The accessibility and the form of a referent in discourse: The case of L2 and Heritage Korean

This study investigates how speakers of an overt pronoun language (English) process a null pronoun language (Korean) as a second language (KL2) or a heritage language (KHL) with regard to the interaction of the accessibility of a referent and the form of expression using a double nominative construction (DNC) with psych-predicates. Referential expressions interacting with discourse has been well documented in overt pronoun languages especially in English (Almor, 1999; 2000; Almor & Eimas, 2008; Gordon, Grosz, & Gillom, 1993; Gundel, Hedberg, & Zacharski, 1993) but only a handful of studies have been conducted, using metalinguistic tasks (Ueno & Kehler, 2010). Korean has a sentence type in which two nominative marked arguments appear, one corresponding to the experiencer of a psych-predicate and the other to the stimulus (see examples below). When only one of those arguments is overt, the thematic role of that overt argument is ambiguous between the experiencer and the stimulus. We show that the thematic role of a null argument is inferable from the interpretation of an overt argument and that the distribution of a null argument interacts with accessibility operationalized here as topicality ([±New Topic]) in native Korean but not in KL2 and KHL. We also show that KHLers behave differently from natives and KL2ers and discuss that the difference comes from a different mental representation of the psych-predicate structure attributable to simultaneous exposure to the two languages.

Background: Korean two-place psych-predicates are classified as class III psych-predicates, which require a dative experiencer and a nominative stimulus (Belletti & Rizzi, 1988); however, the experiencer, as a quirky subject, can also be marked nominative (Gerdts & Youn, 2001; Landau, 2010; Ura, 1996). The DNC with a two-place psych-predicate (1) marks both its arguments 'nominative', and these two nominative NPs are always in the same order: experiencer precedes stimulus. When one NP is dropped, what remains (2) is ambiguous in that the overt NP can be either the experiencer or the stimulus of the psych-predicate (e.g., 'worried'/'worrisome'). For the interpretation of the ambiguous thematic role of the overt NP, [±NT] plays an important role: A subject (= experiencer in (1a)) rarely drops in [+NT] but often does in [–NT], in which cases, then, the ***overt argument*** in [+NT] and [–NT] maps to, respectively, experiencer and stimulus. This study investigates the extent to which KL2ers and KHLers (in comparison to Korean natives) show sensitivity to this mapping tendency via an oral story-telling experiment.

(1) a. Sarah-eykey/ka ~~Jimmy-ka~~ kekcengsulewu-n ka po-a-yo.
Sarah-DAT/NOM ~~Jimmy-NOM~~ worry-ADJ INF AUX-DEC-HON
Sarah: *experiencer*; **Jimmy**: *stimulus*
'Sarah must be worried.' → Experiencer reading

(1) b. ~~Jimmy-eykey/ka~~ Sarah-ka kekcengsulewu-n ka po-a-yo.
~~Jimmy-DAT/NOM~~ Sarah-NOM worry-ADJ INF AUX-DEC-HON
Jimmy: *experiencer*; **Sarah**: *stimulus*
'Sarah must be worrisome.' → Stimulus reading

(2) Sarah-ka kekcengsulewu-n ka po-a-yo.
Sarah-NOM worry-ADJ INF AUX-DEC-HON
→ The thematic role of the overt NP is ambiguous!

Method: Participants were instructed to build a story based on an ambiguous sentence such as (2) in 3 conditions: either using the sentence to start their story ("Beginning"), or inserting the sentence in the middle ("Middle"), or ending their story with the sentence ("End"). The 3 (sentence) locations manipulate discourse topicality since [+NT] is most likely at the beginning of a discourse and [–NT] at the end of a discourse; the "Middle" location is a neutral [±NT] condition. The task comprised 18 critical items, Latin-squared into

3 locations (6 items per location), and 18 fillers. Data were collected from 20 (L1-English) KL2ers and 10 (English-dominant) KHLers, whose Korean proficiency was measured via a C-test using Rasch Analysis (Lee-Ellis, 2009), as well as from 27 adult native Koreans. Mixed effects modeling was used for data analysis.

Results: Natives are biased towards the experiencer reading of the overt NP (79% overall) but this differs significantly by location (Figure 1), as predicted ("Beginning": 90%, "Middle": 78%, "End": 70%, $p<.001$). By contrast, no main effect of location is observed in either KL2ers or KHLers ($p<1$), which means both groups are insensitive to the mapping tendency (Figure 1). What's nevertheless notable is the overall proportions of experiencer reading between the two groups: KL2ers have a (numerically) ***higher*** experiencer-reading rate (86%) than natives, whereas KHLers have a significantly ***lower*** experiencer-reading rate (61%, $p<.05$) (Figure 2). Unlike KL2ers, moreover, KHLers show a negative correlation between proficiency and experiencer-reading rate ($r=-.45$, $p<.001$); the advanced KHL group ($n=6$) showed only 42% of experiencer reading while the intermediate group showed 90%.

Discussion: The numerical tendency of topicality and null argument distribution in KL2ers and KHLers may reach statistical significance with a larger number of participants at a higher proficiency level. Also, class III psych-predicates in Korean are class II psych-verbs in English, which require a nominative stimulus and an accusative experiencer (Belletti & Rizzi, 1988) but both classes allow experiencers to be marked nominative, with dative experiencers as quirky subjects in Korean (1-2) and through the passivization of accusative experiencers in English (The result pleased Sam → Sam was pleased with the result). Thus, both native Koreans and KL2ers prefer the overt NP as a nominative experiencer if from different underlying representations. The advanced KHLers, exposed to both languages from birth, seem to be aware that the Korean psych-predicates at issue here belong to class III but not aware that the dative experiencer can change its underlyingly dative case to nominative; thus, the overt NP in the left periphery is interpreted significantly more as a stimulus, reflecting the class III psych-predicate structure (nominative stimulus and dative experiencer) with the dative experiencer omitted.
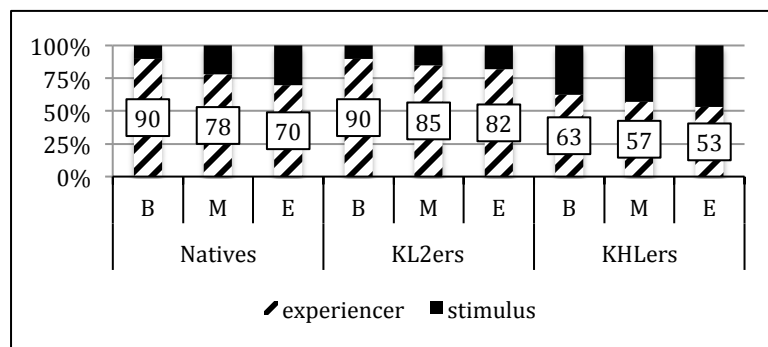

Figure 1. The interpretation of overt NPs by sentence location and by speaker group.
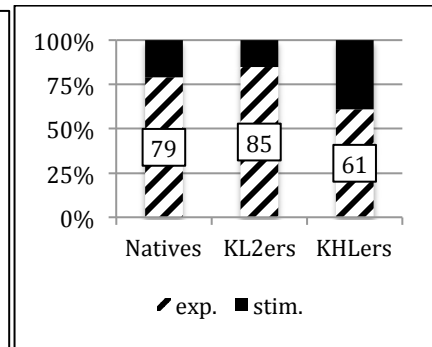
Figure 2. Overt NP interpretation by speaker group

Almor, A. (1999). Noun-phrase anaphora and focus: the informational load hypothesis. *Psychological Review, 106*(4), 748-765. **Almor**, A. (2000). Constraints and mechanisms in the theories of anaphor processing. In M. J. Pickering, C. Clifton Jr. & M. Crocker (Eds.), *Proceedings of Architectures and Mechanisms for Language Processing 2000*. England: Cambridge University Press. **Almor**, A, & **Eimas**, P. D. (2008). Focus and noun phrase anaphors in spoken language comprehension. *Language and Cognitive Processes, 23*(2), 201-225. **Belletti**, A. & **Rizzi**, L. (1988) Psych-verbs and Θ-theory. *Natural Language and Linguistic Theory 6,* 291-352. **Bond**, T. G., & **Fox**, C. M. (2007). *Applying the Rasch Model: Fundamental Measurement in the Human Sciences* (2nd ed.): Routledge. **Gerdts**, D.B. & **Youn**, C. (2001). Korean dative experiencers: the Evidence for their status as surface subjects. HSKL VI. **Gordon**, P. C, **Grosz**, B. J, & **Gillom**, L. A. (1993). Pronouns, names and the centering of attention in discourse. *Cognitive Science, 17*, 311-347. **Gundel**, J. K, **Hedberg**, N, & **Zacharski**, R. (1993). Cognitive status and the form of referring expressions in discourse. *Language, 69*(2), 274-307. **Landau**, I. (2010). *The locative syntax of experiencers*. Cambridge: MIT Press. **Lee-Ellis**, S. (2009). The development and validation of a Korean C-Test using Rasch Analysis. *Language Testing, 26*(2), 245-274. **Ueno**, M, & **Kehler**, A. (2010). *The interpretation of null and overt pronouns in Japanese: Grammatical and pragmatic factors*. Paper presented at the CogSci. **Ura**, H. (1996). *Multiple feature checking: A theory of grammatical function splitting*. Doctoral dissertation, MIT.