The Effect of Tone Changes on The Interjection of ‘Aiya’ (哎呀) in Attitude and Emotional Signals

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Abstract
The purpose of this research is to prove that modification of the interjection ‘Aiya’ (哎呀) at certain intonation signals a different attitude. As a result, this study focuses on the different emotional expressions that the Chinese word aiya might convey. Researchers employed recording methods with the PRAAT application. Furthermore, the researcher presented 40 respondents who were Mandarin students to give a direct assessment of the original and the manipulated interjection. The perception test is carried out by playing five interjection utterances without telling the respondent which sound is the initial utterance. The first sentence has the results of happy emotional attitudes. When it is raised and lowered to 4 semitones, there is a balanced variation of emotions. However, when it was raised to 8 semitones, the test results show an emotional attitude of disappointment, and when lowered to 8 semitones, showed an emotional attitude of impressed. An increase of one tone point can create a positive impression. Then, if there is a decrease, it will make a negative impression. However, because of the vast variation in everyone’s perception, generating these conclusions is still impossible. This is where the suggestion appears for future researchers to continue this research and make this research a reference.

Keywords
PRAAT; Phonology; Suprasegmental; Interjection; Perception Test

INTRODUCTION
Language studies never stop being discussed. There are always interesting language problems to study. This is because language is a part of human life. A language is a tool of communication and human interaction tool. As a means of human communication, language can be separated into units, namely sentences, words, morphemes and phonemes. The main objective of language research is to try to provide systematically the existence of patterns,
the existence of dominant and systematic tendencies, the existence of rules or rules that are governing in a particular language. Furthermore, words used to indicate specific moods or feelings are called interjections [1]. Because they are the only words in a phrase that do not combine with any other word class, they are regarded as the most unique class of words. In other words, the interjection's syntactic function does not combine with any other words in the sentence [2]. Moreover, to master a language well, grammar mastery is a must. In the book entitled 'Tatabahasa Mandarin itu Mudah' [3], Suparto divides grammar into four parts, namely morphemes, words, combinations of words and sentences. It's the same as learning a foreign language like Mandarin which cannot be separated from learning sentence patterns. The sentence-forming elements of Mandarin are not much different from other languages such as subject, predicate, object, adverb, particle and others.

In Mandarin, there are also various types of interjections used to express feelings in spoken speech. These interjections sometimes differ based on the dialect of a particular area, but some are the same and commonly used. According to Liu, et al. [4], interjections in Mandarin have at least four characteristics:

1. Its lexical and grammatical meanings are ambiguous. It is not an abstract or concrete word. Interjections in sentence structure are independent clauses that have no reference to any other parts of the sentence. Each interjection, though, has a specific emotional connotation. Therefore, the sentence and its context are relevant to the interjection's meaning.

2. Typically, it comes first in a statement and is followed by a comma or an exclamation mark.

3. It conveys nuanced feelings or moods. Chinese interjections are numerous and can convey a wide range of nuanced emotions. Different intonations of the same interjection can convey various emotions or feelings.

4. The writing of Chinese exclamations in the book is uncertain. For example, the syllable 'o' can be written as 哦, 噢, or 喔.

One of the common interjections in Mandarin is the 'aiya 哎呀' interjection. The interjection 'aiya 哎呀' is used in situations of disappointment and impressed, for example:
“aiya.. jin tian ni chi dao le!”
“aiya, today you're late again!”
Example sentences 1.1. Disappointed

The interjection in the example above shows the interjection speaker ‘aiya 哎呀 feeling disappointed with someone. In different situations, when speakers say:

“ aiya.. ni hen shui a..”
aiya.. you are very handsome.
Example sentences 1.2. Impressed

This This utterance means that the speaker is amazed at someone's appearance. Of course there are differences in intonation and tone when saying aiya 哎呀 which expresses disappointment and admiration. In a journal article, [5] explains the interjection function of 哎呀/aiya: 1) expresses something unexpected, or something surprising. 2) expresses complaints, impatience, and regret. 3) express negation.

Thus, the limitations of the problem in this study are 1) Does the modification of the interjection “aiya 哎呀” into a certain intonation signal a different attitude and emotion? While the purpose of this research is to prove that modification of the interjection “aiya 哎呀” certain intonation signals a different attitude. As a result, this study focuses on the different emotional expressions that the Chinese word aiya might convey. Therefore, [6] emotion type analysis is used as the parameter. Santangelo divides the many sorts of emotions into five categories: (1) happy expectations and interactions, (2) fulfilling effects, (3) negative projections, (4) violently opposing emotions, and (5) unsatisfactory results. This study tries to provide a more thorough explanation of the different emotions displayed by the interjection of aiya.

RESEARCH METHODS
Researchers employed recording methods with the PRAAT application to collect data from informants so that the captured sound could be saved in WAV format and immediately evaluated. In order to capture the required emotion, the recording method is used. When the researcher explained the scenario, the informant may answer by saying "aiya," upon the sentences/questions.
Furthermore, at the stage of the perception test, the researcher presented 40 respondents who were Mandarin students to give a direct assessment of the original and manipulated 'aiya' interjection. The perception test is carried out by playing a total of five interjection utterances without telling the respondent which sound is the original utterance. The questionnaires sent are as follows:

https://docs.google.com/forms/d/e/1FAIpQLScgc-pUmxdYxDB1XFR84P-9Bqwbcn9STQ6yq3-DzqjChILjng/viewform?usp=pp_url

On the questionnaire notes are:
1. Utterance 1a is sound without modification.
2. Utterance 1b is sound with 4 semitone addition.
3. Utterance 1c is sound with 8 semitone addition.
4. Utterance 1d is sound with 4 semitone decreasing.
5. Utterance 1e is sound with 8 semitone decreasing.

![Figure 1. The image of perception test on Aiya interjection](image)

**RESULTS AND DISCUSSION**

Mandarin has written in the form of characters where each form of the script does not show how to pronounce it but the meaning it represents. In contrast to the alphabetic writing system where the written form of a word is derived from its pronunciation. A phonetic notation system is needed to be able to read Chinese characters so that people don't mispronounce them. The phonetic system currently used in China and studied by most foreigners who want to learn Mandarin is the Pinyin phonetic system, also known as Hanyu Pinyin. In the pinyin phonetic system, one Chinese character is represented by one syllable consisting of an initial consonant, vowel and tone.
Mandarin is also a suprasegmental phoneme because, in the morphemic script, one morpheme represents a set of sounds, one tone, and one meaning. The following is a discussion of the 'aiya' interjection using the 'PRAAT' application. Starting from making a text grid and modifying the 'SECOND PHONEM POINT', namely [i]. raised to 4 semitones. [ii]. raised to 8 semitones. [iii]. lowered to 4 semitones. And [iv]. lowered to 8 semitones. Below is a picture of the process;

![Image of text grid and initial pitch tier of 'aiya']

**Figure 2.** Text grid interjection 'Aiya'

**Figure 3.** Initial pitch tier

Above is an image of the text grid and initial pitch tier of 'aiya' which have not been changed. Then, the data is entered into a variable formula and presented as an increase of 4 semitones, an increase of 8 semitones, then a decrease of 4 semitones and a decrease of 8 semitones. Here is an image of the pitch tier when raised by 4 semitones:
Figure 4. The pitch tier is increased by 4 semitones

Figure 5. The pitch tier is increased by 8 semitones

The two pictures above are a modification process by increasing the 'TONE' of the second dot phoneme.

Figure 6. The pitch tier is lowered by 4 semitones
Figure 7. The pitch tier is lowered by 8 semitones

The last two images are the process of lowering the 'TONE' down to 8 semitones. The conclusion of this discussion, based on the perception test is:

The first sentence which is the original data has the results of the perception test with the highest choice of perceptions being happy emotional attitudes. However, when it is raised and lowered to 4 semitones, there is a balanced variation of emotions. This shows an emotion that is less commonly displayed by the interjection. However, when it was raised and lowered to 8 semitones, there was a uniformity of perception by the test results. The test results show that when it is raised to 8 semitones at the second point of utterance, AIYA's interjection will have the impression of an emotional attitude of disappointment. And if it is lowered to 8 semitones at the point of the second utterance, AIYA's interjection will have the impression of an emotional attitude of impressed.
This is following the results of research by [7] which also examined AIYA interjection. From the results of research by [7] which also used parameters from [6], it was found that these five attitudes were found in the example of the AIYA interjection sentence. This research can be said to be a reinforcement of research [7], where previous research only examined examples of sentences found in print media. While the research this time went straight to the field with tests. Furthermore, this difference in meaning is used by speakers of any language to convey emotion in the sentences or utterances they produce. This can also be seen in the style of language indicated by the tone of the poem which is intended to affect the listener [8].

CONCLUSION
As a language that has suprasegmental characteristics, phonological research still has a lot of space to study Mandarin. As with this study, the analysis results identify that an increase or emphasis on one tone point can create a positive impression. Then, if there is a decrease, it will create a negative impression. However, because of the vast variation in everyone's perception, it is still not possible to generate these conclusions. This is where the suggestion appears for future researchers to continue this research and make this research a reference.

REFERENCES
[7] Liu Yuehua, Pan Wenyu, dan Gu Wei 刘月华, 潘文娱, dan 故韦: 实用现代 汉语语法（第三版）. Beijing: 商务印书馆 (The


