

## INTEGRATION OF MORPHOSYNTACTIC INFORMATION IN INCREMENTAL PROCESSING: EVIDENCE FROM KOREAN CONTROL SENTENCES

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In the online processing of English control constructions, such as “*John promised Mary PRO to wash,*” comprehenders immediately utilize verb information to establish the association between controller (antecedent NP *John*) and controllee (the invisible embedded subject *PRO*) (Boland, Tanenhaus, and Garnsey, 1990). However, in the Korean counterpart, schematized as ‘*John-NOM Mary-DAT PRO wash-COMP promise-PST-DECL,*’ verb information is delayed until the end of the sentence, making immediate use of verb information impossible. Consequently, Korean comprehenders rely on alternative cues. While there is substantial evidence supporting the use of preverbal constituents in verb-final languages (Inoue & Fodor, 1995; Kamide, Yuki, Altmann, & Haywood, 2003), the extent to which these cues are used remains unclear.

This study aims to investigate whether Korean parsers immediately utilize complementizer information in the real-time processing of Korean control sentences. Previous research by Song and Yun (2016) has shown that Korean readers use modal suffixes attached to embedded verbs in combination with control verbs as a cue to identify the referent of *PRO* in control constructions. However, the use of preverbal cues in the absence of verb information has not been thoroughly examined.

This study employs a stop-making-sense task (Boland et al., 1990), where participants read sentences region by region and press a rejection button to move on to the next trial as soon as they perceive the sentence to cease making sense. Notably, in Korean, complement clauses take different complementizers depending on the control verb that follows them (Gamerschlag, 2007): subject-control verbs follow the complementizer *kilo*, whereas object-control verbs follow the complementizer *tolok*. Thus, complementizers potentially play a role in the online processing of Korean control constructions.

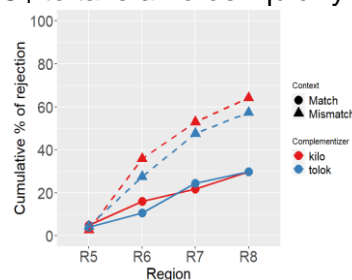
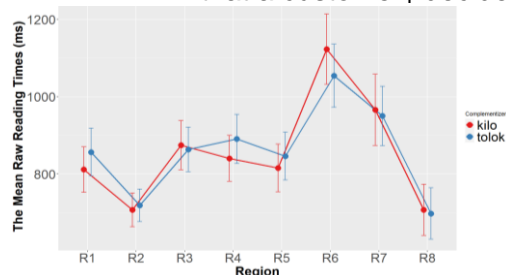
Forty-six native speakers of Korean participated in the experiment, which employed a Latin square design crossing *Complementizer type* (*kilo* vs. *tolok*) with *Context* (Match vs. Mismatch), resulting in four conditions ( $k=8$  each), alongside 64 fillers. The plausibility of the context in regions R1 through R5 was manipulated to either align (Match) or conflict (Mismatch) with the complementizer information presented in R6 by alternating the subject NP and the object NP—see (1). To examine the use of complementizer information despite the absence of control verbs, specific control verbs in the target sentences were replaced with the control-neutral verb *ha-* ‘do’, which can take either complementizer.

The results revealed that, for sentences judged as making sense, there was a main effect of Complementizer, with *tolok* being read faster than *kilo* (Fig.1). Furthermore, in Mismatch conditions, the neutral verb *ha-* in R7 was read more slowly compared to Match conditions. Additionally, a Context effect was observed, with Mismatch sentences exhibiting higher rates of rejection in the critical regions compared to Match sentences (Fig.2). These findings suggest that control information induced by complementizers is immediately used to guide controller choice in the online processing of Korean control constructions. Thus, preverbal morphosyntactic information can be sufficient to elicit active dependency formation, even in the absence of verb control information. (485 words)

### (1) A Sample Target Sentence (*Kilo*-Mismatch Condition; translated into English)

Today<sub>Region1</sub> / customer-NOM<sub>R2</sub> / waiter-DAT<sub>R3</sub> / quickly<sub>R4</sub> / order-ACC<sub>R5</sub> / take-**KILO**<sub>R6</sub> / do-PST-DECL-COMP<sub>R7</sub> / say-PRS-DECL.<sub>R8</sub>

?“It is said that a customer<sub>1</sub> decided *PRO*<sub>1</sub> to take an order quickly from a waiter<sub>2</sub> today.”



**Figure 1 (left).** Mean raw reading times (R6: complementizer region)

**Figure 2 (right).** Cumulative percentages of rejections in the critical regions (R6, R7)