The realization of unaccentedness in Korean and Japanese pitch accent systems

1. Background: In lexical pitch accent languages, accentedness of a word is detectable by looking at the tone interaction with particles. In Tokyo Japanese, for example, *atamá* 'head' (final-accented) and *miyako* 'capital' (unaccented) have the same surface melody LHH in isolation, but with a particle such as *-ga* '-NOM', they have different surface melodies (*atamá-ga* → LHHL vs. *miyako-ga* → LHHH) because pitch accent assigns H*+L to accented syllables (McCawley 1968, *a.o.*). Daegu (or North Gyeongsang) Korean has been claimed to have only accented words (Kenstowicz & Sohn 1997, Jun et al. 2006, *a.o.*: hereafter KSJ) because of the tone interaction between what KSJ call "final-accented" words and particles (Table 1). As in Tokyo Japanese, pitch accent in Daegu Korean assigns H*+L to accented syllables. "Final-accented" words end in an H* tone when they are in isolation (e.g. /wənəmín/ 'native speaker') and the trailing +L tone gets deleted in KSJ because there is no docking site for it. In contrast, when they are followed by a case particle (e.g. /wənəmín-i/ 'native speaker-NOM'), the case particle receives the +L tone as in *atamá-ga* 'head-NOM' in Tokyo Japanese. KSJ found that "final-accented" words in isolation behave in a different way from the other accent classes in certain phrasal contexts, but that they behave in the same way as the other accent classes whey they are followed by a case particle.

	Initial	**Penult**	**Final**	**Double**
In isolation	/mé.nu.ɾi/ HLL 'daughter-in-law'	/ə.mú.i/ LHL 'mother'	/wə.nə.mín/ LLH 'native speaker'	/ó.ɾé.pi/ HHL 'older brother'
/-i/ka/ (-NOM)	/mé.nu.ɾi.ka/ HLLL	/ə.mú.i.ka/ LHLL	/wə.nə.mí.ni/ LLHL	/ó.ɾé.pi.ka/ HHLL

Table 1: Four accent classes in Daegu Korean (Jun et al. 2006; ´: pitch accent)

2. My claim: I show that KSJ's "final-accented" words are in fact unaccented. Diachronic facts due to Ramsey (1978) also support my analysis. Every syllable in the words in this abstract is specified with a tone for simplicity, but I assume that the actual surface melody is underspecified for tone (see e.g. Pierrehumbert & Beckman 1988 and Jun et al. 2006 for details).

3. Daegu Korean has the AP level: KSJ found that Word2 is downstepped in the noun (Word1) + noun (Word2) construction (possessive construction) when Word1 is not what they call "final-accented". In /əmúi mináɾi/ 'mother's parsley', for example, both words retain their pitch accent and the melody of the whole phrase is LHL LHL, but the peak F0 of /mináɾi/ 'parsley' is reduced because of the H*+L in Word1. When Word1 is "final-accented", in contrast, KSJ observed an H-plateau starting from Word1 to the pitch accent of Word2. In /namwón əmúi/ 'mother from Namwon', for example, the melody of the whole phrase becomes LH HHL, not LH LHL; the first syllable of /əmúi/ 'mother' changes to H. These findings are exactly the same as what happens to Tokyo Japanese. Kubozono (1993) observes that in Tokyo Japanese, an unaccented word and the following Prosodic Word (PWd) may form one large accentual phrase (AP), which contains at most one pitch accent and has an initial boundary tone %L (Pierrehumbert & Beckman 1988); on the other hand, an accented word cannot form one large AP with the following PWd. For example, ($_{AP}$ Hiroshima-no tamágo-to) 'Hiroshima-GEN egg-and' in Tokyo Japanese consists of one AP because *Hiroshima* is unaccented; the prosody of the AP is LHHHH HHLL, not LHHHH LHLL. In contrast, ($_{AP}$ Okáyama-no) ($_{AP}$ tamágo-to) 'Okayama-GEN egg-and' consists of two APs and the melody is LHLLL LHLL because *Okáyama* is accented and *Okáyama* triggers downstep (Vance 2008: Figures 7-16, 17, Ito & Mester 2013: (11)). Jun et al. (2006) claim that the AP level is missing in Daegu Korean, but the phrasal prosody of Daegu Korean suggests the existence of the

AP level. I claim that /əmúi mináɾi/ 'mother's parsley' consists of two APs ($_{AP}$ əmúi) ($_{AP}$ mináɾi), while /namwən əmúi/ 'mother from Namwon' consists of one AP ($_{AP}$ namwən əmúi). Jun et al. (2006) claim that an %L is always inserted PWd-initially, not AP-initially as in Tokyo Japanese, but this PWd-initial %L boundary tone would pose a problem for their analysis. Pierrehumbert & Beckman (1988) claim that any HL sequence at the PWd level can be a downstep trigger. Thus, in the sequence of "final" + "non-final", the "non-final" word would undergo downstep, contrary to the fact, because "final" words have a lexical H* at the end and "non-final" words have a lexical %L at the beginning (see Figure 1).

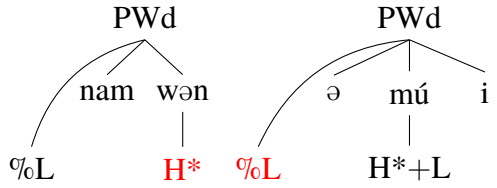

Figure 1: Problem with Jun et al.'s (2006) analysis

4. Gyeongsang accent shift: Middle Korean (15–16th century Seoul Korean) was a lexical pitch accent language. Ramsey (1978) showed that the location of pitch accent in Middle Korean is shifted one syllable to the left in modern Gyeongsang Korean, which includes Daegu Korean. For example, final-accented words in Middle Korean are now penultimate-accented in Gyeongsang Korean (e.g. /minaɾí/ (LLH) → /mináɾi/ (LHL) 'parsley'). We predict the absence of final-accented words in Daegu Korean.

5. Particles: The tone interaction between KSJ's "final-accented" words and particles and the fact that "final-accented" words with a case particle behave like accented words can be explained by Ramsey's (1978) claim that monosyllabic case particles in modern Gyeongsang Korean are all "preaccented"; they were accented in Middle Korean. Following McCawley's (1968) analysis of Tokyo Japanese, I analyze preaccentuation as pitch accent assignment to the preceding syllable and assume that when there is more than one pitch accent in one PWd (N + particle), only the first one survives. I also assume that unaccented words in Daegu Korean have a PWd-final H% boundary tone when there is no pitch accent (e.g. /wənəmin/ (LLH) 'native speaker') as in Osaka Japanese (see Pierrehumbert & Beckman 1988). My analysis can explain the data from Son (2017) in (1–3). The noun in (a) is /úɾi/ 'cage' (initial), while the noun in (b) is /uɾi/ 'we' (unaccented = KSJ's "final"). The particles in (1), (2), and (3) are /-ˊka/ '-NOM' (preaccented), /-k'átʃi/ 'until' (initial), and /-pota/ 'than' (unaccented), respectively. In (1a) and (2a), the pitch accent on the noun survives because it is the first one. In (1b) and (2b), on the other hand, the pitch accent on the particle survives because the noun is unaccented. In (3a), the only one pitch accent on the noun appears on the surface. In (3b), the PWd-final syllable is realized with an H tone because the whole PWd is unaccented.

(1) a. /úɾi/ + /-ˊka/ → /úɾi-ka/ (HLL) b. /uɾi/ + /-ˊka/ → /uɾí-ka/ (LHL)

(2) a. /úɾi/ + /-k'átʃi/ → /úɾi-k'atʃi/ (HLLL) b. /uɾi/ + /-k'átʃi/ → /uɾi-k'átʃi/ (LLHL)

(3) a. /úɾi/ + /-pota/ → /úɾi-pota/ (HLLL) b. /uɾi/ + /-pota/ → /uɾi-pota/ (LLLH)

6. Conclusion: "Final-accented" words in Daegu Korean are in fact unaccented words. Phrasal prosody helps us identify the accentedness or unaccentedness of a word.

References: Ito & Mester 2013. *Lingua.* Jun et al. 2006. *JEAL.* Kenstowicz & Sohn 1997. Focus... Kim & Jun 2009. Prosodic structure... Kubozono 1993. The organization... McCawley 1968. The phonological... Pierrehumbert & Beckman 1988. Japanese... Ramsey 1978. Accent and... Son 2017. *Kankokugo...*