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**RESEARCH ARTICLE**

## **A Study on English Equivalents of Cantonese Sentence-Final Particles: Zaa3 and Ze1 as an Example**

**Xiaoshuai Zhang**

*College of Foreign Studies, Jinan University, Guangzhou, Guangdong, China*

**Corresponding Author:** Xiaoshuai Zhang, **E-mail:** [z13352894311@outlook.com](mailto:z13352894311@outlook.com)

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**ABSTRACT**

This study explores English equivalents of the Cantonese sentence-final particles (SFPs) zaa3 and ze1 by utilizing Natural Semantic Metalanguage (NSM) explications to analyze their semantic components and roles and conducting a phonetic experiment to find the English intonational equivalents. While zaa3 and ze1 both convey the meaning of “only” or “just” in Cantonese, this research reveals that they differ in connotations, are contextually specific, and their implied meanings cannot be adequately captured through direct translation into English. To address this, the study employs NSM explications as the analytical framework and a phonetic experiment involving research participants of two Cantonese native speakers and one English native speaker is conducted to identify the English intonational equivalents of these Cantonese SFPs. The study aims to answer two research questions: (i) What are the NSM explications of the Cantonese sentence-final particles zaa3 and ze1? (ii) Do either of the two Cantonese SFPs possess English intonational equivalents, and if so, what are they? Zaa3 often conveys a sense of complaint or dissatisfaction, suggesting insufficient quantity, while ze1 typically conveys modesty or humility, implying an unremarkable or ordinary quantity. An NSM explication for zaa3 involves the Cantonese semantic primes M4 DO1, SEONG2 DO1 DI1, which translate to “NOT MORE, WANT MORE” in English equivalents. On the other hand, an NSM explication for ze1 comprises M4 DO1, M4 SEONG2 JAN4 GOK3 DAK1 DO1 in Cantonese semantic primes, corresponding to “NOT MORE, DON'T WANT SOMEONE FEEL MUCH~MANY” in English equivalents. These nuanced implied meanings cannot be effectively conveyed through direct translation alone, requiring consideration of intonation patterns in English. The phonetic experiment conducted using Praat software clearly demonstrates distinct pitch contours when participants read English sentences translated from Cantonese sentences containing zaa3 and ze1, respectively. The findings indicate that the English equivalents of the Cantonese SFP zaa3 encompass the meanings of “only” or “just”, accompanied by a falling pitch contour when speakers read the corresponding English translation. Conversely, the English equivalents of the Cantonese SFP ze1 entail the meanings of “only” or “just”, along with the highest pitch point occurring at the end of the sentence in the English translation. In conclusion, this research sheds light on the English equivalents of the Cantonese SFPs zaa3 and ze1, highlighting their divergent connotations and nuanced implied meanings. The study emphasizes the importance of considering intonation patterns to accurately convey these nuances in English translations.

**KEYWORDS**

Cantonese SFP; NSM explication; English Intonational Equivalents

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**1. Introduction**

Cantonese, being a tone language, has a rich tonal system that uses sentence-final particles (SFPs) that perform the same function as intonation and stress used by English. However, very few studies have attempted to discover the English intonational equivalents of Cantonese SFPs. In this study, the meanings of zaa3 and ze1 will be carefully studied, and the natural semantic metalanguage theory (NSM theory) will be applied in this thesis to define the two Cantonese SFPs. Then a phonetic experiment will be conducted

to find out the English intonational equivalents that correspond to the implied meanings of these two Cantonese SFPs that cannot otherwise be conveyed by mere translation.

## **2. Literature Review**

Sentence-final particles (SFPs) are a very common linguistic feature in some languages, especially in Mandarin, Cantonese and so on. Compared with Mandarin, Cantonese has much more SFPs in daily use, especially in spoken form. Up to now, there are plenty of studies on Cantonese SFPs (Luo and Lin, 2022; Fang, 2002; Fantian, 2017; Hong, 2015; Liang, 2016), but very few of them have been conducted from the perspective of discovering the English intonational equivalents of Cantonese SFPs.

Referring to Mandarin, which uses SFPs to a much lesser degree than Cantonese, Chao (1932, p. 115) said that “the speech element in Chinese which may be equated to English intonation is the use of grammatical particles”. Kwok (1984, p. 8) said that “[a]s a system SFPs share many characteristics with intonation”. Matthews and Yip (1994, p.338) said that “many of the SFPs’ functions are often conveyed by intonation patterns in English.

Explaining why Cantonese is restricted in its use of intonation, Cheung (1986, pp. 250-251) said: Not only is Cantonese a tone language, but it has one of the richest tonal systems in the world. And not only is the number of contrastive tones in Cantonese one of the greatest, but the tonal system exploits both pitch height and pitch orientation at the same time. The result is a variety of SFPs that fulfill more or less the same function as intonation.

Yau (1980, p. 51) argued that “there is a mutual compensation between SFPs and intonation patterns and that the more a language relies on the use of SFPs in expressing sentential connotations, the less significant will be the role played by intonation patterns, and vice versa”. English is one of the languages that have very few SFPs, and many linguists have observed that sentential connotation and speaker attitudes are generally expressed in English through a combination of stress and intonation (e.g., Chun, 2002; Pierrehumbert and Hirschberg, 1990).

Cantonese has a lexical tone system that severely restricts its ability to manipulate pitch. As a result, many of the speaker-oriented discourse meanings that are expressed through intonation in languages such as English are expressed in the form of SFPs in Cantonese.

Although this is widely known and accepted by linguists, apparently, very few studies have made a systematic attempt to discover whether any of the more than 30 Cantonese SFPs have English intonational equivalents, and if so, what those equivalents are. To work towards filling this research gap, John C. Wakefield (2011), in his thesis *The English Equivalents of Cantonese Sentence-final Particles: A Contrastive Analysis* examines the English intonational equivalents of four Cantonese SFPs that divide into the following two pairs: particles of obviousness: lo1 and aa1maa3; question particles: me1 and aa4.

To further John C. Wakefield’s research on the English equivalents of Cantonese sentence-final particles and to fill this research gap further, this thesis attempts to study the English equivalents of two other Cantonese sentence-final particles: zaa3 and ze1.

Therefore, my research questions could be like this:

- (i) What are the NSM (Natural Semantic Metalanguage) explications of the Cantonese sentence-final particles of zaa3 and ze1?
- (ii) Whether any of the two Cantonese SFPs have English intonational equivalents? If so, what are those equivalents?

## **3. Theoretical Framework**

In this thesis, the natural semantic metalanguage theory (the NSM theory) is applied to define the two Cantonese SFPs. The NSM theory was initiated by Anna Wierzbicka in the early 1960s. The first tentative list of English semantic primes included a detailed description of 14 “primitives” (Wierzbicka, 1972). More than twenty years later, Wierzbicka (1996) provided a description of English’s NSM grammar with an expanded list of 56 semantic primes. The list of primes presently includes a total of 65. The number of primes can go up or down as the NSM program evolves.

According to the NSM theory, a prime is a morpheme, lexeme or phraseme with an undecomposable meaning that exists in all natural languages (for details of the NSM theory’s assumptions, goals, and accomplishments, see Wierzbicka, 1996; Goddard, 1994a; 2004; 2008a; 2008b). The core assumption of the NSM theory is that “natural languages are adequate to represent their own semantics via language-internal paraphrase” (Goddard, 2008a, p. 3).

According to this theory, the vast majority of words (all but the 65 semantic primes) in all languages can be defined using simpler (i.e., semantically less complex) words. Those simpler words can, in turn, be defined with words that are simpler yet, and on and on until we are left with a set of words (actually morphemes, lexemes, or phrasemes) that cannot be defined.

Here is a concrete example of how NSM theory has been used in cross-linguistic semantics: In English, we use the word “know” to express the concept of having knowledge about something. However, in some other languages, such as Mandarin Chinese, there are multiple words that can be translated as “know”, each with its own specific meaning. For example, the Chinese word “zhi1 dao4” (知道) is used to indicate knowledge about facts or information, while the word “ming2 bai2” (明白) is used to indicate understanding or comprehension of a concept (Liang, 2019). Using NSM theory, researchers can identify the semantic primes that underlie these different meanings of “know” (Chen, 2021). For example, the concept of “fact” might be considered a universal semantic prime, as it is a fundamental concept that is present in many different languages. By identifying these semantic primes, researchers can develop a more nuanced understanding of the differences between languages and the ways in which they express concepts.

This type of analysis can be useful for developing cross-linguistic dictionaries and translation tools, as well as for studying the relationship between language and thought. It can also be used to identify areas of similarity and difference between different cultures, which can be helpful for promoting intercultural understanding and communication.

For this study, I will analyze the meanings of the two Cantonese sentence-final particles using the NSM theory (see the Cantonese semantic primes in Appendix at the end of this thesis) and write an NSM explication to define each of them.

## 4. Research Method

### 4.1 Research Design

The research method mainly relies on empirical research and data analysis, and the detailed research steps are shown as follows.

- (1) 1 male Cantonese native speaker, 1 female Cantonese native speaker and 1 male English native speaker will be selected as participants in this research and the Cantonese speakers should have a high level of proficiency in English (at least with a CET6 certificate or with an IELTS score of above 6.0).
- (2) The NSM theory will be used to analyze and define each of the two Cantonese sentence-final particles.
- (3) Construct mimic conversations with a context that contains the sentence-final particle to be studied.
- (4) Translate the conversations into English. The translations should perfectly reflect the meaning of the sentence-final particle and should be reviewed and accepted by the participants.
- (5) The conversations will be read by all the participants and recorded as research data.
- (6) Analyze the data with the help of Praat.
- (7) Make summaries from the analyses and draw a conclusion.

### 4.2 Research Tool

Praat is a free, open-source software program used for analyzing, synthesizing, and manipulating speech and other types of audio recordings. It was developed by Paul Boersma and David Weenink at the University of Amsterdam and is available for download on the Praat website (Boersma & Weenink, 2021). One of the primary features of Praat is its ability to analyze speech recordings using a wide range of tools and algorithms. These include functions for measuring pitch, intensity, formant frequencies, and other acoustic properties of speech (Jacob et al., 2008, p. 68). In this study, Praat will be used as an analyzing tool to process the research data.

## 5. NSM Semantic Analysis of Zaa3 and Ze1

Before discussing the meanings of the Cantonese SFPs zaa3 and ze1, we may first have a look at the following situations where these two SFPs are used.

Situation A

Speaker A: 你一个月搵几多钱?

nei5 jat1 go3 jyut6 wan2 gei2 do1 cin2

“How much money do you make a month?”

Speaker B: 六千蚊咋, 饮水都唔够啦。

luk6 cin1 man1 zaa3 jam2 sei2 dou1 m4 gau3 laa1

“Just six thousand yuan, not enough for me to drink water.”

Situation B

Speaker A: 你一个月搵几多钱?

nei5 jat1 go3 jyut6 wan2 gei2 do1 cin2

"How much money do you make a month?"

Speaker B: 六千蚊啫, 你都搵到啦。

luk6 cin1 man1 ze1 nei5 dou1 wan2 dou2 laa1

"Just six thousand yuan. You can make it too!"

Based on the two situations provided, we can make a preliminary observation that both zaa3 and ze1 express the meaning of "only" or "just" in Cantonese<sup>1</sup>. However, the use of these SFPs in the two different contexts suggests that there might be more to their meanings than just the literal sense.

To create an NSM explication for zaa3, we can start by identifying its semantic components, which would include the referent, the main concept, and the semantic roles (Goddard, 2011). The referent of zaa3 is the situation where the amount of money or quantity is perceived as insufficient or inadequate, while the main concept is the speaker's evaluation of the quantity in question. The semantic roles include the entity (e.g. the amount of money), the evaluator (the speaker), and the value or degree of insufficiency.

Thus, based on these two situations, we can explicate zaa3 as follows:

Zaa3 (Cantonese SFP): Used to express the speaker's evaluation of a situation where the amount of money or quantity is perceived as insufficient or inadequate, indicating that the quantity is considered to be "only" or "just" barely enough or not enough, and conveying a sense of dissatisfaction or complaint.

To explicate ze1, we can again identify its semantic components, including the referent, the main concept, and the semantic roles. The referent of ze1 is the situation where the amount of money or quantity is perceived as sufficient or satisfactory, while the main concept is the speaker's evaluation of the quantity in question. The semantic roles include the entity, the evaluator, and the value or degree of satisfaction.

Thus, based on these two situations, we can explicate ze1 as follows:

Ze1 (Cantonese SFP): Used to express the speaker's evaluation of a situation where the amount of money or quantity is perceived as sufficient or satisfactory, indicating that the quantity is considered to be "only" or "just" enough and conveying a sense of satisfaction or reassurance.

Also, Fung (2000, pp. 59-60) notes that zaa3 and ze1 are not always interchangeable because they convey different expectations of the speakers, and Kwok (1984, p. 53) believes the difference between zaa3 and ze1 to be that zaa3 suggests 'not enough', and that ze1 carries the meaning of 'not too excessive' or 'not too much'.

From what has been discussed so far, we may write an NSM explication (using Cantonese semantic primes in Appendix at the end of this thesis) for zaa3 and ze1, respectively, like this:

NSM explication for Zaa3:

Cantonese Semantic Primes: M4 DO1, SEONG2 DO1 DI1

English Equivalents: NOT MORE, WANT MORE

NSM explication for Ze1:

Cantonese Semantic Primes: M4 DO1, M4 SEONG2 JAN4 GOK3 DAK1 DO1

English Equivalents: NOT MORE, DON'T WANT SOMEONE FEEL MUCH~MANY<sup>2</sup>

## **6. Data Collection and Analysis**

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<sup>1</sup> In this thesis, the study of the meanings of zaa3 and ze1 is only limited to their meanings of expressing "only" or "just" although they might have other more meanings than "only" or "just".

<sup>2</sup> Note that MUCH~MANY is a single prime, as the two English exponents mean the same thing, although English makes the distinction between count and mass nouns. In Cantonese, no such distinction is made.

In order to shed more light on the implied meanings of the Cantonese SFPs zaa3 and ze1, two situations with English translations are constructed as follows:

#### Situation A

Participants: Speaker A and Speaker B

(When Speaker A asks Speaker B about his salary, speaker B replies by telling Speaker A about his salary with implied meaning.)

A: How much money do you make a month?

B: (六千蚊咋) Just six thousand dollars<sup>3</sup>. (Implied meaning: Speaker B is complaining that he earns too little, "I need more.")

#### Situation B

Participants: Speaker A and Speaker B

(When Speaker A asks Speaker B about his salary, speaker B replies by telling Speaker A about his salary with implied meaning.)

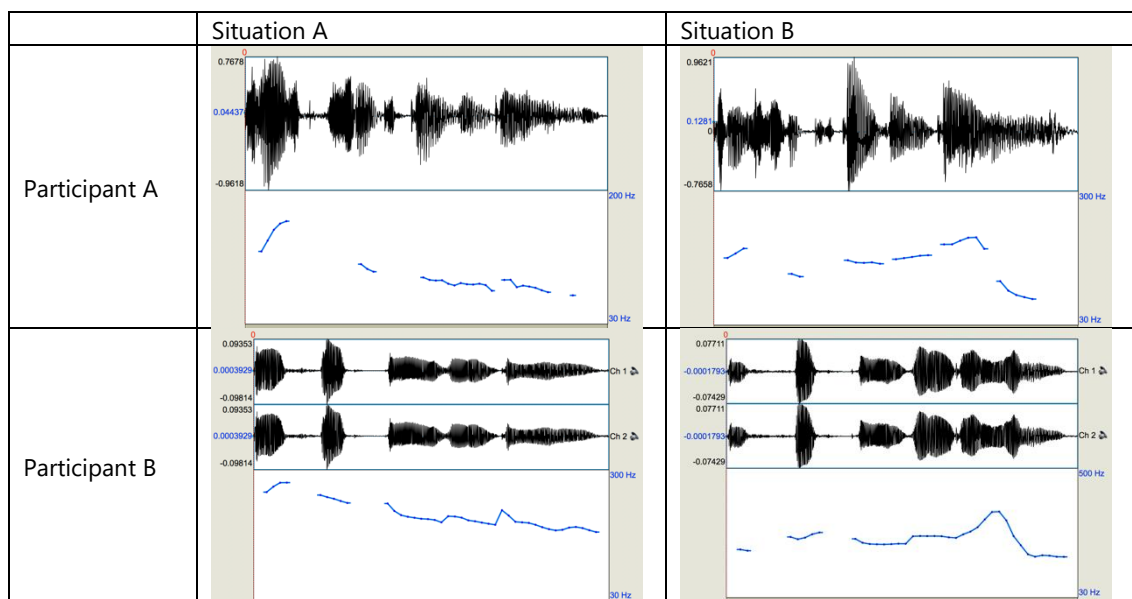
A: How much money do you make a month?

B: (六千蚊啫) Just six thousand dollars. (Implied meaning: Speaker B is trying to be humble and modest, "It's no big deal.")

In these two situations, the English translations are exactly the same. Therefore, the differences between the meanings of zaa3 and ze1 cannot be made clear merely through the translation level, and as a result, a phonetic experiment should be conducted to find out the English equivalents of these two Cantonese SFPs through the intonation level.

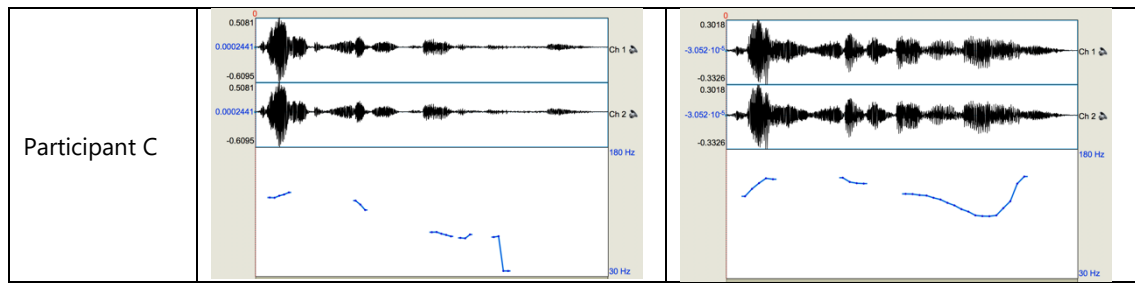
Participants A, B and C (the above-mentioned 1 male Cantonese native speaker, 1 female Cantonese native speaker and 1 male English native speaker, respectively<sup>4</sup>) are asked to read the sentences in these two situations with full knowledge of the contexts and implied meanings in these situations. And their readings of the sentences "Just six thousand dollars" are chosen as objects of analysis.

Then the recordings of the participants' readings of "Just six thousand dollars" are processed by Praat, and their results are shown as follows.



<sup>3</sup> It should be noted that the Chinese currency "yuan (蚊)" here is translated into the American currency "dollar" for English speakers' better understanding, which is insignificant in our study of the SFPs used in these situations.

<sup>4</sup> Participant A stands for the male Cantonese native speaker, participant B for the female Cantonese native speaker and Participant C the English native speaker.



From what is shown in the above chart, it can be clearly seen that in situation A, the pitch contours of the participants' intonations are all in the shape of falling down, which means that when participants read the English sentences translated from a Cantonese sentence that contains the Cantonese SFP zaa1 at the end, their intonations will be in a fall-down shape to convey their implied meaning that cannot be realized by mere translation. And in situation B, the pitch contours of the participants' intonations all have the highest point at the last word of the sentence, which means that when participants read the English sentences translated from a Cantonese sentence that contains the Cantonese SFP ze1 at the end, they will raise their intonations at the last word of the sentence to convey their implied meaning that cannot be realized by mere translation.

### 7. Conclusion

The thesis aims to study the English equivalents of two Cantonese sentence-final particles, zaa3 and ze1. The Cantonese sentence-final particles zaa3 and ze1 have similar literal meanings of "only" or "just" but are used in different contexts and carry different implied meanings. The use of zaa3 usually conveys a sense of complaint or dissatisfaction, implying that the quantity is too little or not enough, while the use of ze1 usually conveys a sense of modesty or humility, implying that the quantity is not too much or nothing to brag about. An NSM explication for Zaa3 could be M4 DO1, SEONG2 DO1 DI1 in Cantonese semantic primes and NOT MORE, WANT MORE in English equivalents, while an NSM explication for Ze1 could be M4 DO1, M4 SEONG2 JAN4 GOK3 DAK1 DO1 in Cantonese semantic primes and NOT MORE, DON'T WANT SOMEONE FEEL MUCH~MANY in English Equivalents. The different implied meanings are conveyed in English through intonation patterns that cannot be captured by mere translation. The phonetic experiment using Praat software clearly shows that the pitch contours of the participants' intonations are different when reading the two different Cantonese sentences with different SFPs. In conclusion, the English equivalents of the Cantonese SFP zaa3 are "only" or "just" in meaning together with a fall-down shape of the pitch contour when speakers are reading an English sentence translated from a Cantonese sentence containing zaa3, while the English equivalents of the Cantonese SFP ze1 are "only" or "just" in meaning together with the highest point at the end of the sentence when speakers are reading an English sentence translated from a Cantonese sentence containing ze1. However, there are some limitations of my study, which are (1) there may be other SFPs in Cantonese or even in other languages that convey similar meanings or have comparable usage patterns. The study's narrow scope limits the generalizability of its findings to the broader domain of sentence-final particles; (2) The analysis primarily focuses on the Cantonese language and its SFPs. While this provides valuable insights into the nuances of zaa3 and ze1, it may not account for variations or similarities in other dialects or languages. Considering a comparative analysis across different languages could contribute to a more comprehensive understanding of sentence-final particles. (3) The study relies on a specific set of NSM explications and phonetic experiments to analyze the SFPs. The generalizability of the findings may be limited due to the sample size and the specific contexts in which the experiments were conducted. Expanding the sample size and conducting experiments in different contexts could enhance the reliability and applicability of the results.

### 8. Suggestions for Future Researches:

- (1) Extend the study by conducting a comparative analysis with similar particles in other languages, particularly those within the same language family or geographical region. This comparative approach would contribute to cross-linguistic studies of sentence-final particles and provide a broader understanding of their functions and nuances.
- (2) Conducting a corpus-based analysis of Cantonese texts could provide a larger dataset for investigating the usage patterns and contextual variations of zaa3 and ze1. This approach would allow for a more comprehensive examination of the semantic and pragmatic functions of these SFPs in real-world language usage.
- (3) Investigate the pragmatic aspects of zaa3 and ze1, including their effects on discourse structure, politeness strategies, and speaker intentions. This would provide insights into the pragmatic functions of these SFPs beyond their semantic meanings.

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