

Focal Parts of Utterance in Busan Korean

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ABSTRACT

Focal parts of utterance can be determined by new/contrastive information, a focus particle, a contrastive topic marker, or a nominative case marker in Busan Korean. Among these factors, new or contrastive information is the most important element in determining the intonational nucleus of an utterance. However, unlike Seoul Korean, when a focus particle, a topic marker, or a case marker contributes to the placement of the most prominent peak of an utterance, the peak is on the noun to which they are attached. Moreover, the case marker *-ga* shows more prominent pitch on the preceding noun than the noun followed by the topic marker *-nun* when *-ga* is used as emphatic or contrastive. This is one of the major problems for Busan Korean users in commanding natural and fluent Seoul Korean intonation even if they use standard written form of Seoul Korean in their speech.

Keywords: Focus, Intonation, Accent, Focus Particle, Information

1. Introduction

Focus refers to the placement of accent to deliver new or contrastive information to a hearer, and a focal part of utterance which contains new or contrastive information is associated with pitch prominence while the remaining part that contains given or non-contrastive information does not have prominent pitch values. In addition to new or contrastive information, the focal part can be determined by focus particles such as *-만* (/man/) 'only', *-도* (/do/) 'also', and *-조차도* (/cofado/) 'even' in Seoul Korean. In this case, the most prominent pitch is on the focus particles instead of the noun to which they are attached. However, when the information that the noun and the focus particle convey is already given or old, the prominent pitch is not on the noun phrase but on the other part of utterance which has the new information (Jun and Lee 1998; Lee 1990; Choi *et. al.* 1999; Lee 2000; Jung *et. al.* 2002). It means that the new information that the speaker is presenting to the hearer dictates the focus particles which are not associated with the new information as far as pitch accent placement is concerned. One interesting

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observation from their studies is that the pitch of focus particle is more prominent than the pitch of noun to which the focus particle is attached in Seoul Korean.

Based on their studies, this paper attempts to unveil the differences in focus-related pitch realization between Seoul Korean and Busan Korean and proposes a way that can help Busan Korean users to command Seoul Korean intonation more fluently. In order to achieve these goals, this paper first examines the influence of focus on the intonation patterns of Busan Korean and illustrates the relation between new and old information in question-answer pairs, and, second, it investigates the roles of focus particles in accent placement and finds out the locus of accent: is the accent locus on the focus particle as in Seoul Korean or on the noun to which the focus particle is attached? Third, this paper looks for a factor that plays a more crucial role in determining the accent placement between focus particle and information, and finally, it points out that the prosodic functions of a nominative case marker *-ga* in Busan Korean are different from those of Seoul Korean and leaves the door open for further study.

In the sections that follow three experiments are conducted to provide substantial evidence for the claim that will be made throughout the paper.

2. Experiments

Three experiments are designed to examine the focal parts of utterances associated with focus markers, a contrastive topic maker, and a nominative case marker in Busan Korean, and eventually to find out the differences in the pitch realization of the focal parts between Seoul Korean and Busan Korean.

2.1 Experiment 1: New Information vs. Old Information

The objectives of this experiment are to examine the relation between new and old information in determining the focal part of utterance and how different positioning of focus can change the intonation contours of the same string of words which have the same syntactic structure.

2.1.1 Materials

In this experiment, the same sentence, *영미가 두부를 먹었어요.* 'Youngme ate the dubu.', is used as the response to three different questions: who ate the dubu?, what did Youngme eat?, and what did Youngme do with the dubu? Though the written forms of the response to each question are the same as far as the syntactic structure is concerned, the focal parts in each response are different depending on the information that the responder is presenting to the questioner.

- (1) A: 누가 . 두부를 먹었니?
 who-Int. dubu-Acc. ate-Int.
 'What ate the dubu?'
- B: 영미가 두부를 먹었어요.
 Youngme-Nom. dubu-Acc. ate.
 'Youngme ate the dubu.'
- (2) A: 영미가 될 먹었니?
 Youngme-Nom. what ate-Int.
 'Did Youngme eat the dubu?'
- B: 영미가 두부를 먹었어요.
- (3) A: 영미가 두부 어떻게 했니?
 Youngme-Nom. dubu how did-Int.
 'What did Youngme do with the dubu?'
- B: 영미가 두부를 먹었어요.

2.1.2 Subjects and Procedures

Four female subjects participated in this experiment. They were born and raised in Busan. They are all native speakers of Busan Korean and their parents speak Busan Korean, too. Three of them are in their twenties and one of them is in her thirties.

Before the recording they were asked which part of an utterance should have the pitch prominence as the response to each question. All subjects had a good understanding of the focal part of utterance in their response, and they practiced the token sentences to make sure they can produce them in a natural and correct manner. Upon recording, subjects asked and answered in pairs, instead of reading a written dialogue, until they could produce the utterances naturally. Among the recorded utterances only the most natural utterance for each token sentence was selected by each subject for measurement because this experiment is to find the focus locus and overall intonation contours of utterance, but not to retrieve numerical pitch values from the utterances.

The recordings were made directly to the computer using CSL 4300B and Shure microphone at a sampling rate of 44100 Hz in a silent office. The recorded utterances were digitized and F0 contours were extracted using CSL 4300B. The primary concern of the measurements were the F0 value of the peak in the focal phrase and the F0 value of the peak in the non-focused phrases.

2.1.3 Results

영미가 'Youngme-Nom.' in 1a), 두부를 'dubu-Acc.' in 1b), and 먹었어요 'ate' in 1c) contain the information that the responder is providing to the hearer as new and they are

the focal parts of utterances associated with the most prominent pitch, while the remaining parts of utterances contain given information and have lower pitch values. The results are not any different from Cho(1997).

There are some interesting intonation patterns related to focus. First, the peak of the second phrase of utterance shows a downstep accent from the first phrase when the focal phrase is at the final phrase of utterance as in (3), though we could have predicted gradual rise from the initial to the last focal phrase. So, the peak of *두부를* is relatively lower than the peak of *영미가* in (3). Second, when focus is placed at the beginning of utterance as in (1), the remaining parts have much lower pitch values than when focus is at the final phrase of the utterance. Accordingly, the peak pitch value of *두부를* in (1) is lower than that of *두부를* in (2) and (3). Third, there is always an accentual phrase boundary right after the first phrase *영미가* whether or not the phrase is a focal part of utterance, though it is possible not to have an accentual phrase boundary depending on speech pattern. It is also possible to place an accentual phrase boundary tone, L-, right after *두부를* in (3), but it will just add more choppiness to the utterance.

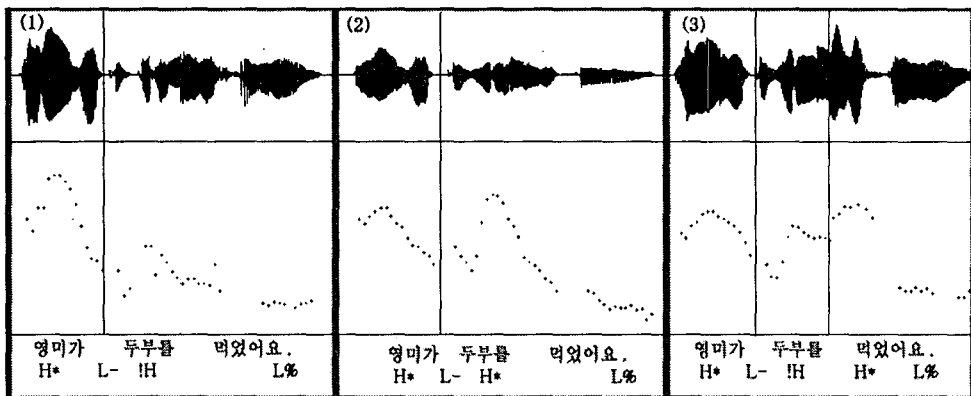


Figure 1. F0 contours of the utterances in (1), (2) and (3). The numbers at the upper left corner of each figure correspond to the utterance in the text. The K_ToBI notation is after Cho (1996).

2.2 Experiment 2: Focus Particles vs. Information

In Seoul Korean, *-만* ('only'), *-조차도* 'even' and *-도* 'also' are focus particles which accompany pitch prominence, and the most prominent pitch is on the focus particle, not on the noun to which focus particles are attached (Lee 1990). However, the focus particles of Busan Korean do not seem to have the most prominent pitch. Instead, the noun to which the focus particle is attached seems to be the locus for the most prominent pitch,

1) The emphatic use of a special particle *-만* (/man/) which Choi *et. al.* (1999) tested for Seoul Korean is not considered in this paper.

if relevant.

So, this experiment is designed, first, to examine whether pitch prominence is placed on the focus particle or on the noun immediately preceding the focus particle when the noun phrase, *i.e.* the noun plus the focus particle, has to be the focal part of utterance, second, to find out the acoustic factors that help Busan native speakers' think that the most prominent pitch is on the noun if the most prominent pitch is on the focus particle, and, third, to see which part of utterance has the intonational nucleus when the information that the noun with focus particle provide is already given.

2.2.1 Materials, Subjects, and Procedures

In this experiment, utterances which make use of the focus particles *-만* and *-도* are used. In each utterance, the status of information that the noun plus focus particle bears is different. In (4) it is not known whether the information that any part of the utterance provides is already given or new. Only a focus particle can be the factor which can cause pitch variations. The utterance in (4) is to examine the influence of the focus particle in placing a nucleus accent when information is neutral. In (5) and (7), the nouns to which focus particles are attached have new information and the other parts have given information. Though it is predictable that the focus is on the noun phrase which carries new information, these two utterances are to check whether the most prominent pitch is on the noun or on the focus particle. In (6) and (8), the noun to which focus particles are attached have old information, and the other parts have new information. These utterances are to find out which factor plays a more crucial role in placing the intonational nucleus between information and focus particles.

The same subjects participated in this experiment, and among the recorded utterances only the most natural utterance for each token sentence was selected by each subject for measurement - CSL 4300B is used for recording, digitization and measurement.

(4) focus particle *-만*

애들이 나만 미워해.

Friends-Nom. me-only hate.

'They hate me only.'

(5) new information followed by a focus particle *-만*

A: 모두다 먹었니?

Everybody ate-Int.

'Did everybody eat?'

B: 영미만 먹었어요.

Youngme-only ate.

'Only Youngme ate.'

(6) old information followed by a focus particle -만

A: 누가 미나만 따라다니니?

who Mina-only follow-Int?

'Who follows only Mina?'

B: 철수가 미나만 따라다녀요.

Chulsoo-Nom. Mina-only follow.

'Chulsoo follows only Mina.'

(7) new information

A: 철수는 100점 받았데.

Chulsoo-Top. 100 points got.

'Chulsoo got 100 points.'

B: 영미도 100점 받았어.

Youngme-too 100 points got.

'Youngme also got 100 points.'

(8) -도 with old information

A: 누가 영어 외에 불어도 할 수 있니?

who English in addition French-too speak-Int?

'Who can speak French in addition to English?'

B: 영미가 불어도 할 수 있어요.

Youngme-Nom. French-too speak.

'Youngme can speak French, too.'

2.2.2 Results

Contrary to Seoul Korean, none of the utterances in this experiment have the most prominent pitch on the focus particle. Instead, the noun to which focus particle is attached has the most prominent pitch if accent is on the noun phrase.

In (4) where information condition is neutral and the focus particle -만 is the only element that can influence the intonation contours of the utterance, the focus particle -만 causes pitch rise on the preceding pronoun and the pronoun has the intonational nucleus. Though the focused pronoun *나* shares the peak with the following particle -만, it is due to the late peak phenomenon. In (5) and (7), the subject nouns have intonational nucleus either because they carry new information or because they are attached to focus particles. From these utterances it is uncertain which factor between focus particle and new information weighs more in determining the intonational nucleus because the noun phrases and focus particles are in the same scope of focus. However, it is clear that the most prominent pitch is not on the focus particles. In (6) and (8), the subject nouns have the intonational nucleus and the following nouns accompanied by focus particles have

downstepped accent and the phrases are demarcated by a phrase tone (L-) just like the utterance in (1). These utterances provide evidence that new information is a more important functor than focus particle in determining the focal part of utterance. That is, when the noun with a focus particle contains only given information, the noun phrase cannot be the focal part of utterance if the other parts of utterance contain new information. In case that focal parts contain either a focus particle or new information and in that new information is a more crucial factor than focus particle in determining the intonational nucleus, Busan Korean is similar to Seoul Korean.

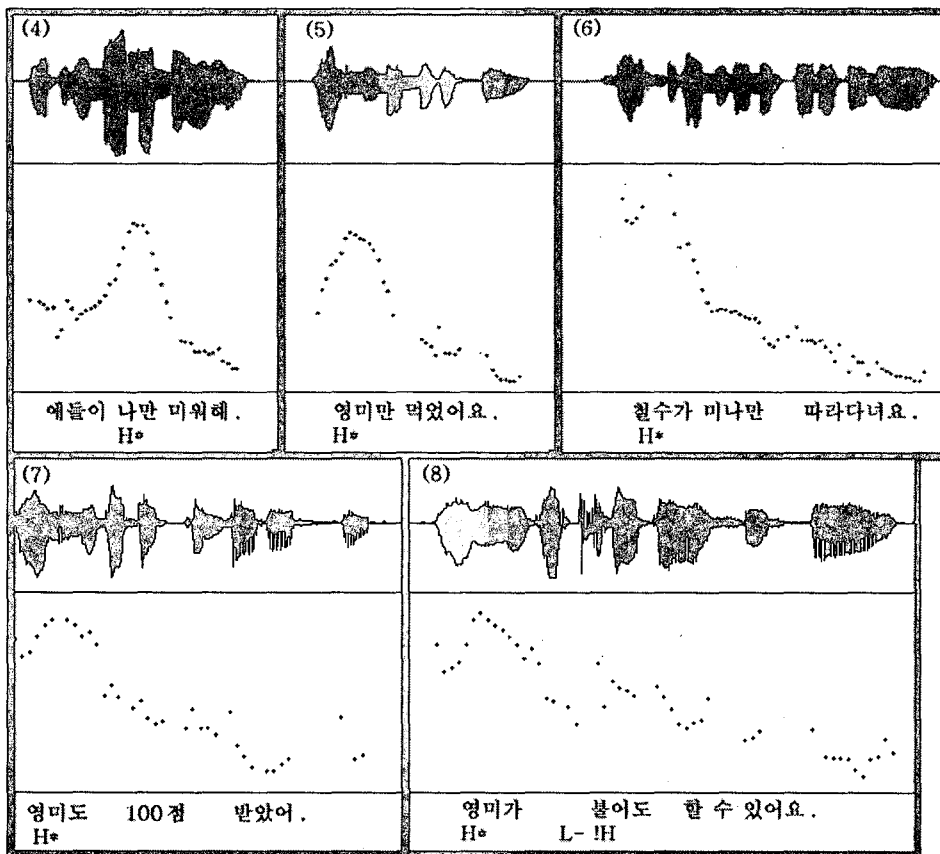


Figure 2. F0 contours of the utterances in (4), (5), (6), (7) and (8). The numbers at the upper left corner of each figure correspond to the utterance in the text.

However, the accent locus in Busan Korean is different from Seoul Korean: while the most prominent pitch is on the focus particle, if appropriate, in Seoul Korean, the most prominent pitch is on the noun accompanied by a focus particle in Busan Korean when the phrase becomes the locus for the intonational nucleus. This is one of the reasons that Busan people have difficulties producing natural Seoul Korean intonation even if they use

standard written form of Korean in their speech.

2.3 Experiment 3: the Topic Marker *-nun* and the Nominative Case Marker *-ga*

In Seoul Korean, pitch tends to rise on the topic marker *-nun*, and, after the pitch rise, phrasing occurs (Lee 2000 and Jung, *et. al.* 2002). Moreover, Lee (2000) argues that the topic marker can be used to convey contrastive information in the utterance and a high intonational phrase boundary tone can be assigned to the topic marker. (This indicates that the topic marker *-nun*, when used contrastively, triggers a H% which does not have to depend on the phonologically driven rhythmic patterns or on the number of syllables to which the marker is attached to.) However, the pitch of the nominative case marker *-ga* blends into the overall pitch contours of the phrase and does not cause any pitch rise. The nominative case marker *-ga* is not a functor which can affect the intonation contours or carry contrastive information.

In Busan Korean, however, the characteristics of the nominative case marker *-ga* and the topic marker *-nun* are different from those in Seoul Korean. So, the aim of this experiment is first to examine if the topic marker *-nun* in Busan Korean carries contrastive information and causes pitch rise and phrasing, and, second, to examine if the nominative case marker *-ga* in Busan Korean functions like *-ga* in Seoul Korean or if it serves also to convey a contrastive topic and causes pitch rise like the topic marker *-nun* in Seoul Korean.

2.3.1 Materials, Subjects and Procedures

Utterances in the experiment contain the topic marker *-nun* and the nominative case marker *-ga*, and the markers in each utterance are attached to the nouns that have contrastive, old, or new information. The other parts of utterances not related to one of the markers are not a major concern in this experiment. For the utterances from (9) to (13), the subjects of the first phrase contrasts with the subject of the second phrase and each subject has either a topic marker *-ga* or *-nun*: *Youngme* and *Chulsoo* contrast in (9), (11), (12) and (13), and *Chulsoo* and *I* contrast in (10). Utterances in (12) and (13) are different from the utterance in (11) only in that the nominative marker *-ga* is used in place of the topic marker *-nun*. So, *Youngme-nun* is replaced by *Youngme-ga* in (12), and *Youngme-nun* and *Chulsoo-nun* are replaced by *Youngme-ga* and *Chulsoo-ga* in (13). This is to examine if the nominative case marker *-ga* performs the function of contrastive topic marker like *-nun* in Seoul Korean and raises the pitch of the noun to which it is attached. In (14) *-ga* is used with the noun that has new information while in (15) *-nun* is used with the noun that has given information. The utterances in (14) and (15) are the replicates of Jung *et. al.* (2002) except that the subject has been changed from *Jini* to *Youngme*. These utterances are to examine the phrasing and intonation that

makers and information status can cause and to compare Busan Korean with Seoul Korean.

The same subjects in experiment 1 participated in this experiment and CSL 4300B is also used for recording and digitization.

- (9) 영미는 미워하지만 철수는 좋아해.
 Youngme-Nom. hate-but Chulsoo-Nom. like.
 'I hate Youngme, but I like Chulsoo.'
- (10) A: 철수는 떨어졌데.
 Chulsoo-Nom. failed.
 'Chulsoo didn't pass the exam.'
 B: 나는 걸렸어.
 I-Nom. pass.
 'I passed the exam.'
- (11) 영미는 노란 옷을 입었고 철수는 검은 옷을 입었다.
 Youngme-Top. yellow suit-Acc. wore-and Chulsoo-Top. black suit wore.
 'Youngme wore yellow suit and Chulsoo wore black suit.'
- (12) 영미가 노란 옷을 입었고 철수는 검은 옷을 입었다.
 Youngme-Nom. yellow suit-Acc. wore-and Chulsoo-top. black suit wore.
 'Youngme wore yellow suit and Chulsoo wore black suit.'
- (13) 영미가 노란 옷을 입었고 철수가 검은 옷을 입었다.
 Youngme-Nom. yellow suit-Acc. wore-and Chulsoo-Nom. black suit wore.
 'Youngme wore yellow suit and Chulsoo wore black suit.'
- (14) A: 누가 안 왔어?
 Who not came?
 'Who didn't come?'
 B: 영미가 안 왔어
 Youngme-Nom. not came.
 'Youngme didn't come.'
- (15) A: 영미 왔니?
 Youngme came-INT?
 'Did Youngme come?'
 B: 영미는 안 왔어
 Youngme-Nom. not came.
 'Youngme didn't come.'

2.3.2 Results

In (9), the utterance is divided into two intonational phrases. In each phrase Youngme and Chulsoo have the most prominent pitch and the pitch of Youngme is higher than the pitch of Chulsoo. This is probably due to the positions of the phrases in the utterance. For the adjectives *미워하다* 'hate' and *좋아하다* 'like' which contrast in meaning, there is no sign of pitch movement that the two adjectives are used as contrastive. *미워하다* has a relatively higher pitch than *좋아하다* just because of the location in the utterance: *미워하다* is at the beginning part of utterance and the *좋아하다* is at the end of utterance. From this utterance, it is evident that the topic marker *-nun* functions as a contrastive topic marker and causes pitch rise on the noun to which topic marker is attached. In (10), the pitch rises on the subject *나* 'I' and on the verb *걸렸어* 'passed'. They contrast with the Chulsoo and *떨어졌데* 'failed', respectively, in the previous utterance. Though the pitch value of *나* is higher than that of *걸렸어*, *걸렸어* is still accented probably due to the contrastiveness and the short length of utterance. In that the utterance is demarcated by a phrase tone right after the contrastive topic marker *-nun*, Busan Korean is similar to Seoul Korean. However, it is different from Seoul Korean in that the pitch starts to fall from the contrastive topic marker, resulting in a L- phrase tone at the accentual boundary.

In (11), the utterance is divided into two intonational phrases, and the intonation contours show that *Youngme* and *Chulsoo* contrast and *노란* 'yellow' and *검은* 'black' contrast. The pitch which once rose to the peak of the intonational phrase continue to fall at the topic marker and an accentual phrase boundary is formed after the topic marker. In this utterance, it is clear that *-nun* functions as a contrastive topic marker.

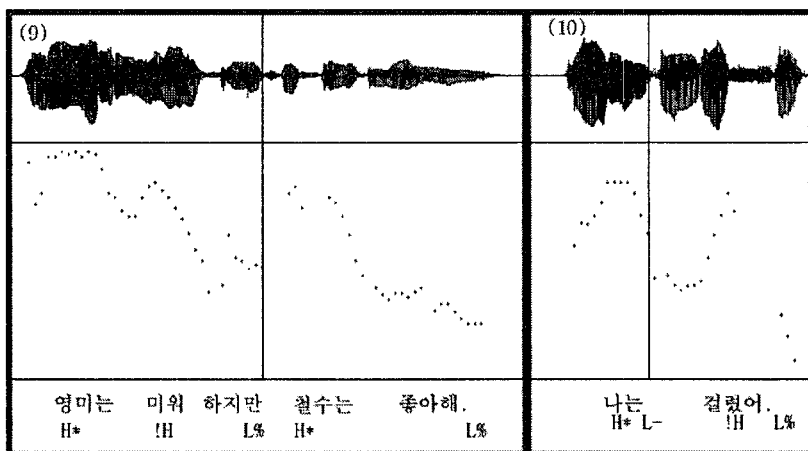


Figure 3. F0 contours of the utterances in (9) and (10). The numbers at the upper left corner of each figure correspond to the utterance in the text. *Youngme* and *Chulsoo* contrast in (9) and the whole utterance in (10) contrasts with the other speaker's utterance.

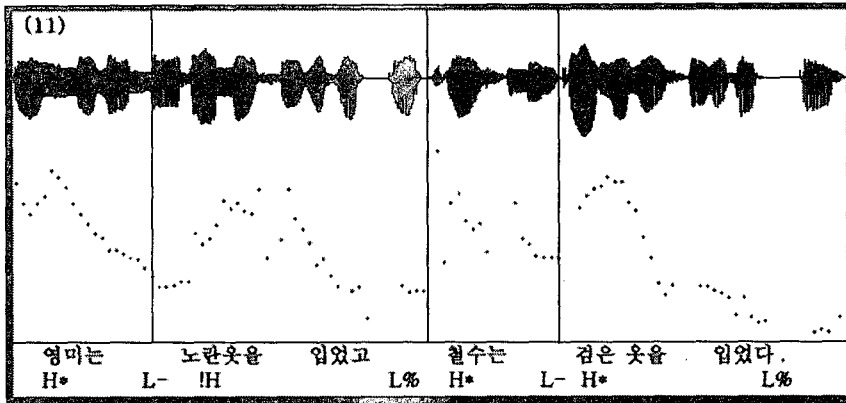


Figure 4. F0 contours of the utterance in (11). *Youngme-nun* and *Chulsoo-nun* contrast and 노란 'yellow' and 검은 'black' contrast in this utterance. The peak of 검은 is higher than the peak of Chulsoo.

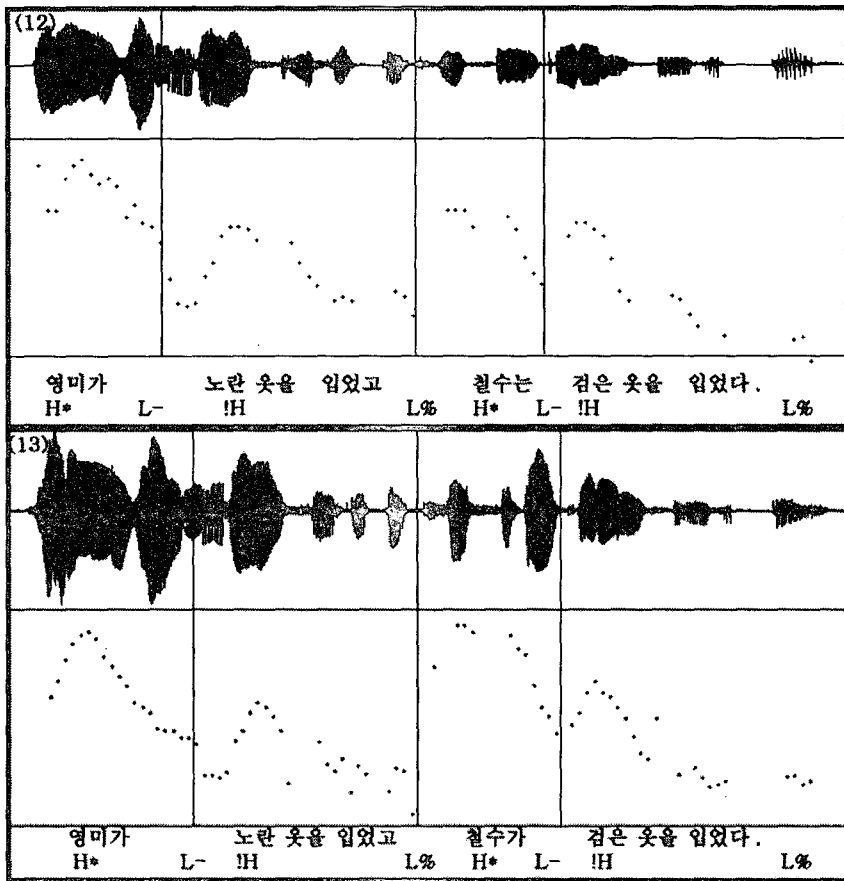


Figure 5. F0 contours of the utterances in (12) and (13). The numbers at the upper left corner of each figure correspond to the utterance in the text. *Youngme* and *Chulsoo* contrast in (12) and (13). In (12) the nominative case marker *-ga* is attached to *Youngme* only while in (13) *-ga* is attached to both *Youngme* and *Chulsoo*.

One interesting observation from the utterance in (11) is that *Chulsoo* in the second intonational phrase has lower pitch than 검은 'black'. As in other utterances, *Chulsoo* should have higher pitch than 검은 because *Chulsoo* is at the first phrase of the second intonational phrase and there is no special reason that the pitch of 검은 should be higher than the pitch of *Chulsoo*. Since this phenomenon is unexpected and hard to explain, I leave this issue for the future study.

In (12), all subjects employed the highest pitch for *Youngme* and the second highest pitch for *Chulsoo*. In this utterance, it is evident that *Youngme* contrasts with *Chulsoo*, and 노란 with 검은. The differences from the utterance (11) are that *Chulsoo* has the highest pitch in the second intonational phrase and 검은 has a downstepped pitch accent from the preceding *Chulsoo*.

In (13) all subjects used higher pitch for *Youngme-ga* than *Youngme-nun* in (11) as shown in Figure 6. The use of the nominative case marker in this case gives a feeling that the speaker tries to emphasize that it is *Youngme*, not any other person, who wore the yellow suit. And the peak of *Chulsoo-ga* in (13) is also higher than the peaks of *Chulsoo-nun* in (11) and (12), and *Chulsoo-ga* gives a more emphatic feeling than *Chulsoo-nun*. This observation supports the claim that the case marker *-ga* plays an emphatic role and causes pitch rise like a focus particle when they are used contrastively as in (12) and (13).

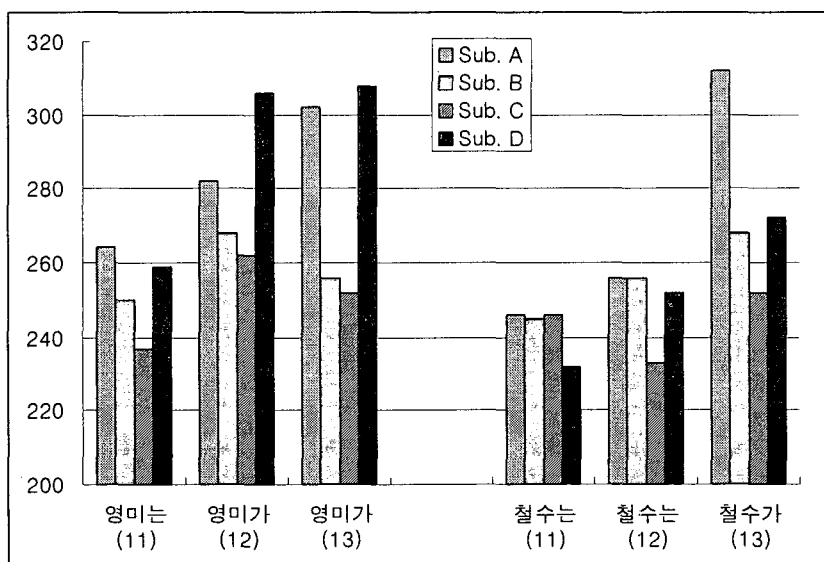


Figure 6. The bars in this figure represent the peak pitch values of *Youngme* and *Chulsoo* for each subject. The values on the y-axis represent pitch values in Hertz and the numbers in parenthesis on the x-axis correspond to the utterance in the text. The peaks of *Youngme* and *Chulsoo* are higher when used with a nominative case marker *-ga* than when they are used with a topic marker *-nun*.

In (14) *Youngme* is really the answer to the question and '안왔어' 'not came' counts as given information. The main answer, *Youngme*, is much more prominent than the given phrase and is accordingly produced with a higher pitch while the given information is deaccented and the pitch of the nominative case marker *-ga* blends into the overall falling intonation contours of the utterance, resulting in one accentual phrase. The results are almost the same as *Jung et. al.'s* (2002) except that the intonational boundary tone in Seoul Korean is HL% while the intonational boundary tone in Busan Korean is L%. In (15), *Youngme* is the given information and '안왔어' is the main answer to the question. Unlike (14), the peak of the given information, *Youngme*, is slightly higher than the peak of the main answer, '안왔어'. The result is opposite to the previous results that the new information has the highest peak. It is not known why the peak on the given information is higher than the peak on the new information. However, when compared to the utterance in (14), the peak of '안왔어' in (15) is much higher than the peak of '안왔어' in (14) and the peak pitch difference between *Youngme* and '안왔어' is reduced. Though the peak pitch value of '안왔어' is lower than the peak pitch value of *Youngme*, '안왔어' is perceived as more emphasized than *Youngme*. It is partly because of the pitch rise from low to high and partly because of the fairly high peak at the last part of the utterance. The exact cause for this perception matter, however, needs more investigation.

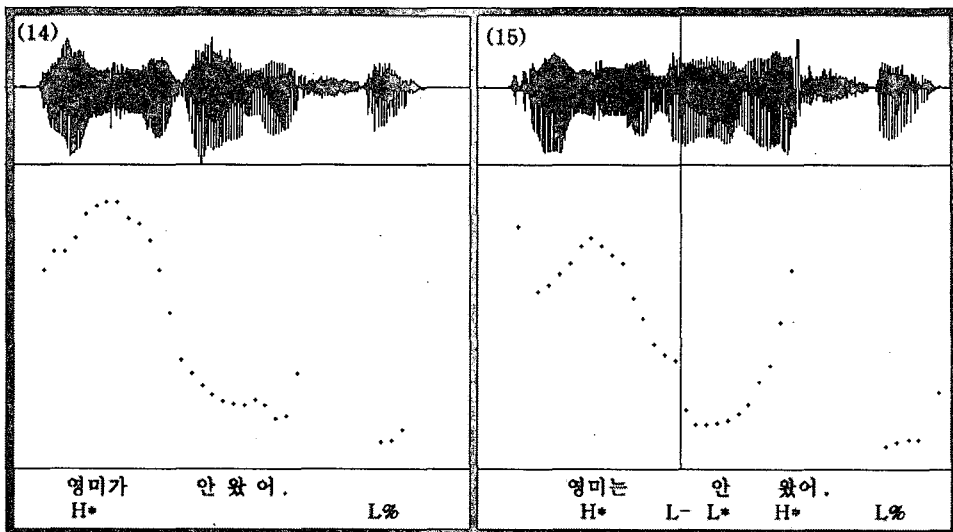


Figure 7. F0 contours of the utterances in (14) and (15). The numbers at the upper left corner of each figure correspond to the utterance in the text. *Youngme*-가 in (14) is the real answer to the question and has the most prominent pitch. *Youngme*-는 in (15) is the background information and '안왔어' 'not came' is the answer to the question. The peak of '안왔어' is much higher than the peak of '안왔어' in (14).

Let us compare the results of the utterance in (15) with *Jung et. al.* (2002) shown in

(16). The utterance in (15) is similar to Seoul Korean in that, first, there is a phrase boundary after *Youngme-nun*, and, second, the negative *안* 'not' has the low accent and, third, the utterance ends with high to low intonation. However, the pitch of topic marker and the preceding noun show the same difference that has been illustrated throughout the paper: the noun has more prominent pitch than the marker in the utterance (15) while the marker in Seoul Korean has more prominent pitch and the phrase ends with a high rising tone as shown in (16).

(16) Answer-Background Question (Jung *et. al.* 2002)

Q: 진이 왔니? (Did Jinni come?)

A: 진이^는 안 왔어. (Jinni didn't come.)

[L H] [L* HL%]

3. Summaries

In experiment 1, it is shown that the answer (i.e., new information) to the question becomes a focal part of an utterance and bears the most prominent pitch. In experiment 2, focus particles *-만* and *-도* make the most prominent pitch placed on the noun to which they are attached if no other phrases contain new or contrastive information. When there are other parts of an utterance which contain new information, the phrase with a focus particle is subject to downstep or deaccenting. This means that the information status (old or new) is a more crucial factor than focus particle in determining the locus of intonational nucleus. In experiment 3, it is shown that *-nun* functions as a contrastive topic marker and causes pitch rise on the noun to which it is attached. The nominative case marker *-ga* causes more pitch rise on the noun to which it is attached than the topic marker *-nun*. In this case, the case marker *-ga* seems to be used to emphasize the noun to which it is attached. However, it needs a further investigation what kind of functions the nominative case marker *-ga* exactly does.

In sum, the focal part of an utterance should contain at least one of the three factors: new/contrastive information, a focus particle, or a contrastive topic marker/a nominative case marker.

From the above observations, we can see that the major difference between Seoul Korean and Busan Korean is on the pitch realization of focus particles, a contrastive topic marker *-nun* and a nominative case marker *-ga*. The difference is one of the key elements that prevents Busan Korean users from commanding fluent Seoul Korean intonation. So, by placing more prominent pitch and by employing a rising tone on the focus particles and a contrastive topic marker rather than on the nouns they are attached

to, Busan Korean users can overcome the dialectal difference and command more fluent Seoul Korean intonation.

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