

Children Need More Information for Comprehension: Limits on the Agent-first Preference in Korean

It has frequently been observed for various languages (Abbot-smith et al., 2017; Slobin & Bever, 1982) that children are inclined to interpret the first noun in a sentence as an agent—the oft-mentioned but little studied *agent-first preference*. We explore this preference for Korean, with a view to determining its possible interaction with other factors such as the number of arguments in the sentence and the presence of case marking. We argue that Korean-speaking children manifest this preference only in conjunction with additional grammatical cues.

Canonical transitive patterns in Korean manifest an SOV order, with a nominative-marked agent and an accusative-marked theme. However, arguments and case markers can be omitted if they are inferable from the context (Table 1). In order to explore whether and how such omissions affect the agent-first preference, we measured children’s comprehension of transitive sentences in which arguments and case markers were obscured to varying degrees.

Methods. Participants (30 3-4-year-olds, mean=4;1; 20 adult controls) took part in a series of picture selection tasks that required matching a test sentence to one of two pictures (Table 2). Three novel contexts were devised where the speaker was coughing, was chewing, or was yawning (Table 2). These extraneous sounds were used to obscure selected parts of the test sentence, including case markers and entire arguments.

Results (Table 3). 3-4-year-olds performed well above-chance (84%) in the $N_{NOM}N_{ACC}V$ condition (a). Their performance on the $N_{NOM}N_{CASE}V$ condition (b) and the $N_{CASE}N_{ACC}V$ condition (c), in which one of the case markers was not audible, was slightly less accurate (79% in both conditions), but not significantly so. Their success on the $N_{CASE}N_{CASE}V$ condition (d), where they would have had to rely solely on the agent-first preference, was significantly less accurate (67%), but still above-chance.

Crucially, however, the children were at-chance in the $N_{CASE}V$ condition (g), where there was only one argument and no audible case marking. This result suggests a failure to rely on the agent-first preference in this condition. In contrast, retention of the case marker on the noun in the $N_{NOM}V$ condition (e) and $N_{ACC}V$ condition (f) elevated their success rates to well above 90%.

Discussion. The finding that 3-4-year-olds were at-chance in the $N_{CASE}V$ pattern points to their uncertainty about the thematic role of a sentence-initial noun when it is both the only argument in the sentence and lacks case marking. Our adult participants also struggled with this condition, but if children (unlike adults) rely on the agent-first preference, we would expect a level of performance higher than chance, which was not the case.

Moreover, the significantly higher level of accuracy achieved on the $N_{NOM}V$ pattern compared to the $N_{CASE}N_{CASE}V$ pattern (94% vs 67%) indicates a heavier reliance on case marking (a local cue) than on the presence of another argument in a sentence for the agent-first interpretation. Taken together, these findings suggest that the agent-first preference in Korean children’s comprehension is activated only in conjunction with other types of grammatical cues and does not function independently of them.




(word count: 498)

Table 1. Canonical active transitives in Korean

Type	Full sentence	Argument omission	Case-marking omission
Example	ciwu-ka minho-lul	ciwu-ka minho-lul	ciwu-ka minho- lul
	ciwu-NOM minho-ACC	ciwu -NOM minho-ACC	ciwu-NOM minho- ACC
	cap-ess-ta.	cap-ess-ta.	cap-ess-ta.
	catch-PST-SE	catch-PST-SE	catch-PST-SE
Meaning	‘Ciwu caught Minho.’		
Thematic role ordering	agent-theme		
Case-marking	NOM for the agent; ACC for the theme		

Note. Pre-verbal elements can be scrambled, but for the sake of discussion, we focused on the canonical pattern in the present study.

Table 2. Sample stimulus in the experiment

	Pictures presented	Sentence presented
Context 1: coughing		talamcwi*cough* kkwulpel*cough* chilha-ayo ¹⁾ squirrel*cough* bee*cough* paint-SE ‘The bee paints the squirrel.’ or ‘The squirrel paints the bee.’
Context 2: yum-yum		khokkili-ka holangi*yumyum* kuli-eyo elephant-NOM tiger*yumyum* draw-SE ‘The elephant draws the tiger.’
Context 3: yawn		wenswungi*yawn* tenci-eyo ¹⁾ monkey*yawn* throw-SE ‘The monkey throws (the squirrel).’ or ‘(The squirrel) throws the monkey.’

¹⁾ Since this stimulus has no case marker to indicate the thematic roles of nominals, it can be interpreted as agent-first or theme-first.

Table 3. Response by condition and group (cf. each condition consisted of 6 test sentences)

Condition	Pattern	Example	Mean % (SD)	
			3-4yr-old	Adult
(a)	$N_{NOM}N_{ACC}V$	dog-NOM cat-ACC kick	84.44 (0.36)	100.00 (0.00)
(b)	$N_{NOM}N_{CASE}V$	dog-NOM cat*yumyum* kick	78.79 (0.41)	98.33 (0.13)
(c)	$N_{CASE}N_{ACC}V$	dog*cough* cat-ACC kick	78.67 (0.41)	98.33 (0.13)
(d)	$N_{CASE}N_{CASE}V^{1)}$	dog*cough* cat*cough* kick	66.67 (0.48)	90.00 (0.30)
(e)	$N_{NOM}V$	dog-NOM kick	94.44 (0.23)	93.33 (0.25)
(f)	$N_{ACC}V$	dog-ACC kick	92.22 (0.27)	100.00 (0.00)
(g)	$N_{CASE}V^{1)}$	dog*yawn* kick	42.59 (0.50)	66.67 (0.48)

¹⁾ The mean score in this condition indicates the mean proportion of the agent-first response, not the mean accuracy of response. Statistical comparisons between this condition and the others (indicating the mean accuracy) were possible (except for $N_{ACC}V$) since all the patterns corresponded to the agent-first interpretation.

Abbreviation: ACC = accusative case marker; CASE = case marker (unspecified); NOM = nominative case marker; PST = past tense marker; SE = sentence ender

References:

- Abbot-Smith, K., Chang, F., Rowland, C., Ferguson, H., & Pine, J. (2017). Do two and three year old children use an incremental first-NP-as-agent bias to process active transitive and passive sentences?: A permutation analysis. *PloS one*, *12*(10), e0186129.
- Slobin, D. I., & Bever, T. G. (1982). Children use canonical sentence schemas: A crosslinguistic study of word order and inflections. *Cognition*, *12*(3), 229–265.