LOANWORD ACCENT IN SOUTH KYUNGSANG KOREAN:
A MORAIC ACCOUNT

Haruo KUBOZONO

Kobe University
kubozono@lit.kobe-u.ac.jp

ABSTRACT

The primary goal of this paper to propose a new mora-based analysis of loanword accent in the South Kyungsang dialect of Korean (SKK) on the basis of data from original fieldwork. This paper first points out some critical errors in previous studies concerning the description of loanword accent in SKK. It will then propose a new, much simpler generalization based on the notion 'mora'. Specifically, seemingly different accent patterns can be generalized as a rule assigning an accent on the penultimate mora. This rule as well as some other pitch features of SKK is strikingly similar to the loanword accent of (Tokyo) Japanese. These cross-linguistic similarities, too, can be uncovered iff the mora is recognized as a relevant unit of description in Korean just as it is in Japanese.

Keywords: loanword accent, South Kyungsang Korean, Tokyo Japanese, moraic analysis

1. INTRODUCTION

Unlike Seoul Korean, the South Kyungsang dialect of Korean (henceforth, SKK) spoken in and near Pusan permits multiple accent patterns and, hence, an accentual contrast. Loanword accent in this dialect supposedly involves a rather complex system. Jun [1], for example, proposed to classify loanwords into the three classes in (1) according to the accent patterns they exhibit. Examples are given in (2). In (2) and the rest of this paper, high-toned portions are underlined.

(1) A. The first two syllables are high-toned with all other syllables being low-toned.

B. All syllables except the very first ones are high-toned.

C. All syllables are high-toned except the first and last ones.

(2) a. <u>in.tʰ</u>ən 'intern', <u>kʰem.pʰ</u>ə.sɨ 'campus',
   <u>kʰon.kʰ</u>ɨ.li.tʰɨ 'concrete'

b. si.<u>sɨ.tʰ</u>em 'system', pʰ<u>ɨ.lo.gɨ.</u>lem 'program'

c. li.<u>pʰo.</u>tɨ 'report', i.<u>tʰal.li.</u>a 'Italy'

Interestingly, Jun [1] observes that the three accent patterns in (1) are largely predictable from syllable structure as in (3):

(3) a. Pattern A arises when the initial syllable is heavy (i.e. bimoraic).
   b. Pattern B arises when the initial syllable is light and the final syllable is heavy.
   c. Pattern C arises when the initial and final syllables are both light (i.e. monomoraic).

With Jun's analysis as a point of departure, the present study reanalyzes the loanword accent of SKK to clarify similarities and differences between Korean and Japanese dialects. After testing Jun's data from an empirical point of view, we will propose a new generalization of loanword accent in SKK and compare it with loanword accent in Tokyo Japanese, which is characterized as a typical 'mora language' in the literature. This fieldwork is sketched in the next section (section 2). Section 3 analyses the data and proposes a rule to generalize the seemingly complex accent patterns of SKK loanwords. It also considers the results from a cross-linguistic viewpoint to point out some crucial similarities between the loanword accent of SKK and that of Tokyo Japanese. Sections 4 and 5 give a summary of major findings and some remaining questions, respectively.

2. METHOD

In the fieldwork we examined two native speakers of SKK, who are female speakers in their twenties and forties, respectively. We asked each informant to pronounce 757 Korean loanwords, mostly from English, which vary in phonological length and syllable structure. Table 1 gives the number of words for each word length (i.e., the number of syllables involved) in our corpus.

Table 1 The number of test words for each word length.

Word length	1	2	3	4	5	6
No. of words	7	132	289	197	108	24

The test words were arranged according to their length and syllable structure; they were written in English and Korean hangul on a sheet of paper and presented to the informants. The informants were asked to read each test word once or twice, in isolation and with the nominative particle (*ka* or *i*). The phrasal form as well as the citation form was recorded in order to see how a word changes its tonal pattern when it is in a non-final position.

3. RESULTS AND DISCUSSION

3.1. Pitch fall

The most important empirical finding of the current study is that all loanwords in SKK end in a low tone, whether they are pronounced in isolation or with the nominative particle. In our data, in fact, no word ended in a high tone in contrast to what has been claimed in the literature. Particularly, pitch falls *within* a final syllable if it is a heavy syllable: e.g., /tʰe/ is high-pitched and /m/ is low-pitched in /si.sɨ.tʰem/ 'system'.

A closer inspection of the SKK data reveals that most loanwords in this dialect involve a pitch fall between the last two moras. If the word ends in a light syllable as in (4a), this light syllable is low-toned, with its preceding syllables high-toned. If the word ends in a heavy syllable as in (4b), on the other hand, the heavy syllable shows a contour tone, with only the final consonant (nasal) low-pitched. (Vowel length is distinctive only in word-initial syllable in this dialect).

(4) a. kʰem.pʰə̲.sɨ 'campus', i.tʰal.li̲.a 'Italy'

   b. in.tʰə̲n 'intern', ke.i̲m 'game', si.sɨ.tʰem 'system', pʰɨ.lo.gɨ.le̲m 'program'

Previous studies of Korean accent have obviously overlooked the pitch fall in final heavy syllables as in (4b), thereby analyzing those syllables as high-toned rather than as a sequence of high-low tones.

That every word ends in a low tone is an interesting finding since this is a feature shared by loanwords in Japanese. In Tokyo Japanese, for example, 90% of loanwords involve a sudden pitch fall, while a majority of native words are pronounced with a flat pitch (Kubozono [3, 4]). In Kagoshima Japanese, too, most loanwords take a falling pitch pattern as opposed to a non-falling one, showing a pitch fall between the final two syllables (Kubozono [3, 6]). If the sudden pitch fall

in Korean loanwords is interpreted as a phonetic manifestation of lexical accent as in Japanese, it follows that loanwords in SKK are generally 'accented', just as are most loanwords in Japanese. This accentual analysis leads us to posit the accent rule in (5) as a general rule of SKK loanwords.

(5) Put an accent on the penultimate mora.

This accent rule accounts for most of the cases discussed by Jun [1] and in our corpus. In fact, this rule allows us to generalize the three accent patterns in (1A-C), as shown in (6A-C), respectively. Apostrophes denote accent marks placed on accented elements.

(6) A. in.tʰə́n 'intern', kʰem.pʰə́.sɨ 'campus'

   B. ke.ím 'game', si.sɨ.tʰém 'system',
      pʰɨ.lo.gɨ.lém 'program', a.i.sɨ.kʰɨ.lím 'icecream'

   C. ká.sɨ 'gas', li.pʰó.tɨ 'report', i.tʰal.lí.a 'Italy'

The only exception to this generalization is four-syllable or longer words belonging to the accent class in (1A), which are accented on the antepenultimate or other preceding mora:

(7) kʰon.kʰɨ́.li.tʰɨ 'concrete', in.tʰə́.ne.syə.nəl 'international'

Interestingly, our data reveal that many words in this class show a variation between the irregular pattern and the regular penultimate pattern.

(8) kʰən.dí.syon ~ kʰən.di.syón 'condition': hen.dí.pon ~ hen.dɨ.pón 'hand phone'

Returning to (5), it must be noted that this generalization can be obtained if and only if we introduce the notion 'mora' into the description of Korean phonology. This generalization has an interesting implication if seen from a cross-linguistic perspective, since loanwords in Tokyo Japanese are generally accented on the antepenultimate mora (McCawley [7], Kubozono [3-5]). Moreover, the penultimate accent pattern of SKK loanwords is identical to the accent of verbs and adjectives in Tokyo Japanese. (9) gives a comparison of the two languages.

(9) Comparison of SKK and Tokyo Japanese

SKK	Tokyo Japanese	Gloss
pi. á.no	pí.a.no	piano
pi. á.no-ka	pí.a.no-ga	piano-NOM
bə.tín	bó.tan	button
bə.tín-i	bó.tan-ga	button-NOM

sɨ.<u>we</u>.dén	su.<u>wée</u>.den	Sweden
sɨ.<u>we</u>.dén-i	su.<u>wée</u>.den-ga	Sweden-NOM
---	kan.ga.é.ru	to think
---	u.tu.ku.<u>síi</u>	beautiful

In relation to this, it is probably worth mentioning that SKK is more 'moraic' than Tokyo Japanese, a typical 'mora language'. This difference shows up clearly in words where accent is supposed to dock on the second mora of a heavy syllable. In SKK, accent freely falls on the second mora of a heavy syllable if this mora is the second mora from the end of a loanword: in /lo.men.sɨ/, for example, /men/ is high-pitched and /sɨ/ is low-pitched.

(10) lo.<u>mén</u>.sɨ 'romance', sɨ.<u>tém</u>.pɨ 'stamp',
     wə.<u>siŋ.tə́</u>n 'Washington'

In Tokyo Japanese, in contrast, heavy syllables cannot carry an accent on their second moras. Thus, the accent 'moves' one mora to the left, i.e., to the nucleus of the relevant syllable, if the second mora of a heavy syllable is chosen as the location of accent by an accent rule (McCawley [7], Kubozono [3-5]). This is exemplified in (11).

(11) wa.<u>sín</u>.ton, *wa.<u>siń</u>.ton 'Washington';
     kon.<u>bén</u>.syon, *kon.<u>beń</u>.syon 'convention'
     su.<u>wée</u>.den, *su.<u>weé</u>.den 'Sweden'

The difference between SKK in (10) and Tokyo Japanese in (11) indicates that any mora can bear an accent in the former, but not in the latter. In Tokyo Japanese, only the mora containing a syllable nucleus can carry an accent. In this respect, SKK is more 'moraic' than Tokyo Japanese.

3.2. Tone in word-initial syllable

The present study has confirmed the following three patterns regarding the pitch of the word-initial syllable in SKK. First, if the word begins with a heavy syllable, it begins with a high tone (H), followed by another high tone: #HH.... If the word begins with a light syllable, on the other hand, it begins with a low tone (L), followed by a high tone: #LH.... Finally, monosyllabic words as well as disyllabic words ending in a light syllable begin with a high tone. These three patterns are illustrated in (12a-c).

(12) a. <u>kʰem.pʰə</u>.sɨ 'campus', <u>kʰem.pʰə</u>.sɨ-ka 'campus-NOM'

b. si.<u>sɨ.tʰ</u>em 'system', si.<u>sɨ.tʰ</u>em-i 'system-NOM'

c. <u>tʰ</u>ip 'tip', <u>tʰ</u>ip-i 'tip-NOM'; <u>ka</u>.sɨ 'gas', <u>ka</u>.sɨ-ka 'gas-NOM'

Interestingly, Tokyo Japanese exhibits exactly the same pitch patterns in word-(or phrase-) initial position, as shown in (13). In this dialect, pitch is supposed to rise from the initial mora to the second unless the initial mora itself is accented. This default rule admits an exception, though, if the initial syllable is bimoraic as in (13a); in such cases, the initial heavy syllable is high as a whole due to a constraint banning a pitch change within a syllable.

(13) a. <u>koo.híi</u> 'coffee'; <u>kan.ga.é</u>.ru 'to think'
     b. be.<u>ru.gíi</u> 'Belgium'; i.<u>ta.ríi</u> 'Italy'; si.<u>ra.bé</u>.ru 'to examine'
     c. <u>kán</u> 'can'; <u>pín</u> 'pin'; <u>mí</u>.ru 'to see'

Thus, the apparently different pitch patterns between initial heavy and light syllables are attributable to a constraint prohibiting a pitch rise within a syllable. This constraint is shared by Korean and Japanese alike. That is, in both SKK and Tokyo Japanese, pitch rise (rising contour) cannot occur within a syllable.

Moreover, SKK and its neighboring North Kyungsang Korean (NKK), as analyzed by Kenstowicz & Sohn [2], probably differ primarily in the pitch pattern of word-initial syllables. Namely, NKK allows a sequence of low-toned syllables in word-initial position, whereas SKK does not. This is shown in (14). In this respect, SKK looks like Tokyo Japanese in (15a), whereas NKK looks like Osaka/Kyoto Japanese in (15b).

(14)

South Kyungsang	North Kyungsang	Gloss
pɨ.<u>la.cíl</u>	pɨ.<u>la.cíl</u>	Brazil
kʰe.pi.<u>nét</u>	kʰe.pi.<u>nét</u>	cabinet
si.<u>sɨ.tʰém</u>	si.<u>sɨ.tʰém</u>	system

(15) a. Tokyo: u.<u>sa</u>.gi 'rabbit', ki.<u>tu</u>.ne 'fox'
     b. Osaka/Kyoto: u.sa.<u>gi</u>, ki.tu.<u>ne</u>

4. CONCLUSION

From the analysis proposed above, we can make the following five points about the location of accent, or a sudden pitch fall, in SKK loanwords.

First, loanwords in SKK—and probably those in NKK, too—are invariably 'accented': they involve a sudden pitch fall at the phonetic output just as do most loanwords in Japanese dialects. Second, just as in Tokyo and Osaka/Kyoto Japanese, accent location in SKK is invariable in the sense that accent is fixed on a certain mora and does not change in phrases. Third, loanwords in SKK (and NKK) are generally 'accented' on their *penultimate mora* just as are verbs and adjectives in Tokyo Japanese. Fourth, SKK and NKK thus share an accent rule for loanwords just as Tokyo and Osaka/Kyoto Japanese have basically the same accent rule, i.e. so-called 'antepenultimate rule', for loanwords. Finally, SKK and NKK differ from Tokyo and Osaka/Kyoto Japanese in the default location of loanword accent: penultimate mora in Korean vs. antepenultimate mora in Japanese.

As for the word-initial—or, better yet, phrase-initial—pitch, the present study has revealed the following two points. First, loanwords in SKK basically begin with a low tone; they exceptionally begin with a high tone if their initial syllable is heavy (i.e., bimoraic). Second, the exceptional behavior of initial heavy syllables is due to a constraint prohibiting a pitch rise within a syllable, which is shared by Tokyo Japanese, too.

Finally, we can make a certain claim about the status of the mora in Korean and Japanese. First, SKK is a mora language in using the mora as a basic unit of phonological distance in loanwords. In fact, it is more 'moraic' than Tokyo Japanese in that loanword accent can fall even on the second mora of a heavy syllable. Second, both SKK and Tokyo Japanese rely on the syllable (structure) with respect to the word-initial pitch, in the sense that the initial syllable is either high or low, with a contour tone strictly prohibited in this position.

5.   REMAINING QUESTIONS

At least two questions remain unsolved in this paper. One of them concerns the origin of the penultimate accent pattern shown by SKK loanwords. As already mentioned, native words in SKK show multiple accent patterns, one of which is the penultimate pattern. Given this, one may naturally wonder where the penultimate accent pattern of loanwords comes from. While this is an open question for future work, recent studies of Japanese accent give a certain hint. According to Kubozono [3-6], the antepenultimate (mora) accent pattern of loanwords in Tokyo Japanese and the

penultimate (syllable) accent of loanwords in Kagoshima Japanese both come from the native phonology of the respective dialects. In Tokyo, for example, /ro.san.zé.ru.su/ 'Los Angeles' reflects the default pattern of *accented* native nouns such as /í.no.ti/ 'life' and /a.zá.ra.si/ 'harbor seal'. Similarly, in Kagoshima Japanese, /ro.san.ze.rú.su/ reflects the default pattern of *accented* native words such as /a.za.rá.si/ 'harbor seal' and /sa.ká.na/ 'fish'. From this analysis, it is possible to speculate that the penultimate (mora) accent in SKK loanwords probably represents the most productive accent pattern—or the default accent rule—of its native phonology; that is, the penultimate rule of loanwords is nothing but the native accent rule of SKK. If carefully pursued, this line of statistical analysis may well show that what seems to be a complex accent system of SKK can be decomposed into two parts, a rule-governed accent pattern and lexically marked accent patterns, just as is the seemingly complex system of Tokyo Japanese (Kubozono [3-5]).

A second question that remains to be answered is how the obtained generalization of SKK can be extended to the loanword phonology of Korean in general. It is expected that careful analysis will uncover both similarities and differences among various dialects of Korean.

6.   REFERENCES

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