

Evidence for accentless words in South Kyungsang Korean*

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Lee, Dongmyung, and Davis, Stuart. 2010. Evidence for accentless words in South Kyungsang Korean. *Studies in Phonetics, Phonology and Morphology* 16.2. 245-258. Recent studies help to establish Kyungsang Korean as a pitch accent language, which differs from some traditional works that view it as a tone language. The purpose of the current paper is to discuss whether South Kyungsang (SK) Korean has an accentless class of words like other pitch accent languages i.e., Japanese. In an examination of SK words of different length, we maintain that SK Korean has accentless monosyllabic, disyllabic, and trisyllabic words. We hold that SK Korean is not only a pitch accent language but also one that has an accentless class of words. (Dong-A University and Indiana University)

Keywords: pitch accent, accentless words, tone, South Kyungsang Korean

1. Introduction

While traditionally South Kyungsang (SK) Korean has been viewed as a tone language (Gim 1994, 1998, Lee 1994, 1997, Chang 2007), recent research (Lee 2008, 2009, Kubozono 2007) helps to establish SK Korean as a pitch-accent language. The traditional works argue that SK Korean has three distinctive tones as High (H), Mid (M) and Low (L) and these tones are assigned on each syllable in a word. The height of non-high-toned syllables in SK Korean words is unpredictable. Therefore, they insist that SK Korean is a tone language. However, in a pitch-accent language like Japanese, an accent is assigned on only one syllable or mora in a word; such a syllable (or mora) typically takes High tone, and the tone height of the other non-accented syllables is determined in a rule-like manner (McCawley 1970, 1978).

Based on recent research (Lee 2009, Kubozono 2007), we argue that Kyungsang Korean is a pitch accent language and there is only one accent in a syllable or mora in a prosodic word. Especially, South Kyungsang

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Korean has one pitch accent, H*+L, with two initial (non-accent) register tones (H, L), while North Kyungsang Korean has two different accent types, H* and L+H*, without any register tones (Lee 2009), though the North Kyungsang dialect will not be detailed here.

Thus, we argue that accent in SK Korean can be viewed as similar to accent in standard Japanese in that accent is located on the high tone syllable that is immediately before the pitch fall (H*+L). Since words in SK Korean can have only one pitch fall, the syllable with the rightmost high tone in the word is considered (and perceived) as the accented syllable. One issue that arises in the study of SK Korean pitch-accent is whether there is a class of words that can be considered as accentless like in Japanese. The essential characteristic of accentless words in Japanese is that they do not have a pitch fall even when a suffix is added. In section 2, after briefly considering Japanese words, we will examine tone patterns of SK Korean disyllabic and monosyllabic words to determine if there is an accentless class of words. In section 3, we will consider SK Korean trisyllabic and quadrisyllabic words. Section 4 concludes this paper.

2. SK Korean Disyllabic and Monosyllabic Words

2.1 SK Korean disyllabic words

If SK Korean is a pitch accent language, we might expect to find an accentless class of words in this language like Japanese. The essential characteristic of accentless class words in Japanese is that they do not have a pitch fall even when a suffix is added. Let us compare the Japanese disyllabic word in (1a) with that in (1b) taken from Haraguchi (1999).

(1) Japanese Accented vs. Unaccented Class

- | | |
|----------------------------------|--------------------------------------|
| a. kaki+ga ‘fence’ nom.
L H L | b. kaki+ga ‘persimmon’ nom.
L H H |
|----------------------------------|--------------------------------------|

The word in (1b) is accentless since there is no pitch fall even when the suffix [ga] is added. On the other hand, the word in (1a) is considered final-accented since the word witnesses a pitch fall once the suffix [ga] is added. SK Korean native words like those in (2a) and (2b), which lack a pitch fall within the noun base, seem to show similar behavior like the Japanese words in (1a) and (1b). This is seen by the SK Korean data in (2) where the nominative case marker [i] is added to nouns that do not have a pitch fall.

(2) Tone Patterns of SK Korean Words

- | | |
|--|-----------------------------------|
| a. kə.rim+i ‘fertilizer’ nom.
L H L | b. sa.ram+i ‘human’ nom.
L H H |
|--|-----------------------------------|

- c. ti.rim+i 'dream' nom.
L H L

The SK Korean word in (2a) resembles the Japanese word in (1a) in that it seems to be final accented on the base noun given the presence of a pitch fall on the nominative suffix [i]. The SK word in (2b) resembles the Japanese word in (1b) in that it seems to be unaccented on the base noun with no pitch fall on the suffix [i]. One interesting observation that we can make in (2) is that an SK loanword like in (2c) always has L tone on the suffix. Therefore, our proposal is that the SK nominal forms in (2) can be divided into two different categories: an accented class (2a, 2c) and an unaccented class (2b). Now, let us consider the data in (3) which show the same nominal forms as in (2) but with the suffix [tʃərəm] 'like' added rather than the nominative.

- (3) Tone Patterns of SK Korean Words with Suffixation [tʃərəm]
 a. kə.rim+tʃərəm 'like fertilizer' b. sa.ram+tʃərəm 'like human'
 L H H L L H H L
 c. ti.rim+tʃərəm 'like dream'
 L H L L

In comparing the tone patterns of the suffixal forms in (3), we notice an interesting difference. Specifically, in the loanword example of (3c) the tone pattern of the suffix [tʃərəm] is LL. However, in the native words of (3a, b), it is HL. How then can we explain why the suffix [tʃərəm] has a high tone in (3a, b) but a low tone in (3c)? Our contention is that this is understandable if the base noun in (3b) is accentless and that [tʃərəm] is an accented suffix with the underlying pitch pattern /HL/.¹ That is, the underlying accentuation of [tʃərəm], /HL/, is realized in (3b) because the noun that the suffix attaches to in (3b) is accentless (as shown by the lack of pitch fall in 2b). Consequently, the suffix [tʃərəm] in (3b) surfaces with its underlying accent since the noun that it attaches to has no accent. Further evidence for this comes from the accentuation of loanwords in SK Korean. Kubozono (2007) has observed that loanwords in SK Korean are always accented. In a loanword like that in (3c) the last stem syllable is accented with the L tone on the final consonantal mora. That is, in the loanword stem in (3c), there is a phonemic pitch fall on the final syllable. This implies that in loanwords the domain of H tone accent is the mora, not the syllable. Thus, we assume that if [tʃərəm] attaches to a noun that contains a pitch fall, as in the examples in (3c), the suffix loses its accentuation surfacing with low tone since in SK Korean there cannot be two pitch falls (i.e. two accents) within a single prosodic word e.g. [base+suffix]. Evidence that this is correct comes from the native words in

¹ Kim (1988) also argues that the suffixes like [tʃərəm] have underlying tone /HL/.

(4) that have accent (i.e. a pitch fall) on a pre-final syllable. In such words the underlying H tone accent on [tʃərəm] always deletes (i.e. becomes L tone).

(4) Tone Patterns of SK Korean Native Words with Affixation

a. ki.rim+tʃərəm	HL+LL	‘like oil’
b. o.re.pi+tʃərəm	HHL+LL	‘like an elder brother’
c. a.dʒi.me+tʃərəm	HLL+LL	‘like an aunt’
d. maŋ.a.dʒi+tʃərəm	LHL+LL	‘like a colt’

Given this, how can we explain the tone pattern of the native word shown in (3a)? The native word in (3a) is accented as shown in (2a). However, in this case the underlying accent of the suffix [tʃərəm] is not deleted as in (3c). One way to conceptualize this difference between native words and loanwords is that native words with such tone patterns are final accented with the domain of the H tone accent being the entire syllable, while loanwords with final accent have the mora as the domain of the H tone accent (with L tone on the final consonantal mora). As further evidence for the distinction between loanwords like in (3c) and native SK words we observe that English loanwords in SK Korean with the tone pattern LH (LHH and LHHH) all have a final heavy (closed) syllable. This means that a pitch fall must be realized on the final (consonantal) mora of the last syllable. On the other hand, native SK Korean words with this tone pattern can have a final light syllable as in [sa.ta.ri] LHH ‘a ladder’ and this implies that native words with such tone patterns are final accented with the domain of the H tone accent being the entire syllable.

Since there cannot be two accented syllables in a single prosodic domain [base+suffix] in SK Korean, one of the accents in words like (3a) and (3c) must delete. When the two accents are not adjacent, the accent on the suffix deletes (becomes L). This is clearly seen in (4), but is also seen in (3c) given that the domain of loanword accentuation is the mora rather than the syllable. With respect to the final accented native word in (3a), the accent remains on the suffix with the final stem syllable deaccenting (LH*+H*L → LH+H*L). In the example like (3a), the final stem syllable deaccents (i.e. it is no longer the rightmost high tone in the word), but remains with a high tone. Note that it cannot become a low tone when it deaccents since there is a general constraint in SK Korean against words beginning in a sequence of low tones (*LL). What the example in (3a) shows is that when two accents are adjacent the first one deletes. In the next part, we will examine SK Korean monosyllabic words inquiring whether we can observe an accentless class of words as we did in the disyllabic words.

2.2 SK Korean monosyllabic words

In this part, we will examine SK Korean monosyllabic words. We show that SK Korean monosyllabic words also have an unaccented class like SK Korean disyllabic words. Let us first consider the SK Korean monosyllabic words with different suffixes in (5), where we divide the words into three classes based on their tonal behavior.

(5) Tone Patterns of SK Korean Monosyllabic Native Words with Affixation

a. H Tone Pattern (spreading class):² Accentless Class

mal	H	'a measurement unit'
mal+i	H+H	'a measurement unit' nominative
mal+il	H+H	'a measurement' accusative
mal+rosə	H+HL	'as a measurement unit'
mal+tʃərəm	H+HL	'like a measurement unit'

b. H Tone Pattern (non spreading class): Accented Class

mal	H	'a horse'
mal+i	H+L	'a horse' nom.
mal+il	H+L	'a horse' acc.
mal+rosə	H+LL	'as a horse'
mal+tʃərəm	L+HL	'like a horse'

c. L Tone Pattern: Deaccenting Class

mal	L	'a language'
mal+i	L+H	'a language' nom.
mal+il	L+H	'a language' acc.
mal+rosə	L+HH	'as a language'
mal+tʃərəm	L+HH	'like a language'

In considering (5b) [mal] H 'horse', we note that when the nominative suffix [i] is added, the tone pattern of the resulting [mal+i] 'a horse' nom. is H+L. This is consistent with the accent on the initial syllable in [mal] H 'horse'. Note further, however, when the accented suffix /tʃərəm/ is added in /mal+tʃərəm/ 'like a horse', the resulting tone pattern is /mal+tʃərəm/ L+H*L with the accent on the suffix. This can be understood as the deaccentuation on [mal] 'horse' which results in a low tone on the initial syllable of the word [mal+tʃərəm]. This should be compared with the deaccentuation in (3a) which cannot result in the originally accented second syllable becoming L tone since that would result in an initial sequence of two low toned syllables; such is not permitted in SK Korean. However, in (5b) we can see that the first accent is deleted (and becomes L

² We tentatively use the terms spreading class and non-spreading class for the classification of the SK Korean monosyllabic tone patterns.

tone) when there is accent clash, that is, when two accents are adjacent after the suffixation.

In (5a) [mal] H ‘a measuring unit’, when the nominative suffix [i] is added, the resulting tone pattern of [mal+i] ‘a measuring unit’ nom. is H+H with H tone on the nominative suffix. This suggests *that* the base [mal] H ‘a measuring unit’ is accentless, thus, the nominative suffix does not have L tone (a pitch fall) when it is added to the base noun. One interesting thing to notice here is when the suffix [tʃərəm] /HL/ ‘like’ is attached to this unaccented base [mal] ‘a measuring unit’, the tone pattern results in [mal+tʃərəm] H+HL ‘like a measurement unit’. Here, since the base [mal] is accentless, the underlying accent of the suffix [tʃərəm], /HL/, surfaces when it is attached to this kind of accentless base. We assume the reasons why this suffixation would not result in *[L+HL] ‘like a measurement’ are, first, the base does not have an accent thus there is no accent clash (so deaccentuation cannot occur); and second, if the tone of the base changes into L tone then it would be same tone pattern with L+HL ‘like a horse’. This may cause synonymy in terms of segment as well as tone. Finally, with respect to low monosyllabic words such as [mal] L ‘a language’ in (5c), we consider such words to be deaccenting. Thus, in [mal+tʃərəm] LHH ‘like a language’ the suffix loses its accent and no pitch fall is witnessed.

In this section, we have seen that there *is* an accentless class of words in SK Korean for both monosyllabic and disyllabic words. The evidence of the accentless class can be seen from the tone patterns of nominative suffix [i/ka] and the suffixes like [tʃərəm] which do not have L tone when it is attached to the base nouns of monosyllabic H tone e.g. [mal] ‘a measuring unit’ or disyllabic LH tone pattern words e.g. [sa.ram] ‘human’. In the next section, we will examine SK Korean words with more than three syllables to see whether there is also an accentless class of words.

3. SK Korean Trisyllabic and Quadrisyllabic Words

In this section, we will examine SK Korean trisyllabic and quadrisyllabic words and see whether we can observe an accentless class of words. So far unlike Japanese, SK Korean trisyllabic and quadrisyllabic words have been considered as not being unaccented. One reason for this is that there seems to be a general constraint that SK Korean words do not begin or end with three H tones in sequence (Lee 2009). However, we present evidence that SK Korean trisyllabic words can also belong to the accentless word class.

3.1 SK Korean trisyllabic words

Let us consider SK Korean trisyllabic words with affixation in (6).

(6) Tone Patterns of SK Korean Trisyllabic Words with Affixation

a. HHL Tone Pattern: Second Syllable Accented with Initial H Register Tone

Native Words

orepi	HHL	‘an elder brother’
orepi+ka	HHL+L	‘an elder brother’ nom.
orepi+ril	HHL+L	‘an elder brother’ acc.
orepi+rosə	HHL+LL	‘as an elder brother’
orepi+tʃərəm	HHL+LL	‘like an elder brother’

Loanwords

repsoti	HHL	‘rhapsody’
repsoti+ka	HHL+L	‘rhapsody’ nom.
repsoti+ril	HHL+L	‘rhapsody’ acc.
repsoti+rosə	HHL+LL	‘as rhapsody’
repsoti+tʃərəm	HHL+LL	‘like rhapsody’

b. LHL Tone Pattern: Second Syllable Accented with Initial L Register Tone

Native Words

maŋadzi	LHL	‘a colt’
maŋadzi+ka	LHL+L	‘a colt’ nom.
maŋadzi+ril	LHL+L	‘a colt’ acc.
maŋadzi+rosə	LHL+LL	‘as a colt’
maŋadzi+tʃərəm	LHL+LL	‘like a colt’

Loanwords

orendzi	LHL	‘an orange’
orendzi+ka	LHL+L	‘an orange’ nom.
orendzi+ril	LHL+L	‘an orange’ acc.
orendzi+rosə	LHL+LL	‘as an orange’
orendzi+tʃərəm	LHL+LL	‘like an orange’

c. LHH Tone Pattern

Native Words: Final Accent (with Initial L Register Tone)

puk’urum	LHH	‘shyness’
puk’urum+i	LHH+L	‘shyness’ nom.
puk’urum+il	LHH+L	‘shyness’ acc.
puk’urum+irosə	LHH+LLL	‘as shyness’
puk’urum+tʃərəm	LHH+HL	‘like shyness’

Loanwords: Final Accented Class

limudzin	LHH	‘a limousine’
limudzin+i	LHH+L	‘a limousine’ nom.
limudzin+il	LHH+L	‘a limousine’ acc.

limudʒin+irosə	LHH+LLL	‘as a limousine’
limudʒin+tʃərəm	LHH+LL	‘like a limousine’

d. HLL Tone Pattern: Initial Accented Class

Native Words

adʒime	HLL	‘an aunt’
adʒime+ka	HLL+L	‘an aunt’ nom.
adʒime+rɪl	HLL+L	‘an aunt’ acc.
adʒime+irosə	HLL+LL	‘as an aunt’
adʒime+tʃərəm	HLL+LL	‘like an aunt’

Loanwords

kesit ^h i	HLL	‘a guest’
kesit ^h i+ka	HLL+L	‘a guest’ nom.
kesit ^h i+rɪl	HLL+L	‘a guest’ acc.
kesit ^h i+irosə	HLL+LL	‘as a guest’
kesit ^h i+tʃərəm	HLL+LL	‘like a guest’

In (6c), when the nominative suffix [i] is attached to the SK Korean trisyllabic native word [pu.k’u.rum] LHH ‘shyness’, the resulting tone pattern is [pu.k’u.rum+i] LHH+L in which the suffix is realized with L tone. This suggests that the base noun of LHH tone is an accented class word, thus, a pitch fall (L tone) is realized on the nominative suffix [i]. At this point we may think that unlike disyllabic words e.g. [sa.ram+i] LH+H ‘human’ nom., there seem to be no unaccented class words among SK Korean trisyllabic words e.g. [pu.k’u.rum+i] *[LHH+H] ‘shyness’ nom. Previously, we could find only this type of LHH tone in SK Korean trisyllabic words, namely, those that seem to be final-accented. However, Utsugi (2009) provides evidence that there is a distinction between two different types of LHH tone words in SK Korean in (7). He mentions that these tone patterns in (7) can be found in the speech of an older generation.

(7) LHH tone Patterns of SK Korean Trisyllabic Words with Suffixation among Older Speakers ([pota] is an accented suffix that patterns like [tʃərəm])

a. tenamu	LHH	‘bamboo’
tenamu+ka	LHH+L	‘bamboo’ nom.
Tenamupota	LHH+HL	‘rather than bamboo’
b. horangi	LHH	‘tiger’
horangi+ka	LHH+L	‘tiger’ nom.
Horangipota	LHH+LL	‘rather than a tiger’

It is interesting to notice the difference in older speakers between [tenamupota] LHH+HL ‘rather than bamboo’ and [horangipota]

LHH+LL ‘rather than a tiger’³. Among older speakers there was still a distinction between [tenamu] LHH and [horangi] LHH with respect to suffixation patterns such that [tenamu] LHH would be final-accented and [horangi] LHH would be considered unaccented. (The form [horangi+ka, LHHL] cannot have H on the suffix given the constraint that prevents SK Korean words from ending in a sequence of three H tones.) It may imply that there are two types of LHH words in SK Korean dialect among older speakers: those that are final-accented like [puk’urum] and [tenamu], and those that are unaccented like [horangi]. The difference between the two can only be seen when the suffix [tʃərəm] (or [pota]) is added. In [puk’urum+tʃərəm] LHHHL the final accent on the stem deaccents as is expected. But with [horangi+tʃərəm] LHHL the accent on the suffix deaccents. This is completely consistent with the observation based on [mal] L ‘a language’ that unaccented words of the Low tone register class are deaccenting as we see in the comparison of [mal+tʃərəm] LHH ‘like a language’ with [holangi+tʃərəm] LHHL ‘like a tiger’. That is, unaccented words with L tone register function as deaccenting:

- (8) a. [puk’urum+tʃərəm] LHHHL
 b. [horangi+tʃərəm] LHHL
 c. [mal+tʃərəm] LHH

In (8a) the final accent of [puk’urum] LHH is deaccented before the accented suffix [tʃərəm] HL as we have seen previously. In (8b) the accented suffix [tʃərəm] HL is deaccented when it is attached to the accentless stem [horangi] which has L tone register. The reason why [tʃərəm] does not have the tone pattern of HH is because SK Korean words cannot end with three H tones in series. Finally, in (8c) the suffix [tʃərəm] is deaccented when it attaches to the stem [mal] which has L register tone. The reason why the suffix [tʃərəm] cannot be LL tone in (8c) when it is deaccented is because SK Korean prohibits words starting with two L tone in series. Thus, the deaccenting pattern of L tone register shows three different types depending on the number of stem syllables as well as the characteristics of the stem final H tone (i.e., accented H or unaccented H).

One important observation that we have made in this part is that SK Korean words cannot end in a series of three or more syllables with H tone. This phenomenon is actually seen in SK Korean loanword tone patterns. In SK Korean loanwords, unlike SK Korean native words, H tone is imposed on heavy (closed) syllables (Lee 2009) e.g. [sen.tal] HH ‘sandal’, [kol.p^hi] HL ‘golf’, [ti.rim] LH ‘dream’. However, in SK Korean trisyllabic loanwords in which all three syllables are heavy like the words [dʒen.t^hil.men] HHL ‘gentleman’, the SK Korean loanword does not have H tones on all of the three syllables [dʒen.t^hil.men] *HHH. Further

³ Utsugi discusses that the pattern of (7b) does not seem to be found in younger speakers.

evidence of this general constraint can also be seen in SK Korean quadrisyllabic words.

3.2 SK Korean Quadrisyllabic Words

Let us consider SK Korean quadrisyllabic words. Here we will examine SK Korean quadrisyllabic words to see whether these can fall into the accentless class of words.

(9) Tone Patterns of SK Korean Quadrisyllabic Words with Affixation⁴

a. HHLL Tone Pattern: Second Syllable Accented with Initial H Register

	Tone	
Native Words		
halapədʒi	HHLL	‘a grandfather’
halapədʒi+ka	HHLL+L	‘a grandfather’ nom.
halapədʒi+rɪl	HHLL+L	‘a grandfather’ acc.
halapədʒi+rosə	HHLL+LL	‘as a grandfather’
halapədʒi+tʃərəm	HHLL+LL	‘like a grandfather’
Loanwords		
p ^h aʃisit ^h i	HHLL	‘a fascist’
p ^h aʃisit ^h i+ka	HHLL+L	‘a fascist’ nom.
p ^h aʃisit ^h i+rɪl	HHLL+L	‘a fascist’ acc.
p ^h aʃisit ^h i+rosə	HHLL+LL	‘as a fascist’
p ^h aʃisit ^h i+tʃərəm	HHLL+LL	‘like a fascist’

b. LHHL Tone Pattern: Third Syllable Accented with Initial L Register

	Tone	
Native Words		
adʒuməni	LHHL	‘an aunt’
adʒuməni+ka	LHHL+L	‘an aunt’ nom.
adʒuməni+rɪl	LHHL+L	‘an aunt’ acc.
adʒuməni+rosə	LHHL+LL	‘as an aunt’
adʒuməni+tʃərəm	LHHL+LL	‘like an aunt’
Loanwords		
ʃinario	LHHL	‘a scenario’
ʃinario+ka	LHHL+L	‘a scenario’ nom.
ʃinario+rɪl	LHHL+L	‘a scenario’ acc.
ʃinario+rosə	LHHL+LL	‘as a scenario’
ʃinario+tʃərəm	LHHL+LL	‘like a scenario’

⁴ In (9) we show all the possible tone patterns of quadrisyllabic words including derivational nouns e.g. kitariki LHHL ‘waiting’ and compound nouns e.g. namutari LHHH ‘a wood bridge’. (Note that it is possible for a compound to end in a sequence of three syllables with H tone if no suffixes are attached.)

c. LHHH Tone Pattern:

Native Words: Final Accented Class with Initial L Register Tone

namutari	LHHH	'a wood bridge'
bridge'namutari+ka	LHHH+L	'a wood bridge' nom.
namutari+ril	LHHH+L	'a wood bridge' acc.
namutari+rosə	LHHH+LL	'as a wood bridge'
namutari+ʈʂərəm	LHHH+HL	'like a wood bridge'

Loanwords: Fourth Accented Class

paiollin	LHHH	'violin'
paiollin+i	LHHH+L	'violin' nom.
paiollin+ril	LHHH+L	'violin' acc.
paiollin+irosə	LHHH+LLL	'as violin'
paiollin+ʈʂərəm	LHHH+LL	'like violin'

d. HHHL Tone Pattern:⁵ Third Accented Syllable with Initial H Register Tone**Loanwords**

sentiwitʃi	HHHL	'a sandwich'
sentiwitʃi+ka	HHHL+L	'a sandwich' nom.
sentiwitʃi+ril	HHHL+L	'a sandwich' acc.
sentiwitʃi+rosə	HHHL+LL	'as a sandwich'
sentiwitʃi+ʈʂərəm	HHHL+LL	'like a sandwich'

e. LHLL Tone Pattern: Second Syllable Accented with Initial L Register Tone

Native Words

kitariki	LHLL	'waiting'
kitariki+ka	LHLL+L	'waiting' nom.
kitariki+ril	LHLL+L	'waiting' acc.
kitariki+rosə	LHLL+LL	'as waiting'
kitariki+ʈʂərəm	LHLL+LL	'like waiting'

Loanwords

p ^h illeiə	LHLL	'a player'
p ^h illeiə+ka	LHLL+L	'a player' nom.
p ^h illeiə+ril	LHLL+L	'a player' acc.
p ^h illeiə+rosə	LHLL+LL	'as a player'
p ^h illeiə+ʈʂərəm	LHLL+LL	'like a player'

⁵ SK Korean native quadrisyllabic words do not have this tone pattern.

f. HLLL Tone Pattern: Initial Accent Class

Native Words

kip'əhaki	HLLL	'being delight'
kip'əhaki+ka	HLLL+L	'being delight' nom.
kip'əhaki+ril	HLLL+L	'being delight' acc.
kip'əhaki+rosə	HLLL+LL	'as being delight'
kip'əhaki+tʃərəm	HLLL+LL	'like being delight'

Loanwords

p ^h iriət̃i	HLLL	'a period'
p ^h iriət̃i+ka	HLLL+L	'a period' nom.
p ^h iriət̃i+ril	HLLL+L	'a period' acc.
p ^h iriət̃i+rosə	HLLL+LL	'as a period'
p ^h iriət̃i+tʃərəm	HLLL+LL	'like a period'

In (9c), when the nominative suffix [i] is attached to the SK Korean quadrisyllabic native word [na.mu.ta.ri] LHHH 'a wood bridge', the resulting tone pattern is [na.mu.ta.ri+ka] LHHH+L where the suffix is realized with L tone (pitch fall). This means that the base noun of LHHH tone is an accented class word and a pitch fall (L tone) is realized on the nominative suffix [i]. Here, we can think that unlike disyllabic words e.g. [sa.ram+i] LH+H 'human' nom., there is no unaccented class words in SK Korean quadrisyllabic words e.g. [na.mu.ta.ri+ka] *[LHHH+H] 'a wood bridge' nom. We can consider that this is because SK Korean words cannot have more than three syllables in a sequence at the end of a prosodic word. That is, in SK Korean words there is a general constraint against words ending in a series of more than three H tones. This precludes longer words from being accentless in SK Korean and so in this way is different from Japanese.

Among some works that view SK Korean as a tone language, such as Chang (2007), it is posited that the difference between the stem nouns in (2a) [kə.rim+i] LH+L 'fertilizer' nom. and (2b) [sa.ram+i] LH+H 'human' nom. is that the final syllable of the stem noun in (2a) has an underlying H tone while that in (2b) has an underlying M tone. This claim is made even though such research shows that speakers cannot perceptually distinguish between the posited M tone and H tone. However, once it is understood that phonologically what is at issue is the distinction between an accented H and an unaccented H, then it comes as no surprise that these cannot be distinguished perceptually in a neutral contrast. Moreover, the various tone patterns found under affixation as discussed here are highly consistent with a pitch accent system. Consequently, we maintain the SK Korean is not only a pitch accent language, but it has a class of nouns (as in 2b) that is accentless.

4. Conclusions

In this paper, we investigated the issue as to whether there is an accentless class of words in SK Korean, which would be expected it is a pitch accent language like Japanese. Throughout the examination of the tone patterns of SK Korean monosyllabic, disyllabic, trisyllabic and quadrisyllabic words with different suffixes, we showed evidence that there exists an accentless class of words in SK Korean, even though SK Korean quadrisyllabic words are not included in this class due to a general constraint prohibiting SK Korean words from ending in a sequence of more than three syllables with H tone. Finally, it is noteworthy that SK Korean loanwords of LH, LHH and LHHH tone patterns all have final closed syllables ending in L falling on its final consonant mora, thus, the suffixes attached to these base forms always surface with L tone regardless of the nature of the suffixes. This can be understood given that all SK Korean loanwords are accented words and their domain of accent is the mora unlike SK Korean native words whose accentual domain is the syllable. In this paper, we maintain that SK Korean is not only a pitch accent language but also one that contains an accentless class of words like other representative pitch accent languages such as Japanese.

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