

# INTENSITY PATTERNS IN CHINESE SENTENCES OF THE SURABAYA-CITIZEN SPEECH

Ong Mia Farao Karsono

Chinese Department of Petra Christian University Surabaya (INDONESIA)  
miafarao@gmail.com

## ABSTRACT

A relationship between intensity, tone level and duration of a discourse, and also difference in intensity understanding between tone language like Chinese and non-tone language like Indonesian was the purpose of this paper to examine intensity patterns in Chinese sentences of the Surabaya-citizen speech. A qualitative descriptive method was used. These record data discourse were processed with a Praat program. Analyses results showed that in declarative sentences a descending pattern occur when the sentence function to inform something only, and shows an ascending pattern if besides giving information, also involve emotion. Intensity patterns in question sentence ascend. Intensity patterns in command sentences also ascend. In shout-out sentences, intensity patterns ascends if there exists a fed up feeling; and if only expresses feeling the intensity pattern descend. Within a sentence, the strongest intensity on a word is not certain the longest. Also intensity related to juncture shows that intensity patterns descend resembling the letter v, sometimes distinct sometimes obscure.

**Key words:** Pattern, Chinese language, intensity

## 1. INTRODUCTION

Two different understanding exists about intensity of tone-language and non-tone language. In Chinese language, each syllable possesses a tone. Intensity of non-Chinese speakers has a different understanding compared to Chinese language. Intensity in Chinese has a connection with tone height and sound duration. In non-tone language, intensity has a connection with power and duration of the sound. According Wang (1999:229), linguistic experts in the early twenties, divided prosody elements into sound intensity which related to sound power (*yīnqiáng zhòngyīn* 音强重音), sound-height (*yīngāozhòngyīn* 音高重音), and tone (*Shēngdiào* 声调). The first kind (*yīnqiáng zhòngyīn* 音强重音) resembles intensity in English, that is based on the sound power which happened on the syllable in a word, for example 'present has a meaning prize when the intensity is on the first syllable. In the word pre'sent when the intensity is on the second syllable it means attending. This paper does not used the term intonation, but word intensity.

Thus, tone in Chinese refers to sound height and sound duration. Relation between tone and intensity is when the word is spoken strongly, the tone height of that word would also be distinct. If a word is read weakly, the tone height will be obscure or become flat. According Shi (2008:325) additional power in a sound is usually followed by an increase height or lengthening of the utterance.

The relationship between word intensity, sound height and duration of an utterance, and also the different meaning of intensity between tone-language like Chinese and non-tone language like Indonesian, causes this paper to examine the tone patterns in the speech of Surabaya citizen. Discourse was done naturally in a relaxed situation. Intensity patterns were also correlated to the seven language functions of Holiday.

## 2. RESEARCH METHOD

A descriptive method was used with a qualitative approach. The fundamental thinking why these methods were used is that qualitative analysis are more qualified to chronologically follow narrative and guide the researcher to discover unexpected items during a research process (Miles & Huberman, 1992:1). To cover other research subjects, a technique called *snowball sampling* was used, which was a good strategy to invite other participants with equal language competence into discussion (Dornyei, 2007:129). Stimulate techniques sometimes seem like doing nothing, but actually conceal special purposes (Samarin, 1988:162). Discourse data collecting proceeded natural, so there were no preparations made by the subjects. From the time range, this research used synchronize approach, which mean a limited research within a certain time. In this research the researcher also made conversation with the subjects in order to make them answer. Discourse was then separated into sentence with key words to find their intensity location. Enough data had been collected to answer the main focus on intensity patterns.

Raw data consisting of recorded conversations were transcribed into data sheet. These data sheet display a phonetic transcript not in IPA but in pinyin, and Chinese calligraphy with tones spoken by the subjects. This data included code number, subject and kind of sentence to ease the analyses. Each sentence is processed with a Praat program to display their graphs. Tran scripted data and Praat graphs actually are improvement of recorded sound which eventually were not obvious. Intensity change were recorded in numbers. These numbers show different levels, so they are relative not absolute values. Intensity movements were documented into three position; at the start, the middle and the end of each word in the discourse. Code mode begins with S1 for the first subject / then number 01 for the first sentence/ and finally the kind of sentence (KB for declarative, KT for question, KP for command, and KS for shout-out sentences).

### 3. RESULTS AND DISCUSSION

#### 3.1. Intensity in Chinese Language (*zhòngyīn*/重音)

In English, intensity or accent do not represent high or low sound, but has an understanding that intensity is focused at the different power of a syllable in a word. In a sentence, if intensity is given to a word, the other words will lower its sound (slower utterance duration, slower movement of time utterance) (Zhao, 1999:87-88). It is matter of strong or weak, not a high or low of a sound. Not many pure English words depends on the existence of a distinctive behaviour of strong or weak. People not always used the same strength for each word in a sentence., which causes different intensity in each syllable of the sentence. When using a great power, utterance will also sound loud and the syllable intensity of the word will slightly increase.

Intensity in Chinese according Wu (1993:150) has an understanding, that is an indication that a bigger intensity on a word or syllable in a sentence will happened, when people read or speak loudly. On the other hand if reading is weak, the syllable sound will also be weak. Intensity accent in Chinese depending on sound strength is divided into strong, medium, and weak levels. Xing and Wang (2009:136) divided intensity accent into word intensity and sentence intensity. Word intensity refers to the reading style of loud or weak sound on syllables in compound words; a general norm in reading double syllables, three syllables and four syllables words. For double syllable words which contain light-tone words, is read with a "strong-weak" pattern, like the word *shítou* 石头 'stone'. For words not containing light-tone words, reading pattern will be "medium-strong", like the word *dìqiú* 地球 'world'. And three syllable words without light-tone words, the reading pattern is "medium-weak-strong" like the word *tàiyángdǎo* 太阳岛 'sunny island'. Because influenced by streaming air, every syllable in a sentence is seldom spoken with the same power. There must be stronger and weaker sound. The front syllable will be pronounced short and weak, and the last syllable will get a intensity. This also happened to the tone, so the sentence become not perfect, and generally the last word will have the most perfect pattern (Yang, 2001:137).

Many people think that light and heavy intensity is caused by strong or weak streaming air. This is not true, because intensity in Chinese language is different than intensity in non-tone languages. In Chinese language intensity besides having power also has a longer sound element and higher tone. In other words, low tone words will become more lower; for example tone-four words will drop from level five to level one, hence the drop will sound more sharply. Intensity in Chinese language can be classified into two big classes, and shown in the following figure (Wu, 2000:283).

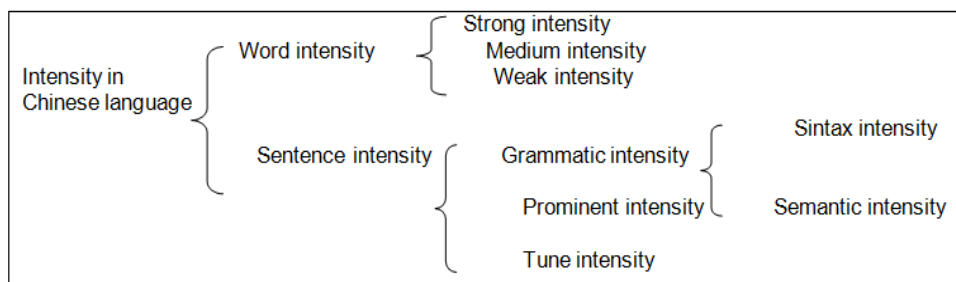


Fig. 1. Kinds of Intensity in Chinese Language (Wu, 2000:284)

Generally people think that intensity graph should be expressed in discourse duration, tone level and strength of sound. Sometimes also with a combination of these three elements. In English intensity is a combination duration, level and strength of discourse, but the most prominent is the level element. According Guo (1991:281) duration of a word strongly relates to the word kind. For example full-kind words have a longer duration compared to particle words. The main theme content in a sentence will have a longer discourse time in seconds than non-thematic ones. Intensity also have a strong relationship with the level sound expresses in Hz. Influence of intensity towards the sound level in Hz here is not the influence to the tone word, but influence of the movement of the original tone level. For example, a tone-one word usually has an average 220-250 Hz, when given intensity it will ascend higher than 250 Hz. Besides that, movement range of Hz will also increase. Meanwhile, words which do not get intensity, their tone pattern flattens, like the word *nǐ* 你, which should have a tone-three, because of the discourse was shortened and without intensity, the pattern becomes flat. Relation between intensity and strength of sound was examined by Guo (1991:285) who concluded that in natural discourse, strength of the component with no intensity is not great. On the other hand, strength of element words with no intensity is not certainly weak.

Students beginning a course learning foreign language, have a natural tendency, especially in reading, to isolate words and produce them all with intensity, however unimportant they may be in the sentence. So they fail to acquire the correct rhythm of the language and get into bad intensity habits that are almost impossible to eradicate. An excellent exercise, which prevent them from forming these bad habits, is to divide their reading text into intensity groups with the intensifyed syllables marked, and then made them read, trying to make each group occupy the same amount of time, or, which is the same thing to pronounce all the intensifyed syllables at equal intervals. (Kingdon, 1958:162).

The reality of a relation between intensity, theme and language function in a sentence, made this paper examine intensity patterns in 29 sentences, consisting of 9 declarative, 7 question, 7 command, and 6 shout-out sentences. This paper only displays two sentences for example.

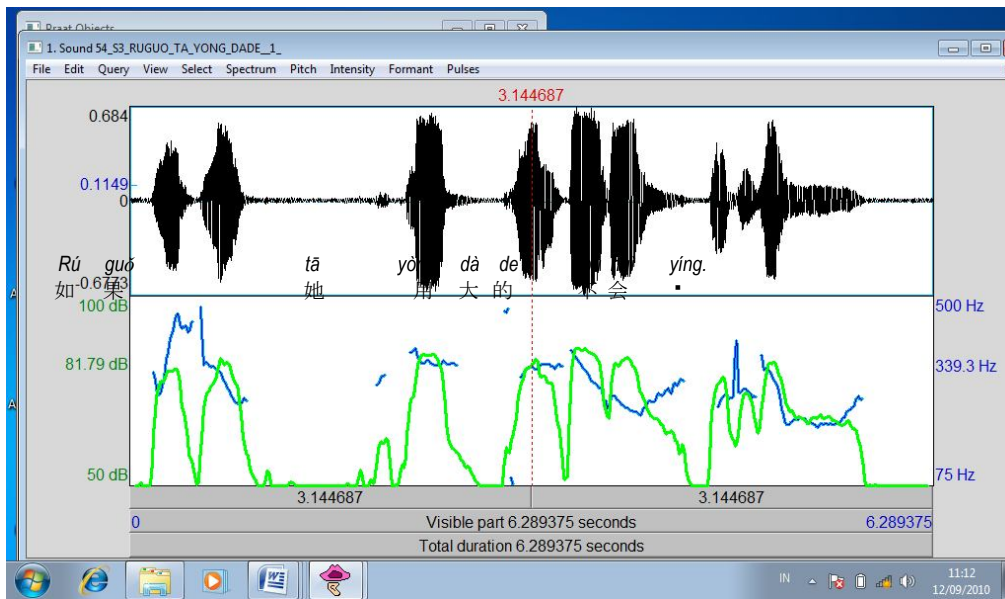
**3.2. Intensity patterns in declarative sentences of the Surabaya-citizens speech.**

1) *Rú guǒ tā yòng dà de eeh bú huì yíng.*

如果她用大的 eeh 不会赢。

'If she uses the big one, she wont win' (S3/24/KB)

On the Praat figure 2 the green curve indicates intensity pattern, and the blue curve indicates tone pattern.



**Fig. 2. Relation Between Tone and Intensity S3/24/KB**

Detailed relation between intensity, time lapse, and tone level of each word in sentence S3/24/KB are shown in table1.

**Table 1. Relation Between Word Intensity, Duration, and Tone Level in Declaration Sentence S3/24/KB**

Word	Tone	Time lapse in second	Intensity movement of each word in dB	Tone level movement of each word in Hz
1. <i>Rú</i> 如	35	0,183 – 0,484 = 0,301	62,10 – 80,65 – 56,50	(3) 329,2 – (4) 447,1 – (5) 442,1
Stopping juncture		0,484 – 0,553 = 0,069		
2. <i>guǒ</i> 果	214√	0,553 – 0,909 = 0,356	59,66 – 82,67 – 58,77	(2) 474,6 – (1) 330,4 – (4) 265,5
Stopping juncture		0,909 – 2,191 = 1,282		
3. <i>tā</i> 她	55→	2,191 – 2,554 = 0,363	71,06 – 84,25 – 58,89	(5) 374,4 – (5) 354,4 – (5) 344,4
Stopping juncture		2,554 – 3,071 = 0,517		
4. <i>yòng</i> 用	51	3,071 – 3,388 = 0,317	77,62 – 83,27 – 55,15	(5) 320,6 – (3) 336,1 – (1) 341,8
Stopping juncture		3,388 – 3,450 = 0,062		
5. <i>dà</i> 大	51	3,450 – 3,736 = 0,286	74,87 – 84,86 – 68,55	(5) 378,9 – (3) 311,1 – (1) 248,4
6. <i>de</i> 的	0	3,736 – 4,330 = 0,594	68,55 – 83,40 – 60,64	(1) 248,4 – (1) 250,3 – (1) 310,8
Stopping juncture		4,330 – 4,608 = 0,278		
Eeh		4,608 – 4,747 = 0,139	76,82 – 74,62 – 60,49	251,3 – 278,4 – 397,1
7. <i>bú</i> 不	35	4,747 – 4,894 = 0,147	60,49 – 74,36 – 67,09	(3) 397,1 – (4) 290,9 – (5) 273,9
Stopping juncture		4,894 – 4,940 = 0,046		
8. <i>huì</i> 会	51	4,940 – 5,149 = 0,209	68,84 – 82,64 – 70,92	(5) 367,9 – (3) 308,3 – (1) 211,1
9. <i>yíng</i> 赢	35	5,149 – 5,705 = 0,556	70,92 – 68,32 – 61,77	(3) 211,1 – (4) 209,2 – (5) 274,8

It was found that the green curve representing intensity, on an overall base, moves downward. This sentence begin with the word *rú* 如<sup>35</sup>, a tone-two word and intensity at 62,10 dB, and ended with the word *yíng* 赢<sup>35</sup>, a tone-two word with a intensity of 61,77 dB. Hence the intensity pattern of sentence S2/23/KB moves downward 0,33 dB (62,10-61,77 dB), which mean the speakers slightly decreases intensity. By observing intensity in the discourse, the strongest intensity happened to the word *dà* 大 at 84,86 dB, followed by the word *tā* 她 at 84,25 dB. This explain that intensity in declarative sentences happened at tone-four and tone-one words. Word with the biggest intensity *dà* 大 has not the longest time lapse (0,286 second), instead the word *tā* 她 has a longer time (0,363 second).

Concerning pragmatic theory of language function (Halliday, 1976:11-17), discourse of subject S3 has a representative function; representing his sister when playing the game. According the context, this discourse only inform something, so intonation pattern decreases.

2) *Bù hǎo yì sī ma!*  
 不好意思嘛! ↗  
 'I am reluctant! (S5/38/KS)

On the Praat figure 3 the green curve indicates intensity pattern, and the blue curve indicates tone pattern.

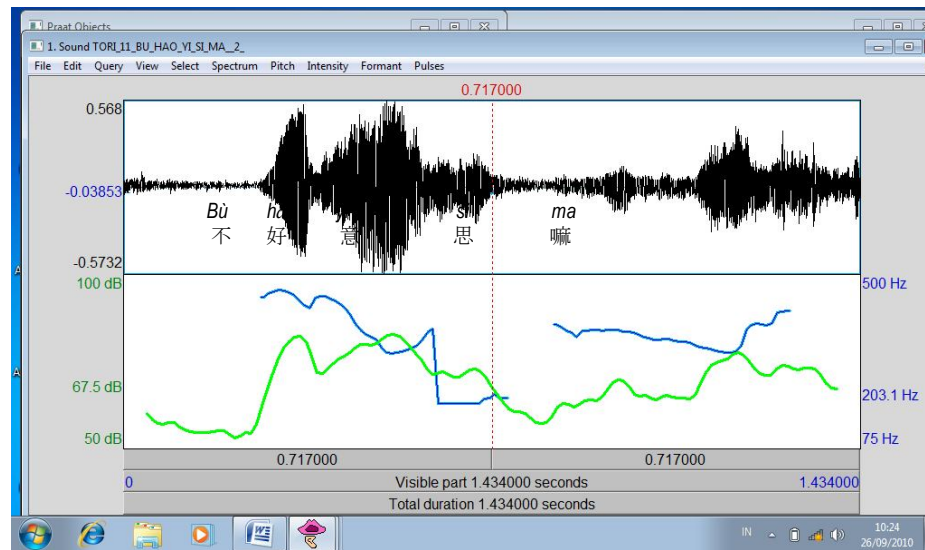


Fig. 3. Relation Between Tone and Intensity S5/38/KS

Detailed relation between intensity, time lapse, and tone level of each word in sentence S9/59/KT are shown in table 2.

Table 2. Relation Between Word Intensity, Duration, and Tone Level in Shout-out Sentence S5/38/KS

Word	Tone	Time lapse in second	Intensity movement of each word in dB	Tone level movement of each word in Hz
1. <i>Bù</i> 不	51↘	0,267 – 0,389 = 0,122	61,18 – 82,21 – 71,82	(5) 445,1 – (3) 471,3 – (1) 446,1
2. <i>hǎo</i> 好	214√	0,389 – 0,600 = 0,211	71,82 – 82,70 – 71,33	(2) 446,1 – (1) 307,6 – (4) 365,3
Connecting juncture		0,600 – 0,614 = 0,014		
3. <i>yì</i> 意	51↘	0,614 – 0,746 = 0,132	71,33 – 72,69 – 61,86	(5) 185,6 – (3) 184,7 – (1) 197,5
Stopping juncture		0,746 – 0,838 = 0,092		
4. <i>sī</i> 思	0	0,838 – 1,109 = 0,271	60,07 – 69,83 – 65,12	(1) 377,7 – (1) 363,6 – (1) 329,2
5. <i>ma</i> 嘛	0	1,109 – 1,295 = 0,086	65,12 – 77,26 – 73,38	(1) 329,2 – (1) 313,9 – (1) 410,5

It was found that the green curve representing intensity, on an overall base, moves upward. This sentence begin with the word *bù*不<sup>51</sup>↘ a tone-four word and intensity 61,18 dB, and ended with the word *ma*嘛<sup>0</sup>, a light-tone word with a intensity of 73,38 dB. Hence the intensity pattern of sentence S5/38/KS moves 12,2 dB (73,38 -61,18 dB), which mean S5 increases loudness in the discourse. Intensity pattern has a close relation with juncture. By observing intensity in the discourse, the strongest intensity happened to the word *hǎo*好<sup>214</sup>√, a tone-three word at 82,70 dB. Followed by the word *bù*不<sup>51</sup>↘ a tone-four word at 82,21 dB, then the word *ma*, a light-tone word at 77,26 dB. This explain that intensity in sentence S5/38/KS happened at tone-three word, which also function to express subject S5 feeling. Word with the biggest intensity also has the longest time lapse of 0,211 second.

Concerning language function (Brown, 2000:251-252), discourse of subject S1 has a personal function to express a reluctant feeling. According the context, this conversation is between lectures; subject S5 got an uneasy feeling when assigned to ask the price of the cake served.

#### 4. CONCLUSION

Intensity patterns in the four sample sentences (declarative, question, command and shout-out ) show a ascending as well descending curve depending on the context. Chinese language of the Surabaya-citizen speech in declarative sentences also indicates this pattern. If declarative sentences functioned to inform something, the intensity pattern descends; but if besides information also have a joyful feeling, the intonation pattern ascends. In question sentences, the intensity pattern ascends. In command sentences, the intensity pattern also ascends. In shout-out sentences, if an annoyed feeling exists, the intensity pattern ascends; and if only expressing feelings, the pattern descends. The strongest intonation in a sentence has not always the longest time lapse.

Except that, intensity pattern connected with juncture showed that, if a juncture happened, intensity pattern descend sharply approaching lowest level and then moved upward to form a curve resembling the letter v. From the analysis data in all kinds of sentences, if a juncture happened some intensity patterns formed a distinct letter v, while others an obscure letter v. With obscure is meant that at juncture, the intensity pattern do not form a letter v, on the other hand even at absent juncture, the intensity form a letter v. This was caused that at those junctures, the glottis did not rest fully, and still contain air to drive the vocal cord which causes intensity movement not fully to the lowest level.

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