Metaphor of Foot: A Comparative Study of Chinese and English Based on Corpora

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Abstract: Metaphor is not only a rhetorical device, but also a ubiquitous cognitive approach. Based on the concept of "Philosophy in the Flesh" proposed by Lakoff and Johnson, this paper analyses the similarities and differences of the metaphor of foot in Chinese and English, using CCL (the Center for Chinese Linguistics PKU) as the Chinese corpus and COCA (the Corpus of Contemporary American English) as the English corpus. It is found that the Chinese and English samples share five metaphorical uses in common: movement, position, function, emotions and attitudes, and address related to the foot. No metaphorical use based on the ability of the foot to measure is found in Chinese. The similarities in the metaphor of foot reflect the common features of "Philosophy in the Flesh" and metaphorical mapping in Chinese and English mindsets, while the differences reflect the cultural disparity behind Chinese and English.

1. Introduction

In *Metaphors We Live By*, Lakoff and Johnson proposed that metaphor is pervasive in everyday life, not just in language but in thought and action. Our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature[1]. This challenges the traditional view of metaphor as solely a rhetorical device, and motivates cognitive linguists to study metaphor more comprehensively. Subsequently, in another book *Philosophy in the Flesh: The Embodied Mind and Its Challenge to Western Thought*, Lakoff and Johnson introduced the concept of "Philosophy in the Flesh", arguing that metaphor is based on bodily experience[2]. The relevance of our daily experiences inevitably leads us to the fundamental metaphor that is the product of the body, experience, brain, and mind, and can only be fully understood through experience[3]. In ancient China, there is a saying suggests "Adopting the patterns from oneself when nearby, and from other things when far away." Similarly, in the West, Protagoras proposed that "Man is the measure of all things", leading to the use of the human body as a standard for understanding the world.

2. Literature Review

Based on the above, scholars have begun to study the metaphor of different parts of the body. A review of the literature from both home and abroad reveals a lack of comprehensive quantitative

studies on the metaphor of foot. Besides, most studies are qualitative and thus do not provide sufficient classification and analysis of the different cognitive patterns behind metaphor. Furthermore, of all the body parts, feet enables the body movement, which leads to our understanding of the world. Thus, functions provided by foot are not shared by other body organs[4], so it is important to objectively acknowledge its significance. Therefore, with the help of corpora, this paper adopts a combination of qualitative and quantitative analyses to compare the metaphor of foot in Chinese and English, as well as the cognitive similarities and differences behind metaphor, so as to provide some insights for the comparative study of the metaphor of body parts in Chinese and English.

3. The Mechanism of Metaphor

The essence of metaphor is understanding and experiencing one kind of thing in terms of the other, which is considered as the mapping of two concepts in different superordinate domains of experience, i.e., the mapping of the properties of the source domain onto the target domain[1]. During this process, relevant concepts and structures belonging to one domain are transferred to another domain, resulting in a new synthesized conceptual structure, i.e. metaphorical meaning[5]. People often refer to familiar, tangible and concrete concepts in order to identify intangible and abstract concepts in their thinking, forming a cognitive way of relating different concepts[6]. From the perspective of "Philosophy in the Flesh", people usually observe the world in terms of themselves, forming a mapping from the human body to the object of observation. For example, ancient people divided the body into three parts: head, waist and foot. When they observed a mountain, they naturally map these three parts onto it, thus creating terms like "top of a mountain", "mountainside" and "the foot of a hill"[7]. In addition, nouns widely used in our daily lives, such as "handle", "needle eye", "bottleneck", "sawtooth", etc. all reflect the concept of "Philosophy in the Flesh".

4. Methodology

In this paper, CCL is used as the Chinese corpus and COCA is used as the English corpus. The two large corpora have a wide range of topics, which are firstly comparable in terms of quantity, and at the same time are credible and authoritative[8]. Firstly, foot is searched in each of the two corpora, and a total of 68,988 Chinese items and 60,022 English items were obtained. For each language, 100 items were randomly selected, making a total of 200 items for the study. Secondly, by consulting the Great Chinese Dictionary, The New Oxford English-Chinese Dictionary (Second Edition) and relevant literature, metaphor of foot in Chinese and English are classified into different categories. Lastly, metaphor of foot in Chinese and English is compared, and then the similarities and differences in the cognitive styles behind the metaphors are further analyzed.

5. Results and Discussion

Through analysis and categorization, metaphor of foot in Chinese and English is presented as follows:

Table 1: Different Types of Metaphor and Their Percentages in Chinese.

Type	Frequency	Percentage	
Original meaning	38	38%	
Movement	28	28%	
Space	14	14%	
Emotion and Attitudes	9	9%	
Function	7	7%	
Address	4	4%	
Total	100	100%	

Table 2: Different Types of Metaphor and Their Percentages in Chinese.

Type	Frequency	Percentage		
Original meaning	38	38%		
Movement	28	28%		
Space	14	14%		
Emotion and Attitudes	9	9%		
Function	7	7%		
Address	4	4%		

Table 3: Comparison between Chinese and English.

	Movement	Space	Function	Emotion and Attitude	Address	Measurement
Chinese			$\sqrt{}$		$\sqrt{}$	×
English	V			V		$\sqrt{}$

As is shown in the tables, there are six metaphorical uses of foot in English and five metaphorical uses of foot in Chinese. Although types of metaphor are richer in English, their distribution is concentrated on Measurement. While in Chinese, the distribution is relatively more even. According to Table 1, The Chinese samples has the largest number of uses of foot in its original meaning, accounting for 38% of the total; the most frequently occurring metaphor is based on movements of the foot, accounting for 28%, followed by the metaphor based on the position of the foot, accounting for 14%. Metaphor based on the emotions and attitudes conveyed by the foot accounts for 9%, while on functions of the foot accounts for 7%. And the metaphor with the lowest frequency is based on the addresses related to the foot, accounting for 4%. According to Table 2, in English samples, the original meaning of Foot is in second place with 35%; the most frequent metaphorical use is based on the ability of the foot to measure with 42%, followed by metaphor based on functions and movements of the foot, occupying 7% and 6% respectively; the percentages of metaphor based on the position of the foot and the emotions and attitudes conveyed by the foot are 5% and 3% respectively. Similarly, metaphor with the lowest frequency is based on the addresses related to the foot, with 2% of the total number of occurrences. According to Table 3, it is worth noticing that no metaphor based on the ability of the foot to measure is found in Chinese samples. Next, different types of metaphor of foot will be analyzed one by one.

5.1. Metaphor based on movements of foot

As far as movements are concerned, the foot has a variety of movements, such as walking, standing, jumping, kicking and running, etc. Therefore, foot is often projected from the movement domain of the human body to other conceptual domains, which extends different meanings[9]. In selected samples, metaphor based on movements of foot occurs 28 times in Chinese and 6 times in English.

- (1)...they have never set foot in Gaza and know nothing about war reporting...
- (2)...give room! And foot it, girls.

The original meaning of example 1 is to step in a certain place, which is based on the action of the foot to step and tread, and the metaphorical meaning is to get involved in a particular area. Example 2 is based on the ability of the foot to move and walk, and here the noun is used as a verb, which metaphorically means to make way for somebody or something.

5.2. Metaphor based on the position of foot

The original meaning of foot in dictionary is "the lower extremity of the leg below the ankle on which a person stands or walks[10][11]". In selected samples, metaphor based on the position of foot occurs 14 times in Chinese and 5 times in English.

- (1) When the volcano erupted, several hotels at the *foot* of Mount Arenal immediately sounded the alarm
 - (2) ... but men and women already fell at her feet.
 - (3) ...taxpayers were footing the bill for his Indiana hotel bills.

Since the foot is the lowest part of the body, its metaphor is often characterized by "lower end" and "bottom part[12]". Therefore, the positional domain of the foot is often mapped onto other domains to form metaphors. Example 3, is based on the fact that the foot is at the bottom of the body, and Example 4 is further derived from this notion, which metaphorically means being conquered by someone. Example 5 uses the noun as a verb. Since the total amount of money is usually written at the bottom of the bill, so foot is used as a verb to refer to the action of paying the bill, which reflects the principle of flexibility and economy in the use of English vocabulary.

5.3. Metaphor based on functions of foot

Foot play a role in supporting the whole body and keeping the body stable. Without the support of the foot, the body will lose balance. Therefore, the functional domain of the foot is usually projected onto other domains, forming multiple metaphorical uses. In selected samples, metaphor based on functions of foot occurs 7 times in both Chinese and English.

(1) But Zingano escaped and got back to her feet.

Getting back to one's feet means someone who stands up again figuratively, and thus its metaphorical meaning is to cheer someone up[13].

5.4. Metaphor based on the emotions and attitudes conveyed by foot

According to Lakoff, the physical effects for an emotion stands for emotion, and body signals as well as concrete body movements can indicate abstract emotions[9]. Among them, the foot is very representative. For example, our hands and feet will be cold when we feel scared or anxious, and "ten feet tall" is used to describe people's mood of being smug. For example, if people walk firmly with both feet, they can keep their balance and are less likely to fall, which is projected onto the attitude domain as "doing things pragmatically and with all one's strength". If they walk with one foot, they will lose their balance and fall, which is projected onto the attitude domain as "doing things carelessly and sloppily[14]". Since both emotions and attitudes are human's subjective feelings, they are discussed as one category in this paper. In selected samples, metaphor based on attitudes and emotions conveyed by foot occurs 9 times in Chinese and 3 times in English.

- (1) Everyone feels cold in hands and *feet*, and everyone has cold sweat on their palms.
- (2) If goosebumps and *cold feet* have you dreading disrobing...
- (3) The reason the NFL finally put its foot down and delivered a long-overdue mandate on

standing...

5.5. Metaphor based on the addresses related to foot

The mapping of the foot to the domain of address also produces a variety of expressions, which fully reflects the ubiquity of metaphor[15]. In selected samples, metaphor based on the addresses related to foot occurs 9 times in Chinese and 3 times in English.

(1) Mao thinks that if he can turn those villagers into foot soldiers in a giant army...

Example 10 is based on the movement of the foot to walk, it refers to the soldiers who march and fight on foot.

5.6. Metaphor based on the ability of foot to measure

In selected English samples, the foot is widely used as a measure, accounting for 42% of the total. And it is usually used together with numbers and takes on the plural form. In English samples, this type of metaphor is even more common than its original meaning. However, this type of metaphor is not found in Chinese samples.

- (1)...scrambling up, up, up, over two hundred feet above the ground.
- (2)...he was seen acting in an agitated and very suspicious manner *mere feet* from St. Francis convent...

6. Similarities and differences in cognitive styles behind metaphor

6.1. Similarities

In this study, samples from two languages share five types of metaphor of foot in common. For a number of metaphor, equivalents can be found in Chinese and English. For example, foot of the wall, foot soldier, with both feet on the ground, etc. The reason for this phenomenon might be that the two languages have developed the same conceptual metaphor for foot, and that there may be some universal basis for the same metaphor to develop, namely bodily experience[16]. In this process, metaphor derived from bodily experience plays an important role. Based on bodily experience, people first create expressions through direct perceptions, and then, from near to far, from shallow to deep, they obtain a richer and more diversified language system[8]. After understanding the basic structure and function of their own body parts, people map the concrete, familiar and tangible realm of the foot onto the abstract and unfamiliar realm to form their own understanding of new things. This common metaphorical way of thinking exists in every culture and forms the basis of human cognition. Therefore, in Chinese and English, based on the same physiological structure, there is a mapping from the domain of foot to other domains, and thus similar metaphorical meanings have been created.

6.2. Differences

Although bodily experience is the common basis upon which similar metaphorical concepts are formed, we should not see "embodied experience" as a homogeneous, monolithic factor. This is made possible by the idea that embodiment consists of several components and that any of these can be singled out and emphasized by different cultures. This idea is termed as "differential experiential focus[16]". In this way, the metaphorical disparity across languages emerges, but the most important one derives from the fact that there are innumerable cultural units available to the metaphor user and each of those units consists of a huge bundle of semantic components that could be used to illuminate various aspects of social life[17]. First, by observing the Chinese samples, it is

found that many expressions related to foot in Chinese usually have an even number of characters and tend to be paired with other body parts, especially hands, to form a complete lexical meaning. This is due to the fact that Chinese culture lays an emphasis on the Unity of Heaven and Man, and focuses the transformation of "yin and yang" between things. Since the hand represents yang, while the foot represents yin, this specialty in culture is inevitably reflected in linguistic expression[18]. Besides, in Chinese, many metaphorical uses related to foot come from ancient literature such as Dream of Red Mansions and Book of Han, which also reflects the influence of culture on language. The same goes for English. In this study, metaphor of Foot based on its ability to measure is only found in English. And this comes from the idea of "Divine Right of Kings" in England. In order to unify the standard for measuring the area of a field, the king's foot was used to indicate the length, hence the foot has been used as a measure. Another expression "the shoe is on the other foot" means a complete reversal of the situation, which can be traced back to 19th century, when boots were popular in the West and there was no distinction between right and left foot. Later, as the boots were massively produced, people felt that it was inappropriate to wear them the way they had been worn before, so the situation of wearing shoes randomly has completely been reversed. Another example is "shot oneself in the foot", which originates from the United States and was once used to describe a clumsy person who tried to shoot someone else but accidentally hurt himself. Nowadays, the idiom is often used to describe a politician or a celebrity who wants to attack others but ends up hurting himself. In summary, Chinese and English expand their cultural categories respectively according to their own understanding and experience of specific body parts, ultimately deriving their own distinctive personalized imagery, highlighting the heterogeneity of cross-ethnic cognitive metaphors. Thus, it can be said that we don't see things as they are, we see things as we are [19].

7. Conclusions

The human cognitive laws of near to far, simple to complex, and concrete to abstract determine the importance of the human body in human cognitive process. Based on the concept of "Philosophy in the Flesh" proposed by Lakoff and Johnson, this paper adopts a combination of qualitative and quantitative analyses to explore the distribution of metaphor of foot in Chinese and English, as well as the cognitive differences and similarities behind metaphor. CCL is used as the Chinese corpus and COCA is used as the English corpus. Through the analysis of 200 Chinese and English metaphor of foot, it is found that the Chinese and English samples share 5 types of metaphor in common, namely, metaphor based on movements, position, functions, emotions and attitudes, and addresses related to the foot. However, no metaphor of the foot as a measurement tool is found in Chinese. The similarities in the metaphor of the foot reflect the common features of bodily experience and metaphorical mapping in two languages, while the differences reflect the cultural disparity behind Chinese and English cognitive styles. Through this study, this paper hopes to provide some insights for the comparative study of the metaphor of body parts in Chinese and English.

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