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Embodied Cognition of Metaphorical Discourse from A Phenomenological Perspective

Niu Huijun¹,Hani Qasem Mohammed Asaad²

Abstract

This study delves into the intricate relationship between embodied cognition and metaphorical discourse from a phenomenological standpoint. Metaphor, as a fundamental aspect of human language and thought, often relies on the body's experiential and sensorimotor dimensions to convey abstract concepts. From a phenomenological perspective, this study explores how individuals engage in metaphorical thinking, drawing on their embodied experiences and sensory perceptions to make sense of the world. A series of empirical studies demonstrate how metaphors are cognitive tools and embodied and enactive processes. The study explores the neural underpinnings of metaphor processing and highlights the role of the body in grounding abstract concepts in concrete experiences. Additionally, it investigates the cultural and contextual variations in metaphorical discourse, shedding light on the dynamic nature of embodied cognition within different socio-cultural settings. Furthermore, this study examines the implications of our findings for fields such as education, communication, and psychology. Understanding the embodied nature of metaphorical discourse can lead to more effective teaching strategies, improved cross-cultural communication, and enhanced therapeutic interventions. By appreciating how the body shapes our metaphorical expressions and interpretations, we can gain deeper insights into the human mind and its connection to language and meaning. In conclusion, this study advances our understanding of the intricate relationship between embodied cognition and metaphorical discourse from a phenomenological perspective. It underscores the importance of recognizing the role of the body in shaping our conceptualizations of the world, shedding new light on the fundamental processes that underlie human language and thought.

Keywords: Phenomenology, horizon, metaphor, discourse, embodied cognition

Research Hotspots

"A research hotspot can be thought of as one or more topics that scholars in a certain field share a common interest in, literally, with a strong temporal character" (Li & Chen, 2017). In other words, a research hotspot is a topic that scholars have worked on together and achieved certain research results within a specific time jurisdiction. The keywords of these research results can help us target the research hotspots. Therefore, we use CiteSpace to analyze the keywords of embodied cognition-related literature for co-occurrence analysis and burst detection and explore the hot topics. We imported the data of embodied cognition literature into CiteSpace software and used the Minimum Spanning Tree algorithm to analyze the nodes of "Keyword" to generate the co-occurrence knowledge graph of keywords (Figure 1). The generated keyword co-occurrence knowledge graph has 26 nodes and 27 lines between nodes. The size of nodes represents the frequency of keywords, and the lines between nodes indicate the co-occurrence relationship between keywords. According to Figure 1, embodied cognition has the highest frequency, followed by body, body cognition, cognitive science, conceptual metaphor, etc. This indicates that scholars have researched topics related to the theme of embodied cognition. This indicates that

¹ Universiti Utara Malaysia, School of Languages, Civilisation and Philosophy, Malaysia. Email: niuhuijun1234@163.com

² Universiti Utara Malaysia, School of Languages, Civilisation and Philosophy, Malaysia. Email: hanialasbahi@gmail.com

scholars have conducted research on topics related to embodied cognition. These topics map the hot spots of embodied cognition research.

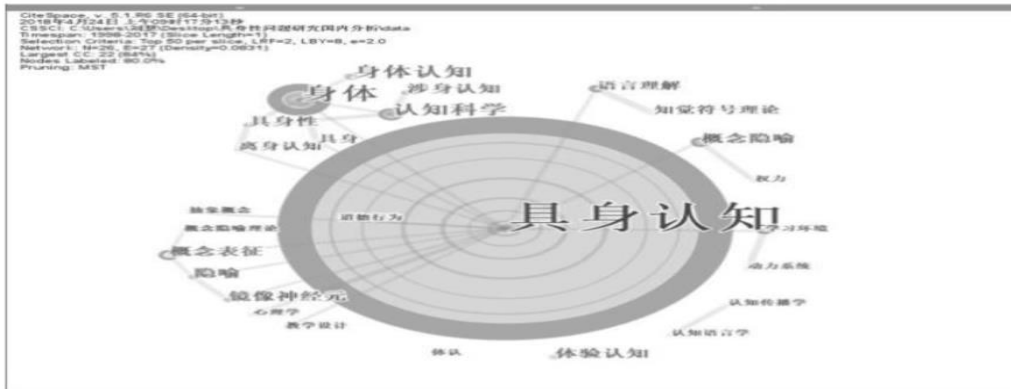


Figure 1. Keyword Co-occurrence Mapping

The keywords with emergent keywords in the keyword co-occurrence clusters also reflect the hot topics of research. Among them, the year of the sudden change of conceptual metaphor is 2015, and the influence continues until 2017; it can be said that conceptual metaphor is the latest research hotspot in embodied cognition research. From the conceptual metaphor-related literature, it can be seen that conceptual metaphor research has begun to focus on the combination of conceptual metaphor and the concept of power.

Phenomenology

Phenomenology studies the structure of consciousness as experienced from a first-person perspective. The central structure of experience is its intentionality, i.e., it is directed to something because it is an experience about some objects. An experience points to an object through its content or meaning (representing the object) and the appropriate vantage point. Phenomenology is distinct from but related to, other key disciplines in philosophy, such as ontology, epistemology, logic, and ethics. Phenomenology has been practiced in various forms for centuries. Still, in the early 20th century, it took on a style of its own in the work of Edmund Husserl, Carl Wilhelm Scheele, Martin Heidegger, Jean-Paul Sartre, Maurice Merleau-Ponty, Hans-Georg Gadamer, Merleau-Ponty, Hans-Georg Gadamer, and others. Phenomenology's issues of intentionality, consciousness, qualia, and first-person perspective have been prominent in recent philosophies of mind.

Phenomenology lies in the mainstream of German and French philosophy in the twentieth century. “Returning to things in themselves” is the slogan of phenomenology. Phenomenology as a method is always concerned with intuitive phenomena, that is, the essence of things. The essence is not independent of the phenomena; the essence is the phenomena revealed in the best perspective. The core of phenomenology is intentionality, which is the reduction of all the subjective components in the objective process that the subject carries out.

Metaphor

Human is embedded in the body. “The structure of language depends on and reflects the process of concept generation, which cannot be formed without the foundation of our bodily experience” (Wen, 2002). Lakoff and Johnson (1980) wrote, “The essence of metaphor is to understand and experience one thing or experience in the light of another” (p. 5). The metaphor plays a crucial role in discourse. A

discourse consists of more than one segment or sentence; the components are formally articulated and semantically coherent. Metaphorical discourse affects the imagery formation of the meaning construction process of metaphorical discourse.

Meaning construction of metaphorical discourse can not be separated from body-based sensorimotor knowledge. Several scholars have examined this relationship in various fields. For example, Fan and Zhao (2020) studied the knowledge, learning, and teaching views of embodied cognition; Jiang (2010) analyzed the growth metaphors of kindergarten teachers from a phenomenological perspective; Hua (2019) argued that the embodied metaphorical discourse takes imagery. Cui (2019) stated that the problems must be solved through other-directed perceptions. He used Merleau-Ponty's phenomenology of the body to refine the theory of other-directed perception and applied the refined theory to autism, artificial intelligence, and interactive machine ethics. Liu (2020) analyzed the current controversies within the second generation of cognitive science by examining the limitations of "embodied extended cognition" based on the fusion of the mind within the framework of the philosophy of cognitive science, starting with emotions. Gao (2004) focused on visual metaphor, the turn of space, and the relationship of both, and revealed that visual metaphors hidden in visual culture and inclination toward the turn of space have been in Western thoughts and learning since the latter half of the late 20th century. Zhang (2004) explained that in art, Merleau-Ponty sought to explore how the body and nature, the individual and the universal, were intertwined. In others, Merleau-Ponty tried to explore whether there is a more original and harmonious inter-subjective relationship under the two opposing interpersonal relationships of egoism and master-slave conflict.

Merleau-Ponty explored the dialectic between body and situation, individual and group through the relativistic view of history and the determinism of the end of history, and finally, moved towards a vertically generated history of existence. Xing (2020) used phenomenological interviews, observation of life experiences, recording of researcher's experiences, and collecting textual information to conduct a phenomenological thematic analysis of the collected materials and investigate students' learning process. He examined the learning process of the "China's Natural Environment" unit in geography, investigated the characteristics and roles embodied in the learning of Dulangkou High School students, and elucidated the implications of embodied cognition theory for classroom teaching.

Despite all these studies, scholars seldom research space, time, emotions, and abstraction using metaphorical instances to check the embodiment from a phenomenological perspective. This paper aims to fill this knowledge gap, examining space, time, emotions, and abstraction by using metaphorical examples to explore the embodiment from a phenomenological perspective.

Embodied Philosophy and Cognitive Science

Nowadays, lots of cognitive science claims to be embodied. Typically, those writing about embodied cognition start with the early work of Rodney Brooks (1991). Randy Beer's 2003 target article in *Adaptive Behavior* provides a good illustration of embodied cognitive science: it uses dynamic systems theory to describe and explain the behavior of simulated robots controlled by an evolved artificial neural network. This work shows the style of explanation and demonstrates that embodied cognitive science is fully compatible with neural networks and artificial life methodologies.

Research and artificial life methodologies are fully compatible (although these methodologies are often conflated with computationalism). In this study, the author uses artificial evolution to produce an artificial agent capable of categorical perception that classifies environmental entities for computational purposes. The agent is a circular simulated robot with a row of seven "eyes" arranged horizontally, consisting of one-sixth of the robot's body. These "eyes" are linked with a continuous-time, real-valued neural network (CTRNN) including fourteen neurons: seven sensor neurons, each receiving inputs from the "eyes"; five interneurons, which are connected from the input neurons; and two motor neurons,

which receives connections from the interneurons and control the agent's two motors. The CTRNN was evolved to classify and respond differently to circular and diamond-shaped objects in the environment. On each trial, a circle or diamond falls from above the agent's arena, and the CTRNN evolves to the point where the agent will grab the circle and avoid the diamonds.

Later, “Husserl reduced the subjective component to the intuition of consciousness, and Merleau-Ponty, a French phenomenological philosopher, began proposing, modifying the phenomenology of the body, which was reducing the subjective component to the bodily faculty itself “intentionality-subjectivity-body capacity-experience-emotional -good and beautiful, in this scheme, is an equivalent set of concepts” (Zhi, 2020).

Phenomenologists such as Husserl, Merleau-Ponty, and Heidegger do not mention cognitive science in their works, but this absence does mean that their ideas are irrelevant to cognitive science. In his masterpiece *Phenomenology of Perception*, Merleau-Ponty proposed the idea of embodied philosophy, which laid the intellectual foundation for cognitive science. Scholars have different views on the meaning of embodied. According to Silen, “Cognition is embodied, i.e., originates from the interaction of the body with the world. Accordingly, the mind relies on a variety of experiences of the organism that come from a body with unique perceptual and motor capacities that are inseparably linked and together form an organism in which memory, emotions, language, and other aspects of life are woven together” (Thelen, 2001). However, no one lists metaphorical instances to study space, time, emotions, and abstraction to study the embodiment from a phenomenological perspective.

The Metaphorical Embodiment from a Phenomenological Perspective

The latest elaborations of Conceptual Metaphor Theory (Grady, 1997; Lakoff & Johnson, 1999; Grady & Johnson, 2003) emphasize that metaphor is a strong source of evidence for the embodiment of cognition. Embodiment is understood in a variety of ways within the cognitive sciences (Ziemke, 2003). Three main aspects of the embodiment of cognition are distinguished: neural embodiment, embodiment on the phenomenological level, and embodiment in the cognitive unconscious (Lakoff & Johnson, 1999).

According to Lakoff and Johnson, metaphor is one of the basic ways for human beings to survive. It consists of an origin domain with a relatively clear structure and a target domain with a relatively ambiguous structure. The essence of metaphor is to map the schematic structure and meaning of the origin domain onto the target domain so that we can construct and understand the target domain through the structural features of the origin domain. The origin domain is generally familiar and concrete things and concepts. The concepts of the target domain are mostly abstract, and the two domains can interact because of their similarity.

Abstract concepts originate from bodily perception experiences. People always use their most familiar "own body" to understand unfamiliar things and project their body-based perceptual-motor experiences and experiences onto the target domain to understand abstract concepts about the target domain. For example, without the physical sensations of "cold" and "hot" and the abstract experiences of "coldness" and "warmth" in the body, people would not be able to understand the abstract concepts of the target domain. Abstract tests; one would not be able to generate and understand that abstract concepts do not arise out of thin air but are bodily perception concepts. This results from the projection of experience and the involvement of imagination.

Since few people have studied metaphorical embodiment from a phenomenological perspective, creating a knowledge gap. This paper examined embodied cognition of metaphorical discourse from a phenomenological perspective to fill this void. In doing so, it used examples to address the following:

1. The embodiment of space from a phenomenological perspective;

2. The embodiment of sight time from a phenomenological perspective;
3. Embodied nature of emotions from a phenomenological perspective
4. The embodied nature of abstraction from a phenomenological perspective.

Method

This qualitative study used cases to explain embodied cognitive effects- metaphorical discourse from the phenomenological perspective.

The Case of Embodied Cognitive Effects-Metaphorical Discourse in the Phenomenological Perspective

The main philosophical foundation of experiential is phenomenology. Maurice (2005), in his book "*The Structure of Behavior*, Merleau-Ponty systematically discussed the role of the body and the environment" and argued that the origin of bodily perception is the desire to explore the world and that the body is energetic. Evidence from Richardson et al. (2003) supports Barsalou's (1999, 2009, 2012) claim that there is a link between language processing and the sensorimotor system. They showed the subjects' aural sentences in which the verbs exhibited vertical or horizontal characteristics (Richardson et al., 2003). The participant would hear a sentence such as: 'The ship sank in the sea' while presenting two visual images in either vertical or horizontal orientations (Richardson et al., 2003). The recognition of an image is improved if the sentence is oriented in the same direction as the image with a vertically oriented image, which suggests that our embodiment affects the way we understand words and concepts.

In *The Metaphors, We Live By*, and *The Philosophy of Experience-The Experiential Mind and Its Challenge to Western Thought*, Lakoff and Johnson suggest that the philosophical foundation of cognitive linguistics is the philosophy of experience, which marks the beginning of the second generation of cognitive science. They point out two fundamental principles of experiential philosophy: The first is the experiential nature of the mind, i.e., the essence of the mind is based on the body. This view criticizes the previous dualistic, objectivist, and a priori views that philosophy is experiential reasoning and that the experiential mind is dependent on our bodies while motivating individuals to understand others more easily based on their own experiences. The second is the metaphorical nature of thinking; that is, metaphors are products of the brain, mind, body, and experience, which are prevalent in everyday life. These two principles reflect the experiential character and effects of embodied.

Embodied Cognitive Effects

This section presents an account of embodied cognition of concepts. By "embodied", Barsalou (1999, 2009, 2012), Richter and Zwaan (2010), and Damasio et al. (2004) refer to the basis of concepts. Damasio et al. (2004) refer to the way in which concepts are based on the sensorimotor system. Damasio (1994, 2000) also emphasizes how concepts allow access to sensations/emotions that lead to a physiological response to the world.

Cognitive linguistics emerged at the end of the 20th century to help explain the embodied cognitive effect in humans. According to Lakoff and Johnson (1980), the leading representation of cognitive linguistics is the metaphor. The metaphor is a cognitive process or way of thinking in which people use one to understand another type of thing. It is a linguistic rhetorical device, a way of thinking, and a basic cognitive style on which human beings depend. Thinking is based on bodily experience, and bodily sensory-motor experience gives rise to categories of thought and conceptual metaphors and thus systematically addresses and demonstrates the oneness characteristic of mind and body.

Embodied cognitive theory is a cognitive process of cognitive linguistic interpretation of linguistic phenomena, i.e., based on bodily experience, mapped inward to the mental domain and outward to the external environment, including the natural and social environment, through metaphors. Traditionally,

people use their bodies to measure things around them, e.g., they speak of the canopy of a tree, the waist of a tree, the waist of a mountain, and the foot of a mountain, all using the body as a whole metaphorical object. The whole conceptual system is based on the metaphorical principle of "taking the body from near and taking things from far" (Changle, 2008).

The Embodied Nature of Phenomenological Horizon

Embodied Cognition (EC) is commonly used to refer to several theories in various areas of cognitive science (artificial intelligence, robotics, psychology, cognitive neuroscience, philosophy, linguistics, cognitive anthropology). In the EC approach, some authors have emphasized the importance of action for cognition and the role played by bodily states, while other authors more generally emphasize the foundational role of cognition and equate embodied cognition with embodied cognition with contextual cognition (Goldman & de Vignemont, 2009; Kiverstein & Clark, 2009). According to the most radical version of EC, cognition is constrained by the particular type of body we have, and the key concept of embodied cognition is action (Gallese, 2008; Glenberg, 1997). The second version of EC acknowledges the importance of the sensorimotor system for cognition, but it emphasises grounding in multiple ways, not just physical states. Barsalou (2008) noted that "grounded cognition reflects the assumption that cognition is often grounded in multiple modalities, including simulation, contextual action, and occasionally bodily states."

However, horizon is a word that has been given a special philosophical meaning in the writings of Husserl, Heidegger, Jürget, and other phenomenological and hermeneutic philosophers. The horizon is a framework by which someone comprehends or understands. Every human being as a historical being is situated in a tradition and culture and, therefore, in a field of vision. There can be no purely objective understanding unrelated to one's particular field of vision. The meaning of a text is determined in a particular field. Gadamer's "field of view" refers to the area of seeing, and we can speak of the narrowness of the field of view, the possible expansion of the field of view, the opening up of new fields of view, and so on (Gadamer, 1999).

Embodiment is a new theme in current cognitive science research, and evidence shows that it is strongly embodied in the physical world and many fundamental processes that retain the imprint of the material world. The embodied nature of the field of vision refers to what is seen from a particular foothold, based on bodily experience and the use of thinking consciousness to generate an understanding of the world in different contexts, emphasizing that the subject of human cognitive activity is the body.

Embodied Knowledge of Metaphorical Discourse

Sensorimotor knowledge in the meaning construction of metaphorical discourse is the bodily cognitive element of perception formation. The process of generating metaphorical discourse reflects the characteristics of imaginative thinking. The cognitive elements of metaphorical discourse meaning construction are paved by embodied cognitive theories that emphasize the external body and environmental elements of the brain. The theory of perceptual content duality is the theory of perceptual generation in the context of embodied, which is considered the mechanism of perceptual activity in constructing metaphorical meaning. Object-viewing also shows the connotation of embodied. These are the full manifestations of embodied metaphorical discourse studies. Figure 2 shows these elements.

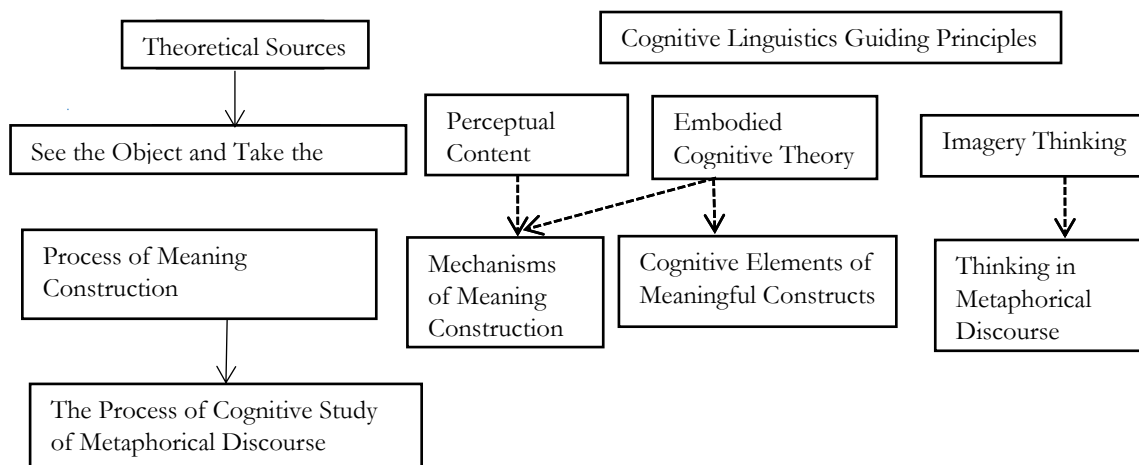


Figure 2. The flow of metaphorical discourse cognition research (Hua, 2019)

The above figure presents the theoretical knowledge required for studying metaphorical discourse cognition: the theory of cognitive linguistics, the theory of object-viewing in Chinese philosophy, the theory of embodied, and the theory of perceptual content duality in cognitive science. The effective combination of these theories makes studying metaphorical discourse and embodied cognition possible. The flowchart of cognitive research of metaphorical discourse guides this study in an orderly manner, which, in turn, helps us to develop a more complete model of metaphorical discourse research in the following.

The Embodiment of Phenomenological Perspective Space

Phenomenology discusses how objective space is constructed and objectified in spatial consciousness. Husserl established the theory of spatial construction through the concept of kinesthesia (Husserl, 1999). Utilizing phenomenological reduction, Husserl frees the concept of kinesthesia from all psychological and physiological presuppositions, i.e., it transcends all presuppositions without losing the purely descriptive, phenomenologically determined connotations connected with this concept. The relationship between phenomenal and objective space is phenomenologically similar to that between intention-related terms and real objects. Phenomenal space is the main subject of spatial phenomenological research. Spatial consciousness must arise with an external perception presupposing external or thing perception. However, spatial consciousness transcends the perception of things imaginatively and can also transcend the perceived things.

Human cognitive activity is rooted in everyday bodily experiences. In space, a common experience is movement. For example, the concept of “up.” We understand the concept of “up” through embodiment, a body-centred perception of space. The experience of the body understands the concepts of “before” and “after.” The basic actions performed by the body help us understand the concept of force-laying, the foundation for “squeezing, pulling, pushing, supporting, and maintaining balance” (Lakoff & Johnson, 1999).

A spatial metaphor is an essential conceptual metaphor in Lakoff’s metaphor theory. It takes spatial concepts as the origin domain and maps them to other cognitive or target domains to obtain derived and abstract meanings. After repeated use, the abstract concept formed by mapping from a spatial domain to a non-spatial domain is fixed in its metaphorical meaning. We use metaphorical discourse as a case study to analyze the spatial domain embodiment from the phenomenological perspective. The concepts of “up” or “down” are also closely related to human judgment. Virtue is upward, while evil is downward. Studies have shown that people who come up the escalator in the mall are more likely to

donate to the charity donation box than those who come down the escalator. Similarly, subjects who experienced a high perspective, such as looking out of an aeroplane cabin window and seeing the plane climb up through a sea of clouds, were more willing to cooperate with people than others. Thus, maintaining this state gives people higher moral values (John, 2017; Brockman, 2017). The concept of “up” is rooted in the human body's physiological constitution and the experience of human interaction with the world. The body's regulation of escalators up and down through perceptual awareness is also accomplished by maintaining balance and moving the body schemata. In addition, the study's reference to a "greater willingness to donate to charity donation boxes" (Nanawang, n.d) reflects that phenomenological spatial awareness must arise in response to external perceptions and transcend the perceived object.

The Embodiment of Phenomenological Sight Time

Intuition (“Anschauung” in German, intuition in English), meaning a direct awareness or direct experience, emphasizes a perceptual awareness obtained directly without intermediary perception. Husserl divided intuition into individual intuition and essential intuition. In phenomenology, an essential science, intuition is an essential intuition, not an individual or empirical one. Phenomenology takes intuitive phenomena as primordial givens, as the opening item of research, and it does not presuppose any prior assumptions or adopt any unexplained and unreflective view. The intuitive act is foundational to all other acts (Robert, 2009). For essential intuition, this beginning item can be perceptual or imaginative (Husserl, 1999).

Shi embodied has become a surging academic trend, greatly impacting traditional Western epistemology and cognitive science (Kontra et al., 2012). Philosophy of mind has taken a philosophical turn under the influence of the embodied paradigm, guided by Merleau-Ponty's phenomenology of perception; linguistics has taken a philosophical turn under the influence of Lykov and Johnson. Linguistics is based on the body metaphor of Lykov and Johnson and proposes that thinking is based on and originates from the body (Ye, 2020). In psychology, embodied is a theoretical reflection on the mind-body relationship and is now mainstream in cognitive science (Davis & Markman, 2012). Metaphor is based on intentional schemas and basic cognitive concepts (in Lakoff's theory, the fundamental cognitive concept is the concept of space), and they play an important role in mapping across cognitive domains. Metaphors are based on the accumulation of daily life experiences that become intentional schemata in our minds. Metaphors are the product of the body, perception, experience, brain, and mind.

The “metaphor of time” refers to the many relics of Xinye Village that have been preserved through time, such as “Nan Tang, the old ancestral hall, the old ancestral house, the old theater, and the old alleyways.” which demonstrate the power of time and involve profound thoughts about life. When describing these historical relics, the author adds unique feelings, novel metaphors, and fluid imagery, such as writing about Nantang, which is “more like a clock tower of time” and “the people by the pond eventually fall into the pond with the stars, and the bells will vanish and disappear in the wind.” Through the author's descriptions, these relics are covered with a deep and introspective color, thus enhancing the meaning of the “time metaphor.”

In this process, we can see “Huaiyu Mountain, Longmen Mountain, Nantang, old ancestral halls, old ancestral houses, old theatres, and old alleyways” through our bodies' constant “presence” and “experience”. I felt that “the people by the pond eventually fell into the pond with the stars” and experienced that “the bell will vanish and disappear in the wind.” At this time, a vivid picture was presented in front of our eyes.

Embodied Nature of Emotions in Phenomenological Perspective

The so-called emotion is a temporary, unstable state of mind or attitude (Zhang, 2013). An individualized

consciousness mostly characterizes emotions. The so-called “Affekt” (translated as “emotion”), according to Scherrer, is “a rapid catharsis of intense feeling states that are essentially sensory and organismic, which are synthesized in different types as typological expressions are accompanied by a strong and gradual rise of instinctive impulses and organismic sensations in the expression” (p. 12). This behavior approaches the feeling state. The phenomenological theory of the body allows for a better understanding of the body and its role in intellectual or cognitive activity. On the other hand, embodied cognition assumes that the person is the body and that the person’s ability to reason is shaped by the body (Xu, 2009).

Gibbs and Colston (1995) and others argue that “the experience of inner states still needs to be perceived and understood through some direct, concrete experience” (p. 65). Metaphors allow us to express, understand, and perceive abstract concepts in terms of familiar, concrete concepts. As Barsalou (2010) says, perceptual symbols represent abstract concepts, but in many cases, these symbols are essentially constructed by metaphors. The following case of metaphorical discourse shows the embodied nature of the emotional field of view from the phenomenological perspective.

Every child has an “emotional box.” When this box is filled with positive energy and unconditional love, children will feel secure and confident, give their best in everything, grow normally, and reach their potential. On the other hand, a child will show deviant behavior when this box is full of negative energy and conditional love. When a child’s emotional box supports them through childhood and adolescence, the child will face a variety of frustrations and challenges. However, children sometimes feel tired because their inner entanglements and hesitations drain their energy. However, when we detect resentment, sadness, and depression in their hearts, we need to use the ‘Emotional Iceberg’ to find out the motivation behind their negative emotions, analyze the deepest expectations and desires, and gradually change the emotions from negative to neutral and positive, and explore practical action plans to transform the negative emotions into positive personal motivation to move forward (Jian, 2022).

In *Being and Time*, Heidegger (2010) says that “this is always already emotional” and is always present with emotions (p. 34). Heidegger means that emotions are the original way of being of this being, that “emotions have always already unfolded being as a whole, while only making it possible for us to formulate directions toward something” (p. 46). In a booklet about Heidegger, English philosopher Inwood (2000) points out that emotions are not directed at any specific entity but that life is always in an inexplicable emotion. Therefore, emotions are an unmanageable and inseparable state of being.

In phenomenology, emotions are not intentional. For example, anger is sensory and not intentional in combination with what we are angry about. The object of anger is given representation and thought, not anger itself. Here, the feeling activity accompanies anger to feel the specific nature of value, but what we feel is not the object given in the perceptual activity. Value exists independently of subjective emotion. If I feel sadness, this sadness has the potential to evoke subjective emotions. Values are also independent of the things and relationships that are their bearers. Even if the bearer of the nature of value changes, the nature of value does not change in any way (Wang, 2009).

In the above discourse, emotions are described metaphorically as boxes. When each child’s box is filled, the child feels safe, and the whole world is brightened, embodying embodied. The valued nature of phenomenological emotions allows a child to feel truly loved and to grow normally. But when the box is empty, the child does not feel loved, and the whole world is darkened. The value of emotions causes a child to develop problem behaviors. A child’s problematic behavior is motivated by his desire for an empty box. In this discourse, the author metaphorically refers to emotions as icebergs.

The wavy line on Satir’s “Iceberg Principle of Emotions” diagram is like a wave on the ocean’s surface: the top of the wave is anger, the tip of the iceberg, and the bottom is a large piece of other emotions. Our anger is a variety of emotions that have been suppressed (sadness, aggression, grief, worry, fear, sorrow, guilt, frustration), fermented, and turned into expressions of anger (Banmen, 2002).

Satir’s (1973) iceberg model is a metaphor for one’s “self” being like a huge iceberg floating on the

water's surface. The behaviors or ways of coping with the outside world are only a small part of the surface, while a larger part is hidden in the deeper underwater world, the "inner" world that has been repressed and ignored for a long time. This is the profound embodiment of phenomenology. By uncovering the secrets of the iceberg, we will see the desires, expectations, opinions, and feelings of our lives and our true selves.

The mind is grounded in the body and comes from the body. In Figure 1 above, perceptions, behaviors, gestures, feelings, decisions about feelings, perspectives, expectations, longings, ego, and emotions are all governed by the physical properties of the body. The structure of the body and the light and heavy physical experiences all influence the characteristics of mental activity. In this sense, "the content of the mind depends on the construction of the body Different bodily tendencies produce different ways of thinking" (Casasanto, 2011). There is no such thing as a mind separate from the body.

The Embodied Nature of Abstraction in the Phenomenological Perspective

The most fundamental nature of phenomena is that they show something that does not show through something that shows and refer to something that does not show itself by showing itself (Hong, 2008). Phenomenology is the science of phenomena; however, phenomenology is also an essential science that wants to see the essence through intuition. Phenomenology points to a new way of seeing things. It requires people to know things through their intuition and perceptions, to learn through their own direct experience and reflection, to avoid being taught knowledge and facts, to be open to "seeing" what is presented to them, and to apply this attitude to their learning and their daily lives with others.

According to Lakoff and Johnson (1980), cognition is embodied. It depends on human experience and the interaction of the body with the environment, which comes from a body with special sensory-motor abilities and is related to human perceptual, thinking, and emotional activity (Ma & Zhao, 2010). Lakoff and Johnson (1980) consider metaphors as the core of abstract concepts. The rich connotations of perceptual, experiential modes of experience mapped through metaphor provide the essential framework for abstract concepts.

Phenomenological intentionality is the intentionality of consciousness, which means that the activity of consciousness has a directionality, always toward an object (whether it is a reality, an illusion, a state of affairs, or even an act of oneself). Consciousness is always "about of consciousness." Awareness is the perception of something, imagination weaves an imaginary picture, and recollection recalls a past. Intentionality here is in the realm of the active. Husserl also called it "transverse intentionality" (Husserl, 2009).

The first paragraph of this essay says: "Our sliding glass door is just a window." This means that in perceiving the door, the door exists. This means that the door itself is opening, and the door itself is revealing itself here. The door here is the way of stillness, and the meaning of the door is as an entity with specific properties like extension, hardness, and location. In addition, the meaning of the door also includes the apprehension of the door's way of being: "This which is also existing has apprehended the way of being of the present. The intentionality belonging to perception has not only intention (intention) and intent (the intended), but also the apprehension of the way of being of the intended in the intention" (Martin, 1982).

The way of being of the door is related to the specific situation. The author metaphorically describes the door as a window. Windows are rich in cultural connotations, and beautifully carved windows are always a high visual pleasure, reflecting the embodied cognition theory. The window is not only the eye of the house but also a medium to communicate the inner and outer space, an emotional window. In addition, a door refers to where we must pass to reach the front. It usually refers to the specific experience we have to go through.

In the short quotation above, “They came to a metaphorical door.” At this point, the whole body acts and wants to open the door. This is what we feel in our bodies. In other words, one part of the body needs, and another part responds to that need. The body becomes a unified whole through this combination of need and fulfillment. Moreover, the author metaphorically presents the door as an abstract opportunity. When the opportunity arrives, we should not hesitate to grasp it and seize it, which is also the full expression of the theory of embodied.

Conclusion

Phenomenology studies human experience and how things are presented to us through experience. We can think not only about the things given to us in experience but also understand ourselves as we think about them. Husserl argues that worldly objects are always given incompletely and sidelong precisely because they are relative to a knowing subject with a body. The union of consciousness with a body in space and time predestines the intentional object to reveal itself in a certain perspective, time, and dimension. The body fundamentally determines whether any perception is a relative or an incomplete lateral perception (Chen, 1999). But in general, in Husserl’s case, the body remains a subordinate thing to consciousness, while Merleau-Ponty makes the body the core of his philosophy. He argues that the body makes perception possible. That is, the body, not transcendental consciousness, makes pattern recognition possible. The body gives and conveys meaning. “Because we see the body secrete a ‘meaning’ that comes from nowhere, the body projects that meaning onto its surrounding idiosyncratic environment and onto other concretized subjects” (Maurice, 2001). Human is a brain-body-environment coupling constituting a complex and dynamic self-organizing system (Gu, 2016).

Limitations of Research

Notably the studies on embodied metaphorical discourse from a phenomenological perspective. Although it is broad, it remains limited. Moreover, metaphorical discourse is discrete and does not involve actual oral knowledge, which is complex and comprehensive. More vitally, it does not involve knowledge of style without discipline, vocabulary, or semantics. The above elements must be more extensively explored, reconsidered, and valued in this area. Furthermore, embodied metaphorical discourse must be explored more effectively and reliably from a phenomenological perspective. Despite these limitations, research into the embodied cognition of metaphorical discourse from a phenomenological perspective offers a unique and valuable perspective on the intricate relationship between language, the body, and human cognition. By addressing these limitations thoughtfully and transparently, researchers can contribute to a more nuanced understanding of how our embodied experiences shape our metaphorical expressions and interpretations.

References

- Banmen, J. (2002). The Satir Model: Yesterday and today. *Contemporary Family Therapy*, 24, 7–22.
- Barsalou, L. W. (1999) Perceptual Symbol Systems. *Behavioural Brain Sciences*. Vol. 22, pp. 577-660.
- Barsalou, L. W. (2008). Grounded cognition. *Annual Review of Psychology*, 59, 617–645.
- Barsalou, L. W. (2009) Simulation, Situated Conceptualization, and Prediction. *Phil. Trans. R. Soc. B*. Vol. 364, pp. 1281–1289.
- Barsalou, L. W. (2010). Grounded cognition: Past, present, and future. *Topics in Cognitive Science*, 2(4), 716-724.
- Barsalou, L. W. (2012) The Human Conceptual System. In M. Spivey, K. McRae & M. Joanisse (eds.) *The Cambridge Handbook of Psycholinguistics*. Cambridge University Press.
- Beer, R. (2003). The dynamics of active categorical perception in an evolved model agent. *Adaptive*

- Behavior*, 11, 209, 243.
- Brockman, J. (2017). *The Mind*, translated by Huang Yuping, Dengyuan, Ouyangmingliang. Zhejiang: Zhejiang people publication.
- Brooks, R. (1991). Intelligence without representation. *Artificial Intelligence*, 47, 139, 159.
- Casasanto, D. (2011) Different bodies, different minds: The body specificity of language and thought. *Psychological Science*, 20(6), 378-383.
- Change, Zh. (2008). Metaphor cognition and its relevant analysis. *Mind and Computation*, 2(3), 223-245.
- Chen, L. (1999). *The self and the world*. Guangdong: People's Publishing House, 238-239.
- Damasio, A. (1994). *Descartes' Error: Emotion, Reason and the Human Brain*. London: The Random House Group Ltd.
- Damasio, A. (2000). *The Feeling of What Happens: Body and Emotion in the Making of Consciousness*. New York: Mariner Books.
- Damasio et al. (2004). *Cognition*. Systems Behind Word and Concept Retrieval. Vol. 92, pp. 79-229.
- Davis, J. I., & Markman, A. B. (2012). Emboding cognition as a practical paradigm: Introduction to the topic, the future of embodied cognition. *Topics in Cognitive Science*, 4(4), 685-691.
- Fan, W. X., & Zhao, R. (2020). Embodied cognition's view of knowledge, learning and teaching. *Research in Electro-Chemical Education*, (22), 7.
- Gadamer, H. G. (1999), translated by Hong H. D., *Truth and Method*. Shanghai: Shanghai Translation Press, 41.
- Gallese, V. (2008). Mirror neurons and the social nature of language: The neural exploitation hypothesis. *Social Neuroscience*, 3, 317-333.
- Gao, Y. (2004). *Visual metaphor and the turn of space-philosophical analysis of contemporary visual culture* [Doctoral dissertation, Fudan University].
- Gibbs, R., & Colston, H. (1995). The cognitive psychological reality of image schemas and their transformations. *Cognitive Linguistics*, 6(4), 347-378.
- Glenberg, A. M. (1997). What memory is for. *Behavioral and Brain Sciences*, 20, 1-55.
- Goldman, A., & de Vignemont, F. (2009). Is social cognition embodied? *Trends in Cognitive Science*, 13, 154-159.
- Grady, (1997). *Foundations of Meaning: Primary Metaphors and Primary Scenes*. Department of Linguistics, U.C. Berkeley. Unpublished doctoral dissertation.
- Grady., & Christopher, J. (2003). Converging evidence for the notions of *subscene and primary scene*. In: René Dirven and Ralf Pörings (eds.), *Metaphor and Metonymy in Comparison and Contrast* 533-554. Berlin: Mouton de Gruyter.
- Gu, F. (2016). Current status of contemporary cognitive psychology research. *Social Psychological Science*, (8), 4.
- Heidegger, M. (2010). *Being and time*. (J. Stambaugh, Trans.) State University of New York Press, Albany, 34, 46.
- Hong, H. D. (2008) *Returning to the origin of phenomenology-Fourteen lectures on phenomenology*. People's Publishing House.
- Hua, H. (2019). *A study on embodied cognition of metaphorical discourse taking* [Doctoral dissertation, Southwest University]. *Doctoral Dissertation*.
- Husserl, (1999), translated by Deng Xiaomang and Zhang Tingguo, *Experience and judgment-A study in logical genealogy*. Beijing: Life. Readings. Xin Zhi San Lian Bookstore.
- Husserl, (2009), translated by Ni Liangkang, *Phenomenology of inner-time consciousness*. Beijing: The Commercial Press, 56.
- Inwood, M. (2000). *Heidegger: A very short introduction*. Oxford University Press.
- Jian, Sh. (2022). Emotional box. <https://www.jianshu.com/p/410f4e2896f4>
- Jiang, Y. (2010). Phenomenological perspectives on kindergarten teachers' growth metaphors. *Preschool*

Education Research, 4, 34.

John, B., & Pang, Y. (2009). Brockman, translated by Pang Yan (2017). *Why the world works beautifully and elegantly*. Hangzhou: Zhejiang People's Publishing House.

Kiverstein, J., & Clark, A. (2009). Introduction: Mind embodied, embedded, enacted: One church or many? *Topoi*, 28, 1–7.

Kontra, C., Goldin, M. S., & Beilock, S. L. (2012). Embodied learning across the life span. *Topics in Cognitive Science*, 4(4), 731-739. <https://doi.org/10.1111/j.1756-8765.2012.01221.x>

Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. University of Chicago Press, 50.

Lakoff, G., & Johnson, M. (1999). *Philosophy in the flesh: The embodied mind and its challenge to Western thought*. New York: Basic Books.

Li, J. & Chen, Ch. M. (2017). *CiteSpace: Technology Text Mining and Visualization* (2nd Edition). Beijing: Capital University of Economics and Business Press.

Liu, M. (2020). *An empirical research on the embodied-enacted cognition Model* [Doctoral dissertation, The University of Science and Technology of China].

Ma, Y. K. & Zhao, J. (2010). Embodied cognition: New reflections on the Mind-Body relationship. *Journal of Xuzhou Normal University (Philosophy and Social Sciences)*, 139, 5.

Martin, H. (1982). *The basic problems of phenomenology*. Indiana University Press.

Maurice, M. P. (2001). Translated by Jiang Zhihui, *Phenomenology of perception*. Beijing: The Commercial Press.

Maurice, M. P. (2005). Translated by Yang Dachun and Zhang Yaojun, *The structure of behavior*. Beijing: The Commercial Press.

Richardson, D., Spivey, M., McRae, K., & Barsalou, L. (2003) Spatial Representations Activated During Real-time Comprehension of Verbs. *Cognitive Science*. Vol. 27, pp. 767-780.

Richter, T. & Zwaan, R. A. (2010) Integration of Perceptual Information in Word Access. *Quarterly Journal of Experimental Psychology*. Vol. 63 (1), pp. 81-107.

Robert, S., Gao, B. J., & Zhang, J. H. (2009). *Introduction to phenomenology*. Wuhan: Wuhan University Press.

Satir, V. S. (1973). *Satya Model and Self-Growth*. Wuhan: Wuhan University Press.

Thelen, E., Schoner, G., Scheier, C., & Smith, L. B. (2001). The dynamics of embodiment: A field theory of infant preservative reaching. *Behavioral and Brain Sciences*, 24 (1), 1-34. <https://doi:10.1017/s0140525x010039102001>.

Wang, L. G. (2009). On Values and Emotions. *Ethics*, 3.

Wen, X. (2002). Goals, principles and methods of cognitive linguistics. *Foreign Language Teaching and Research*, 91-100.

Xing, L. Y. (2020). *A study on the observation of geography classroom teaching in Du Langkou Middle School from the perspective of embodied cognitive theory Study—A case study of the unit "China's Natural Environment."* [Master's thesis, Shenyang Normal University].

Xu, X. J. (2009). *Embodied cognitivism-The role of phenomenology in the paradigm shift of cognitive science research*. Zhejiang: Zhejiang University Press.

Ye Haosheng, (2020). Exploring ideas of embodied psychology in Chinese Mythology. *Acta Psychologica Sinica*. Vol. 52, Issue (3): 386-398. doi: 10.3724/SP.J.1041.2020.00386

Zhang, Y. J. (2004). *The metaphorical body-Merleau-Ponty's phenomenological study of the body* [Doctoral dissertation, Zhejiang University].

Zhang, Z. G. (2013). *The idea of aesthetics - Taking Husserl's phenomenology as the beginning*. Beijing: China Social Science Press.

Zhi, H. (2020). What is the relationship between embodied cognition and phenomenology? <https://www.zhihu.com/question/61393242/answer/1312700040>

Ziemke, T. (2003). What's that thing called embodiment? In: *Proceedings of the 25th Annual Meeting of the Cognitive Science Society*, 1305–1310. Lawrence Erlbaum.