

A Study on Fuzzy Words in Chinese Diplomatic Discourse

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Abstract—This paper discusses the use of time-fuzzy words and frequency-fuzzy words in President Xi Jinping’s diplomatic speeches, and analyzes the fuzziness of the words “long-term” and “continuous”, which are frequently used in the time-fuzzy words and frequency-fuzzy words. Meanwhile, it discusses the pragmatic function of these two words based on specific corpus of diplomatic speeches. According to the study, it is found that the use of fuzzy words in diplomatic speech is typical and representative, which is of vital importance to the writing of political-style writing and political communication. In political language writing, the pragmatic function of fuzzy words cannot be replaced by precise words. However, the use of fuzzy words requires certain rules and regulations, such as grasping the ambiguity degree of fuzzy words and combining fuzzy words with precise words. Otherwise, the political discourse will look like stereotyped and rigid, resulting in a negative impact of fake and inane political discourse language.

Index Terms—Diplomatic speech, fuzzy words, pragmatic function

I. INTRODUCTION

Ambiguity is an important attribute of the language. As the American philosopher Pierce put it: “When things appear in several potential conditions, despite the speaker may have thought through these conditions carefully, he is still not certain whether these states are excluded from a proposition or belong to this proposition. In this case, the proposition is ambiguous. What is said above is in fact indeterminable, by which I didn’t mean the uncertainty caused by the ignorance of the speaker, but the characteristics of the language is ambiguous itself.” The fuzziness of language meets the needs of people’s communication in real life [1]. The proper use of pragmatic strategies of fuzzy words can not only make the meaning of words and sentences more flexible, so that the language can adapt to the complex social life, but also enhance the language expression and make the expression more tactful. The phenomenon of fuzzy language is closely related to the specific environment of language communication, which is the product of the verbal communication by the members in the linguistic community. Therefore, the study of fuzzy language cannot only be on the ontological study of fuzzy words and fuzzy sentence patterns, but also rely on the specific communication environment to analyze the pragmatic utility of the words and sentences in the actual use of language.

In this paper, 18 diplomatic speeches delivered by President Xi from February 10, 2021 to November 19, 2022 were retrieved in corpus software WordSmith, and the time-fuzzy words and frequency-fuzzy words used frequently in the speeches were analyzed. It is found that the use of these

two types of words has significant value in pragmatic research.

II. TIME FUZZY WORDS

A. The Concept and Statistics of the Usage Frequency of Time Fuzzy Words

Time fuzzy word refers to the word whose expression has no accurate starting point and ending point in the semantic features of time, or either of which is fuzzy. The fundamental reason for the existence of time range fuzzy words is that there is no accurate range division and fixed boundary of time itself, such as morning, noon, afternoon, midnight, evening and so on [2]. We cannot precisely define the precise time nodes of these words that expressing time. Influenced by thinking patterns and dividing standards, people’s cognition of time horizon is also different. For instance, in ancient times, people tended to live shorter due to various reasons. Therefore, forty years old and above can be described as old, while in modern society, the average of people’s lifespan is longer. So it is generally believed that sixty years old and above can be described as old.

In this paper, the author mainly studies the time fuzzy words frequently used in Xi’s diplomatic speeches. Through the statistics of 17 diplomatic speeches from 2021 to 2020, the author calculates the words with frequency ≥ 10 as follows (see Fig. 1):

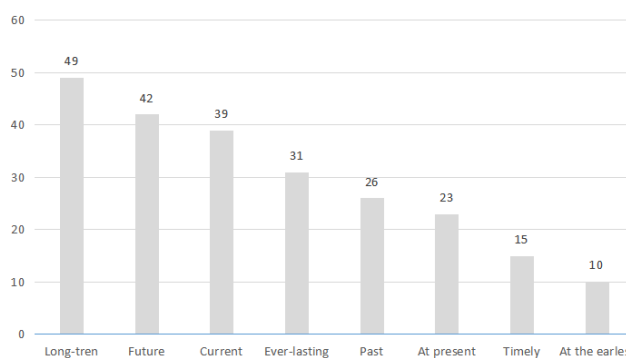


Fig. 1. Usage frequency statistics chart of time fuzzy words.

The following article will analyze the most frequently used word “long-term”.

B. Typical Word: “Long-Term”

1) Relevant corpus

(1) “At the same time, deep-seated and long-term issues in global development have not been effectively solved.” (Xi, 2021)

(2) “The world economy remains long-term sluggish, and the disparity between the rich and the poor and the North and the South has been more acute.” (Xi, 2021)

(3) “The overall momentum of China’s long-term stable

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and positive economic growth will continue to be maintained.” (Xi, 2021).

(4) “China has maintained long-term cooperation with Finland on international affairs and supports Finland in playing a more important role in international affairs, contributing to world peace and development.” (Xi, 2021).

(5) “Since the establishment of the comprehensive strategic partnership between the two countries in 2004, the two sides have played a leading and driving role in high-level exchanges, and given each other understanding and strong support on issues concerning each other’s core interests and major concerns, becoming a solid supporter for the long-term and stable development of China-Italy relations.” (Xi, 2021).

2) Fuzziness analysis

The Contemporary Chinese Dictionary (The Commercial Press, 2016) defines “long-term” as: a long period of time. However, due to the ambiguity of the meaning, we are not able to learn from the dictionary’s interpretation exactly how long can be defined as long-term. Therefore, we should try to accurately understand the word in the examples combined with specific corpus.

Although the specific duration is not presented, the “long-term” in corpus (3), (4) and (5) all imply that the longer the better. The “long-term” in corpus (3) is the hope of China’s economy will continue to develop steadily, and the longer this trend can be maintained, the better. Corpus (4) is to emphasize the international cooperation between China and Finland is a long and lasting process, which shows the profound friendship, positive and stable diplomatic relations between these two countries. In corpus (5), “long-term” demonstrates the hope that the comprehensive strategic partnership between China and Italy can develop stably and be maintained for a long time. Although “long-term” in corpus (1) also represents “a long time”, the accumulation of deep-seated contradictions in global development is an unfavorable trend. It calls for better solutions, therefore the longer, is not the better in this case. Similarly, the “long term” in corpus (2) implies that the economic downturn can end soon.

From above analysis, we can learn that the degree of ambiguity of “long-term” is various in different contexts. To study ambiguity, first, we need to analyze the upper and lower limits of the word.

3) Upper and lower limits analysis

As a time, range fuzzy word, the phase “long-term” has no clear extension, i.e., no lower limit since one cannot be sure about exactly how long does it take for a something to develop. However, there must be a definite point in time when things start, “long term” has a definite upper limit, and its upper limit starts at the time when things first happen. Represented by a graph:

As the Fig. 2 shows, Y0 means things just begin to develop, and going down, depending on the meaning of user want to express, it can be described as “long-term.” The “long term” at Y1 and Y2 has different durations. When things go beyond Y2 and downward, the “long-term” goes on continuously. In that case, it is hard to define the lower limit of the word. In order to better analyze the fuzzy degree of “long-term”, we need to analyze its fuzzy subordinate degree.

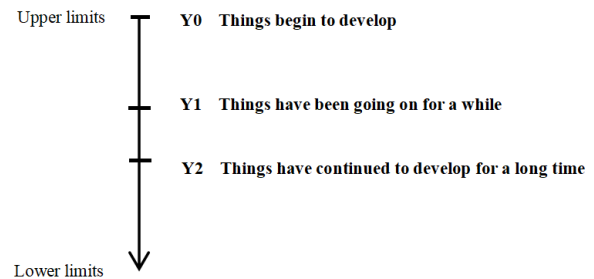


Fig. 2. Upper and lower limits of “long term”.

4) Fuzzy membership degree analysis

In traditional fuzzy set theory, there are only two circumstances in which members of the set are truth-value (represented as 1) or false value (represented as 0). Inspired by the fuzziness in language, American cybernetics expert Zadeh proposed fuzzy set theory on the basis of classical set theory [3]. “Whether a thing belongs to a set in a set of ambiguous, things cannot be answered simply by a single word ‘yes’ or ‘no’. The process is gradual, composed by this and that paradox and there are Intermediate transition states.” Zadeh [4] used the membership function with value interval [0, 1] to express the subordinate degree of an element to the fuzzy set. The closer the subordinate degree is to 1, the higher the degree of the element belonging to fuzzy set. The closer the subordinate degree is to 0, the lower the possibility of the element belonging to fuzzy set. Fuzzy subordinate degree of elements is not constant, it can be affected by variables and demonstrates different values.

We set the membership function of “long-term” as $A(x)$, and take the interval [0, 1] as the range of $A(x)$ to represent the level of fuzzy membership of the word “long-term”. Consider the time at which things develop that affect the fuzzy membership of the word as a linguistic variable x (“Zadeh called a variable valued by a word or sentence in natural or artificial language a linguistic variable.”), the membership function of “long-term” can be expressed as follows (see Fig. 3):

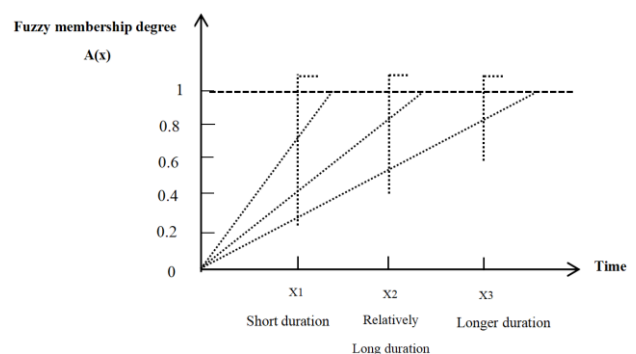


Fig. 3. Fuzzy membership degree of “long term”.

In specific context, the linguistic variable of “time for the development of things” is also restricted by massive factors. Therefore, comprehensive analysis needs to be adopted when make concrete analysis of the fuzzy subordinate degree of “long-term”. In corpus (3), the economic development trend is influenced by both domestic and overseas economic situations. Since the 18th National Congress of the CPC, the Communist Party has made scientific judgment and wise decisions based on the development of economy, formed Xi Jinping Thought on Socialism Economy with Chinese

Characteristics for a New Era with New concept for development as its core, and have successfully achieved historic achievements in economic development. Therefore, there is no doubt that Chinese economy sees a stable and promising future for a long period of time. If the fuzzy membership degree of “long term” in corpus (3) set as A1, then A1 approaches to 1 infinitely. Similarly, corpus (4) and (5) both discussed about China’s foreign relations with other countries. Despite the ever-changing and complicated international landscape, the CPC Central Committee has fully grasped the development trend of China and the world in the new era after the 18th CPC National Congress, thus attaches great importance to developing a new type of international relations with European countries, and promotes the construction of a stable and balanced China-Europe relations framework in all fronts. The relations between China and European countries will accelerate to a higher level in the future. The fuzzy membership degree of these two “long-term” are set as A2 and A3 respectively, and A2 and A3 also approach 1. In corpus (1), all countries hope to ease or even eliminate deep-seated contradictions as soon as possible. In corpus (2), it is the common wish of people worldwide for the world economy to recover as soon as possible. The fuzzy membership degrees of these two “long-term” are set as A4 and A5 respectively, then A4 and A5 approach 0.

C. . The Pragmatic Utility of Time Range Fuzzy Words

First, expand the semantic scope to avoid pragmatic mistake. For example:

(6) “Over the years, the United Nations and other international organizations have done a pool of good work and made tremendous contributions to maintaining world peace and sustainable long-tern development.” (Xi, 2021)

The term “long-term” obfuscates the specific time for the UN and other international institutions to maintain the international governance system because international institutions are established at different times and play different roles for different periods of time. Using the term “long-term” as a fuzzy term of time can reliably include all international institutions, which not only reflects their efforts to maintain world peace and promote sustainable development, but also expressed the expectation that these institutions should continue to perform their functions in the future. Another example is:

(7) “We should make clear the general trend of the world, grasp the pulse of the economy and make clear the direction of the future.” (Xi, 2021).

In this corpus, the word “future” replaces the expression of specific time, showing the overall grasp of the future situation, showing perceptiveness.

Second, reflect the flexibility of decision-making and policy implementation to facilitate the actions and operations of government departments. Such as:

(8) “We will speed up the signing of free trade and investment agreements with related countries, promote the building of Asia-Pacific free trade area, push for getting the negotiations done as soon as possible on the Regional Comprehensive Economic Partnership Agreement, and build a network of free trade areas opening to the world.” (Xi, 2021).

The word “as soon as possible” is used in the corpus. The FTA negotiation and application need to be adapted to each country’s specific national conditions as the actual conditions vary from country to country. The use of “as soon as possible” not only emphasizes the urgency of the FTA construction and urges all parties to take active actions, but also shows China’s attitude of earnestly promoting the FTA completion and shows the look as a major country.

Third, show the country’s concern to the problem. Such as: (9) “We should formulate a G20 action plan and make timely and necessary institutional communication and arrangements for macro policy coordination,” (Xi, 2020).

The word “timely” in the corpus shows the importance China attaches to the world’s fight against Covid-19.

III. FREQUENCY FUZZY WORDS

A. The Concept and Statistics of the Usage Frequency of Frequency Fuzzy Words

Frequency is the number of times something completes a periodic change per unit of time. For those things that can not be accurately measured or the number of movements can not be precisely measured per unit time, we often use generality words to express the frequency of the motion changes, which is frequency-fuzzy words [5].

In the corpus studied in this paper, the statistics of frequency-fuzzy words are as follows (see Fig. 4):

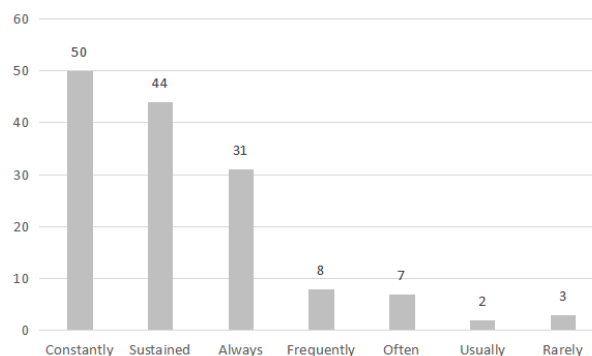


Fig. 4. Usage frequency statistics chart of frequency fuzzy words.

The most frequently used frequency-fuzzy word is “constantly.” We will take this word as a typical example to analyze the use of frequency ambiguity in diplomatic speech.

B. Typical Word “Constantly”

1) Relevant corpus

(10) “China persists in overcoming difficulties and challenges on its way forward through reform. It has the courage to tackle obstacles and wade through tough tasks, it has the courage to remove institutional obstacles hindering development, and has constantly liberated and developed the productive forces, emancipated and enhanced social vitality.” (Xi, 2021).

(11) “China will actively adapt to the actual needs of the development of trade in services, promote coordination of service rules at multilateral and regional levels, constantly improve global economic governance, and promote inclusive growth of the world economy.” (Xi, 2021).

(12) “Both China and Arab countries are important

political forces in the international community. China-Arab cooperation should advance in the tide of world development constantly and make progress in the pace of human history.” (Xi, 2021)

(13) “Outbreaks such as avian influenza, Ebola and Zika have constantly ringing the alarm bell for acceleration of international health security.” (Xi, 2021)

(14) “In the meanwhile, we also face unprecedented challenges, especially the constantly rising protectionism and unilateralism.” (Xi, 2021)

2) Fuzziness analysis

The Contemporary Chinese Dictionary (The Commercial Press, 2016) explains “constantly” as follows: a verb, continue to do; adverb, continuously. The core meaning of the word is that things happen one after another. However, how often things happen in quick succession is uncertain. It is impossible to quantify exactly what frequency is required to be continuous. So let’s first try to understand this word further by looking at concrete corpus [6].

In the corpus studied in this paper, “constantly” is mostly an adverb used to modify verbs. In corpus (10), “constantly” means that the emancipation and development of social productive forces and the enhancement of social vitality cannot be achieved overnight, and will continue to be carried out in the future. Corpus (11) means to continue to promote the development of the global economy on the basis of the previous global economic governance pattern. The situation of corpus (12) is similar to that of (10) and (11), both of which indicate that people expect things to happen frequently and continuously, and the more times they happen, the better. On the contrary, the things mentioned in corpus (13) and corpus (14) are not what people wish to happen frequently. The less problems of world public health security occur, the better. Similarly, the lower the incidence of protectionism and unilateralism, the more beneficial to world economic development.

In order to better understand the ambiguity of this word, we will first analyze the upper and lower limits of this word.

3) Upper and lower limits analysis

We can use upper and lower limits to clearly represent the boundary of “constantly”. Since the occurrence of events are affected by multiple factors, for instance, “constantly” in corpus (10) is restricted by specific political and economic conditions of China, it is uncertain how many times and how often productive forces will be liberated in the future. Therefore, the lower limit of the word cannot be determined. But for something to happen continuously, it must have already happened at least once, and it must have happened several times in succession, so the upper limit of “constantly” is the first time something happens. Here is a graph to make it clearer:

As the Fig. 5 shows, T0 represents the upper limit of “constantly”, that is, the first time something happens, from T0 down, it can be described as continuous. At T1, things only happened a few times, at T2, things have happened a lot of times, and then we’re getting closer and closer to the lower limit, to an infinite number of times. The number of times something happens is near the lower limit, the higher the frequency. So “constantly” has a clear upper limit, but a vague lower limit [7].

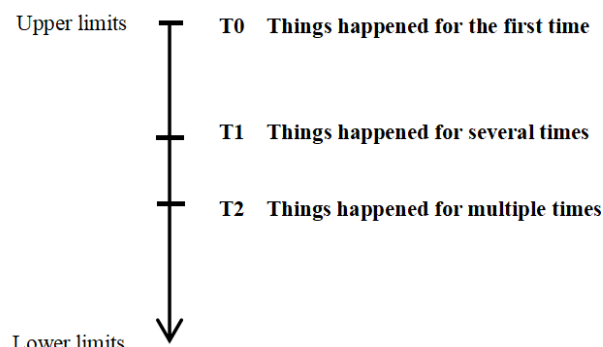


Fig. 5. Upper and lower limits of “constantly”.

4) Fuzzy membership degree analysis

The concept of membership degree has been introduced previously. Now following the previous analysis method, we will set the membership function of “continuous” as $B(x)$, and take the interval $[0, 1]$ as the range of $B(x)$ to represent the membership degree of “constantly”. Set the number of occurrences, the primary linguistic variable that affects the fuzzy membership of this word, as x , then the membership function of “constantly” can be expressed as (see Fig. 6):

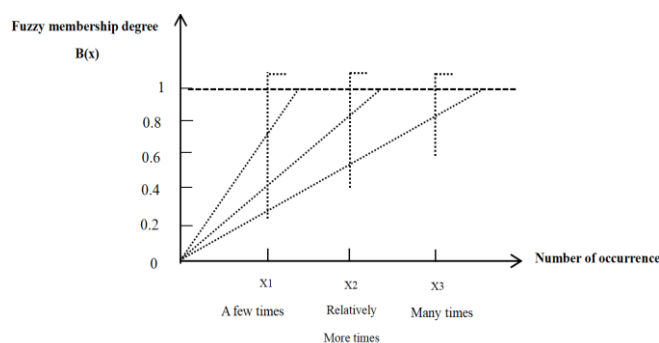


Fig. 6. Fuzzy membership degree of “constantly”.

When “constantly” is restricted by other factors in the specific context, how did it manifest? In corpus (10), the emancipation and development of social productive forces is the essential requirement of socialism as well as the fundamental task of socialism with Chinese characteristics. Since the reform and opening up, it has laid a solid foundation for the prosperity of the country, the rejuvenation of the nation and the happiness of the people. In the new era, the CPC will continue to develop productive forces, stimulate social vitality to enhance the high-quality economic development in China. The fuzzy membership degree of “constantly” here is set as B1, and the membership degree of B1 to the fuzzy lower limit is high and approaches 1 infinitely. In corpus (11), all countries are actively calling for the reform of the global economic governance system. In the new era, China adheres to the global governance concept of extensive consultation, joint contribution and shared benefits, and actively participates in promoting the reform of the global economic governance system. The fuzzy membership degree of “constantly” here is set as B2, and B2 approaches 1. Similarly, the relations between China and Arab countries have been developing in an all-round way. In order to build a China-Arab community of shared future in the new era, the two sides need to carry out more extensive and deeper cooperation. The fuzzy membership degree of “long-term” in corpus (12) is set as B3, which also approaches 1. Several infectious diseases mentioned in corpus (13), which may

cause great damage to the world's public health security. The emergence of these diseases is undesirable, and countries around the world have taken various measures to curb the epidemic of diseases. In corpus (14), unilateralism and protectionism are manifestations of anti-globalization, which are not conducive to global economic recovery and run against the trend of world economic development. China has always been committed to a win-win strategy of opening-up. On this basis, China has put forward the epoch-making Belt and Road Initiative to further advance the process of globalization. Therefore, the fuzzy membership degree of "long term" in corpus (13) and corpus (14) is set as B4 and B5 respectively, then the membership degree of B4 and B5 to the fuzzy lower limit is high and approach 0.

C. The Pragmatic Utility of Frequency Range Fuzzy Words

First, clarify stand position and demonstrate firm attitude. For example, the fuzzy word "constantly" in corpus (10) and corpus (11) respectively represents China's determination to liberate and develop productive forces to better promote the reform of the global economic governance system. Meanwhile, it also indicates a firm position that China recognizes the efforts made by previous parties and makes further requirements for future development. For another example, in President Xi's diplomatic speeches, he frequently used such expressions as "I have said many times", "I have stressed many times" and "China has announced many times". The fuzzy word "many times" indicates the leader's resolute attitude to implement important policy decisions and the country's unyielding position on some important issues.

Second, emphasize the importance of the matter or highlight the seriousness and urgency. In the corpus (13) and (14), "constantly" is used to describe the occurrence frequency of diseases and anti-globalization trends that pose threats to global public health security. According to the analysis above, "constantly" in these two contexts has a high degree of membership of the lower limit of ambiguity. The purpose of using "constantly" in these two contexts is to highlight the seriousness of the issue and attract the attention of the world. It urges all countries to take active measures to curb the occurrence of negative events and reduce their frequency.

IV. CONCLUSION

In communicative language, the pragmatic function of fuzzy words cannot be replaced by precise words. That being said, the use of fuzzy words should follow certain rules, otherwise it will cause pragmatic errors and have negative effects. The skills for the use of fuzzy words in Xi Jinping's diplomatic speech is worth learning [8].

A. Grasp the Ambiguity Degree of Fuzzy Words

In diplomatic speeches, fuzzy words with vague connotations are often used to emphasize China's firm position on a certain issue, or to express good expectations for the future direction of bilateral relations. In diplomatic occasions, the use of such fuzzy words can make the speech more effective in political communication and expressing

political demands [9].

However, not all contexts are suitable in using fuzzy words frequently. Taking government documents as an example, the purpose of writing government documents is to accurately and clearly convey government behaviors to the public effectively. If fuzzy words with infinite extension are frequently used in government documents, they will look like stereotyped and rigid, resulting in a negative impact of fake and inane political discourse language. Therefore, according to the specific context and communication needs, the political discourse language should properly choose fuzzy words and grasp the fuzzy degree of fuzzy words.

B. Fuzzy Language is Used in Conjunction with Precise-Word Language

The combination of fuzzy words and precise words in diplomatic speech can not only provide enough information to the audience, but also make the language concise and appealing. For example [10]:

"Since China and Belarus established diplomatic ties 23 years ago, bilateral relations between these two countries have made substantial progress. The two countries have established a comprehensive strategic partnership, formulated a five-year plan for the development of China-Belarus relations and established an intergovernmental cooperation committee. The two sides have increasingly consolidated political mutual trust, strengthened mutual support and deepened cooperation in various fields, making them good friends and good partners in every sense of the word. China has become Belarus's largest trading partner in the Asia-Pacific region, and bilateral trade continues to grow, rising 27.3% last year against the backdrop of the global economic downturn." (Xi, 2021).

In the first sentence of this paragraph, the precise number of the two countries used to emphasize the specific time-length of diplomatic relations, followed by the use of two fuzzy words "substantial" and "comprehensive", illustrate the development of the friendly relations and strategic partnership between China and Belarus concisely and vividly. Next, the second and third sentences use a number of fuzzy words with vague connotations to convey China's vision for future exchanges and cooperation between the two countries, while also using specific figures to illustrate the economic growth. The combination of fuzzy language and precise language, complement each other, make the content rigorous, expression more concise and properly detailed and concise of the content.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

REFERENCES

- [1] H. Du, "Quantitative analysis of fuzzy semantics," *Language Teaching and Research*, vol. 1, pp. 64-70, 1995.
- [2] L. A. Zadeh, "Fuzzy sets," *Information and Control*, vol. 8, pp. 15-21, 1965.
- [3] L. G. Hedges, "A study in meaning criteria and the logic of fuzzy concepts," *Journal of Philosophical Logic*, vol. 2, pp. 458-508, 1973.
- [4] T. Wu, *Quantitative Analysis of Fuzzy Semantics*, Shanghai, CHN: Shanghai Foreign Language Education Press, 1999, pp. 36-46.
- [5] G. Yu, *Theoretical Outline of Applied Linguistics*, Beijing, CHN: Chinese Teaching Press, 1992, pp. 10-37.

- [6] J. Channell, *Vague Language*, Oxford, UK: Oxford University Press, 1994, pp. 26–50.
- [7] D. Minhhal, “A comparative research on the vague expression of quantity in Chinese and Vietnamese,” Ph.D. dissertation, Central China Normal Univ., Wuhan, CHN, 2014.
- [8] J. Yu, “Research on expression of quantitative vagueness,” Ph.D. dissertation, Huazhong University of Science and Technology, Wuhan, CHN, 2006.
- [9] C. Han, “Study of verbs modified by adverbs of degree in modern Chinese,” Ph.D. dissertation, Chongqing Normal University, Chongqing, CHN, 2017.
- [10] Y. Wei, “Comparison on vague quantities between Chinese and English,” Ph.D. dissertation, Huazhong University of Science and Technology, Wuhan, CHN, 2010.

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