

Cross-linguistic syntactic priming in Korean-English bilingual production

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Cross-language syntactic priming studies have provided evidence for syntactic persistence in bilingual production (Desmet & Declercq, 2006; Hartsuiker, Pickering, & Veltkamp, 2004; Loebell & Bock, 2003; Meijer & Fox Tree, 2003; Schoonbaert, Hartsuiker, & Pickering, 2007). Bilinguals tend to produce the same kind of structure as the previous utterance they have heard or produced in a different language, irrespective of its meaning. This suggests shared or interactive bilingual syntactic processing in production. However, the cross-linguistic syntactic priming research to date has investigated speakers of typologically similar languages such as German-English, Dutch-English, and Spanish-English bilinguals, but few studies have been conducted with two typologically different languages. In addition, the question whether syntactic priming across languages is more susceptible to syntactic hierarchical configuration (Desmet & Declercq, 2006) or to surface word order information (Hartsuiker, Kolk, & Huiskamp, 1999) has yet to be answered.

This study examined Korean-English bilinguals' sentence production, investigating whether bilingual syntax is shared between two typologically different languages and what kind of syntactic information is shared in terms of surface word order or underlying hierarchical structure in dative constructions. Korean has both double object and prepositional dative constructions, as in English (Jung & Miyagawa, 2004). Furthermore, Korean has another alternation, namely, scrambled word order of arguments, because it allows relatively free word order (see examples). This makes it possible to compare the hierarchical structural and word order priming effect. The experiment followed the general procedure of Meijer and Fox Tree's (2003) sentence recall paradigm. The only change was that this experiment used auditory sentence stimuli instead of the written format used in the original paradigm. Participants, unbalanced bilinguals speaking Korean as L1 and English as L2, listened to and memorized a target English sentence for later recall, and then they listened to a Korean sentence that was semantically unrelated to the target English sentence. After performing a distraction task involving a word probe, they were asked to produce the target sentence aloud.

The results showed that the participants were more likely to switch the English double object dative target to the English prepositional dative target when primed by the Korean dative constructions, whereas the English prepositional dative target was rarely changed to the double object dative structure during recall, presumably because of low-frequency double object datives in L2 production (McDonough, 2006). The results also revealed that the switched recall of the targets was sensitive to both structure and word order of Korean primes. The participants were more likely to switch the English target to its alternation with the same structure and word order as the Korean prime than with a different structure and word order from the prime. The cross-linguistic syntactic priming effect was also found regardless of word order, even when the Korean primes had different word order but the same structure (see table). These results suggest shared bilingual syntax even in two typologically different languages like Korean and English. The shared syntactic information is primarily in the underlying hierarchical structure and secondarily in surface word order.

Examples of stimuli

Dative	Romanization of Korean				Meaning
Canonical prep	Ann-i	Tom-eykey	swuhak-ul	kaluchi-ess-ta	<i>Ann-Nom Tom-Dat math-Acc teach-Past-Dec</i>
Scrambled prep	Ann-i	swuhak-ul	Tom-eykey	kaluchi-ess-ta	<i>Ann-Nom math-Acc Tom-Dat teach-Past-Dec</i>
Double object	Ann-i	Tom-ul	swuhak-ul	kaluchi-ess-ta	<i>Ann-Nom Tom-Acc math-Acc teach-Past-Dec</i>

Proportion of recall with the alternate construction

Condition	Target (English)	Prime (Korean)	Recall (English)	Prime and recall		Mean (%)
				Structure	Word order	
1		Canonical prep		same	different	22.68**
2	Double object	Scrambled prep	Prep dative	same	same	23.14*
3		Double object		different	different	17.12

The base line of paired t-test within each target condition is the condition 3. \* $p < .05$ , \*\* $p < .01$

Selected References

- Desmet, T., & Declercq, M. (2006). *Journal of Memory and Language*, 54, 610-632.
- Meijer, P. J. A., & Fox Tree, J. E. (2003). *Experimental Psychology*, 50, 184-195.