

The Role of Emotional Valence of Head-NP in the Korean Relative Clause Attachment

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Introduction

• Introduction

Someone shot the **servant** of the **actress** who was on the balcony.

Who was on the balcony?
servant **actress**

Someone saw the **explosion** of the **car** which was unexpected.

What was unexpected?
explosion **car**

Someone told the **sound** of the **gun** which was unexpected.

What was unexpected?
sound **gun**

• Background

- **RC Attachment Ambiguity:** Korean shows a preference for High Attachment (HA), whereas English favors Low Attachment (LA).
- **Conflicting Findings across Tasks:** Attachment preferences vary across online and offline tasks. [1-3]
- **The Role of Emotional Valence:** Emotional valence influences relative clause attachment. [4]

Procedure

• Research Questions

- What is the primary RC attachment preference in Korean?
- Does it differ between online and offline tasks?
- Does the emotional valence of the head noun (positive, negative, neutral) influence RC attachment preferences in Korean?

• Procedure

- **Online task:** A self-paced reading (SPR) with non-cumulative, moving-window presentation in PsychoPy.
- **Offline task:** An attachment judgment task (NP1 vs. NP2), with response option order counterbalanced.
- **Emotional valence:** Selected using ANEW and validated via a SAM questionnaire.

Try it yourself!

• dish

• metal

• trophy

• defect

• party

• gun

• auditorium

• clock

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Experimental Design

• Experimental Materials

- Sentence structure: KOR → Subject-main + [[Subject-rel + Verb-rel] + **NP1** -possessive marker + **NP2** -accusative marker]object RC + verb-main
- 21 Korean speakers (7 males, mean age = 22.9) who had lived abroad for less than six months.
- Experiment 1: 60 sentences—ambiguous (Neutral–Neutral) and disambiguated items biased toward HA or LA.
- Experiment 2: 100 ambiguous sentences—varying in valence (neutral, positive, negative) and position (NP1, NP2)

	word1	word2	word3	word4 (NP1)	word5 (NP2)	word6
Ambiguity RC	나는	주희가	설명한	기계의	부품을	찾았다.
	I-top.	Juhee -nom.	explain-rel.	machine-poss.	part-acc.	find-past-decl.
'I found the part of the machine that Juhee explained'						
Low Attachment Bias	나는	윤지가	개업한	식당의	직원을	칭찬했다.
	I-top.	Yoonji-nom.	open-rel.	restaurant-poss.	employee-acc.	praise-past-decl.
'I praised the employee of the restaurant that Yoonji opened'						
high Attachment Bias	나는	지윤이가	주문한	요리사의	음식을	음미했다.
	I-top.	Jiyeon-nom	order-rel.	chef-poss.	food-acc.	restore-past-decl.
'I savored the food of the chef that Jiyeon ordered'						

- By semantically constraining the RC to a specific NP (NP1 vs. NP2), baseline reading time patterns of attachment were examined.

valance	word1	word2	word3	word4 (NP1)	word5 (NP2)	word6
😊 – 😐	나는	지훈이가	준비한	파티의	접시를	닦았다.
	I-top.	Jihoon-nom.	prepare-rel.	party-poss.	dishes-acc.	clean-past-decl.
'I cleaned the dishes of the party that Jihoon prepared'						
😡 – 😐	나는	태연이가	바라본	총의	금속을	만졌다.
	I-top.	Taeyeon-nom.	look at-rel.	gun-poss.	metal-acc.	touch-past-decl.
'I touched the metal of the gun that Taeyeon looked at'						
😐 – 😊	나는	인서가	관리한	강당의	트로피를	정리했다.
	I-top.	Inseo-nom.	manage-rel.	auditorium-poss.	trophies-acc.	organize-past-decl.
'I organized the trophies of the auditorium that Inseo managed'						
😐 – 😡	나는	시윤이가	확인한	시계의	결함을	수리했다.
	I-top.	Siyoon-nom.	check-rel.	clock-poss.	defect-acc.	repair-past-decl.
'I repaired the defect of the clock that Siyoon checked'						

Results

• Offline Attachment Task

- **Experiment1:** In ambiguous RC sentences, participants showed a 53% preference for NP2 attachment (HA) vs. 47% for NP1(LA).
- **Experiment2:** In ambiguous RC sentences, attachment shifted depending on valence position, with LA preferred when the emotional word was in NP1 and HA strongly preferred when it was in NP2, especially in the negative–NP2 condition (74%).

• Online Task (Self-Paced Reading, SPR)

- **Experiment1:** Unlike the offline task, online processing favored LA.
- At word5, HA showed longer reading times than the ambiguous RC, indicating integration failure and reanalysis to HA.
- **Experiment2:** At word5, emotional words (positive or negative) caused delays compared to neutral words, similar to Exp1.
- This indicates that the presence of emotional words at NP2 delays immediate integration and triggers structural reanalysis toward HA.

Condition	word4 (NP1)	word5 (NP2)	word6 (verb)
Ambiguity RC	429	448	521
LA	430	437	521
HA	447.	482*	527

Conclusion & Discussion

- In Korean RC processing, initial parsing favors LA during online tasks, while HA preferences emerge only later through semantic re-integration, as reflected in offline judgments.
- RC attachment preferences were modulated by the emotional valence of the NP, with negative valence leading to the strongest preference.
- The parser interacts with emotional-semantic cues, revealing the dynamic relationship between syntax and emotion.
- Future research should use eye-tracking/ERP to clarify processing stages and extend to L2 learners to examine whether their attachment preferences are more strongly influenced by their L1 bias or emotional valence, and how these factors interact in RC processing.

Reference

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