The Application of Metaphor Theory in the Teaching of Polysemy Content Words in Chinese as a Foreign Language

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ABSTRACT
The metaphor theory in cognitive linguistics theory has outstanding guiding ability in the teaching of polysemy content words in Chinese as a foreign language. Based on metaphor theory, this article starts with the word-formation morphemes, the metaphorical derivation of word meaning, the cultivation of students' ability of metaphorical cognition and the teaching of metaphor culture, and attempts to conduct research on the teaching of polysemy content words in Chinese as a foreign language, so as to improve foreign learners' learning effect of Chinese polysemy content words.

Keywords: metaphor theory, teaching Chinese as a foreign language, polysemy content words

I. INTRODUCTION
Traditionally, metaphor is regarded as a figure of speech, in other words, it is a rhetorical device used in a rhetorical literary form. The cognitive research of metaphor can be traced back to the early 18th century. The Italian rhetorician G. Vico expounded the cognitive function of metaphor in the book "New Science" in 1725. British philosopher and linguist Richards broke through the shackles of classical metaphor theory in 1936 and put forward the famous "semantic interaction" theory, and put forward in the book "Philosophy of Rhetoric" that, "When people put their perceptions of two different things together and relate to each other, it is a manifestation of metaphorical meaning". This opens a new chapter for metaphor theory. In the 1970s, metaphor began to develop in the fields of philosophy, semiotics and cognitive psychology. Until 1980, Lakoff and Johnson incorporated the concept of metaphor into cognitive linguistics. They believe that metaphor is a mapping from one conceptual domain to another, and its cognitive basis comes from the "image schema", that is, from people's daily life experience. In 1996, cognitive linguists Ungerer and Schmid proposed: "Metaphor, as a cognitive tool, is an excellent way for people to conceptualize abstract things. Metaphor is used very frequently in everyday language". It can be seen from this that under the joint discussion of rhetoric, philosophy, linguistics, psychology and other related disciplines, metaphor has been proven to be a powerful cognitive tool for people to conceptualize the world, and it has continuously derived views and theories on the description, explanation and operating mechanism of metaphorical phenomena.

II. METAPHORICAL MECHANISM
Ullmann, a functional semanticist, believes that "metaphor is the inner motivation and main cause of the extension of the meaning of a word, and it is also a mechanism of expression. It brings strong emotional release, fills the gap in vocabulary, and is also the source of synonymy and polysemy". Metaphor extends the basic meaning and produces the extended meaning. It extends not only the intrinsic attributes of each concept, but also the structure, internal relations or logic of the entire cognitive model. This "extension" is often referred to as a "mapping" from source to target. From a cognitive perspective, metaphor is to map the structure of the source model to the target model.

As shown in the "Fig. 1" below, the metaphor process includes the target concept (ontology), source concept (metaphorical object), and mapping domain (background). The "Fig. 1" reflects that the concept source that can be mapped to the target concept must be in the same mapping domain as the target concept, that
is, under a restriction. This shows that the occurrence of metaphor is not unconditional, but based on the experience of the objective world in which people live.

![Metaphorical mapping diagram](image)

**Fig. 1.** Metaphorical mapping diagram.

More than half of word extensions are derived from the use of metaphor. The basis of this phenomenon lies in people's daily experience and the cognition of the relevance of different things. For example, in modern Chinese, people often compare "life" to "travel" or "one-way train". This is based on the similarities between "life", "travel" and "one-way train". Most people believe that the three occur along the time axis, and there is no repeatability between "life" and "one-way train", so it can be mapped. It can be seen that the multiple senses of vocabulary based on metaphor are derived from the similarity between the senses and the personal life experience of language users.

**III. POLYSEMY CONTENT WORDS**

To explain polysemy content words, one must first explain polysemy words. Polysemy words are also called "a word with multiple meanings", which means that a word has many meanings. These meanings (senses) are based on a basic meaning, produced by metonymy, metaphor, etc., and there is a certain connection between each other, but there also are differences. Chinese vocabulary is divided into two categories: content words and function words. Content words are words that can serve as sentence components alone, have practical meaning, and have both lexical and grammatical meaning. Polysemy content words are the content part of polysemous words.

**IV. TEACHING OF POLYSEMY CONTENT WORDS IN CHINESE AS A FOREIGN LANGUAGE BASED ON METAPHOR THEORY**

As an important cognitive method for human beings, metaphor is to use the similarity between different things to map complex and abstract things with simple and easy-to-understand concrete things to improve people's cognitive level. Teachers should stimulate the metaphorical mechanism in students' cognition, guide them to consciously analyze the inner rationale of the extended meaning based on the prototype meaning of the target polysemy, use the mechanism of metaphor to help students understand the derivation process between senses, realize the construction of the meaning network of polysemous words, and strengthen learners' overall grasp of the meaning of Chinese polysemy content words. At the same time, metaphor theory can also help students gradually understand the word-formation rationale of polysemy content words, understand Chinese metaphor culture, learn metaphorical thinking, and then build a comprehensive and multi-level Chinese polysemy content words knowledge system based on metaphor mechanism. Teachers of Chinese as a foreign language can gradually start the teaching of polysemy content words in Chinese as a foreign language in terms of word-formation metaphor, semantic metaphor, metaphor ability and metaphor culture.

**A. The metaphor of word-formation**

Chinese vocabulary is composed of morphemes. As a combination of sound and meaning, morphemes are the smallest grammatical unit. Morphemes with actual meaning are called lexical morphemes, and morphemes without actual meaning are called empty morphemes. The morphemes of Chinese vocabulary are basically composed of lexical morphemes, which contain various meanings and constitute the overall meaning of the target words. Many monosyllable polysemy content words in Chinese have strong word-formation ability. When they are used as morphemes to form new words, they often use metaphorical mechanisms to map the original semantic features to the new words. This way of word-formation is more rational, which is convenient for students to understand new words, and also provides
necessary prerequisites for subsequent students to understand other derived meanings of words.

Teachers of Chinese as a foreign language can start the teaching of metaphorical word-formation from the perspective of the combination of "metaphorical morphemes" and "category morphemes". Here, "metaphorical morphemes" refer to the components of two-syllable or multi-syllable words that are responsible for mapping the target domain, and "category morphemes" emphasize the essential attributes of words. For example, the polysemy content word "snowflake", which is composed of the Chinese morphemes "雪 (snow)" and "花 (flower)" (the original meaning refers to "herbs and woody plants for ornamental purposes", and its extended meaning contains "things shaped like flowers"), includes many senses such as "the snow falling in the air is shaped like a flower", "a flower-like object made of snow", and "antonomasia for some white objects" and so on, therefore, it is a polysemy content word. The "snow" in the word "snowflake" is a category morpheme, which points out the fundamental attribute of this word; while "flake" is a "metaphorical morpheme" which represents the characteristic attribute of this word. When forming the noun "snowflake", the metaphorical morpheme "flake" maps the semantic feature of [+shaped like flower] to the word "snowflake", emphasizing the shape attribute of the word "snowflake", which is convenient for foreign students to understand and memorize the word. At the same time, in some Chinese pragmatics, the metaphor of word-formation can also help foreign students understand other meanings of the polysemy.

For example, Wen Tingyun's poem "Apricot Blossom" in the Tang Dynasty described: "The color of apricot blossoms is bright red when they bloom, and after their full blossom, they become as white as snowflakes; small courtyards are filled with overlapping flower branches". In this poem, the "snowflake" alluded to the color change from red to white when the apricot blossoms bloom. Here, the polysemy content word "snowflake" is used as the meaning of "antonomasia for some white objects". The semantic feature of [+shaped like flower] of the metaphorical morpheme "flower" has similarities with apricot blossom, so it can be referred to. It can be seen that making good use of the characteristics of word-formation metaphors can effectively improve foreign students' understanding and grasp of the meaning of Chinese polysemy content word.

In summary, teachers of Chinese as a foreign language can carry out teaching practice of polysemy content words in Chinese as a foreign language in the order of morphemes, prototype meaning of words, and extended meanings. As shown in "Fig. 2", the intersection of "metaphorical morphemes" and "category morphemes" constitutes the prototype meaning of the polysemy content word. On the basis of the prototype meaning, the related senses are extended through the metaphorical mechanism.

![Fig. 2. Illustration of teaching Chinese polysemy content words (from morpheme to word meaning).](image-url)
B. Semantic metaphor

Semantic metaphor is closely related to word-formation metaphor. The latter is an important premise and basis for the former, but the latter focuses on the metaphors at the morpheme level, while the former emphasizes the metaphors at the sense level, that is, the metaphorical derived associations between senses based on family resemblance. In Chinese polysemy content words, extended meanings are mostly derived from prototype meanings under the influence of metaphorical mechanisms. American cognitive psychologist Jerome Seymour Bruner believes that humans represent information processing systems through actions, portraits, and symbols. Adults particularly rely on symbols to process information. Therefore, teachers of Chinese as a foreign language should make use of the students' intrinsic metaphorical cognition mechanism, and strengthen the metaphorical connection between senses through representation methods such as "portraits", "actions" and "symbols", and guide them to establish metaphorical connections in the word meaning network. Metaphorical semantic association is mainly divided into two types: radial type and chain type.

1) Radial semantic association: Lakoff proposed that the radial metaphorical derivation of the meaning of a word refers to a certain feature of the word, which is radially extended to the secondary category. Taking the Chinese polysemy content word "手 (hand)" as an example, the word has the following six senses: sense 1: human organs located at the front end of the forearm; sense 2: small and easy-to-handle things, such as: "手枪 (handgun)", "手册 (handbook)"; sense 3: do it oneself, for example: "手写 (write in one's own hand)", "手刃敌人 (kill the enemy with one's own hand)"; sense 4: people who are good at a certain skill, for example: "好手 (good hand)", "国手 (national champion in chess, etc.) ", "能手 (expert)"; sense 5: skills or abilities, for example: "手法 (technique)", "手段 (means)", "留一手 (hold back a trick or two (in teaching a trade or skill))"; sense 6: take something with hands, for example: "人手一册 (everyone takes a copy)".

Based on the prototype meaning of "hand", teachers of Chinese as a foreign language can gradually introduce various extended meanings to help students build a systematic semantic structure. The prototype meaning of "hand" (namely sense 1) has semantic features such as [+human organ][+functionality][+small size], and sense 2 "small and easy-to-handle things" conforms to the semantic feature of [+small size]; the senses 3, 4, and 6 meet the characteristics [+functionality]. At the same time, these four senses all represent objective things, highly agree with the prototype meaning, and are relatively independent of each other, so they surround the prototype meaning in a radial shape. However, the sense 5 "skills or abilities" is relatively weakly related to the prototype meaning, which is not in this category. As shown in "Fig. 3":

![Fig. 3. The radial meaning structure of the polysemy content word "hand".](image)

2) The chain-like semantic association: The chain-like semantic association refers to that the latter sense extends from a certain feature of the previous sense, and is linked together in a chain-like manner. Taking "hand" as an example, there is a progressive semantic relationship between some extended meanings, and a chain-like semantic structure is formed, such as "Fig. 4". On the basis of the prototype meaning, the teacher maps out the specific concept of sense 3 "people who are good at a certain skill", and through the mechanism of metaphor, the abstract concept of sense 4 "skills or abilities" is derived from the specific concept of "person who are good at a certain skill". Since the senses 4 and 5 are generated layer by layer on the basis...
of the prototype meaning, teachers should consciously let students perceive the layers of progressive relationship through deduction and illustration when teaching these three senses.

1. Hand (human organ, located at the front of the forearm)

4. People who are good at a certain skill

5. Skills or abilities

Fig. 4. The chain-like semantic structure of the polysemy content word "hand".

To sum up, teachers of Chinese as a foreign language show students the different derivation methods between the prototype meaning and extended meaning of polysemy through the radial and chain-like structure, let students further understand the types of metaphorical associations of polysemy content word, and help students strengthen their rational cognition among polysemy content word senses.

C. Metaphorical cognitive ability

When students are aware of the types of metaphorical associations between the prototype meaning and the extended meaning, teachers should guide the students to establish metaphor awareness and cultivate their ability to consciously use the metaphor mechanism to learn Chinese polysemy content word. This is because metaphor always plays a positive role in the acquisition of polysemy content word and the development of students' thinking, and the effective acquisition of vocabulary and even language is, in the final analysis, the autonomous acquisition of students. Therefore, cultivating students' metaphorical cognitive ability in the process of polysemy content word learning has far-reaching significance for them to actively learn vocabulary. On the basis of metaphorical morphemes and semantic metaphorical teaching, teachers of Chinese as a foreign language can cultivate students' metaphor cognitive ability in a three-step approach.

The first step is to assist in teaching with context. Because the interpretation of other meanings of polysemy content words will involve more new words, it will increase the memory burden of students. Therefore, in the teaching of polysemy content words in Chinese as a foreign language, teachers can use context-assisted methods to teach polysemy content words. The second step is to carry out supplementary teaching based on students' encyclopedia knowledge. Since people's cognition of new things is based on old experience diagrams, in the process of learning Chinese polysemy content words, it is also necessary for students to understand the encyclopedic knowledge of the target polysemy content word. The third step is to cultivate students' metaphorical thinking ability. Teachers of Chinese as a foreign language can use pictures and explanatory charts to help students construct new concepts and image schemas, let students use the collected metaphorical polysemy content words to form words and sentences and analyze the metaphorical operating mechanism therein, encourage students to independently speculate the meaning of polysemy content words in the text through the context, and help them understand the encyclopedic knowledge background of polysemy content words. Through the above methods, it can effectively improve the metaphorical cognitive ability of foreign students in learning Chinese polysemy content words.

D. Metaphorical culture

"Language learning is ultimately cultural acquisition". After students have mastered the cognitive way of thinking and can autonomously infer polysemy content words, teachers of Chinese as a foreign language can properly explain the metaphorical culture behind the vocabulary to help students better understand Chinese thinking. The cultural characteristics and cognitive methods of a nation are often invisible and often expressed through metaphors, which is clearly reflected in the vocabulary. Vocabulary based on metaphorical culture will produce more senses on the basis of prototype meaning. For example: "twinned trunks" originally refers to the combination of the branches of two trees, also known as "acacia rachii" and "couple tree"; "inseparable king bird" is a kind of bird recorded in "Legends of Mountains and Seas". It only has one eye and one wing, and the male and female birds must combine their wing together to fly. On the basis of the prototype meaning, these two words use metaphors to map the characteristic of "never to be separated" to people, and refer to the conjugal affection in general. Therefore, the teaching of polysemy content words, especially the extended meaning of polysemy content words, can best reflect the metaphor culture in Chinese.

Chinese people's thinking is intuitive, emphasizing the individual's perception of the universe, country, society and everything around them. "Heaven-Human Induction" and "Nature and Man in One" all embody...
the cognitive characteristics of the Chinese "sensing things with the body". In the way of expression, it often doesn't adopt inference and deduction, but uses metaphors and other techniques to make the expression concise and clear. This kind of intuitive thinking of "sensing things with the body" is a metaphorical way of thinking unique to Chinese people. The Chinese polysemy content word "吃 (eat)" can be taken as an example. The prototype meaning of "eating" is "putting food in your mouth and then chewing and swallowing it". As a country with a developed food culture, the polysemy content word "eat" is used as a morpheme, and it often synthesizes new words with unrelated morphemes, reflecting the influence of culture on word metaphor. For example, a full understanding of a certain thing can be expressed as "吃透 (have a thorough grasp of )", the mastering of a certain specialty or skill can be expressed as "一招鲜, 吃遍天 (people who have a certain skill or ability shall make a living everywhere)", and being rejected by someone can be called "吃闭门羹 (kiss the post)" and so on. When teaching the polysemy content word "eat", teachers can appropriately expand the metaphorical cultural vocabulary related to "eat" according to students' interests.

Chinese polysemy content words contain a large number of Han nationality's social, religious, custom and value tendencies. Conducting teaching research on them can on one hand deepen students' understanding of polysemy content words and help students understand the metaphor culture behind the meaning of words on the other hand, which can be said to complement each other. In the teaching of Chinese polysemy content words, teachers should pay attention to the metaphor culture behind the meanings of words, introduce metaphorical culture teaching in a timely manner, help students understand the reasons for this culture, deepen their dual understanding of polysemy content words and related cultural background, and further improve students' understanding of Chinese culture and thinking mode.

V. Conclusion

In recent years, with the increasing demand of foreign students for high-quality Chinese teaching, teachers of Chinese as a foreign language should continue to improve their theoretical and practical skills in second language teaching and learning, and constantly try to innovate teaching methods with new ideas. Metaphor theory actively explores and adapts to learners' cognitive models and learning rules in the process of guiding the teaching of polysemy content words in Chinese as a foreign language. It provides strong theoretical support for helping foreign students understand the rational connection between the multiple meanings of Chinese vocabulary, greatly improves students' Chinese vocabulary learning level and efficiency, and helps learners gradually become familiar with and master the unique thinking mode of Chinese in the process, laying a solid learning foundation for the next step of Chinese sentence pattern and text learning.

References

[1] Black, M. Models and Metaphors [M]. New York: Cornell University Press, 1962.
[2] Block, D. Who framed SLA research? Problem framing and metaphoric accounts of the SLA research process [A]. Cameron, L. & Low, G. Researching and Applying Metaphor [C]. Cambridge: Cambridge University Press, 1999.
[3] Cameron, L. & Low, G. Researching and Applying Metaphor [C]. Cambridge: Cambridge University Press, 1999.
[4] Friedrich Wengerer, Hans-Jug Schmidt: "Introduction to Cognitive Linguistics" [M], He Wenzhong trans., Shanghai: Fudan University Press, 2009. (in Chinese)
[5] Cai Longquan: "The Application of Metaphor Theory in Second Language Acquisition" [J]. Foreign Languages, 2003(6). (in Chinese)
[6] Chen Jiasheng: "An Introduction to Cognitive Lexicology" [M], Shanghai: Fudan University Press, 2008. (in Chinese)
[7] Wen Quifang: "Cognitive Linguistics and Second Language Teaching and Learning" [M], Beijing: Foreign Language Teaching and Research Press, 2013. (in Chinese)
[8] Teng Min, Zhu Zhe: "Study on the Acquisition of Polysemy Content Words Based on Lexical Concepts and Cognitive Model Theory" [J], Foreign Language World, No.4, 2015. (in Chinese)