

## Tone patterns of loanword compounds in South Kyungsang Korean<sup>\*</sup>

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**Lee, Dongmyung. 2013. Tone patterns of loanword compounds in South Kyungsang Korean.** *Studies in Phonetics, Phonology and Morphology* 19.1. 81-105. The current study investigates the tone patterns of South Kyungsang Korean (SKK) loanword compounds consisting of two words [W1+W2]. Out of these two words, one has to be a non-native Korean word. In this paper, English, Sino-Korean, and Japanese words are used as non-native Korean words. The tonal interactions of the current study show the consistent results with the previous research (Lee and Davis 2009, 2010, Lee 2011a, b). That is, SKK has an accented H tone class as well as an unaccented H tone class, and SKK disprefers a word initial sequence starting with two Low tones. SKK does not prefer two pitch accents in a prosodic domain either. (Dong-A university)

Keywords: pitch accent, loanword compound, compound tone, Kyungsang Korean

### 1. Introduction

Even though there have been a couple of analyses on the tone patterns of native compound words on all types of tone patterns and syllabic structures in South Kyungsang Korean (Lee 2011a, 2011b), there has not been any analysis on the tone patterns of loanword compounds in South Kyungsang Korean (SKK). Therefore, we will study the tone patterns of SKK loanword compounds in this paper. The term loanword compounds imply the compound compositions that are made of two words and at least one of these two component words is not a Native Korean Word (NKW). The compounds have the structure of [Word 1 (W1) + Word 2 (W2)]. Before the examination of SKK loanword compound data, the tone patterns of SKK native and loan words will be reviewed in the following part.

#### 1.1 Toneme inventory of SKK native and loan words

The toneme inventory of SKK native words can be summarized as in Table 1 (Lee 2009, Lee and Davis 2009, 2010). Recent research (Lee 2009, Kubozono 2007) argue that South Kyungsang Korean is a pitch accent language and there is only one accent in a syllable or mora in a prosodic word. Especially, these research insist that SKK has one pitch accent, H\*+L,

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with two initial register tones (H, L) which are non-accented. This SKK accent can be viewed as similar to accent in standard Japanese where accent is located on the high tone syllable that is immediately followed by the pitch fall (H\*+L). Thus, the SKK pitch accent is identified by the highest peak pitch followed by L falling in a prosodic domain.

The monosyllabic SKK native words have three different tones: H (accent), L, and H (unaccent). The SKK disyllabic native words have four different tone patterns: HH (final accent), HL (initial accent), LH (final accent), and LH (unaccent). The trisyllabic SK native words have four different tone patterns: HHL (second syllable accent), HLL (initial accent), LHL (second syllable accent), and LHH (final accent). The SKK quadrisyllabic monomorphemic words have two tone patterns: HHLL (second syllable accent) and LHHH (third syllable accent), and non-monomorphemic tone patterns, which were represented in the parentheses, are HLLL (initial accent), LHLL (second syllable accent), and LHHH (final accent).

Table 1. Toneme inventory of SKK native words

Monosyllabic	Disyllabic	Trisyllabic	Quadrisyllabic
H /mal/ 'horse' (accent)	HH /kurim/ 'cloud'	HHL /mudʒike/ 'rainbow'	HHLL /halapʌdʒi/ 'grandfather'
L /mal/ 'language'	HL /kirim/ 'oil'	HLL /adʒime/ 'aunt'	LHHH /adʒumʌni/ 'aunt'
H /mal/ 'measuring unit' (unaccent)	LH /kʌrim/ 'fertilizer'	LHL /adʒumma/ 'aunt'	(HLLL) /kipʰʌki/ 'being delight'
	LH /saram/ 'human' (unaccent)	LHH /satari/ 'ladder'	(LHLL) /kitariki/ 'waiting'
			(LHHH) /namutari/ 'wood bridge'

In the monosyllabic words of Table 1, the distinction between the accent H and the unaccent H can be seen in suffixation situation. The accented H tone word, /mal/ H 'horse', has an L tone on the following nominative (nom.) suffix when the suffix /-i/ is added to the previous base, + /mal+i/ HL 'horse' nom. However, the unaccented H tone word, /mal/ H 'measuring unit', has a H tone on the following suffix when the same nom. suffix /-i/ is added to the base, + /mal+i/ HH 'measuring unit' nom. This difference of tone pattern (when the nominative suffix /-i/ is added to two different base words, 'horse' and 'measuring unit') shows the distinction between the accented H tone and the unaccented H tone monosyllabic words in SKK. That is, as shown in previous research (Lee and Davis 2010), Japanese also has the similar distinction between the accented and the unaccented words.

The data in (1) is taken from Haraguchi (1999).

(1) Japanese Accented vs. Unaccented Class (Haraguchi 1999)

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

The word in (1a) is considered final accented because the word has pitch fall once the suffix [ga] is added. However, (1b) is accentless since there is no pitch fall even when the suffix [ga] is added. The data in (1) indicate that the LH tone words are considered as unaccented class words when a nom. suffix is added to the previous base and the suffix does not have a pitch fall in a pitch accent language like Japanese.

Based on this observation, SKK disyllabic words have four different tone patterns: HH, HL, LH (accent), and LH (unaccent). When the nom. suffix /-i/ is added to the HH tone word, /kurim/ ‘cloud’, the L falling appears on the suffix, + /kurim+i/ HHL ‘cloud’ nom. The HL tone word, /kirim/ has an initial accent which is followed by a L tone on the following syllable. When the accented LH tone word, /kʌrim/ LH ‘fertilizer’, has the nom. suffix, + /kʌrim+i/ LHL, the suffix /-i/ has the L falling on it. On the other hand, when the unaccented LH tone word, /saram/ LH ‘human’, has the same nom. suffix /-i/, the suffix does not have a L tone but have a H tone, + /saram+i/ LHH ‘human’. This tone pattern is same as the suffixation tone pattern of (1b), the unaccented class word.

SKK trisyllabic words do not seem to have the unaccented word class but Utsugi (2009) argues that two types of LHH tone ( /tenamu/ LHH ‘bamboo’, + LHH+HL /tenamu+tʃʌrʌm/ → LHHHL ‘like bamboo’; /horaŋi/ LHH ‘tiger’, + LHH+HL /horaŋi+tʃʌrʌm/ → LHHLL ‘like a tiger’) can be evidenced in SKK among older speakers. However, we will not discuss this here in detail.<sup>1</sup>

The tone patterns of SKK loanwords can be summarized as in Table 2 (Lee 2009). Unlike the SKK native words, all the SKK loanwords have one pitch accent (H\*+L). Based on the previous research (Lee 2009), the tone patterns of the SKK loanwords are predictable with syllable weight playing a crucial role in the assignment of a H tone.<sup>2</sup>

<sup>1</sup> Utsugi (2009) discusses that the LHH tone word /tenamu/ ‘bamboo’ can be interpreted as final accented and the LHH tone word /horaŋi/ ‘tiger’ as unaccented. He argues that the distinction between the two different LHH tone patterns does not seem to be found in younger speakers. The two different LHH tone with suffixation is not analyzed here.

<sup>2</sup> Lee (2009) argues that this can be seen as an instance of the Emergence of the Unmarked. The SKK loanwords are assumed not to have lexically specified tone patterns thus an unmarked tone pattern emerges. However, we do not further describe this here in detail.

Table 2. Toneme inventory of SKK loanwords

Monosyllabic	Disyllabic	Trisyllabic	Quadrissyllabic
H /k <sup>h</sup> ʌp/ ‘cup’	HH /menʃʌn/ ‘mansion’	HHL /repsoti/ ‘rhapsody’	HHLL <sup>3</sup> /p <sup>h</sup> asisit <sup>h</sup> i/ ‘fascist’
	HL /kop <sup>h</sup> i/ ‘golf’	HLL /kesit <sup>h</sup> i/ ‘guest’	LHHL /sinario/ ‘scenario’
	LH /kasip/ ‘gossip’	LHL /orendʒi/ ‘orange’	HLLL /p <sup>h</sup> iriʌti/ ‘period’
		LHH /limudʒin/ ‘limousine’	LHLL /p <sup>h</sup> illeiʌ/ ‘player’
			LHHH /paiollin/ ‘violin’

The suffixation form of the monosyllabic H tone loanword, + /k<sup>h</sup>ʌp+i/ HL ‘cup’ nom. has L falling on the nom. suffix. The suffixation form of the disyllabic HH tone loanword, + /menʃʌn+i/ HHL ‘mansion’ nom. has L falling on the suffix. When the same nom. suffix /-i/ is added to the disyllabic LH tone loanword, ㄱㅏㅍ + /kassip+i/ LHL ‘gossip’ nom., the suffix has L falling. The same nom. suffix after the trisyllabic LHH and the quadrissyllabic LHHH tone also has pitch falling, + /limudʒin+i/ LHHL ‘limousine’ nom., + /paiollin/ LHHHL ‘violin’ nom..

In section 2, the loanword compound data and their tonal interactions will be represented. In the data representation of section 2, only some possible loanword combinations are presented out of the complete list of all possible SKK loanword compound combinations.<sup>4</sup> All the tone patterns of the current study are collected by the author (who is a native SKK speaker) and attested by several native SKK speakers who were born in Busan and have lived in the region for their whole lives. Sample *Optimality Theoretic* (OT: Prince and Smolensky 1993, 2004, McCarthy and Prince 1995) analyses will be provided at the end of the section. Section 3 presents some overall generalizations from the data and concludes the current study.

## 2. SKK loanword compounds and their tonal interactions<sup>5</sup>

In this section, we will provide some possible SKK loanword compounds composed of Native Korean, Sino-Korean, English, and Japanese words. The

<sup>3</sup> HHHL tone loanword /sentiwitʃi/ ‘sandwich’ is also attested in a SKK Korean dialect (in Changwon dialect) but Busan dialect (another major SKK dialect) does not have this tone pattern but has HHLL. However, we do not represent this tone pattern HHHL in Table 2.

<sup>4</sup> More compound combinations will be added up to the list of SKK compound combinations in future research.

<sup>5</sup> All the tone patterns of the current study are collected by the author (who is a native South Kyungsang Korean speaker) and they are attested by other native South Kyungsang Korean speakers. Some of the component word tones of the current compounds are possibly from previous research (Lee 2009, Lee 2011a, b).

first data show the tone patterns of the compounds consisting of a Sino-Korean Word (Sino-KW) and an English Word (EW). The Sino-KW is located at W1 position and the EW is at W2 in the composition scheme of the compounds.

### 2.1 Sino-Korean Word (Sino-KW) + English Word (EW)

- (2) [jʌlhjʌl] HH + [p<sup>h</sup>en] H → [jʌlhjʌlp<sup>h</sup>en] HHL ‘extreme fans’  
 (3) [kolsu] HH + [p<sup>h</sup>en] H → [kolsup<sup>h</sup>en] HHL ‘extreme fans’  
 (4) [ilpon] HH + [p<sup>h</sup>en] H → [ilponp<sup>h</sup>en] HHL ‘Japanese fans’  
 (5) [keksil] HH + [k<sup>h</sup>i] H → [keksilk<sup>h</sup>i] HHL ‘hotel/motel room key’

From the data (2) to (5), (final accented) HH tone Sino-KWs are combined with accented H tone EWs. The resulting tone pattern is HHL tone. As we observed in SKK native word combinations (Lee 2011a, 2011b), SKK disprefers a long final monotone sequence (\*HHH) in a prosodic domain. The loanword compound data here show exactly the same phenomenon.

- (6) [jasʌŋ] HH + [eŋk<sup>h</sup>ʌ] HL → [jasʌŋeŋk<sup>h</sup>ʌ] HHLL ‘woman anchor’  
 (7) [seŋil] HH + [k<sup>h</sup>eik] LH → [seŋilk<sup>h</sup>eik] HHLL ‘birthday cake’  
 (8) [kaŋpjaŋ] HH + [t<sup>h</sup>aun] LH → [kaŋpjaŋt<sup>h</sup>aun] HHLL ‘riverside A.P.T.’  
 (9) [p<sup>h</sup>ilsu] HH + [ait<sup>h</sup>em] LHH → [p<sup>h</sup>ilsuait<sup>h</sup>em] HHLLL ‘must-have items’  
 (10) [tʃwaljʌŋ] HH + [sik<sup>h</sup>edʒul] LHL → [tʃwaljʌŋsik<sup>h</sup>edʒul] HHLLL ‘filming schedule’  
 (11) [wʌlhwa] HH + [tiraŋa] LHL → [wʌlhwatiraŋa] HHLLL ‘Mons. Tues. soap opera’  
 (12) [dʒumal] HH + [tiraŋa] LHL → [dʒumaltiraŋa] HHLLL ‘weekend soap opera’  
 (13) [sumok] HH + [tiraŋa] LHL → [sumoktiraŋa] HHLLL ‘Weds. Thurs. soap opera’  
 (14) [p<sup>h</sup>okp<sup>h</sup>uŋ] HH + [taiʌt<sup>h</sup>i] LHHL → [p<sup>h</sup>okp<sup>h</sup>uŋtaiʌt<sup>h</sup>i] HHLLLL ‘intensive diet’

From the data (6) to (14), (final accented) HH tone Sino-KWs are combined with HL (6), LH (7, 8), LHH (9), LHL (10-13), and LHHL (14) tone pattern EWs. The second H tone of the Sino-KWs is the accented H tone. SKK accented H tone has L falling right after the accent: H\*+ (L), thus, all the following tones of the EWs are leveled as L tone because SKK does not have two accents (falling and rising) in a prosodic domain. All the resulting tone patterns of these combinations from (6) to (14) are HHLL and HHLLL. This means that in SKK there cannot be two pitch accents in one prosodic domain, thus all the following tones of the accent H of these Sino-KWs become L

tone. The resulting tone patterns also show the same tonal interaction patterns as the SKK native compounds do.

- (15) [sinsaŋ] HL + [p'ek] H → [sinsaŋp'ek] HLL 'newly released bag'  
 (16) [kaŋp<sup>h</sup>an] HL + [eŋk<sup>h</sup>ʌ] HL → [kaŋp<sup>h</sup>aneŋk<sup>h</sup>ʌ] HLLL 'representative anchor'  
 (17) [sisa] HL + [t<sup>h</sup>ok<sup>h</sup>i] HL → [sisat<sup>h</sup>ok<sup>h</sup>i] HLLL 'talk show on current issues'  
 (18) [tunwe] HL + [keim] LH → [tunwekeim] HLLL 'brain game'  
 (19) [wansuk] HL + [t<sup>h</sup>omat<sup>h</sup>o] LHL → [wansukt<sup>h</sup>omat<sup>h</sup>o] HLLLL 'ripped tomato'  
 (20) [dʒikak] HL + [p<sup>h</sup>irinsi] LHL → [dʒikakphirinsi] HLLLL 'a handsome prince-like actor who always shows up late at the filming scene'  
 (21) [pikik] HL + [tirama] LHL → [pikiktirama] HLLLL 'tragedy drama'  
 (22) [hikik] HL + [tirama] LHL → [hikiktirama] HLLLL 'comedy drama'

From the data (15) to (22), HL tone Sino-KWs are combined with H (15), HL (16, 17), LH accented (18), and LHL (19-22) tone EWs. The H tone of the Sino-KWs is the accented H tone thus the L falling after the accent levels all the following tones in the EWs. Therefore, the resulting tone pattern of these combinations from (15) to (22) becomes HLL(L)(L). This means that in SKK there has to be only one pitch accent in a prosodic domain. These resulting tone patterns also show the same tonal interaction patterns as the SKK native compounds do.

- (23) [kwaŋŋhak] LH (unaccented) + [dʒum] H (accented) → [kwaŋhakdʒum] LHH 'optical zoom'  
 (24) [pjʌntʃik] LH (unaccented) + [t<sup>h</sup>okʌ] HL → [pjʌntʃikt<sup>h</sup>okʌ] LHHL 'unusual speaker'  
 (25) [hanu] LH (unaccented) + [s'et<sup>h</sup>i] HL → [hanuset<sup>h</sup>i] LHHL 'Korean beef gift pack'  
 (26) [dʒʌndʒa] LH (unaccented) + [renti] HL → [dʒʌndʒarenti] LHHL 'electronics land (a shop)'  
 (27) [jenin] LH (unaccented) + MC [ems'i] HH → [jeninem's'i] LHHH 'entertaining M.C.'  
 (28) [hanlju] LH (unaccented) + [sit<sup>h</sup>a] LH → [hanljusit<sup>h</sup>a] LHHH 'Korean Wave star'  
 (29) [sakak] LH (unaccented) + [lain] LH → [sakaklain] LHHH 'rectangular jaw line'  
 (30) [onjʌl] LH (unaccented) + [k<sup>h</sup>ap<sup>h</sup>et<sup>h</sup>i] LHL →

- (31) [suhak] LH (unaccented) + [onjəl k<sup>h</sup>ap<sup>h</sup>et<sup>h</sup>i] LHHHL ‘heating carpet’  
[k<sup>h</sup>illinik] LHH → [suhak  
k<sup>h</sup>illinik] LHHHL ‘math clinic’
- (32) [wemo] LH (unaccented) + [k<sup>h</sup>amp<sup>h</sup>illeksi] HHLL  
(HHHL) → [wemok<sup>h</sup>amp<sup>h</sup>illeksi] LHHHLL (LHHHHL) ‘appearance  
complex’

From the data (23) to (32), LH unaccented Sino-KWs are combined with H (23), HL (24-26), HH (27), LH (28, 29), LHL (30), LHH (31), and HHH (32) tone EWs. The H tone of the Sino-KWs is unaccented H tone which means no L falling follows this H tone. This H tone spreads rightward onto the following syllables e.g., [hanu] LH 'Korean cows' → -ㄱ [hanu-ka] LH-H 'Korean cows' nominative. The resulting tone pattern of (23) is LHH and that of (24-26) is LHHH. The resulting tone pattern of (27-29) is LHHH. Especially for the data (28, 29), we can see that SKK does not prefer two accents (H\*+L) in a prosodic domain. In these two combinations, the unaccented H of the preceding Sino-KWs spreads rightward onto the first L toned syllable of the EWs. The resulting tone pattern of (31-32) is LHHH(L) (or LHHHHH).

- (33) [sundʒaŋ] LH + [matʃo] LH (unaccented) →  
[sundʒaŋmatʃo] LHHH ‘naive macho’
- (34) [koŋkan] LH + [paksi] HL → [koŋkanpaksi] LHHL  
‘organizing box’
- (35) [tʃaŋjaŋ] LH + [p<sup>h</sup>alp<sup>h</sup>i] HL → [tʃaŋjaŋp<sup>h</sup>alp<sup>h</sup>i] LHHL  
‘natural pulp’
- (36) [makdʒaŋ] LH + [tirama] LHL → [makdʒaŋtirama]  
LHHHL ‘ugly soap opera’
- (37) [wɔndʒo] LH + [p<sup>h</sup>irirensa] LHHL →  
[wɔndʒop<sup>h</sup>irirensa] LHHHHL ‘original freelancer’

From (33) to (37), accented LH tone Sino-KWs, e.g., [sundʒʌŋ] LH → [sundʒʌŋ-i] LH-L nominative, are combined with LH unaccented (33), HL (34, 35), LHL (36), and LHH (37) tone EWs. The resulting tone pattern of (33) is LHHH which means that SKK disfavors two accents in a prosodic domain.<sup>6</sup> The resulting tone pattern of (34, 35) is LHHH which means that the accent H of the Sino-KWs clashes with the accent of the EWs thus the accent of the Sino-KWs are deaccented. However, the resulting tone pattern cannot be \*LLHL because SKK does not prefer a prosodic domain starting with two L tones in sequence. The resulting tone patterns of (36, 37)

<sup>6</sup> The L tone of W2 (33) seems to deaccent the H tone accent of W1, thus the deaccented H tone of W1 spreads rightward. In this case, the H accent of W1 cannot be a L tone because it would result in an ill-form \*LLH which starts a prosodic domain in three L tones in series. This deaccenting effect of the L tone in W2 seems to be also applied in (36) and (37). However, we do not further discuss this here.

<sup>8</sup> Kim (1988) also argues that accent clash makes the previous accent as L tone in the phrases of North Kyungsang Korean.



The unaccented H of W1 seems to spread rightward onto the first syllable of W2.

- (49) [kʌn] L + [mijʌk] HL → [kʌnmijʌk] LHL ‘dried seaweed’  
 (50) [kʌn] L + [mjʌltʃi] HL → [kʌnmjʌltʃi] LHL ‘dried anchovy’  
 (51) [su] L + [pak] H (unaccented) → [supak] LH ‘watermelon’  
 (52) [pan] L + [mal] L → [panmal] LH ‘talk down’  
 (53) [jan] L + [tari] LH → [janʔari] LHH ‘two timing’

From (49) to (53), L tone Sino-KWs are combined with HL (49, 50), H (51), L (52), and LH (53) tone NKWs. The resulting tone pattern of (49, 50) is LHL and that of (51-53) is LH(H). From (52, 53), we can see that SK does not prefer two L tones in series, \*#LL at word initial position.

- (54) [wanto] HH + [mijak] HL → [wantomijak] HLLL  
‘Wando island seaweed’
- (55) [dʒaltan] HH + [k’otke] HL → [dʒaltank’otke] HLLL  
‘cut crab’
- (56) [dʒaltan] HH + Ɂ [kadʒami] LHL → [dʒaltankadʒami]  
HLLL ‘cut hailbut’
- (57) [dʒaltan] HH + [tasima] LHL → [dʒaltantasiswa]  
HLLL ‘cut seaweed’
- (58) [apɾjak] HH + [sot] H → [apɾjaksot] HHL ‘pressure pot’
- (59) [wɔlnam] HH + [s’am] H (unaccented) → [wɔlnams’am]  
HHL ‘Vietnamese dish’

From (54) to (59), HH tone Sino-KWs are combined with HL (54, 55), LHL (56, 57), H (58), and unaccented H (59) tone pattern NKWs. SKK does not prefer a prosodic domain starting with three H tones in series thus the resulting tone pattern of (54) and (55) is HHLL. SKK also disprefers two accents in a prosodic domain so the resulting tone pattern of (56) and (57) is HHLLL. The L tone after the accent of W1 (which is the second H) levels all the following tones in these combinations. SKK does not like a monotoned prosodic domain hence the resulting tone pattern of (58, 59) is HHL. The reason why (58) does not have \*HLH as the resulting tone pattern (due to the accent clash) is that SKK dislikes two accents (which implies falling and rising) in a prosodic domain.

- (60) [mjʌŋtʰe] HL + [dʒ'im] H (unaccented) → [mjʌŋtʰedʒ'im]  
HLL 'steamed Pollack'
- (61) [dʒepʌl] HL + [t'al] H (unaccented) → [dʒepʌlt'al] HLL  
'daughter of a rich family'

In (60) and (61), the L falling after the accent of W1 levels the following tone.

- (62) [samkjʌp] LH + [sal] H (unaccented) → [samkjʌpsal]  
LHL ‘bacon’
- (63) [dʒʌŋdʒaŋ] LH + [tʃarim] HL → [dʒʌŋdʒaŋtʃarim] LHHL  
‘wearing suit’
- (64) [pute] LH + [dʒ’ike] HL → [putedʒ’ike] LHHL ‘U.S.  
military base soup’
- (65) [okjʌp] LH (unaccented) + [sal] H (unaccented) → [okjʌpsal]  
LHH ‘five layers bacon’

In (62), a LH (accented) tone Sino-KW is combined with an unaccented H tone NKW. The resulting tone pattern is LHL. In (63) and (64), LH (accented) tone Sino-KWs combine with HL tone NKWs, and the resulting tone pattern is LHHL. The accented H tone of W1 gets deaccented due to the accent clash. However it cannot be a L tone, #\*LL, because SKK does not prefer a prosodic domain starting with two L tones in sequence. In (65), an unaccented LH tone Sino-KW combines with an unaccented H tone NKW. The resulting tone pattern is LHH.

### 2.3 Sino-KW + Japanese Word (JW)

The third data show the tone patterns of compounds consisting of a Sino-Korean Word (Sino-KW) and a Japanese Word (JW). The Sino-KW is located at W1 position and the JW is at W2 in the composition scheme of the compounds.

- (66) [sudʒe] HH + [tonk’asi] HHL → [sudʒetontk’asi]  
HHLLL ‘handcrafted pork cutlet’
- (67) [neŋdʒaŋ] LH (unaccented) + [tonk’asi] HHL →  
[neŋdʒaŋtonk’asi] LHHHL ‘refrigerated pork cutlet’
- (68) [neŋton] LH (unaccented) + [tonk’asi] HHL →  
[neŋtonk’asi] LHHHL ‘frozen pork cutlet’

In (66), a HH tone Sino-KW combines with a HHL tone JW and the resulting tone patterns is HHLLL. The L falling after the accent H (which is the second H of W1) levels all the following tones (and it seems that SK does not prefer four H tones in series at word initial position). In (67) and (68), unaccented LH Sino-KWs combine with HHL JW and the resulting tone pattern is LHHHL.

### 2.4 EW + Sino-KW

The fourth data set shows the tone patterns of compounds consisting of a English Word (EW) and a Sino-Korean Word (Sino-KW). The EW is located at W1 position and the Sino-KW is at W2 in the composition scheme of the compounds.

- (69) [puk<sup>h</sup>iŋ] HH + [nam] H → [puk<sup>h</sup>iŋnam] HHL ‘instant date man’  
 (70) [dʒent<sup>h</sup>il] HH + [nam] H → [dʒent<sup>h</sup>ilnam] HHL ‘gentleman’  
 (71) [entɪŋ] HH + [dʒaŋmjʌn] HL → [entɪŋdʒaŋmjʌn] HHLL ‘last scene’  
 (72) [welpiŋ] HH + [site] HL → [welpiŋsite] HHLL ‘wellness era’  
 (73) [ʃop<sup>h</sup>iŋ] HH + [dʒuŋtok] LH (unaccented) → [ʃop<sup>h</sup>iŋdʒuŋtok] HHLL ‘shopping addiction’  
 (74) [p<sup>h</sup>enʃʌn] HH + [saʌp] LH (unaccented) → [p<sup>h</sup>enʃʌnsaʌp] HHLL ‘pension business’

From the data (69) to (74), (final accented) HH tone EWs are combined with H (69, 70), HL (71, 72), and unaccented LH (73, 74) tone Sino-KWs. The resulting tone pattern of the combinations in (69, 70) is HHL. The second H tone of the EWs is the accented H thus the L falling after the accent seems to level the following tone. SKK also disprefers monotone in a prosodic domain e.g., \*HHH. The resulting tone pattern of (71-74) is HHLL, and this implies that SKK disprefers a prosodic domain starting with three H tones in series (71, 72) as well as a prosodic domain having two accents (73, 74).

- (75) [rekk<sup>h</sup>a] HL + [tʃa] H → [rekk<sup>h</sup>a tʃa] HLL ‘towing truck’  
 (76) [t<sup>h</sup>ok<sup>h</sup>i] HL + [matsu] HL → [t<sup>h</sup>ok<sup>h</sup>imatsu] HLLL ‘talk show rival’  
 (77) X [eksi] HL + [sete] LH (unaccented) → [eksisete] HLLL ‘generation X’  
 (78) [p<sup>h</sup>idʒa] HL + [petal] LH (unaccented) → [p<sup>h</sup>idʒapetal] HLLL ‘pizza delivery’  
 (79) 가 [kasi] HL + [petal] LH (unaccented) → [kasipetal] HLLL ‘L.P.G. delivery’  
 (80) [remon] LH + [tʃa] H → [remontʃa] LHL ‘lemon tea’  
 (81) [p<sup>h</sup>iri] LH + [sʌnʌn] LH → [p<sup>h</sup>irisʌnʌn] LHHH ‘declaring freelancer’  
 (82) [kirup] LH + [ponpu] HH → [kirupponpu] LHHH<sup>9</sup> ‘Headquarter of a company’  
 (83) [k<sup>h</sup>ilik] LH + [dʒʌndʒeŋ] LH (unaccented) → [k<sup>h</sup>ilik dʒʌndʒeŋ] LHLL ‘clicking competition’

<sup>9</sup> For the result tone pattern, LHHH, of (81) and (82), there might be an alternative tone pattern, LHLL. It seems that some alternations look quite systematic based on the observation of some previous research (Kubozono 2007, Lee 2009). According to these studies, in SK loanwords having the pitch accent (H\*+L) at the final syllable, e.g., HH\*, LH\*, LHH\*, the L falling (of the pitch accent) already starts on the last mora (in this case final coda of the last syllable) unlike SK native words that have L falling on the following syllable of the final accented syllable. However, we do not further discuss this here.

From (75) to (79), accented HL tone EWs are combined with accented H (75), HL (76), and unaccented LH (77-79) tone Sino-KWs. The resulting tone patterns of these combinations are HLL and HLLL. The H tone accent of the EWs levels all the following tones in all of these combination processes. From (80) to (83), LH tone EWs are combined with accented H (80), LH accented (81), HH (82), and LH unaccented (83) tone Sino-KWs. The resulting tone pattern of (80) is LHL and that of (81) is LHHH. In (81), SKK shows it does not prefer two accents in a prosodic domain. The accent of W1 seems to be deaccented due to the following L tone of W2 but this accent of W1 cannot get deaccented into a L tone because SKK does not prefer two L tones in series at word initial position. The resulting tone pattern of (82) is LHHH (LHLL) and that of (83) is LHLL.

- (84) [k<sup>h</sup>onsʌt<sup>h</sup>i] HHL + [dʒaŋ] H → [k<sup>h</sup>onsʌt<sup>h</sup>idʒaŋ] HHLL  
‘concert hall’

The HHL tone pattern EW in (84) is combined with an accented H tone Sino-KW, and the resulting tone pattern is HHLL. The second H of the EW is the accented H thus the L falling after the accent levels the following tone.

- (85) [pirenti] LHL + [dʒʌŋ] L → [pirentidʒʌŋ] LHLL ‘designer brand exhibition’  
(86) [k<sup>h</sup>amera] LHL + [kamtok] HL → [k<sup>h</sup>amerakamtok] LHLL ‘camera director’  
(87) [ap<sup>h</sup>at<sup>h</sup>i] LHL + [kwaŋko] LH (unaccented) → [ap<sup>h</sup>at<sup>h</sup>ikwaŋko] LHLL ‘condo advertisement’  
(88) [hausi] LHL + [supak] LH (unaccented) → [hausisupak] LHLL<sup>10</sup> ‘greenhouse watermelon’  
(89) [teit<sup>h</sup>i] LHL + [saŋte] LH → [teit<sup>h</sup>isaŋte] LHLL ‘a date’  
(90) [mak<sup>h</sup>et<sup>h</sup>iŋ] LHH + [dʒʌŋkoŋ] LH → [mak<sup>h</sup>et<sup>h</sup>iŋ dʒʌŋkoŋ] LHLL ‘marketing major’  
(91) [mak<sup>h</sup>et<sup>h</sup>iŋ] LHH + [kwadʒaŋ] HL → [mak<sup>h</sup>et<sup>h</sup>iŋ kwadʒaŋ] LHLL ‘marketing section chief’

From (85) to (89), LHL EWs are combined with L (85), HL (86), LH unaccented (87, 88), LH accented (89). The resulting tone patterns of these combinations are LHLL(L). In (90, 91), LHH (final accented) tone EWs are combined with accented LH (90) and HL (91) tone pattern Sino-KWs. The resulting tone pattern of (90) and (91) is LHLL. The resulting tone patterns of (85-91) are indicates that the L falling after the accent H of the EWs levels all the following tones in the combining processes.

<sup>10</sup> As you may see later, [supak] ‘watermelon’ is the combination of a Sino-KW (水) [su] and a NKW [pak], however, we use this example here due to the lack of data.

## 2.5 EW + NKW

(92) shows the tone pattern of a compound consisting of a English Word (EW) and a Native Korean Word (NKW). The EW is located at W1 position and the NKW is at W2 in the composition scheme of the compounds.

- (92) LA [e.le.i] LHL + [kalpi] HL → [eleikalpi] LHLLL ‘L.A. style Korean grill’

The LHL EW is combined with a HL tone NKW in (92), and the resulting tone is LHLLL because the H tone of the EW is the accented H. That is, the L falling after the accent H in the EW levels all the following tones in the combining process. SK disprefers two accents in a prosodic domain, \*LHLHL either.

## 2.6 NKW + EW

The sixth data show the tone patterns of compounds consisting of a Native Korean Word (NKW) and an English Word (EW). The NKW is located at W1 position and the EW is at W2 in the composition scheme of the compounds.

- (93) [mom] H (unaccented) + [keki] HL → [momkeki] HHL ‘slapstick comedy’  
 (94) [mul] H (unaccented) + [tiʃu] HH (HL) → [multiʃu] HHL ‘wet tissue’

In (93) and (94), unaccented H tone NKWs are combined with HL (93) and HH (94) tone EWs. The resulting tone pattern is HHL. Especially in (94), the resulting tone pattern implies that SKK does not prefer a monotone in a prosodic domain.

- (95) [nunmul] HH + [s’in] H → [nunmuls’in] HHL ‘crying scene’  
 (96) [pulk’ot] HH + [pet<sup>h</sup>il] HH → [pulk’otpet<sup>h</sup>il] HHLL ‘fiery battle’

In (95) and (96), HH tone NKWs combine with H (95) and HH (96) tone. The resulting tone pattern is HHL and HHLL which mean that SKK disprefers a monotone pattern in a prosodic domain. The L falling after the accent H of W1 (which is the second H) levels all the following tones in (95) and (96).

- (97) [kui] HL + [p<sup>h</sup>æn] H → [kuip<sup>h</sup>æn] HLL ‘grill pan’  
 (98) [kirit] HL + [s’et<sup>h</sup>i] HL → [kirits’et<sup>h</sup>i] HLLL ‘dish collection’

- (99) [kʲʌul] HL + [p<sup>h</sup>etɨŋ] HH → [kʲʌulp<sup>h</sup>etɨŋ] HLLL ‘winter  
down jacket’  
(100) [paŋul] HL + [t<sup>h</sup>omat<sup>h</sup>o] LHL → [paŋult<sup>h</sup>omat<sup>h</sup>o] HLLL ‘cherry tomato’  
(101) [miri] HL + [k<sup>h</sup>irisimasi] LHHHL → [mirik<sup>h</sup>irisimasi] HLLLLL ‘early Christmas’

From (97) to (101), HL tone NKWs combine with H (97), HL (98), HH (99), LHL (100), and LHHHL (101) tone EWs. The resulting tone patterns are HLL, HLLL, HLLLL, and HLLLLL which mean the L falling after the pitch accent in W1 levels all the following tones in the combining processes. The data in (97-101) show that SKK does not like two accents in a prosodic domain.

- (102) [nempi] LH + [s<sup>h</sup>et<sup>h</sup>i] HL → [nempis<sup>h</sup>et<sup>h</sup>i] LHHL ‘pot  
collection’  
(103) [motim] LH + [s<sup>h</sup>et<sup>h</sup>i] HL → [motims<sup>h</sup>et<sup>h</sup>i] LHHL ‘collection’

In (102) and (103), LH (accented) tone NKWs are combined with HL EWs and the resulting tone is LHHL. The accent of W1 and that of W2 clashes but the accent in W1 cannot be deaccented into a L tone (\*#LL) because SK does not like to start a prosodic domain with two L tones in sequence.

## 2.7 NKW + Sino-KW

The seventh data show the tone patterns of compounds consisting of a Native Korean Word (NKW) and a Sino-Korean Word (Sino-KW). The NKW is located at W1 position and the Sino-KW is at W2 in the composition scheme of the compounds.

- (104) [k<sup>h</sup>ul] H (unaccented) + [kwan] L → [k<sup>h</sup>ulkwan] HH ( )  
‘shining like honey’  
(105) [mul] H (unaccented) + [kwan] L → [mulkwan] HH ( )  
‘shining like water’  
(106) [s<sup>h</sup>am] H (unaccented) + [dʒaŋ] L → [s<sup>h</sup>amdʒaŋ] HH ‘soybean  
sauce for vegetable dish’  
(107) [mul] H (unaccented) + [sek] H (unaccented) → [mulsek] HH  
‘the color of water’  
(108) [mul] H (unaccented) + [neŋmjʌŋ] HH → [mulneŋmjʌŋ] HHL ‘Korean cold noodle’  
(109) [k<sup>h</sup>e] H (unaccented) + [paŋdʒʌŋ] LH → [k<sup>h</sup>epaŋdʒʌŋ] HHL  
‘act rashly’  
(110) [dʒʌt] H (unaccented) + [toŋnaŋ] LH (unaccented) → [dʒʌttoŋnaŋ] HHL ‘asking for breast milk’

- [illegible]

From (104) to (106), unaccented H tone NKWs are combined with L tone Sino-KWs. The resulting tone pattern of these combinations is HH. The unaccented H tone spreads rightward. In (107) an unaccented H tone NKW is combined with an unaccented H tone Sino-KW. The resulting tone pattern of the combination is HH. In (108) an unaccented H tone NKW is combined with a HH tone Sino-KW. The resulting tone pattern of (108), HHL, shows that SK disprefers a monotone pattern in a prosodic domain. In (109, 110), unaccented H tone NKWs are combined with an accented LH tone (109) and an unaccented LH tone (110) Sino-KW. In (111, 112), accented H tone NKWs are combined with a LH unaccented tone (111) and a HL tone (112) Sino-KW. In (113), a L tone NKW is combined with a HH tone Sino-KW. The resulting tone pattern of (109, 110) is HHL which indicates the unaccented H of W1 spreads rightward. The resulting tone pattern of (111) is HLL. The L falling after the accent H in W1 levels the following tones. In (112), the resulting tone pattern is LHL which implies that the accent H of W1 clashes with the accent H of W2 thus the accent of W1 gets deaccented into a L tone. The resulting tone pattern of (113) is LHH.

- (114) [nalke] HH + [hjʌŋ] H → [nalkehjʌŋ] HHL ‘wing shape’  
(115) [aldʒ’a] HH + [ran] L → [aldʒ’aran] HHL ‘really good eggs’  
(116) [kurim] HH + [sadʒin] LH → [kurimsadʒin] HHLL  
‘picture of cloud’

From (114) to (116), HH NKWs are combined with an accented H (114), a L (115), and an accented LH (116) tone Sino-KWs. The resulting tone pattern of (114, 115) is HHL and that of (116) is HHLL. The compound combination (114) shows that SKK disprefers a monotone pattern in a prosodic domain and (116) represents SKK does not prefer two accents in a prosodic domain.

- (117) [kui] HL + [joŋ] L → [kuijoŋ] HLL ‘(meat) for grill’  
 (118) [pos’am] HL+ [joŋ] L → [pos’am joŋ] HLL ‘(meat) for  
 steam or boil’  
 (119) [kʌul] HL + [koŋdʒu] HH → [kʌulkʌŋdʒu] HLLL  
 ‘mirror princess’

From (117) to (118), HL tone NKWs combine with L tone (117, 118), and HH tone (119) Sino-KWs, and the resulting tone patterns are HLL (for 117, 118) and HLLL (for 119). The L falling after the accent of W1 levels all the following tones in these combinations. Especially, (119) indicates that SKK

<sup>11</sup> Some native speakers attested that LHL is also a possible tone pattern for this compound.



in sequence. In (126), a LHHL tone JW is combined with an unaccented H tone NKW, and the resulting tone pattern is LHHLL.

The tonal interactions that we observed from 1 Sino-Korean Word (Sino-KW) + English Word (EW) to 8 JW + NKW can be summarized as below in Table 3, Table 4, and Table 5:

**Table 3. Tonal interactions of SKK loanword compounds<sup>12</sup>**  
(W1 is a monosyllabic word, \* means an accented tone)

H* +	H +	L +
H* → LH	H* → HH	
L → HL	L → HH	<b>L → LH</b>
H → HL	H → HH	H → LH
H*L → LHL	H*L → HHL	H*L → LHL
	<b>HH* → HHL</b>	HH* → LHH
		<b>LH* → LHH</b>
LH → HLL	LH → HHL	
	LH*L → HHLL	

In Table 3, the (accented) H\* tone of W1 gets deaccented into a L tone when the following W2 starts with H\* accent. In other cases, the H\* predominates over the following tones in W2. The (unaccented) H tone shows the tendency to spread rightward. Two noticeable tonal interaction from this table is H + HH\* in the sixth cell of the second column and L + LH\* in the seventh cell of the third column. The result tone patterns of these combinations are HHL (second syllable accented) and LHH (final syllable accented). The HHL resulting tone means that SKK does not allow a monotone pattern (\*HHH) in a prosodic domain and the LHH resulting tone indicates that SKK does not allow two L tones in sequence at word initial position (\*#LL).

<sup>12</sup> The tone in the uppermost cell of each column means the tone of W1 in the compound composition scheme. From the second cell of each column, the tone of W2 is located on the left side of the arrow mark and the tonal interaction output is represented on the right side of the arrow. The asterisk (\*) means an accented H tone in either W1 or W2 position. An unaccented H tone is indicated as H in both W1 and W2 position. The result tone patterns of the interactions do not distinguish H\* and H. (All of the empty cells do not mean impossible combinations but indicate the lack of data.)

**Table 4. Tonal interactions of SKK loanword compounds<sup>13</sup>**  
(W1 is a disyllabic word, \* means an accented tone)

H*L +	HH* +	LH* +	LH +
H* → HLL	H* → HHL	H* → LHL	H* → LHH
L → HLL	L → HHL	L → LHL	
H → HLL	H → HHL	H → LHL	H → LHH
H*L → HLLL	H*L → HHLL	H*L → LHHL	H*L → LHHH
HH* → HLLL	HH* → HHLL	HH* → LHHH (LHLL)	HH* → LHHH
LH* → HLLL	LH* → HHLL	LH* → LHHH	LH* → LHHH
LH → HLLL	LH → HHLL	LH → LHHH (LHLL)	
	HH*L → HHLLL	HH*L → LHHHL	HHL → LHHHL
LH*L → HLLLL	LH*L → HHLLL	LH*L → LHHHL	LH*L → LHHHL
	LHH* → HHLLL		LHH* → LHHHL
LHHH*L → HLLLLL	LHH*L → HHLLL	LHH*L → LHHHHL	HH*LL → LHHHLL

In Table 4, W1 H\*L (initial accented) and W1 HH\* (final accented) predominates over the following tones in W2. When the W1 is LH\* (accented) and LH (unaccented), the accent of W2 predominates. In the combination of LH\* + H\* (or unaccented H), these tones in W2 become L tone.

**Table 5. Tonal interactions of SKK loanword compounds**  
(W1 is a trisyllabic word, \* means an accented tone)

HH*L +	LH*L +	LHH* +
H* → HHLL		H* → LHHL
	L → LHLL	
	H → LHLL	H → LHHL
	H*L → LHLLL	H*L → LHHLL
	LH* → LHLLL	LH* → LHHLL
	LH → LHLLL	

In Table 5, W1 HH\*L (second syllable accented), LH\*L (second syllable accented), and LHH\* (final syllable accented) predominate over the following tones in W2. When the W1 is a quadrisyllabic word, LHH\*L, and the W2 is a H (unaccented) tone word, the tonal interaction output is LHHLL (which means that the accent of W1 predominates the following tone in W2).

Based on the current observation of all the tonal interaction patterns of SKK loanword compounds, we can point out one important thing. That is,

<sup>13</sup> The tone pattern in a parenthesis in each cell is a variation of the main tonal interaction of the cell.

even though all the component words have different language sources in the loanword combinations, the tonal interaction patterns show consistency which means that all the tonal interaction patterns of SKK loanword compounds in the current study follow the regulations (or constraints) of the South Kyungsang Korean tonal system without considering the original prosodic systems of the component words' source languages. This indicates that the original prosodic system of each source language does not play any role in the tonal interactions of the SKK loanword compounds and that the systems look all irrelevant to these tonal interaction patterns of the current SKK dialect. In the following part, we will provide sample analyses on the two noticeable tonal interactions that were mentioned in Table 1.

## 2.9 Sample Analyses

In this part, two significant tonal interactions that were observed in Table 1 will be analyzed. One tonal interaction is H + HH\* (e.g., [mul] + [t<sup>h</sup>iʃu] 'wet tissue') and the other one is L + LH\* (e.g., [jaŋ] + [tari]). As we already saw in the data section, the resulting tone patterns of these combinations are HHL and LHH. The HHL resulting tone pattern indicates the prohibition of a monotone pattern (\*HHH) in a prosodic domain in SKK. The tonal interactions of HH\* + H\* (e.g., [ʌlhjaŋ] + [p<sup>h</sup>en] 'extreme fans') and HH\* + H (e.g., [wʌlnam] + [s'am] 'Vietnamese dish') from Table 2 also show the same resulting tone pattern, HHL and this also indicates SKK does not allow a monotone pattern in a prosodic domain. The LHH resulting tone pattern of the L + LH\* combination means that SKK prohibits two L tone sequence at the word initial position (\*#LL).

Before the analyses, we would like to mention that the first word (W1) and the second word (W2) in every compound composition scheme [W1 + W2] already have underlying tone patterns before the tonal interactions. The tone assignment processes for the SKK loanwords that were used in these compound compositions are not discussed here.<sup>14</sup> For the current analyses, we adapt the following OT constraints from the literature (Lee 2009, Lee and Davis 2009, Kager 1999). First, we adopt a faithfulness constraint to preserve underlying tone pattern of each component word (W1, W2) in the compound composition processes.

(127) PRESERVE (TONE): THE TONE OF AN INPUT MUST BE PRESERVED IN ITS OUTPUT CORRESPONDENT.

In SKK loanword compound data, we saw that only one pitch accent is allowed in a prosodic domain. Thus, we adopt the following constraint from

<sup>14</sup> So far any regularity about which syllable in a SKK native word is assigned with a H tone is not found yet. However, a regularity which syllable is assigned with a H tone in SKK (English) loanwords is discussed in Lee (2009). We do not discuss this here in detail but according to his study a H tone is basically imposed on the heavy syllable in SKK loanwords.

Lee (2009).

(128) ONE-H-PW: A HIGH TONE IS PRESENT IN A PROSODIC WORD.<sup>15</sup>

From the in-depth examination on the SKK loanword compound data, we could see one solid constraint in this Korean dialect (even in SKK native and loan words). That is, this dialect prohibits a monotone pattern (\*HHH) in a prosodic domain. Therefore, we adopt the following constraint from Lee (2009).

(129) \*MONOTONE: WORDS OF THREE OR MORE SYLLABLE CANNOT HAVE H TONE ON ALL SYLLABLES.

The \*MONOTONE constraint must be an undominant constraint because no loanword compound composition in SKK shows a monotonous tone pattern as a resulting tone.

(130) Tonal interactions of SKK loanword compounds (\*HHH)

/mul/ H + /tʰiʃu/ HH	*MONOTONE	PRESERVE	NON-FINALITY
a. H H H	*!		*
*b. H H L		*	
c. L H H		*	*!
d. L H L		**!	

In (130), candidate a. violates the undominant constraint \*MONOTONE. Candidate b. violates the PRESERVE constraint twice. Candidate c. violates both the PRESERVE and the NON-FINALITY constraint. Thus, the optimal output is candidate b. that violates only PRESERVE once. In this table, the NON-FINALITY constraint is adopted to avoid the optimal output having LHH tone in this loanword compound.

(131) NON-FINALITY: FINAL MORA IS EXTRAMETRICAL.

For the next analysis shown in (133) the following constraint is adopted from Lee (2009).

(132) \*LL: A WORD CANNOT BEGIN WITH TWO LOW TONES.

From the data section (or even in SKK native and loan word data from the previous research and the literature), we can see that SKK does not allow a prosodic domain starting with two L tone sequence. To avoid this initial L

<sup>15</sup> According to Lee (2009), when there is multiple H tones in an SKK word there is only one H tone assigned and it links with neighboring syllables. This hypothesis is supported by the observation that in words with multiple high tones, the high tones are always on adjacent syllables. There are no SKK words where two high tones are separated by a low tone.

tone sequence, the constrain (132) is adopted. This constraint is an undominant constraint because no loanword compound composition (even native and loan words) in SKK shows a tone pattern starting with two L tones in series (\*#LL).

(133) Tonal interactions of SKK loanword compounds (\*LLH)

/jan/ L + /tari/ LH	*MONOTONE	ONE-H-PW	*LL	PRESERVE	NON-FINALITY
a. L L H			*!		*
b. L H H				*	*
c. H H H	*!			**	*
d. H L H		*!		*	*

In the following section, we will conclude by drawing several generalizations based on the current tonal interaction patterns of SKK loanword compositions.

### 3. Conclusions

From all of the loanword compound data discussed here, we can draw several generalizations that hold across the different categories as follows:

- 1) If the first word of the loan compound is larger than one syllable and accented, then its accent predominates with all other tones (All the H tones of W2 become Low).
- 2) If the first word of the loan compound is monosyllabic and accented, and the second word begins with a high tone, then the first word deaccents and becomes a low tone.
- 3) In compounds where the first word has LH tone pattern (regardless of whether it is an accented or unaccented LH) then the accent of the second word predominates. However, there is a difference between accented LH and unaccented LH when the second word is a monosyllabic word as seen in the comparison of (62), (80), (120) and (125) with (65) where the second word surfaces with a high tone after unaccented LH (65).
- 4) Unaccented H has a tendency to spread rightward.

Implications for the understanding of accent and tone in SKK are as follows:

- 1) The data offer independent support for the position of Lee and Davis (2010) that SKK has a class of accentless words, distinguishing between two High tones: an accented high tone and an unaccented high tone. Lee and Davis based their evidence on differing tone patterns under suffixation. Data like that in (38) through (48) show that two different high tone monosyllabic words are being distinguished in

compounds, high tones that act as accented (38-45) and those acting as unaccented (46-48).

- 2) Constraints on the SKK tone system posited by Lee (2009) such as \*#LL and the avoidance on long monotonic H tone words are active in the compounds as well. This is seen in many compound data, e.g., (2-5), (34-35), (52-53), (80) among others, where the tone patterns of some component words of the compounds are even changed in order to avoid violating these constraints.

The current study provides SKK loanword compound combinations and their tonal interactions. These tonal interactions in SKK loanword compound combinations have not been represented in the literature on the SKK tonal system as far as we are aware. An important academic purpose and value of the field of Linguistics is to describe linguistic phenomena found in languages in order to come to understand the procedures (and perhaps the reasons) that underlie such phenomena. From this point of view, the current research has an academic significance in terms of describing a linguistic (the tonal interactions of SKK loanword compounds) phenomenon and providing its analytical interpretation in the South Kyungsang Korean tone system.

For future research, an (acoustic) experimental study on the tone patterns of SKK loanword compounds needs to be conducted to investigate whether we can observe more detailed acoustic descriptions such as downstep and upstep (especially on W2) in the tonal interaction patterns of these compounds. For another future research, a full range of Optimality theoretic (Prince and Smolensky 1993, 2004, McCarthy and Prince 1995) approach also needs to be conducted to understand all the necessary constraints and their rankings both in the tonal interactions of SKK native (Lee 2011a, b) and loan word compounds.

## Appendix

1. Loanword Compounds (the compounds in the parentheses have more than two words as their component words).

### 1.1 Sino-Korean Word (Sino-KW) + English Word (EW)

,	,	,	,	,	,	,	,
,	,	,	,	,	,	,	,
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#### 1.2 Sino-KW + Native Korean Word (NKW)

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#### 1.3 Sino-KW + Japanese Word (JW)

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#### 1.4 EW + Sino-KW

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#### 1.5 EW + NKW

LA , , , ,

#### 1.6 NKW + EW

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### 1.7 NKW + Sino-KW

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### 1.8 JW + NKW

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### 1.9 JW + Sino-KW

#### 1.10

- 1.10.1 가 (Portuguese Word + Native Korean Word)
- 1.10.2 (Portuguese Word + English Word)
- 1.10.3 (Italian Word+ Portuguese Word)

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