Unaccented and Final-Accented Classes in Lexical Pitch Accent Languages: A Case Study of Gyeongsang Korean

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ABSTRACT

A number of researchers (Kenstowicz & Sohn, 1997; Jun et al., 2006, among others) have claimed that the pitch accent systems of Gyeongsang Korean (specifically North Gyeongsang Korean and South Gyeongsang Korean) lack an unaccented class and instead have a final-accented class. This claim contradicts recent work on the role of accentedness in *wh*-prosody in Gyeongsang Korean (Hwang 2011) and earlier research on Gyeongsang lexical pitch accent (Ramsey 1978). In this study, I provide additional prosodic evidence to support the claim that Gyeongsang Korean has an unaccented class. I also argue that a final-accented class in Gyeongsang Korean exists, but it is limited to loanwords. This study demonstrates the importance of using more than one diagnostic to identify accent classes in lexical pitch accent languages.

Keywords: Gyeongsang Korean, lexical pitch accent, unaccentedness, loanword phonology

1. Introduction

The nominal accent classes of North and South Gyeongsang Korean have been the subject of considerable dispute, with linguists such as Ramsey (1978) and others analyzing these varieties as having both an accented class with a lexical pitch accent and a pitch fall (HL) and an unaccented class without a lexical pitch accent and a pitch fall, while others, such as Kenstowicz & Sohn (1997) and Jun et al. (2006), posit only an accented class. The two contrasting claims differ in the treatment of the accent class with a final H tone such as the disyllabic noun *namwul* 'cooked vegetable', where the surface melody is LH in Gyeongsang Korean. The former claim treats it as an unaccented class, while the latter claim treats it as a final-accented class. The latter claim is problematic from the

* I would like to thank John Whitman for discussion and comments. I would also like to thank my language consultants for sharing their languages with me. All errors are my own.
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standpoint of current analyses of the prosody of *wh*-questions in Gyeongsang Korean. Hwang (2011) reports that two different prosodies occur within *wh*-scope in South Gyeongsang Korean, attributing the difference to the (un)accentedness of *wh*-words. The no unaccented hypothesis by Kenstowicz & Sohn (1997) and Jun et al. (2006), would require an alternative account of these prosodies. In this paper, I will further support the claim that Gyeongsang Korean has an unaccented class, referring to lexical prosody, OV-sentence prosody, diachronic facts, and loanword accentuation.

This paper is organized as follows. Section 2 discusses the basic prosodic facts, where accented and unaccented *wh*-words trigger different *wh*-prosodies in Gyeongsang Korean, despite the claim of some researchers that an unaccented class is missing. I also briefly touch on Lee & Davis' (2009, 2010) analysis of South Gyeongsang Korean. Section 3 shows how to identify the unaccented class in Gyeongsang Korean, looking at word-level and sentence-level melodies. I show that my analysis with an unaccented class fits with the diachronic developments of Gyeongsang Korean and makes sense of the pitch accent location of loanwords. Section 4 concludes the paper.

This paper presents a reanalysis of the data in previous studies such as Kenstowicz & Sohn (1997) and Jun et al. (2006) for North Gyeongsang Korean and Lee & Davis (2009, 2010) for South Gyeongsang Korean. In addition, I had two North Gyeongsang (Daegu) speakers (1 female and 1 male) and three South Gyeongsang (Busan and Changwon) speakers (3 females) as my consultants to confirm my hypothesis and the data in the previous studies cited above. I also recorded my language consultants for the pitch tracks in this paper.

2. *Wh*-prosody and Some Other Facts

Hwang (2011) found that there are two types of *wh*-words in South Gyeongsang Korean in terms of accentuation through *wh*-prosody: accented *wh*-words with a pitch fall trigger focus pitch compression prosody, while unaccented *wh*-words without a pitch fall trigger non-focus H plateau prosody.[1] Hwang observes that South

1) Focus prosody and *wh*-prosody are identical in some languages such as Tokyo Japanese (e.g., Deguchi & Kitagawa 2002; Ishihara 2003, among others). However, they are not identical in some languages such as Fukuoka Japanese; focus prosody is pitch compression prosody, but *wh*-prosody is H plateau prosody in Fukuoka Japanese (Igarashi 2007). South Gyeongsang focus prosody is pitch compression

Gyeongsang *wh*-words are all unaccented with a rising contour (LH⋯), but that some *wh*-words such as *nwukwu* 'who' also allow a double-accented pattern with two H tones and a pitch fall at the beginning. (1) is a South Gyeongsang yes/no question, while (2) is the *wh*-counterpart.[2] Note that the acute accent symbol indicates the pitch accent location of each word throughout this paper. Figure 1 is the pitch track of (1), recorded by a female speaker, one of my South Gyeongsang consultants.[3] Each pitch peak due to pitch accent is clearly realized in the figure. Figure 2 is the pitch track of (2a) and Figure 3 is the pitch track of (2b), recorded by the same speaker. In Figure 2, the unaccented *wh*-word *nwu=ka* 'who=NOM' triggers a flat pitch contour, deleting the pitch accents of *énni* 'sister' and *mánna* 'meet'.[4] In Figure 3, the accented *wh*-word *nwú=ká* 'who=NOM' receives a focus pitch boost, reducing the pitch peak of each word in the *wh*-domain. Hwang relates the South Gyeongsang patterns to a similar contrast in Tokyo Japanese and Fukuoka Japanese *wh*-prosody; Tokyo Japanese uses focus pitch compression prosody (e.g., Deguchi & Kitagawa 2002; Ishihara 2003, among others) because Tokyo *wh*-words are accented (e.g. Kuroda 2005/2013; Shimomura 2006), while Fukuoka Japanese uses non-focus H plateau prosody (e.g. Hayata 1985; Kubo 1989, among others) because Fukuoka *wh*-words are unaccented (Hayata 1985; Kubo 1989).

(1) Non-*wh*-prosody in South Gyeongsang Korean

Yélum=ey	Yéngmi=ka	énni=lul	mánna-ss-na?
summer=in	Youngmi=NOM	sister=ACC	meet-PST-Q[-wh]

'Did Youngmi meet (her) sister in summer?'

(2) a. H plateau *wh*-prosody in South Gyeongsang Korean

Yélum=ey	**nwu=ka**	enni=lul	manná-ss-no?
summer=in	who=NOM	sister=ACC	meet-PST-$Q_{[+wh]}$

b. Pitch compression *wh*-prosody in South Gyeongsang Korean

Yélum=ey	**nwú=ká**	énni=lul	mánna-ss-no?
summer=in	who=NOM	sister=ACC	meet-PST-$Q_{[+wh]}$

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prosody (Kim & Jun 2009).

2) I made simple example sentences based on what Hwang (2011) found. See also similar examples (e.g., (9)) and pitch tracks (e.g., Figures 4-7) in Hwang (2011).

3) I used Praat (Boersma & Weenink 2023) to make the pitch tracks in this paper.

4) The verb *manná* 'meet' receives a pitch accent on the second syllable in (2a). I assume that this is because the Q-particle *-no* assigns a pitch accent to the preceding syllable. Note that monosyllabic particles in Gyeongsang Korean are all preaccented (see Ramsey 1978).

'Who met (her) sister in summer?'

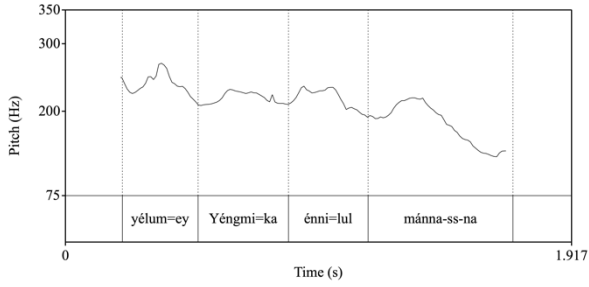

Figure 1. Pitch track of (1)

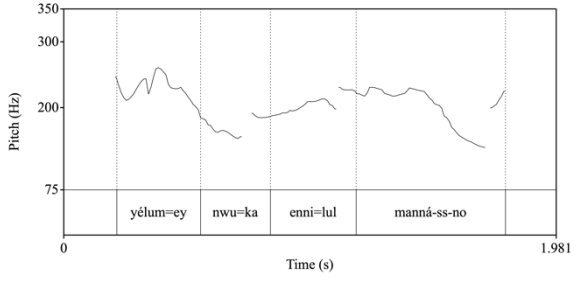

Figure 2. Pitch track of (2a)

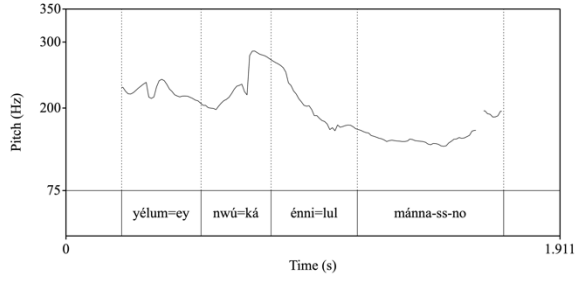

Figure 3. Pitch track of (2b)

To my knowledge, there have been no studies on North Gyeongsang *wh*-prosody. My novel data here show that North Gyeongsang *wh*-prosody has the same contrast. (3) is a yes/no question, while the two sentences in (4) are the *wh*-counterparts; in (4a), the *wh*-word *eti=se* 'where=at' has the rising melody LL=H, while in (4b), the *wh*-word is *éncéy* 'when' has two H tones and a pitch

fall. I claim that the former is an unaccented word, while the latter is a (double-)accented word.[5] Figures 4, 5, and 6 are the pitch tracks of (3), (4a), and (4b), respectively. One of my North Gyeongsang consultants, a male native speaker, read each sentence.[6] Figure 4 shows a clear pitch peak of each accented word. Figure 5 shows a flat pitch contour, triggered by the unaccented *wh*-word.[7] Figure 6 shows focus pitch compression, triggered by the accented *wh*-word. The North Gyeongsang fact suggests that this variety also has both accented and unaccented classes.

(3) Non-*wh*-prosody in North Gyeongsang Korean

Yéngmi=ka	écey	énni=lul	mánna-ss-na?
Youngmi=NOM	yesterday	sister=ACC	meet-PST-$Q_{[-wh]}$

'Did Youngmi meet (her) sister yesterday?'

(4) a. H plateau *wh*-prosody in North Gyeongsang Korean

Yéngmi=ka	**eti=se**	enni=lul	manná-ss-no?
Youngmi=NOM	where=at	sister=ACC	meet-PST-$Q_{[+wh]}$

'Where did Youngmi meet (her) sister?'

b. Pitch compression *wh*-prosody in North Gyeongsang Korean

Yéngmi=ka	**éncéy**	énni=lul	mánna-ss-no?
Youngmi=NOM	when	sister=ACC	meet-PST-$Q_{[+wh]}$

'When did Youngmi meet (her) sister?'

5) As we saw, *wh*-words are all unaccented, but some of them also exhibit a double accent pattern in South Gyeongsang Korean (Hwang 2011). My consultants told me that North Gyeongsang *wh*-words do not alternate between the accented and unaccented patterns.

6) I also asked the other North Gyeongsang consultant to record the sentences to confirm the data. The pitch tracks are omitted for the sake of space.

7) In Figure 5, there is a pitch rise on the *ná in manná-ss-no* 'meet-PST-$Q_{[+wh]}$'. Kenstowicz & Sohn (1997) and Jun et al. (2006) claim that final-accented words, which are analyzed as unaccented words in this paper, trigger "upstep". I assume that the pitch rise in Figure 5 is "upstep" triggered by the unaccented *wh*-word *eti=se* 'where=at'.

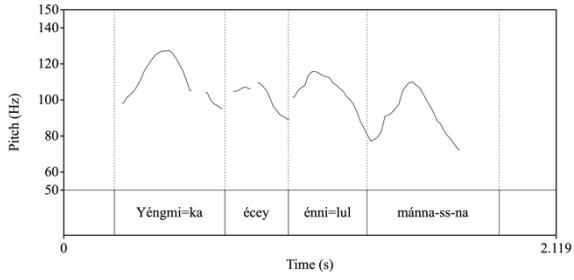

Figure 4. Pitch track of (3)

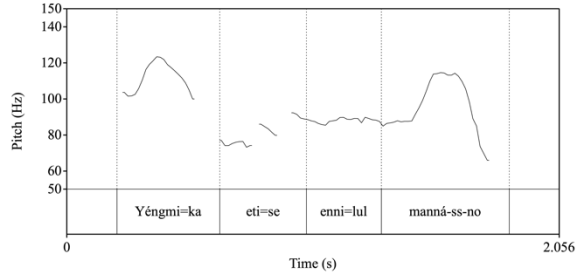

Figure 5. Pitch track of (4a)

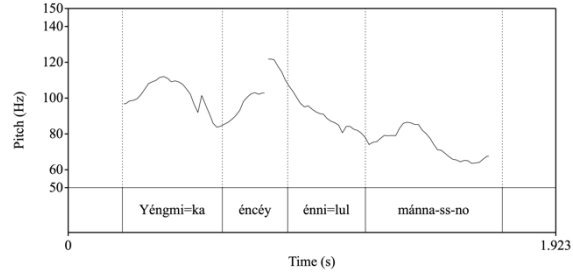

Figure 6. Pitch track of (4b)

However, Kenstowicz & Sohn (1997) and Jun et al. (2006) independently claim that there is no lexically unaccented class in North Gyeongsang Korean and that the unaccented class under Hwang's (2011) and my analysis (e.g., *eti=se* 'where=at' in (4a)) is in fact final-accented. An analysis with no unaccented class cannot explain the facts on *wh*-prosody in (North) Gyeongsang Korean.[8] A third position

8) One of the anonymous reviewers suggested the possibility that a final-accent is just deleted at the

is represented by Lee & Davis (2009, 2010), who identify a different class as a lexically unaccented class in South Gyeongsang Korean. Like Kenstowicz & Sohn and Jun et al., they analyze the unaccented class under Hwang's and my analysis as final-accented. The motivation for Lee & Davis's analysis is the pitch fall when accompanied by a monosyllabic enclitic particle; they cite Haraguchi's (1999) Tokyo Japanese data, which exhibit the same contrast between final-accented words and unaccented words with an unaccented monosyllabic enclitic particle.[9)]

(5) presents Lee & Davis' (2010) analysis of final-accented and unaccented classes in South Gyeongsang Korean; note that the enclitic particle *=i* '=NOM' is analyzed as an unaccented morpheme in their paper. The noun *kelúm* 'fertilizer' in (5a) is final-accented because a pitch fall appears when it is followed by a monosyllabic enclitic particle, while the noun *salam* 'person' in (5b) is unaccented due to the lack of a pitch fall after the noun. Lee & Davis also examine loanwords and claim that the noun *tulím* 'dream' in (5c) is also a final-accented word because it behaves in the same way as (5a).

(5) Tone patterns of South Gyeongsang Korean words
   a. Final-accented (native word)
      kelúm=i (LH=L) 'fertilizer=NOM'
   b. Unaccented
      salam=i (LH=H) 'person=NOM'
   c. Final-accented (loanword)
      tulím=i (LH=L) 'dream=NOM'

(Lee & Davis 2010: (2))

However, an analysis of (5b) as representing an unaccented class is not tenable for two reasons. First, Lee & Davis (2009, 2010) mention that their unaccented class is limited to monosyllabic and disyllabic words. This would be typologically unusual in lexical pitch accent languages; for example, there is no such restriction in Tokyo Japanese (e.g., McCawley 1968; Haraguchi 1999, among others). Second,

post-lexical level, which makes final-accented words unaccented. Kenstowicz & Sohn (1997) and Jun et al. (2006) propose the same analysis. In Tokyo Japanese, final-accented words without enclitic particles undergo final accent deletion, but they act as accented words in phrasal context (e.g., Haraguchi 1977), which implies that final accent deletion does not change accentedness in lexical pitch accent languages.

9) Kenstowicz & Sohn (1997) and Jun et al. (2006) do not mention why words such as (5a) are final-accented, but they seem to have the same motivation as Lee & Davis (2009, 2010).

the analysis of the (5b) pattern as unaccented also raises problems to the diachronic analysis of Korean pitch accent. (5b) descends from the historical rising class of Middle Korean, with an initial rising tone, as shown by Ramsey (1978) (see Section 3.3). Lee & Davis do not explain how initial rising tone in Middle Korean could develop into an unaccented class.

Thus, the proposal by Kenstowicz & Sohn (1997) and Jun et al. (2006) and the proposal by Lee & Davis (2009, 2010) are essentially the same; they all claim that Gyeongsang Korean lacks an unaccented class and instead has a final-accented class. In the next section, I will show that the accent class with a final H is unaccented in native words and is final-accented in loanwords; that is, (5a) is an unaccented word, while (5c) is a final-accented word. I will also show why native words and loanwords have different sets of accent classes.

Before moving on to the next section, I briefly discuss the accent class in (5b) here. Following Utsugi (2007), I assume that (5b) is not in a lexical pitch accent system, but in a lexical tone system because this class belongs to the rising class in Table 1 in Section 3.3.[10] What a lexical tone system means concretely is that the rising class has the fixed melody LHHL word-initially, not a pitch accent (see the review of this approach in Lee & Davis 2009). Words from this class always show the same surface melody LHHL…. For example, the surface melody of *salam=chelem* 'person=like' is LH=HL (Lee & Davis 2010: (3b)) and the surface melody of *holangi=pota* 'tiger=than' is LHH=LL (Utsugi 2007: (7b)); note that both nouns belong to this class. It appears that these words have a pitch accent on the third syllable, but South Gyeongsang Korean has a separate accent class with a pitch accent on the third syllable (see Lee & Davis 2009, 2010). North Gyeongsang Korean lacks the class in (5b); (5b) is realized as a double-accented class (i.e., HH L…) (Kenstowicz et al. 2008).

3. Diagnoses for Unaccentedness

Section 2 showed that *wh*-prosody is a diagnosis for unaccentedness. In this

10) One of the anonymous reviewers pointed out that it is unusual that a quite large number of words are not in a lexical pitch accent system. Do et al.'s (2014) data reveal that 21% of monosyllabic words, 13% of disyllabic words, and 14% of trisyllabic words belong to this class. I do not know whether the proportions are large. I leave this issue for future research.

section, I use three more diagnoses to identify unaccented words, focusing on how unaccented words differ from final-accented words because they are not easy to distinguish. Note that accented words with a pitch accent on a non-final syllable behave in the same way as final-accented words. Section 3.1 discusses the surface melodies of unaccented and final-accented words in isolation. Section 3.2 examines OV-sentence prosody to show that (5a) and (5c) in Section 2 are unaccented and final-accented, respectively. Section 3.3 examines how unaccented native words and final-accented loanwords interact with enclitic particles. Prior to that, I discuss why native words have unaccented words, while why loanwords have final-accented words, referring to the accent correspondences between Middle Korean and Modern Gyeongsang Korean.

3.1. Lexical prosody

Unaccented words and final-accented words may sometimes have the same word-final melodies in isolation, as in the well-known Tokyo Japanese case (e.g., McCawley 1968; Haraguchi 1999, among others), but they may also differ. In Osaka Japanese, for example, unaccented words with an L register tone have a word-final H tone, but final-accented words with an L register tone have either a word-final H tone or a word-final falling pitch contour (HL͡) due to pitch accent, depending on the speaker (Kori 1987). Kubozono's (2018) production experiment on North and South Gyeongsang Korean revealed that loanwords with a final H tone in fact have a lexical pitch fall; that is, the surface melody of *tulím* 'dream' in (5c) in Section 2 is LHL͡, not LH. Kubozono's observation was confirmed by a personal communication with Hyang-Sook Sohn, a native speaker of North Gyeongsang Korean and one of the co-authors of Kenstowicz & Sohn (1997) and by a personal communication with Dongmyung Lee, a native speaker of South Gyeongsang Korean and one of the co-authors of Lee & Davis (2009, 2010) (see Kubozono's 2018 Footnote 15). In contrast, there have been no reports of a similar word-final lexical pitch fall in native words with a final H tone such as (5a) in Section 2 (e.g., Kenstowicz & Sohn 1997; Jun et al. 2006 for North Gyeongsang Korean; Kim & Jun 2009 for South Gyeongsang Korean). This contrast with respect to the presence or absence of a word-final lexical pitch fall supports my claim that (5a) and (5c) in Section 2 belong to different accent classes; (5a) is unaccented, while (5c) is final-accented.[11)]

3.2. OV prosody

Kenstowicz & Sohn (2001) examine loanwords in North Gyeongsang Korean and observe that native words with a final H tone and loanwords with a final H (more accurately, $\widehat{\text{HL}}$) tone behave differently in phrases (see also Kenstowicz & Sohn 1997 and Jun et al. 2006 for native words). Despite the contrast, Kenstowicz & Sohn claim that both native words and loanwords have a final-accented class and lack an unaccented class. Here, I reanalyze their findings and claim that native words have an unaccented class, while loanwords have a final-accented class. (6) and (7) are OV sentences in Gyeongsang Korean; (6) has the unaccented object noun *namwul* 'cooked vegetable', while (7) has the final-accented object noun *leymón* 'lemon' under my analysis in this paper.[12] The unaccented object noun has an LH melody, whereas the final-accented object noun has an L$\widehat{\text{HL}}$ melody in North and South Gyeongsang Korean, and belong to the same accent class as (5a) and (5c) in Section 2, respectively. The verb *mek-nún-ta* 'eat-PRES-DECL' is medial-accented and the surface melody is LHL in isolation. Figure 7 is the pitch track of (6), while Figure 8 is the pitch track of (7), recorded by the male North Gyeongsang speaker who also recorded (3) and (4) in Section 2. As Kenswoticz & Sohn (1997) found, the object noun triggers a pitch plateau until the verb in Figure 7, changing the melody of the verb to HHL. In contrast, both the object noun and the verb maintain their original melodies and the object noun decreases the pitch peak of the verb in Figure 8, as Kenstowicz & Sohn (2001) found. It is known that accented words and unaccented words in lexical pitch accent languages trigger different melodies in phrases. For example, Kubozono's (1993) experiment on Tokyo Japanese revealed that an accented word reduces the pitch peak of the following word, while an unaccented word is usually connected with the following word with a flat pitch contour. The contrast shown in Figures 7 and 8 is the exact contrast, which is expected from unaccented and (final-)accented words, respectively.[13]

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11) There are two ways to see whether a pitch fall is lexical. First, a pitch fall appears with an unaccented enclitic particle. Second, a word with a final lexical pitch fall causes pitch reduction to the following word. The data will be presented in the following subsections.

12) The accusative case particle *=ul* is omitted in (6) and (7), following Kenstowicz & Sohn's (1997, 2001) examples. With *=ul*, *namwul* 'cooked vegetable' would cause pitch reduction to the verb in (6) (see Kenstowicz & Sohn 1997: (8a)). This is because the accusative case particle is accented as we will see in Section 3.3.

13) One of the anonymous reviewers pointed out that focus might affect the prosodies in Figures 7 and 8. I asked the speaker not to put focus. In addition, the prosodies in the figures are different from

(6) Unaccented (= (5a))

(*pro*) namwul mek-nún-ta.

cooked vegetable(=ACC) eat-PRES-DECL

'(*pro*) eats cooked vegetable.'

(7) Final-accented (= (5c))

(*pro*) leymón mek-nún-ta.

lemon(=ACC) eat-PRES-DECL

'(*pro*) eats a lemon.'

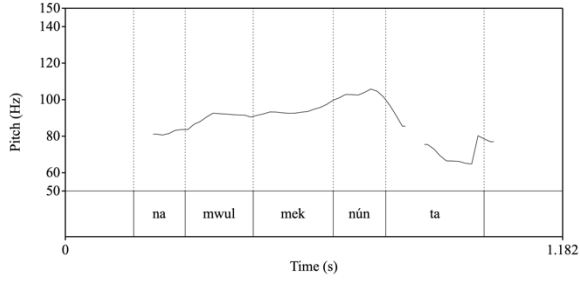

Figure 7. Pitch track of (6) in North Gyeongsang Korean

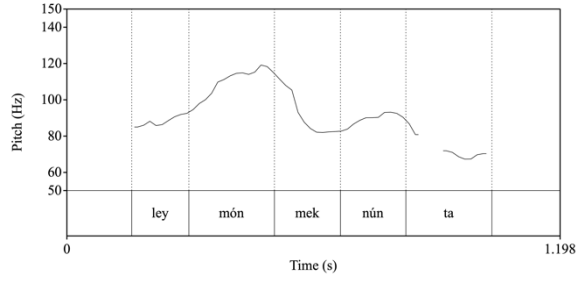

Figure 8. Pitch track of (7) in North Gyeongsang Korean

I asked the same South Gyeongsang female speaker who also read (1) and (2) to read the same sentences. Figures 9 and 10 are the pitch tracks of (6) and (7), respectively.[14] A pitch plateau connects the object noun and the verb in Figure 9,

the North Gyeongsang focus prosody discussed in Kenstowicz & Sohn (1997) and Jun et al. (2006). When an accented word is focused, the post-focus words undergo more pitch reduction. In contrast, when an unaccented word under my analysis is focused, it forms a large prosodic unit with the following word as in Figure 7 and the F0 of the post-focus word is boosted.

while two pitch peaks with different pitch heights appear in Figure 10. Phrasal prosody tells us that (5a) and (5c) in Section 2 are unaccented and final-accented, respectively.

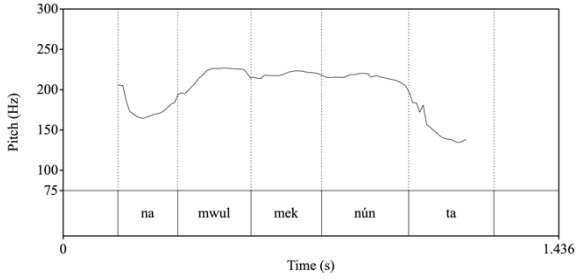

Figure 9. Pitch track of (6) in South Gyeongsang Korean

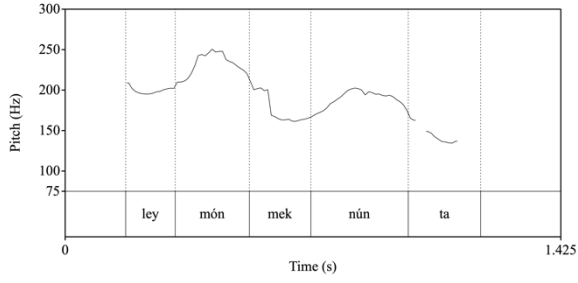

Figure 10. Pitch track of (7) in South Gyeongsang Korean

3.3. Diachronic developments and loanwords

Ramsey (1978) argues that the location of pitch accent shifted one syllable to the left from Middle Korean to Modern Gyeongsang Korean. Table 1 shows the accent correspondences between Middle Korean and Modern Gyeongsang Korean based on Ramsey's analysis; the data except for the loanword are from Kenstowicz et al. (2008): (4)-(6). Middle Korean had an unaccented class and a final-accented class. This fact and the accent shift suggest that Modern Gyeongsang Korean would also be expected to have an unaccented class, but it is less obvious where a final-accented class would derive from. Unlike in native words, pitch accent assignment is predictable in loanwords to some extent; heavy syllables tend to

14) See also similar pitch tracks in Kim & Jun (2009).

receive a pitch accent (e.g., Chung 2000; Kenstowicz & Sohn 2001 for North Gyeongsang Korean; Lee 2009 for South Gyeongsang Korean). Hence, the final syllable of a loanword can receive a pitch accent, filling the gap in the accent classes for native words.

Table 1. Accent correspondences in disyllabic words

Middle Korean	North Gyeongsang	South Gyeongsang	Examples
HL (Initial)	HH (Preaccented/Double)	HH (Preaccented/Double)	moki 'mosquito'
LH (Final)	HL (Initial)	HL (Initial)	atul 'son'
	LH͡L (Final)	LH͡L (Final)	leymon 'lemon'
LL (Unaccented)	LH (Unaccented)	LH(L) (Unaccented)	poli 'barley'
RX[15] (Rising)	H(:)H (Merged into HH)	LH(H) (Rising)	salam 'person'

There are four things to note about Table 1. First, there are two LH classes in South Gyeongsang Korean as we saw in (5) in Section 2; the parentheses indicate the tone on a monosyllabic enclitic particle. Second, North Gyeongsang Korean and South Gyeongsang Korean are different in how the rising class in Middle Korean was derived into the modern form of each variety; the class was merged into the double-accented class in North Gyeongsang Korean, while it still maintains the lexical rising melody in South Gyeongsang Korean (Kenstowicz et al. 2008).[16] As discussed in Section 2, I analyze the LH(H) class in South Gyeongsang Korean as a class in a lexical tone system, not in a lexical pitch accent system. Third, North Gyeongsang Korean and South Gyeongsang Korean show another difference in words with three or more syllables. North Gyeongsang Korean can start with LL…, while South Gyeongsang Korean cannot (see e.g., Lee & Davis 2009, 2010; Kubozono 2018). For example, the unaccented class is L…H in North Gyeongsang Korean, while it is LH…H in South Gyeongsang Korean. The word *mintulley* 'dandelion' is unaccented in Gyeongsang Korean; it is LLH in North Gyeongsang Korean, while it is LHH in South Gyeongsang Korean (see the data in Do et al. 2014). Finally, the initial-accented class in Middle Korean became preaccented in Modern Gyeongsang Korean as a consequence of the accent shift. Following

15) The rising class in Middle Korean can be either RH or RL depending on the inflection (Kenstowicz et al. 2008).

16) See Kenstowicz et al. (2008) for how the historical rising class was developed into the forms in Modern North and South Gyeongsang Korean.

Kenstowicz et al. (2008), I assume that preaccented words are realized as double-accented words at the surface level. I also assume that preaccented morphemes act as "preaccented", assigning a pitch accent to the preceding tone-bearing unit (see McCawley 1968), when they are bound morphemes or in compounds.

My analysis explains correctly how unaccented native words and final-accented loanwords interact with enclitic particles. (8) and (9) show my reanalysis of the two South Gyeongsang nouns, analyzed as final-accented words by Lee & Davis (2010) in (5) in Section 2. The noun *kelum* 'fertilizer' in (8) is unaccented, while the noun *tulím* 'dream' in (9) is final-accented under my analysis. In addition to the enclitic particle *=ˊi* '=NOM', the enclitic particle *=chélem* '=like' is also examined in (8) and (9); the data on *=chélem* '=like' are from Lee & Davis (2010): (3).[17] The particle *=ˊi* '=NOM' is preaccented because monosyllabic enclitic particles were all accented in Middle Korean (Ramsey 1978).[18] The particle *=chélem* '=like' is initial-accented, which has the surface melody HL in isolation. In (8), the pitch accent on each enclitic particle appears on the surfaces because the noun has no pitch accent. In (9), the pitch accent on the noun appears on the surfaces, deleting the pitch accent on each enclitic particle. (8a) and (9a) happen to have the same surface melody due to the preaccent of the enclitic particle.

(8) Unaccented *kelum* (LH) 'fertilizer' (= (5a))
  a. With preaccented *=ˊi* '=NOM'
    kelum + =ˊi → kelúm=i (LH=L) 'fertilizer=NOM'
  b. With initial-accented *=chélem* '=like'
    kelum + =chélem → kelum=chélem (LH=HL) 'fertilizer=like'

(9) Final-accented *tulím* (L$\widehat{\text{HL}}$) 'dream' (= (5c))
  a. With preaccented *=ˊi* '=NOM'
    tulím + =ˊi → tulím=i (LH=L) 'dream=NOM'
  b. With initial-accented *=chélem* '=like'
    tulím + =chélem → tulím=chelem (LH=LL) 'dream=like'

17) The pitch accent location of *kelum=chélem* 'fertilizer=like' in (8b) is the same, but the surface melody is LL=HL in North Gyeongsang Korean (see similar examples in Hwang & Davis 2019) because North Gyeongsang Korean allows word-initial LL, but South Gyeongsang Korean does not. North Gyeongsang Korean has the same melodies in the other examples in (8) and (9).

18) Recall that Lee & Davis (2009, 2010) treat the enclitic particle =i '=NOM' as an unaccented morpheme.

Despite the different behaviors of the two nouns with the enclitic particle =*chélem* '=like' in (8b) and (9b), Lee & Davis (2009, 2010) analyze both nouns as final-accented words. They argue that when there are two pitch accents in the resulting forms, the first pitch accent is removed when the two pitch accents are adjacent to each other, while the second pitch accent is removed when the two pitch accents are not adjacent to each other. Lee & Davis further argue that the reason why the pitch accent on the noun is deleted in (8b), while the pitch accent on the enclitic particle is deleted in (9b) is because native words and loanwords have different accent domains, following Lee (2009): it is the syllable in native words, whereas it is the mora in loanwords.[19] That is, the final syllable of the noun receives a pitch accent in (8), while the penultimate mora of the noun receives a pitch accent in (9). Since the two pitch accents are no longer next to each other, the pitch accent on the noun survives in (9b). My analysis has two advantages over Lee & Davis' analysis. First, my analysis is simpler than Lee & Davis' analysis in that it is always the first pitch accent that survives. Second, my analysis of positing unaccented native words and final-accented loanwords is supported by the diachronic developments of Gyeongsang Korean. In contrast, Lee & Davis' analysis of positing different accent domains is not supported by diachronic facts.

4. Conclusion

I have argued that Modern Gyeongsang Korean varieties have an unaccented class. Gyeongsang Korean also has a final-accented class, as claimed by some researchers, but it is restricted to loanwords. This study has revealed two things, one for Gyeongsang Korean and one for lexical pitch accent languages generally. First, native words and loanwords have different phonologies in Gyeongsang Korean, but it is the matter of accent classes, not the matter of accent domains. Second, it is not enough just to look at how words interact with different enclitic particles to examine whether a word is unaccented or not because there are cases where common enclitic particles such as enclitic case particles are preaccented as in Gyeongsang Korean. Other diagnoses such as a word-final lexical pitch fall, phrasal prosody, and *wh*-prosody must be applied for confirmation.

19) See also a similar analysis by Hwang & Davis (2019) for North Gyeongsang Korean.

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