A Study on the Psychosocial Effects of Linguistic Innovations: A Case Study of New Vocabulary during the COVID-19 Pandemic

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Abstract: This study employs textual analysis to explore the psychosocial effects of metaphorical vocabulary in linguistic innovations during the COVID-19 pandemic. By analyzing metaphorical expressions widely used in the contexts related to the COVID-19, the paper examines how they reflect the public's psychological state and exert far-reaching effects on it. Within the framework of Conceptual Metaphor Theory and Social Identity Theory, the paper reveals the specific role of metaphorical vocabulary in helping the public to enhance cognition, regulate emotions, stimulate a sense of collective responsibility, and promote social identity and solidarity through cognitive mechanisms. The findings reveals the critical role of linguistic innovation in social crises, providing novel linguistic perspectives and practical insights for future crisis management, especially in strengthening social cohesion and promoting public collaboration.

Keywords: COVID-19, Metaphor Theory, Social Identity Theory, Linguistic Innovation, Psychosocial Effects

1. Introduction

As a core tool of human cognition and social interaction, language plays a vital role in sudden public crises. Since the outbreak of the COVID-19, a large number of innovative forms of expression have emerged in social discourse, and metaphorical vocabulary has become a particularly significant linguistic phenomenon. These words not only reflect the vitality of linguistic innovation, but also deeply reflect the public's cognitive, emotional and social needs in the face of the crisis. Therefore, the study of the metaphorical vocabulary occurring during pandemic, is not only an important way to understand the psychosocial dynamics of the people during the crisis, but also a unique perspective to explore the complex relationship between language and society.

The generative mechanism of metaphorical vocabulary and its function have long been the focus of linguistics and psychology. In the context of pandemic, metaphorical vocabulary transform abstract and complex coronavirus phenomena into concrete and familiar concepts through their cognitive mechanism. In addition, these vocabularies demonstrate a powerful psychosocial adjustment function by stimulating emotional resonance, regulating psychological state and shaping social identity. They not only help individuals deal with uncertainty and stress, but also enhance collective responsibility and cohesion. However, despite the high frequency of metaphorical vocabularies during the pandemic, current research has not systematically explored their generative mechanisms and psychosocial effects. This study aims to examine new metaphorical expressions that emerged during the pandemic from the perspectives of metaphor theory and social identity theory. Using textual analysis, it investigates how these expressions, through distinctive metaphorical mechanisms, contribute to the adjustment of public psychosocial states.

2. Metaphor Theory

Metaphor is a linguistic expression in which one thing or concept is used to represent another. This kind of expression usually involves a comparison or mapping between two things in different domains. The theory of metaphor can be traced as far back as the ancient Greek philosopher Aristotle, who considered metaphors to be modifying language, used primarily in rhetoric and literature. As linguistics and cognitive science advance by leaps and bounds, the theory of metaphor has gradually expanded

from rhetoric to cognition. Afterwards, Lakoff and Johnson put forward, "the essence of metaphor is understanding and experiencing one kind of thing in terms of another." [1] It is a cognitive activity of people, which is represented by the phenomenon of thinking and behavior. [2] Andrew said, "metaphor has been widely used in the field of discourse analysis, such as news discourse, academic discourse, and advertising discourse." [3] In advertising discourse specifically, metaphor transcends mere linguistic embellishment; it serves as a potent tool for both modification and persuasion. By employing metaphors, advertisers can craft messages that are not only attention-grabbing but also deeply resonate with consumers on an emotional level.

There are primarily three types of metaphors: orientational metaphors ontological metaphors and structural metaphors. Orientational metaphor is a cognitive process in which spatial concepts are mapped to other domains to obtain abstract meanings. Many abstract concepts are cognized by orientation metaphors, with spatial orientation words reflecting different practical and cultural experiences to express concepts such as emotion, physical state, social status and values. Among these, the "up/down" metaphor is commonly used. It expands a series of rich metaphorical meanings with the spatial meaning of up/down. For example, in "I'm feeling up today," the word "up" conveys happiness, connecting the abstract concept of joy to the spatial idea of elevation. Ontological metaphors regard abstract concepts like thoughts, feelings or mental activities as concrete and tangible entities, especially the human body itself, enabling us to refer to, quantify, and act on them. For instance, "Love is a journey" frames love as an experience of growth and exploration. Structural metaphors, on the other hand, use the structure of one concept to understand another, such as in "Argument is war," where arguments are conceptualized in terms of attack, defense, and victory.

The theory of metaphor provides essential theoretical underpinning for this essay, allowing an exploration of the generative mechanisms and functions of metaphorical expressions during the pandemic from a cognitive perspective. Based on the core principles of conceptual metaphor theory, this study elucidates how metaphors map the abstract to the concrete, facilitating the public's rapid understanding and assimilation of complex pandemic-related information.

3. Social Identity Theory

Proposed by Tajfel and Turner, social identity theory believes that people would identify with a certain group according to their self-awareness^[4], as they believe the membership is meaningful to them due to the significance of emotion and value.^[5] Ashforth and Mael suggest that as the sense of belongingness affects an individual's value concept, people tend to join social groups which they identify with, thereby consolidating the sense of identification.^[6] The greater the identification with a group, the more one conceives of oneself as a member of the group, leading to a shift from 'I' to 'we' intentions as the most basic explanation of behaviour.^{[7][8]} Stets and Burke believe that individuals shape their self by internalising shared attitudes, beliefs and values, affective reactions, behavioural norms, and styles of speech amongst members of the same social group.^[9] Thus, individuals who develop strong social identities develop emotional connect with those identities and conduct themselves in such a way that augments their self as well as other group members' outcomes.^[10]

In this study, the theory is applied to analyze how metaphorical vocabulary shapes group identity through linguistic mechanisms and further regulates the social psychological state of the public during the pandemic. In this special period, social group identity was prominently expressed through language, especially through metaphorical expressions to build and strengthen the sense of belonging and cohesion among group members.

4. Psychosocial Effects of Pandemic Metaphors

4.1 Cognitive Enhancement

Metaphor, as an important cognitive tool, concretizes abstract concepts through language to help the public better understand complex information about the pandemic. The emergence of a large number of metaphorical expressions during this period not only provided the public with an intuitive understanding framework, but also played a role in enhancing awareness and shaping public attitudes. This process contains the cognitive mechanism of "mapping the abstract to the concrete" in conceptual metaphor theory, and also reflects the function of constructing group cognition through common language as proposed in social identity theory.

4.1.1 Flatten the Curve

The expression "flatten the curve" compares the rate of pandemic spread to a steep curve. Also, through the figurative action of "flatten the curve", it directs the public to focus on reducing the peak of infection. Literally, paired with a visual curve graph, this metaphor helps the public quickly understand the relationship between the dynamics of virus transmission and the ability of healthcare systems to withstand it. On a deeper level, this expression transforms complex public health goals into clear, easy-to-understand guidelines for collective action by emphasizing the causal relationship between the "curve" and "our behavior." This metaphor not only gives the public a comprehensible understanding of the spread of the pandemic, but also fosters a strong sense of group identity among individuals by conveying the message that "everyone can contribute", thus promoting social cooperation and a shared sense of responsibility.

4.1.2 Second Wave

The metaphor "Second Wave" describes the recurring outbreaks of the pandemic as the rise and fall of waves, using vivid imagery to concretize the abstract process of virus transmission into a dynamic natural phenomenon. This metaphor enables the public to intuitively grasp the unpredictability and potential threats of the pandemic, thereby reinforcing awareness of the long-term nature and necessity of control measures. Moreover, by framing the spread of the pandemic as a "second wave" faced collectively, the public is placed in a shared context of responding to external challenges together. The metaphorical language emphasizes the common experience of being "passengers in the same boat," evoking a sense of group identity and solidarity. Through the dynamic and threatening imagery of "waves," the metaphor not only deepens public understanding of the pandemic's complexity but also fosters a consensus on aligning individual actions with broader prevention and control objectives.

4.1.3 Vaccine Passport

The metaphor "vaccine passport" compares proof of vaccination to a travel passport, transforming the abstract concept of pandemic prevention policies into a concrete and relatable idea. A passport typically symbolizes identity verification and permission to travel, and the "vaccine passport" extends this symbolic meaning into the context of pandemic control, emphasizing vaccination as a crucial tool for restoring normalcy. This metaphor helps the public more directly grasp the necessity of vaccination: it not only protects individual health but also paves the way for achieving herd immunity, thereby benefiting society as a whole. Cognitively, this expression enhances understanding of the vaccine's function, framing vaccination not merely as a medical act but as a practice tied to social mobility and responsibility. More importantly, the metaphor creates an implicit contrast between the "vaccinated group" and the "unvaccinated group," subtly shaping vaccination as a social norm. Individuals holding a "vaccine passport" are categorized as "responsible citizens," while those unvaccinated are placed at the margins of the group. This metaphorical framing reinforces the social significance of vaccination, encouraging individuals to perceive it as behavior aligned with group expectations, thus promoting their own and the group's positive image.

During the pandemic, metaphors have served not only as cognitive tools but also as vital mediators of social connection. In a context where regular social interactions were limited, metaphors, with their concise and vivid expressions, provided the public with cognitive frameworks to understand complex phenomena. Simultaneously, they acted as the "lexical social glue", helping people establish a shared language and system of meaning and enabling a sense of collective connectedness even in states of physical separation.

4.2 Emotional Regulation

In times of crisis, effective communication requires not only conveying facts but also resonating with the emotional state of the public. Metaphors play a crucial role in emotional regulation by softening the harsh realities of the crisis, offering comfort, and inspiring hope. Such metaphors often bridge the gap between speakers and their audience, transforming collective anxiety into resilience and confidence.

4.2.1 Corona Bubble

On the surface, the expression of corona bubble described the small social circles permitted during the pandemic, such as groups formed by family members or close friends. However, from an emotional perspective, this metaphor, with its warm and protective imagery, offered emotional relief and support to the public. First of all, the term "bubble" inherently carries light, soft, and comforting connotations,

symbolizing a safe barrier that provides a sense of psychological refuge. People no longer viewed isolation purely as a passive and negative restriction but began to perceive it as an active protective measure. This emotional shift allowed the public to approach quarantine life with a more composed mindset, thereby easing the anxiety and stress caused by the lack of social interaction. Moreover, it underscored the significance of individual actions, alleviating the public's sense of helplessness during the pandemic. Living in a bubble was not merely about self-protection; it was also an expression of responsibility and care for others. This layer of metaphorical meaning allowed the public to view adherence to quarantine measures as an act of love for family and community, thereby fostering positive emotions and balancing the negative psychological impacts of the pandemic.

4.2.2 Covid Cocoon

The metaphor of the "covid cocoon" is both vivid and rich in symbolism, transforming isolation from a passive state into a positive and transformative process. In many cultures, a cocoon often symbolizes safety and rebirth, and this metaphor skillfully reframes the negative imagery of isolation as an opportunity for growth and renewal. This reframing of language encourages individuals to view isolation as a necessary protective phase rather than merely a restriction or confinement, thereby reducing feelings of loneliness and alleviating the fear of uncertainty about the pandemic's future. Additionally, the cocoon metaphor highlights a forward-looking psychological orientation, inspiring people to use their time in isolation for self-reflection and personal growth. By shifting focus, this metaphor reassures the public that, despite the challenges of the isolation process, growth and transformation lie ahead. This sense of hope effectively stabilizes emotions and enhances psychological resilience in facing the pandemic.

4.2.3 Pandemic Marathon

The metaphor of the "Pandemic Marathon" played a crucial role in regulating public emotions during the pandemic. By likening the fight against the pandemic to a marathon, it emphasized that the process is long and challenging, requiring patience, perseverance, and teamwork. This metaphor helped the public adjust their expectations, recognizing that pandemic control is a prolonged effort, thereby reducing the anxiety and disappointment stemming from unrealistic hopes for a quick return to normalcy. The marathon metaphor also evoked a sense of collective effort and mutual support. A marathon is not merely an individual endurance test but a symbol of collaboration within a community, team, or even an entire society. This metaphor conveyed the message that combating the pandemic requires collective cooperation and joint efforts. Even though each individual may "run" at a different pace, everyone's contribution matters in achieving the collective goal.

These metaphors, through cognitive reframing, transformed the uncertainty and challenges of the pandemic into experiences that were not only acceptable but also potentially inspiring on a societal level, effectively regulating public emotions. More importantly, they emotionally bridged the psychological gap between individuals and the collective, deepening social identity and solidarity. This allowed people to feel the strength and significance of the collective even in isolated environments.

4.3 Fostering Collective Responsibility

Metaphors can not only enhance cognition and regulate emotions but also foster a sense of collective responsibility by guiding individuals to identify with communal duties. During the pandemic, many metaphorical expressions linked individual actions to the well-being of the whole, imbuing public behavior with greater significance. These metaphors invoked the concept of community to evoke a sense of responsibility toward others, encouraging the establishment of social norms for unified action.

4.3.1 Herd Immunity

The metaphor likens human society to a "herd," skillfully linking the dynamic relationship between individual and collective health. The term "herd" evokes imagery of group behavior in nature, transferring this understanding to human society and highlighting the symbiotic relationship between individuals and the whole. This makes complex medical concepts, such as the threshold for herd immunity, more comprehensible. Apart from fostering moral identification with the idea of "protecting others", this metaphor shapes a clear group identity as an "immune herd," emphasizing the interdependence among its members. Within this metaphorical framework, individuals are assigned a responsible role for collective health, perceiving their own health-related behaviors as contributions to the group. The goal of "protecting the herd from the virus" is redefined through this metaphor as a

shared societal responsibility, effectively inspiring public collective responsibility and motivating action. This enables individuals to grasp more intuitively the critical impact of their personal actions on the health of the collective.

4.3.2 War on the Virus

The metaphor "war on the virus" frames the fight against the pandemic as a "war," imbuing public health actions with a sense of heroism and mission, while evoking the public's desire for victory. It activates the context of battle, personifying the virus as a common enemy and reinforcing the necessity of collective cooperation. Within this framework, individual behaviors—such as wearing masks and maintaining social distance—take on a collective significance, portrayed as tangible contributions to the fight. Social identity theory further suggests that this metaphor constructs a shared identity of "citizens united against the virus," effectively developing a sense of collective responsibility and social solidarity. By recognizing the indispensable role of their own actions in the "battle", the public is more motivated to engage actively in pandemic measures, adopting a collaborative approach to confront the crisis.

4.3.3 Shield the Vulnerable

The metaphor "shield the vulnerable" vividly portrays public actions as building a "shield" to protect vulnerable groups from the impact of the pandemic, assigning individuals the role of guardians. This expression, through cognitive reframing and meaning mapping, makes it easier for the public to understand the social value of their behavior and enhances their acceptance of pandemic control measures. By highlighting the role of "protecting the vulnerable" in overall public health, this metaphor evokes empathy and collective responsibility, further driving the implementation of pandemic control measures.

Metaphorical language has played a significant role in fostering collective responsibility by providing intuitive and easily understood imagery for complex public health concepts, embedding individual actions within the framework of collective efforts. This linguistic approach not only enhances public awareness of the significance of preventive measures but also shapes a sense of communal identity, strengthening the interdependence between individuals and the group. Guided by metaphors, the public is more inclined to perceive their own actions as contributions to the collective good, thereby cultivating a stronger sense of responsibility and motivation to act. This, in turn, helps build societal cohesion to collectively overcome challenges.

4.4 Promoting Social Identity and Cohesion

Metaphorical expressions can be instrumental in shaping social identity and strengthening cohesion. Speakers can use metaphors to construct frameworks of group identity, building emotional connections between themselves and their audience. This mode of expression not only enhances the affinity of language but also evokes emotional resonance among the public, enabling individuals to psychologically integrate into a collective identity. As a result, it promotes a unified social response.

4.4.1 We Are the Frontline

"We Are the Frontline" uses metaphor to liken society's members to "frontline warriors," transforming pandemic prevention into a collective battle and assigning each individual a heroic role. The word "we" highlights the shared identity of the speaker and the audience, reinforcing the connection between individuals and the collective by positioning all members of society on the "frontline" of the pandemic response. This expression constructs a framework of identity rooted in heroism and communal awareness, emphasizing the equal importance of the public alongside governments and healthcare workers in combating the pandemic. Through this metaphor, it bolsters individuals' sense of belonging to the group, encouraging the public to transcend individual differences and adopt a collective perspective to face challenges, thereby laying the psychological groundwork for group collaboration.

4.4.2 Building the Bridge to Normalcy

The metaphor "building the bridge" compares pandemic response to a collaborative project of "bridge-building," emphasizing the importance of collective effort and cooperation. In this metaphor, the "bridge" symbolizes overcoming the challenges posed by the pandemic and connecting to future goals, transforming the public's shared objective into a tangible, achievable "bridge project". By turning abstract collective action into a concrete and vivid image, the metaphor helps the public

understand the critical role each individual plays in achieving the common goal, while also motivating them to contribute to the collective effort. By framing a shared goal, this metaphor not only promotes collaboration but also deepens the emotional investment of individuals in the shared endeavor, further solidifying the collective spirit.

4.4.3 The Vaccine: Light at the End of the Tunnel

The "light" here is not just a symbolic signifier; it is also the key force that rescues the public from the difficulties they face. This metaphor not only helps the public understand the significance of vaccination but also imbues it with emotional warmth and hope. The tunnel, as a symbol of hardship, suggests the darkness and uncertainty brought about by the pandemic, while the light represents the solution, symbolizing the recovery and hope that come with vaccination. The metaphorical mapping enables the public to intuitively perceive the vaccine as the "guidance" in the process of pandemic recovery. In this context, the vaccine is not only an individual choice but a collective task for all members to move toward the "light". Moreover, by constructing this forward-looking vision, the metaphor increases people's sense of participation and social identity regarding vaccination. The public not only sees the direct benefits of vaccination for themselves but also understands that this action is a necessary step for the collective effort to emerge from the pandemic and restore normal life, thereby strengthening collective identity and social cohesion.

Through metaphorical expression, the speaker can transform complex public health issues into vivid and easily understandable scenarios, emphasizing the shared mission and collective identity of the public in combating the pandemic. This linguistic strategy not only effectively enhances the public's identification with group goals but also stimulates their emotional engagement in pandemic efforts. By constructing a shared social vision, the metaphor provides the public with a tangible framework for community, allowing individuals to psychologically feel their importance in the collective goal, thereby promoting social cohesion.

5. Conclusion

This paper analyzes the use of metaphors during the pandemic, exploring their multiple functions in public discourse, particularly in areas such as emotional regulation, the activation of collective responsibility, and the promotion of social identity and cohesion. Metaphors are not merely rhetorical tools; in times of crisis, they became a key force in shaping public attitudes and behaviors. By transforming abstract public health actions into easily understandable images, metaphors helped the public find emotional resonance in complex situations and identify their roles and responsibilities in collective action. Our era is more digitally interconnected than ever before. Modern communication technologies have propelled the speed and influence of metaphor dissemination to unprecedented heights. Platforms such as social media, news outlets, and public campaigns have become the primary channels for the spread of metaphors, impacting public cognition and emotion through rapid and widespread distribution. The potency of metaphors is not confined to language alone; it ranges from shaping group identity, emotional connections, and social responsibility, to motivating the public to collectively confront the crisis.

Overall, the use of metaphors in public health crises not only provides effective linguistic tools for pandemic prevention but also offers emotional support for building social cohesion. In the face of global challenges, metaphors offer a foundation for consensus, unity, and action, inspiring both individual and collective efforts. Through metaphors, social members are able to find shared goals, identity, and motivation in times of crisis, providing solid linguistic and psychological support for overcoming the pandemic and effectively advancing the social response to the crisis. The power of metaphors, therefore, extends beyond the realm of communication, acting as a psychological and social force that strengthens societal bonds, facilitates compliance, and ultimately contributes to more effective pandemic response efforts.

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