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Emotional Utterances in Langkat Malay's Intonation: An Experimental Phonetics[1]

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***Abstract*:** *This study describes the Langkat Malay (LM)'s intonation in two emotional utterances, i.e., anger and happiness. Those two are especially practiced by the nobles (Nb) and the common people (CP) in Tanjungpura District which is administratively located in Langkat Regency, North Sumatra Province (Indonesia). It involves six main informants for obtaining key speeches and 40 respondents for perception tests. This study uses acoustic phonetics theory and Praat program. For the emotional speech of anger the expression is* **pedeh hati ambe ngeleh kelakuannya tang orang tua** *which are used by both the Nb and the CP and can be phonetically pronounced as* [pədeh ha:tɪ ʌmbə ŋəleh kəlʌkʊanɲʌ tʌŋ **ɔ**:rʌŋ tʊa]; *while for the emotional speech of happiness the expression is* **senang bena amba mendengar kabarnya yo** *which is pronounced as* [sənʌŋ bena: ʌmbə məndəŋa:r kʌbʌrɲʌ jo] *and this last expression is only spoken by the Nb. The study is conducted with several steps. The initial step refers to the process of digitization and the next was to measure the acoustic characteristics of frequency and duration of speeches, and extracting the measurement results. The final steps was the statistical tests to determine the acoustic characteristic significance of measurement results. The findings of the study are that intonation patterns, frequency and duration, and speech intonation are all signified in the characteristics of LM's utterances. Intonation pattern of anger among the CP tends to have the falling movement with declining tone contour; while among the Nb the pattern shows to rise and fall with declining tone contour. Furthermore, there was no distinction of intonation pattern of sadness among the CP and the Nb because they emphasizes the decliningtone contour. Finally, the intonation pattern of happiness exhibits a rise among the Nb and a rise-fall among the CP; however, both the Nb and the CP indicate the inclining tone contour.*

***Keywords*:** *intonation, emotional speeches, a rise, a fall, a rise-fall, tone contour*

I. Introduction

The way we speak, write, and gesture shows our style of communication and our language community where we belong to. Speaking is associated with the sound and is discussed under the heading of phonetics. Phonetic study is divided into three subfields: the articulatory phonetics, the study relating to the language tool system that generates the sounds and its processes to produce the sound; the acoustic phonetics, the study of sound waves resulting from the pronunciation and broadcasting system over the airwaves; and the auditory phonetics, study about sound waves, language hearing and tools, such as ears and other auditory tools involved in auditory system [Chaiyanara, 2006:21].There are a few studies on suprasegmentals or prosody. Among of them are written in Indonesian and Malay,as conducted by Pane (1950), Halim (1969), Samsuri (1971), van Heuven (1994), Laksman (1991, 1994), Ode (1994), Ebing (1997), Remijsen (2002), Rahyono (2003), Sugiyono (2003), Stoel (2005), Roosman (2006), Syarfina (2008, 2009), Syarfina and Silvana Sinar (2010), and Rohani Ganie (2014).

The study on emotion and language, particularly in Indonesia, remains a few. Most of the studies were carried out from the stand point of psychology, anthropology and philosophy (Muslich 2007 inYanti 2010). Moreover, in phsychology, emotion is viewed as a fundamental element of human experience or something innate; whereas, in anthropology, this is considered asa result of cultural ideas and interaction between social situations, feelings, and behavior of human beings. Philosophy considers emotions as an element that accompanies the sense and mind. From these views, emotion is therefore associated with the human experience either it is good and bad one and can be expressed verbally and non-verbally. The basic emotions such as anger,

[1] This paper is part of my doctoral dissertation. I would like to thank Muhammad Ali Pawiro for his careful reading of an earlier draft of this article, as well as for his editing.

upset, excitement, anxiety, and sadness can be expressed through words (verbal) and through gestures, behaviors, and expressions (non-verbal).

In order to expand the scientific repertoire in this field, the researcher attempts to describe the emotional speeches such as anger, sadness, and happiness and intonation in LM which is one of the regional languages in Indonesia. It serves as communication tool, supporting culture, and a symbol ofidentity ofthe LM community. This third function is realized in conveying the communication among the members of community. Malay community consists of two groups, the Nb and the CP (Husny, 1975:109). In similar ideas with Husny, Omar (1985: 84) confirmed that Malay community has two classes of language, for instance, the language used by the Nb and the CP. Both groups have different customs, neighbourhood, and rules and the way to use the language.

This study is chosen on the base of an assumption that there are social groups in LM communities. The social groups have different ways in doing interaction, expressing their emotions towards someone else in relation to the followings: happiness, anger, sadness, hatred, admiration, love, and anxiety. The expression of emotions by LM's speakers are realized in prosodic or suprasegmental ways. It is assumed that the patterns of daily emotional intonation of the Nb show the lower or tender accent compared to the CP. This study describes the intonation, as well as duration, and emotional speeches in LM in three basic emotions, such as, anger and happiness. Hence, the researcher formulates the problems as the following: how does the description of emotional speeches of anger, sadness, and happiness and how are their intonation patterns?

II. Location, literature review, theoretical framework, and research methodology

2.1 Location

This study was conducted in Tanjungpura District (TD), Langkat Regency, North Sumatra Province (Indonesia) in which this district is situated around 60 kilometres from Medan. The area of the TD is 165.78kms^2, consisting of 5 urban villages (Kelurahan) and14 villages. The total population is 64.342 in which the males are 32.507 and females 31.835. Population density is 358 inhabitants per kilometre square.The TD is actually a small town and becomes the main road from-and-to Aceh; therefore, it is classified as busy Sumatra high way traffic. Formerly, it was well-known as the city of education and culture. For people who have lived there, the TD would actually bring memorable stories. It was proved by the existence of the tomb of the national hero Tengku Amir Hamzah, a famous poet who was buried in Masjid Azizi which is situated on Jalan Lintas Sumatera or Jalan Masjid. The TD has ever become the center of the Old kingdom. Now, besides the Masjid Azizi, other supporting facilities can be found, such as,penitentiary (Lembaga Pemasyarakatan), General Hospital, Post Office and Tomb of Sheikh Rokan who was the great teacher of Islamic sect Tariqah Nasbandiah in Besilam which was formerly called Babussalam. Eighty percent of populations are Malay, the rest are five ethnics such as Chinese immigrants, Acehnese, Minangkabaunese, and Bantenese.

2.2 Literature Review

There were previous studies on intonation in Indonesia. Among of them were done by Halim (1969) in *Intonasi dalam Hubungannya dengan Sintaksis Bahasa Indonesia;* Ebing (1997) in *Form and Function of Pitch Movements in Indonesian*; Siregar (2000) in *Fungsi Pragmatika Intonasi di dalam Bahasa Indonesia: Suatu Kajian Awal*; Sugiyono (2003) in *Pemarkah Prosodik Kontras Deklaratif dan Interogatif Bahasa Melayu Kutai*; Rahyono (2003) in *Intonasi Ragam Bahasa Jawa Keraton Yogyakarta Kontras Deklarativitas, Interogativitas, dan Imperativitas;* Syarfina (2008) in *Ciri Akustik Sebagai Pemarkah Sosial, Penutur Bahasa Melayu Deli*; Syarfina and Silvana Sinar (2010) in *Ciri Akustik Bahasa Melayu Langkat*; Hesti Fibriasari (2012) in *Kendala Prosodi Pembelajar Bahasa Prancis di Medan*; and Rohani Ganie (2014) in *Intonasi Kesantunan Tindak Tutur Direktif Bahasa Aceh Dialek Aceh Timur: Kajian Fonetik Eksperimental*.

Some studies on emotional intonation using experimental phonetic approach can be seen as follows: Mozziconacci's (1998) Speech Variability and Emotion, Production and Perception; and Zahid's (2003) Penelitian Intonasi Fonetik Eksperimental: Realisasi Makna Emosi Filem Sembilu 1 dan 2. Those previous researchers pointed above occupied different tools in their study. Halim used Mingograf owned by phonetics laboratory of University of Michigan; while Ebing, Rahyono, Syarfina, Mozziconacci, and Zaid employed more advanced tools equipped with computer technology for easier modification of prosodic parameters. These fifth researchers were also successful in exercising the IPO approach in analyzing intonation. However, those researchers have shown the similarities in expressing their comprehension on intonation study. Halim stated that the tone in Indonesian is tone-temporal that can be formed by a pitch and duration, while Ebing argued that the tone in the same language has no obligation to use the tone wherever it was located. Siregar stated that intonation was the change pattern in the tone of the sentence generated whenever the speaker is uttering. This pattern can divide an utterance into meaningful grammatical units and demonstrate the particular use.

Rahyono found that every sentence in Javanese used in Yogyakarta Palace has a basic intonation patterns and variants. Morevover, Syarfina found that the tone flow of modes sentence in Deli Malay was rise,

fall, rise-fall, rise-flat, flat-fall and fall-rise. Moreover, the separate studies on emotional intonation conducted by Mozziconacci and Zahid shows both the similarities and the differences. Some elements which refer to the similarities are (1) neutrality, and (2) result from happy emotion. While the Mozziconacci's differences relate to (1) boredom, (2) fear, (3) anger, (4) sadness, and (5) result from emotional pressure. Zahid argues that the differences might be caused by (1) anxiety, (2) unhappiness, (3) mind, (4) anger, (5) affirmation, (6) wondering, and (7) result from distress emotions.

2.3 Theoretical Framework

The word emotionis adapted from the French émouvoir, which means 'to stir up'. Moreover, emotion can also be derived from the Latin emovere, e- (variant of ex-) which means 'outside' and movereis 'moving'. Some linguists believe that this word is more fleeting than mood. For example, if we want to be rude to someone, he/she must be angry with us. The anger could come and go quickly. However, the mood which is created by the explosion of anger will last longer (Syukur, 2011:11).

Crystal (1989:171) argued that intonation and the characteristics of suprasegmentals/prosody has several functions, such as, (1) as emotional marker to express the meaning associated with a great attitude, bored, surprised, hospitality, reception, and other attitudes. Intonation, the prosody and paralinguistic features complement other emotional expression, (2) as grammatical markers, since intonation has a very important role in marking grammatical contrast in identifying the larger grammatical units, i.e. clauses and sentences are rely on how the tone contour sifting through an utterance; some specific contrasts, such as sentence statement and question sentences, or positive and negative sentences, that whole rely on intonation, (3) structure marker, since intonation can convey information about many things if there is something new or something that has been known in the meaning of an utterance, hence it is known as information structure; (4) textual markers, for it is not only used to signal the sentence structure, but also an important element in construction of a broader range of discourse, (5) psychological marker, because the intonation was very helpful in organizing language into parts that are easier to comprehend , and the ability to organize speech into parts of intonation is also an important feature of normal language acquisition, and (6) indexical marker, that being a marker of personal identity or 'indexical' function, these traits are important to identify people as belonging to social groups and different occupations

Frequency is an accoustic feature that affects the high and low tones of sound. The higher the frequency, the higher the pitch of sound. According to Lehiste (1970), the sound frequency is a number of vibrations per second. In general, the frequency of sound is 20 to 20,000Hz. As Boë in Laksman(1995:189) argued that in a certain sound frequency 37Hz, our ears can only hear it as sound variations, while the characteristic continuity of musical sound just emerged from 41Hz. The speech has the frequency about 80Hz or 8 kHz. Intonation has several functions in language, such as general nature that is applicable to all languages and a special nature that applies to a particular language. Ansari (2010:129) noted that there are, at least, three functions of intonation, they are (1) semantic function which distinguishes the meaning of a word or phrase, (2) grammatical functions which distinguish the forms of the sentence, and (3) the expression of mental function which distinguishes the mental attitude of the speaker such as happiness, anger, wonder, or amazement.

Duration can be defined as the span of time to produce an utterance (Halim, 1984:43). The same idea was also expressed by Sugiyono (2003) that the duration was time span required in the realization of a sound segment that can be measured in milli seconds. According to Lyon and Martin in Laksman (1995:189) in order we can hear and recognize, the sound segment should be delivered within a certain time duration.The best perception will capture in sound segments in the span between 30 and 50 milli seconds.

Lapoliwa (1988: 41) proposed that intonation is used to express things, both linguistic and non-linguistic. Almost languages use the tone as a marker of syntactic unit, e.g., the low voice (beeps) indicates the completeness of speech, the rising voice (tone) indicates the incompleteness of utterances. Non-linguistic field considers that the tone reveals the nature of a person, such as (1) the sex indication–male or female, where the male voice is usually lower than the females, (2) the age, where the adult voice tone is lower than child, and (3) the speakers' emotion which refers to, for example, (a) when someone gets angry, his/her tone normally arisens sharply, (b) when he/she is sad or troubled, his/her tone tends to be lower, and (c) when someone is excited or happy, his/her tone is usually high.

The tone flow or pitch movement is the smallest unit of perceptual analysis (intonation). Moreover, the tone flow is the smallest constituent unit of intonation in forming the larger one that is called tone contour. The tone contour is the largest unit of intonation. Through the pitch contour patterns, we will find the intonation patterns (Hartetal., 1990: 72). Experimental phonetics is a study that deals with the sounds and other human speech units by using apparatus or instruments. Instrument in acoustic phonetics is a tool to proceed, analyze and produce acoustic analysis. Therefore, the experimental phonetics is also known as instrumental phonetics. This study is relatively novel compared to impressionistic phonetics, which also performs the similar phonetic analysis. Impressionistic phonetics is the research that relies on the expertise of an expert in analyzing the

differences between phonetic sounds using the ear or sense of hearing. The results were only based on the responses of the researchers to the impressionistic phonetics alone. Hence, the experimental phonetics can provide a good solution to the problems faced in impressionistic phonetics.This study uses the instrumental approach by utilising Praat in measuring pitch movement and acoustic characteristics speech (Ladd 1996, Cruttenden 1997).

2.4 Methods of Study

The informants and respondents in this study area ll native speakers of Malay who live in Tanjungpura District and in surrounding areas. They belong to two different social classes: the Nb and the CP (Omar, 1985). The number of informants and respondents in this study are 46 respondents. They comprise of males and females whose ages are between 20 to 55 years, and have perfect articulatory and auditory abilities. Six of them were employed as the utterers, and the rest were subjected to perception tests. The acquiring of data in this study was performed by collecting the LM's utterances of six speakers which were divided into two groups, the Nb and the CP. Each groups consist of three speakers who utter sentences that contain both aspects ofemotions.

1) The utterance of anger: *Pedeh hati ambe ngeleh kelakuannya tang orang tua!*
2) The utterance of joy: *Senang bena, amba mendengar kabarnya yo*

Three speakers of both groups aged 20 to 35 years and 36 to 55 years respectively were given the form of narratives and condition.They were asked to realize the emotional aspects of utterances. The utterances that was recorded in this study were unspontaneous (prepared) and spontaneous dialogues. The utterances were digitized and analyzed with the help of Praat version 4.0.27. This program is well-known in experimental phonetic research and has been used by Remijsen (2002), Rahyono (2003), Sugiyono (2003), Stoel (2005), Roosman (2006), Syarfina (2008, 2009), as well as Syarfina and SilvanaSinar (2010). Praat was developed by the University of Amsterdam, and this tool is well-known by its user-friendly in taking the measurements of frequency, duration, intensity, and speech. Moreover, the researcher should follow the certain steps. Firstly, digitization process. In this step, utterances are recorded by using the audio cassette and converted into a digital format that resulted the sound-wave before it is selected and given a code. The next step is the use of acoustic characteristics measuring. This step is aimed at obtaining the frequency and duration of speech, followed by extracting the results into a data base.The data base contains the recording of perception test which is addressed to 20 Nbs and CPs respectively.

III. Discussion and results

3.1 Primary Contour or Speech Emotions

The target expressions that comprise the speech intonation of emotion in relation to anger and happiness are selectively based on the best utterances of LM's native speakers from the Nb and the CP. The corpus of speech can be seen below:

1. The use of intonation for the target expression of *Pedeh hati ambe ngeleh kelakuannya tang orang tua* among the nobles

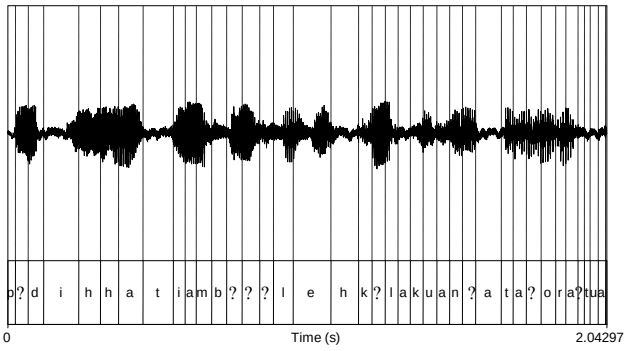

Figure 1. Acoustic signals and speech intonation grid text of anger among the nobles

2. The intonation of the target expression of happiness utterance among the nobles *Senang bena amba mendengar kabarnya yo*

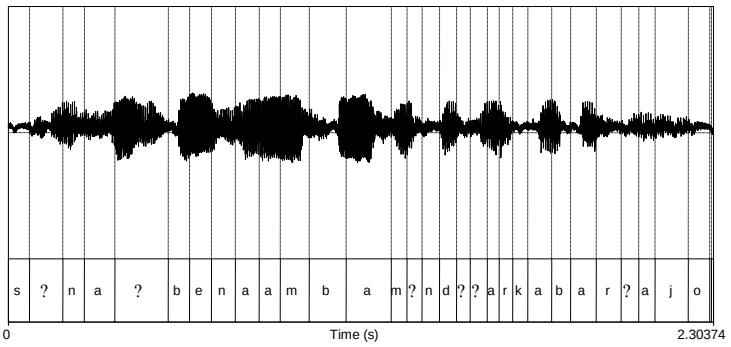

Figure 2. Acoustic signals and speech intonation text grid of happiness among the nobles

3. The intonation of the target expression of anger utterance among the common people as in *Pedeh hati ambe ngeleh kelakuannya tang orang tua*

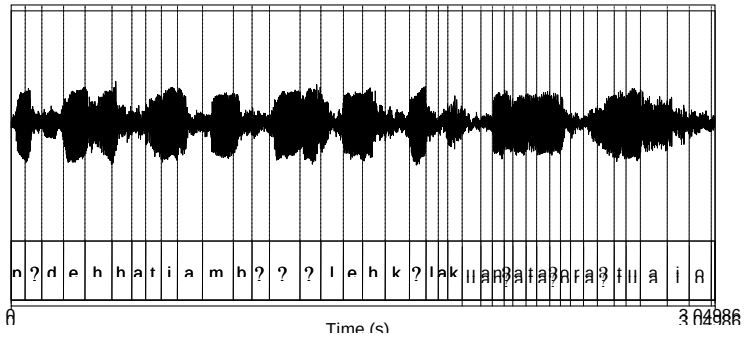

Figure 3. Acoustic signals and speech intonation text grid of anger among the common people

4. The intonation of the target expression of happiness utterance among the commons people who use *Pedeh hati ambe ngeleh kelakuannya tang orang tua*

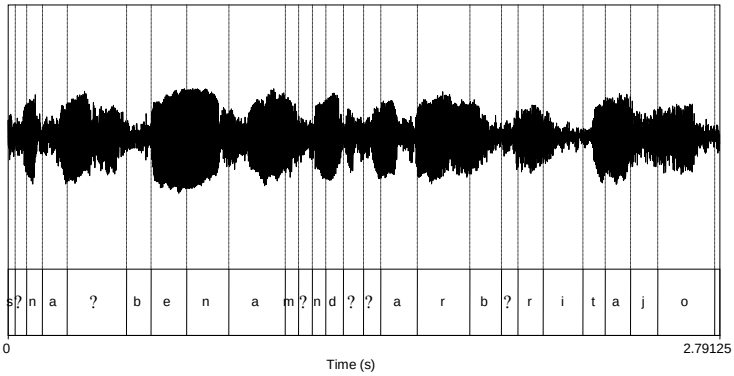

Figure 4. Acoustic signals and speech intonation text grid of happiness among the common people

3.2 Pitch Movement

Pitch movement or local attributes is the elements that shape the pitch contours. In determining the pitch movement, the description to the utterences are segmented on the sound syllables which are found in word and phrase levels. These descriptions bring more details in tone contour in the process of analysis. Hence, the analysis of syllable that consists of rise and fall of pitch movement of anger and happiness in emotional speech contour for both the Nb and the CPwill be grasped more clearly.In this case the researcher discusses the pitch movement that happens in primary contours of emotional utterances which are being used by the Nb and the CP. The emotional utterance include (1) emotion of anger [*pedeh hati ambe ngeleh kelakuannya tang orang tua*], and (2) emotion of happiness such as [*senang bena amba mendengar kabarnya yo*].

Determination of pitch movement for the primary utterance contours might follow these steps: (1) selecting the primary contour of acoustic signal of anger [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] and happiness [*senang bena amba mendengar kabarnya yo*] in which both of utterances in accoustic signal are extracted and based on words or phrases level; (2) once more, the results of extraction are processed in order to

produce the proper signals; (3) then, the acoustic signal manipulation are performed at the level of words or phrases to generate the melodic tone curve; (4) simplify the pitch movement point in the level word or phrase to produce pitch tier; (5) doing the segmentation of acoustic signal or phrase based on their syllable sound; (6) measuring the pitch movement of word or syllable in Hertz (Hz); (7) analysing the pitch movement on word or phrase level; (8) comparing the pitch movement of Nb and the CPin speech; and (9) describing the pitch movement by comparing the findings.

3.2.1 Pitch Movement of the nobles
3.2.1.1 Pitch Movement of anger
3.2.1.1.1 Pitch Movement of *pedeh hati ambe*

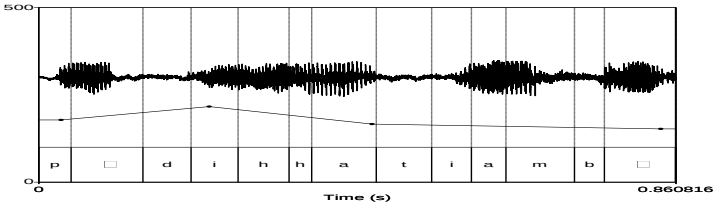

Figure 5. Pitch movement of the utterance [*pedeh hati ambe*] among the nobles

Fig. 5 refers to the pitch movement of *pedeh hati ambe* in primary contour of anger among the nobles. This expression is taken from the complete utterance of [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] which consists of three pitch movements. Initially, the rise and fall of pitch movement occurs in syllables pə and *dih* in which the tone position locates at 178.1 Hz and then reaches 216.4 Hz. Both of the pitch movements of the syllable *ha* which starts from 216 Hz then falls into 166.3 Hz, and the third continues to fall on the thi syllable. Finally, the syllables *am* and *bes* stand at the position from 166.3 Hz into 152.5 Hz. Based on this result, the pitch movement of *pedeh hati ambe* which is on primary contours of anger among the nobles' utterance in [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] has the rise-fall following the tone contour declination.

3.2.1.1.2 Pitch Movement of *ngeleh kelakuannya*

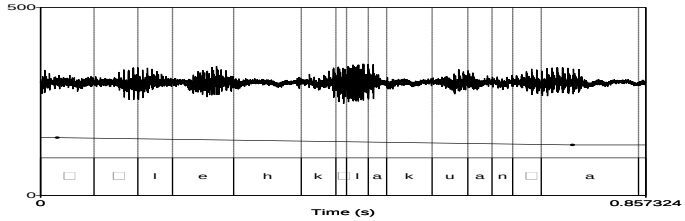

Figure 6. Pitch movement of utterance [*ngeleh kelakuannya*] among the nobles

Fig. 6 shows that the pitch movement of *ngeleh kelakuannya* refers to the primary contour of anger among the nobles. This utterance is taken in part from the [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] and has only one pitch movement. Initially, the tone level reaches 154.0 Hz with the fall tone on the syllable *ŋə*. This falling goes along the syllableske, *la, ku, an* and *ɳ* are spectively and reaches134.5Hz. Based on this result, the pitch movement of *ngeleh kelakuannya* which is uttered in primary contours from the nobles' anger in the utterance of [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] might fall with tone contour declination

3.2.1.1.2 Pitch Movement of *tang orang tua*

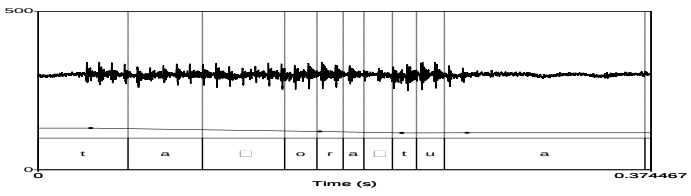

Figure 7. Pitch movement of nobles' utterance of [*tang orang tua*]

Fig. 7 relates to the pitch movement of *tang orang tua* in primary contour, which becomes the expressions of anger among the nobles and the complete utterance is this: [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] and this comlete utterance consists of three movements. Initially, the tone level is around 131.7 Hz and has the fall tone on syllable *taŋ* in which this syllable reaches 121.0 Hz. Then, this is continued on the syllable *oraŋ* having 121.0 Hz into 116.5 Hz. Finally, there is a slight rise on the syllable *tua* which has the value from 116.5 Hz into 116.8 Hz. Based on the pitch movement of *tang orang tua* which fall on the primary contours, the nobles' anger in the utterance of [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] is considered fall with tone contour declination.

3.2.1.2 Pitch Movement of happiness

3.2.1.2.1 Pitch Movement of *senang bena*

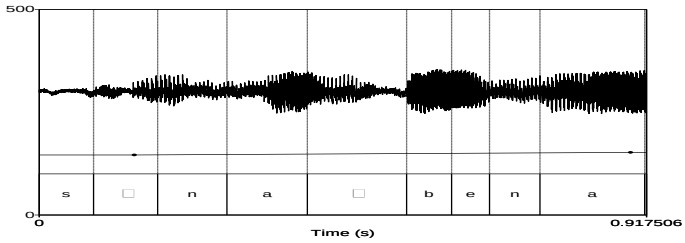

Figure 8. Pitch movement of nobles' utterance [*senang bena*]

Fig. 8 illustrates the pitch movement of *senang bena* in primary contour of happiness among the nobles and this expression is only the part of the [*senang bena amba mendengar kabarnya yo*] which owns one pitch movement only. Initially, the tone level of the syllable sə is about 146.2 Hz and shows a rising along the syllables *naŋ*, *be* and *na* respectively from about 146.2 Hz into 152.4 Hz. This result means that the pitch movement of *senang bena* on the primary contours of the nobles' happiness in the [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] shows a rise which is followed by tone contour declination.

3.2.1.2.2 Pitch Movement of *amba mendengar*

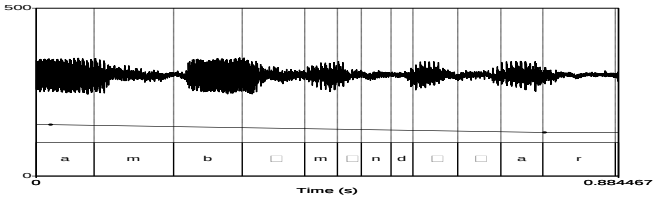

Figure 9. Pitch movement of nobles' utterance [*amba mendengar*]

Fig.9 reveals the only one pitch movement of *amba mendengar* in primary contour of happiness among the nobles, in which it is taken from the whole speech of [*senang bena amba mendengar kabarnya yo*]. Initially, the tone level of the syllable [am] stands at 153.2 Hz and then falls along the syllables [be], [mən], [də] and [ŋar] at around 152.4 Hz. With this result, the pitch movement of *amba mendengar* positing in primary contours of nobles' happiness, such as, [*senang bena amba mendengar kabarnya yo*] decreases with tone contour declination.

3.2.1.2.3 Pitch Movement of *kabarnya yo*

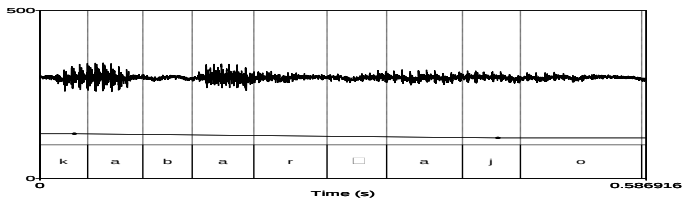

Figure 10. Pitch movement of nobles' utterance [*kabarnya yo*]

Fig. 10 only presentsone pitch movement of *kabarnya yo* in primary contour of happiness among the nobles who express the [*senang bena amba mendengar kabarnya yo*]. Initially, the tone level of syllable [ka] can be heard at 133.3 Hz and falls on the syllables [bar], [ŋa], and [jo] reaching 120.8 Hz. Based on this result, the pitch movement of *amba mendengar* in primary contourof nobles' happiness [*senang bena amba mendengar kabarnya yo*] is falling with tone contour declination

3.2.2 Pitch Movement of common people's utterance
3.2.2.1 Pitch Movement of anger
3.2.2.1.1 Pitch Movement of *pedeh hati ambe*

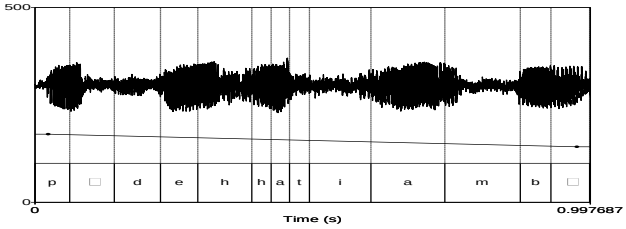

Figure 11. Pitch movement of common people's utterance [*pedeh hati ambe*]

Fig. 11 shows pitch movement of *pedih hati ambe* in primary contour of anger among the common people who say the [*pedeh hati ambe ngeleh kelakuannya tang orang tua*]. Initially, the tone level of syllable [pə] is about 174.8 Hz and is falling; the same happens to the syllables [deh], [ha], [ti], [am], and[bə] and touches 142.6 Hz. This result means that the pitch movement of pedeh hati ambe on primary contour of common people's happiness [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] decreases to show its tone contour declination.

3.2.2.1.2 Pitch Movement of *ngeleh kelakuannya*

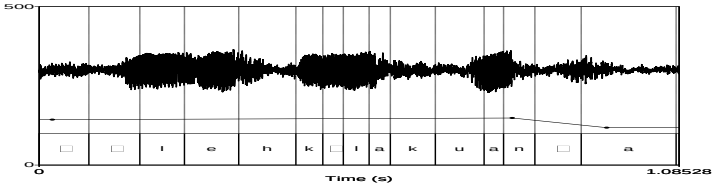

Figure 12. Pitch movement of common people's utterance [*ngeleh kelakuannya*]

Fig. 12 reveals that the pharase *ngeleh kelakuannya* in primary contour of anger emotion among the nobles [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] consist of two pitch movement. Initially, the pitch movement of [ŋə] is rising at 143.8 Hz, and continues along [leh], [ke], [la], [ku], and [an] syllabels until reaching 148.85Hz. Finally, the pitch movement of ŋa is falling to 117.9 Hz. This result tells us that the pitch movement of *ngeleh kelakuannya* on primary contour of common people's anger [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] is recorded to fall and rise with tone contour declination.

3.2.2.1.3 Pitch Movement of *tang orang tua yo*

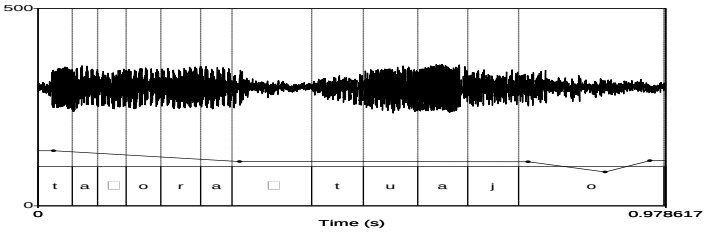

Figure 13. Pitch movement of common people's utterance [*tang orang tua yo*]

Fig. 13 shows that the pitch movement of *tang orang tua yo* in primary contour of anger among the common people's utterance as follow [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] consists of four movements. Initially, the tone level of syllable [taŋ] reaches 139.7 Hz with the falling tone on syllable [or] and

[aŋ] having the value of 112.4 Hz; then it decreases on syllable [tua] from 112.4. Hz to 111.8 Hz. Third, the pitch movement of syllabel [jo] is rising and then falling down from 111.8 Hz to 85.8 Hz. This pitch movement of *tang orang tua yo* in primary contour of common people's anger [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] can be interpreted as having a fall-rise with tone contour declination.

3.2.2.2 Pitch Movement of happiness

3.2.2.2.1 Pitch Movement of *senang bena*

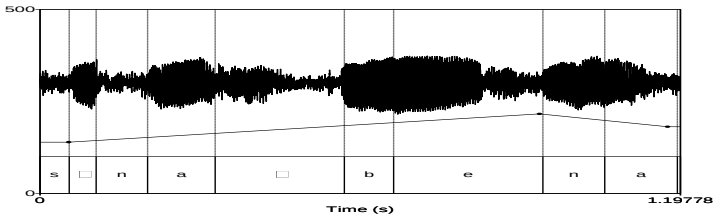

Figure 14. Pitch movement of common people's utterance [*senang bena*]

Fig. 14 might be interpreted that the pitch movement of *senang bena* in primary contour of anger among the common people's utterance of [*senang bena ambe mendengar berita yo*] consists of two movements. Initially, the tone level of syllable [taŋ] sits at 139.1 Hz with therising tone on syllables [naŋ] and [be] from 139.1Hz to 215.9 Hz. Then, the pitch movement is falling on syllable [na] at181.1 Hz. Based on the pitch movement of *senang bena* in primary contours of common people's happiness utterance of emotion [*senang bena ambe mendengar berita yo*], the pitch movement becomes rise-fall with tone contour declination.

3.2.2.2.1 Pitch Movement of *ambe mendengar*

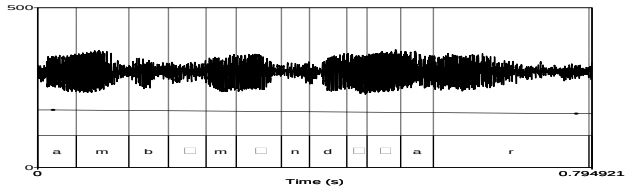

Figure 15. Pitch movement of common people's utterance [*ambe mendengar*]

Fig. 15 displays that there is one pitch movement of *ambe mendengar* in primary contour of happiness of emotion among the common people's speech of [*senang bena ambe mendengar berita yo*]. Initially, the tone level of the syllable [am] comprises a value of 180.5 Hz. The tone is falling in a series of the following syllables [bə], [mən],[də], and [ŋar] and reaches 168,9 Hz. Based on this result, the pitch movement of ambe mendengar in primary contourof common people's speech of happines [*senang bena ambe mendengar berita yo*] is considered a fall with tone contour declination.

3.2.2.2.2 Pitch Movement of *berita yo*

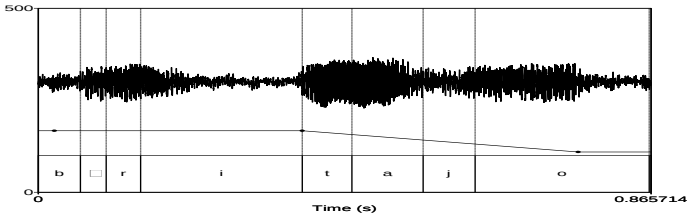

Figure 16. Pitch movement of common people's utterance [*berita yo*]

Fig. 16 exhibits that the pitch movement of *berita yo* in primary contour of happiness among the common people's speech of [*senang bena ambe mendengar berita yo*] consists of two movements. Initially, the tone level of the syllable [bə] stands at 167.2 Hz, then it becomes quitely flat on the syllable [r] at about 167.0 Hz. Finally, the pitch movement is falling on the syllable [ta] and [jo] at 109.5Hz. Based on the pitch movement

of berita [yo] in primary contour of common people's utterance of happiness in [*senang bena ambe mendengar berita yo*], the pitch movement discloses falling with tone contour declination.

3.3 Comparison

3.3.1 Comparison of pitch movement of anger among the nobles and common people

3.3.1.1Pitch Movement of *pedeh hati ambe*

The pitch movement of *pedeh hati ambe* in primary contour of anger as seen in *pedeh hati ambe ngeleh kelakuannya tang orang tua* utterance among the Nb and the CP are distinct. While the Nb have three pitch movements, the CP have only one. The pitch movement of [*pedeh hati ambe*] among the Nb has the rise-fall with the tone contour declination, while among the CP the pitch shows the fall with tone contour declination. It can be concluded that the pitch movement of *pedeh hati ambe* among the Nb and the CP apparently has the similar tone contour.

3.3.1.2 Pitch Movement of *geleh kelakuannya*

The pitch movement of *ngeleh kelakuannya* in primary contour of anger in *pedeh hati ambe ngeleh kelakuannya tang orang tua* utterance among the Nb and the CP is shown different. While the Nb have only one pitch movement, the common people have two. The pitch movement [*pedeh hati ambe*] among the nobles emphasis the fall with declination tone contour, while among the CP the pitch is heard to rise with tone contour declination. The conclusion is that the pitch movement of *ngeleh kelakuannya* among the Nb and the CP has a relatively similar tone contour.

3.3.1.3 Pitch Movement of *tang orang tua*

The pitch movement of *tang orang tua* in primary contour of anger in *pedeh hati ambe ngeleh kelakuannya tang orang tua* utterance among the Nb and the CP are not the same. When Nb have three pitch movements, there are four pitch movements spoken by the CP. Morever, there is a particle [yo] which is generally used by CP as a specific style of their language. The pitch movement of *tang orang tua* among the Nb is falling with tone contour declination, while among the CP the pitch shows a fall-rise with the same tone contour declination too. We conclude then that the pitch movement of *tang orang tua* among the Nb and the CPis proved to have the similar tone contour.

3.3.2 Comparison of pitch movement for the happiness utterance among the nobles and common people

3.3.2.1 Pitch Movement of *senang bena*

The pitch movement of *senang bena* in primary contour of happiness in the *senang bena amba mendengar kabarnya yo* utterance among the Nb and the CP is distinct. While the Nb have a rise pitch movement, the CP have three pitch movements and they tend to be falling. However, both the Nb and the CP have the tone contour inclination. It can be concluded that the pitch movement of *senang bena* in primary contour of happiness in the *senang bena amba mendengar kabarnyayo* utterance among the Nb and the CP have the similar tone contour.

3.**3.2.2 Pitch Movement of *amba mendengar***

The pitch movement of *amba mendengar* in primary contour of happiness in the *senang bena amba mendengar kabarnya yo* speech among the Nb and the CP are quite similar. Both groups have one pitch movement with tone contour inclination. However, the difference can be heard in the *hamba* utterance. The Nb choose the *amba* expression while the CP take the *ambə* as their daily speech.I t can be concluded that the pitch movement of *amba mendengar* among the Nb and of *ambe mendengar* among the CP in primary contour of happiness in the *senang bena amba mendengar kabarnya yo* utterance have the declining tone contour.

3.3.2.3 Pitch Movement of *kabarnya yo*

The pitch movement of *kabarnya yo* in primary contour of happiness in the *senang bena hamba mendengar kabarnya yo* speech among the Nb and the CP is really distinct. While the Nb have only one pitch movement by declining the tone contour, the CP have two pitch movements. This distinction is due to the choice of *berita yo* instead of saying *kabarnya yo*. However, the tone contour of the two speeches is similar. It can be concluded that the pitch movement of *kabarnya yo* in primary contour of happiness in the *senang bena hamba mendengar kabarnya yo* utterance among the Nb and the CP have the declining tone contour.

3.4 Findings

Based on the measurement of the pitch movement for the target utterance, the emotion for anger and happiness among the Nb and the CP can be found on the intonation patterns as follows:

3.4.1 Pitch Movement of anger

The pitch movements of *pedeh hati ambe* in primary contour of happinessin the [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] utterance among the Nb and the CP clearly shows the rise-fall with declining contour tone. Those pitch movements include the followings: 1) a rising and falling on syllables [pə] and [di] at 178.1 Hz, and arising at 216.4 Hz; 2) both pitch movements on syllable [ha] is falling from 215.4 Hz to 166.3 Hz; and 3) a falling again on syllables [ti], [am] and [be] from 166.3 to 152.5 Hz.The pitch movement [*ngeleh kelakuannya*] in primary contour of happiness in the [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] among the Nb tends to be falling with contour tone declination. Initially, being at 154.0 Hz a falling happens on syllable [ŋə], then goes to syllable [leh] and continues to be falling on syllables [ke], [la], [ku], [an] and [ɳa] at 134.5 Hz.

The pitch movement of *tang orang tua* in primary contour of anger related to the [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] emotion among the Nb emphasizes a falling where the contour tone is declining. The pitch movement consists of three movements. Initially, the tone level sits at 131.7 Hz followed by a falling tone on syllable [taŋ] at 112.4 Hz; the second movement happens on syllable [oraŋ] at 121.0 Hz to 116.5 Hz, and the last, arising on syllable [tua] from 116.5 Hz to 116.8 Hz.The pitch movement of *pedeh hati ambe* in primary contour of sadness in the [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] speech among the CP refers to a falling in which the contour tone is declining. The pitch movement is initially occuring on syllable [taŋ] syllble at 131.7 Hz, and a falling continues to syllbles [deh], [ha], [ti], [am] and [bə] which reach 142.6 Hz. The pitch movement of [*ngeleh kelakuannya*] in primary contour of anger as seen in [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] emotion among the CP tend to be a rise-fall with contour tone declination. The pitch movement consists of two movements. Initially, the tone is at 143.8 Hz, then rises for the syllables [leh], [ke], [la], [ku] and [an] at148.8 Hz; finally, the pitch movement on syllable [ɳa] shows a falling from 148.8 to 117.9 Hz. The pitch movement of *tang orang tua yo* in primary contour of anger [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] utterance among the CPis a fall-rise where contour tone is declining. The pitch movement consists of four movements. Initially, a falling occurs on syllable [taŋ] at 112.4 Hz; the second movement goes to syllable [tua] from 112.8 Hz to 118.4 Hz; finally a falling continues to syllable [jo] from 111.8 Hz to 85.8 Hz, and the rest on 114.5 Hz.

The comparison of pitch movements among the Nb and the CP varies. The utterance of *pedeh hati ambe* in primary contour of anger which is part of [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] among the Nb and the CP shows a distinction.The Nb's utterance contains three pitch movements, while the CP's is one. The pitch movement of [*pedeh hati ambe*] among the Nb emphasizes a rise-fall with contour tone declination, while among the CP the movement relates to a fall. So, the pitch movement of *pedeh hati ambe* among the Nb and the CP tends to have a declining tone contour.T he pitch movement of *ngeleh kelakuannya* in primary contour of anger in the [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] speech among the Nb and the CP is different based on amount of pitch movements. The Nb have one pitch movement, while the CP two. The pitch movement of *ngeleh kelakuannya* among the Nb is falling with declining contour tone, while among the CP it reveals a rise-fall movement. As a result the pitch movement of *ngeleh kelakuannya* among the Nb and the CP has a declining tone contour.

The pitch movement of *tang orang tua* in primary contour of anger in the [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] utterance among the Nb and the CP is proved to be distinct. The Nb's utterance contains three pitch movements, while the CP have four; this is due to affix [yo] as a kind of improvisation among the CP. The pitch movement of *tang orang tua* among the Nb is considered falling with tone contour declination, while among the CP becomes a fall-rise with tone contour declination. In short, the pitch movement of *tang orang tua* among the Nb and the CP apparently has the similar tone contour.

3.4.2 Pitch Movement of happiness

The pitch movement of [*senang bena*] in primary contour of happiness as found in [*senang bena amba mendengar kabarnya yo*] speech among the Nb and the CP is agued to be a rise with an inclining contour tone. Initially the movement on syllable [sə] sits at146.2 Hz, and continues to a rise on syllables [naŋ], [be] and [na], from 147.2 Hz to 152.4 Hz.The pitch movement of [*amba mendengar*] in the primary contour of [*senang bena hamba mendengar kabarnya yo*] utterance among the Nb and the CP might be a falling with contour tone declination. The pitch movement is only one which starts on syllable [am] at 153.2 Hz, then a falling goes to syllables [be], [mən], [də] and [ŋar] reaching at 129.9 Hz.

The pitch movement of [*kabarnya yo*] in primary contour of happiness as seen in [*senang bena amba mendengar kabarnya yo*] speech among the Nb reveales a falling movement followed by a declining contour tone. The pitch movement is only one which starts from the syllable [am] at 133.3 Hz, then a falling continues to syllables [ka], [bar], [ɳa], and [jo] reaching at 120.8 Hz. The pitch movement of [*senang bena*] in primary

contour of happiness of utterance [*senang bena amba mendengar kabarnya yo*] among the CP shows a rising-falling movement followed by inclining contour tone. This phrase has two picth movements. Initially, the syllable [se] sits at 139 Hz and a rising happens at syllables [naŋ], and [be] at 215.9 Hz; then the second pitch movement is falling on syllable [na] reaching at 181.1 Hz.

The pitch movement of [*ambe mendengar*] in primary contour of happiness in the [*senang bena amba mendengar kabarnya yo*] utterance among the CP shows a falling movement with a declining contour tone. This phrase has one picth movement. Initially, the syllable [am] sits at 180.5 Hz, then a falling goes to syllables [bə], [mən], [də], and [ŋar] reaching at168,9 Hz. The pitch movement of [*berita yo*] in primary contour of happiness taken from [*senang bena ambe mendengar berita yo*] speech among the CP shows a falling movement with a declining contour tone. This phrase has two picth movements. Initially, the syllable [bə] stands at 167.2 Hz, then being flat on syllable [ri]. Finally, a falling happens again at syllables [ta] and [jo] reaching at109.5 Hz.

The comparison of pitch movement of [*senang bena*] in primary contour of happiness which is part of the complete utterance of [*senang bena ambe mendengar kabarnya yo*] among Nb and the CP reveals a distinction in amount of pitch movements. The Nb's utterance has one pitch movement, while the CP has three. However, both the Nb and the CP have the inclining contour tone.The pitch movements of [*ambe mendengar*] in primary contour of happiness in [*senang bena ambe mendengar kabarnya yo*] among the Nb and the CP are similar followed by a declining tone contour. However the, difference is found on utterance of [hamba]. While the Nb utter hamba as [*amba*], the CP pronounce [ambə]. The phrase [kabarnya yo] in primary contour of happiness in utterance [*senang bena amba mendengar kabarnya yo*] among the Nb and the CP are distinct on the amount of pitches. The Nb have one pitch movement followed by tone contour declination, while the CP change the [*kabarnya yo*] to be [*berita yo*] and create two pitch movements. However, both the Nb and the CP have a declining tone contour.

IV. Conclusions

With reference to the discussion above the conclusions are written as follows:

1. The pitch movement of [*pedeh hati ambe*] in primary contour of angry utterance [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] among the Nb and the CP are distinct. The common people show the falling movement with tone contour declination, while the Nb tend to say a rise-fall with a declining tone contour.
2. The pitch movement of [*ngeleh kelakuannya*] in primary contour of anger utterance of [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] among the Nb and the CP are distinct too. The Nb have a falling, while the CP is recorded to have a rise-fall. However, both Nb and the CP have tone contour declination.
3. The pitch movement of [*tang orang tua*] in primary contour of anger in the [*pedeh hati ambe ngeleh kelakuannya tang orang tua*] utterance among the Nb and the CP is different. The Nb reveals a falling movement, while the CP's pronounciation is a rise-fall. However, both the Nb and the CP has declining tone contour.
4. The pitch movement of [senang bena] in primary contour of happiness related to the utterance of [*senang bena amba mendengar kabarnya yo*] among the Nb and the CP prove to be distinct. The Nb have a rising, while the CP tend to have a rising-falling. However, both the Nb and the CP have a declineingt one contour.
5. The pitch movement of [*amba mendengar*] in primary contour of happiness in the [*senang bena amba mendengar kabarnya yo*] speech among the Nb and the CPis proved to be similar. Both the Nb and the CP have the tone contour declination.
6. The pitch movement of [kabarnya yo] in primary contour of happiness of [*senang bena amba mendengar kabarnya yo*] utterance among the Nb and the CPis similar. Also, both the Nb and the CP have the declining tone contour.

V. Suggestion

Since Indonesia is a large country with various ethnics and languages, the suprasegmentals or prosodic study on those ethnic languages should be drawn more attention froml anguage researchers/linguists in order their studies might enrich some understandings on language communities here.

References

[1]. Chaiyanara, Paitoon M. Pengenalan Fonetik dan Fonologi (Kuala Lumpur: Dewan Bahasa dan Pustaka, 2006).
[2]. Pane, Armijn, Mentjari Sendi Baru Tata Bahasa Indonesia (Jakarta: Balai Pustaka, 1950).
[3]. Halim, Amran, 1969. Intonasi dalam Hubungannya dengan Sintaksis Bahasa Indonesia (Jakarta: Djambatan, 1969).
[4]. Samsuri,Tjiri-tjiri Prosodi Kalimat Bahasa Indonesia (Malang: FKSS-IKIP Malang, 1971).
[5]. Van Heuvent, Vincent J. Introducing Prosodic Phonetics.In Ode, Cecilia and Vincent J.van Heuven (eds). Experimental Studies of Indonesian Prosody. (Semaian 9). (Leiden: Rijksuniversiteit Leiden,1—26, 1994).

[6]. Laksman, Myrna, 1995. Realisasi Tekanan Kata, Proc. 8th PELLBA 8 Conf. on Sewindu, Jakarta, 1995. Ebing, Ewald Frankwin, Form and Function of Pitch Movements in Indonesian (Leiden: Research School CNWS, 1997).
[7]. Remijsen, Bert 2002. Word-prosodic systems of Raja Ampat languages, doctoral diss., Netherlands Graduate School of Linguistics, Utrecht, 2002.
[8]. Rahyono, FX. Intonasi Ragam Bahasa Jawa Keraton Yogyakarta Kontras Deklarativitas, Interogativitas, dan Imperativitas, doctoral diss.,Universitas Indonesia, Depok2003.
[9]. Sugiyono, Pemarkah Prosodik Kontras Deklaratif dan Interogatif Bahasa Melayu Kutai, doctoral diss., Universitas Indonesia, Depok, 2003.
[10]. Stoel, Ruben, Focus in Manado Malay (Leiden: CNWS Publication Universiteit Leiden, 2005).
[11]. Roosman, Lilie, Phonetic experiments on the word and sentence prosody of Betawi Malay and Toba Batak.doctoral diss., Series 129. Netherlands Graduate School of Linguistics, Utrecht, 2006.
Syarfina, T., Ciri Akustik Sebagai Pemarkah Sosial, Penutur Bahasa Melayu Deli, doctoral diss., Pasca Sarjana USU, Medan, 2008.
[12]. …....., Ciri Akustik Bahasa Melayu Deli(Pasca sarjana USU, Medan, 2009).
[13]. ....., and Silvana Sinar, Ciri Akustik Bahasa Melayu Langkat(Pasca Sarjana USU, Medan, 2009).
[14]. Ganie, Rohani, Intonasi Kesantunan Tindak Tutur Direktif Bahasa Aceh, Dialek Aceh Timur: Kajian Fonetik Eksperimental. doctoral diss,. Fakultas Ilmu Budaya, Medan, 2014.
[15]. Yanti, Yusrita, Bahasa Emosi Kandidat Presiden dalam Sebuah Debat, Proc. 9th KOLITA Conf. on Linguistics, Jakarta, 2010.
[16]. Husny, T.H.M.,Lintasan Sejarah Peradaban dan Budaya Penduduk Pesisir Sumatera Timur(Medan: B.P. Husny, 1975).
[17]. Omar, Asmah, Bahasa Diraja (Kuala Lumpur: Dewan Bahasa dan Pustaka, 1985).
[18]. Siregar, B.U., Fungsi Pragmatika Intonasi di dalam Bahasa Indonesia: Suatu Kajian Awal, Journal of Linguistik Indonesia, 18(1), 2000.
[19]. Fibriasari, Hesti, Kendala Prosodi Pembelajar Bahasa Prancis di Medan, doctoral diss., Pascasarjana USU, Medan, 2012.
[20]. Mozziconacci, Sylvie J.L.,Speech Variability and Emotion: Production and Perception, (Eindhoven: Technische Universiteit Eindhoven, 1998).
[21]. Zahid, Indirawati, Penelitian Intonasi Fonetik Eksperimental: Realisasi Makna Emosi Filem Sembilu 1 dan 2, doctoral diss., Akademi Pengajian Melayu of Universiti Malaya, 2003.
[22]. Syukur, Abdul, Beragam Cara Terapi Gangguan Emosi Sehari-hari, (Jogjakarta: DIVA Press, 2011). [25]Crystal, David, The Cambridge Encyclopedia of Language(New York: Cambridge University Press, 1989).
[23]. Lehiste, Ilse. Suprasegmentals (Camridge: The MIT Press, 1970).
[24]. Nasution, Ahmad Sayuti Anshari.Bunyi Bahasa (Jakarta: AMZAH, 2010).
[25]. Lapoliwa, Hans, Pengantar Fonologi I: Fonetik (Jakarta: Departemen Pendidikan dan Kebudayaan, 1988).
[26]. Hart, Johan, R. Collier, and A. Cohen, A Perceptual Study of Intonation: An Experimental-Phonetics Approach to Speech Melody (Cambridge: Cambridge University Press, 1990).
[27]. Laad, Robert D., International Phonology (Camridge: The MIT Press, 1996).
[28]. Cruttenden, Alan, Intonation (Cambridge: Cambridge University Press, 1997).