Japanese/Korean has both A and A' properties. However, under Saito's analysis of scrambling as adjunction to TP, A-scrambling behavior was difficult to account for, since adjoined positions are by definition A'-positions. Utilizing later developments in the analysis of clause structure, Miyagawa (2001) offered an elegant solution to this conundrum by analyzing A-scrambling as movement/substitution to SpTP, an A-position, with the thematic subject staying in SpvP, under the assumption that subjects may, but need not, move to SpTP in languages like Japanese/Korean.

It is notable that in Miyagawa's analysis, the A-scrambled object occupies a position typical of subjects and is predicted to behave like a subject, given that SpTP is the canonical derived/high subject position across languages (McCloskey 1997). A-scrambled objects do indeed control certain properties typical of subjects, such as the binding of anaphors and having wide scope over the base subject. The object controls these properties only when A-scrambled but not when it remains in-situ, as well-documented in both languages. These facts seemingly lend support to Miyagawa's analysis that takes A-scrambling to be an instance of movement to a SpTP, a subject position.

However, work on A-scrambling has shied away from making an explicit claim that A-scrambled non-subjects end up in a subject position. This may be because (anaphor) binding and wide scope are not the only properties controlled by subjects. There are other subject properties. For Korean, control of honorific marking *–si* on the predicate (Honorific Agreement, HA) and of the copied plural marker *–tul* on constituents within the VP (Plural Copying, PC), are also deemed to be the prerogatives of a subject (S. Song 1995, J. Song 1997, Cho 2000, Choe 2004, Choi 2010, etc.). Nevertheless, an object fronted by A-scrambling (as diagnosed by anaphor binding into the base subject) fails to act as the controller of these properties, as seen below.

(1)
a. *__Kim-kyoswu-nim__[1]__-ul__   [caki[1]
   Kim-professor-**HON**-ACC   self
citohaksayngtul]-i ___ chaca ka-**si**-ess-ta
advisees-NOM   seek go-**HON**-PST-DECL
'His advisees visited Professor Kim.'

a'. Kim-kyoswu-nim[1]-ul   [caki[1]
    Kim-professor-HON-ACC   self
citohaksayngtul]-i ___ chaca ka-ss-ta
advisees-NOM   seek go-PST-DECL
'His advisees visited Professor Kim.'

b.***Kyoswunim[1]-tul-ul** [caki[1] hakkwacang]-i
    Professor-**PL**-ACC   self chair-NOM
hakkyo-eyse-**tul** ___ manna-ss-ta.
school-LOC-**PL**   meet-PAST-DECL
'The chair met his departmental faculty at school.'

b'. Kyoswunim[1]-tul-ul [caki[1] hakkwacang]-i
    Professor-PL-ACC   self chair-NOM
hakkyo-eyse ___   manna-ss-ta.
school-LOC   meet-PAST-DECL
'The chair met his departmental faculty at school.'

The well-formedness of (1a') shows that (1a) is out because HA cannot be licensed by the honorific scrambled object. Similarly, the contrast between (1b) and (1b') shows that an A-scrambled plural object cannot license PC on the adverbial. This raises the possibility that the analysis of A-scrambling as movement to a subject (SpTP) position is on the wrong track, since its prediction that A-scrambled objects should control subject properties is falsified.

We do not believe that this is the only possible conclusion to draw from the facts shown in (1). This is so because by now it is well-known that cross-linguistically not all subject properties are created equal. Indeed, even the earliest generative works on subjecthood (Keenan 1976) divided subject properties into two types (coding vs. behavioral properties). A similar division is endorsed by Falk (2006), who posits a split between Pivot vs. Prominent Argument (PA) subject properties and employs the distinction profitably to account for split subject behavior in languages like Tagalog. The hypothesis of two structurally distinct subject positions in an articulated clause structure has been employed to explain cross-linguistic variations in subject properties in Guilfoyle, Hung and Travis (1992) as well.

Therefore, the answer to why the A-scrambled non-subject in SpTP controls only certain subject properties could be related to the distinction between high/Pivot and low/PA subject properties in Korean. In particular, if reflexive binding and

wide scope are properties available to a nominal in the high/derived subject position while HA and PC are properties of the low/thematic subject position, the fact that the A-scrambled object fails to control the latter two properties would not constitute a counterexample to the analysis that takes A-scrambling to involve movement to SpTP.[1]

Do we have independent evidence that the subject properties in Korean are split in the way described above? We do. The investigation of the distribution of subject properties in Multiple Subject Constructions (MSCs), which is characterized by the presence of two (or more) distinct nominals occupying the lower and higher subject positions simultaneously (cf. 2), provides support for this proposal.

(2)
a. Cheli-ka   **apenim**-i   pwuca-**si**-ta.
   Cheli- NOM   father **(HON)**- NOM rich-**HON**-DECL
   'Cheli's father is rich.'
b. *Chongcang-nim-i elin   soncwu-ka
   Chancellor-HON-NOM young granddaughter- NOM
    yeyppu-**si**-ta.
    pretty-**HON**-DECL
   'Chancellor's young granddaughter is pretty.'
c. Seoul-i   salam-**tul**-i   manhi-**tul**
   Seoul- NOM   people-**PL**-NOM   much-**PL**
   moyetun-ta.
   gather- DECL
   'It is to Seoul where people relocate a lot.'
d. *?Namhan-kwa pwukhan-i   kyengkyeysen-i
   South Korea and North K.-NOM borderline-NOM
   manhi-**tul** sakmakha-ta.
   much-**PL**   desolate-DECL
   'It is South and North Korea whose border is very desolate.'

Yoon (2007, 2009) argued that among the subject diagnostics proposed for Korean (Yoon 1986, Youn 1990, Hong 1991, etc.)[2], some are

---

[1] A reviewer notes that this could be a distinction between structural subject properties and thematic (highest argument) subject properties. We agree. The GB/Minimalist implementation of this distinction is in terms of two distinct structural positions.

[2] The subject diagnostics in Korean (Yoon 1986, Youn 1990, Hong 1991) include all or a subset of the following:

a. Controller of optional plural-marking (Plural Copying)
b. Controller of subject honorification (Honorific Agreement)

low/PA subject properties while others are high/Pivot subject properties. Specifically, he argued that HA and PC are PA/lower, subject properties, which are not controlled by high/Pivot subject (cf. 2b, 2d), but only by the lower subject (cf. 2a, 2c). Subsequent experimental research (Lee et al 2016, Kim et al 2016, Kim et al 2017) provided backing for his theoretical claims.

The goal of this paper is to provide experimental support for the suggested interpretation of the apparent challenge to Miyagawa's analysis of A-scrambling, by verifying that scrambled objects (non-subjects, more generally) fail to control low subject properties such as HA and PC. While additional experimentation supporting the theoretical claim that A-scrambled objects can control high subject properties (binding into low subject, taking scope over low subject) needs to be undertaken in order to complete the argument, the results in this paper can be construed as providing tentative support that an apparent challenge to A-scrambling-as-movement-to-SpTP can be defused once we combine the analysis of A-scrambling with the theory of split subject properties in Korean.[3] Another way to look at the results of the paper is to view it as a contribution to the research on split subject properties. Support for the distribution of subject properties into high vs. low properties comes not only from the investigation of MSCs, but also from the mixed behavior of nominals undergoing A-scrambling. The fact that the conclusions from two different lines of investigations converge is a welcome result.

The remainder of the paper is organized as follows: Section 2 presents the research hypotheses and the methodology employed in the current experimental study. Section 3 presents the results. Finally, the discussion of the results and the

---

c. Controller of PRO in certain complement clauses
d. Binding of anaphors
e. Controller of PRO in certain adjuncts
f. Controller of null coordinate subjects

[3] A-scrambling is attested within the vP/VP as well. The question arises how this type of A-scrambling (short A-scrambling) can be dealt with. While a complete account is beyond the scope of this work, short A-scrambling can be accounted for by splitting object positions into high and low positions (coupled with a concomitant theory of split object properties). The positional decomposition of object positions is prima facie supported by the existence of Multiple Object Constructions in Korean.

tentative conclusion will follow in subsequent sections.

2 Research Method

2.1 Research Question and Hypothesis

The research question of the current study is the following, where the scrambling in question is clause-bounded local scrambling to the initial position of the clause (and hence, a possible instance of A-scrambling):

Research Question: Can a scrambled non-subject possessing the requisite properties (+honorific, +plural) function as the controller of HA and PC when the subject nominal is not specified for these properties?

Our hypothesis and prediction are the following:

Hypothesis: A scrambled non-subject will not be able to function as controller of HA and PC, since these are properties controlled by the lower subject in Korean (Yoon 2008, 2009).

We hypothesize that the fact that local (A)-scrambling can place the non-subject in a high subject position (SpTP) will not impact the control of low subject position properties, which leads to the following prediction.

Prediction: Scrambled sentences with initial non-subjects that are [+hon] or [+pl] will not get higher acceptability scores than the corresponding sentences with canonical word order.

2.2 Participants

Sixty native speakers of Korean (age ranging from 22 to 38; m=23.05, sd=3.314) residing in or near Seoul, South Korea, who are either current university students or recent graduates, participated in the experiment.

2.3 Task, Materials, and Procedure

The main task was an acceptability judgment using Magnitude Estimation (ME) task, which was administered online. The stimuli were composed of

170 Korean sentences - 80 target items and 90 fillers - testing Honorific Agreement (HA) on predicates and Plural Copying on adverbs (PC). The experiment had on a 2 $_X$ 2 factorial design (2 word orders: Canonical vs. Scrambled; 2 agreement types: Subject vs. non-Subject). The sentence types with different word orders are shown in (3) below, where (3a-b) shows scrambled sentences with subject controllers which have [+hon] and [+pl], respectively. In contrast, (3c-d) are scrambled sentences where a non-subject constituent (i.e., Object) is marked [+hon] and [+pl] respectively. (3a'-d') are corresponding sentences with canonical word order.

(3)   Target Sentences with Scrambling

Type 1: [NP2]$_{ACC}$ **[NP1]**$_{NOM}$ **diagnostic property**[controlled by[+hon]/[+pl] Subject]

a. Elin soncwu-lul   **halapeci-ka**
   Young grandson$_{-ACC}$ grandfather-$_{NOM}$
   cohaha-**si**-ess-ta.
   like-**HON**- PST-DECL
   'Grandfather likes his young grandson.'
        [NP1**[+hon]Subject** controller/**Scrambled order**]

a'. **Halapeci-ka**   elin   soncwu-lul
    Grandfather-$_{NOM}$ young grandson$_{-ACC}$
    cohaha-**si**-ess-ta.
    like-**HON**- PST-DECL
    'Grandfather likes his young grandson.'
        [NP1**[+hon]Subject** controller/**Canonical order**]

b. Elin   atul-lul   **Cheli-wa Yenghi-ka**
   Young son$_{-ACC}$ C-$_{NOM}$ Y-$_{NOM}$
   himtulkey-**tul**   chaca-ss-ta.
   hard- $_{PL}$ search- PST-DECL
   'Cheli and Yenghi had difficulties in searching
    for their young son.'
        [NP1**[+pl]Subject** controller/**Scrambled order**]

b'.**Cheli-wa Yenghi-ka**   elin   atul-lul
   C- $_{NOM}$ Y-$_{NOM}$ young son$_{-ACC}$
   himtulkey-**tul**   chaca-ss-ta.
   hard- $_{PL}$ search- PST-DECL
   'Cheli and Yenghi had difficulties in searching
    for their young son.'
        [NP1**[+pl]Subject** controller/**Canonical order**]

Type 2: [NP2]$_{ACC}$ **[NP1]**$_{NOM}$ **diagnostic property**[controlled by[+hon]/[+pl]Non-Subject]

c. **Halapeci-lul**   elin   soncwu-ka
   Grandfather$_{-ACC}$ young grandson-$_{NOM}$
   cohaha-**si**-ess-ta.
   like-**HON**- PST-DECL
   'The young grandson liked his grandfather.'
        [NP2**[+hon]Non-Subject** controller/**Scrambled order**]

c'. Elin soncwu-ka   **halapeci-lul**
    Young grandson-$_{NOM}$ grandfather$_{-ACC}$
    cohaha-**si**-ess-ta.
    like-**HON**- PST-DECL
    'The young grandson liked his grandfather.'
        [NP2**[+hon]Non-Subject** controller/**Canonical order**]

d. **Cheli-wa Yenghi-lul**   elin   atul-i
   C- and   Y- $_{ACC}$ young son-$_{NOM}$
   himtulkey-**tul**   chaca-ss-ta.
   hard- **PL**   search- PST-DECL
   'Their young son had difficulties in searching for
    Cheli and Yenghi.'
        [NP2**[+pl]Non-Subject** controller/**Scrambled order**]

d'. Elin   atul-i   **Cheli-wa Yenghi-lul**
    Young son-$_{NOM}$ C- and   Y- $_{ACC}$
    himtulkey-**tul**   chaca-ss-ta.
    hard- $_{PL}$ search- PST-DECL
    'Their young son had difficulties in searching for
     Cheli and Yenghi.'
        [NP2**[+pl]Non-Subject** controller/**Canonical order**]

2.4   Statistical Analysis

All scores for the target sentences were coded for the four linguistic factors shown in Table 1 below: the value of DIAGTYPE is either HA or PC. WORDORDER is either Canonical or Scrambled. AGREEMENT is coded as either NP1 (Subject) or NP2 (Non-subject). Though the original research question is intended to test the effect of scrambling, we also added another possible factor that might have an effect on the outcomes – differences in GR among the non-subjects in scrambled sentences. We call this factor AGREETYPE, which codes for differences among non-subject GRs in the target sentences (Direct Object, Indirect Object, Adjunct). Finally, SCORE indicates the acceptability scores of the sentences containing relevant factors. The

scores were converted into the *z*-scores using mean and standard deviation, following Gries (2013) and Lee (2016).

Factor	Value
DIAGTYPE	HA, PC
WORDORDER	Canonical, Scrambled
AGREEMENT	NP1(Subject), NP2(Non-subject)
AGREETYPE	Direct Object, Indirect Object, Adjunct
SCORE	Acceptability scores

Table 1: Encoded Factors

For the analysis of results, we implemented a random forest analysis (Breiman, 2001). A random forest analysis or a random decision forest analysis is both a statistical method and a machine learning method, which can be utilized for classification, regression, and other types of statistical tasks. This analysis usually operates by constructing a multitude of decision trees at training time and outputting the class that is the mode of the classes (classification) or mean prediction (regression) of the individual trees (Breiman, 2001; Hastie et al., 2008). In the current study, the analysis was used to investigate the relative strength of different experimental factors mentioned in Table 1.[4]

3   Results

3.1   HA + Scrambling

Overall results with HA indicated that the scrambling of non-subject NPs had no effect on the acceptability of test sentences. In Figure 1, the columns marked "Subject" represent the acceptability of sentences where the subject has the controlling feature [+hon], both for canonical (black bar) and scrambled orders (white bar). The "Non-subject" columns on the right side represent sentences with a [+hon] non-subject controller for both word orders.

As shown in Figure 1, sentences where the subject has the controlling feature [+hon] got

---

[4] Since there were no differences among different Non-subject GRs (i.e., AGREETYPE), we collapsed them into a single category "Non-subject" for the analysis of descriptive statistics. However, AGREETYPE was used later in Random Forest analysis for measuring the relative strength of different factors.

higher acceptability scores (canonical*: z-score =* 1.061; scrambled: *z-score* = 0.944) than the modulus (*z-score* = 0), while those with non-subject controllers were considered less acceptable (canonical: *z-score* = -0.606; scrambled: *z-score* = -0.612) than the modulus.

A Wilcoxon test (the non-parametric paired *t*-test) was conducted (since the data in both groups did not show a normal distribution) in order to examine the statistical significance of the difference between the acceptability scores of the sentences. In the case of subject controllers, the acceptability scores of the canonical order was significantly different from those of scrambled orders (*V* = 99972, *p*-value = 0.03079*). However, in case of non-subject controllers, a Wilcoxon test yielded no significant difference between canonical and scrambled orders (*V* = 99156, *p*-value = 0.8744, n.s.).
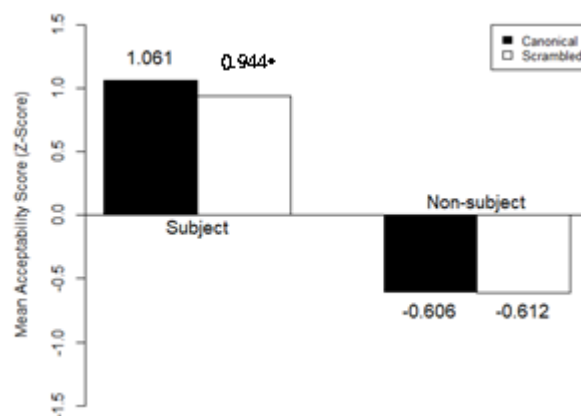
Figure 1: HA + Scrambling

Sentences crucial to testing the prediction of our hypotheses are the non-subject sentences. If a non-subject that is [+hon] is able to function as the controller of HA when it is scrambled (and hence, potentially occupying a subject position), we expect to see scrambled orders (white bar) to be judged significantly better than canonical orders (black bar) for this category of sentences. This was not the case. In fact, the scrambled sentences were judged to be numerically worse than the canonical sentences. This shows that scrambling of [+hon] non-subject NP to a potential subject position does not make the target NP more subject-like, which supports our prediction.

3.2 PC + Scrambling

The results with PC were very similar to those with HA shown in Figure 1. Sentences where the subject is [+pl] were judged much more acceptable than those where the non-subject has the feature. And while the difference between the sentences with canonical order and those with scrambled order was significant statistically with subject controllers ($V = 97324$, p-value = 0.02168*), as shown from a Wilcoxon test, sentences with non-subject controllers showed no difference between canonical and scrambled orders ($V = 96376$, p-value = 0.3059, n.s.).

That is, scrambling of non-subject NP that is [+pl] to a potential subject position cannot improve the acceptability of the sentences (white bar in Non-subject). The results are shown in Figure 2 below.
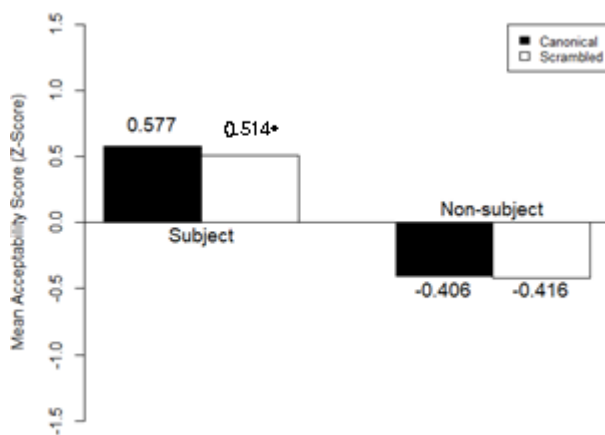

Figure 2: PC + Scrambling

3.3 Random Forest for Variable Importance

In order to determine whether word order is a crucial predictor of acceptability variation compared to the other factors (whether subject or non-subject has the relevant feature; what kind of GR the non-subject has) in the constructed sentences, we calculated the relative strength of the three tested factors: AGREEMENT: NP1[subject] vs. NP2[non-subject], AGREE TYPE: different Non-subject GRs (D.O., I.O., Adjunct), and WORD ORDER (canonical v s. scrambled), using a Random Forest analysis. The factor AGREEMENT was used as baseline (=100) for its comparison to the other two factors.

As shown in Figure 3 below, we found that the variation in acceptability scores owes the most to the type of agreement (whether subject or non-subject has the controlling property). In contrast, the relative impact of WORD ORDER in influencing the acceptability of HA was 0.10 compared to AGREEMENT. This shows that scrambling had almost no effect on determining the acceptability of sentences. Also, AGREE TYPE (differences in the GRs of the non-subject NPs with the relevant controlling feature) showed 0.18, which shows that it exercises little influence in determining acceptability scores.
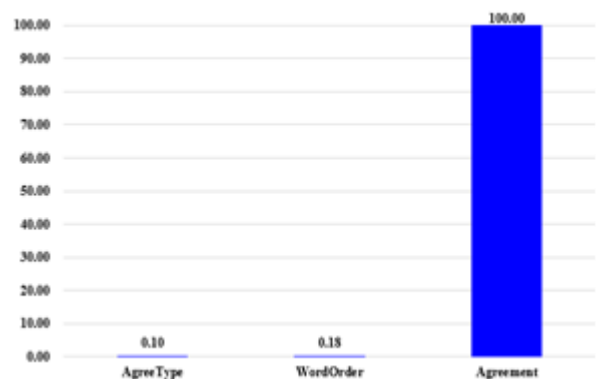

Figure 3: Variable Importance (HA)

For PC, the same pattern was found: Both WORD ORDER and AGREE TYPE represented only 0.00 and 0.01, respectively in relative strength compared to AGREEMENT. This again shows that word order and differences in GRs played almost no role in contributing to acceptability judgements. This is represented in Figure 4.
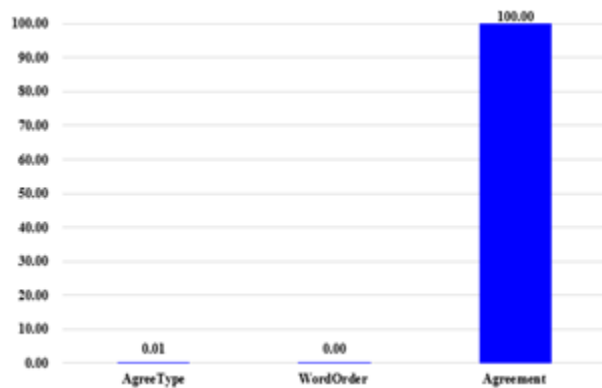

Figure 4: Variable Importance (PC)

4 Discussion

The specific hypothesis and prediction in the study were the following:

Hypothesis: A scrambled non-subject will not be able to function as controller of HA and PC, since these are properties controlled by the lower subject in Korean (Yoon 2008, 2009).

Prediction: Scrambled sentences with a non-subject that has a subject-like controlling feature (i.e., [+hon] and/or [+pl]) will not get higher acceptability scores than those in canonical order.

Our hypothesis is supported, since the results of our experiment showed that the sentences with scrambled order did not get significantly higher acceptability than those with canonical order both for HA and in PC, when the scrambled non-subject has the controlling property. Testing the variable importance of factors through Random Forest analysis also supports our research hypothesis that scrambling had little effect on acceptability of the sentences with both diagnostics. In addition, different non-subject NPs behaved similarly, which implies that regardless of GRs, a non-subject scrambled to a potential subject position cannot function like a subject with regard to HA and PC.

The current experimental results are consistent both with the analysis of A-scrambling as movement to SpTP and the hypothesis that HA and PC in Korean can only be controlled by the lower/thematic subject. This is the reason that the A-scrambled object which can occupy the higher/derived subject position cannot control these properties.

What other subject-like properties (besides reflexive binding and wide scope) can be attributed to the A-scrambled object/non-subject in SpTP? Levin (2017) argues that the A-scrambled object in that position can undergo case alternation and be marked nominative (for some speakers), which is something that has not been noted thus far.

(5) ku sihem-ul/i   motun namhaksayng-i
    That exam-ACC/NOM   all   male.students-NOM
    __an-po-ass-e   (ex 33 in Levin 2017)
       NEG-see-PST-DECL
    'That test, not all male students took it.'

Crucially, Levin argues that (for his informants), case alternation is possible only if negation outscopes the thematic subject, which is required for the structure to be parsed as A-scrambling (Miyagawa 2001). Given the existence of MSCs, we expect nominative to be available to both lower and higher subject positions and hence for the acc-marked nominal in the high subject position to alternate with nominative, since Korean allows multiple case-marking/case alternations (J. Yoon 1996).

5 Conclusion

The current experimental study investigated whether the local scrambling of non-subject NPs to clause-initial (and hence, potentially a subject) position can turn them into controllers of HA and PC. The overall results demonstrated that it did not, which may appear to challenge the analysis of A-scrambling as movement to SpTP, the high subject position. However, if we adopt the distinction between low and high subject positions and assume that HA and PC are low subject properties, the apparent challenge can be dismissed. And the work of Levin (2017) reveals that the A-scrambled non-subject may in fact manifest more typical subject-like behavior than hitherto imagined, though this too awaits systematic experimental confirmation.

However, we admit that the results of this paper are tentative, since the current experimental study did not control carefully for the A vs. A'-scrambling parse of scrambled sentences. Our test items did not have the signature properties that have been identified as crucial to the A-scrambling parse of a locally scrambled sentence. Thus, the overall results indicating that local scrambling of non-subjects (marked [+hon], [+pl]) did not lead to any improvement in overall acceptability might be because our test participants are imposing an A'-scrambling parse on them, where the scrambled non-subject occupies an A'-position and is not expected to control any subject property. We need to fill this lacuna in our subsequent study, though the clear unacceptability of (1a) and (1b), which can only be parsed as A-scrambling, indicates that the results of a further experimental study may not be different from the conclusion reached in the current one.

Acknowledgments

References

Leo Breiman. 2001. Random Forests. Machine Learning, 45(1): 5-32.

Sungeun Cho. 2000. Three Forms of Case Agreement in Korean. Doctoral dissertation, State University of New York at Stony Brook

Jae-Woong Choe. 2004. Obligatory Honorification and the Honorific Feature. Studies in Generative Grammar 14(4): 545-559.

Kiyong Choi. 2010. Subject Honorification in Korean: In Defense of Agr and Head-Spec Agreement. Language Research 46: 59-82.

Trevor Hastie, Robert Tibshirani, and Jerome Friedman. 2008. The Elements of Statistical Learning (2nd edition). Springer, Berlin.

Ki-Sun Hong. 1994. Subjecthood Tests in Korean. Language Research 30:99-136.

Beom-Mo Kang. 2002. Pemcwu Mwunpep: Hankwuke-uy Hyengthaylon, Thongsalon, Thaipnonlicek Uymilon (Categorial Grammar: The Morphology, Syntax, and Type-Logical Semantics of Korean). Seoul: Korea University Press.

Richard Kayne. 1994. The Antisymmetry of Syntax. Cambridge: MIT Press.

Kiyong Choi. 2010. Subject Honorification in Korean: In Defense of Agr and Head-Spec Agreement. Language Research 46: 59-82.

Eithne Guilfoyle, Henrietta Hung and Lisa Travis. 1992. Spec of IP and spec of VP: Two subjects in Austronesian languages. Natural Language & Linguistic Theory 10 (3): 375–414.

Stefan St Gries. 2013. Statistics for Linguistics with R: A Practical Introduction. Berlin: Mouton.

Edward L Keenan. 1976. Towards a universal definition of subject. In Li, C. N. (ed.) Subject and Topic, New York: Academic Press, pp. 303–333

Ji-Hye Kim, Eunah Kim and James H-S Yoon. 2016. An Experimental Study of Subject Properties in Korean Multiple Subject Constructions (MSCs). Proceedings of 2016 Pacific Asia Conference on Languages, Information and Computation 30.

Ji-Hye Kim, Yong-hun Lee, and Eunah Kim. 2017. Honorific Agreement and Plural Copying as Korean Subject Diagnostics: An Experimental Approach. Modern Grammar Studies 93:119-144.

Yong-hun Lee. 2016. Corpus Linguistics and Statistics Using R. Seoul: Hankook Publishing Company.

Yong-hun Lee, Eunah Kim, and Ji-Hye Kim. 2015. Reflexive Binding and Adjunct Control as Subject Diagnostics in Korean: An Experimental Approach. Studies in Language Research 31.2:427-449.

Ho-min Sohn. 1980. The State of the Art in the Historical-Comparative Studies of Japanese and Korean. Korean Studies 4, 29-50.

Jae Jung Song. 1997. The So-called Plural Copy in Korean as a Marker of Distribution and Focus. Journal of Pragmatics 27: 203-224.

Seok Choong Song. 1975. Bare Plural Marking and Ubiquitous Plural Marker in Korean. In Papers from the 11th Regional Meeting of Chicago Linguistic Society, 536-46.

Charles Li and Thompson, Sandra. 1976. Subject and Topic: A New Typology of Language. In Charles N. Li. Subject and Topic. New York: Academic Press. pp. 457–489.

James McCloskey. 1997. Subjecthood and Subject Positions. In Elements of Grammar, Liliane Haegeman, ed., Dordrecht, Boston & London: Kluwer Academic Publishers: 197-235.

Shigeru Miyagawa. 2001. The EPP, scrambling, and wh-in-situ. In Kenstowicz (ed.), Ken Hale: A life in language, pp. 293-338.

Chongwon Park. 2010. The Role of Metonymy in the Interpretation of Korean Multiple Subject Constructions. Language Sciences 33(1): 206-228

Mamoru Saito. 1985. Some Asymmetries in Japanese and Their Theoretical Implications, Ph.D. dissertation, MIT, distributed by MIT Working Papers in Linguistics, Cambridge, MA.

James Hye Suk Yoon. 1986. Some Queries Concerning the Syntax of Multiple Subject Constructions in Korean. Studies in the Linguistic Sciences 16: 215-236, Department of Linguistics, University of Illinois, Urbana-Champaign.

James Yoon. 1996. Ambiguity of Government and the Chain Condition. Natural Language and Linguistic Theory 14(1): 105-162.

James Hye-Suk Yoon. 2008. Subjecthood and Subject Properties in Multiple Subject Constructions. Talk

presented at the East Asian Linguistics Seminar, Oxford University.

James Hye-Suk Yoon. 2009. The Distribution of Subject Properties in Multiple Subject Constructions. Japanese/Korean Linguistics 19:64-83. Stanford, CA: CSLI.

Cheong Youn. 1990. A Relational Analysis of Korean Multiple Nominative Constructions. Doctoral dissertation, State University of New York at Buffalo.