

A Cognitive Study of Multimodal Metaphors in Telecommunication Fraud Editorial Cartoons

Zhang Xue^{1,a,*}

¹*School of Foreign Languages, Ningxia Medical University, Yinchuan, Ningxia, 750000, China*

^a*wodejojo@126.com*

^{*}*Corresponding author*

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Abstract: Metaphors in editorial cartoons focus on the resonance of public emotions, which can effectively simplify complex problems in reality. The purpose of this paper is to explore the metaphors in editorial cartoons on telecommunication fraud from the perspective of cognitive linguistics and based on multimodal metaphor theory. It is found that the metaphorical target domains focus on telecommunication fraud, victims and regulatory bodies; the representation mechanisms are mainly pictorial metaphor and verbo-pictorial metaphor; the frequency of contextual metaphor and hybrid metaphor is similar, and the pictorial source domain to verbal target domain is more significant; personification, spatial metaphors and scenario metaphors are more often used in the content themes, and dynamic micro-narrative format A-ING IS B-ING is used in the pictorial source / target domain. By analyzing such kind of metaphor, a better job of telecommunication fraud prevention can be done so as to enhance public alert awareness and prevent telecommunication fraud. In addition, it also makes a sense for public welfare multimodal publicity.

1. Introduction

Editorial cartoons, a distinctive illustration format gracing newspapers and web platforms, employ humor, satire, subtle nuance, and a critical lens to illuminate intricate facets of social, political, and cultural landscapes, thereby capturing public attention^[1]. Their metaphorical constructs distill intricate societal issues into concise, comprehensible narratives, fostering clarity and insight among the masses. Amidst the rapid technological advancements, telecommunication fraud has emerged as a salient challenge, adversely affecting daily life and professional endeavors. A diverse array of media—cartoons, advertisements, videos, among others—endeavors to communicate perspectives to the public via inventive methods. Consequently, this study, anchored in multimodal metaphor theory and cognitive linguistics, delves into the metaphorical themes, representational mechanisms, and distinct attributes embodied in editorial cartoons addressing telecommunication fraud. Our objective is to leverage an understanding of the cognitive prowess of multimodal metaphor and unveil the authors' creative intents, thereby refining anti-fraud propaganda efforts and fortifying public vigilance against such scams.

2. Theoretical Framework

Within the realm of cognitive linguistics, metaphors are recognized as cognitive constructs, facilitating the comprehension and articulation of abstract notions from alternate perspectives. These mental devices inherently encompass source and target domains, where the former comprises familiar, tangible concepts serving as a scaffold for apprehending the more elusive latter. Common source domains draw upon imagery of plants, human anatomy, cuisine, fauna, and authority, whereas target domains often revolve around relationships, temporal constructs, emotions, intellectual pursuits, and moral constructs.

Lakoff (1980) seminally classified metaphors into three distinct categories: Orientational, Ontological, and Structural, with the latter particularly emphasizing how a complex system of thought is structured by a metaphor. Furthermore, researchers have distinguished between monomodal and multimodal metaphors, based on the varied symbolic modalities employed, spanning textual, visual, verbal, aural, gestural, musical, tactile, gustatory, and olfactory expressions^[2]. Monomodal metaphors leverage a singular modality to elucidate the source-target relationship, exemplified by prevalent textual and image-based forms. Conversely, multimodal metaphors integrate multiple modalities within a given context, fostering dynamic, narrative, and immersive experiences. These multimodal constructs, rich in image, sound, language, and action, allow cognitive agents to engage their senses in navigating intricate event sequences, often eliciting more vivid and intuitive responses than purely linguistic or sensory-specific counterparts. Consequently, multimodal metaphors are adept at evoking cognitive resonance and intensifying emotional impact^[3].

The strategic application of nuanced multimodal metaphors in editorial cartoons facilitates public comprehension of intricate realities by bridging abstract target domains with relatable source domains. These cartoons predominantly feature image and graphic metaphors, particularly the latter, which underscores the study's utilization of multimodal metaphor theory to decipher metaphorical elements in comics. This approach involves categorizing target-domain themes, elucidating representational mechanisms, and examining their unique content and formal attributes, ultimately deepening our understanding of the meanings conveyed through these narrative art forms.

3. Corpus and Analytical Framework

The phenomenon of telecommunication fraud has emerged as a pressing societal concern, intimately tied to people's well-being, and consequently, it has garnered significant attention in the realm of editorial cartoons. For this research endeavor, New Comics, a collaborative venture between China Daily Network and China News Cartoon Society, was zeroed in on. Utilizing keywords such as "telecommunication fraud" and "Internet fraud", a corpus comprising 100 metaphor-laden cartoons was curated, embarking on an exploration of both monomodal and multimodal metaphorical constructs within these visual narratives. The focus lies in delving into the thematic realms of the target domains and the mechanisms that underpin their representation.

This investigative journey is structured into three pivotal stages: metaphor identification, differentiation between image and graphic metaphors, and elucidation of representational mechanisms alongside an analysis of their distinctive features. In the process of identifying metaphors, the following criteria are followed: first, there is a homogeneity relation between two different categories in the given context; second, the categories are source and target domains respectively and are irreversible; and lastly, some of the features (at least one of them) in the source domain are mapped to the target domain^[4]. At the stage of distinguishing image metaphors from graphic metaphors and elaborating the representation mechanism, the identification criteria are almost the same as the process of identifying metaphors, with the only difference being that the "A

IS B” expression proposed by Forceville is used to explain the target and source domains and simplify the mapping method^[5].

In order to accurately distinguish monomodal metaphors from multimodal metaphors, the following strategies are referred to: firstly, assuming that the textual elements in the cartoon are deleted, the source and target domains are identified by the remaining visual effects, and if one of them can be recognized, it is an image metaphor; if not, it is a graphic metaphor; secondly, assuming that the image elements in the cartoon are deleted, and if the source and target domains can be identified, it is regarded as a textual metaphor, and only its theme and metaphor type are discussed. After completing the differentiation work, the representation mechanism of the target metaphor is explored and its metaphorical features are analyzed.

Acknowledging the inherent subjectivity in metaphorical analysis, a team of six graduate students specializing in cognitive linguistics, divided into Groups A and B, alongside myself as Group C, collaboratively analyzed the caricatures. Each member of Groups A and B was assigned 33-34 cartoons, while I comprehensively assessed all 100, ensuring that every cartoon yielded three independent evaluations. The most congruent outcome was adopted as the definitive result, with discrepancies revisited for consensus-building. Furthermore, various authoritative online resources were leveraged to enrich the analysis with external validations, thereby enhancing the study’s objectivity, reducing the likelihood of subjective interpretations, and ultimately bolstering its credibility.

4. Results and Discussion

4.1 Themes of the metaphors

Drawing upon the framework of multimodal metaphor theory, the amassed cartoon corpus underwent rigorous identification and iterative analysis, culminating in the pinpointing of 156 metaphors. These metaphors, when examined through the lens of target domain dimensions, coalesce primarily around three focal areas: telecommunication fraud, victims, and regulatory bodies along with their measures (encompassing anti-fraud legislation, applications, and operations, among others). Additionally, a minor fraction falls under the broad category of “others”, reflecting a diverse array of less prevalent domains.

“Telecommunication fraud”, a pressing societal concern intimately tied to public welfare, emerges as the most prevalent target domain, constituting approximately 45% of the total. The metaphorical imagery deployed—depicting telecommunication fraud as a nefarious entity akin to devils wielding WiFi, spectral presences, skeletal forms, fishing hooks, traps, and claws—imbues the concept with a sinister, alluring, and perilous aura, poignantly capturing its seductive yet destructive essence. The “victims” segment, accounting for roughly 16% of the total, encompasses both tangible entities like individuals, money, and user data, as well as abstract concepts such as freedom. Here, the metaphorical narrative likens victims to hapless prey, fish ensnared by bait, emphasizing their obliviousness to danger, vulnerability, helplessness, and a state of panic. “Regulatory bodies”, occupying a substantial 32% share within the target domain landscape, are portrayed as fists of justice, anti-fraud initiatives as nets, swords, and handcuffs, while anti-fraud legislation and applications function as shields and umbrellas. These metaphors evoke sentiments of swiftness, precision, severity, authority, adherence to the law, and a reassuring sense of security. The residual 7% falls under the “others” category, a heterogeneous grouping due to the disparity in its constituent target domains (as tabulated in Table 1). In sum, these metaphors serve as potent vehicles, enabling the public to grasp the multifaceted nature of telecommunication fraud with clarity and vividness.

Table 1: Number and themes of metaphors

Target domain	Source domain	Number	Percentage (%)
Telecommunication fraud	devils wielding WiFi, spectral presences, skeletal forms, fishing hooks, traps, nooses, octopuses, rats, snakes, foxes, claws, etc.	70	44.87
Victims	individuals, money, user data, freedom, puppets, etc.	25	16.03
Regulatory bodies	fists, nets, swords, handcuffs, shields, umbrellas, etc.	50	32.05
Others	Chinese idiom — borrowing arrows with straw boats, etc.	11	7.05
Total		156	100.00

4.2 Representation mechanism

Drawing upon the framework of multimodal metaphors, monomodal metaphors are categorically distinguished as pictorial metaphors and verbal metaphors. Conversely, multimodal metaphors are specifically identified as verbo-pictorial metaphors, rooted in the comic genre and its distinctive representational modes. Adhering to the research focus, verbal metaphors were meticulously excluded from the initial dataset. Consequently, a refined count reveals that 95 out of the 156 metaphors analyzed constitute monomodal image metaphors, while the remaining 61 are classified as verbo-pictorial metaphors.

4.2.1 Monomodal metaphors: pictorial metaphors

In accordance with Forceville^[6], the pictorial metaphors encountered in the data can be neatly divided into two categories: contextual metaphor (MP1), accounting for 50.53%, and hybrid metaphor (MP2), comprising 49.47%, with a near-perfect balance between the two. MP1 denotes scenarios where one of the metaphor’s subjects is visually rendered within the picture, while the other, though absent, is made explicit and discernible. Consequently, MP1 manifests in two primary forms: picture source domain—implied target domain (P-ØMs) and implied source domain—picture target domain (Ø-PMs), with Ø signifying the concept of “implied” in this context. Notably, P-ØMs predominate, accounting for roughly 85% of instances, whereas Ø-PMs constitute approximately 15%, highlighting the prevalence of the P-ØMs representational framework. MP2, on the other hand, involves the depiction of both metaphorical subjects within the picture, with specific elements from both the source and target domains being seamlessly merged into a unified whole. Even when stripped of its contextual backdrop, the source and target domains remain discernible within this type^[7] (as tabulated in Table 2).

Table 2: Distribution of pictorial metaphor representation mechanisms

Type	Representation mechanisms	Abbr.	Number	Percentage(%)
MP1	pictorial source—implied target	P-Ø	41	43.16
	implied source—pictorial target	Ø-P	7	7.37
MP2	pictorial source—pictorial target	P-P	47	49.47
Total			95	100

4.2.2 Multimodal metaphors: verbo-pictorial metaphors

Verbo-pictorial metaphor (VPM) stands as a prominent example among multimodal metaphors, distinguished by its dual modalities: verbal and pictorial. The present investigation encompasses 61 instances of VPMs, which manifest through six distinct representational frameworks. These are classified as pictorial source—verbal target (P-VMs), pictorial source—pictorial and verbal target (P-PVMs), pictorial and verbal source—pictorial target (PV-PMs), pictorial and verbal source—pictorial and verbal target (PV-PVMs), pictorial and verbal source—verbal target (PV-VMs), and verbal source—pictorial target (V-PMs). Notably, within the scope of this study, P-VMs emerge as the prevalent form of verbo-pictorial metaphor representation, closely followed by P-PVMs and PV-PMs (as tabulated in Table 3).

Table 3: Distribution of verbo-pictorial metaphor representation mechanisms

Type	Representation mechanisms	Abbr.	Number	Percentage (%)
VPM	pictorial source—verbal target	P-V	26	42.62
	pictorial source—pictorial and verbal target	P-PV	14	22.95
	pictorial and verbal source—pictorial target	PV-P	9	14.75
	pictorial and verbal source—pictorial and verbal target	PV-PV	7	11.48
	pictorial and verbal source—verbal target	PV-V	4	6.56
	verbal source—pictorial target	V-P	1	1.64
Total			61	100

4.3 Metaphorical features

4.3.1 Content dimension

The metaphors explored in this study, from a content dimension, encapsulate profound contemplations and insights into the prevailing state of telecommunication fraud. By delving into the expansive content of the metaphorical target domain, encompassing themes such as telecommunication fraud, victims, and regulatory bodies, the public gains a heightened awareness of the deleterious effects and repercussions of such scams. Additionally, the cartoonists' source domain artfully employs personification, spatial metaphors, scenario metaphors and color metaphors, offering a nuanced portrayal of their stance towards the contemporary landscape of telecommunication fraud.



Figure 1: The Fraud



Figure 2: Making “fraud-free” a reality



Figure 3: Cracking down on internet fraud



Note: Figures 1-4 from The New Comics Network <http://cartoon.chinadaily.com.cn/index.shtml>

Figure 4: Show strength to telecommunication fraud with practical actions

Firstly, the study reveals a prevalent utilization of personification by 31% of targeted domain themes. This observation underscores that the metaphorical essence in these cartoons stems from human experiences, aligning with the core concept of “experience” in cognitive linguistics. Additionally, it reinforces the study’s assertion that personification constitutes the fundamental form of both monomodal and multimodal metaphors^[8]. Personification vividly personifies telecommunication fraud, as exemplified in Figure 1, where furious eyes, sinister tongues, and menacing fangs evoke a potent sense of “fraud’s” evil, thereby enhancing public awareness of its nefarious nature. Furthermore, contextual cues—such as news context, the facial expressions, settings, and associated elements—enable discernment of the artist’s stance towards this societal issue. Drawing from the above analysis, several conclusions emerge: firstly, personification heighten recognition of “telecommunication fraud”, emphasizing its persistence as a prominent concern with lingering societal repercussions; secondly, the “victims” of telecommunication fraud

spans diverse demographics, encompassing juveniles, university students, and the elderly; lastly, it is heartening to note that “regulatory bodies” are frequently portrayed positively in these cartoons, reflecting the earnest efforts of authorities in addressing this issue^[9].

Secondly, the utilization of spatial metaphors comes into play. Investigation reveals that the spatial framework in the source domain revolves primarily around fundamental directional notions: “up/down”, “big/small”, “front/back”, and “center/edge”. The portrayal of these specific orientations fosters a tense, ominous ambiance, heightening public awareness of telecommunication fraud. These metaphorical aspects also emerge as a vital tool for cartoonists to articulate sentiments. The study underscores that “telecommunication fraud” dominates the imagery, emphasizing the widespread nature of this societal issue and the extent of its damage. The “victims” are often depicted at the picture’s base, occupying a diminished space, mirroring their entrapment and inability to escape the grasp of telecommunication fraud. Conversely, the “regulatory bodies” assumes a commanding position at the picture’s apex, occupying a significant portion, signifying their proactive stance in combating this fraud. As depicted in Figure 2, the colossal “anti-telecommunications fraud bill” descends upon the puny fraudulent cell phones, with the upper segment exuding a triumphant aura, while the lower segment evokes feelings of embarrassment and oppression among the masses. Thus, the metaphors of POWER IS UP / WEAKNESS IS DOWN and POWER IS BIG / POWERLESS IS SMALL are vividly invoked.

Thirdly, the employment of scenario metaphors, a prevalent aspect in editorial cartoons, transcends individual element traits to encapsulate the overarching situation^{[10][11]}. These scenario metaphors construct additional conceptual frameworks within comics by weaving together elements via causal, thematic, and temporal linkages. Scenario metaphors are abundant in comics, encompassing diverse scenarios like fishing, the crow-and-fox encounter, and traps, among others. They also incorporate scenes imbued with Chinese cultural elements, such as battlefield carnage and the ancient tale of borrowing arrows with straw boats. As exemplified in Figure 3, the “public security department” and “network information center” are personified as the feline protagonists, while network fraud takes on the guise of the mouse, activating the ubiquitous cat-and-mouse narrative. This metaphorical portrayal, where network fraud scurries in the face of a joint crackdown by the aforementioned entities, deepens public understanding and empathy towards the prevailing telecommunication fraud situation, thereby amplifying awareness.

4.3.2 Formal dimension

Exploring the realm of representation mechanisms, editorial cartoon metaphors depict both source and target domains, either solely through picture or verbal elements, or a harmonious blend of both. This multimodal approach crafts a vibrant and immersive experience for the audience, reinforcing the assertion that each monomodal or multimodal metaphor encapsulates a miniature narrative. Consequently, the “A-ING IS B-ING” formula for multimodal metaphors triumphs over the traditional “NOUN A IS NOUN B” paradigm within conceptual metaphor theory. Notably, in this study, the dynamic “A-ING IS B-ING” formulation is utilized in 20 metaphors, adeptly conveying the intrinsic motion of the metaphor while vividly narrating the action sequence. These primarily embody positive resistance, reflecting the cartoonists’ call to arms, encouraging public participation in the battle against telecommunication scams by illustrating the intensity and dedication involved. As exemplified in Figure 4, “telecommunication fraud” is assailed by a flashing blade, the very motion of the swing signified by the knife’s glimmer, igniting the micro-narrative of “combating online fraud as the epoch of the sword”. This empowers the public to perceive the bravery and relentlessness of regulatory bodies in their quest to vanquish telecommunication fraud, embodying the unwavering sword spirit in their crusade.

5. Conclusion

Telecommunication fraud editorial cartoons skillfully harness the cognitive structuring prowess of monomodal and multimodal metaphors to vividly portray this pressing social issue. Our study delves into metaphorical themes centered around “telecommunication fraud”, “victims”, and “regulatory bodies”, with a prominent emphasis on TELECOMMUNICATION FRAUD IS THE DEVIL and THE REGULATORY BODIES ARE THE FISTS. These themes are conveyed through a blend of monomodal pictorial metaphors and multimodal verbo-pictorial metaphors, notably showcasing the P-ØMs, P-PMs, and PVMs. Personification, spatial, and scenario metaphors proliferate, emotionally charged, while the “A-ING IS B-ING” structure crafts miniature, dynamic narratives. Reflecting on these traits, it becomes evident that telecommunication fraud has intensified in China, its impact inestimable; the scope of victimhood broad, yet regulatory bodies are steadfast in their efforts to counter and eradicate this menace, striving to establish a secure and trustworthy communication landscape that safeguards public welfare and societal stability. Leveraging the metaphorical insights from these editorial cartoons, we can enhance public awareness campaigns and elevate vigilance against telecommunication fraud. Furthermore, this study augments the analytical landscape of editorial cartoons, offering a valuable tool for multimodal public outreach aimed at safeguarding public interests.

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