

Interpretation of Korean null pronouns: Testing sensitivity to coherence relations in native speakers and second language learners

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Work on pronoun interpretation largely falls into (i) a structurally-based heuristics approach focusing on factors like subjecthood and structural parallelism as guiding pronoun resolution (e.g. Ariel 1990, Smyth 1994) or (ii) a discourse-based coherence relation approach, which views pronoun interpretation as a by-product of general reasoning about relations in discourse (e.g. Hobbs 1979, Kehler 2002). Research has not yet converged on one over the other.

We contribute to this discussion by investigating the interpretation of Korean null pronouns in **subject and object position**, going beyond prior work which has largely focused on subject-position null pronouns. This allows us to evaluate whether the grammatical position of a pronoun has any bearing on whether its interpretation is guided by heuristic-based vs coherence-based considerations. Furthermore, we test **both native Korean speakers and L2 Korean learners whose L1, Spanish, only has null pronouns in subject position**, in order to assess (i) whether these two groups are sensitive to the coherence relations between clauses signaled by 'and' and 'so', and (ii) to see how L2 speakers interpret null pronouns in a position not available in their L1. This allows us to test claims that L2 learners struggle with interface phenomena such as reference resolution (Sorace 2006: interface hypothesis). More specifically, prior work has looked at how speakers of null-subject languages use overt pronouns in L2 and how speakers of overt-pronoun languages use null subjects in the L2 (Sorace & Serratrice 2009 for a review). However, what happens when the L1 *has* null *subject* pronouns but lacks null *object* pronouns – can the learners attain native-like performance with null object pronouns in the L2? Spanish and Korean are ideal for investigating this.

We conducted two studies: **Exp.1** on Korean monolinguals (n=51), **Exp.2** on L1 Spanish speakers (in Costa Rica) studying Korean (n=38). On each trial, people saw a picture depicting the event in sentence 2 (in Korean) and typed the names of the event participants in the boxes (Fig.1, 24 targets, 36 fillers). This reveals how they interpret the null pronouns. We manipulated (i) connective type (*and/so*, signals coherence relation) and (ii) null-pronoun position (subject/object, Table 1). In sentence 1, nonce verbs avoid verb-semantics effects. Sentence 2 used transitive agentive verbs. The L2'ers knew the verbs and connectives. The case-marker in sentence 2 (*nom/acc*) indicates if the null is in subject or object position.

According to the coherence approach, with *and*, subject and object nulls will prefer antecedents in parallel position, but with causal *so* we may see a weakening (or absence) of this parallelism. A simple version of the heuristic-based approach does not predict connective effects. We also expect L1/L2 differences: Since Spanish lacks object nulls and learners struggle with syntax-discourse interface phenomena (Sorace 2006), we may find less sensitivity to connective type in L2'ers, especially with object nulls.

Results. L1 Korean speakers show sensitivity to coherence relations. We find a main effect of connective (lmer, $p < 0.001$), main effect of null pronoun position ($p < 0.001$; more parallel interpretations with subject than object pronouns) and an interaction ($p < 0.001$, Fig.2). Interestingly, subject-position nulls show a stronger effect of connective type (coherence relation) than object-position nulls. In contrast, with **L2 speakers** (Fig.3) there is no main effect of connective, and no connective x position interaction, though we find a main effect of null pronoun position (lmer, $p < 0.001$; again, more parallel interpretations with subject than object nulls). Further analyses based on L2 proficiency are still on-going, but point to a similar pattern.

Exp.1 provides novel evidence that while both subject and object nulls in Korean are sensitive to structural factors (pronoun position) and the *and/so* coherence distinction, subject nulls are more sensitive to coherence. **Exp.2** provides novel evidence that L2'ers are more influenced by structural factors than coherence. This suggests interface phenomena are harder than grammar-internal phenomena (Sorace 2006), *even when the L1 has null pronouns*.

FIGURE 1. Sample display (English text was not shown in the experiment)

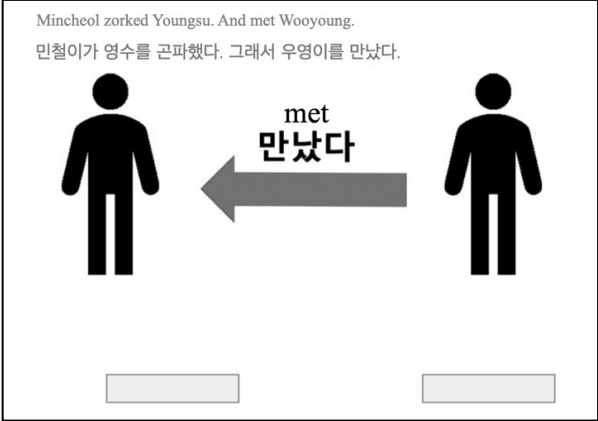


TABLE 1. A set of example stimuli (Stimuli were presented only in Korean; case-marker in second clause (acc or nom) indicates whether null pronoun is in subject or object position)

Null Pronoun	Connective	Example
Subject	And	민철이가 영수를 곤파했다. 그리고 \emptyset 우영이를 만났다. Mincheol-nom Youngsu-acc zorked. And \emptyset Wooyoung-acc met. 'Mincheol zorked Youngsu. And \emptyset met Wooyoung.'
	So	민철이가 영수를 곤파했다. 그래서 \emptyset 우영이를 만났다. Mincheol-nom Youngsu-acc zorked. So \emptyset Wooyoung-acc met. 'Mincheol zorked Youngsu. So \emptyset met Wooyoung.'
Object	And	민철이가 영수를 곤파했다. 그리고 우영이가 \emptyset 만났다. Mincheol-nom Youngsu-acc zorked. And Wooyoung-nom met \emptyset . 'Mincheol zorked Youngsu. And Wooyoung met \emptyset .'
	So	민철이가 영수를 곤파했다. 그래서 우영이가 \emptyset 만났다. Mincheol-nom Youngsu-acc zorked. So Wooyoung-nom met \emptyset . 'Mincheol zorked Youngsu. So Wooyoung met \emptyset .'

FIGURE 2. Native Korean speakers (Exp1)

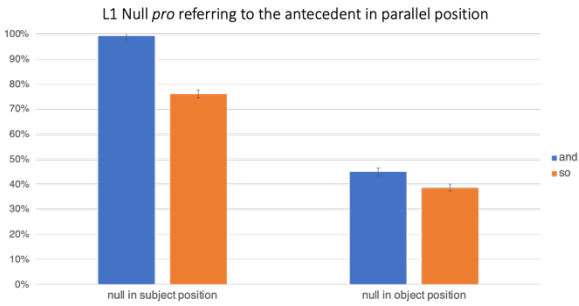


FIGURE 3. L2 Korean speakers (Exp2)

