

Comparative Analysis of The Phonetic Adaptation of English Loanwords in Korean And Karakalpak

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Abstract: The article conducts a comparative analysis of the phonetic and phonological adaptation of English loanwords in Korean and Karakalpak. The study seeks to identify the main mechanisms of phonological integration—such as phonemic substitution, epenthesis, elision, stress redistribution, and phonotactic adaptation—and to explain how these mechanisms operate within the phonological systems of the recipient languages. Through comparative typological analysis, the article also highlights the similarities and differences in the adaptation strategies of Korean and Karakalpak and contributes to a broader understanding of phonological processes in situations of language contact.

Keywords: Phonological adaptation, loanwords, English borrowings, Korean language, Karakalpak language, phonemic substitution, epenthesis, phonotactic constraints, segmental adaptation, suprasegmental adaptation, comparative linguistics, language contact, agglutinative languages.

Introduction: Loanwords entering a language system first undergo a process of phonological adaptation. Phonological integration refers to the process by which the phonological units of the donor language (English) are adjusted to the phonological system of the recipient language. This process occurs through mechanisms such as phonemic substitution, epenthesis, elision, gemination, and assimilation. In world linguistics, the phonological adaptation of borrowings has been extensively studied. In particular, U. Weinreich, in his classical research on language contact, emphasizes that phonological changes in contact situations have a systematic character and that borrowed items are actively “recoded” by the phonological system of the recipient language. E. Haugen divides the borrowing process into two stages: importation and substitution, noting that substitution is the primary mechanism of phonological integration. Within the framework of Optimality Theory, linguists such as P. Kiparsky argue that loanwords can be

explained through the hierarchy of phonological constraints: the form of the donor language is preserved as much as possible, but the phonotactic and phonemic constraints of the recipient language take precedence. In Korean linguistics, the phonology of English loanwords has been systematically investigated. For instance, studies by Sang-Cheol Ahn and Jae-Hoon Lee interpret the simplification of English consonant clusters through vowel epenthesis in Korean as a systematic phonological phenomenon. In Uzbek linguistics, the phonology of loanwords has also been an important area of research. Sh. Rahmatullayev emphasizes that phonetic changes in borrowed words in Uzbek occur according to the internal phonological rules of the language. Similarly, D. S. Nasirov, analyzing the development of Karakalpak terminology, explains the rapid phonological and morphological integration of borrowed units by the agglutinative structure of the language. Thus, phonological integration mechanisms constitute a set of systematic processes that ensure the

adaptation of borrowed units to the phonological system of the recipient language. These processes are not random or individual speech phenomena but systematic processes determined by the internal phonological model of the language, its phonemic inventory, phonotactic constraints, and prosodic structure. They occur through the following main mechanisms:

- phonemic substitution (English /θ/ → /t/ or /s/);
- epenthesis (insertion of vowels within clusters);
- elision (sound deletion);
- redistribution of stress;
- graphemic mediation (adaptation through orthography).

These mechanisms have a systematic character and are determined by the internal phonological model of the language.

English	Korean form	Analysis
think /θɪŋk/	싱크 (sink)	/θ/ → /s/ substitution
father /'fɑ:ðər/	파더 (padeo)	/f/ → /pʰ/, /ð/ → /d/
school /sku:l/	스쿨 (seukul)	cluster adaptation

The interdental fricatives /θ/ and /ð/ do not exist in the Korean phonological system. Therefore, they are realized through /s/ or /d/. This substitution is

English	Karakalpak	Analysis
theory	teoriya	/θ/ → /t/
video	video / wideo	/v/ sometimes approximates /w/
factor	faktor	/f/ preserved

In this case, the principle of articulatory economy operates: the speech apparatus prefers an available alveolar or dental articulation rather than producing complex interdental articulation. Y. Kang empirically demonstrates that English loanwords in Korean are adapted according to the principle of perceptual

The process of phonetic adaptation takes place at two interrelated but theoretically distinct levels: the segmental and suprasegmental layers. The segmental level concerns individual phonemes and their combinations, while the suprasegmental level includes stress, rhythm, intonation, and syllable structure. In modern phonological studies, the interaction between these two layers is considered a central factor in explaining the integration of loanwords.

Segmental Adaptation. Segmental adaptation is related to the adjustment of donor-language phonemes to the phonemic inventory of the recipient language.

Phonemic Substitution. If a phoneme from the donor language does not exist in the phonological system of the recipient language, it is replaced by the closest segment in terms of articulation and acoustic similarity. For example:

determined by the limits of the phonemic inventory. A similar phenomenon is observed in Karakalpak:

similarity, meaning that substitution is determined not only by articulation but also by auditory perception.

Adaptation of Consonant Clusters. In Korean phonotactics, word-initial consonant clusters are highly restricted. Therefore, English clusters are simplified through epenthesis. Examples:

stress → 스트레스 (seuteureseu)

school → 스쿨 (seukul)

club → 클럽 (keulleop)

Here, epenthetic vowels such as [w] or [eu] are inserted to preserve the CV syllable structure.

In Karakalpak, two strategies are observed:

1. Cluster preservation (sport, klub) or minimal adaptation
2. Vowel insertion or simplification, especially in colloquial speech

This difference can be explained by the strict CV syllable structure of Korean, whereas Karakalpak allows certain consonant clusters.

Systematic Nature of Segmental Adaptation. Segmental adaptation does not occur at the level of individual words but rather at the level of the entire phonological system. Within Stratal Optimality Theory, Paul Kiparsky emphasizes that loanwords are subject to the constraint hierarchy of the recipient language. Therefore, substitution or epenthesis is not random but the result of systematic phonological constraints.

Suprasegmental Adaptation. Suprasegmental adaptation concerns stress, rhythm, intonation, and syllable structure. This level often requires deeper structural adaptation than segmental changes.

Stress Redistribution. English is a stress-accent language, where stress can have phonemic significance. In Korean and Karakalpak, however, stress is generally non-phonemic.

Therefore, stress contrasts in English are neutralized in borrowed words:

- Korean: 임포트 (impo-teu) stress has no grammatical function
- Karakalpak: import is usually pronounced with uniform stress

Thus, the English contrast 'import (noun) vs im'port (verb) is typically lost during borrowing. This phenomenon illustrates the dominance of the prosodic system. In his Interlanguage Theory, L. Selinker highlights prosodic transfer as an important component of phonological adaptation.

Adaptation of Syllable Structure. English allows

complex syllable structures such as CVC, CCVC, CCCVC, while Korean prefers CV and CVC patterns.

Example:

spring - 스프링 (seupeuring)

The CCC cluster is adapted to the CV structure.

In Karakalpak:

print - print / p rint (colloquial form)

This difference reflects the greater phonotactic flexibility of Karakalpak.

Fortis–Lenis Opposition. Korean phonology distinguishes between fortis, lenis, and aspirated consonants. English borrowings are reinterpreted according to this system.

Examples:

pizza - 피자 (pija)

coffee - 커피 (keopi)

This demonstrates the interaction between suprasegmental properties and the segmental system. Thus, segmental and suprasegmental adaptation represent two fundamental levels of phonological integration.

Phonotactic Constraints. Phonotactic constraints regulate the internal phonological system of a language and determine permissible combinations of segments. Every language has its own phonotactic model, which shapes the adaptation of borrowed units. Within generative phonology, Noam Chomsky and Morris Halle emphasize that phonotactic rules reflect the deep structure of a language.

Korean phonotactics is based primarily on the CV syllable structure, and word-initial clusters are generally prohibited.

For example:

school - 스쿨 [seukul]

Similarly:

stress - 스트레스 [seuteureseu]

Complex clusters are divided into several open syllables.

Final clusters are also simplified:

hand - 핸드 [haendeu]

Thus, phonotactic constraints play a decisive role in Korean adaptation.

Phonotactic Adaptation in Karakalpak. Karakalpak phonotactics belongs to the Turkic typological group and is more flexible regarding clusters.

Examples:

sport

bank

traktor

However, vowel harmony remains a strong phonotactic principle.

Examples:

bank - bankler

marketing - marketingler

In addition, final devoicing may occur:

club /kɫʌb/ - [kɫʌp]

This reflects the tendency toward final devoicing typical of Turkic languages.

Agglutinative vs Inflectional Systems. From a typological perspective, Korean and Karakalpak belong to agglutinative languages, while English exhibits primarily analytic-inflectional features. According to Martin Haspelmath, agglutinative systems facilitate transparent structural integration of borrowings.

For example:

Karakalpak

bank - bankler

blog - blogshi

Korean

service - 서비스 (seobiseu)

서비스하다 (seobiseu-hada) “to provide service”

Here, the English base combines with Korean grammatical markers.

In English, grammatical distinctions may be expressed through stress alternations:

record vs re'cord

'import vs im'port

Such oppositions are neutralized in Korean and Karakalpak.

Comparative typology analyzes borrowings at three

levels:

1. phonemic inventory
2. phonotactic structure
3. prosodic system

Bernard Comrie notes that typological similarity does not necessarily correspond to genealogical relationship. Although Korean and Karakalpak belong to different language families, they share typological features such as agglutination and syllable-based rhythm.

The phonological integration of English loanwords in Korean and Karakalpak is a systematic process determined by the internal phonological structure of the recipient language. Segmental and suprasegmental adaptations operate simultaneously, while phonotactic constraints serve as the central determinant of adaptation. In agglutinative languages, phonological adaptation often leads rapidly to morphological integration while maintaining structural transparency. Comparative typological analysis reveals both similarities and differences in adaptation strategies between Korean and Karakalpak and provides a deeper understanding of the interaction between language contact and phonological systems.

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