By or *by*-phrase on its own does not prime passives: Evidence from Korean

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Research on structural priming has demonstrated that speakers' choices of syntactic structures are influenced by their syntactic experience (Bock, 1986). For example, speakers are more likely to produce passives immediately after encountering passives. However, the precise origin of structural priming remains a subject of debate. While some argue that structural priming arises from purely abstract syntactic structures (Bock & Loebell, 1990), others contend that it is lexically dependent (Ziegler et al., 2019). Critical evidence supporting the lexical account comes from Ziegler et al. (2019), showing that passives (e.g., *The 747 was radioed by the airport's control tower*) and intransitive *by*-locatives (e.g., *The 747 was landing by the airport's control tower*) primed passives, whereas non-*by*-locatives (e.g., *The 747 has landed near the airport control tower*) did not. They suggest that *by*-locatives prime passives because the presence of *by* or a locative *by*-phrase activates passive frames.

Yet to what extent is structural priming lexically dependent? If locative-to-passive priming is driven solely by the presence of *by* or *by*-phrase, any *by*-phrase in constructions different from passives should prime passives. However, this possibility has not been empirically tested. Previous studies on closed-class priming are uninformative in addressing this issue. This is because, unlike the preposition *by* in locatives and passives, function words used in primes and targets in these studies belong to different syntactic categories (e.g., infinitive *to* vs. preposition *to* in Bock & Loebell, 1990; complementiser *that* vs. demonstrative *that* in Ferreira, 2003). As primes and targets differ not only in clausal constructions but also in syntactic categories of function words and phrases (e.g., tense phrase vs. prepositional phrase), these studies do not provide critical evidence for/against the lexical account that a function word or phrase overlap triggers priming.

The present study evaluates the validity of the lexical account for structural priming by employing clausal constructions that are syntactically different yet share the same closed-class category. Specifically, we investigate whether passives in Korean can be primed by *hanthey* or *hanthey*-phrases. The passive preposition *by* and the dative preposition *to* in English are both realised with the postposition *hanthey* in Korean (Table 1). We hypothesise that, if structural priming is entirely lexically driven, both passives and *hanthey*-datives should prime passives due to the shared *hanthey* or *hanthey*-phrase. However, if priming requires some overlap in structural properties, *hanthey*-datives should not prime passives.

Methods. A total of 65 adult native Korean speakers joined a structural priming experiment in which they described 16 pictures depicting transitive events following active vs. passive primes (N=33), or active vs. *hanthey*-dative primes (N=32). Participants were instructed to verbally repeat the auditory prime sentence and provide descriptions of each picture. Their descriptions were analysed for their choice of syntactic structure. Using logistic mixed-effects modelling, we analysed the data as a function of *Prime Condition* (passive; *hanthey*-dative) and *Prime Type* (active; non-active [passive and *hanthey*-dative]).

Results (Table 2). We found a significant main effect of *Prime Condition* and *Prime Type*: Non-active primes (25.4%) and passive prime condition (26.5%) resulted in significantly more passives than active primes (20.0%) and *hanthey*-dative condition (18.4%) respectively (ps<0.01). Crucially, there was a marginally significant interaction between *Prime Condition* and *Prime Type* (p=0.08). Pairwise comparisons (α=0.025) revealed that participants produced significantly more passives following passive primes (31.5%) than active primes (21.6%) (p=0.002), but not following *hanthey*-dative primes (18.7%) than active primes (18.2%). These results suggest that structural priming may not be entirely lexically driven, and some degree of structural overlap between primes and targets may be necessary.

Table 1. Passive and dative constructions in Korean

Construction	Example	Function of *-hanthey*
Passive	Kongmwuwen-i kyengchal-**hanthey** caphyessta. Public.official-NOM police-**DAT**(by) was caught 'The public official was caught by the policeman.'	Indicating the agent of an event (corresponding to 'by' in English)
Dative	Kongmwuwen-i kyengchal-**hanthey** noymwul-ul cwuessta. Public.official-NOM police-**DAT**(to) bribe-ACC gave 'The public official gave bribe to the policeman.'	Indicating the recipient of an event (corresponding to 'to' in English)

Note. ACC = accusative case marker; DAT = dative marker; NOM = nominative case marker.

Table 2. Statistical outputs (α = 0.05)

	β	*SE*	*Z*	*p*
Intercept	–2.123	0.565	–3.757	<0.001***
Prime Condition (passive; *hanthey*-dative)	0.654	0.247	2.646	<0.01**
Prime Type (active; non-active)	0.817	0.339	2.407	0.01*
Prime Condition * *Prime Type*	0.762	0.449	1.697	0.08†

Note. *** < 0.001; ** < 0.01; * < 0.05; † < 0.1