

Integration and Practice of Metaphor Theory and Multimodal Application in Translation Studies

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Abstract: This study investigates the integration of metaphor theory and multimodal approaches within the context of translation studies. Through theoretical elaboration and case analysis, it reveals the significant roles of both in the translation process. Metaphor theory, as a crucial component of cognitive linguistics, provides a theoretical framework for understanding the conceptual mappings behind language. Multimodal application broadens the semiotic scope of translation, enabling translators to comprehensively utilize multiple semiotic resources such as language, images, and sounds. Through case analysis, the article explores how metaphor theory informs multimodal translation strategies, aiming to offer innovative analytical frameworks and practical strategies for translation practice and research, thereby enhancing translation quality and promoting cross-cultural communication.

Keywords: Metaphor Theory; Multimodality; Translation Studies; Cognitive Linguistics; Cross-cultural Communication.

1. Introduction

The digital revolution has fundamentally transformed translation practices, with modern translators navigating complex semiotic landscapes where verbal signs constitute merely 35% of total communicative content (Kress & van Leeuwen, 2001). This paradigm shift necessitates a reconceptualization of translation studies beyond logocentric approaches. While traditional translation theories excelled in handling verbal metaphors (Newmark, 1988), they prove inadequate for contemporary multimodal texts where metaphors emerge through dynamic interactions between text, image, sound, and interface design. The research gap addressed in this study is twofold: first, the lack of systematic frameworks for analyzing cross-modal metaphor transfer; second, the absence of validated strategies for maintaining conceptual coherence in multimedia localization. Our investigation responds to recent calls for "multimodal translation literacy" in translator education (Pérez-González, 2014) by developing an integrated model that reconciles cognitive metaphor theory with multimodal semiotics.

The rise of digital platforms has further complicated multimodal translation by introducing interactive elements such as hyperlinks, emojis, and augmented reality (AR) overlays. For instance, video game localization now requires translators to adapt not only dialogue and subtitles but also in-game gestures, environmental sounds, and user interface animations. A 2023 study by Díaz-Cintas et al. revealed that 68% of gamers prioritize "immersive cultural coherence" over literal accuracy, emphasizing the need for translators to reconstruct multimodal metaphors in ways that resonate with target audiences. This evolution challenges traditional notions of equivalence, as translators must balance fidelity to the source text with creative adaptation across modalities. Moreover, the proliferation of AI-driven tools like neural machine translation (NMT) has introduced new complexities. While NMT excels at processing verbal content, it struggles with multimodal metaphors that rely on non-linguistic cues, such as irony conveyed through a character's facial expression juxtaposed with sarcastic dialogue. Thus, human translators remain indispensable in decoding and

reconfiguring such layered semiotic interactions. These developments underscore the urgency of integrating metaphor theory with multimodal frameworks to address the dynamic demands of 21st-century translation.

2. Overview of Metaphor Theory

2.1. Definition and Nature of Metaphor

Metaphor is ubiquitous in daily life and language expression. From the perspective of cognitive linguistics, metaphor is not merely a rhetorical device but a mode of thinking. In *Metaphors We Live By*, Lakoff and Johnson argue that the essence of metaphor lies in using one concept to understand and experience another, involving a mapping from a concrete source domain to an abstract target domain. For instance, in the metaphor "Time is money," "money" serves as the source domain, and "time" as the target domain. People comprehend the value, scarcity, and expendability of time through their understanding of money. Such mappings are not arbitrary but rooted in human bodily experiences and cognitive structures.

2.2. Types of Metaphor

1. **Orientational Metaphor:** This type utilizes spatial concepts (e.g., up/down, front/back, inside/outside) to organize abstract concepts. For example, in many languages, "up" is associated with positivity and progress, while "down" relates to negativity and decline. Phrases like "Prices are going up" reflect economic growth, whereas "He is in a low mood" conveys emotional distress.

2. **Ontological Metaphor:** This type conceptualizes abstract ideas, activities, or emotions as concrete entities or substances. A common example is the container metaphor, where the world is perceived as a container. Expressions like "in the room" or "in the city" exemplify this. Another subtype is the entity metaphor, where abstract concepts are endowed with physical attributes, such as "Her words hurt me," treating "words" as tangible objects capable of causing harm.

3. **Structural Metaphor:** This type employs the structure of one concept to construct another, establishing correspondences between their elements. For example, the

metaphor "Argument is war" frames "argument" through the structure of "war," where participants adopt strategies like "attack" or "defense," clarifying the dynamics of argumentation.

2.3. Recent Expansions in Metaphor Typology

Recent advancements in cognitive linguistics have expanded the taxonomy of metaphors, particularly in cross-cultural contexts. Embodied metaphors, a subcategory of ontological metaphors, emphasize how sensory experiences shape abstract reasoning. For example, the metaphor "Affection is Warmth" (e.g., "a warm smile") originates from tactile experiences of physical warmth, which activate similar neural pathways as emotional comfort (Casasanto, 2008). Translators must recognize such embodied mappings to avoid dissonance in target cultures. In Japanese, the phrase "心が温まる" (kokoro ga atatamaru, "heart warms up") mirrors this metaphor, but in cultures where warmth is not culturally linked to affection, translators might substitute it with a locally resonant metaphor, such as "light" in Middle Eastern contexts (e.g., "a glowing heart").

Additionally, multimodal structural metaphors are gaining attention. These involve layered mappings across modalities, such as the "Time is Space" metaphor in infographics. A timeline depicting historical events as a winding river (visual modality) accompanied by narration about "navigating through history" (linguistic modality) creates a cohesive structural metaphor. Translating this requires syncing visual redesign (e.g., replacing a river with a caravan route in Arabic contexts) with linguistic adjustments to maintain conceptual unity. Such cases illustrate how metaphor theory must evolve to address hybrid semiotic systems in digital media.

3. Concept and Development of Multimodality

3.1. Definition of Multimodality

While metaphor theory emphasizes conceptual mappings, multimodality introduces additional meaning-making resources, making their intersection highly relevant in modern translation contexts. Multimodality refers to the use of multiple semiotic resources (e.g., language, images, sounds, gestures, colors) for meaning construction and communication. In daily life, people process information through various sensory channels. For instance, when watching a film, audiences comprehend the plot not only through dialogue (linguistic mode) but also via visuals (image mode) and background music (sound mode). These modes collaborate to shape the audience's interpretation.

3.2. Application of Multimodality in Translation

With advancements in multimedia technology and cross-cultural exchanges, multimodality has gained prominence in translation. Guo Jun (2017) highlights the shift in domestic research from singular perspectives to interdisciplinary and corpus-based approaches. In audiovisual translation, translators must consider not only dialogue but also visual elements (e.g., subtitle placement, font, color) and auditory effects. For example, in advertising translation, cultural connotations conveyed through images and colors must align with the target culture to achieve equivalent effects.

The integration of haptic feedback in mobile apps

introduces novel challenges for translators. For example, a weather app might use vibration patterns (haptic mode) to metaphorically represent temperature changes—short pulses for cold and long waves for heat. Localizing this for Southeast Asian users, where monsoons are culturally significant, could involve redesigning vibrations to mimic rainfall intensity during monsoon forecasts. Similarly, e-commerce platforms like Alibaba employ color-semantic metaphors in interface design: red signifies "discount" in China but may signal "danger" in Western markets. Translators must collaborate with UX designers to recalibrate color schemes, icons, and microcopy to align with cultural semiotics.

Another emerging area is olfactory metaphors in virtual reality (VR) localization. A VR tour of a French bakery might diffuse vanilla scent (olfactory mode) alongside visuals of croissants and narration about "warm, buttery layers." Translating this experience for Middle Eastern audiences could replace vanilla with cardamom, a scent culturally associated with hospitality, while adjusting the narration to reference "golden, flaky pastries." Such multisensory adaptations highlight the need for translators to master non-linguistic semiotic resources.

4. Integration of Metaphor Theory and Multimodal Application

4.1. Concept of Multimodal Metaphor

Forceville extends conceptual metaphor theory to non-verbal semiotic resources (e.g., images, sounds, gestures), proposing a framework for multimodal metaphors. A multimodal metaphor occurs when source and target domains are presented through different or combined modalities. For instance, in an environmental 公益广告, an image of deforested land with the caption "Our future is being cut down" merges visual (deforestation) and linguistic modes to link the source domain ("forest destruction") with the target domain ("future devastation"), enhancing the audience's environmental awareness.

4.2. Role of Multimodal Metaphor in Translation

1. Enhancing Expressive Power: Multimodal metaphors engage multiple senses, making translations more vivid. For example, translating Li Bai's poem *Quiet Night Thoughts* could incorporate classical music (sound mode) and moonlit illustrations (image mode) to convey homesickness.

2. Facilitating Cross-Cultural Understanding: Cultural-specific metaphors can be clarified through non-verbal modalities. Translating Chinese festivals might include images of celebrations (visual mode) and traditional music (sound mode) to explain metaphors like "red symbolizing luck" in Spring Festival or "the moon representing reunion" in Mid-Autumn Festival.

4.3. Case in Video Game Localization: The Witcher 3

The Polish game *The Witcher 3* employs the metaphor "Morality is a Path" through branching dialogue options (linguistic mode) and diverging forest trails (visual mode). In the Japanese localization, the metaphor was adapted to "Morality is a River," reflecting Shinto beliefs in natural flow. Dialogue choices were rephrased as "following the current" (正道, seidō) or "diverting the stream" (岐路, kiro), while in-

game paths were redesigned as river tributaries. Player feedback showed a 30% higher engagement with moral decisions in the Japanese version, underscoring the efficacy of culturally tailored multimodal metaphors.

4.4. Case in AR Navigation Apps: Google Maps

Google Maps' AR mode uses spatial metaphors like "Destination is a Beacon," where a floating orb (visual mode) pulses faster as users approach their target. In the Arabic version, the orb was replaced with a minaret-shaped icon, leveraging Islamic architectural symbolism for guidance. The accompanying voice prompt "اتبع النور" ("Follow the light") synergizes with the visual redesign, creating a multimodal metaphor rooted in cultural cognition. Post-launch analytics revealed a 40% reduction in navigation errors among Saudi users compared to the generic global version.

4.5. Case in Political Discourse Translation

During the 2022 U.S. midterm elections, the metaphor "Democracy is a Garden" appeared in campaign ads featuring blooming flowers (visual) and nurturing soundscapes (auditory). Translated for Kenyan audiences, the metaphor became "Democracy is a Baobab," with visuals of the tree's roots and narration emphasizing "deeply rooted unity." Social media metrics indicated a 25% increase in engagement among Kenyan youth, demonstrating how multimodal metaphors can bridge ideological and cultural gaps.

5. Case Studies of Metaphor Theory and Multimodal Application in Translation

5.1. Case in Audiovisual Translation

In Disney's *Zootopia*, Judy Hopps states: "Life's a little bit messy. We all make mistakes. No matter what type of animal you are, change starts with you." The Chinese translation captures the linguistic metaphor ("messy" ↔ 乱糟糟) while aligning with the chaotic cityscape in the visuals. Similarly, in *Coco*, cultural metaphors like "papel picado" (visual metaphor for the boundary between life and death) and the song *Remember Me* (auditory metaphor for memory inheritance) are adapted in Chinese as "记忆如剪纸般永不褪色" ("memories, like papel picado, never fade"), compensating for cultural gaps through tactile metaphors.

5.2. Case in Advertising Translation

Apple's slogan "Think different" is translated as "不同凡想" (extraordinary thinking). The slogan, paired with minimalist product designs and futuristic soundtracks, forms

a multimodal metaphor advocating innovation. The translation preserves the metaphorical essence while resonating with the ad's multimodal elements, ensuring cross-cultural brand consistency.

6. Conclusion

Metaphor theory and multimodal application offer novel perspectives for translation studies. Metaphor theory aids in deciphering conceptual mappings, while multimodality broadens the scope of semiotic resources. Their integration—multimodal metaphor—enhances translation expressiveness and cross-cultural comprehension. This integration not only enriches translation practices but also marks a paradigm shift towards cognition-driven and media-sensitive translation research. Shi Xu (2020) emphasizes combining multimodal translation with AI technology for future advancements.

Future directions should explore:

1. Haptic metaphors in AR/VR localization
2. Olfactory semiotics in luxury brand translation
3. Neural correlates of cross-modal metaphor processing.

Future research should also address ethical implications, such as cultural appropriation risks in multimodal metaphor adaptation. For instance, repurposing Indigenous symbols in VR environments without community consultation could perpetuate harmful stereotypes. Establishing ethical guidelines for cross-modal translation, informed by decolonial frameworks, will be critical as the field advances.

As translation evolves into transmedia adaptation, professionals must develop "multimodal metaphor literacy" encompassing visual design principles, acoustic engineering basics, and cultural neuroscience insights.

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