French loanwords in Korean: Modeling Lexical knowledge in OT

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French words ending in postvocalic coronal voiceless plosives are adapted in two different ways in Korean. Either the final [t] is replaced by an aspirated one followed by vowel insertion as in (1a) or the coronal plosive is replaced by an underlying /s/ which shows up as surface [s] when followed by the locative suffix [ɛ] as in (1b). If not followed by a vowel /s/ is turned into surface [t] by Coda Neutralization.

(1a)		(1b)		
baguette	[pa.kɛ.tʰɨ]	omelette	/o.mɨl.lɛs/	[o.mɨl.lɛ.sɛ]
Lafayette	[la.pʰa.jɛ.tʰɨ]	etiquette	/ɛ.tʰɨ.kʰɛs/	[ɛ.tʰɨ.kʰɛ.sɛ]

Replacement of French word-final postvocalic plosives by /s/ is intriguing given that that there are Korean words ending in surface [t], like [pɑt] 'field'.

Kim (2010, to appear) argues that cases like these clearly show that, besides perception and production, knowledge of lexical forms also plays a determining role in the adaptation of loan words. Adaptation as /s/ is explained by the fact that Korean words in the lexical representations are more likely to end with /s/ rather than with any of the other coronal plosives /t, tʰ, t'/. No Korean word ends in /t'/ and that there are but a few words ending in /t/ or / tʰ /. This paper purports to propose a formal way of modeling lexical knowledge in OT. Boersma and Hamann (2010) have proposed to model the replacement by /s/ by assuming a positional faithfulness constraint IDENT (stri(.)), which requires that, in coda position, the underlying and surface values of stridency should be identical. This constraint is split up into the two faithfulness constraints (2a-b):

(2a)   */+stri/[-stri(.)] underlying +stri should not correspond to surface -stri

(2b)   */-stri/[+stri(.)] underlying -stri should not correspond to surface +stri

and the two anti-faithfulness constraints (2c-d):

(2c)   */+stri/[+stri(.)] underlying +stri should not correspond to surface +stri

(2d)   */-stri/[-stri(.)]   underlying -stri should not correspond to surface -stri

The anti-faithfulness constraints become active if a surface form is recognized without meaning attached to it, or which has no underlying representation yet. This is crucial because Korean surface [pɑt] 'field' is stored in the lexicon as /pɑtʰ/. Lexical constraints of the type *<field>/pɑs/ (the morpheme <field> does not link to underlying /pɑs/) are used. With the latter constraint dominating the anti-faithfulness constraint */–stri/[stri(.)], the faithfulness constraint */+stri/[-stri(.)] and the lexical constraint *<field>/pɑtʰ/, perceived surface [pɑt] is correctly stored in the lexicon as /pɑtʰ/ as illustrated in tableau (3).

(3) [.pɑt.]	*< >	*<field> /pɑs/	*/–stri/ [-stri(.)]	*/+stri/ [-stri(.)]	*<field> /pɑtʰ/
/pɑs/ < >	*!			*	
☞/pɑtʰ/ <field>			*		*
/pɑs/ <field>		*!		*	

On the assumption that loanwords are not yet in the lexicon, lexical constraints do not play a role in loanword adaptation. This implies that a French loanword containing a postvocalic final [t] is treated differently than a Korean native word ending in [t]. Boersma and Hamann provide the following account for English *shot*. Surface [sjɑt], enters the lexicon or is recognized without meaning attached to it. On that assumption perceived surface [sjɑt] is correctly stored as underlying /sjɑs/, as illustrated in (4).

(4) [.sjɑt.]	*< >	*<field> /pɑs/	*/–stri/ [-stri(.)]	*/+stri/ [-stri(.)]	*<field> /pɑtʰ/
☞/sjɑs/ < >	*			*	
/sjɑtʰ/ < >	*		*!		
/sjat/ < >	*		*!		

Interestingly, a similar replacement of word-final postvocalic coronal plosives can be observed in native Korean phonology where next to locative /.pɑ.tʰɛ./ forms such as /.pɑ.sɨn./ do occur.

This paper critically reviews Boersma and Hamann's proposal and points out a number of drawbacks, one of which is that the restructuring in native paradigms cannot be modeled in the same way as the loan adaptations. Instead of lexical constraints and anti-faithfulness constraints, we propose to model frequency and knowledge of likely inputs as input-output chain positions (McCarthy 2007) placed in a language-specific markedness hierarchy. We will argue that this proposal allows the same markedness hierarchy to account for both loanword adaptation of final coronal plosives as /s/ and for the analogical pressure in L1.

References

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