



# Does explicit causality marking lead to stronger interpretive bias than implicit causality? Evidence from Korean



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## Background

### ◆ Implicit causality (IC) verbs

convey information regarding the cause of the event as part of the lexical semantics of the verb (e.g. Garvey & Caramazza, 1974)

#### Example

- (1) a. **Tom** surprised John (*surprise*: subject-biased)
- b. Tom feared **John** (*fear*: object-biased)

→Comprehenders make use of IC in referential processing during both offline and online tasks (e.g. Cozijn et al., 2011; Koorneef & Van Berkum, 2006; Pyykkönen & Järviö, 2010)

### ◆ Explicit causality (EC) verbs in Korean

In addition to IC verbs (2a, b), Korean has subject-biased verbs that denote causality through both lexical semantics of verb and explicit causative morphemes, *keyha* and *shiki* (2c, Jung, 2014; Park, 2009)

#### Example

- (2) a. Tom-i John-ul mwusewehay-ess-ta  
Tom-NOM John-ACC fear-PAST-DECL  
'Tom feared John.' (object-biased IC verb)
- b. Tom-i John-ul pnull-ess-ta.  
Tom-NOM John-ACC call-PAST-DECL  
'Tom called John.' (subject-biased IC verb)
- c. Tom-i John-ul nolla-**keyha**-ess-ta.  
Tom-NOM John-ACC be surprised-**cause**-PAST-DECL  
'Tom surprised John.' (EC verb)

## References

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## Exp 1: Sentence completion (Korean)

- ◆ **Goal:** Exp 1 investigates whether EC verbs induce a stronger subject bias than subject-biased IC verbs
- ◆ **Participants:** 36 adult native speakers of Korean (recruited in Korea)
- ◆ **Task:** Written sentence completion
- ◆ **Materials:** 80 sentence fragments (20 subj-biased IC, 20 subj-biased EC, 40 obj-biased IC), consisting of a main clause followed by the connective *waynyahamyen* ('because') and a blank line.
- ◆ **Data coding**
  - Two native speakers of Korean annotated participants' responses for the intended reference of the grammatical subject of the subordinate clause
  - Items with rater disagreement (0.24%) or subject referents other than the previous subject or object (8.85%) were excluded from the analysis

### Example Stimuli (Experiment 1)

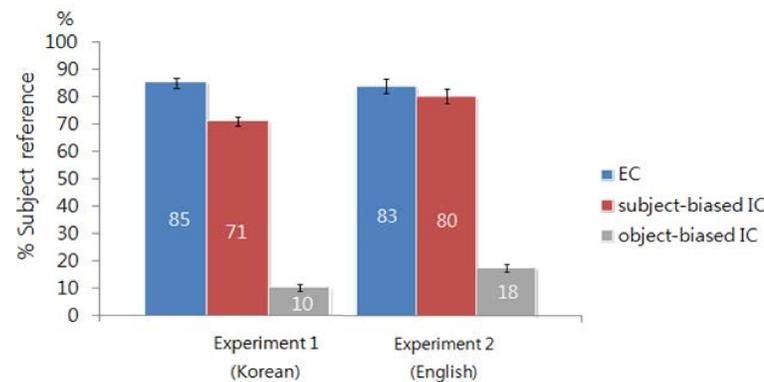
#### a. Subject-biased IC verb condition

Eceyspamey Hodong-i Myungho-lul pnull-essnuntey,  
last night Hodong-NOM Myungho-ACC call-PAST  
waynyahamyen \_\_\_\_\_  
because  
'Last night, Hodong called Myungho because \_\_\_\_\_.'

#### b. EC verb condition

Poktoeyse Yena-ka Jihee-lul nolla-**keyha**-ess-nuntey,  
in the hallway Yena-NOM Jihee-ACC be surprised-**cause**-PAST  
waynyahamyen \_\_\_\_\_  
because  
'In the hallway, Yena surprised Jihee because \_\_\_\_\_.'

## Results



Mixed-effects logistic regression; maximal random effects structure justified by design (random intercept for participants and items, random slopes for participants); reference level for fixed effect 'verb type' = subj-biased IC:

### Exp 1 (Korean). Fixed effects.

	b	se	p
(Intercept)	1.06	.22	<.001***
verb type: EC	1.01	.32	<.01**
verb type: obj-biased IC	-3.57	.29	<.001***

### Exp 2 (English). Fixed effects.

	b	se	p
(Intercept)	1.91	.33	<.001***
verb type: EC	.21	.42	=.619
verb type: obj-biased IC	-3.74	.38	<.001***

## Exp 2: Sentence completion (English)

- ◆ **Goal:** Exp 2 serves to ensure that differences between EC and IC verbs in Exp 1 in terms of the strength of subject bias are not due to differences in the *lexical* semantics of EC vs. IC predicates
- ◆ **Participants:** 35 adult native speakers of English (recruited in the U.S.)
- ◆ **Task:** Written sentence completion
- ◆ **Materials:** English translation of Korean materials from Exp 1  
All materials from Exp 1 were translated into English by 4 speakers fluent in both English and Korean (2 L1-Korean/L2-English, 2 L1-English/L2-Korean). Translation for each sentence was selected when 2 or more translators agreed on the same translation
- ◆ **Data coding**
  - Two native speakers of English; same procedures in Exp 1
  - Items with rater disagreement (6.25%) or subject referents other than the previous subject or object (9.07%) were excluded from the analysis

### Example Stimuli (Experiment 2)

#### a. Subject-biased IC verb condition

Late at night, Landon called Jack because \_\_\_\_\_.

#### b. EC verb condition

In the hallway, Rob surprised Lance because \_\_\_\_\_.

## Summary & Discussion

- Subject-bias is stronger with Explicit than Implicit Causality verbs in Korean (Exp 1)
- This effect does not seem to be due to the lexical semantics of the respective verbs (Exp 2)

*Why does explicitly marked causality induce stronger referential bias?*

**Future plans:** investigate whether Korean learners of English activate explicit causality marking in Korean during comprehension of English causality sentences

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