



Effects of morphological and prosodic focus cues on topic maintenance in Korean

Kitaek Kim, Theres Grüter, and Amy J. Schafer

University of Hawai'i at Mānoa



How do morphology and prosody work together to manage a discourse topic?

Morphological and Prosodic Focus Cues in Korean

- (1) Chelswu-ssi-ka Yengswu-ssi-eykey chayk-ul kenney-ess-ta.
C-HON-NOM Y-HON-DAT book-ACC hand-PAST-DECL
'Mr. Chelswu handed a book to Mr. Yengswu.'
- (2) Chelswu-ssi-nun Yengswu-ssi-eykey chayk-ul kenney-ess-ta.
C-HON-TC Y-HON-DAT book-ACC hand-PAST-DECL
'Mr. Chelswu_{TC} handed a book to Mr. Yengswu.'
- (3) Chelswu-ssi-ka YENGSWU-SSI-EYKEY-NUN chayk-ul kenney-ess-ta.
Chelswu-NOM Yengswu-DAT-TC book-ACC hand-PAST-DECL
'Mr. Chelswu handed a book to Mr. YENGSWU_{TC}.'

Sohn (1999):

"[-nun] provides the co-occurring noun phrase with either a **topic meaning**, usually when the noun phrase is **unstressed** and occurs in the **sentence-initial position**, or a **contrast meaning**, especially when the **noun phrase is stressed** or appears in a **non-initial position**."

NB: (1) with contrastive focus prosody and (3) without contrastive focus prosody are unnatural in Korean.

Motivation for this Study

• Kim, Grüter & Schafer (2013) tested the effect of topic/focus marking on topic maintenance, using sentence types (1)-(3) in a written story continuation task. They found:

- No difference between (1) and (2) in topic choice in the continuation (see also Ueno & Kehler, 2010, for Japanese).
- (3) increased maintenance of the current topic (vs. (1) & (2)).

- This goes against the idea that focus increases salience and therefore subsequent reference (Birch & Garnsey, 1995).
- This supports the idea that focus highlights a reference set with alternatives (Rooth, 1992), which allows maintenance of the current topic (source/subject), together with a contrastive alternative as focus (see Appendix, example (ii)).

• What remains unresolved:

- To what extent is this effect due to
 - (a) the presence of the morphological marker *-nun* on the goal, or
 - (b) the presence of implicit prosody on the *-nun*-marked goal?

→ Need for *spoken* stimuli with manipulation of prosody: this study.

References

Birch, S. L., & Garnsey, S. (1995). The effect of focus on memory for words in sentences. *Journal of Memory and Language*, 34, 232-267.

Kim, K., Grüter, T., & Schafer, A. (2013). Effects of event-structure and topic/focus-marking on pronoun reference in Korean. Poster presented at CUNY2013.

Rooth, M. (1992). A theory of focus interpretation. *Natural Language Semantics*, 1, 75-116.

Sohn, H.-M. (1999). *The Korean language*. New York: Cambridge University Press.

Ueno, M., & Kehler, A. (2010). The interpretation of null and overt pronouns in Japanese: grammatical and pragmatic factors. In S. Ohlsson & R. Catrambone (Eds.), *Proceedings of the 32nd Annual Meeting of the Cognitive Science Society* (pp. 2057-2062). Austin, TX: Cognitive Science Society.

Method

Participants: 32 students at Seoul National University

Task: Participants *listened* to a context sentence (1-4), then *wrote* a continuation.

Materials: 4 conditions (see 1-4 below) ; 70 items (42 experimentals; 28 fillers)

• Broad focus prosody (Cond1)

- (1) Chelswu-ssi-ka Yengswu-ssi-eykey chayk-ul kenney-ess-ta.
C-HON-NOM Y-HON-DAT book-ACC hand-PAST-DECL
'Mr. Chelswu handed a book to Mr. Yengswu.'

• Focus on source/subject: morphology only (Cond2)

- (2) Chelswu-ssi-nun Yengswu-ssi-eykey chayk-ul kenney-ess-ta.
C-HON-TC Y-HON-DAT book-ACC hand-PAST-DECL
'Mr. Chelswu_{TC} handed a book to Mr. Yengswu.'

• Focus on source/subject: morphology & prosody (Cond3)

- (3) CHELSWU-SSI-NUN Yengswu-ssi-eykey chayk-ul kenney-ess-ta.
C-HON-TC Y-HON-DAT book-ACC hand-PAST-DECL
'Mr. CHELSWU_{TC} handed a book to Mr. Yengswu.'

• Focus on goal/non-subject: morphology & prosody (Cond4)

- (4) Chelswu-ssi-ka YENGSWU-SSI-EYKEY-NUN chayk-ul kenney-ess-ta.
C-HON-NOM Y-HON-DAT-TC book-ACC hand-PAST-DECL
'Mr. Chelswu handed a book to Mr. YENGSWU_{TC}.'

Prosodic analyses

Fig1. Duration (in ms) of critical regions. Pause after contrastive *-nun*.

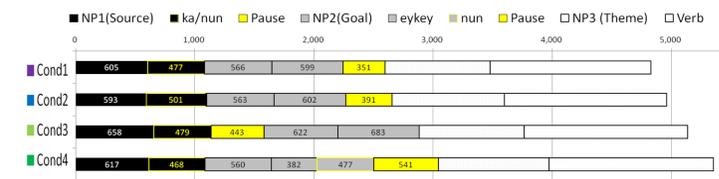
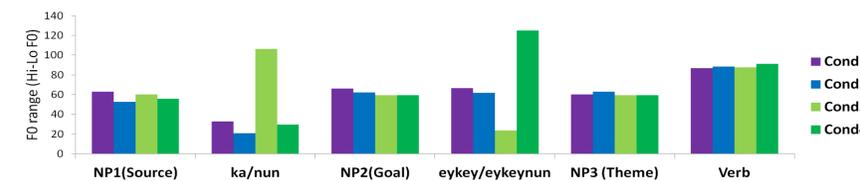


Fig2. Prosodic analyses, F0 range. Greater F0 range with contrastive *-nun*.

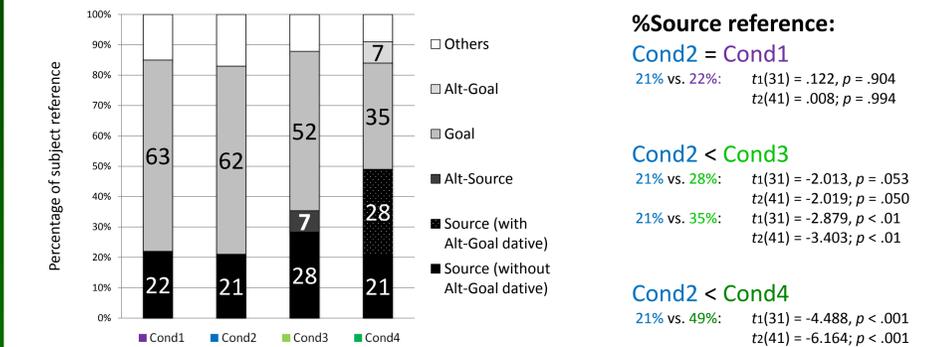


Questions and Predictions

- **Cond2 vs Cond1:** How does morphology alone on the **source/subject** affect topic selection in the continuation?
 - Previous (written) work showed no effect (Kim et al., 2013; Ueno & Kehler, 2010).
- **Cond3 vs Cond2 (and 1):** How do morphology and prosody together on the **source/subject** affect topic selection in the continuation?
 - If increased salience promotes increased selection for topic,
 - more source selections for topic
 - If focus highlights a reference set with alternatives,
 - more continuations with contrastive (parallel) coherence relation
 - more selections from source reference set (alternative or original source) for topic
- **Cond4 vs Cond2 (and 1):** How do morphology and prosody together on the **goal/non-subject** affect topic selection in the continuation?
 - If increased salience promotes increased selection for topic,
 - more goal selections for topic
 - If focus highlights a reference set with alternatives,
 - more continuations with contrastive (parallel) coherence relation
 - more selections from goal reference set (alternative or original goal), especially as the focus, while maintaining current (source/subject) topic

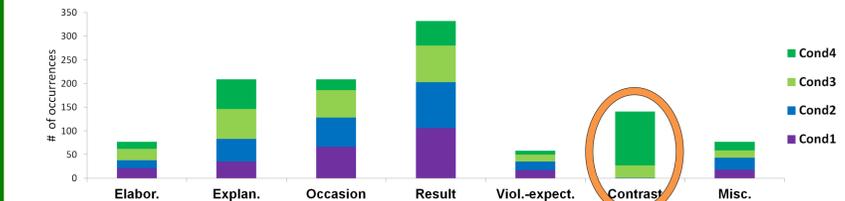
Results

Fig3. Referential patterns: Sentential subject of continuation



- Replication of written study: Broad focus *-ka* and *-nun* result in similar referential patterns. (Written *-nun* in sentence-initial position is interpreted with implicit broad focus prosody.)
- Contrastive prosody on *-nun* results in distinct referential patterns:
 - Contrastive prosody on the **source** increases source and alt-source selections for the topic.
 - Contrastive prosody (+ *-nun*) on the **goal** also increases source selections for the topic: Goal focus enhances topic maintenance, together with a selection from the goal reference set as the focus.

Fig4. Coherence relations vary by condition



• Contrastive coherence relations were found only in Cond3 and Cond4

contrastive focus prosody → contrastive coherence rel. → maintenance of current topic

Conclusion

- Contrastive prosody plus contrastive morphology together produce contrastive focus, which in turn affects discourse coherence and topic management.
- Contrastive morphology alone does not.

Appendix: Examples of Contrastive Continuations

• Found only in Cond3 - Alt-Source subject continuation (7%)			
Context:	CHELSWU-SSI-NUN	Yengswu-ssi-eykey	chayk-ul kenneyessta.
	C-HON-TC	Y-HON-DAT	book-ACC handed
	'Mr. CHELSWU handed a book to Mr. Yengswu.'		
Continuation:	(i) Alt-ssi-nun	Yengswu-ssi-eykey	chayk-ul kenney-ci anh-ass-ta.
	Alt-HON-TC	Y-HON-DAT	book-ACC hand-NEG-PAST-DECL
	'Mr. Alt did not hand a book to Mr. Yengswu.'		
• Found only in Cond4 - Alt-Goal dative (28%), Alt-Goal subject (7%) continuations			
Context:	Chelswu-ssi-ka	YENGSWU-SSI-EYKEY-NUN	chayk-ul kenneyessta.
	C-HON-NOM	Y-HON-DAT-TC	book-ACC handed
	'Mr. Chelswu handed a book to Mr. YENGSWU.'		
Source subject with Alternative Goal dative			
Continuation:	(ii) Chelswu-ssi-ka	Alt-ssi-eykey-nun	chayk-ul kenney-ci anh-ass-ta.
	C-HON-NOM	ALT-HON-DAT-TC	book-ACC hand-NEG-PAST-DECL
	'Mr. Chelswu did not hand a book to Mr. ALT.'		
Alternative Goal subject			
Continuation:	(iii) Alt-ssi-nun	Chelswu-ssi-eykeyse	chayk-ul pat-ci-mot-ha-ess-ta.
	ALT-HON-TC	C-HON-from	book-ACC receive-NEG-PAST-DECL
	'Mr. ALT did not receive a book from Mr. Chelswu.'		