

How We Conceptualize Epidemic--Visual Metaphors of COVID-19 in Editorial Cartoons

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Abstract: Since 2020, the whole world has been busy in fighting against a new invisible enemy: COVID-19. As a public health emergency of international concern, COVID-19 has become the focus of media attention at home and abroad. War-related terminology is commonly used in news to frame the discourse around epidemics and diseases. The current study presents an analysis of the visual metaphor of COVID-19 in 24 editorial cartoons from China Daily. The conceptual and framing of the metaphors are conducted. The study finds that the metaphors in editorial cartoons evoke a general understanding of COVID-19 problem by activating the war scenario and this particular way of framing help to establish people's confidence and make them work together. The study further affirms that visual metaphors are better in conveying rich and implicit conceptual and affective meaning, and can be direct manifestation of the conceptual metaphor without the mediation of language.

Keywords: Visual metaphor, War scenario, Framing theory, Editorial cartoons

1. Introduction

The New Coronary epidemic that broke out in Wuhan, Hubei in January 2020 was listed by the World Health Organization as a public health emergency of international concern on January 30, 2020. The exact cause of this epidemic still remains unknown and the disease was first referred to as 2019-nCoV and then named as COVID-19. So far, COVID-19 has spread across the world and affected millions of people, killing thousands of individuals. The disease has exerted an extremely serious impact on people's life and health. Thus, how the media frame the disease would play an important role during this epidemic.

Since the outbreak of the epidemic, major media for government affairs have been actively guiding public opinion, showing a rich discursive feature. The prevention and control of public health emergencies require not only strong actions and measures, but also the active response and solidarity of the whole society. Although discourse cannot directly participate in the treatment of patients, it plays an important role in health communication, prevention and control propaganda, and social mobilization (Miao & Li, 2020). Specially, metaphor is commonly used to frame the discourse around epidemic and diseases.

At present, the researches on the public health emergencies in the news mainly focus on the strategies of the official media to deal with the crisis in risk management issues and discourse communication (Baker et al., 2006; Bennett et al., 2010; Platt et al., 2016), some studies involve the influence of ideology implicit in the discourse on the prevention and control of epidemic situations (Garoon et al., 2008; Salas et al., 2017), but the cognitive thinking mechanism in the dialogue is insufficiently explained. They did not fully explain how discourse leads social opinion. For the analysis of COVID-19, Zhang Wei et al. (2020) analyzed a total of 109,907 words of text, 76 pictures, and 8 videos in the official Weibo and WeChat public accounts of People's Daily, Xinhua News Agency, and CCTV News, highlighting wars, competitions, and education, Solidarity, incentives and other structures. However, the research on metaphor mainly focuses on the text part, and the systematic analysis of visual metaphor is lacking. The current research analyzed the editorial cartoons concerning the COVID-19 from the perspective of visual metaphor to reveal how the media construct the COVID-19 pandemic.

2. Literature review

An editorial cartoon, also known as political cartoon, is a drawing containing a commentary expressing the cartoonist's opinion, in which the cartoonist uses visual metaphors and caricatures to address complicated political or societal phenomena or events, and thus sums up a current event with a humorous or emotional picture (see https://en.wikipedia.org/wiki/Editorial_cartoon). Like verbal metaphors, non-verbal and multimodal metaphors not only require the mapping of features from one domain or object to another, but also serve a wide range of communicative goals, such as explaining, persuading, or achieving certain emotive impact (Schilperoord & Maes, 2009). Metaphors in editorial cartoons aim to promote particular construal of events by projecting prominent iconic features.

Forceville (2008) defined multimodal metaphor as metaphors in which target, source and/or mappable features are represented or cued by more than one sign systems (one of which may be language) or modes of perception. Specially, pictorial metaphors are monomodal: their target and source are entirely rendered in visual terms (Forceville, 2008). Although multimodal metaphor study has often been conducted in genres like advertisement, film, etc. (Forceville 1994, 2016; Pérez-Sobrino 2016), editorial cartoons are the area of greatest interest for multimodal metaphor analysis in that they systematically employ visual and multimodal metaphors (Schilperoord & Maes, 2009; Bounegru & Forceville, 2011; Lin & Chiang, 2015; Lan & Zuo, 2015). Most previous researches focus on the conceptual metaphor conveyed by the visual and multimodal and emphasize identification and interpretation of visual metaphor (Forceville 2002; Bounegru & Forceville 2011; Lan & Zuo, 2015).

To explore how the using of metaphor reflects the way people conceptualize the certain disease has long been a research hot spot. Researches have approached the disease from the facet of social construction. In particular, metaphor is often used to talk about different aspects of diseases, such as their treatment, their outbreak and their symptoms. The framing power of metaphor is particularly relevant in health-related discourse, because it has been shown that it can impact patients' general well-being. For example, in a seminal study Sontag (1978) criticized the popular use of war metaphors to talk about cancer, a topic of research recently investigated also by Semino and his colleagues (2017). Besides the more frequent use of war metaphor framing disease, a study of SARS (Wallis & Nerlich, 2005) found that the social media use killer as the source domain for constructing the epidemic disease instead of war scenario. That is, the main conceptual metaphor used was SARS as a killer. SARS as a killer was a single unified entity, not an army or force.

The discourses and metaphors used to frame diseases have become a prominent subject within this literature. This interest in metaphor illustrates the impact of the 'linguistic turn', the emergence of 'cognitive linguistics' (Lakoff & Johnson, 1980; Turner, 2001), and the influence of critics, notably Susan Sontag, who has emphasized the interdependence of language and stigma in disease since the 1970s. Perhaps the most significant factor, however, is the character of the AIDS epidemic, by far the most widely discussed disease in social and cultural studies. The attention given to the cultural and linguistic framing of AIDS has been a direct response to the stigmatization faced by those infected, and to the heated debates over the disease in the 1980s and 1990s. The significance of metaphor within this process has been widely analyzed with some striking results, for example showing that negative AIDS metaphors can be correlated with the outcome of AIDS-related litigation in the US (Drass, Gregware, & Musheno, 1997; Rollins, 2002). However, we scarcely see researches aiming at exploring the use of visual metaphor to construct diseases.

The current study tried to address the following two questions:

- 1) What kinds of visual metaphors are used in the editorial cartoon to frame COVID-19?
- 2) How does this relate to or mediate media, public and governmental responses to the disease?

3. Methods

The present study investigated 24 Chinese editorial cartoons concerning the COVID-19, a critical epidemic has spread all over the world. The study aims to (1) identify what kinds conceptual metaphors are systematically construed in editorial cartoons related to the COVID-19 epidemic; (2) examine the implicit meaning conveyed by means of visual rhetoric or in combination with linguistic cues; (3) explain the use of metaphor in editorial cartoons by reference to the socio-cultural context.

China Daily is the official English-language newspaper for major international forums and activities held in China. The corpus of editorial cartoons was collected from online published works

(<http://cartoon.chinadaily.com.cn/>) from January 2020 till now. During this time period, COVID-19 firstly broke out and then gradually under control through the hard work by the Chinese government and people. Thereby, media's focus of this epidemic was also increasingly intensive for COVID-19 has become one of the biggest concerns of the general public. A variety of issues were debated on a daily basis on media, in relation to the pandemic. These include, but are not limited to, the political and social consequences of various governmental decisions, the situations in the hospitals getting increasingly more crowded every day, the interpretation of the numbers associated with the spreading of the pandemic, the problems that families face with homeschooling their children while working from home, and so forth. Among these issues, the discussion around the treatment and containment of the virus is surely a central topic.

All the cartoons were created closely as a restatement or response towards a particular newspaper report concerning COVID-19. The cartoonists include both professionals and amateurs, ranging from artists to senior high school students. Thus, this corpus of cartoons represents the folk understanding of the hot issue. The selection was conducted under the theme "COVID-19", combined with automatic searching of the key word "virus" in caption or tag. The preliminary searching led to a corpus of 28 cartoons.

With the manual check of the metaphorical mapping and natural gap between literal representation and evoked concept, literal and irrelevant cartoons were filtered out. Among them, 2 cartoons were considered literal since the visual signs depict a thing literally without evoking any metaphoric thought. The selected cartoons must contain at least one visual metaphor, either a mono-pictorial metaphor or a verbal-visual metaphor. That means, there should be a metaphorical mapping between two different domains. And another 1 cartoon was irrelevant, because it did not represent the virus.

The research procedure includes the following steps:

First, the source and target domain of each cartoon were identified, and features or connotations mapped from source to target domain were determined. At this step, we used the slightly modified Metaphor Identification Procedure (Group, 2007).

Then, conceptual metaphors were categorized and interpreted. The frequent ones that characterized the folk understanding about the COVID-19 were analyzed.

Finally, the ways in which visual modes convey implicit conceptual and affective meaning were discussed.

4. Analysis

The study found that some metaphors systematically occurred among the selected corpus. Many cartoons contained more than one metaphor in one single picture, usually one or some being the major metaphors and others being minor ones. Some metaphors enjoyed a much higher frequency than others. The analysis mainly focused on the prominent visual metaphors. The metaphors will be discussed in four major groups that share similar target domain (i.e. COVID-19): (1) OPPONENT; (2) ENEMY; (3) INVADER; (4) MONSTER.

4.1 Source domain: OPPONENT

In this group, the cartoonist depicted the COVID-19 virus as an opponent. The most frequent source domain of the coronavirus is an opponent in a battle. The mapped features are the virus's shape and its weakness compared to unity of Chinese people's endeavor especially doctors wearing medical protective clothing.

The cartoons repeatedly represent COVID-19 as an opponent whose head is in the shape of coronavirus. Specially, the facial expression of opponents is always full of fear and exhaustion in most cases (see Figure 1, Figure 2 and Figure 3). For example, in Figure1 the virus-like man is kept swearing and breathing, showing his tiredness and weakness, evoking the positive emotions like determination to get over this epidemic. There is systematic employment of visual fusion: the source and target objects are literally fused into one hybrid visual image (Schilperoord & Maes 2009) which expresses the metaphor COVID-19 IS OPPONENT.

Generally, there is a consensus among cultures that we need to fight against the opponent in a battle. Framing COVID-19 in this way visually could raise strong public feeling to work together to eliminate

this epidemic. For instance, several fists in the cartoon and the verbal tag on the fists all express the united endeavor of Chinese people to fight against the virus who are running away with bated breath (see Figure 3). Another manifestation of unity is the love from all over the world. In figure 2, a big red heart with two fists merge small heart across the world. On the contrary, a tiny virus is knocked out of the earth.

In sum, the metaphor COVID-19 IS OPPONENT constructs two parts in a battle or fight. Metaphorical framing of epidemic in this way set people's endeavor, medical staff and the earth against COVID-19. On the one hand, the weakness and vulnerability impression conveyed in the cartoon try to inspire confidence to win this battle towards the virus in the public. On the other hand, the determination and unity showed among medical staff and people evoke public's attention to fight against COVID-19 together.

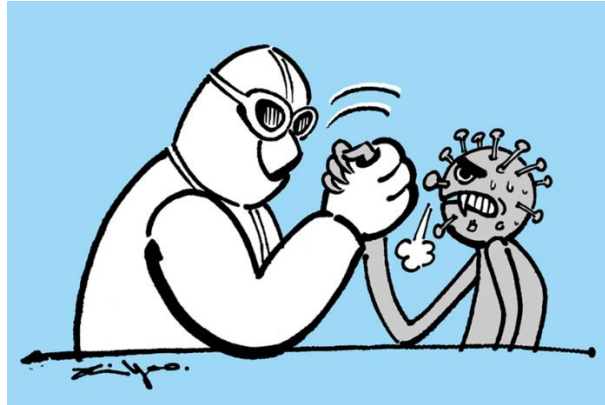


Figure 1: Must-win battle.

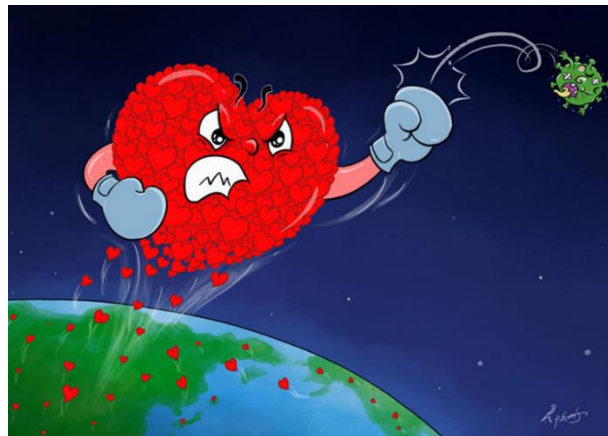


Figure 2: Fighting from the heart.



Figure 3: Unity remains key to virus battle.

4.2 Source domain: ENEMY

In this cluster of cartoons, the virus is visually metaphorized as horrible enemies. The most prominent feature is that the earth or medical staff are presented fully prepared soldiers to fight against coronavirus,

depicting the metaphor COVID-19 IS ENEMY.

In Figure 4, nearly all space in the picture is used to present a well prepared soldier wearing medical protective clothing. The soldier holds an advanced gun with injector as bullet and looks forward fearlessly. On the backside of this soldier, there is another soldier carrying supplements. On the other side, a few viruses were marked with red cross, showing the soldier has aimed at them. The color language is also applied in this figure. That is, white highlights cleanliness while black represents virus. Altogether, this picture shows a must-win war toward the virus, evoking public's confidence and pride to our medical staff who fight at the frontline with great courage.

Figure 5 is a case of visual fusion which refers to the cases where both vehicle and topic of a metaphor are presented. It shows a quite strong soldier holding a spear and a shield while the medical protective clothes and the globe with green and blue parts suggest medical staff and the earth as target domain. Specially, there are many other relatively small medical staff offering help to the soldier. On the left side of the picture, the virus is portrayed as an enemy holding arms with a fringe of bulbous surface projections on head. It is a prominent feature for COVID-19 virus.

In this series of cartoons, the virus is framed as enemies in a war. Whereas the medical staff are presented as fearless soldiers. Interestingly, the image of soldier is not a single but always with many helps from others and constant supplements. This way of presentation calls for public help and attention to work together to eliminate COVID-19. Moreover, the determination and toughness of soldier in the cartoon could alleviate public's anxious and worries about COVID-19 as well as praise the medical staff for their hard work.

In this group, Great Chain of Being metaphor (Lakoff & Mark, 1989; Forceville 2006; Kövecses 2002) is frequently employed. Things are hierarchically structured from the top to the bottom in the order of HUMANS-ANIMALS-PLANTS-COMPLEX OBJECTS-NATURAL PHYSICAL THINGS. In non-verbal modes like pictorial variety, both the source and target object are depicted, e.g., medical staff and soldier, virus and enemies. This kind of metaphor is typically OBJECT A IS OBJECT B type. Great Chain metaphor features concrete is concrete, in which both source domain and target domain are directly accessible to senses (Forceville, 2006). And in this Great Chain of Being metaphoric system, a particular level of chain is used to understand another level (Kövecses, 2002). However, in figure 5 human (i.e. soldier in this case) is used to is conceptualized virus (i.e. COVID-19 in this case). It is different from the Great Chain of Being metaphor yet follow Conceptual metaphor theory which emphasizes the mapping from concrete domain onto abstract domain. That is, COVID-19 is a relatively abstract term for the public compared to the idea of human enemy.



Figure 4: Fully prepared for coronavirus.

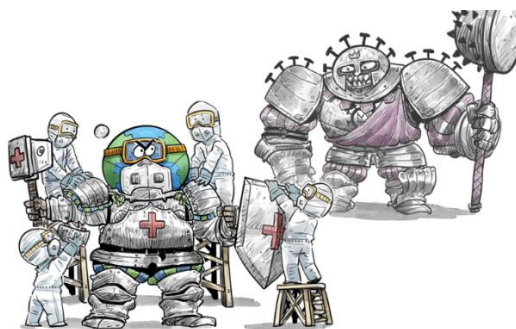


Figure 5: Global fight against the virus.

4.3 Source domain: INVADER

In this group, the COVID-19 is represented as invaders into our cities. Accordingly, a group of medical staff is portrayed as a solid wall. The mapped features between invaders and virus are aggressive and has a destructive effect to the city.

In Figure 6, one virus-like man is standing in front of a high and solid wall with wide open mouth and scared eyes. The wall consists of a lot of bricks with paintings of medical staff. All the medical staff wear masks and protective clothes and their facial expression is full of firm and consistence. Similarly, in Figure 7, a cluster of viruses is stopped by medical staff wearing protective clothes and holding injectors. Specially, the injectors are vertically lined up serving a barrier to stop the virus. These images connote that COVID-19 should be expelled outside of our city and suggest that it is the medical staff who do this for us. On the other hand, this way of conceptualization also evokes the public's respect to the medical staff.

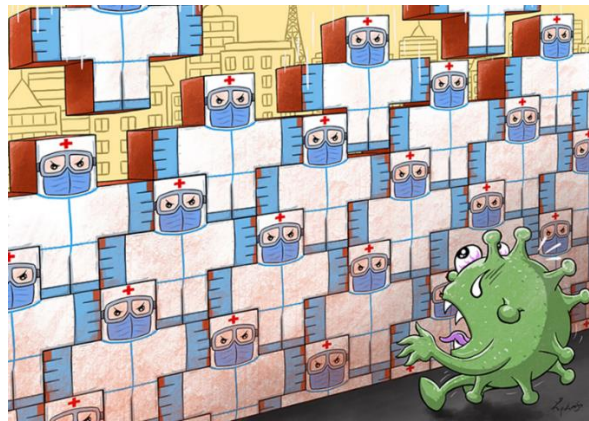


Figure 6: The wall.

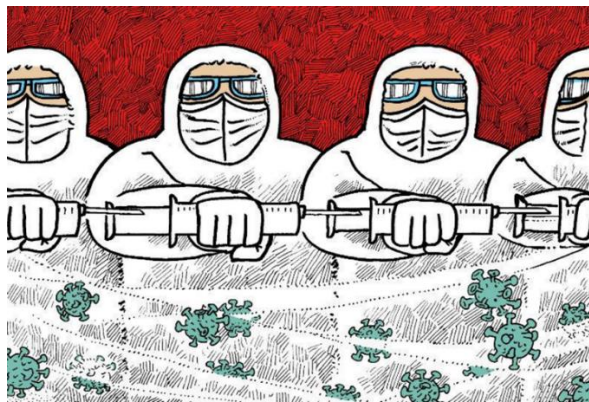


Figure 7: Fight against virus.

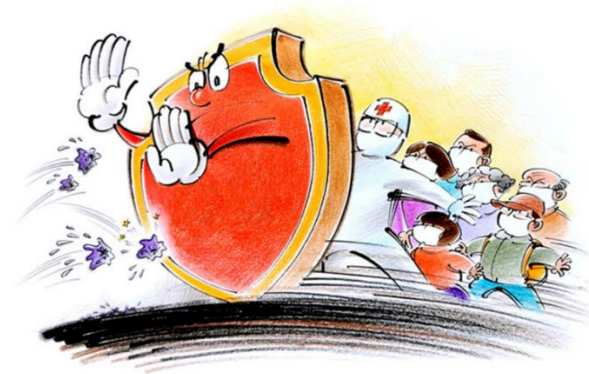


Figure 8: Fight against coronavirus.

In figure 8, a big shield with a read face and two hands is fighting against COVID-19, represented as small virus-like droplets with fierce face. Right just behind the shield, there is a doctor with one arm holding up the shield and the other arm stretching arm out to protect other people. In this image, VIRUS IS INVADER and PEOPLE'S UNITE ENDEAVOUR IS SHIELED. In addition, the old people are also protected to keep distance from the virus by young people. Overall, this image implies that medical staff and normal people should work together to fight against COVID-19. The medical staff make great efforts to stop the virus.

In this group of cartoons, the composition of the virus and medical staff is meaningful. According to Kress and Van Leeuwen (2006), the meaning of composition encodes in “the way in which the representational and interactive elements are made to relate to each other, the way they are integrated into a meaningful whole”. In these images, the medical staff are more salient in terms of size than the virus so as to attract the viewer's attention to a relatively larger degree. The salience of medical staff image sends the message that the doctor is strong enough to fight against COVID-19.

4.4 Source domain: MONSTER

In this group, the COVID-19 is metaphorically depicted as a horrible monster. The mapped features between virus and monster are unknown, dangerous and fierce.

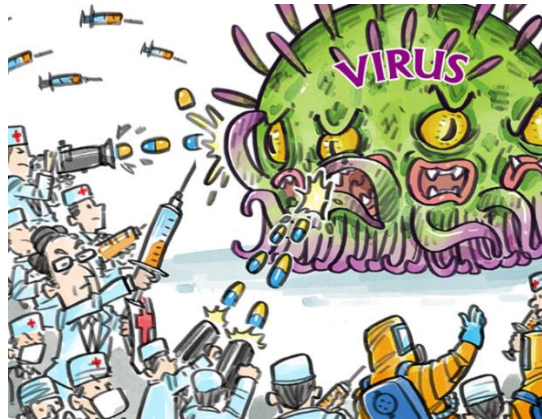


Figure 9: Fight against coronavirus.



Figure 10: Globalization.

In Figure 9, the monster-like virus is surrounded by a group of medical staff. The capsules and injectors are metaphorical depicted as weapons to fight against the monster. The image manifests persistence and cooperation of the medical staff to fight against the virus. Besides, different from the above-mentioned categories, this image shows the hardness of medical staff to fight against virus as the virus is depicted as a giant and fierce monster. Moreover, there is no weakness, fear and exhaustion of the virus showing in this image.

In figure 10, although the image is not about the relationship between the virus and medical staff or the earth. It is classified into this category because the virus is also metaphorically depicted as an octopus-like monster. In this cartoon, the virus looks like an octopus stretching out the long tentacle to destroy the ship sailing in the sea. The ship is marked with verbal tag “globalization”. Overall, the image shows

that COVID-19 exerts negative effects upon globalization. As we know, many countries have canceled international flights and trading to avoid the transmission of COVID-19.

To conceptualize the virus as monster not only shows the hardworking from medical staff but also emphasizes the dangerous aspect of the virus. Thus, the image could raise our alarm to the virus at the same time. The cartoon is posted at the early stage of the epidemic, so it is important to make the public know the danger of this epidemic and take effective measures.

5. Discussion

In this study, we have analyzed the various visual source domain of the COVID-19 virus in Chinese editorial cartoons. The analysis reveals that the media mainly frame the virus into four categories, including opponents, enemies, invaders and monsters. In this section, the interpretation of metaphors in terms of scenario will be discussed. The majority of cartoons in this corpus introduce a common war scenario as the basis of the visual metaphor.

5.1 War scenario

A pervasive characteristic of editorial cartoon metaphors is their scenario character (Schilperwood & Maes 2009). Metaphor scenario serves as source domain, representing a set of basic assumptions made by members of a discourse community. Most cartoons in this corpus trigger a conceptual domain that we may call a self-defense War scenario, most prominently in group 1, group 2 and group 3.

Most cartoons in this corpus trigger a conceptual domain that we may call a self-defense War scenario. Authorities have used war metaphors and analogies to persuade citizens to adhere to emergency measures (Hartmann-Mahmud, 2002; Steinert, 2003). In the same way, war and infectious disease are closely related (Hagopian, 2017; Ingram, 2009): 'war metaphors' are widely used as 'medical metaphors' (Hodgkin, 1985) and, likewise, war is a key vector for and the spread of disease (Bashford, 2014). War scenario is universally applied metaphorically to "any domain of experience that involves difficulties, danger, effort and uncertain outcomes" (Semino, 2008). The central connotation highlighted in the war scenario is gravity of the problem and the urgency of solution to deal with the problem.

The War scenario contains several elements: persons (enemy, victim, invader, defender), relations (antagonism, attack, defend, counter-attack), objects (weapons), and attributes (death, injury, defeat, victory, strategy) (Niu, 2020). In war scenario there are several metaphorical relations:

COVID-19 IS ENEMY/INVADER

EARTH IS DEFENDER

DOCTOR IS DEFENDER/SOLIDER/PROTCTOR

RUMOR IS ENEMY

UNITY IS WEAPON

War scenario is universally applied metaphorically to "any domain of experience that involves difficulties, danger, effort and uncertain outcomes" (Semino 2008). War scenario is especially suitable for source domain that is related to "particularly serious and intractable problems, and to the initiatives and strategies that are developed to solve them" (Semino, 2008), highlighting the urgency of the issue in question, and the need for tremendous effort to deal with it.

Set within war scenario, metaphors in group 1 conceptualize the COVID-19 as opponents in a fight or match. Metaphors in group 2 define COVID-19 as an enemy who is defended and threatened by the hard-working and brave medical staff. According to Lakoff & Johnson (1980), metaphors have the power to define realities. In this case, enemy metaphor and victim metaphor construct a worldview that COVID-19 problem has threatened the survival of the whole planet.

Metaphors in group 3 also cue the two parties in the war: the virus and the city. In this group, the COVID-19 virus is often visualized as an invader to our cities. However, unlike the enemy depicted in group 1 which construct two belligerent parties, that is, the image presents an ongoing fight between the virus and medical staff or earth. Thus, the two parts in group 1 and group 2 are often holding weapons. The enemy in group 3 is personified as invaders who is trying to enter our city while the city and medical staff is depicted as a strong wall to prevent the virus entering the city. The metaphor indicates the importance of prevention in this war. That is, during an epidemic, control and prevention is as crucial as

important as curing. This metaphorically-constructed reality attempts to evoke readers' awareness towards their reasonability as common people to the control and prevention. It is worthwhile to note the way medical staff and people are conceptualized in these cartoons. Metaphor serves as an affective mediator and makes visible the power of unity and every one's contribution. The medical staff in this group are not presented as brave and strong individuals but many people in same outfit unite together.

The application of war scenario metaphors contains ample implication. For example, the elements are essential to conquer the epidemic. Anti-COVID-19 measure is war and weapon. The most frequently used image for the weapon in this fight against virus is injectors holding by medical staff. Specially, in some images, several specific measures are indicated by verbal tags, such as "quarantine, lockdown, social distancing and testing success". Moreover, these images also emphasize the importance of using cooperation and unity across the world as weapon in this fighting process.

The central connotation highlighted in the war scenario is the gravity of the problem and the urgency of solution to deal with the problem. And what lies at the heart of this warfare is the danger of the enemy – virus. This war scenario treats haze problem as the biggest enemy of humans, evoking people's anger, terror and worry rather than any positive associations. And this war scenario is built upon the social reality in modern age. We can see how metaphors "change people's conceptual system and affect how we perceive the world and act upon those perceptions" (Lakoff & Johnson 1980). And the very choice of the metaphor scenario, together with the visual details, accounts for the cartoon's critical stance (Schilperwood & Maes 2009), and expects to activate viewers' similar response.

5.2 The framing effect of visual metaphor

"Societies and individuals are constantly constructed by discourse. Language is not an objective and practical reflection, but a constructive active medium" (Xin, 2016). In the process of construction, discourse plays a guiding role. Among the above-mentioned four metaphorical categories, we can tell that discourse realizes the guiding function through the choice of architecture and the activation of specific metaphor scenario. Framing refers to the selective emphasis on a particular point of view or perspective on a problem, resulting in a high degree of "framing effect", or a small change in the problem or a large change in opinion. Framing concerns the process by which people develop a particular conceptualization of an issue or reorient their thinking about an issue. (Chong & Druckman, 2007).

Discourse realizes the guiding function through narrative. Narrative refers to the use of framing to tell stories. Framing includes semantic roles, role attributes, role relationships, and scenes (Lakoff, 2008). Musolff emphasizes that the scene extracts data from the discourse and provides a platform. This platform connects the conceptual aspects of metaphor with the usage patterns in social contextual discourse (Musolff, 2006). The events framed by narrative can activate the audience's emotional judgment and have the characteristics of infecting the audience. For instance, in these editorial cartoons of COVID-19, the authors metaphorically construct the war scenario and thus evoke the reader's strong emotional feeling to win this war towards the virus.

In addition, public discourse is usually associated with the values behind the conceptual framework and choose the way of framing that are consistent with public values. This kind of narrative is a narrative that uses a deep structure. Only when the discourse contains a deep structure can it reach people's hearts. When the audience is exposed to deep narrative, the neurons in their brain will change and become firmly connected. Without a deep narrative, the audience cannot understand the discourse effectively (Lakoff, 2008: 34). The concept conveyed by the images in current study is a manifestation of deep narrative. Specially, most images bring out the idea "unity remains key to virus battle". The above images constantly emphasize that the virus has no borders and there is true love across the world. It is necessary to move forward together to overcome difficulties. The above-mentioned video constantly emphasizes that viruses have no borders and there are true feelings in the world. We should go forward hand in hand and tide over the difficulties together. Through pictures and texts, we have exerted the power of multi-modal discourse, and through the power of deep narration in narration, we have condensed our hearts and gathered our strength to overcome the difficulties together.

6. Conclusion

This study investigates how visual metaphors conceptualize reality of COVID-19 in editorial cartoons. Slightly different from some preliminary assumptions that the surface form does not matter much compared with the underlying concept, this study shifts the focus to the visual features employed to

express metaphoric meanings. The study found that visual techniques can create rich meaning by activating familiar social and cultural scenario, and are especially useful in conveying implicit affective meanings which their verbal counterpart may not.

Visual metaphors in this corpus not only express a conceptual reality, but also construct an epidemic issue into a socio-political matter. Visual metaphors here serve as affective mediator which connects various public to the urgent issues. In this sense, it is assumed that editorial genre invites the use of metaphor, especially visual metaphor, for visual images may be more suited than verbal texts to the task of implicitly conveying affective meanings because they often engage feelings, attitudes and emotions and mobilize fears and anxieties in the views at deeper level than language can explain explicitly (Hall 1997; El Refaie 2003; Forceville, 2008)

Limitations of the current studies are we were unable to interview the cartoonist. Such interviews would have allowed us to investigate the perspective of the authors and perhaps to discover what the various features of visual meaning meant to them. Secondly, the current study also didn't collect responses from viewers of editorial cartoons. This might be a useful direction for future study. Actually, the comments from the websites have been tried to collect but the comments are scarce.

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