

A Study of Korean Phonology

with

An Acoustic Analysis *part 9*

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26.00. MORPHOPHONEMICS

26.10 Classification of the Morphophonemic Changes

The scope of morphophonemic study is confined to the study of phonemic changes occurring in combinations of morphemes. The morphophonemic changes occurring in the HSL are divided into the meaning of the combination of morphemes, and to the word class of the morphemes within the combination. The same morpheme may bring about two different changes in similar phonemic conditions as follows:

1. The meaning of the combination of morphemes: (complex combination)
/ip.i/ [ibi] 'mouth' + nominative case ending
/tor.i/ [ḏoLi] 'stone' + nominative case ending
2. The member morphemes of the combination: (compound combination)
/ip.i/ [ib. ni] 'mouth and teeth'
/to. ri/ [ḏo. Li] <(ḏo 'truth' (SK), Li 'reason' (SK)) 'reason, right'.

As the examples show, the combinational boundary is made up of similar phonemic shapes between the member-morpheme combinations of each pair of examples (i.e. /-p. i-/ and /-r. i-/), but each member-morpheme combination brings about different phonetic changes, according to the different combinations of morphemes, whether complex or

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compound. Some changes occur in combinations of both substantival morphemes and verbal morphemes, while some occur between verbal morphemes alone or between substantival morphemes alone. From the view-point of the phonemic and phonetic factors conditioning the changes the more frequent morphophonemic changes can be easily explained by the morphological factors. Classified according to their characteristic qualities, the morphophonemic changes occurring in the HSL can be divided into the following seven different types of changes:

27.00. TENSIONALIZATION

“Tensionalization” here means the change in which the five voiceless normal consonants /p, t, c, s, k/ are turned into their respective tensioned counterparts. The morphophonemic change occurs after the tensional stop ['] in compound combinations. Following illustration is the phonetic conditions for the occurrence of the change.

	Initial	p-	t-	c-	s-	k-
Final	-p ₁	-p ₁ p'-	-p ₁ t'-	-p ₁ c'-	-p ₁ s'-	-p ₁ k'-
	-t ₁	-t ₁ p'-	-t ₁ t'-	-t ₁ c'-	-t ₁ s'-	-t ₁ k'-
	-k ₁	-k ₁ p'-	-k ₁ t'-	-k ₁ s'-	-k ₁ s'-	-k ₁ k'-
	-'	-p'-	-t'-	-c'-	-s'-	-k'-

27. 10. In Compound Combination

The morphological condition (i.e. compound combination) for tensionalization of the morphemic initials in the five voiceless normal consonants is confined mostly to the substantival compound combination, and to the contractional type of verbal compound combination. The phonetic aspect of the tensionalization of the morphemic initial (in voiceless normal consonants) in compound combination is simple: such laryngealization takes place after the tensional stop ['], whose morphological meaning is emphatic compounding, and it is required for the formation of a substantive compound.

(1) -n + ':-

/san. ' .kir/ [sank'il] 'mountain pass' (SK + Kor.) ~ /san. kir/ [sangil] 'the pass which I bought.'

/nun. ' .saram/ [nuns'aram] 'a snow-man' ~ /nun. saram/ -/nu:n. saram/ [nu:nsaLam] 'a man who lay down.'

/sin. ' .ko/ [jink'o] 'put on the shoes' ~ /sin.ko/ [jingo] (SK) 'statement, hardship.'

/puin. ' .ka/ [buink'wa] (SK) 'genecology, ~ /puin. kwa/ [buingwa] (SK + particle)

'woman and. . .'

(2) -m + ':-:

/Kam. ' .ca/ [g̊amʃ'a] 'let us wind'~/kam. ca/ [g̊amʃa] 'a potato.'

/pam. ' .sæ/ [p̊ams'æ] 'during the night'~/pam. sæ/ [p̊amsæ] 'a nightbird'.

(3) -r + ':-:

/phar. ' to/ [palt'o] (SK) 'eight provinces'~/phar. to/ [paldo] 'arm too.'

/ma:r. ' .sori/ [ma: ls'ori] 'a voice'~/mar. sori / [malsori] 'horse's voice.'

/ma:r. ' .par/ [ma:l.p'al] 'an expression of speech, the use of word'~/mar. par/ [malbal] horse's leg.'

(4) -ŋ + ':-:

/chaŋ. ' .kun/ [ʃaŋk'un] (SK + Kor) 'marketers'~/caŋ. kun/ (ʃaŋŋun) (SK) 'a general.' /caŋ. 'pyəŋ/ [ʃaŋp'jəŋ] 'bottle of soy'~/caŋ. pyəŋ/ [ʃaŋbjəŋ] 'a long sickness' officer and soldier.'

As the above illustrations show, the five voiceless consonants /k-, t-, p-, c-, s-/ are tensionalized after the tensional stop ['] in the compound combination of morphemes, while in the complex combination of morphemes they are tensionalized after the implosives. The common morphological condition as between the tensionalizations in the complex and compound combinations is the principle of word unity (i.e. unifying into one word the components of complex or compound combinations.) tensionalization in the compound combination occurs mostly in the SK substantival compound, while it occurs in both the substantival and the verbal or adjectival complex combinations. The tensionalization in the complex combination is conditioned more phonetically than in the compound combination. We recognize the glottal stop on the compounding boundary on the strength of both synchronic and diachronic evidence. Synchronically, the insertion of the tensional stop explains phonologically the phenomenon of tensionalization, which occurs after diverse phonetic conditions (i.e. -k₁, -t₁, -p₁, vowels and sonants). Insertion of the tensional stop on the compounding boundary, however, changes the divers phonemic of phonetic conditions (i.e. the implosives -k₁, -t₁, -p₁, vowel and sonant) into a single phonetic condition (i.e. -' -).

27. 20. Tensionalization occurs in the loanwords

The tensionalization occurs in the loan words differs according to the degree of their assimilation into Korean, I assumed that the morphophonemic change (laryngealization) is intrinsic to Korean. That is, the five voiceless consonants /k-, t-, p-, c-, s-/ are tensionalized after the tensional stop only in the loan words which have been assimilated into the morphological structure of Korean. Tensionalization occurs more frequently in the loan coinages than in the loan transfers:

A. SK LOANWORDS

Loan coinage	Loan transfer
<kunca>-g'unj'a] 'the letter "kun" ' (<kun + ' + cha),	<kunca>-[g'unja] 'a man of virtue'
<hanca>-[hanj'a] 'Chinese letter' (<Han + ' + cha),	<hanca>-[hanj'a] 'a man of leisure'
(<sirce>-[silj'e] 'in reality' (<sir + ' + che),	<sirce>-[silj'e] 'one's own brother'.

B. OBLIQUE LOANWORDS

(a) Loan coinages with Japanese

(gudup'an] 'shoe-shop <gudu (<kus'u 'shoe') [Japanese] + ban] 'shop; room' (SK),
 As is shown in the above illustrations, as the etymology of the loan words indicates, the laryngealized voiceless consonants in their original forms were not laryngealized. I am thus justified in assuming that the tensionalization of the voiceless consonants on the compounding boundary occurred in the process of transposition.

Table 15

Definitions	Transcriptions	Proponents
[tɕn siot]~[tɕn sori]	sk, st, sp, ps, pc	Pre-USS Korean
[tɕn sori]	gg, dd, bb, ss, cc	USS
Ejective	k', t', p', s', c'	Zong In-sob
Geminate	kk, tt, pp, ss, cc (t̃)	Ramstedt
Pre-glottal	?k, ?t, ?p, ?s, ?c	Ogura
Quasi-geminee	^h k, ^h t, ^h p, ^h s, ^h c	Haguenauer
Stark	ḡ, ḑ, ḃ, ḥ, ḑc	Junker
Laryngealized phonemes	k', t', p', s', ts'	Cho

NOTE. The leading opinions concerning the tensionalized phonemes are grouped here in Table 15. They are arranged according to the transcriptions and definitions of the phonemes and their proponents. Classified according to whether the designations were based upon auditive or articulatory features. The designations of the auditive group are mainly based upon two auditive features which I characterize as tensionalized colour and longer duration,

while those of the articulatory group are mainly based upon the articulatory feature which we may characterize as oral plosion checked by tensional tension. The two Korean designations of the auditive group, i.e. “tøn siot” (hard “s”) and “tøn sori” (hard sounds), have been used to refer to two different features (one auditive and one articulatory) in the popular characterization of the tensionalized phonemes: the auditive feature of laryngealized colour and the articulatory feature of oral plosion. In addition to the above-mentioned eight opinions on the characterization of the tensionalized phonemes, there are also a few transcriptions of the phonemes, even though they are not widely used in the linguistic literature on Korean (e.g. A. Eckardt, S. Martin, Cholodovic, and URKS).

28.00. ASPIRATION

Aspiration is divided here into progressive and regressive types. “Aspiration” here means the assimilation in which a plosive or affricate phoneme of normal type is changed to its aspirated counterpart. The morphological condition for the occurrence of the aspiration results from the phoneme’s location on the boundary between root or stem and suffix in the formation of verbal or adjectival or de-verbal or de-adjectival morphemes. The phonological condition results from the phoneme of normal type being preceded or followed by the laryngeal fricative /h/.

28. 10. Regressive Type of Aspiration

Regressive aspiration of the plosive phoneme of normal type occurs when the laryngeal fricative /h/ follows the plosive phonemes, except for the alveolar plosive /t/. When the combinational boundary is made up of a sequence such as -t +h- (i.e. alveolar implosive final and laryngeal fricative initial), the occurrence of aspiration of the alveolar implosive final in the context depends upon the tempo at which the combination is pronounced: when it is pronounced according to the principle of phrase unity (or syntagmatic unity), the alveolar implosive final is not aspirated, but when it is pronounced according to the principle of word unity, the alveolar implosive final is aspirated:

Pronunciation according to the
principle of phrase unity

/mos, hæse/ [mot, hæse] since
cannot do it’~

Pronunciation according to the
principle of word unity

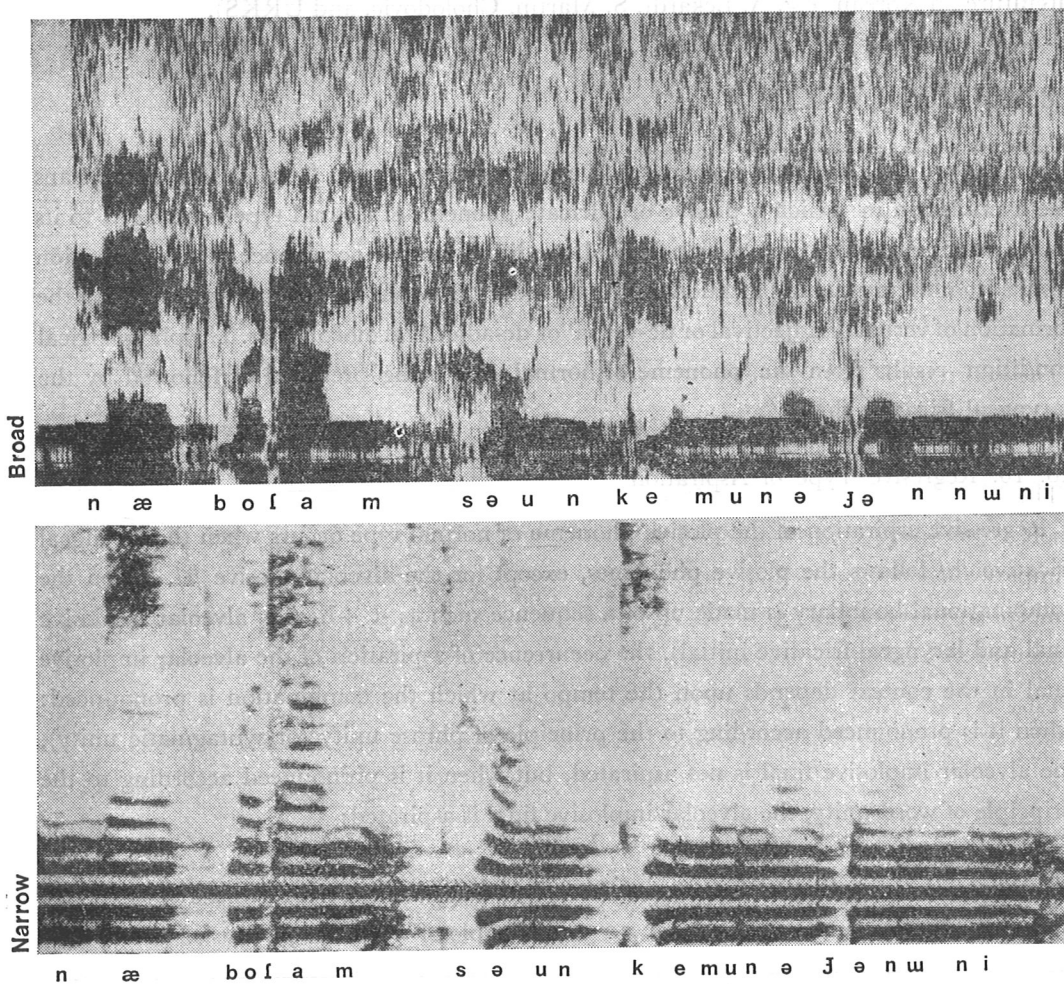
~[motæse] (SK (mother’s womb)
+kor,) ‘from the mother’s womb, since
cannot do it’

/ip, hyəto/ [ib ↑ hjədo] 'mouth and tongue' [ipjədo] 'though dress him'
 /kak, homata/ [g̊ak ↑ homada] (SK [g̊akomada 'every nose, every home'.
 +particle) 'every home'

28. 20. Progressive Type of Aspiration

Progressive aspiration of a plosive phoneme of normal type occurs when the laryngeal fricative precedes the plosive phoneme:

/səunhake/~səunhke/[səunke] 'regrettably'
 /manh. ta/[manta] 'is (are) many: plenty'.



An anomalous aspiration of the plosives /k/ and /t/ occurs after the prefixes of sex [am-] (for female) and [su-] (for male) in the two substantival morphemes [amkæ] 'female dog' and [sukæ] 'male dog'. [amtak₁] 'hen' and [sutak₁] 'cock'.

29.00. NASALIZATION

“Nasalization” here means the phonetic change in which a plosive phoneme is assimilated to a nasal phoneme. The nasal assimilation occurs on the contactual boundary of the morpheme combination in which the preceding morpheme ends with an implosive or glottal stop and the following morpheme begins with the nasals (either n or m); that is, the morphemic final is assimilated to one of the three nasals (n, m, ŋ) in the given context. According to its direction, the nasalization can be termed regressive and mutual. The phonetic conditions for the nasalization may be indicated as in Table 16.

Table 16

Morphemic final	Morphemic initial	
	n-	m-
-k	-ŋn-	-ŋm-
-t	-nn-	-nm-
-p	-mn-	-mm-

The occurrence of nasalization differ slightly in SK and Korean. In the combination of SK substantives, nasalization of the implosive finals occurs mostly under phonetic conditions similar to those for nasalization in the combination of Korean verbal or adjectival morphemes. The SK lateral initial is transposed into the n- before hard vowels and is syncopated before soft vowel in Korean. The number of the SK implosive finals is smaller than Korean implosive finals, but the number of the conditioning sounds⁴ for nasalization (i.e. the following morpheme initials) is greater in the SK than in Korean. The phonetic conditions for the occurrence of nasalization in the SK can be illustrated in Table 17.

Table 17

Morphemic final	Morphemic initial			
	n-	i-(hv)	l-(sv)	m-
-k	-ŋn-	-ŋn-	-ŋ-	-ŋm-
-p	-mn-	-mn-	-m-	-mm-
-m		-mn-	-m-	
			-mn-	

The abbreviations hv and sv stand for hard vowel and soft vowel respectively.

Contents and names of the paper of each parts are as follows.

- Part 1* : Foreword, Introduction, Signs and Assumptions, Classification of Phonemes, Vocalism § 4.00~5.00. Taejon College Thesis, 1969, Taejon, Korea.
- Part 2* : Vocalism § 6.00~8.10. 50th years memorial thesis of HANGEUL, 1971, Seoul.
- Part 3* : Vocalism § 9.00. Diphthong, Korean Language and Literature, No. 49, 1970, Seoul.
- Part 4* : Vocalism § 10.00~10.50. HANGEUL No. 146 1970, Seoul.
- Part 5* : Consonantism § 11.00~15.00.
- Part 6* : Inaternal Structure § 16.00~16.10. Relative Phonemes § 17.00~17.30. Prof. Chy, Hun Young's 60th birth-day memorial thesis, 1972, Taejon.
- Part 7* : Relative Phonemes § 18.00~24.60.
- Part 8* : Syllables. § 25.00~25.30.
- Part 9* : Morphophonemics § 26.00~29.00. Soong Jun University Themes No. 3, 1971, Seoul.
- Part 10* : Morphophonemics § 30.00~34.00.