



The Effect of Source Text Structure in L2-to-L1 Translation

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ABSTRACT

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Research in translation has long suggested that the source text structure exerts a strong influence on the translated output, but previous works have mainly examined the source text in isolation in the absence of a structural alternative. It remains unclear whether the strong effect of the source text persists when another target language structure is available, and the present study investigates the extent to which bilinguals are influenced by the syntactic structure of the source text as opposed to that of a previously encountered translation. Forty-five Korean learners of English participated in two experiments that used a structural priming paradigm to examine whether their syntactic choices in translation were more influenced by the structure of English source sentences or that of the Korean translations they had previously read. In Experiment 1, attributive and predicative adjective structures were placed in systematic conflict between source text and translated text, employing a between-subjects design crossing prime structure with text presentation format (consecutive vs. simultaneous). In Experiment 2, nominalized structures in English were paired with Korean translations using either parallel nominalizations or finite clause structures in a within-subjects design. Across both experiments, participants consistently followed the source text structure in their translations (94.0% and 92.1%, respectively) regardless of text presentation format or second language proficiency. These findings suggest that source text structure operates as a robust processing anchor in translation, with previously encountered translations exerting no detectable influence under the conditions tested.

KEYWORDS

translation, source text effect, structural priming, cross-linguistic influence

1. Introduction

A central question in bilingual processing concerns the degree to which a bilingual's two languages share underlying syntactic representations, and Hartsuiker et al.'s (2004) shared-syntax account proposes that bilinguals possess a single set of abstract syntactic representations that can be accessed from either language. The key evidence for this account comes from structural priming, which is defined as speakers' tendency to reuse a morphosyntactic structure they have recently processed (Bock 1986, Branigan and Pickering 2017, Pickering and Ferreira 2008). For example, when speakers are exposed to a passive sentence, they are more likely to produce another passive rather than the active alternative. Structural priming effect has since been found in numerous comprehension and production experiments and is taken to reflect the activation of abstract syntactic representations. To investigate whether a bilingual's two languages are shared across the two languages, many studies have employed cross-linguistic structural priming and have generally found that comprehending a structure in one of a bilingual's languages facilitates production of the corresponding structure in the other (Hartsuiker et al. 2004, Kantola and van Gompel 2011, Loebell and Bock 2003, Schoonbaert et al. 2007), which is consistent with the shared-syntax account's prediction that the same representation underlies both languages.

In the context of translation, cross-linguistic priming has been proposed as a key mechanism underlying source language influence (Maier et al. 2017). Studies found that the lexical and structural choices in the source text (ST) increased the likelihood that a similar form will be used in the translation (Jacob et al. 2024, Loebell and Bock 2003, Maier et al. 2017). While the ST effect is well-established in the literature, it is unclear whether previously encountered translations also influence structural choices in subsequent translations. For example, in contemporary translation contexts where machine translation (MT) is widely used in the translation process, structural priming can occur not only from the ST but also from MT output (Resende et al. 2020, Resende, 2023). The important question then concerns the relative influence of these two potential sources of priming. The two primes may converge on the same structure but may also diverge, and the bilingual can be exposed to conflicting structures—a cross-linguistic prime in the source language (SL: the language in which the original text is written), and a within-language prime in the target language (TL: the language into which the original text is being translated). If, in accordance with the shared-syntax account, any structurally relevant input can prime subsequent production regardless of language, then both inputs have the potential to shape the bilinguals' structural choices in subsequent translations. The TL prime can be expected to exert significant influence, as it appears in the language into which one must translate and models a syntactic option that can be adopted without reformulation. However, research in translation has long suggested that ST structure exerts a strong, often near-default influence on translators' output. Tirkkonen-Condit's (2005) monitor model proposes that translators tend to faithfully follow ST form unless an internal monitor detects a problem and intervenes to revise (Jakobsen 2003, Krings 2001). Consistent with this view, studies have repeatedly shown that translated text follows the structural features of the ST even when more idiomatic TL alternatives are readily available (Teich 2003, Toury 1995). Robust effects of ST have also been reported using cross-linguistic structural priming (Jacob et al. 2024, Maier et al. 2017), but these works have examined ST influence in isolation in the absence of another structural alternative. The present study thus addresses this gap by investigating the extent to which bilinguals' translations align with the ST structure as opposed to that of an alternative translation in the TL, and whether such alignment reflects cross-linguistic structural priming. The research questions are as follows:

1. Does previous exposure to a conflicting structure in the TL bias learners' translations away from the ST structure? That is, when the structure of the ST and that of a previously encountered translation are

different, which structure do Korean learners of English reproduce in their subsequent L2-to-L1 translations?

2. Are these structural choices modulated by text presentation format (consecutive vs. simultaneous) or L2 proficiency?

2. Literature Review

2.1 Cross-linguistic Structural Priming and Bilingual Structural Choices

Structural priming, the tendency to repeat morphosyntactic structures recently encountered in comprehension or production, represents one of the most well-established phenomena in psycholinguistic research. Bock (1986) provided the first experimental evidence that speakers are more likely to produce a particular syntactic structure after reading or hearing the same structure. Participants were asked to repeat sentences containing either passive constructions (“The referee was punched by one of the fans”) or active constructions (“One of the fans punched the referee”) and then describe unrelated pictures. Results showed that participants tended to describe the pictures using the same syntactic structure they had just repeated. This finding has been replicated across numerous languages, syntactic structures, and experimental paradigms, establishing syntactic priming as a fundamental characteristic of language processing (see Pickering and Ferreira 2008 for comprehensive review). Subsequent studies have since shown that the effect of syntactic priming persists across multiple intervening utterances (Bock and Griffin 2000), occurs even without lexical overlap between prime and target sentences (Branigan et al. 2000, Pickering and Branigan 1998), and exhibits an inverse preference pattern whereby less frequent structures prime more strongly than common ones (Ferreira and Bock 2006). These findings suggest that priming operates at an abstract structural level rather than through temporary activation or word-level repetition.

Priming effects can also operate across languages in bilingual learners. Hartsuiker et al. (2004) demonstrated this cross-linguistic priming effect when they found that participants who heard passive sentences in Spanish were significantly more likely to produce passives when describing pictures in English, compared to those who had heard active sentences. Cross-linguistic structural priming effects have been found across various language pairs (Cai et al. 2011, Loebell and Bock 2003, Schoonbaert et al. 2007) and has been found to be equally strong as in monolingual contexts (Kantola and van Gompel 2011). These effects provide strong evidence for shared syntactic representations across a bilingual's languages (Bernolet et al. 2013, Hartsuiker et al. 2004). The shared-syntax account proposes that structurally equivalent constructions in the two languages are linked to common combinatorial nodes, allowing activation to spread across languages during production. That is, when a syntactic structure is activated during processing in one language, this activation spreads to corresponding abstract representations, facilitating production of the same structure in the other language.

Numerous studies have since examined the conditions under which cross-linguistic priming is enhanced or attenuated, such as structural similarity between the two languages (Bernolet et al. 2007, Loebell and Bock 2003), second language (L2) proficiency (Bernolet et al. 2013, Hartsuiker and Bernolet 2017), and lexical factors (Schoonbaert et al. 2007). While much work has largely focused on factors intrinsic to the prime and the speaker, the question of competition among multiple primes has received considerably less attention. Researchers have recently begun to investigate how multiple sources of structural activation, such as repeated exposure, conflicting distributions, and language-specific biases, interact to influence syntactic choice (Ahn and Ferreira 2024, Kootstra and Doedens 2016). The relevant work that examines multiple primes is often framed in terms of cumulative

structural priming where repeated exposure to one structure across a block of trials creates a bias that affects subsequent production. For example, Kootstra and Doedens (2016) examined how multiple sources of experience, such as immediate structural priming, cumulative cross-language effects, verb bias, and language dominance, affect bilingual syntactic choices and found that structural choice was not determined solely by the most recent prime but shaped by a dynamic weighting of multiple cues. From this perspective, however, the presence of multiple primes is less about conflicting primes than the accumulation of prior structural primes across languages, and it remains unclear how bilinguals respond when exposed to two structurally conflicting primes.

2.2 Cognitive Processes and Cross-linguistic Influences in Translation

The cognitive process of translation can be described as a complex process involving comprehension of ST, activation and production of TL equivalents, and an in-depth understanding of cross-linguistic differences (Klings 2001). The structural priming paradigm has been extended to translation using the ST as a prime and the translation as a target in order to examine the influence of SL structure on TL production. Whereas early studies emphasized lexical aspects of translation priming such as cognate facilitation (Finkbeiner et al. 2004, van Hell and de Groot 2008), subsequent work has demonstrated that syntactic factors also play a significant role: syntactic incongruency between source and target languages increases processing effort (Jensen et al. 2009), whereas congruency facilitates both form and meaning transfer (Schaeffer and Carl 2013). Maier et al. (2017) examined whether translation involves cross-linguistic structural priming of the kind observed in bilingual language production and found that structural properties of the ST activate corresponding structural representations and influence TL production. German-English bilinguals translated German ditransitive sentences—with either double-object (DO) structure or prepositional-object (PO) structure—into English, and results revealed robust priming effects with participants producing significantly more DO translations following DO source sentences than following PO source sentences, and vice versa. Importantly, this effect emerged despite both structures being grammatical in English and expressing essentially identical meanings, indicating that the structural properties of the ST activate corresponding representations that bias TL production. Further evidence for ST effect can also be found in corpus-based studies in the form of “shining-through”, which refers to the imprint of ST features on the translated product. Using a corpus-based comparison of English-to-German translations with original German texts, Teich (2003) identified systematic differences in grammatical and lexical choices, with translations exhibiting closer adherence to English structural patterns than comparable German originals. Teich found that “shining-through” effects can even lead translations to deviate from conventional TL norms. Taken together, previous literature in translation process research has repeatedly shown that the ST functions as the prime for TL production and exerts a robust effect on its structure.

Contemporary MT-assisted translation practice complicates this picture, however, because ST is no longer the only structural input and the MT output constitutes an alternative prime. Employing a syntactic priming paradigm, Resende et al. (2020) provided the first experimental evidence that MT output can prime syntactic choices in L2 English learners. Brazilian Portuguese speakers completed a baseline phase where they translated Portuguese sentences expressing possession relationships into English. These sentences could be translated using either prepositional noun phrases (PNP: “the window of the room is closed”) matching Portuguese word order, or non-prepositional noun phrases (NP: “the room window is closed”) differing from Portuguese structure. Following the baseline, participants entered a priming phase where they used MT (Google Translate) to translate prime sentences from Portuguese to English, then immediately described unrelated target images in English. Results revealed robust priming effects: after exposure to MT output—which consistently produced NP structures—participants

significantly increased their production of NP structures when describing images, compared to their baseline preferences. In a follow-up study, Resende (2023) extended these findings by investigating whether cumulative exposure to MT output could lead to implicit learning of challenging L2 structures. Results demonstrated significant cumulative priming effects: participants increasingly produced NP structures throughout the experimental session as they were repeatedly exposed to these structures in MT output. These findings provide evidence that MT output can influence not only immediate structural choices but also contribute to longer-term learning through repeated exposure.

The studies reviewed above provide evidence that both ST structures (Maier et al. 2017) and MT output structures (Resende 2023, Resende et al. 2020) can independently influence structural choices in translation. However, these studies examined each structure in isolation rather than investigating how the two structural inputs affect linguistic choices. Thus, it remains unclear which input would exert a stronger influence when a cross-linguistic prime from the source text and a within-language prime from a previously encountered translation provide conflicting syntactic structures. The present study thus examines syntactic priming effects when there is a mismatch between the structure of ST vs. pre-generated translation, focusing on L2-to-L1¹ translation (English-to-Korean) by Korean-English bilinguals.

3. Methodology and Results

Two structural priming experiments were conducted to examine how the structure of the ST and that of the translated text (TT)—a previously encountered translation—influence learners' subsequent structural choices in L2-to-L1 translation. The design, materials, and procedure, and results of each experiment are reported in the following sections.

3.1 Participants

Forty-six Korean learners of English who are undergraduate or graduate students at a university in Seoul were recruited through an online recruitment platform. Participation was voluntary, and each participant received compensation of KRW 10,000 upon completion of the study. All participants identified Korean as their native language (L1) and reported no extended residence (more than six months) in an English-speaking country prior to age 15. To assess participants' English proficiency, a cloze test that has been employed in previous studies (Chung 2024, 2025) was used. The test consisted of 40 multiple-choice items and could typically be completed within 10 to 15 minutes. One participant whose proficiency score fell more than 3 standard deviations below the sample mean ($z = -3.08$) was excluded from analysis, resulting in a final sample of 45 participants. The remaining participants' proficiency scores ranged from 21 to 38 ($M = 30.67$, $SD = 4.18$), indicating intermediate to advanced English proficiency.

¹ The experiment focused on L2-to-L1 translation because this language direction minimizes the potential confounds associated with L2 production difficulties or limited proficiency (Bernolet et al. 2013).

3.2 Experiment 1: Attributive vs. Predicative Adjective

3.2.1 Experiment 1: Method and procedure

Experiment 1 examined the research question using the attributive-predicative adjective contrast in Korean and English. Both languages allow adjectives to appear in two syntactic positions that are largely equivalent in meaning with subtle differences in information structure and temporal implications.² In English, the predicative adjective functions as the main predicate of the clause and appears after a copular verb (e.g., The noise in the room was loud), whereas attributive adjectives appear directly before the noun they modify (e.g., There was a loud noise in the room). In Korean, the same contrast can be realized as shown in (1) below. The predicative adjective structure in Korean appears in sentence-final position as the main predicate and takes verbal inflections (tense/aspect), whereas the attributive adjective requires the suffix *-(u)n* to modify nouns within the noun phrase. Despite cross-linguistic differences in morphosyntactic realizations of the alternate structures, the distinction between predicative and attributive structures is parallel across the two languages, making them viable translation alternatives.

(1a) Predicative adjective structure

Pang an-i sikkule-wess-ta.
 room in-NOM³ loud-PAST-DECL.
 ‘The noise in the room was loud.’

(1b) Attributive adjective structure

Pang an-eyse sikkule-un soli-ka nass-ta.
 room-in-LOC loud-ATTR noise-NOM exist-PAST-DECL
 ‘There was a loud noise in the room.’

These structures were selected because (a) they differ in syntactic structure but express nearly equivalent semantic content and (b) both structures are grammatically well-formed and commonly used in both languages. The experiment deliberately introduced a structural mismatch between the English source sentences and the Korean translations in the prime trials to place the ST and TT structures in conflict. The study employed a 2 x 2 between-subjects design crossing syntactic structure primed (attributive vs. predicative adjective) with text presentation method (consecutive vs. simultaneous). Four experimental lists were constructed to counterbalance these conditions, and participants were randomly assigned to one of the four lists, with approximately 11-12 participants per list. In Lists 1 and 2, all prime trials consisted of English source sentences with attributive adjectives (ST-attributive), paired with Korean translations with predicative adjectives (TT-predicative). Target

² Predicative adjectives typically assert a property about an already identified referent, whereas attributive adjectives integrate the property within the noun phrase, often identifying or classifying the referent itself. Predicative adjectives can describe both temporary states and permanent properties, whereas attributive adjectives are often associated with more stable or inherent characteristics (Bolinger 1967). Despite these subtle pragmatic and temporal distinctions, the two structures express similar propositional content, making them viable translation alternatives. Crucially, in the context of translating isolated sentences (as in the present experiment) where broader discourse context is absent, both structures can serve as equally acceptable and natural translation alternatives.

³ To control for potential information structure effects associated with different case markers in Korean, Korean sentences consistently used the nominative case marker *-ka/-i* (rather than the topic marker *-nun/-un*) on subject nouns in both structures.

trials following these primes consisted of new English sentences with attributive adjectives, which participants translated into Korean. In Lists 3 and 4, the configuration was reversed: English source sentences with predicative adjectives (ST-predicative) were paired with Korean translations using attributive adjectives (TT-attributive), and target trials consisted of English sentences with predicative adjectives. A critical feature of the design was that each experimental list consistently instantiated only one prime configuration. That is, within a given list, all prime trials involved the same pairing of SL and TL structures. This consistency was intended to strengthen priming effects and to prevent the “noise” of alternating structures that might carry over (i.e., cumulative priming) from switching between different structural pairings. Text presentation was also manipulated across lists. In lists with consecutive presentation (Lists 1 and 3), participants read the English source sentence first, followed by the Korean translation on a separate subsequent screen. In lists with simultaneous presentation (Lists 2 and 4), English ST and Korean TT were displayed together on a single screen (See Appendix for detailed experimental procedure for each list).

Participants completed a total of 54 trials. The session began with six control trials, which served to establish a baseline prior to any priming exposure. In these trials, participants read an English ST and translated it orally into Korean. No translation was presented, and there was a time limit of 20 seconds to complete each translation. The critical trials consisted of 12 prime trials and 12 target trials. In prime trials, participants first read an English source sentence aloud and then read its translated Korean sentence aloud. Because the translation was already provided, no translation was required during prime trials. Each reading segment had a time limit of eight seconds to encourage fluent processing without extended reflection. In target trials, participants read a new English source sentence and translated it orally into Korean. No translation was provided during these trials, and participants were given up to 20 seconds to complete each translation. To reduce predictability, 24 filler trials were included. Half of the filler trials were similar in format to prime trials, and the other half were similar to target trials. Filler trials involved sentence structures unrelated to the linguistic structures in question and were interspersed after the critical trials to obscure the experimental focus. The experimental procedure is illustrated in Figure 1 below.

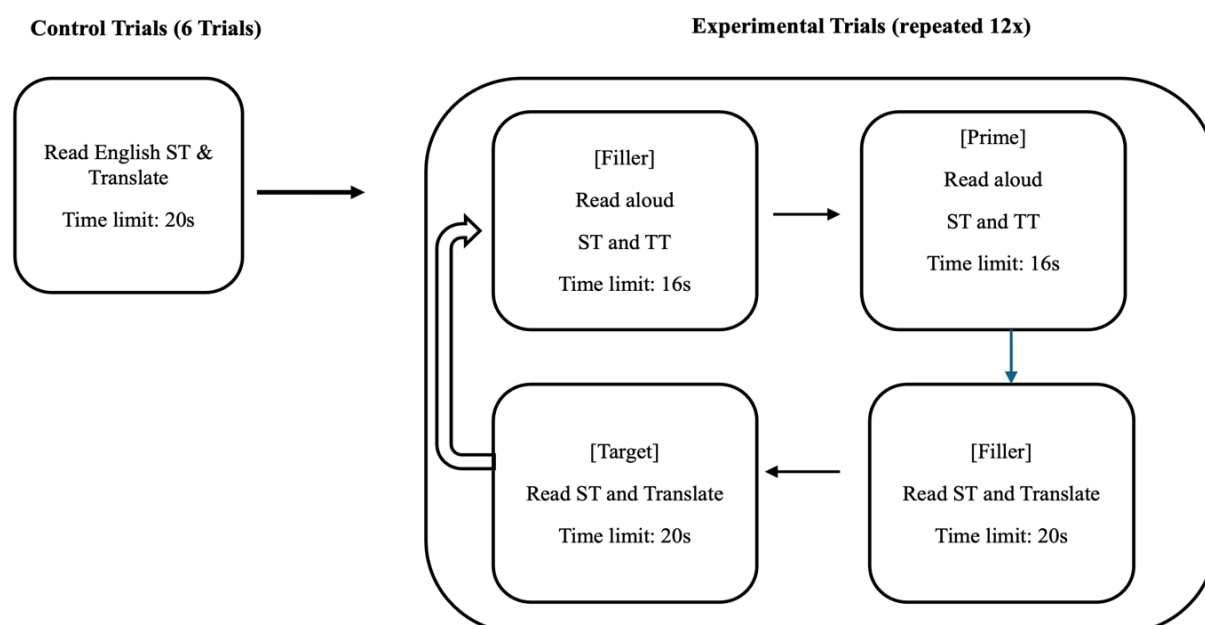


Figure 1. Experimental Procedure

Each participant was tested individually in a quiet room using a laptop computer. Stimuli were displayed using E-Prime 3.0 software (Psychology Software Tools, Inc., Pittsburgh, PA; www.pstnet.com) in bold Courier 18-point font, centered on the screen. Following an instruction session and practice trials, participants completed the experiment, which lasted approximately 10 minutes. All oral responses were recorded for coding and analysis.

Participants' syntactic choice in their translations (attributive vs. predicative) was coded to determine whether participants' translations aligned more closely with the syntactic structure of the English ST or with that of the Korean translation in the prime. Coding was performed by the author using explicit mutually exclusive morphosyntactic criteria to distinguish the two structural alternatives.⁴ Translations that did not clearly conform to either structure were coded as "other" and excluded from analyses. The proportion of excluded "other" responses was low and did not differ systematically across conditions (see Sections 3.2.2 and 3.3.2). English proficiency, as measured by the cloze test, was treated as a continuous variable. Rather than categorizing participants into discrete proficiency groups at the outset, proficiency was modeled as a continuous predictor for a more fine-grained analysis.

3.2.2 Experiment 1: Results and discussion

The control trials in which participants translated English sentences into Korean without any translation present established baseline structural preferences before exposure to any experimental priming. Of the 270 control trial responses, 266 (98.5%) were valid and could be clearly classified as either attributive or predicative structures. Overall, participants demonstrated a strong tendency to maintain the ST structure in their translations with ST-aligned responses accounting for 88.9% of translations in the ST-Attributive condition and 97.5% of translations in the ST-Predicative condition.

The data were analyzed using mixed-effects logistic regression with the `glmer` function from the `lme4` package (Bates et al. 2015) in R (R Core Team 2023). The binary dependent variable was whether participants' translations were ST-aligned (1) or TT-aligned (0).⁵ Fixed effects included ST structure (effect-coded: -0.5 = attributive, 0.5 = predicative) and centered proficiency scores (z-scored). Random intercepts were included for participants and items. The results revealed a significant effect of ST structure ($\beta = 1.80$, $SE = 0.69$, $z = 2.59$, $p = .010$), with ST-alignment rates being significantly higher in the ST-predicative condition than in the ST-attributive condition. L2 proficiency did not significantly predict baseline ST-alignment rates ($\beta = 0.08$, $SE = 0.25$, $z = 0.31$, $p = .754$). These baseline results demonstrate that even in the absence of any experimental manipulation, participants exhibited a strong tendency to produce ST-aligned translations, with this tendency being particularly strong for ST-predicative condition.

In the experimental trials, 98% of participants' responses ($n = 529$) were valid and could be clearly classified as

⁴ In Experiment 1, a response was coded as predicative when the adjective functioned as the predicate of a copular clause and as attributive when the adjective directly modified a following head noun within the noun phrase. In Experiment 2, a response was coded as a nominalization when the event was encoded as a deverbal noun phrase headed by a nominalizer and as a finite clause when it was encoded through a tensed verb. Because these categories are distinguished by discrete, surface-identifiable morphosyntactic markers, the classification was unambiguous for most responses. For this reason, a separate inter-coder reliability assessment was not conducted, but an independent re-coding of a subset of responses would have further strengthened the transparency of borderline cases.

⁵ Throughout the paper, "ST-alignment" is used as a descriptive term for an observable outcome where there is a structural match between the source text and the translation. ST-alignment is treated here as an outcome to be explained rather than as direct evidence of priming.

either attributive or predicative structures. Overall, 94% of participants' responses were ST-aligned, demonstrating a strong tendency to maintain ST structure. A total of 89.4% of responses were ST-aligned in the ST-Attributive condition, and 99.2% of responses were ST-aligned in the ST-Predicative condition. Text presentation method had minimal influence, with consecutive presentation yielding 92.6% ST-aligned responses and simultaneous presentation yielding 95.3% ST-aligned responses as shown in Figure 2.

The data were analyzed using mixed-effects logistic regression following the same approach as control trials. Fixed effects included ST structure (effect-coded: -0.5 = attributive, 0.5 = predicative), text presentation (effect-coded: -0.5 = consecutive, 0.5 = simultaneous), their interaction, and centered proficiency scores. Random intercepts were included for participants and items. As shown in Table 1 below, ST structure significantly predicted ST-alignment rates with participants showing significantly higher alignment to predicative ST structures (99.2%) than to attributive ST structures (89.4%). The odds of ST-alignment were substantially higher for predicative than for attributive source structures ($OR = 19.33$, 95% confidence interval [CI] [4.32, 86.61]). Neither text presentation format, L2 proficiency, nor the interaction between ST structure and text presentation format reached statistical significance. Additional analyses were conducted to test whether the presence of the translation prime increased ST-alignment relative to the no-prime baseline. Control and experimental trials were combined in a mixed-effects model with trial type (control vs. experimental) as a predictor. ST-alignment did not increase reliably when the TT-prime was present (88.9% $\rightarrow$ 89.4% attributive; 97.5% $\rightarrow$ 99.2% predicative; trial-type $OR = 1.66$, 95% CI [0.88, 3.16]), indicating that adding the TT-prime did not shift structural choice. In addition, the effect of cumulative priming was examined by fitting a logistic regression predicting ST-alignment from trial position (centered) while controlling for ST structure. ST-alignment was at ceiling with no gradual rise showing a flat, non-significant slope ($b = -0.04$, $OR = 0.96$, 95% CI [0.77, 1.21], $p = .74$). No incremental build-up could be found, providing no evidence of cumulative priming from the TT-prime. TT-alignment was rare and asymmetric: of the 529 valid experimental responses, 32 (6.0%) were TT-aligned, almost all in the attributive condition (30 of 32). A further 11 responses (2%) were "other" forms distributed evenly across conditions ($\chi^2(1) = 0.03$, $p = .87$). Together these results indicate that the TT-prime produced no measurable shift in structural choice in the learners' subsequent translations.

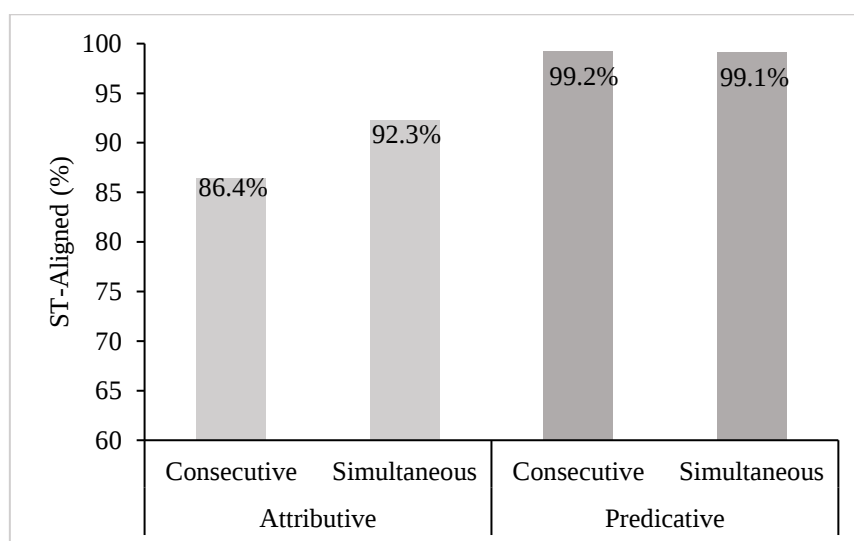


Figure 2. Experiment 1: Experimental Trial Responses by Structure and Text Presentation

Table 1. Experiment 1: Fixed Effects from Mixed-Effects Logistic Regression

	β	<i>SE</i>	<i>z</i>	<i>p</i>
Intercept	4.70	0.74	6.36	< .001
ST Structure	2.96	0.77	3.87	< .001
Text Presentation	0.30	0.76	0.39	.695
Proficiency	-0.06	0.21	-0.27	.788
ST Structure: Text Presentation	-1.02	1.52	-0.67	.501

The results of Experiment 1 reveal a robust effect of ST structure on learners' translation. Control trials established that participants show strong baseline tendencies to maintain ST structure, with significantly stronger alignment for predicative structures than attributive structures. Experimental trials, in which ST and TT structures were placed in systematic conflict, revealed that this strong ST influence also persists even in the presence of translations in the TL. A potential limitation of Experiment 1 worth noting is that the two structures examined were equally natural and acceptable translation alternatives in Korean, which may have contributed to the strong tendency to align with ST structure. That is, when both structural options are equally felicitous in the TL, learners may have little motivation to resist ST influence or produce an alternative structure. This raises the question of whether the strong ST priming effect observed in Experiment 1 would persist when the ST structure conflicts with TL preferences. Experiment 2 was designed to address this question by examining syntactic priming with a structural alternation in which the two structures differ in their degree of naturalness in Korean.

3.3 Experiment 2: Nominalization vs. Finite Clause

3.3.1 Experiment 2: Method and procedure

As a preliminary investigation, Experiment 2 was smaller in scale than Experiment 1 and used a syntactic alternation involving different ways of encoding events across English and Korean. English frequently employs "action nominal constructions" (ANCs) (Koptjevskaja-Tamm 1993) that transform verbal predicates into noun phrases. While deverbal nominalizations frequently occur in argument positions in English (Halliday 1985), Korean often prefers to use finite or conjunctive clause structures over nominalizations to encode complex events (Sohn 1999). This preference reflects cross-linguistic differences in the functions and distributions of nominalizations, where some languages favor nominal encoding and others clausal encoding of events (Koptjevskaja-Tamm 1993). For example, the English sentence "The change in schedule confused students" can be translated either using a parallel deverbal nominalized structure as in (2a) or with a finite clause as in (2b) both of which are grammatically acceptable in Korean. However, the finite clause structure is preferred over the nominalized structure, because as a head-final and verb-dominant language, Korean prefers to express complex event relations through explicit clause linkage rather than noun phrase embedding (Sohn 1999). Indeed, Korean employs deverbal nominalizations considerably less frequently than English, and such constructions are often regarded as English-influenced calques that occur primarily in academic and technical discourse (Yoon 2017).

(2a) Nominalization:

Siganpyo	pyenkyeng-i	haksayng-tul-ul	honlansulepkey hay-ss-ta
Schedule	change-NOM	student-PL-ACC	confused.CAUS-PAST-DECL
'The change in schedule confused students'			

(2b) Finite clause:

Siganpyo-ka pakkwi-e-se haksayng-tul-i honlansulewehay-ss-ta.
 Schedule-NOM change-CONN-because student-PL-NOM confused-PAST-DECL
 ‘Because the schedule changed, students were confused’

Experiment 2 tested whether the strong ST priming effect observed in Experiment 1 would persist when ST-alignment produces a dispreferred construction in Korean, or whether learners would instead adopt a structure that is generally regarded as more natural when primed by the pre-generated translation. The experiment employed a mixed within- (TT-prime: nominalization vs. finite clause) and between-subjects (text presentation) design. Four experimental lists were constructed to counterbalance these conditions, and participants were randomly assigned to one of the four lists. All participants encountered identical English source texts employing nominalized event structures, but the TT-prime structure (nominalization vs. finite clause) varied systematically across trials. The assignment of items to TT-prime conditions was fully counterbalanced across lists such that each of the experimental items appeared in both the nominalized and finite clause TT-prime conditions across participants, but each participant encountered any given item in only one TT-prime condition. The text presentation method (consecutive vs. simultaneous) remained a between-subjects factor with lists 1 and 2 presenting sentences consecutively and lists 3 and 4 simultaneously. As a preliminary investigation, this experiment was substantially shorter than Experiment 1 and included only 8 experimental trials and 8 filler trials with no control trials. The same participants from Experiment 1 partook in Experiment 2 immediately afterward within the same session. Each participant was assigned to the same text-presentation condition (consecutive vs. simultaneous) as in Experiment 1, and the experimental procedure and analyses were conducted in the same way as Experiment 1.

3.3.2 Experiment 2: Results and discussion

In Experiment 2, 343 of 360 total responses (95.3%) were valid. Of these valid responses, 316 (92.1%) followed ST structure, demonstrating a persistent ST effect comparable to Experiment 1. When the TT-prime employed a finite clause structure, participants still produced nominalized structures in 89.9% of their subsequent translations, and when the TT-prime employed a nominalized structure, participants produced nominalized structures in 94.3% of subsequent translations. Mixed-effects logistic regression revealed that this difference did not reach statistical significance (TT-prime $OR = 2.39$, 95% CI [0.53, 10.72], $p = .255$), and there was no significant effect of TT-prime, text presentation, or proficiency, as shown in Table 2 below. While these non-significant results do not establish that the TT-prime exerts no influence, they indicate that no TT influence was detectable under the present conditions, particularly given the near-ceiling baseline (about 92%) and the small item set (eight items).

Table 2. Experiment 2: Fixed Effects from Mixed-Effects Logistic Regression

	β	SE	z	p
Intercept	3.38	0.73	4.62	< .001
TT-Prime Structure	0.87	0.77	1.14	.255
Text Presentation	-0.89	0.84	-1.06	.288
Proficiency	-0.41	0.42	-0.98	.325
TT-Prime: Text Presentation	-1.18	1.41	-0.83	.405

The results of Experiment 2 converge with the findings of Experiment 1: learners’ translations largely followed ST structure, and the TT-prime had no significant effect. The two experiments that found no measurable influence

from the previously encountered translation suggest that ST structure was the primary determinant of learners' structural choices.

4. Discussion

The present study investigated the relative influence of ST structure and previously encountered TT structure on learners' structural choices in L2-to-L1 translation. Using a structural priming paradigm, two experiments tested whether Korean learners of English would align their translations with the syntactic structure of English ST or with that of previously encountered translations in Korean. Across all conditions and experimental designs, results converged on a single, consistent finding: ST structure exerted a robust influence over learners' structural choices in translation, and no measurable influence of the previously encountered translation was detected even when it presented a TL alternative that is generally regarded as more natural. Experiment 1 employed a between-subjects design in which the structure of TT-prime was always different from ST structure, creating a consistent structural conflict across all experimental trials. By exposing each participant to only one structural pairing throughout the session, the design facilitated the accumulation of TT-prime influence across trials through repeated structural priming while avoiding the noise that might arise from alternating between different structural pairings within the same session. Despite such design, the participants produced ST-aligned translations in 94.0% of responses. Experiment 2 took a different approach, holding ST structure constant while allowing TT-prime structure to alternate within participants across trials to test whether TT-prime exposure could shift structural choices on a trial-by-trial basis. Here again, ST-aligned responses predominated with participants following the ST structure in 92.1% of responses. When TT-primes modeled the nominalized structure matching the ST, participants produced nominalized translations 94.3% of the time; when TT-primes modeled the finite clause alternative, participants still produced nominalized translations in 89.9% of cases—a reduction of 4.4 percentage points that did not reach statistical significance ($p = .255$). The present data are insufficient to establish whether a small TT influence exists, and future research with more experimental items is needed to clarify this issue. Taken together, the two experiments—one maximizing cumulative TT-prime effect through consistent structural conflict, the other testing TT-prime effect through within-subjects alternation—produced the same results as neither design revealed meaningful TT-prime influence on participants' structural choices.

Two factors that were expected to influence participants' responses—text presentation method (consecutive vs. simultaneous) and L2 proficiency—showed no significant effects across any condition. The salience of ST structure remained unaffected regardless of when or how the TT-prime was presented in the previous trial. Also, L2 proficiency did not predict ST-alignment rates, which stands in contrast with studies reporting proficiency effects in structural priming. Resende et al. (2020) found that priming effects from MT output were modulated by L2 proficiency, with higher-proficiency learners showing stronger structural alignment with MT-generated structures. The present results do not converge with these findings, possibly due to differences in the nature of the experimental task. In Resende et al., participants were required to use Google Translate and were asked to translate sentences depicting images using words below each image. Alternatively, the proficiency range sampled in the study (intermediate to advanced learners) may have been insufficient to detect proficiency effects that might emerge across a broader range including beginning-level to highly proficient learners. It is also possible that the robust effect of ST structural priming observed in the present results may be sufficiently strong to override any proficiency-related differences.

The robust effect of ST structure can be attributed in part to a built-in asymmetry of the experimental design,

which affords the ST structure both recency and task-relevance. After reading a sentence in ST and its corresponding TT-prime in the prime trial, participants then had to translate a new ST in the target trial. Since the participants had just read and processed the new ST, its structural representation would have been most recently activated and processed when translating, and priming effects would be strongest for the structure that is most recently processed (Pickering and Ferreira 2008). In contrast, the TT-prime, which was encountered in the previous trial as a translation of a different sentence, faces a substantial processing disadvantage relative to the immediate structural activation of the new ST that participants are actively translating. Crucially, the present study found that any cumulative priming that repeated exposure to the TT-prime may have generated across trials was insufficient to override the ST effect.

The near-categorical nature of ST-aligned translations and its consistency across different linguistic phenomena, text presentation, and individual differences in proficiency suggest that ST structural influence in translation is a pervasive feature of translation processing. This is consistent with theoretical accounts positing source language representations as primary organizational scaffolds in translation (Tirkkonen-Condit 2005). Tirkkonen-Condit's monitor model argues that translators allow SL structures to guide TL production as a default, unless they detect specific problems—grammatical errors, stylistic awkwardness, or semantic distortions—that trigger more deliberate monitoring and revision. Under the monitor model, the conditions of the present study in which following the ST structure still resulted in grammatically well-formed sentences in Korean, would have been insufficient to trigger the monitoring processes that would motivate structural departures from the ST. Future research should thus examine whether ST predominance persists when following the ST structure results not merely in marked or unnatural TL output but in ungrammatical forms. The monitor model further predicts that ST influence should be especially strong under time pressure or conditions that reduce opportunities for deliberate monitoring. The time-limited nature of the present translation task may have contributed to the ST predominance observed, and future research must compare different time conditions in the translation task. It is also possible that the nature of the translation task itself makes ST structure difficult to avoid as bilinguals may be tempted to rely on a literal translation strategy in which they reproduce the ST structure by default.

The present results are also consistent with the shared-syntax account (Hartsuiker et al. 2004) that states verbs and structures in both languages are connected to shared combinatorial nodes representing abstract syntactic configurations. According to this account, when a structure is activated through comprehension in one language, that activation spreads to the shared combinatorial node and makes the structure more accessible for production in either language. In the present study, ST structural activation constrained TL production resulting in the robust effect of ST structure on the structure of subsequent translations. Such a representational account complements rather than competes with the strategic, monitor-based account described above. The default translation strategy relies on the ST structure unless monitoring signals the need for revision, while shared syntactic representations ensure that it is the most accessible option from the outset. The present findings may therefore be best understood in terms of both strategic reliance on the ST and the greater accessibility of syntactic structures activated during comprehension.

These findings have pedagogical implications for translation tasks in second language (L2) learning. Learners' strong reliance on ST structure as a default processing strategy may lead them to reproduce ST structures even when they result in less natural output in the TL. Learners showed a strong tendency to retain the ST structure even when a more natural Korean alternative was presented immediately before translation. This suggests that simply exposing learners to well-formed TL examples does not on its own influence their structural choices during translation. Translation instruction should therefore explicitly address the influence of the ST and raise learners' awareness of their tendency to preserve the ST structure. Rather than relying solely on exposure to model

translations, instruction should incorporate targeted practice in identifying ST interference and critically evaluating translationese—the preservation of SL structural patterns rather than conforming to TL norms (Gellerstam 1986, Toury 1995).

5. Conclusion

The present study provides evidence that ST structure exerts a robust influence on L2 learners' structural choices in L2-to-L1 translation. Across two experiments using different experimental designs and structural contrasts, Korean learners of English consistently produced translations that aligned with English ST structure rather than adopting the structures of Korean translations. This pattern persisted regardless of whether the TT-prime offered an equally natural alternative (Experiment 1) or a generally preferred structure in the target language (Experiment 2) and was unaffected by text presentation format or L2 proficiency. These findings contribute to our understanding of the cognitive mechanisms underlying translation by demonstrating that ST structural influence operates as a default processing tendency under these conditions, while previously encountered translations appear to exert no measurable influence. The results are consistent with the monitor model of translation, which posits that SL structures guide TL production unless specific problems trigger deliberate revision. While the present design does not itself distinguish structural priming from a deliberate literal-translation strategy, as both predict the near-categorical ST-alignment observed here, the central finding remains unchanged: learners consistently preserved the ST structure in their translations regardless of the underlying mechanism.

Several limitations of the present study invite future investigation. First, for the adjective structure trials in Experiment 1, the design did not control for an important distinction between temporary and inherent adjectival properties. Some adjectives describe relatively temporary states (e.g., the noise was loud) while others describe more stable, inherent properties (e.g., a large house), and this distinction may interact with preferences for predicative versus attributive constructions in both English and Korean. Future studies should systematically control for this variable to determine whether adjectival semantics modulates the structural asymmetries observed here. Second, future research should examine whether ST predominance is specific to L2-to-L1 translation or also characterizes L1-to-L2 translation, where learners translate from their dominant language into the weaker L2. Comparing L2-to-L1 and L1-to-L2 directions would shed light on whether the ST effect observed here reflects a universal feature of translation processing or one that is asymmetric across translation directions. Another limitation is that the naturalness of the structural alternatives was not established through acceptability norming of the actual items. This is particularly relevant to Experiment 2, where participants produced the assumedly dispreferred nominalization about 92% of the time. Whether finite clauses are indeed the more natural Korean option than nominalization should be tested and normed in future work. Finally, Experiment 2 included no baseline (control) trials, used only eight items, and was completed by the same participants immediately after Experiment 1, so a carryover of the ST-following pattern cannot be excluded. Taken together, these limitations call for a cautious interpretation of the findings. Although they provide compelling evidence of robust ST influence within the present paradigm, future studies must examine whether this effect generalizes across different tasks, syntactic structures, and experimental designs.

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Appendix. Experimental Procedure for Lists 1-4

Trial	Procedure	Time limit
[List 1] ST-Attributive, TT-Predicative, Consecutive presentation		
Control	[READ & TRANSLATE] <i>The calendar had cute pictures.</i>	20s
Filler	[READ ALOUD] <i>Trees covered the mountain.</i>	8s
	[READ ALOUD] 나무가 산을 뒤덮었다. Namu-ka san-ul twitep-ess-ta. Tree-NOM mountain-ACC cover-PAST-DECL.	8s
Prime	[READ ALOUD] <i>There was a strong wind outside.</i>	8s
	[READ ALOUD] 밖에 바람이 강했다. Pakk-ey palam-i kanghay-ss-ta. Outside-LOC wind-NOM strong-PAST-DECL.	8s
Filler	[READ & TRANSLATE] <i>Parents always worry about their children.</i>	20s
Target	[READ & TRANSLATE] <i>There was a beautiful painting.</i>	20s
[List 2] ST-Attributive, TT-Predicative, Simultaneous presentation		
Control	[READ & TRANSLATE] <i>The calendar had cute pictures.</i>	20s
Filler	[READ ALOUD] <i>Trees covered the mountain.</i> 나무가 산을 뒤덮었다.	16s
Prime	[READ ALOUD] <i>There was a strong wind outside.</i> 밖에 바람이 강했다.	16s
Filler	[READ & TRANSLATE] <i>Parents always worry about their children.</i>	20s
Target	[READ & TRANSLATE] <i>There was a beautiful painting.</i>	20s
[List 3] ST-Predicative, TT-Attributive, Consecutive presentation		
Control	[READ & TRANSLATE] <i>The pictures on the calendar were cute.</i>	20s
Filler	[READ ALOUD] <i>Trees covered the mountain.</i> 나무가 산을 뒤덮었다.	8s
Prime	[READ ALOUD] <i>The wind outside was strong.</i>	8s
	[READ ALOUD] 밖에 강한 바람이 불었다. Pakk-ey kanghan palam-i pul-ess-ta. outside-LOC strong-ATTR wind-NOM blow-PAST-DECL.	8s
Filler	[READ & TRANSLATE] <i>Parents always worry about their children.</i>	20s
Target	[READ & TRANSLATE] <i>The painting was beautiful.</i>	20s
[List 4] ST-Predicative, TT-Attributive, Simultaneous presentation		
Control	[READ & TRANSLATE] <i>The pictures on the calendar were cute.</i>	20s
Filler	[READ ALOUD] <i>Trees covered the mountain.</i> 나무가 산을 뒤덮었다.	16s
Prime	[READ ALOUD] <i>The wind outside was strong.</i> 밖에 강한 바람이 불었다.	16s
Filler	[READ & TRANSLATE] <i>Parents always worry about their children.</i>	20s
Target	[READ & TRANSLATE] <i>The painting was beautiful.</i>	20s

Note. ST = source text; TT = translated text. Romanization (Yale system) and morphological glosses are provided for reference and were not presented during the experiment. Gloss abbreviations: NOM = nominative, ACC = accusative, LOC = locative, ATTR = attributive, PAST = past tense, DECL = declarative. Cell arrangement reflects presentation format: separate cells indicate consecutive presentation of ST and TT, whereas combined cells indicate simultaneous presentation.

Examples in: English and Korean

Applicable Languages: English and Korean

Applicable Level: Tertiary