https://doi.org/10.24303/lakdoi.2024.32.1.157

Adaptation of the English Agentive Suffix in Korean: An Optimality-Theoretic Analysis

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Cho, Youngyoon & Seo, Hongwon. (2024). Adaptation of the English agentive suffix in Korean: An optimality-theoretic analysis. *The Linguistic Association of Korea Journal*, *32*(1), 157-169. This research explores the morphological and phonological adaptation of the English agentive suffix '-er' into Korean, employing the framework of Optimality Theory (OT) by proposing a revised constraint hierarchy that accurately captures these processes. Through a comprehensive examination, two pivotal constraints, *NON-MORAIC-l and IDENT-IO (manner), were identified as central to addressing previous analytical shortcomings. The refined constraint hierarchy—comprising ALIGN-STEM-R, ALIGN-SUFFIX-L, *NON-MORAIC-l, SYLLCON, and IDENT-IO (manner, place)—offers a distinct explanation for the selection of optimal candidates in the adaptation process. This work not only deepens the understanding of phonological adaptation processes but also emphasizes the importance of adapting constraint hierarchies to accommodate empirical data, setting a foundation for future research in the field.

Key Words: adaptation, English agentive suffix, lexical stratum, allomorphs, optimality theory

1. Introduction

This study embarks on an exploration of the phonological intricacies involved in the adaptation of the English agentive suffix '-er' into newly coined Korean words,

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represented as /lə[1]/ in a significant number of words. It is frequently used not only in online text or daily chat but also in the title of webtoon or the title of news articles. Predominantly used in English to denote agents or entities engaged in specific actions or embodying particular characteristics, this suffix undergoes intriguing phonological transformations when integrated into the Korean linguistic context. However, in American English, its use is consistently pronounced as [ər] '-er', regardless of the neighboring phonological context (e.g., 'teacher' from 'teach', 'runner' from 'run'). It forms nouns from verbs like the previous examples, or occasionally nouns as in 'New Yorker', 'first-grader'. Although '-er' is the remarkable case of the adaptation of the English suffix in Korean[2], this uniformity stands in stark contrast to its Korean counterpart, where /lə/ displays a diverse array of phonological patterns. This phenomenon is described as false etymology which is also called fake etymology or pseudo-etymology. It is named when the false theory about the origin or derivation of a specific word affects the word formation. As reshaping of words can result in false etymology (Asher, 1994), Korean language also has some corresponding examples. Following (1) is a set of example words using '-ting' (/t^{h}iŋ/) as the suffix meaning 'meeting' or 'blind date'.

(1) Examples of false etymology in Korean ('-ting' from meeting)

a. 번개팅 /pənkæ + t^{h}iŋ/ → [pəngaet^{h}iŋ] 'impromptu meeting'
b. 소개팅 /sokæ + t^{h}iŋ/ → [sogaet^{h}iŋ] 'blind date'
c. 과팅 /kwa + t^{h}iŋ/ → [kwat^{h}iŋ] 'blind date between different departments'
d. 반팅 /pan + t^{h}iŋ / → [pant^{h}iŋ] 'blind date between students from different classes.

As examples in (1) have a strong tendency to preserve the syllable structure of the suffix /t^{h}iŋ/, the suffix /lə/ would also have been brought from specific English words like 'wrestler' or 'traveler'. The suffix /lə/ has been highly productive and attached to

1) We assume that [ə] is closer to Korean vowel 'ㅓ' rather than [ʌ], considering Bae (1996) and Sohn (1999).
2) Besides '-er', Korean has adapted various English affixes and structures, although the direct adaptation of suffixes like "-er" is more straightforward due to its frequent use in English loanwords. Other English suffixes such as '-ist' might not be as explicitly recognized in Korean due to the nature of how Korean integrates foreign linguistic elements. Korean often borrows the whole English word and adapts it into Korean phonology and orthography rather than borrowing and applying English grammatical structures directly.

derive many words, as in the following (2).

(2) Korean words +/lə/ (From Lee, 2017)

a. 긱사러[3]	/kiksa + lə/	→ [kiksaɾə]	'a person who lives in a dormitory'
b. 자취러	/cac^{h}ui + lə/	→ [cac^{h}uiɾə]	'a person who lives in a studio'
c. 불참러	/pulc^{h}am + lə/	→ [pulc^{h}amnə]	'a person who does not attend certain event frequently'
d. 불평러	/pulp^{h}jəŋ + lə/	→ [pulp^{h}jəŋnə]	'a person who complains a lot'
e. 거짓러	/kəcis + lə/	→ [kəcinnə]	'a person who tells a lie'
f. 읽씹러	/ilks'ip + lə/	→ [ils'imnə]	'a person who does not respond after reading the message'
g. 지각러	/cikak + lə/	→ [cigaŋnə]	'a person who is often late'
h. 혼술러	/honsul + lə/	→ [honsullə]	'a person who enjoys drinking alone'
i. 현질러	/hjəncil + lə/	→ [hjəncillə]	'a person who spends money playing game'

(3) Loanwords from English[4]

a. 댄서	/dænsəɹ/	→ [tænsə]	'dancer'
b. 블로거	/blogəɹ/	→ [pɨllogə]	'blogger'
c. 스포일러	/spoiləɹ/	→ [sɨp^{h}oillə]	'spoiler'
d. 유튜버	/jutjubəɹ/	→ [jut^{h}jubə]	'youtuber'
e. 클러버	/clʌbəɹ/	→ [k^{h}ɨlləbə]	'clubber'
f. 프로게이머	/pro geyməɹ/	→ [p^{h}ɨrogeimə]	'pro gamer'

Different from the words in (3), which are directly borrowed from English, the agentive suffix '-er' in Korean is attested in different forms. The suffix /lə/ is represented as [ɾə] in the intervocalic position, as shown in (2a) and (2b). However, it has positional variants such as [nə] in (2c)-(2g), and [lə] in (2h) and (2i), depending on the last consonant of its stem preceding the suffix. That is, the last consonants of each stem are nasals in (2c)-(2g), and a lateral in (2h) and (2i), respectively. Looking at the examples in (2), we observe that all the data consists of three syllables. In fact, of the approximately 180 examples presented by Lee (2017), fewer than 10 are composed of 4 or 5 syllables.

3) '긱사' [kiksa] is the truncated form of '기숙사' [kisuksa].

4) We will not cover the analysis of loanwords having the English suffix '-er' in this paper.

Given this observation, three syllables might be the considered default morphological condition.

This paper aims to delve into these variations through a comprehensive analysis within the framework of Optimality Theory (OT), as delineated by Prince and Smolensky (1993, 2004) and McCarthy and Prince (1995). The ensuing section will be structured as follows: In section 2, we will present a detailed examination of the use of /lə/ in Korean, supported by pertinent examples given by Lee (2017). Subsequently, we will present an alternative analysis with constraints, informed by sonority principles and syllable structure considerations, to better encapsulate the phonological phenomena observed. The final section of this paper will reconfigure the hierarchy of these constraints, aligning them more closely with the empirical data. Through this analysis, the study aims not only to contribute to a more elaborate understanding of the phonological adaptation processes in Korean, but also to enhance our broader comprehension of linguistic borrowing and phonological theory.

2. Literature Review

Lee's analysis (2017), grounded in Optimality Theory, offers a systematic approach to understanding the organization and structure of the English agentive suffix 'er' within the context of Korean. In particular, Lee endeavors to analyze the process of word formation, whereby new words emerge from existing ones through the addition of the suffix /lə/, drawing upon Stratum 2 in Kiparsky (1982) and Mohannan (1982). According to Kiparsky (1982), Stratum 2 refers to a level of analysis that follows the application of phonological rules (Stratum 1) but precedes the application of syntactic rules (Stratum 3)[5]. It serves as

5) According to Kiparsky (1982), the stratification of morphological processes can be categorized into three distinct levels. The first stratum includes affixes traditionally linked with the +boundary marker, aligning with primary suffixes as described in classical Sanskrit by Whitney (1889). This stratum encompasses both derivational suffixes such as '-al', '-ous', '-ity', and '-th', and inflectional suffixes found in words like 'kept', 'met', 'hidden', and 'children', along with plural forms such as addenda and indices, and cases of stem modifications including ablaut and umlaut as seen in verbs like teethe and bleed, or nouns like teeth and lice. The second stratum is identified with the #boundary marker, covering secondary derivation and compounding, with suffixes including '-hood', '-ness', '-er', '-ism', and '-ist'. The third stratum is dedicated to the regular inflection processes evident in forms like 'leaped', 'pleated', and 'books', detailing the routine morphological changes in English.

the important stage in which the fundamental elements of a language's lexicon are shaped and modified, contributing significantly to our comprehension of how words are structured. Lee (2019) argues that due to its high productivity and formative nature, the /lə/ suffix appears to belong to Stratum 2. The constraints that Lee (2017) suggests provide valuable insights into the basic principles governing this morphological phenomenon. The constraints and hierarchy that he chose for the analysis are as follows:

(4) Constraints
   a. ONSET: Syllables must have onsets.
   b. NO-CODA: Syllables are open.
   c. PRESERVE(MORPHEME): The morpheme of an input must be preserved in its output correspondent.

(5) The constraint hierarchy
   PRESERVE(MORPHEME) ≫ ONSET, NO-CODA

As given in (4), Lee suggests PRESERVE(MORPHEME) requiring that each morpheme of a stem and a suffix should not be deleted in the output. In his analysis, this undominated constraint plays a crucial role in selecting the optimal candidate of which the suffix /lə/ survives in the suffixation process. The tableau below shows how the derivational process can be accounted for under the constraint ranking he suggested.

(6) Suffixation of /lə/ onto a base having a final coda consonant (Lee, 2017, p. 420)[6]

/pulc^{h}am + lə/	PRESERVE	ONSET	NO-CODA
a. pul.c^{h}am.ə	*!	*	**
b. pul.c^{h}a.lə	*!		*
☞ c. pul.c^{h}am.lə			**
☜ d. pul.c^{h}am.nə	*!		**

According to his analysis, candidates (6a) and (6b) are all eliminated by violating PRESERVE because /1/ in the suffix and the final coda in the stem are deleted, respectively. Thus, since only candidate (6c) satisfies the faithfulness constraint PRESERVE,

6) We added candidate (6d) to Lee's original analysis.

it could be chosen as the optimal output. However, the optimal output that we want is candidate (6d), in which /1/ is changed into [n], affected by the required phonological condition between syllable boundaries.

Of course, his analysis has a few important morphological implications in that he suggests that the English suffix '-er' is consistently loaned into /lə/ in Korean and can be analyzed within OT. However, Lee's analysis has some fatal drawbacks. First, PRESERVE(MORPHEME) requires that suffix /lə/ should preserve its form in the suffixation. Considering that this constraint is the undominated in the ranking hierarchy, we can predict that any allomorphs except [lə] cannot be selected as the optimal output. In fact, unlike our prediction, the optimal output should be a candidate (6d), [pul.c^{h}am.nə], which violates PRESERVE by changing /lə/ into [nə]. In addition, it cannot also account for various phonological changes of the final consonant, as shown in /kʼampʼak + lə/ → [kʼampʼaŋnə]. This means that we need additional constraints or a revision of existing ones to better capture these phonological adaptations. Second, two markedness constraints, ONSET and NO-CODA lower ranked than PRESERVE do not play any decisive role in choosing the optimal output. Thus, instead of them, alternative additional constraints should be employed for the positional variants of /lə/.

These limitations underscore the need for a revised model, which is addressed in section 3 of this paper. The revised model proposes new constraints and a restructured hierarchy to better explain the phonological adaptations of '-er' in Korean, considering the inconsistencies and gaps identified in Lee (2017).

3. Data & Analysis

The core of this analysis centers on the Korean adaptation of the English agentive suffix '-er', represented phonologically as /lə/. This section presents a series of examples to demonstrate the application of newly proposed constraints within the Optimality Theory framework. These examples elucidate the complex interplay of phonological processes at work in the adaptation of this suffix in Korean.

(7) Some examples from (1)

a. 자취러 /cac^{h}ui + lə/ → [cac^{h}uiɾə] 'a person who lives in a studio'
b. 불참러 /pulc^{h}am + lə/ → [pulc^{h}amnə] 'a person who does not attend certain events frequently'
c. 거짓러 /kəcis + lə/ → [kəcinnə] 'a person who tells a lie'
d. 혼술러 /honsul + lə/ → [honsullə] 'a person who enjoys drinking alone'

Like other research which has been made concerning the sonority in syllable structure (Kiparsky 1979; Steriade 1982; Selkirk 1984; Vennemann, 1972), even in Korean, consonant changes inevitably occur to avoid the situation that an onset of the suffix has higher sonority than a coda consonant of stem's ultimate syllable. Davis and Shin (1999) also mentioned that a syllable contact constraint is the driving force of nasalization and lateralization in Korean. Actually, in (7a), only the onset of the suffix is changed into /ɾ/ instead of /l/. In contrast, in the case of (7b)-(7c), both the coda of the ultimate syllable of the stem and the onset of the suffix are turned into nasals(/m/ or /n/) while the onset is preserved as /l/ in (7d). When the phoneme change happens as in (7b) and (7c), the coda consonants are assimilated into nasals articulated at the same place. We also note that both the onset of the suffix and the final consonant of the stem are not omitted in the output form. Based on these observations, the following constraints are proposed in (8).

(8) Constraints

a. SYLLCON (Syllable Contact Law): Avoid rising sonority over a syllable boundary. (Davis & Shin, 1999)
b. ALIGN-STEM-R: The right edge of a morpheme coincides with the right edge of a syllable.
c. ALIGN-SUFFIX-L: The left edge of a morpheme coincides with the left edge of a syllable.
d. IDENT-IO(manner): The specification for the manner of articulation of an input segment must be preserved in its output corresponding segment.
e. IDENT-IO(place): The specification for the place of articulation of an input segment must be preserved in its output corresponding segment.

(9) Constraint ranking hierarchy
ALIGN-STEM-R, ALIGN-SUFFIX-L ≫ SYLLCON ≫ IDENT-IO (manner), IDENT-IO (place)

As in (9), ALIGN-STEM-R has to be the highest constraint since the Korean language does not allow deletion of the rightmost segment of the stem. ALIGN-SUFFIX-L is another highest constraint to prohibit separation or deletion of each phoneme in /lə/. SYLLCON is employed since it is the main reason of the assimilation which occurs at the syllable boundary in Korean. With the examples that allow the phoneme to be changed into another with a different place, IDENT-IO(place) would be the lowest constraint above all. Following (10) is the analysis of /pulc^{h}am + lə/ with the constraint hierarchy in (9).

(10) /pulc^{h}am + lə/ → [pul.c^{h}am.nə], (revised analysis of (6))

/pulc^{h}am + lə/	ALIGN-STEM-R	ALIGN-SUFFIX-L	SYLLCON	IDENT-IO (place)	IDENT-IO (manner)
a. pul.c^{h}am.lə			*!		
☞ b. pul.c^{h}am.nə					*
c. pul.c^{h}am.ə		*!			
d. pul.c^{h}a.mə	*!				

According to the tableau, candidates (10c) and (10d) violate the undominated constraints, ALIGN-SUFFIX-L and ALIGN-STEM-R, respectively, both of which can be ruled out. On the contrary, candidates (10a) and (10b) satisfy those two constraints, as there was no deletion or resyllabification of both the rightmost segment of the stem and the leftmost segment of the suffix. Of the two remaining candidates, candidate (10a) violates SYLLCON since the sonority of /m/ is lower than that of /l/, which is also eliminated. Thus, candidate (10b) is chosen as the optimal output despite the violation of IDENT-IO (Manner). Different from (6) which derives the wrong optimal form, the revised constraint hierarchy can easily choose the final winner, as in (10). Next, let us move to /cac^{h}ui + lə/, which does not have the coda on the ultimate syllable of its stem, to examine whether it could be applied in other examples.

(11) Analysis of /cac^{h}i + lə/ → [ca.c^{h}i.ɾə]

/ca.c^{h}ui + lə/	ALIGN-STEM-R	ALIGN-SUFFIX-L	SYLLCON	IDENT-IO (manner)	IDENT-IO (place)
☞ a. ca.c^{h}ui.lə					
b. ca.c^{h}ui.nə				*!	
☜ c. ca.c^{h}ui.ɾə					
d. ca.c^{h}ui.ə		*!			

In (11), except candidate (11d), missing the correspondent of the onset of the suffix, the other candidates do not violate both ALIGN-STEM-R and ALIGN-SUFFIX-L. SYLLCON is vacuously satisfied by all candidates. Thus, the lowest constraints should play a role in choosing the optimal output. However, with the hierarchy we proposed, (11) chooses two optimal forms, candidates (11a) and (11c). To fix this problem, we would like to add another constraint in our hierarchy model as follows in (12) and (13).

(12) Additional constraint
*NON-MORAIC-l: Do not have [l] in a non-moraic position. (Lee, 2001)

(13) Constraint ranking hierarchy (revised)
ALIGN-STEM-R, ALIGN-SUFFIX-L ≫ *NON-MORAIC-l, SYLLCON ≫ IDENT-IO(manner), IDENT-IO(place)

As /l/ cannot be in onset position alone, *NON-MORAIC-l is required. Since the constraint has to filter out the candidate (11a) while keeping candidate (11c) as its optimal output, the constraint has to be a higher constraint than IDENT-IO(manner). Following (14) is the revised analysis of (11) with the new constraint hierarchy in (13).

(14) Revised analysis of (11)

/ca.c^{h}i + lə/	ALIGN-STEM-R	ALIGN-SUFFIX-L	*NON-MORAIC-l	SYLLCON	IDENT-IO (manner)	IDENT-IO (place)
a. ca.c^{h}i.lə			*!			
b. ca.c^{h}i.nə					*!	
☞ c. ca.c^{h}i.ɾə						
d. ca.c^{h}i.ə		*!				

By adding *NON-MORAIC-l, the analysis successfully filters out candidate (14a), which makes candidate (14c) chosen as the optimal form. Following (15) is the analysis of /kəcis+ lə/, having an obstruent in the coda which is not nasal.

(15) 거짓러 /kəcis + lə/ → [kəcinnə]

/kəcis + lə/	ALIGN-STEM-R	ALIGN-SUFFIX-L	*NON-MORAIC-l	SYLLCON	IDENT-IO (manner)	IDENT-IO (place)
a. kə.cit.lə			*!	*!	*	
b. kə.cit.nə				*!	**	
c. kə.cin.lə			*!	*!	*	
☞ d. kə.cin.nə					**	

As no candidate is omitting corresponding segments of the input, ALIGN-STEM-R and ALIGN-SUFFIX-L are vacuously satisfied. One violation mark is given to *NON-MORAIC-l column on candidates (15a) and (15c), which have /l/ in the non-moraic position. Candidates (15a) - (15c) cannot satisfy SYLLCON with the rising sonority across the syllable boundary. Although candidate (15d) violates IDENT-IO(manner), it is chosen as the optimal form as we intended. Following (16) is the analysis of 혼술러 /honsul + lə/, having /l/ as the rightmost segment of its stem.

(16) 혼술러 /honsul + lə/ → [honsullə]

/hon.sul+lə/	ALIGN-STEM-R	ALIGN-SUFFIX-L	*NON-MORAIC-l	SYLLCON	IDENT-IO (manner)	IDENT-IO (place)
☞ a. hon.sul.lə						
b. hon.sul.nə					*!	
c. hon.sul.rə				*!		
d. hon.sul.ə		*!				

According to the tableau in (16), different from candidate (16d) violating ALIGN-SUFFIX-L, all the other candidates satisfy two ALIGN constraints. Candidate (16c) fatally violates SYLLCON, which is also eliminated. As /l/ and /n/ have different manner of articulation, candidate (16b) cannot satisfy IDENT-IO(manner). Thus, the final winner is (16a).

Through this data-driven analysis, it becomes evident that the interaction between the final consonant of the stem and the initial consonant of the suffix in Korean adaptations of the English '-er' is governed by a complex set of phonological rules. The proposed constraints and their hierarchy offer a more accurate and legitimate explanation of this phenomenon, showcasing the dynamism and adaptability of language in the context of cross-linguistic borrowing.

4. Conclusion

This study has delved into the morphological and phonological adaptation of the English agentive suffix '-er' in Korean, offering a detailed analysis within the framework of the Optimality Theory. Our research has identified the revised constraint hierarchy that clearly captures the phonological processes involved in this adaptation. Two key constraints, *NON-MORAIC-l, which prohibits [l] in non-moraic positions, and IDENT-IO (manner), which demands the preservation in articulation manner from input to output, have played crucial roles in addressing previous analytical gaps. The revised constraint hierarchy, ALIGN-STEM-R, ALIGN-SUFFIX-L ≫ *NON-MORAIC-l, SYLLCON ≫ IDENT-IO (manner), IDENT-IO (place), effectively accounts for the selection of optimal candidates in the adaptation process. It distinguishes between potential adaptations while maintaining phonological integrity and adhering to Korean phonotactic constraints.

Through this data-driven OT analysis, it becomes evident that the interaction between the final consonant of the stem and the initial consonant of the suffix in Korean adaptations of the English '-er' is governed by a complex set of phonological rules. The proposed constraints and their hierarchy provide a more precise explanation of this phenomenon, demonstrating the dynamic nature of language in cross-linguistic borrowing contexts.

Our findings contribute to the deeper understanding of phonological adaptation processes, highlighting the intricate balance between preserving phonological characteristics of the source language and conforming to the phonotactic constraints of the target language. This study underscores the importance of revisiting and revising constraint hierarchies to reflect empirical data accurately, thus paving the way for future advancements in phonological theory and cross-linguistic adaptation research.

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Received on February 20 , 2024
Revised version received on March 26, 2024
Accepted on March 31, 2024