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Research Article

Language experience, speech perception and loanword adaptation: Variable adaptation of English word-final plosives into Korean



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ABSTRACT

This study examines the influence of experience with the source language for loanwords on loanword adaptation, asking whether the influence can be attributed to listener-borrowers' perception of the source language. The study focuses on variable insertion of *li/* after word-final plosives in novel English words borrowed into Korean. Korean participants who differ in the extent of their English experience are asked to borrow English non-word stimuli ending on a coda plosive into Korean by attaching appropriate Korean case-markers to the stimuli. Korean case-marker allomorphy determines whether the participants insert *li/* after the coda plosives or not. Four context factors, namely, coda release, coda voicing, coda place of articulation, and pre-coda vowel tenseness, are investigated. The results indicate that Korean listeners' experience with English influences how they perform the task of borrowing, or adding a case-marker suffix to, English non-words. The effects of the four context factors on the variable vowel insertion are influenced by the listeners' English experience: Listeners' responses in the borrowing task reflect that less experienced listeners are more attentive to non-contrastive phonetic information, such as coda release, than more experienced listeners. The different perception of English sounds altered by the listeners' English experience is proposed to be responsible for the seemingly random variation in loanword adaptation patterns.

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1. Introduction

When words are borrowed from one language to another, their sound structure in the source language (SL) often gets modified to conform to the sound pattern of the borrowing language (BL). The process of modification, or loanword adaptation, has been studied extensively in recent years, and has been characterized as a complicated phenomenon involving different elements, such as speech perception (e.g., Peperkamp & Dupoux, 2003; Peperkamp, 2005; Peperkamp, Vendelin, & Nakamura, 2008), phonology of both the BL and the SL (e.g., LaCharité & Paradis, 2005; Paradis & LaCharité, 2008; Paradis & Tremblay, 2009), statistical tendencies in the lexicon of the BL (e.g., Zuraw, 2000; Walter, 2006), orthographic information (e.g., Smith, 2006; Vendelin & Peperkamp, 2006; Kang, 2009; Daland, Oh, & Kim, 2015), social status of the SL in the borrowing community (e.g., Lev-Ari & Peperkamp, 2014), among others (for a review, see Kang (2011)).

This study investigates whether adaptation can take different shapes when individual borrowers differ in the extent of their experience with the SL, by examining variable adaptation of English word-final stops into Korean. English words ending on a postvocalic stop are adapted into Korean by variably inserting the epenthetic vowel /i/ after the word-final plosive. For example, Korean speakers use both /kʰɛik/and /kʰɛik/ɨ/ as the adaptation of *cake*.² This study asks whether different borrowers who have varying degrees of English experience would prefer one form to the other and, if so, whether the choice can be accounted for as a consequence of their different perception of English sounds. A broad goal is to better understand the role of speech perception in loanword adaptation.

Previous studies disagree on the role speech perception plays in loanword adaptation. Perceptually based approaches towards loanword adaptation underscore the role of speech perception in the process of adaptation, claiming that adaptation is a consequence of perceptual assimilation (e.g., Peperkamp & Dupoux, 2003; Peperkamp, 2005; Peperkamp et al., 2008). In contrast, the phonological view of loanword adaptation claims that adaptation is mainly computed by BL phonology (e.g., LaCharité & Paradis,

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² A Google search on the Korean web (October 2015) for 케익 /kʰɛik/ yielded 2 330 000 hits and 케이크 /kʰɛikʰi/ yielded 3 270 000.

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2005; Paradis & LaCharité, 2008; Paradis & Tremblay, 2009). While the former claims that the sub-phonemic, acoustic details in SL can influence adaptation, the latter argues loanword mapping occurs at an abstract level and a single SL phoneme tends to be adapted uniformly despite all sub-phonemic details. In other words, according to the phonological view, the role of perception in adaptation is minimal because the typical borrowers are proficient bilinguals who perceive SL sounds in (nearly) the same way as SL monolinguals do as they have access to both BL and SL phonology.

Why does speech perception or the SL phonology seem to contribute more to loanword adaptation patterns in some cases than others? Differences in borrowers' linguistic experience, or different levels of bilingualism of the borrowing community, have been pointed out as a potential source (e.g., Smith, 2006; Kang, 2009; Chang, 2012). The language experience of a borrower influences the degree to which her perception of the SL sounds is constrained by her native language versus the SL phonology, which in turn may lead to different adaptation patterns. For instance, the borrowers with less experience with the SL are comparable to the "functional monolinguals", or naïve listeners who are not actively learning or using an L2, in Best's (1995) perceptual assimilation model (PAM). On the other hand, typical borrowers in the phonological view are proficient bilinguals with more experience with the SL who are arguably advanced learners of the SL (as L2). According to PAM-L2 (Best & Tyler, 2007), an extended version of PAM, learners' L2 perception differs from naïve listeners' non-native perception in that learners perceive not to discriminate phonetic gradient details but to seek meaningful information. Thus PAM-L2 predicts that an L2 phone is assimilated to an L1 category not only at the phonetic, but also at the phonological level (cf. Pajak & Levy, 2014). According to this prediction, even the most phonological view in loanword adaptation, represented in works by Paradis and LaCharité, can arguably be considered as perceptual assimilation by L2 learners of the SL, largely informed by the phonology of the SL. Monolingual BL speakers who have little experience with the SL, in contrast, may perceive the target SL sounds differently from proficient L2 learners of the SL. This study attempts to empirically test the possibility that individuals with different degrees of SL experience adapt the SL sounds differently and evaluate whether these differences can be understood as a result of their altered perception of the SL sounds.

The approach taken in this study is to investigate the perception and adaptation of novel English "words" by native Koreanspeaking listeners who differ in their age of initial exposure to English. Experimental findings in L2 acquisition literature suggest that age of initial exposure (or age of arrival, i.e., AOA) plays an important role: most listeners whose AOA was less than 10 years showed native-like perception whereas most listeners whose AOA was greater than 10 years did not (e.g., Flege, Munro, & MacKay, 1995; Munro, Flege, & MacKay, 1996; Yamada & Tohkura, 1992). In contrast, longer exposure to L2 does not guarantee more native-like perception after the first few years (e.g., Aoyama, Flege, Guion, Akahane-Yamada, & Yamada, 2004; Jia, Strange, Wu, Collado, & Guan, 2006).

These perceptual findings for L2 learners lead us to hypothesize that bilingual speakers of BL and SL with earlier or later AOA (i.e., early bilinguals, late bilinguals) and monolingual BL speakers may exhibit different patterns in loanword adaptation. Late bilinguals may show influence of their native language (BL) on the structure of the borrowed SL forms to a greater extents than early bilinguals, but lesser than BL monolinguals. The present study addresses this hypothesis by comparing the performance of functional monolinguals of Korean, Korean-English late bilinguals, and Korean-English early bilinguals in an adaptation experiment, in which they are required to borrow English "novel words" with a word-final plosive into Korean.

1.1. Variable /i/ insertion after English word-final plosives

When English words with a postvocalic word-final plosive are borrowed into Korean, *ii*/ is variably inserted after the plosive. This vowel epenthesis is variable in a multifaceted way. First, not all words take the epenthetic vowel (inter-item variation), and some words variably take the vowel (intra-item variation). More specifically, (i) some words always take the epenthetic vowel (e.g., $guide \rightarrow /kaiti/$), (ii) some never do (e.g., $pop \rightarrow /p^nap/$), and (iii) some vary between these two options (e.g., $cake \rightarrow /k^n \epsilon ik^n i/$). Another crucial aspect of this variable vowel insertion is that not all speakers agree on how they classify words into the epenthetic, non-epenthetic, or variable categories (inter-speaker variation). What is epenthetic for one speaker may be variable or even non-epenthetic for another.

Previous studies on this variation have focused on inter-item variation, most relying heavily on the standardized written loanwords. Kang (2003), in her detailed survey of the loanword list compiled by the National Academy of the Korean Language (the NAKL list), examines 447 instances of loanwords whose English source words end in a postvocalic plosive, among which only 27 words (6%) show intra-item variation. Rhee and Choi (2001) collected 409 loanwords from newspapers and magazines, and 40 words (10%) are reported to be variable. However, the standardized orthographic data employed do not fully reflect the behavior of Korean speakers. Jun (2002), based on a large-scale experimental study using nonce words, reports that the vowel epenthesis pattern is indeed far more variable than shown by the orthographic data. In a pilot survey conducted during the planning phase of the current project, 40 native Korean speakers reported their use of 48 actual English loanwords in Korean; the findings showed that only two out of 48 loans consistently took the epenthetic vowel, one never did, and 45 were variable. Even when the words that more than 90% of the speakers agreed either to insert or not to insert the vowel were considered as invariable, 24 words (50%) still showed inter-speaker variation. Inter-speaker variation seems far more prevalent than has been reported.

Although previous studies may ignore some crucial aspects of the variable vowel insertion with regard to intra-item and interspeaker variation, they have thoroughly examined inter-item variation and agreed that this variation is conditioned by the phonological properties of the words being borrowed: the vowel insertion rate is higher (i) when the final plosive is voiced (90%) than when it is voiceless (46%), (ii) when the pre-coda vowel is tense or long (93%) than when it is lax (35%), and (iii) when the plosive is coronal (82%) than non-coronal, and when it is dorsal (35%) than labial (25%) (Rhee & Choi, 2001; Jun, 2002; Kang, 2003; Download English Version:

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