

Goals and Motivation

Q1) Are **null pronouns** strongly biased for subject reference (Ueno & Kehler, 2010), or is their interpretation influenced by event structure, like other referential forms?

Q2) How does **topic-marking** on a Goal argument affect reference resolution of a subsequent subject-position anaphor?

Two opposing predictions:

• Focus makes an argument more salient (Birch & Garnsey, 1995)

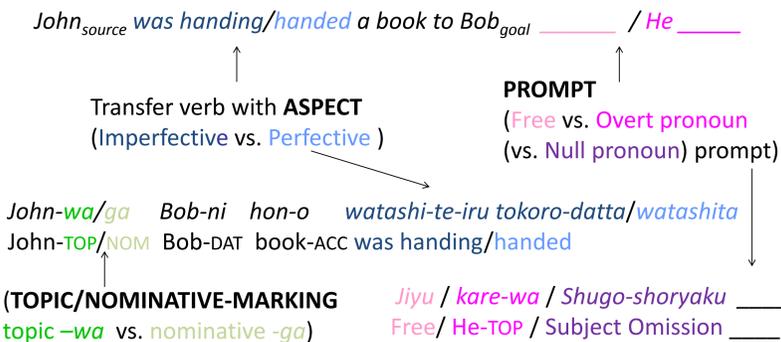
• Focus indicates the presence of alternatives that are relevant for interpretation (Rooth 1992)

→ **Prediction A: more goal reference** (Goal, more salient in memory, is chosen as an antecedent.)

→ **Prediction B: more source reference** (Goal alternatives support a parallel coherence relation with a contrastive goal and topic maintenance.)

Previous Research

Story continuation with native English & native Japanese speakers



- More source-reference with (overt) pronoun vs. free prompts, and with imperfective aspect (ongoing events) vs. perfective (completed events, which highlight the endpoint) (Arnold, 2001; Kehler et al., 2008; Stevenson et al., 1994)
- Ueno & Kehler (2010) used a "subject omission" prompt to elicit null subjects in Japanese. They found that (i) overt *but not null* pronouns were sensitive to the aspectual manipulation, and (ii) topic-marking did not influence reference resolution.

Topic/Focus marking with *-nun* in Korean

(see Sohn, 1999, p. 347)

- (1) Chelswu-ka Yengswu-eykey chayk-ul kenneycwu-ess-ta.
Chelswu-NOM Yengswu-DAT book-ACC hand-PAST-DECL
'Chelswu handed a book to Yengswu.'
- (2) Chelswu-nun Yengswu-eykey chayk-ul kenneycwu-ess-ta.
Chelswu-TC Yengswu-DAT book-ACC hand-PAST-DECL
'Chelswu-TC handed a book to Yengswu.'
- (3) Chelswu-ka Yengswu-eykey-nun chayk-ul kenneycwu-ess-ta.
Chelswu-NOM Yengswu-DAT-TC book-ACC hand-PAST-DECL
'Chelswu handed a book to Yengswu-TC.'

- No difference in meaning between (1) and (2).
- Difference between (1) and (3): "[*-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."

Exp1. Event-Structure (via aspect manipulation)

1. **Participants:** 30 students at Seoul National University
2. **Task:** Written story continuation
3. **Materials:** 2 x 3 design; 70 sentences (42 experimental; 28 fillers)
4. **Data coding:** Two trained judges; cases of disagreement (4.3% of the data) and ambiguity (14.2% of the data) were discarded.

John-ka Bob-eykey chayk-ul kenneycwukoissessta/kenneycwuessta. Cayu / Ku-nun / ∅
John-NOM Bob-DAT book-ACC was handing/handed Free / He-TOP /

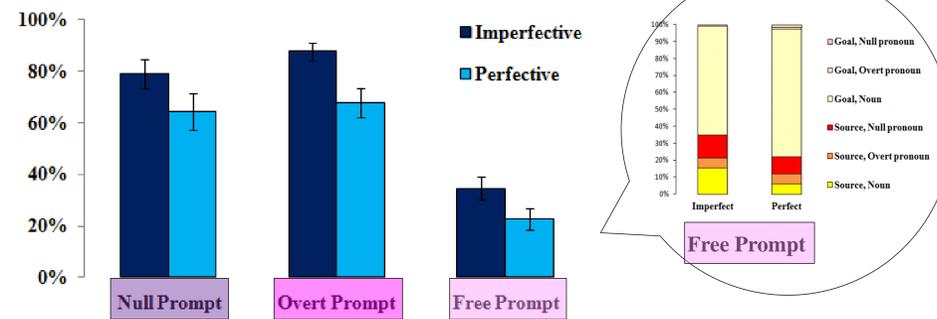
Transfer verb with **ASPECT** (Imperfective vs. Perfective)

PROMPT (Free vs. Overt pronoun vs. Null pronoun prompt)

- Unlike U&K (2010), we used "∅" for the null pronoun prompt, explained as "invisible pronoun", with one-referent (non-source, non-goal) examples in the instructions. (ex. Yesterday, Yengsu's house burned down. "∅" cried because everything got burned.)

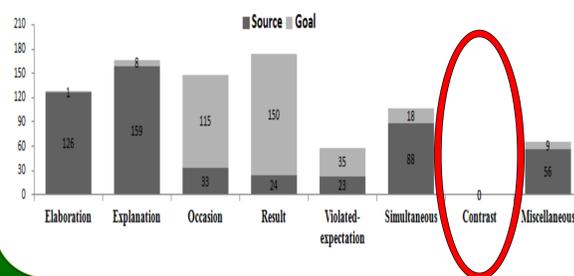
Results for Exp1.

Figure 1. % Source-reference by prompt type



- Replication of main effects of *aspect* and *prompt type*: All $F_s > 12.0$, $p < .01$
- No significant (*aspect x prompt*) interaction: $F_1(2,58)=0.4$, $p > .65$; $F_2(2,82)=0.3$, $p > .71$
- Unlike in U&K, overt *and null* pronouns were sensitive to event-structure.

Figure 2. Coherence relations in Exp. 1



- Coherence patterns are consistent with previous studies in English and Japanese. (see Exp. 2 re the contrast relation.)

Summary (Exp. 1 & Exp. 2) and conclusion

1. Null pronouns in Korean are sensitive to event structure, like overt pronouns. We attribute the difference from U&K's (2010) findings to the less biasing prompt description in our study.
2. Contrastive Focus marking influences reference resolution: Contrastive focus promotes alternatives in the reference set, facilitating a contrastive coherence relation, and thus increases Source argument reference for a subject anaphor (consistent with our prediction B, contra prediction A).
3. Two sources of semantic information (event structure and focus structure) guide the construction of coherence relations and anaphoric reference for overt and null anaphors in Korean.

Acknowledgments

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Exp2. Topic/Focus-Marking (with *-nun*)

1. **Participants:** 36 students in Seoul National University
2. **Task:** Written story continuation
3. **Materials:** 3 x 3 design; 75 sentences (45 experimental; 30 fillers)
4. **Data coding:** Two trained judges; cases of disagreement (4.3% of the data) and ambiguity (12.2% of the data) were discarded.

John-ka Bob-eykey a book handed. Free / He-TOP / ∅
John-nun Bob-eykey (perf)
John-ka Bob-eykey-nun

TOPIC/FOCUS-MARKING

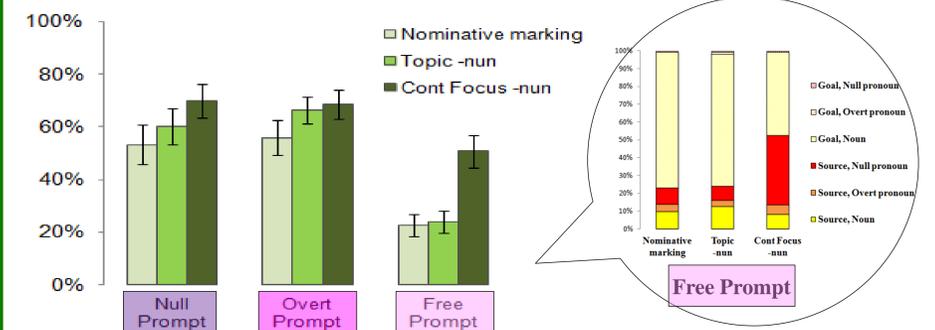
(Nominative marking vs. Topic *-nun* vs. ContFocus *-nun*)

PROMPT (Free vs. Overt pronoun vs. Null pronoun prompt)

- Extending U&K (2010), we added the *contrastive focus -nun* condition.

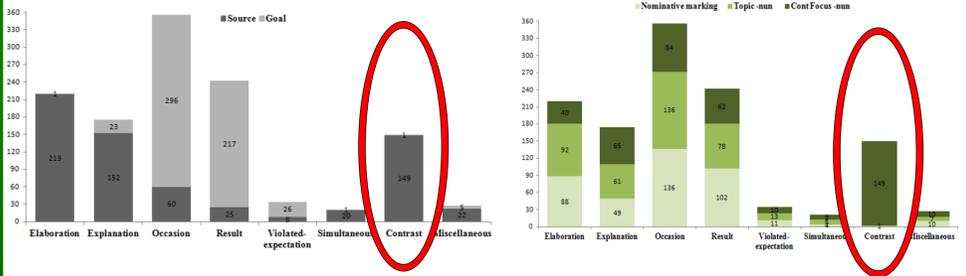
Results for Exp2.

Figure 3. % Source-reference by prompt type



- Main effect of *topic/focus-marking*: $F_1(2,70)=18.5$, $p < .001$; $F_2(2,88)=15.7$, $p < .001$
- Replication of main effect of *prompt type*: $F_1(2,70)=26.6$, $p < .001$; $F_2(2,88)=46.8$, $p < .001$
- Significant (*topic/focus x prompt*) interaction: $F_1(4,140)=2.7$, $p < .04$; $F_2(4,176)=3.0$, $p < .03$

Figure 4. Coherence relations in Exp. 2



- Two types of contrastive continuations:
e.g., John-ka Bob-eykey-nun chayk-ul kenneycwuessta
John-NOM Bob-DAT-CONFOC book-ACC handed
'John handed a book to Bob.'
- (1) **Negated event for an alternative goal: 84.7% (127/150)**
e.g., Michael-eykey-nun chayk-ul kenneycwu-ci anh-ass-ta.
Michael-DAT-CONFOC book-ACC hand -NEG-PAST-DEC
'(He:John) did not hand a book to MICHAEL.'
- (2) **Related event with alternative theme and goal: 15.3% (23/150)**
e.g., Michael-eykey-nun yenphil-ul kenneycwu-ess-ta.
Michael-DAT-CONFOC pencil-ACC hand -PAST-DEC
'(He:John) handed a pencil to MICHAEL'