Metaphorical Expressions of Temperature Sensory Words in the Theory of Traditional Chinese Medicine

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Keywords: Metaphor, “Heat”, “Cold”, Traditional Chinese Medicine, Cognition

Abstract. This article presents a study of metaphorical expressions of temperature sensory words in Traditional Chinese Medicine (TCM). It demonstrates that TCM practitioners used the temperature sensory words such as “Heat” or “Cold” to illustrate the human body system including physiological functions, pathogenesis, therapeutic principles and herbs. Metaphorical mapping was applied for exploring and analyzing the expressions of “cold” and “heat” included in the language of TCM. Body experiences to nature and macro phenomena of nature are the foundation and logical materials. The results show that through sensory interaction in human body and nature, Chinese ancients spontaneously generate a novel reference-system of exploring the human body, as well as treatment of disease, which was made on the basis of referring to the theory of Yin-Yang. This theory forms a cognitive or cultural model underlying the metaphorical conceptualization and primitive thought in Chinese. This study shows that metaphors of temperature sensory words in TCM are primarily based on common bodily experience. It also provides empirical evidence, from a language of TCM, to support the claim that metaphor is essential in human understanding, meaning, and reasoning, even creating.

Introduction

Temperature sensory words are the perception measure of the human body without the thermometer and centigrade scale, which is rooted in bodily experience, to interact with the environment. Such enacted bodily knowledge is powerful, efficient, predictive. It is a portion and logical materials of traditional Chinese medicine theory, including physiological functions, pathogenesis, therapeutic principles and herbs. Temperature sensory words such as “Cold” and “Heat” can be found everywhere in TCM language.

Lakoff and Johnson proposed that “Metaphors allow us to understand one domain of experience in terms of another”, “a structured whole within recurrent human experience” that “seem to us to be natural kinds of experience”[1]. They demonstrated that cognition, language, and human exchanges are organized metaphorically as a result of our bodily interactions with the world correlations within perceptual experience. Commonplace expressions such as “Cold war,” “a warm family,” or a “Hot topic” all originate in and provide evidence of correlations between physical sensations (physical temperature) and more abstract concepts (relationship, family affection, topic-talking). The cognitive ground of language metaphors and conceptual substrate for the most abstract thoughts are, according to this view, influenced by bodily experience. And abstract concepts are represented by image schemas from concrete domains. Also, sensory interaction with the environment has been considered as crucial for developing a sense of the self and the environment[2], and for developing higher reasoning skills across domains[3,4,5,6].

TCM is an interpreted language in the first place that was made on the basis of the culture of
representative of the correspondence between man and universe recorded in the Book of Changes [7]. For thousands of years, Chinese people adapt to nature as the guidance of making one's way in the world, and they think they have interaction with nature. As a TCM classic works, Huang Di Nei Jing (Yellow Emperor's Cannon of Medicine) stated that man who exists on the dependence of the Tianqi (Heaven-Qi) and Diqi (Earth-qi) and lives in accordance with the principle for the four seasons [8]. The physiology changes with the seasons and circadian rhythms, people must follow the natural law.

Thus, TCM is a kind of theory of interpretation based on the body experience and sensory[9]. In the age of only macroscopic view, explaining the clinical facts should be a kind of based on the theory of cognitive metaphor, which are expressed with two domains: the source and the target. It follows that two conceptual domains in one conceptual metaphor with systematic correspondence called metaphorical mappings, which provided insight into individual cognitive processes[10]. Accordingly, there are a large number of concepts related with temperature sensory words in TCM. I consider the most dominant metaphorical tendency for the description of “Cold” and “Heat” concepts in TCM that some form of embodied similarity is involved in comprehension generally, and in the processing of metaphorical expressions in particular. The theories of Yin-Yang and the five elements serve as an underlying model that exert a strong impact on the use of Chinese language. And these theories underlie the metaphorical conceptualization of the TCM theory. It is found that there exists a strong parallelism in Chinese between everyday language and medical language[11]. Thereinto, temperature sensory words are used to explain physiological function, pathological change and treatment of human body which is similar to the metaphorical expressions of emotion. Taking “Heat” and “Cold” for instance, in this section, I will analyze each in turn, and discuss how the same word with the concepts of similarity might be applied to Chinese medicine.

Methods

This study was basis on the conceptual metaphor theory. Metaphorical mapping was applied for exploring and analyzing the expressions of “cold” and “heat” included in the language of TCM. Body experiences to nature and macro phenomena of nature are the foundation and logical materials.

Results

The conceptual metaphor of “Heat”

“Heat” means high temperature. Phenomenon associated with “Heat” in reality seems always to be promoted in the fierce motion state, such as the dancing flames, boiling water etc. What phenomenon “Heat” embodied as follows:

1. a. have snow melted b. melt the materials
   c. make liquid water into vapor d. bring full of life
   e. turn skin red f. boil water

   All living things begin to grow in the warm season as spring and summer. From the above examples, “Heat” has function of pushing, warmth, exciting, transpiration and dispersing, etc. Obviously, “Heat” is the premise to maintain physiological function, thus the body's normal physiological temperature is tendency to hot. This kind of natural phenomenon related to “Heat” is also metaphorically analogy to explain physiology of human body. When “Heat” is applied to solids in TCM, we get exactly the same metaphorical concept as “Fire” of which the metaphorical expressions are all quite conventionalized. There is a large group of symptoms that encode and elaborate the general concept “Fire” in one way or another. For instance:

2. a. “red eyes and red skin” b. “dry lips, swelling and ulcer”
   c. “rapid digestion of food and polyorexia” d. “swelling and pain of eye”
e. “all kinds of haemorrhage”  f. “people agitated”

In both nature and human body domain, the effect of “Heat” is excited, intense and hyper. According to observation the similarities of external phenomena caused by heat and our experience of heat with a series of symptoms whose etiology and pathogenesis is summed up “Heat”. Yang qi of human body is a metaphor of “Heat” in the China traditional philosophy. Like Huang Di Nei Jing stated that Yang qi in the human body is just like the sun in the sky, abnormal flow of it shortens people’s life without any obvious signs[12]. It is believed that Yang qi leads life activities. Consider “Yang qi is the sun (“Heat”)” Since “Yang qi” denotes individual in the target as “(Yang qi)T”; since “(sun)Heat” denotes individual in the source as “(‘(sun)Heat’)S”. “((x)T” (is “(y)S)MET” is true if and only if there are situations S and T in world W, and there is some f, such that S is f-analogous to T and x in T is the analogical f-counterpart of y in S[13]. The analogy is illustrated in Table 1.

Table 1. The mapping of “Heat”.

<table>
<thead>
<tr>
<th>Source Situation S</th>
<th>Target Situation T</th>
<th>Analogy f</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1:concept (Sun, Heat)</td>
<td>T1:concept (Yang qi)</td>
<td>“Heat” →Yang qi</td>
</tr>
<tr>
<td>S2:substance (water)</td>
<td>T2:substance (Blood)</td>
<td>Water → Blood</td>
</tr>
<tr>
<td>S3:“Heat” (Heat, water)</td>
<td>T3:“Heat”(Yang qi, Blood)</td>
<td>Water → Body fluid</td>
</tr>
<tr>
<td>S4:boiling (Heat, water)</td>
<td>T4:pushing(Yang qi, blood)</td>
<td>Plant → Human</td>
</tr>
<tr>
<td>S5:evaporate (Heat, water)</td>
<td>T5:evaporate(Yang qi, body fluid)</td>
<td></td>
</tr>
<tr>
<td>S6:living beings (plants)</td>
<td>T6:living beings (human)</td>
<td></td>
</tr>
<tr>
<td>S7:nourish(Heat, plants)</td>
<td>T7:nourish(Yang qi, human)</td>
<td></td>
</tr>
<tr>
<td>S8:burning (Heat, materials)</td>
<td>T8: burning (Fire, skin)</td>
<td></td>
</tr>
</tbody>
</table>

Analysis of (1), (2) in terms of the metaphoric mappings. Yang qi analogy to heat, boiling water is mapped onto push blood and body fluid; skin analogy to materials, burning skin to be red or carbuncle is mapped onto burning materials (metal or plants) to be waste. Heat can bring dry air and environment which is mapped onto dry lips or skin. When people feel or suffer extreme heat, we’ll see lip red or dry even ulcer and dysphoria by reason of “Heat”. “Heat” can consume Yin-fluid this perpect metaphorically formed by heat burning water. These two domains share the same sensory word “Heat” and the same expression structure. The result is that “Heat” borrowed to metaphorically explain etiology and pathogenesis of a group of symptoms embodied.

The conceptual metaphor of “Cold”

When cold is applied to embodied phenomena, which we can see or feel as follows:

(3) a. “water frozen and not flowing” b. “In the winter, all things withered”
c. “raining and snowing” d. “the branches become dry and easily broken”
e. “frozen ground” f. “people shivering, crouching and stamping”

From a to e, it is thus clear that “Cold” has stagnation, inhibition, weaken, sedimentation properties. This kind of natural phenomenon related to “Cold” in terms of metaphorical modes is used to explain the symptoms related to pathogenesis in TCM theory. For people, why we shiver, crouch and stamp during experience cold. I have found that cold properties are exactly applicable in explaining human bodies’ reaction and that it also yields two sub-versions:

(4) a. “slow blood flow even coagulation” b. “tension and stiff of the limbs”
c. “affect skin to shiver” d. “bone pain”
e. “consume Yang qi” f. “cold limbs”

Although Nature and TCM these two domains share exactly the same concept “Cold”, the actual linguistic expressions they use for the conceptualization may be similar or different. In both domains, the effect of cold is conceptualized as a destructive force that may be harmful. Cold is an
etiology in TCM, and also be pathogenesis of a group of symptoms by analogy to the nature phenomenon. There is a metaphoric mapping between the two domains.

Table 2 shows the source and target situations S and T. It gives an analogical map f. From that correspondence, “Cold” can cause qi and blood stasis, thus the viscera function weakened, resulting in various diseases. Huang Di Nei Jing stated that both blood and qi prefer warmth and detest “Cold”, “Cold” makes it difficult for blood and qi to flow and warmth removes blood and qi stasis[14].

Table 2. Table 2 shows that the mapping of “Cold”.

<table>
<thead>
<tr>
<th>Source Situation S</th>
<th>Target Situation T</th>
<th>Analogy f</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1: substance (Water)</td>
<td>T1: substance (Body fluid, blood)</td>
<td>Nature→Body</td>
</tr>
<tr>
<td>S2: Cold (Freezing, water)</td>
<td>T2: “Cold”(Stasis, blood and fluid)</td>
<td>Water→Body fluid</td>
</tr>
<tr>
<td>S3: flow slow(cold, water)</td>
<td>T3: flow slow(cold, blood and fluid)</td>
<td>Plant→Human</td>
</tr>
<tr>
<td>S4: stiffen (cold, branches)</td>
<td>T4: stiffen (cold, four limbs)</td>
<td>Branch→four limbs</td>
</tr>
<tr>
<td>S5: death(cold, plant)</td>
<td>T5: death (cold, human body)</td>
<td>Cold→death</td>
</tr>
</tbody>
</table>

Analysis of (3), (4) in terms of the metaphoric mappings. Blood and body fluid analogy to water, coagulation on the nature fluid is mapped onto stasis on our body fluid both due to cold; four limbs analogy to tree branches, hypertonicity and stiff of the limbs is mapped onto rigidity of tree branches both due to cold. When people feel extreme cold, we’ll see lip empurples and feel limbs coldness by reason of blood flow slow caused by “Cold”. “Cold” can consume Yang qi is this percept metaphorically formed by cold weaken hot. On the basic of metaphor mode “correspondence between man and nature”, Nature and us all suffer “Cold” with the result is that “Cold” borrowed to metaphorically explain etiology and pathogenesis of a group of symptoms embodied.

The “Heat” and “Cold” in Chinese herbs

Shen Nong’s Herbal Classic proposed that “herb has the four properties of “Cold” or ”Heat” and warm or cool”[15], which derived from a corresponding subordinate relationship that is if no properties of diseases of “Cold” or “Heat”, no drugs with ”Cold” or “Heat”. Shen Nong’s Herbal Classic put forward that cure “Cold” diseases with the “Heat” drugs and “Heat” with the “Cold” medicine therapies .

TCM holds that the symptoms of “Cold” or “Heat” body presented are expressions of excess and deficiency of Yin-Yang. Huang Di Nei Jing stated that predominance of Yin results in the disease of Yang while predominance of Yang leads to the disease of Yin, predominance of Yang generates “Heat” while predominance Yin produces “Cold”[16]. Balancing Yin and Yang of the human body is the principle. Hence, the effect of herbs on the excess or deficiency of Yin-Yang, the alternation of “Cold” and “Heat” formed four properties.

The theory of four- properties was a product of embodied cognition. For instances, in “Cold” weather, drinking a bowl of ginger decoction, feeling warm, thus, the ginger has “Heat” property; in “Heat” weather, eating a watermelon, feeling cool, so watermelon with “Cold” property. Similarly, in clinical practice, all that supplement Yang qi to defense cold called the “Heat” herb. Such as Shen Nong’s Herbal Classic recorded that ligusticum Chuanxiong, warm nature, treats “Cold” impediment[17]. And vice-versa with “Cold”. Also Shen Nong’s Herbal Classic recorded that tale, “Cold” nature, treats body “Heat”[18]. Huang Di Nei Jing stated that to treat disease due to “Cold” qi with “Heat” therapy; to treat disease due to “Heat” qi with “Cold” therapy; to treat disease due to warm qi with cool therapy; to treat disease due to cool qi with warm therapy[19]. The properties of herbs and treatment principles of “Cold” or “Heat” metaphorically derived from the body's various sensorimotor experiences.
Conclusion

For the first time cognitive science is brought into researching traditional Chinese medicine (TCM) theory. We find that description and treatment of diseases with “cold” and “heat” in TCM are probably in born of observing natural phenomena and body experiences interaction. Corresponding between human and universe is the basis of TCM theory. TCM theory was born in the use of this primitive metaphorical thought and analogy rather than scientific thought of lab. Comprehending TCM theory and use it to cure diseases which need to understand the language and cognition it uses. TCM is most likely metaphorical and reasonable.

Lakoff proposed that the question “as to whether all abstract human reasoning is a metaphorical version of imagistic reasoning” be “a major question for future research in cognitive linguistics”[20]. Metaphorical mapping is such a logical organization that reflects the existence of “equivalence” exchange between two concepts associated, in addition, inverse compensation and repair existed in the process of mapping of one category to another. In this paper, we proposed the metaphorical links between our daily experiences of “Cold” & “Heat” and their application in TCM. The evidence for such a correspondence between them is largely theoretical, embodied, and symbolic. To date, there have been no empirical studies to support the relationship, particularly as evidenced in the context of conceptual metaphor. It is the task of the TCM researchers to give a persuasive and understandable account of TCM languages, and to frame the interpretations so that they appeal to the reader’s comprehension.

Imagination, analogy and metaphor were used on the invisible things in the past, such as human body more than experimental evidence modern medicine borrowed. TCM uses this kind of cognition. The symptoms of diseases are often represented metaphorically in terms of what causes the unbalance of Yin-Yang. Cold and Heat are to be respectively classified Yin and Yang. The experiences of “Cold” & “Heat” and to observe the relevance phenomena in nature that is the source domain, to be analogy with the symptoms human body embodied, we found that the target domain “Cold” & “Heat” languages in TCM exactly formed on the basis of this kind of analogy. Earlier in this paper, cold can cause coagulation on the nature fluid (blood), which is similar with the symptoms of blood stasis such as cyanotic lips or tongue, cold limbs or figures, chilly. Heat has function of pushing, warmth, exciting, etc. that is necessary for human living. For instance, heat can consume water also body fluid, burn skin and flesh to red also human body’s sore and ulcer, boil water to spill also all kinds of bleeding. All these analogies metaphorically formed TCM language. This discussion from the perspective of metaphor has inevitably been rather speculative. In part, this is due to the fact that TCM theory tends to involve the use of primitive thought rather than scientific thought. While there are good reasons for why this is the case, we would argue that it is even more important to understand how we suffer from this kind of disease was explained by TCM language and what did that mean. We believe that results of this study have some important implications to understand TCM.

In short, “metaphor is not merely a linguistic mode of expression”; rather, “it is a pervasive mode of understanding by which we project patterns from one domain of experience in order to structure another domain of a different kind,” and “it is one of the chief cognitive structures by which we are able to have coherent, ordered experiences that we can reason about and make sense of”[21]. In the forming of TCM, metaphors have been directed the way we think, reason and treatment in the medical category. We hope our attempt that analyzes TCM language from the perspective of conceptual metaphor could make a contribution to the future development of scientific experiment.

Acknowledgements

This study was funded by by the National Science Foundation of China. (Grant No.81373770, Grant No. 81173464).
References


