

Poetic Metaphors and Embodied Cognition

—A Potential Pathway of Mind Development

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Abstract: Cognitive poetics theory regards metaphor as a significant mechanism in human unconscious cognitive processes for understanding abstract concepts and phenomena, which constitutes the essence of poetic expression. Poetic metaphors accentuate linguistic expression at the level of pure abstract concepts, transcending experiential and cultural limitations, and emerge as a significant wellspring for unconscious cognition and mind development. However, mind development cannot be exclusively reliant on metaphor, as abstract thinking arises from the interplay between rational agents and the objective external world through embodied cognition. Therefore, poetic metaphors and embodied cognition synergistically constitute a crucial constituent of mind development. This article aims to explicate that poetic metaphors, as a mode of concretely ideologizing through vivid imagery, serve as a vital mechanism for cognitive abstraction, the exploration of mental patterns, and the fostering of mind development. This is accomplished by leveraging bodily experience as a pivotal medium bridging the subject and object, as well as the internal mind and external world, thereby forging a potential pathway of abstract concept, poetic metaphor, embodied cognition, and mind development.

Keywords: cognitive poetics, embodied cognition, metaphor, mind

1. Introduction

Poetry, as a distinct literary form, has always been an important area of study within literary scholarship. However, with the development of cognitive science, the theory of cognitive poetics has emerged as a burgeoning field of research in poetry studies. Metaphor, as one of the core concepts in cognitive poetics theory, is considered a crucial mechanism for understanding abstract concepts and phenomena in human cognitive unconscious processes. The three major findings of cognitive science, as articulated by Lakoff and Johnson, further affirm this notion: (1) The mind is inherently embodied, meaning that cognition is grounded in bodily experiences and perceptions. (2) Thought is mostly unconscious, highlighting the significant role of unconscious cognitive processes in shaping our thinking. (3) Abstract concepts are largely metaphorical, emphasizing that our understanding of abstract concepts is heavily reliant on metaphorical mappings from concrete experiences. The aforementioned insights accentuate the significance of metaphor as a cognitive instrument in our apprehension and portrayal of reality [1].

The research conducted by Lakoff, Johnson, and Turner on metaphor, poetry, and embodied cognition has significantly contributed to the field of cognitive poetics. In 1980, Lakoff and Johnson published a seminal paper titled *Metaphors We Live By*, wherein they elucidated the process through which our minds comprehend and articulate ideas by mapping experiences and concepts from one domain to another, employing metaphor as a means of expression and understanding. Metaphor serves as a means of bridging the divide between abstract concepts and tangible, sensory experiences, thereby enabling a more profound understanding and engagement with abstract ideas and subsequently influencing our cognitive frameworks and thought processes [2]. Expanding upon this premise, Lakoff and Turner published *More than Cool Reason: A Field Guide to Poetic Metaphor* half a decade later, to explore the fundamental nature of metaphor and elucidate its conventional and inventive applications in poetry [3]. This book asserts that metaphors in poetry serve to underscore the distinctive nature of metaphor within our conceptual system. However, unraveling the enigmatic metaphors within poetry is a challenging task, as our cognition and language are intricately intertwined with our perception of the world and bodily experiences, rejecting the notion of abstract thinking detached from corporeal existence. In their book, *Philosophy in the Flesh: The Embodied Mind and its Challenge to Western Thought* [1], Lakoff and Johnson introduced the concept of "Embodied Cognition," positing that human thought and language are intimately linked to our bodily encounters and perceptions. They advocate for incorporating the body and perception as foundational elements in the realms of thought and language, emphasizing the pivotal role played by the body in our cognitive processes and comprehension of the world. Moreover, it has been argued by certain scholars that cognitive science research has taken on a pragmatic trajectory, with embodied cognition playing a pivotal role as a driving force [4].

If considering the exploration of human mind development as a practical endeavour, the works of Lakoff and Johnson, as well as Lakoff and Turner, offer insights into a potential pathway of investigation: abstract concepts - poetic metaphor - embodied cognition - mind development. This article aims to address several key questions and provide a coherent argument for this proposed trajectory: 1) The metaphorical nature of abstract concepts, 2) The distinctive qualities of poetic metaphor, and 3) The interconnectedness between embodied cognition and mind development. Through this comprehensive analysis, not only establishes a connection between abstract concepts, poetic metaphor, embodied cognition, and mind cognition but also presents a novel perspective on the formation and functioning of the mind while offering practical methodologies for concretizing abstract concepts. Furthermore, such research holds implications for the fields of philosophy of language, literature, and psychology by emphasizing the significance of metaphorical thinking and prompting reflection on fundamental inquiries within mind research, including meaning, truth, the essence of thought, and the influential role of the body in shaping the mind.

2. Metaphorical Nature of Abstract Concepts

Within the domain of the philosophy of language, it is commonly accepted that the search for meaning centers on the endeavour to ascertain the objective truth values of linguistic expressions, as espoused by Frege [5]. However, Lakoff and Johnson challenge this view, contending that such a notion of "meaning" diverges significantly from our everyday understanding. They argue that cognitive activities and mind development in our daily lives are not purely rational, nor can they be reduced to formal calculations using representational symbols. Instead, they assert that these processes are inherently metaphorical and often operate at an unconscious level. In cognitive science, the term "cognition" refers to the study of precise mind development or mental structures. Lakoff and Johnson posit that a significant portion of these mental structures or cognitive developments transpire in an unconscious manner, evoking a profound impact on our perception, reasoning, and conceptualization of the world [1]. Consequently, cognitive processes do not merely involve the formation of conceptual

or propositional structures, nor do they imply conditional truth values. Instead, they argue that all unconscious mental operations related to conceptual systems, meaning, reasoning, and language can be accurately described as "cognitive unconsciousness."

Similarly, the Iceberg Theory posits that human behavior and communication only represent a small portion of the iceberg, while the bottom of the iceberg symbolizes underlying factors such as the subconscious, emotions, motivations, and values. Lakoff and Johnson argue that our self-concept is fundamentally metaphorical, and the deep-seated factors at the bottom of the iceberg significantly influence our mental activities and decision-making processes. In the pursuit of uncovering our "true self," unconscious metaphors are utilized to conceptualize the underlying "self" hidden beneath the surface. The comprehension of these essential abstract concepts, encompassing the self, time, causality, essence, mind, or morality, extends beyond their literal meanings. It necessitates the utilization of alternative entities or experiences to grasp their essence. Hence, what may initially seem like a rational "concept" is, in fact, metaphorical in its nature, termed as a "metaphorical concept."

Following the notion of "conceptual metaphor," the seemingly poetic "metaphor" is actually "conceptual" in nature, as described by the term "conceptual metaphor", which characterizes the cognitive mechanism of metaphor [1]. Abstract concepts, as the foundation of cognitive processes, require interpretation through basic and complex metaphors. Therefore, metaphor is not merely a linguistic or lexical description of objective phenomena; it is a part of unconscious cognition. In other words, mental processes are largely metaphorical. Some scholars propose that metaphor serves as a pathway for concretizing ideologies, enabling the cognitive acceptance of abstract doctrines [6]. It can be said that metaphor provides the most fundamental building material for the cognitive system and the development of the mind.

3. Unique Poetic Metaphors

In their book "More than Cool Reason: A Field Guide to Poetic Metaphor," Lakoff and Turner express their application of recent metaphor research to poetry, further highlighting the distinct nature of metaphor in our conceptual system. They argue that poetic metaphor is not merely a decoration but rather involves the core and essential aspects of our conceptual system [3]. Lakoff and Turner considered esteemed poets to be able to effectively engage with their audience by harnessing universally accessible modes of thought. By employing the cognitive faculties inherent to all individuals, poets can illuminate our lived experiences, interrogate the ramifications of our convictions, challenge our cognitive frameworks, and critique prevailing ideologies. To grasp the true nature and intrinsic value of poetic creativity, it becomes imperative for us to comprehend the ordinary cognitive processes that underlie our thinking patterns.

Lakoff and Turner's distinction between basic conceptual metaphors and specific linguistic expressions of these conceptual metaphors highlights the necessity of examining both the conceptual and linguistic levels when analyzing poetic metaphors [3]. The poetic metaphor, which resides at the conceptual level, involves abstract concepts that still need to be fully integrated into our cognitive system. Consequently, the linguistic expressions of these concepts are inherently unique, but their uniqueness extends beyond mere linguistic expression. In essence, the individuality of language is not necessarily indicative of the individuality of thought, but personalized thoughts necessitate personalized language, as exemplified by the language of poetry. Therefore, a comprehensive understanding of poetic metaphor requires an examination of both the cognitive and linguistic dimensions of metaphor.

Based on the cognitive and linguistic dimensions of metaphor, poets often employ metaphors in three fundamental ways: First, they may engage in a simplistic and automatic process of poeticizing metaphors, resulting in an abundance of uninspiring, feeble, and trite poems. Second, they may demonstrate adeptness in utilizing metaphors, skillfully integrating and expanding them to forge

compelling imagery. Third, poets may strive to transcend conventional metaphorical thinking by introducing novel metaphorical frameworks or employing metaphors in unconventional manners, thereby exposing the limitations of our comprehension of poetic meaning in the realm of reality [3]. It becomes apparent that the second and third approaches to poetic metaphor, as elucidated by Lakoff and Turner, enable poets to realize Chomsky's notion of using limited means to achieve unlimited ends [7] through deft extensions, elaborate elaborations, thought-provoking questioning, artistic compositions, and vivid personifications. Consequently, these approaches bestow upon poetry an inexhaustible wellspring of poetic potential.

To explore the impact of poetic metaphors on the cognitive development of individuals, it is crucial to initially examine the inherent nature of metaphor. In contrast to traditional metaphors, which adhere to a literal interpretation [8], Lakoff and Turner characterize poetic metaphor as "unconventional", poetic metaphors encompass a conceptual mapping or cognitive strategy that stems from two fundamental sources: personal experience and culture [3]. Scholars argue that the essence of metaphor lies in its experiential cognition, coherent culture, and ideological nature [6]. Metaphor, functioning as a cognitive tool, develops and operates within a collective framework, serving as a medium for interpersonal meaning and a conduit for ideological expression. Metaphor is deeply intertwined with social constructivism [9]. As discussed in previous research, the comprehension of abstract concepts is an integral part of unconscious cognition, and mental processes predominantly rely on metaphorical thinking. Consequently, metaphor compels individuals to confront the hidden dimensions of their own experiences, minds, and cultures.

Compared to traditional metaphors, the significance of comprehending "unconventional" poetic metaphors lies in the revelation of the limitations imposed by our specific, familiar experiences, shared cultural value systems, and the reliance on accumulated experiences, which reinforce habitual and socialized patterns within poetic metaphor. However, the abstract concepts that emerge through metaphor play a profound role in shaping our cognitive frameworks and, subsequently, our understanding of everyday life and life trajectories. As Lakoff and Turner assert, this constitutes a remarkable aspect of the power of poetic metaphor "it calls upon our deepest modes of everyday understanding and forces us to use them in new ways"[3].

4. Embodied Cognition and the Developmental Pathway of the Mind

Lakoff and Johnson posit that direct observation or awareness of the mind's operations is unattainable, and our understanding of it is only possible indirectly. "Embodied cognition" refers to the integration of sensory experiences from the body's organs and more subtle experiences into a cognitive system. Some scholars argue that embodiment emphasizes that mental processes are not purely abstract symbol processing but are deeply rooted in the interaction between the body and the world, inseparable from bodily states and environmental conditions [10]. This concept emerged as a critique of Descartes' mind-body dualism by philosophers. Descartes posited that although the mind and body interact, their essence is fundamentally different. The body symbolizes sensibility, contingency, and uncertainty, being influenced by external sensations and physiological reactions. In contrast, the mind represents reason, truth, stability, and certainty, serving as the source of thinking, consciousness, and will. The mind is considered an independent entity separate from the body, capable of autonomous thinking and decision-making, unrestricted by bodily limitations.

Before Lakoff, phenomenological philosophers such as Husserl, Heidegger, and Merleau-Ponty had already engaged in the "bracketing" and "reduction" of logical thinking. According to their perspective, philosophy and poetics, as well as logic and poetic thinking, are deeply intertwined and inseparable. Heidegger's concept of "Dasein" emphasizes the unity of the mind, body, and environment, rejecting the dualistic division of subject and object, consciousness and the world. Human existence is understood as "being-in-the-world," and from an existentialist standpoint, there

is no isolated self, no insulated subject devoid of a world; rather, there is only an integrated "being-in-the-world" [11]. Similarly, French phenomenologist Merleau-Ponty contends that the body constitutes our most primal connection to the world. By surpassing and transcending the subjectivity principles and rational norms of empiricism and rationalism, Merleau-Ponty redefines intentionality as how the subject engages with the world and objects, thereby transforming traditional consciousness philosophy [12].

However, according to Lakoff and Johnson, "Phenomenological reflection even allows us to examine many of the background prereflective structures beneath our conscious experience. But neither method can adequately explore the cognitive unconscious-the realm of thought that is completely and irrevocably inaccessible to direct conscious introspection [1]." They argue that both philosophical reflection and phenomenological analysis need to be revised. In response, Lakoff and Johnson focus their efforts in cognitive linguistics on investigating how to connect the holistic mental capacities and states of humans, encompassing sensory experiences such as vision, hearing, and touch. They propose that conceptual structures must be verified in the neural structures of the brain, leading to the notion of embodiment, which suggests that mental structures can only be realized through neural processes. The development of human cognition and mental abilities is inherently intertwined with the body, as all abstract concepts and mental activities are grounded in bodily experiences. In essence, human abstract thinking is fundamentally rooted in the dynamic interplay between the rational subject and the objective external world, with bodily experiences serving as the foundation. Consequently, Lakoff and Johnson view the external world, bodily experiences, neural systems, and the domain of the mind as an interconnected and dynamic organic system within the framework of cognitive linguistics.

According to Lakoff and Johnson, they understand three ways in which embodied cognition basic metaphors. Firstly, it is manifested through the body's experiences in the world. This implies that our bodily perceptions and motor experiences, combined with our subjective experiences, form the experiential foundation of basic metaphors. Secondly, the source domain logic of basic metaphors originates from the reasoning structure of the sensory-motor system. This implies that reasoning logic is developed through sensory and motor experiences, enabling the comprehension and expression of various concepts. Lastly, basic metaphors are realized in the synaptic weights of neural connections. This signifies that our neural system implements the expression and cognition of primary metaphors through specific neural connections and synaptic weights [1].

"It is nearly impossible to think or talk seriously about the mind without conceptualizing its various aspects through metaphor [3]." The statement by Lakoff and Turner underscores the significance of metaphor in comprehending and articulating the complexities of the mind. As previously mentioned, by employing poetic metaphors, we acquire the most direct conceptual metaphors, which can then be expanded upon, elucidated, interrogated, amalgamated, and personified, thereby giving rise to intricate metaphors. These complex metaphors encompass a multitude of foundational metaphors that can be comprehended through embodied cognition. Consequently, it becomes plausible to explore a potential trajectory from abstract concepts to the development of the mind. Given the intricacy and abstract nature of the mind, poetic metaphors accentuate the purely conceptual facets of linguistic expression, surpassing the confines of personal experiences and cultural influences, thereby serving as the cornerstone for delving into mental patterns and facilitating the advancement of the mind. Concurrently, embodied cognition manifests itself through bodily experiences, the inferential structure of the sensorimotor system, and the synaptic weights of neural connections, laying the groundwork for comprehending and articulating diverse fundamental metaphors and enabling us to cogitate and communicate about abstract concepts in a more tangible and intelligible manner within the realm of mind development.

5. Conclusion

By exploring the roles of poetic metaphor and embodied cognition in cognitive development, this article offers a novel perspective on understanding the formation and operation of the mind. The self, emotions, aesthetics, feelings, thoughts, and morality are pivotal elements in individual experience and crucial abstract concepts in the development of the mind. Due to the unconscious nature of these concepts, they cannot be comprehended solely through literal meanings or analytical reasoning. It is through metaphor that abstract concepts are mapped onto concrete, perceptual experiences, thereby shaping our modes of thinking and providing a foundation for our cognitive development.

As stated by Lakoff and Turner, engaging with powerful poetic metaphors is a significant way to explore the meaning of human life. Due to their uniqueness at both the conceptual and linguistic levels, poetic metaphors are far from mere embellishments to the realm of the human psyche. They are crucial for our understanding of the self, culture, and the entire world. Through the expansion, elaboration, questioning, combination, and personification of traditional metaphors, poetic metaphors can ingeniously extend and articulate abstract concepts. Such poetic expressions transcend rationality and objectivity, exercising our thinking faculties, unlocking our imagination, and enabling us to surpass the limitations imposed by personal experiences and cultural boundaries, thus becoming a significant source in individual cognitive development.

Taking into account the intrinsic connection between our cognition, language, and bodily experiences, embodied cognition offers a promising avenue for the potential practical progression of mind development. Through the lens of embodied cognition, we are able to concretize the abstract concepts conveyed by poetic metaphors and establish meaningful associations with our everyday encounters, thereby fostering deeper insights and cognitive understanding. Consequently, the fusion of poetic metaphors and embodied cognition engenders a viable trajectory that bridges the gap from abstract notions to the cultivation of the mind. By leveraging bodily experiences as a pivotal mediator between the subjective and objective realms, as well as between internal mental processes and the external environment, poetic metaphors serve as a profound manifestation of ideational concretization. They furnish us with a fresh vantage point to comprehend abstract concepts and propel the maturation of the mind, thereby beckoning us to embark upon an exploration of profound cognitive patterns and prompting a reevaluation and introspection of their essence.

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