

A Contrastive Study of Spatial Metaphors of “Up/Down” in English and “Shang/Xia” in Chinese

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Abstract: *Metaphors play an important role in human language and thinking, and their cognitive essence is gradually highlighted in the perspective of cognitive linguistics. In the perspective of cognitive linguistics, spatial metaphor is a fundamental and crucial type of metaphor, defined as a way of thinking that uses specific spatial conceptual domains to interpret abstract conceptual domains. This paper takes the spatial metaphor of “up/down” as an example to compare its similarities and differences in Chinese and English languages from the perspectives of quantity, time, state and status domains. Exploring these similarities and differences in depth can help reveal the laws of human cognition, understand the close connection between language and culture, promote cross-cultural communication, provide rich materials and new perspectives for interdisciplinary research, and explore more directional metaphorical phenomena and the dynamic evolution of metaphors in different cultures and languages.*

Keywords: Metaphor; Spatial Metaphor; Similarities and differences.

1. INTRODUCTION

Metaphor, as a phenomenon that occupies a crucial position in human language and thinking, runs through the long process of language development and cognitive deepening (Shu, 2000). In the perspective of cognitive linguistics, metaphor is defined as a way of thinking that uses specific conceptual domains to interpret abstract conceptual domains, with spatial metaphor being particularly fundamental and crucial. Talmy (1983) pointed out that the concept of space holds a crucial position as a foundational entity category in language, and can be said to be the most fundamental concept of humanity. Lakoff (1987) put forward three basic viewpoints of modern cognitive science: the experience of mind, the unconsciousness of thinking and the metaphor of concepts. People also see knowledge as the result of people’s practice. And the first thing people acquire is spatial knowledge. Essentially, people’s understanding of spatial orientation precedes their understanding of time, quantity, state and so on. Therefore, in the metaphor of orientation, the spatial domain is the source domain, while time, quantity and other domains are the target domains. People naturally project their cognition of spatial orientation onto target domains such as time, quantity, and state, thus forming the phenomenon of using spatial orientation words to represent abstract concepts (Li & Sun, 2024). Although mapping is a one-way projection from the source domain to the target domain, it is also influenced by the image schema of the target domain. Whether it is the source domain or the target domain, their image schemas are largely based on culture (Wu & Zhou, 2012). As Lakoff and Johnson (1980) pointed out, the concept of space holds a fundamental position in the human cognitive system, and humans construct a framework for understanding numerous abstract concepts based on their own perception and movement experience in the spatial environment. The spatial concept of “up/down” or “Shang/Xia” is a typical representative, widely permeating the expression and understanding of many abstract fields such as quantity, state, time, and social status. However, due to differences in cultural backgrounds, thinking patterns, and language structures, the specific manifestations of the spatial metaphors of “up/down” in English and “Shang/Xia” in Chinese vary greatly in different fields. We must understand that metaphor is rooted in daily bodily experiences, and the bodily experiences of different ethnic groups are the same. Therefore, the existence of metaphor is universal; on the other hand, due to the fact that bodily experiences cannot be independent of specific cultures and societies, we know that there are differences in metaphorical concepts across different cultures. Exploring these similarities and differences in depth is of great significance for revealing human cognitive laws, understanding the close relationship between language and culture, and promoting cross-cultural communication. It also provides rich and valuable materials and perspectives for interdisciplinary research in linguistics, cognitive science, and other fields (Zhao, 2009).

Cognitive linguistics holds that language is not a self-sufficient system, and human experience of the world largely constrains the structure and meaning of language. Language ability is a part of human cognitive ability, so

language structure and meaning should be explained by human general cognitive ability (Zhang, 2001). This paper will study the similarities and differences in spatial metaphors between English and Chinese from a cognitive perspective, based on the premise that metaphor is one of the most important means for human cognition of the world; spatial metaphor is an image schema metaphor that starts with spatial concepts and constructs other non spatial target domains. Many abstract concepts of humanity must be constructed through spatial metaphors. Therefore, spatial metaphors play an indispensable role in human cognitive activities.

2. THE CONCEPT OF SPATIAL METAPHOR

Space is a fundamental concept formed by early humans, which is summarized through direct experience, easy to understand, and many abstract concepts are constructed based on spatial concepts. Up/down and shang/xia are important spatial concepts in both English and Chinese languages. Psychologist Gibson (1969) pointed out that the upper and lower levels of space are the most fundamental because they are rooted in the gravitational pull of the Earth. Spatial metaphor is formed on the basis of spatial concepts and serves as the foundation for other cognitive activities of human beings. It originates from the organic interaction between humans and nature, and is the most fundamental concept that people rely on for survival, such as front-back, top-bottom, deep-shallow, center-edge. We project these well-known concepts onto abstract concepts such as quantity, emotion, class, physical condition, forming language expressions that use spatial words to express abstract concepts.

Orientation is one of the most fundamental bodily experiences of humans, originating from the interaction between humans and nature, and is also the earliest tangible and concrete concept that humans come into contact with. Directional metaphor, also known as spatial metaphor, refers to the organization of many concepts into a complete system related to spatial orientation. When we map spatial relationships to non-spatial concepts, spatial metaphors arise. For example, we liken abstract changes in the nature, quantity, and state of things to changes in spatial displacement. Lakoff and Johnson's research suggests that human concept formation typically relies on "image schemas", such as "container schemas" and "part-whole schemas". These patterns are all derived from human sensory motor experiences and derive meaning from them. Human beings have been in space since birth, and in order to survive and develop, they naturally understand the external world by experiencing their relationship with the objective world. The concept of space is one of the earliest concepts formed by humans and has a priori nature. In the long-term cognitive process, humans have created a set of language structures to describe various spatial structures and relationships. Spatial relationships are the foundation for human understanding of other relationships and the core part of cognition. Understanding the spatial relationships between different objects, especially describing spatial relationships based on simple directional expressions, is a fundamental survival ability for human cognition of the objective world. Therefore, people often use spatial concepts to understand and construct other abstract and complex conceptual systems and things, resulting in spatial metaphors.

In recent years, relevant cognitive research has found that spatial cognition is largely metaphorical and has important ideological functions, manifested through people's conceptualization, reasoning, and communication of the real world. Therefore, the academic community generally believes that studying spatial metaphors is the best way to explore the organization of human concepts (Liu & Liu, 2022). In a sense, spatial metaphor is an image schema metaphor that maps spatial concepts from the source domain to an abstract target domain, while preserving spatial imagery and its logical connotations, allowing people to use spatial concepts to discuss, think about, and understand non-spatial concepts.

The core of spatial metaphor lies in its expansion and transfer of meaning based on spatial concepts, and the academic community generally believes that the study of spatial metaphors is the best way to explore the organization of human concepts (Shayan, 2014; Yu, 2016). Human cognition begins with the interaction between oneself and the spatial environment, where spatial orientations such as "up/down", "front/back", and "inside/outside" become the basic framework for understanding the world and are projected into non-spatial domains. For example, in the metaphorical application of the spatial orientation of "up/down", its basic spatial meaning has a wide range of extensions in different languages and cultures. In Chinese, "shang" in "shang ji (superior)" and "shang liu she hui (upper class society)" represents high status, "shang" in "fang jia shang zhang (rising housing prices)" represents an increase in quantity, and "shang" in "xi shang mei shao (look very happy)" represents a positive emotional state; in English, "upper class" and "high status" indicate that "up" represents high status, "The price goes up" represents an increase in price, and "Happy is up" represents a state of happiness. This indicates that in both Chinese and English languages, the spatial metaphor of "up/down" or "shang/xia" has certain commonalities in social status, quantity, status, and other fields. Its root lies in the common physical experience and basic cognition of space among humans, such as when humans walk upright, they usually associate high places

with concepts such as advantages and positivity, and low places with concepts such as disadvantages and negativity.

3. THE RELATIONSHIP BETWEEN ENGLISH AND CHINESE SPATIAL METAPHORS

3.1 Corresponding Metaphorical Relationship

Research on the mapping relationship between Chinese and English spatial metaphors shows that there is a significant semantic overlap between the two language systems at the level of metaphorical cognition. This cross linguistic metaphorical commonality stems from the universal commonality of human living environments, including climate conditions, geographical features, and socio-cultural structures. These objective commonalities encourage different language groups to form similar cognitive frameworks towards the external world, which in turn present systematic correspondences in metaphorical expressions. For example, in both Chinese and English, “pigeon” is often seen as a symbol of peace. This stems from the gentle and peaceful image of pigeons themselves, as well as the metaphorical associations gradually formed in historical and cultural contexts. Therefore, when expressing concepts related to peace, the image of pigeons is often used; “lion” is often used to symbolize bravery, majesty, and strength. As the king of beasts, lions are recognized in both cultures for their powerful physique and majestic aura. For example, the English word for “shi zi ban de yong qi” is “lion’s courage”, which is used to describe a person’s extraordinary courage and strength.

3.2 Non-Corresponding Metaphorical Relationship

Research on cross linguistic cognitive differences in the metaphorical systems of Chinese and English shows that due to the fact that the two languages are rooted in different cultural cognitive frameworks, their metaphorical mapping mechanisms exhibit significant asymmetric features. This non-corresponding relationship is mainly manifested in three types:

One is metaphorical correspondence, where the metaphorical form does not correspond to the conceptual mapping. Different ethnic groups often construct differentiated image representations of the same objective thing based on their unique cultural cognitive patterns, but the resulting conceptual metaphors may point to the same semantic category. Typical examples include the metaphorical expressions of “pai ma pi (flattery)” in Chinese and “brown nose” in English, which, despite using completely different animal imagery (horses vs. noses), achieve completely equivalent pragmatic functions in flattery behavior.

The second one corresponds to the metaphorical object, but not to the metaphorical meaning. Sometimes there is a common metaphor in English and Chinese, but the metaphorical meanings in each language and culture are different, and even vastly different. For example, in Chinese, the dragon is a totem symbol of the Chinese nation, representing auspiciousness, power, and wisdom. The image of the dragon is often used to metaphorically describe outstanding figures (such as “ren zhong long feng (The cream of the crop)”). In Western culture, dragons are often associated with evil and danger, and are often depicted as fire breathing monsters guarding treasures. This difference stems from the cognitive construction of different cultures on dragons: Chinese dragons originated from ancient totem worship, integrating a variety of animal characteristics, carrying the cultural psychology of praying for blessings and receiving auspiciousness; The image of the Western dragon is more associated with the demonic imagery in Christian culture, reflecting a fear of unknown forces and a sense of conquest.

The third one is that the metaphorical object and the metaphorical meaning do not correspond, resulting in a dual alienation between the metaphorical object and the metaphorical meaning. This metaphorical relationship reflects deeper cultural cognitive differences. The metaphorical meaning of some metaphorical objects is closely related to their language and culture, and it is often difficult to find corresponding objects and meanings in another culture (Chen, 2011). For example, although both the Chinese words “yan zhong ding” and the English expression “thorn in the flex” have the same meaning and use body part metaphors, the former emphasizes the visual level of impairment, while the latter focuses on the sustained pain at the tactile level, demonstrating the differentiated encoding strategies of different language groups towards similar experiences. The existence of such non-corresponding metaphorical phenomena profoundly reveals the complex interactive relationship between language symbol systems and cultural cognitive structures.

4. COMPARISON OF SPATIAL METAPHORS BETWEEN "UP/DOWN"

4.1 Domain of Quantity

In terms of the expression of the quantity domain, the spatial metaphor of the English and Chinese directional word "up/down" or "shang/xia" has both significant similarities and some subtle differences. From a common perspective, humans have formed a basic metaphorical cognition of "when there is more of something, we use up/shang; On the contrary, we use down/xia" in both English and Chinese languages based on shared bodily experiences and intuitive perceptions of space (Zhao, 1995). In Chinese, we often say, "shou ru zeng jia (increasing income)", "chan liang shang sheng (rising production)" and other expressions, where "shang (up)" clearly indicates an increase in quantity; the "down" in expressions such as "ren kou jian shao (decreasing population)", and "ku cun xia jiang (decreasing inventory)" represents a decrease in quantity (Yu, 2009). The same applies to English. The sentences "The temperature goes up" and "The sales volume is increasing" reflects an upward trend in quantity, while "The price drops down" and "The number of students declines" indicate a decrease in quantity. This consistency stems from people's common understanding of the relationship between the height and quantity of object stacking in daily life. When adding items to a container, the height increases, and when removing items, the height decreases. This intuitive experience has become the core foundation of the metaphor of the quantity domain. When the concepts of "up/down" and "shang/xia" are used to represent quantities in both Chinese and English, the concepts and meanings correspond to each other, taking into account the physical reflection of the fluctuation of up and down. From this, we can infer to a more abstract state, such as "hot" being "up"; "Cold" is "down". For example, "The kettle has heated up", "The tea has gradually cooled down".

However, there are also some differences between English and Chinese. When expressing quantitative changes in Chinese, the vocabulary is more diverse and rich. In addition to simple "shang/xia", words such as "biao sheng (soar)", "hua luo (slide)", and "rui jian (sharp decline)" are also used to more accurately describe the degree and speed of quantitative changes. For example, "soaring housing prices" makes the expression more vivid. However, English is relatively concise and direct in this regard, focusing more on the combination of "up/down" with some basic verbs or prepositions, such as "go up", "come down", "rise up" and "fall down". It has obvious differences from Chinese in terms of idiomatic expressions and fixed collocations (Wu & Xu, 2007). In addition, in certain professional fields or specific contexts, English may use specific terms or expressions to replace "up/down" to represent quantitative changes, such as using "appreciate" and "depreciate" in the financial field to represent the increase or decrease of monetary value.

4.2 Domain of Time

A universal characteristic of human language, and even of human thinking, is the systematic use of spatial concepts and vocabulary to metaphorically refer to the concept of time. However, among the many spatial relationships, different languages will use different spatial relationships to metaphorically refer to time. In Chinese, "shang/xia" has a relatively systematic application in expressing time. Usually, "shang" indicates an earlier time, such as "morning", "last month", "previous year"; "xia" indicates a later time, such as "afternoon", "next month", "next year". The formation of this time metaphor is closely related to the cultural traditions and cognitive styles of the Han ethnic group. Lan Chun (1999) mentioned that the concept of time in ancient China may have been influenced by sacrificial culture. People worshipped their ancestors on high places, and the past time was considered to be in a higher position, namely "shang", while the future time was in a relatively lower position, namely "xia".

However, the metaphorical representation of "up/down" in English varies in the temporal domain. Although there are also some cases where "up" is used to represent the continuation of time or the future, such as "up to now" representing "until now" and "What's coming up this week?" representing "what is about to happen this week", the overall correspondence with Chinese is not completely consistent. In the time expression system of English, the order of time is more reflected through other vocabulary and grammatical structures, and the metaphorical application of "up/down" in the time domain is relatively less extensive and systematic than in Chinese. Wu Jing and Wang Ruidong (2001) also pointed out that English tends to use vocabulary such as "before/after" to clarify the order of time when expressing time. Meanwhile, through comparison, it can be found that the frequency of using "shang" and "xia" to represent time in Chinese is very high, but it is almost invisible in English. In English, Westerners usually use prepositions such as "at", "in", "before", "after" to represent time. In addition, Westerners tend to use more horizontal metaphors to expand basic spatial concepts such as "before" and "after", and less use words like "up" and "down".

The difference in temporal metaphors between English and Chinese reflects the uniqueness of people's perception of time in different cultural backgrounds. Chinese culture emphasizes history and inheritance, and has a high respect for the past. Therefore, in terms of time expression, it gives the meaning of "shang" to the past; English culture, influenced by Christian culture and modern concepts of time, places greater emphasis on the present and the future. In some cases, "up" represents the future, but unlike Chinese, it has not formed a complete system of time metaphors based on "shang/xia".

4.3 Domain of State

If the direction of change is positive, it belongs to upward movement; otherwise, it belongs to downward movement (Qian, 2013). The upper part can represent a relatively ideal state in all aspects, while the lower part represents a state that is too far from the ideal state. The "up and down" image schema is projected onto the target domain, and this metaphor is one of the contents of the event structure metaphor. In Chinese, the image schema structure of "shang/xia" is projected onto the target domain, which not only represents space, but also represents the ideal state as up, and vice versa as down.

From similarities, in both languages, "up/shang" is generally associated with a positive state, while "down/xia" corresponds to a negative state (Chen, 2009). In Chinese, "xi shang mei shao (look very happy)" vividly depicts a joyful and positive state, while "shang jin (striving forward)" embodies a spirit of active progress; and "chui tou sang qi (dejected)" indicates a negative state of low mood. There are similar expressions in English, such as "Happy is up" and "Cheer up", which represent positive emotions and encouragement to bounce back, while "Sad is down" and "be down in spirits" represent sadness and low mood. The formation of this metaphor stems from the common physical experience and emotional cognition of humans. When people are sad, depressed, or have a low will, the state they exhibit is often one of dejection and despair; on the contrary, when people are joyful, uplifted, and full of confidence, the state they exhibit is lifting their heads and chest (Chen, 2009). It can be seen that spatial metaphor originates from human life experience, and it uses directional metaphors that are closely related to the characteristics of the object itself, making the image displayed by the metaphor very similar and appropriate to the characteristics of the object itself.

However, there are also differences in the expression of the state domain between English and Chinese. The "shang/xia" in Chinese is more closely combined with verbs and has various forms when representing states. For example, "shang ke (have classes)" and "shang ban (go to work)" indicate entering a working or learning state, while "xia ke (Class is over.)" and "xia ban (go off work)" indicate ending the corresponding state. Although there are some similar expressions in English, such as "go up on stage" and "step down from the position", they are relatively less rich and detailed than in Chinese. In addition, there are some unique idioms or sayings in Chinese to express states, such as "qi shang ba xia" to describe a feeling of unease, which is difficult to find a corresponding metaphor in English.

4.4 Domain of Status

Social status refers to the hierarchical relationship between individuals in the social sphere. If a certain connection is established between society and location, vertical spatial relationships are very likely to occur, whether in English or Chinese. Due to the different values formed by different people, the criteria for judging the importance of status are also different, so different people believe that the object in the most important position is also different. "Up/shang" represents a relatively important social status, while "down/xia" represents a secondary important status. The "up and down" image schema structure is projected onto the target domain using metaphorical methods. Status inherently belongs to spatial location. In modern society, the higher and more important the social status, the greater the power. Therefore, the spatial concepts of "up" and "shang" have developed metaphorical extensions of social hierarchy: social status is more important as "up/shang" (Kang, 2009).

Generally speaking, in both English and Chinese languages, there is a phenomenon of using "up/shang" to indicate higher social status and "down/xia" to indicate lower social status (Tao, 2000). In Chinese, words such as "shang ji (manager)", "shang ceng shehui (the upper class)" all reflect the revered status represented by "up/shang"; "xia ji (the lower level)", "xia ceng ren min (the lower class people)" indicate the lowly status of "down/xia". In English, there are also "upper class", "high status", and "top position" representing the upper class, and "lower class", "low status", and "bottom position" representing the lower class. This is because in the common understanding of human society, status and power often match the upper and lower structure of space. Dai Weiping and Xu Linlin

(2006) explained that in many situations, people or things with high social status or rank are usually in higher positions, while those with lower social status or rank are in lower positions.

However, there are also differences in the expression of status domains between English and Chinese. The expression of status in Chinese is more diverse and rich, and in some traditional cultural contexts, the distinction of status is more detailed. For example, in ancient times, there were a large number of vocabulary used to reflect the differences in status between different levels, such as “yi pin da yuan (first-class official)” and “jiu pin zhi ma guan (low ranking official)”. However, English is relatively concise in this regard, although it also has clear distinctions between upper and lower classes, it is not as rich in vocabulary as Chinese. In addition, there are also differences in some special expressions. In Chinese, words such as “bi xia or dian xia (Your Majesty)” originally meant respectful titles for those of lower status, but in the long-term evolution of language, they have become honorifics for individuals of specific identities. This phenomenon does not exist in a similar situation in English.

5. CONCLUSION

In the in-depth study of spatial metaphors in English and Chinese, this paper explores the similarities and differences of spatial metaphors in two languages from a cognitive perspective, revealing their complex manifestations in terms of quantity, time, state and status. Research has found that the commonality of spatial metaphors in English and Chinese stems from the common bodily experience and basic cognition of space among humans, such as the association between “up/shang” and positivity, advantages, and the association between “down/xia” and negativity, disadvantages. This commonality reflects the universal law of human cognition, which is to construct and understand abstract concepts through spatial concepts. However, due to differences in cultural backgrounds, thinking patterns, and language structures, there are significant differences in the specific manifestations of spatial metaphors between English and Chinese. For example, in the time domain, Chinese forms a systematic temporal metaphor through “shang/xia”, while English relies more on other vocabulary and grammatical structures; in the state domain, Chinese expressions are more diverse and rich, while English is relatively concise and direct. It is not difficult to see that, based on the same experience, both Chinese has its own characteristics, indicating the potential role of culture and cognitive patterns behind language (Jiang, 2005). The revelation of these similarities and differences not only enriches our understanding of the relationship between language and cognition, but also provides important insights for cross-cultural communication. In cross-cultural communication, we should fully recognize the cultural cognitive differences behind language and avoid misunderstandings caused by deviations in metaphorical understanding. At the same time, the study of spatial metaphors provides rich materials and new research perspectives for multiple disciplines such as linguistics and cognitive science, which helps to further explore the universality and specificity of human cognition.

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