

Interactive roles of cross-linguistic influence, usage frequency, and task effects in L2 processing of Korean dative construction

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Second language (L2) knowledge is often characterised as its noisier representations compared to how L1 knowledge is constructed,^[1,2] which is attributed to various factors such as cross-linguistic influence (CLI),^[3,4,5] task effects,^[6,7] increased cognitive load in performing L2 behaviour,^[8,9] and learner characteristics.^[10] This study investigates how CLI, usage frequency, and task effects jointly contribute to L2-sentence processing of Korean, an SOV language with overt case-marking via dedicated postpositions and understudied for this topic. We (i) adopt two alternating patterns of Korean dative construction (**Dative**–Accusative vs. **Accusative**–Accusative; Table.1) and (ii) conduct an acceptability judgement task (AJT) and a self-paced reading task (SPRT; non-cumulative moving-window paradigm) targeting L2-Korean learners with three L1s which are typologically distinctive from each other (English, Czech, Japanese; Table.2). The two dative patterns share the basic communicative intent—*transferability*,^[11] despite the low usage frequency of **Accusative**–Accusative,^[12] Korean speakers do employ this pattern for communication,^[13] confirming its status as a legitimate/grammatical pattern for this construction.

We recruited 24 L1-English (ENG; $M_{age}=23.3$, $SD=4.2$), 28 L1-Czech (CZH; $M_{age}=24.1$, $SD=2.8$), and 32 L1-Japanese (JPN; $M_{age}=19.8$, $SD=1.0$) learners and native speakers (NSK; $M_{age}=23.6$, $SD=4.1$) of Korean. Learner proficiency was measured separately;^[14] there was no statistical by-group difference in the scores (one-way ANOVA: $F(81)=0.984$, $p=.378$). 32 test sentences were created (16 sentences * 2 conditions; Table.3), respecting the canonical word order (recipient-before-theme), and were passed the norming test for grammaticality. All the sentences and fillers were split into two sub-lists and were randomly assigned to participants; we also randomised the sentences' presentation order in each sub-list. The pre-processed data from each task were fitted to the respective linear mixed-effects models.^[15]

Results: AJT (Figure.1). The global model ($\alpha=.05$) revealed interaction*** between *Group* and *Condition*; post-hoc analyses ($\alpha=.025$) revealed (i) the L2 groups' conservatism with **Dative**–Accusative and generosity with **Accusative**–Accusative than NSK, (ii) ENG–JPN difference in **Accusative**–Accusative, and (iii) by-group difference only for NSK and ENG.

Results: SPRT (Figure.2). The global model per region ($\alpha=.05$) revealed a main effect of *Group* at all the critical (R2–R4) and spill-over (R5) regions and *Condition* at R2. Post-hoc analyses ($\alpha=.025$) revealed by-condition difference at R2 only for ENG.

Our findings suggest CLI interfacing with usage frequency involving the target construction and task-specific requirements. For AJT, the learners were stringent with **Dative**–Accusative (deemed more complex and less frequent than simple clausal constructions in L2 input) and were lenient with **Accusative**–Accusative (infrequent together with the atypical recipient–**accusative** pairing), pointing to statistical pre-emption.^[16] The finding that JPN rated **Accusative**–Accusative more acceptable than ENG and CZH is attributable to their L1 knowledge that allows particle repetition (*not* related to the dative construction). For SPRT, given L2 learners' overall challenge in real-time processing,^[9,17,18] the learners' interpretation may have been garden-pathed at R2 in **Accusative**–Accusative: nominative-marked agent + accusative-marked theme, not accusative-marked recipient. Based on these aspects, the insignificant reading-time differences between the two conditions for CZH and JPN imply a processing benefit induced by their respective L1s: overt realisation of the dative case found in Czech and Japanese, but not in English.

Keywords: Korean dative construction; cross-linguistic influence; usage frequency; task effects; L2 sentence processing

Table 1. Two grammatical patterns of Korean dative construction

	Dative–Accusative	Accusative–Accusative
Scheme	Form: X _{actor} -NOM Y _{recipient} - DAT/ACC Z _{undergoer} -ACC V Meaning: X causes Y to receive Z	
Usage frequency	Frequent	Infrequent
Case-marking facts	Recipient– dative pairing	Recipient– accusative pairing

Table 2. Three L1s: English, Czech, and Japanese

	English	Czech	Japanese
Word order	SVO; rigid	SVO; flexible	SOV; somewhat flexible
Case	Inflection but minimal	Inflection	Particle use
# of dative patterns 2 (prepositional; double-object)	1 (Dative–Accusative)	1 (Dative–Accusative)	

Table 3. Scheme of stimuli: SPRT (note: AJT sentences were generated by extracting R1–R4)

Condition	R1	R2	R3	R4	R5	R6
Dative–Accusative	N1-NOM	N2- DAT	N3-ACC	V	<i>Yenghuy</i> -NOM	said
Accusative–Accusative		N2- ACC				

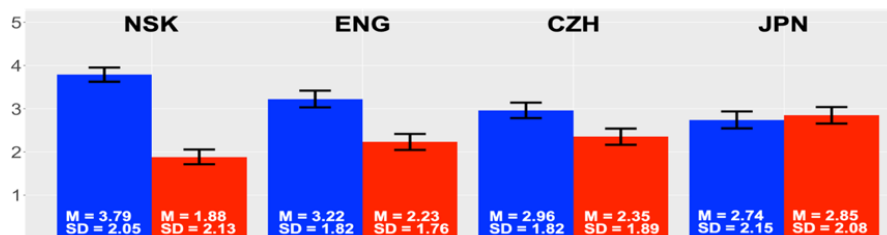


Figure 1. Results (AJT). X-axis: Group & Condition (Blue = Dative–Accusative; Red = Accusative–Accusative); Y-axis: acceptability (6-point Likert scale from 0 to 5). M = mean score; SD = standard deviation. Error bars indicate 95% CI. Data pre-processing: any response with RT below 1000 ms or above 10000 ms was excluded.

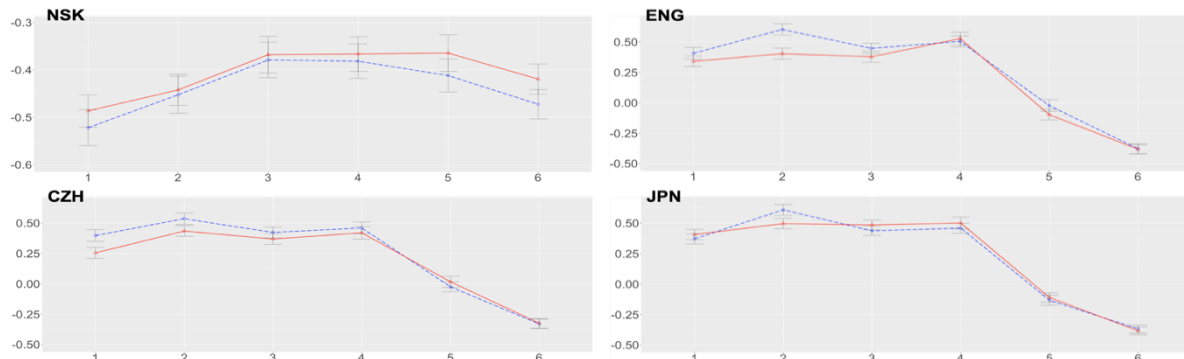


Figure 2. Results (SPRT). X-axis: region; Y-axis: reading time (residualised). Blue, dotted = Dative–Accusative; Red, solid = Accusative–Accusative. Error bars indicate 95% CI. Data pre-processing: raw data were trimmed by excluding (i) data points failing to pass comprehension questions and (ii) outliers below/above 3SD, were log-transformed for data normalisation, and were further residualised to adjust for the variability in word length and individuals’ reading speed.

Abbreviation. ACC = accusative case marker; DAT = dative marker; NOM = nominative case marker; PST = past tense marker; SE = sentence ender; V = verb.

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