Study of Chinese Polysemous Character "Fang" from a Cognitive Linguistic Perspective

Xinwan Kong

College of Foreign Languages, Sichuan University of Science and Engineering, Zigong 643000, China

Abstract

Chinese polysemous characters have received considerable scholarly attention in recent years. However, there is little research on Chinese polysemous word "fang (茂)". This study adopts a cognitive linguistic approach to examine the prototypical meaning and the mechanism of the meaning extension of "fang". The results show that the prototypical sense of "fang" is "to remove constraints or to be free" in modern Chinese; conceptual metaphor and conceptual metonymy are responsible for the mechanism of meaning extension. Moreover, conceptual metaphor plays a more significant role than conceptual metonymy in the process of meaning extension. The findings in this study may provide a new understanding of the mechanism of the meaning extension of Chinese polysemous verbs.

Keywords

Polysemy; Cognitive Metaphor; Cognitive Metonymy; Prototype.

1. Introduction

Polysemy has long been a question of great interest in a wide range of fields. It usually refers to the phenomenon in which a word has several distinct but related meanings [1]. A considerable amount of literature has been published on polysemy within the field of linguistics [2, 3, 4, 5, 6, 7, 8]. There is a myriad of polysemous words in Chinese. "Fang" is a frequently-used polysemous verb, which has fifteen meanings in modern Chinese. However, little is known about the prototypical sense of "fang" and it is unclear what is accountable for the mechanism of the meaning extension of it. This study set out to gain further understanding of the mechanism of the meaning extension of Chinese polysemous words. In this research, a corpusassisted cognitive linguistic approach was used to address the following two research questions:

- (1) What is the prototypical meaning of "fang"?
- (2) What is the working mechanism of the meaning extension of "fang"?

2. Literature Review

2.1. Previous Studies of Polysemy in Modern English

For many years, many research on polysemy has been carried out from a cognitive linguistic view. One well-known study that is often cited in research on polysemy is that of Lakoff and Johnson [2], who proposed that polysemy can be explained by the conceptual metaphor. Brugman and Lakoff [3] explored a polysemous English lexical "over" and pointed out that both metaphors and image-schema transformations played a role in the formation of networks that can reveal the relationships among the senses of polysemous words. Goldberg [4] investigated the inherent semantics of argument structure of the English ditransitive construction and analyzed the polysemous senses of the ditransitive construction and argued that a polysemous analysis was conducive to identify the special status of the central meaning of the construction.

Csabi [9] investigated the extent to which teachers' and learners' awareness of the cognitive mechanisms making up the network of senses of polysemous words was helpful in the language acquisition and found that language teaching can benefit from the application of cognitive linguistics. Foraker and Murphy [10] examined polysemy in sentence comprehension and pointed out that when readers read a polysemous word, they would select an individual sense rather than a core one. Srinivasan and Rabagliati [11] discussed the implications of polysemy for theories of word learning and found that polysemy may be useful for vocabulary learning by allowing children to use their knowledge of the familiar senses of a word to learn its other meanings. However, most studies of polysemy in modern English have only investigated English words or constructions, so those studies make no attempt to consider the important role played by linguistic differences. In other words, the extent to which the findings in those studies can be applied to modern Chinese polysemous words remains unknown.

2.2. Previous Studies of Polysemy in Modern Chinese

Recently, Chinese researchers have also shown an increased interest in exploring polysemy in modern Chinese. One of the most cited studies is that of Li and Wen [5] who investigated the role played by cognitive metonymy and metaphor in the mechanism of the meaning extension of "head" both in English and in Chinese. Liu [7] explored the mechanism of both English and Chinese semantic extension of body terms through systematic comparison and contrast and demonstrated the similarities and differences of thinking and cognitive patterns of English and Chinese language users. Wang [8] studied the Chinese polysemous word "chi" and English polysemous "make" and pointed out the interchangeable relationship between figure and ground would be the reason for the formation of polysemy. Su and Zhou [12] examined the translation strategies of the polysemous word "jing" in Yellow Emperor Neijing and pointed out that translators were supposed to understand the meaning of the original text precisely based on the context and relevant materials, and to select appropriate strategies with consideration of the purpose, the focus, the reader acceptance, and other relevant factors in translation so as to improve the translation quality of traditional Chinese medicine classics. However, those studies do not give sufficient consideration to some common Chinese polysemous verbs. This work attempts to shed a new light on the relationship between the mechanism of the meaning extension and Chinese polysemous verbs. It is hoped that this research will facilitate our understanding of what will contribute to the meaning extension of Chinese polysemous verbs.

3. Theoretical Foundations

3.1. Prototype Theory within Cognitive Linguistics

The prototype theory originated in the mid-1970s with scholars' investigation into the internal structure of categories. [13, 14, 15, 16]. It "construes membership in a concept's extension as graded, determined by similarity to the concept's 'best' exemplar (or by some other measure of central tendency)" [17]. Rosch *et al.* [18] pointed out that the most prototypical items were the first and most frequently produced items when subjects were asked to list the members of the category. Ungerer and Schmid [19] also argued that prototypes play a key role in the formation of cognitive categories, such as colors, shapes, and concrete objects. Moreover, some studies suggested that prototypical meaning would be easily acquired by language learners [20, 21]. It indicated that there is a prototypical meaning within the distinct but related senses of polysemous words or expressions. Therefore, it is worth considering the prototypical meaning of polysemous words in modern Chinese when we investigate the mechanism of the meaning extension of them.

3.2. Conceptual Metaphor within Cognitive Linguistics

Historically, research investigating metaphors has mostly focused on their rhetorical function. It was not until the 1980s that Lakoff and Johnson proposed that metaphor was ubiquitous in people's life, not just in language but in thought and action. In other words, the ordinary conceptual system of human beings is fundamentally metaphorical in nature [2]. Lakoff and Johnson also created a new term, conceptual metaphor, in order to differentiate it from "linguistic metaphor" and to stress that metaphors were a matter of cognition and conceptual structure rather than a matter of mere language.

Conceptual metaphors generally refer to mappings between two different conceptual domains [19]. This means that a metaphor is a mapping of the structure of a source concept onto a target concept from a cognitive view, as shown in Figure 1. Here the mapping can be described as a set of constraints regulating which correspondences are qualified for mapping from a source concept onto a chosen target concept. The mapping includes three major components: image schemas, basic correlations, and culture-dependent evaluations. It reflects language users' conceptual experiences in construing the world around them. For example, the conceptual metaphor +LIFE IS A JOURNEY+ can be activated within a mapping scope depending upon the image schema of "path" and is supported by the correlations "change<>motion" and "purposes<>goals". Conceptual metaphors provide a useful account of how human beings attempt to understand partially what cannot be comprehended totally, such as feelings, aesthetic experiences, moral practices, and spiritual awareness [2].

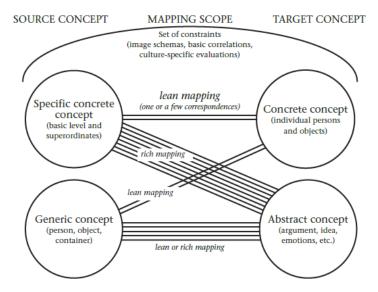


Figure 1. Metaphorical mapping: an overview [19]

3.3. Conceptual Metonymy within Cognitive Linguistics

Metonymy can broadly be defined as the way in which one entity is being used to refer to another. Prior to the work of Lakoff and Johnson [2], metonymy is also merely regarded as just figures of speech in literature. In their landmark work, *Metaphors We Live By*, Lakoff and Johnson [2] proposed that conceptual metonymy bore some similarity with conceptual metaphor, which means both serve the function of providing understanding. Besides the similarity, conceptual metonymy also allows language users to focus more specifically on certain aspects of what is being referred to.

As can be seen from Figure 2, conceptual metonymy is also described as a relationship between a source concept and a target concept. The relationship develops within a socially accepted mapping scope that prototypically corresponds to a cognitive model [19]. For instance, the metonymy +I HAVE JUST BOUGHT A PICASSO+ can be activated within a mapping scope relying

on the "part-whole" schema. This means the mapping scope "famous painters" fully supports the +AUTHOR FOR WORK+ metonymy for Picasso. Conceptual metonymy, like conceptual metaphors, structure not just linguistic system but the thoughts, attitudes, and actions of speakers and writers. Actually, metonymic concepts are grounded in human experience and the grounding of metonymic concepts is usually more evident than is the case with metaphoric concepts, for it is generally related to direct physical or causal associations [2]. Similarly, the proposal of conceptual metonymy establishes a novel model to explore how the cognitive function of language users interacts with linguistic expressions.

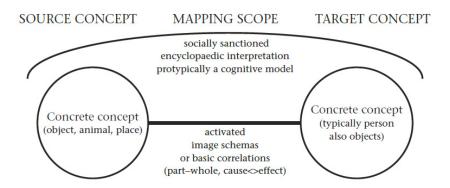


Figure 2. Metonymical mapping: an overview [19]

In summary, this section provides an overview of the theoretical foundations of the exploration of the working mechanism of meaning extension of polysemous words. It has been argued that conceptual metaphor and conceptual metonymy play an essential role in the mechanism of semantic extension of polysemous words [5]. Thus, this section will facilitate the analysis of the way the different but related meanings of Chinese polysemous "fang" were extended from a cognitive linguistic perspective.

4. Methodology

A mixed method was employed since a qualitative method can be particularly useful for characterizing the mechanism of the meaning extension of "fang" and the advantage of using a quantitative approach is that it allows us to identify the frequency of each meaning of "fang".

To begin with, easy access to the Internet and the availability of corpora of different emphasis in various languages provide the author with sufficient researching tools and objective materials. Center for Chinese Linguistics PKU (CCL) Corpus and *Modern Chinese Dictionary* (MCD) were selected as the data sources of the current study, for they feature widest scope and largest data among all the corpora in Chinese language.

Chinese characters are often combined into compound words, so the understanding of a single Chinese character would be enhanced and deepened with the assistance of its compounding character. CCL Corpus is a corpus with abundant language material more diversified data sources. A typical feature of CCL is that it can be employed to search Chinese characters and display the relative frequency of those words, which is of great significance to the current research. In the process of searching data, the words without metaphorical meaning were excluded, like the meaning as a family name.

With the goal of highlighting useful information and supporting conclusion-making, descriptive statistics analysis and exploratory data analysis were included. Descriptive statistics analysis was used to reveal the commonness of the metaphoric meaning of the word "fang" while

exploratory date analysis was employed to assist the revealing the facts below the surface of language.

5. The Semantic Extension "Fang"

5.1. The Initial Meaning of "Fang" in Ancient Chinese

Chinese characters feature an ideographic writing system, in which the form of characters is related to the meaning directly. Therefore, when it comes to the initial meaning of "fang", its form has to be considered and then it is likely to continue discussing its extended meanings.

In the book *The Etymology Dictionary of Common Chinese Words* [22], "fang" is categorized as ideographs. The ideographs mean that they are compounds, composed of two or more than two existing characters. Regarding the structure, an ideograph is the composition of two or more characters side by side or one on top of another. With regard to the meaning, an ideograph is the composition of the meanings of its component characters. According to the book *The Etymology Dictionary of Common Chinese Words* [22], "fang" is composed of two characters, "fang(\mathcal{F})" and "pu(\mathcal{F})", side by side. The ideograph "fang(\mathcal{F})" means that criminals' hair was shaved, their faces was branded or tattooed, and they were exiled to places that were desolate and far from their hometowns. The "pu(\mathcal{F})" refers to using some torture instruments to hit or to punish, so the composition of the meaning of these two characters is that criminals were exiled to places which were far from their hometowns so as to punish them. In *Shuowen Jiezi Zhu* [23], the meaning of "fang" is "to exile". From above explanation, it is evident that the initial meaning of the character "fang" is "to exile". For example

(1) 齐放其大臣孟尝君于诸侯。(《战国策》)

The chancellor of Qi state, MengChang was **exiled to** other states. ("Zhan Guo Ce")

(2) 屈原生活在战国时代,为了实现他的政治理想,不断受到腐朽的贵族集团的打击,一再被<u>放逐</u>。(《文艺理论》—郑国铨)

Qu Yuan lived in Warring States period. In order to achieve his political ideals, he was successively assailed by decadent aristocracy groups and repeatedly **exiled**. ("Literary Theory"—Zheng Guoquan)

In (1), the ancient Chinese character "fang" means "to exile". In (2), the character "fang(放)" combines with another character "zhu(逐)" to form "fangzhu"(放逐) to refer the meaning of exiling in modern Chinese, which is different from ancient Chinese.

5.2. The Extended Meanings of "Fang" in Modern Chinese

As a polysemous character, the character "fang" has many extended meanings. According to *Modern Chinese Dictionary*, there are sixteen meanings, including the initial meaning. In the previous part, the initial meaning has been discussed and in this part, it will not be mentioned again. In addition, there is a meaning which referring to a family name, then it is also excluded from the following analysis. Thus, there are fourteen meanings to be discussed in this section, they are:

- 1) to remove constraints or to be free;
- 2) to stop doing something within certain period, like stopping studying, working, etc.;
- 3) to allow someone to have or to do whatever they want, even if it is bad for them;
- 4) to allow cattle or sheep to graze in a pasture;
- 5) to make something come out or emerge;
- 6) to make something burn;
- 7) to lend money to someone so as to charge interests;
- 8) to expand;

- 9) to bloom;
- 10) to set something aside;
- 11) to make something fall;
- 12) to put something in a particular place or position
- 13) to add something to something;
- 14) to control someone's own action and adopt an attitude to reach a certain extent.

And then, examples relating to each extended meaning will be searched in the corpus CCL. Since Chinese characters are often combined into compound words, two or three compound words containing the "fang" were researched (See Table 1). For instance, when discussing the extended meaning **A**, the "shifang"(释放) and "jiefang"(解放) are supposed to be searched.

Table 1. The distribution of each extended meaning of "fang" in CCL

The Extended Meaning of "fang"	Retrieved Item	Relative Frequency	(%)
A. to remove constraints, to be free	释放、解放	64,427	17.74
B. to stop doing something within certain period, like stopping studying, working, etc.	放学、放工	2,040	0.56
C. to allow someone have or to do whatever they want, even if it is bad for them	放纵、放任	2,274	0.63
D. to allow cattle or sheep to graze in a pasture	放牛、放羊	823	0.22
E. to make something come out or emerge	放枪、放光	1,016	0.28
F. to make something burn	放火、放爆竹	1,326	0.37
G. to lend money to someone so as to charge interests	放贷、放款	1,541	0.42
H. to expand	放大、放宽	7,609	2.10
I. to bloom	怒放、绽放	1,501	0.41
J. to set something aside	放一放	96	0.03
K. to make something fall	放倒、放树	253	0.07
L. to put something in a particular place or position	放在	34,529	9.50
M. to add something to something	放点	244	0.07
N. to control someone's own action and adopt an attitude to reach a certain extent	放明白、放轻	215	0.06
The total frequency of "fang" in CCL		363,111	

As we saw in Table 1, the character "fang" was fairly frequent in CCL. Table 1 presents that the meaning **A** (*to remove constraints; to be free*) was significantly more frequent in the corpus CCL, with the relative frequency of 64,427. It suggested that this meaning, *to remove constraints,* was extremely common in modern Chinese and this meaning would also be the prototypical meaning of "fang" based on the relationship between the prototypical meaning of a word and its frequency of use in diversified contexts.

Besides, the meaning **L** to make something to be a particular position, is also frequently used in modern Chinese. What is interesting about the data in this table is that the extended meaning **J**, to put something aside, is the least used one, with the percentage of 0.03%, in modern Chinese.

5.3. The Meaning Extension Mechanisms of "Fang"

Polysemy is a kind of common linguistic phenomenon. Kövecses [24] proposed that polysemy was often associated with metaphor and metonymy and there were systematic metaphorical

and metonymic relationships between the senses of a polysemous word. Similarly, Li and Wen [5] argued that conceptual metonymy and metaphor were primarily responsible for the meaning extension of polysemous words. Hence, this part describes how the meanings of "fang" were extended in terms of conceptual metaphor and metonymy.

As was mentioned above, fifteen senses were discussed in the exploration of the mechanism of the semantic extension. The semantic links between different meanings of "fang" was displayed in Figure 3.

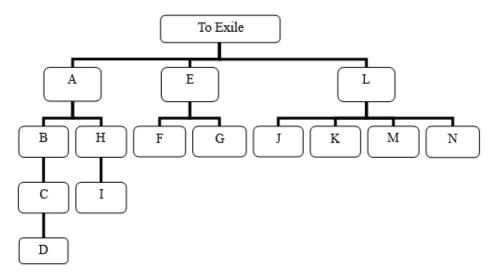


Figure 3. Semantic Network of "Fang" in Chinese

From the description in Figure 3, it can be assumed that the sense **A** (*to remove constraints; to be free*) derived from the initial sense through metaphorical mapping. In ancient China, "fang" was a kind of punishment for criminals by which criminals were sent away from their native country or home. Regarding this situation, it relates to "someone in exile and a position movement" which is associated with at least two different places. Like the punishment "to exile", the sense **A** also refers to some kind of position movement. For example, someone is initially forced to stay one place and cannot obtain freedom, and then the person is given freedom and can go to some places where he wants to go. Obviously, the sense **A** indicates certain potential movement. Given this similarity between the initial sense and the sense **A**, there is a metaphorical mapping between them. Thus, the sense **A** was extended based on conceptual metaphor.

It would be evident that the sense **B** (to stop doing something within certain period) derived from the sense **A** because they both have the meaning of removing constraints or giving freedom to somebody. In terms of the sense **B**, there are such expressions, like "fangxue (汝学)", "fanggong (汝工)". The former means all classes are over and students can leave school and cannot be restricted by class disciplines; the latter means going off work, so workers cannot be restricted by working disciplines. Based on this similarity, it is reasonable that there is a metaphorical mapping between them. The sense **C** (to allow someone to have or to do whatever they want) derived from the sense **B** through metaphorical mapping because they refer to removing constraints, which is the similarity between them. The sense **D** (to allow cattle or sheep to graze in a pasture) derived from the sense **C** through metaphorical mapping. In terms of the sense **D**, there is an expression, "fangyang (汝羊)", which means allowing sheep to graze in a pasture freely, so removing constraints and providing freedom are the similarity between them. The sense **H** (to expand) also derived from the sense **A** through metaphorical mapping. It is certain that when referring to removing constraints, there will be more space for activities, that is, the original space will have been expanded. Thus, it is understandable that

there is a similarity between the sense **H** and the sense **A**. The sense **I** (*to bloom*) refers to a process that trees are in bud at the initial stage and finally bloom. Obviously, in this process, the shape of buds will change and the size of them are expanding. Therefore, the sense **I** derived from the sense **H** through metaphorical mapping.

As for the sense **E** (to make something come out or emerge), the motivation of extension is conceptual metonymy. As was mentioned before, when referring to the event of exiling, there are series of movements, one of them is the movement of coming out. Hence, the sense **E** can be regarded as a part of the sense **A**. Here there is a metonymy: WHOLE FOR PART. And this conceptual metonymy is the motivation for explaining how the sense **E** derived. The senses **F** (to make something burn) and **G** (to lend money to someone to charge interests) derived from the sense **E** through the motivation of conceptual metaphor because they all relate to the movement of coming out or appearing, and this is the similarity between them. For example, in terms of the sense **E**, there is an expression, "fangqiang (放枪)", which means shooting, indicating that bullets will come out from the bore of a gun. Like the sense **E**, there are expressions, such as "fanghuo (放火) and "fangkuan(放款)". The former means making something burn, namely making flames come out from somewhere; the latter means money lender firstly withdraw his money from bank or strongbox, then he can borrow his money to borrowers.

When it comes to the sense **L** (*to put something in a particular place or position*), it can be assumed that this sense also derived from the sense **A** through metaphorical mapping. Since the sense **A** refers to a position movement, the sense **L** has some similarity with the sense **A**. The senses **J** (*to set something aside*), **K** (*to make something fall down*), **M** (*to add something to something*) and **N** (*to control someone"s own action and adopt an attitude to reach a certain extent*) derive from the sense **L**, for there is a conceptual metaphor between them. And the similarity between them is that they all include a kind of position movement. For instance, there are expressions, like "fangyifang (放一放)", "fangshu (放树)", "fangdiantang (放点糖) and "fangmingbai (放明白). "Fangyifang" means setting something aside, namely, making something stay a situation in which something is not considered temporarily because other things are more important. "Fangshu" means cutting down trees, which means making trees change their position, from an upright position to a flat position. "Fangdiantang" means adding sugar to water or milk, that is, making sugar stay a particular position. "Fangmingbai" means someone should adopt certain attitude towards something or somebody when dealing with something and try to be clear in mind.

From the above analysis, it can be concluded that the mechanism of the meaning extension of "fang" relates to conceptual metaphor and conceptual metonymy. It has been argued that conceptual metaphor and conceptual metonymy are two important elements for word meaning extension. Conceptual metaphor is based on similarity, which is associated with two different domains, while conceptual metonymy depends on contiguity, which is related to a single domain.

6. Conclusion and Discussion

Our research questions explored the prototypical meaning of "fang" and the mechanisms of the meaning extension of it and the findings suggest that the prototypical meaning of "fang" is to "remove constraints or to be free" and conceptual metaphor and conceptual metonymy are accountable for the mechanisms of its meaning extension. Moreover, what is interesting in the analysis is that conceptual metaphor plays a more pivotal role in the meaning extension process than conceptual metonymy because thirteen senses derived from the motivation of conceptual metaphor except for the sense **E**, which derived from the motivation of conceptual metonymy. In other words, although conceptual metaphor and conceptual metonymy are both answerable

for the meaning extension of polysemous words, the degree to which they contribute to the meaning extension is different. This finding is consistent with that of Li and Wen who proposed that conceptual metaphor bore more importance than conceptual metonymy in the mechanism of word meaning extension.

The present study was subject to a few weaknesses. The primary limitation of this study lies in the small data size, which may limit the generalisability of these findings to other Chinese polysemous words. It is highly recommended that further studies be carried out in the wide scope of data. Another inherent limitation of this analysis is, unfortunately, a layer of linguistic and cognitive complexity. This indicates that a simple process of induction cannot fully reveal how human cognitive system acts on the meaning extension of polysemous words.

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