



Research Article

CONCEPTUALIZING GLOBAL WARMING THROUGH METAPHORS IN ENVIRONMENTAL DISCOURSE

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Abstract

Language is a primary means by which humans comprehend global warming. This cognitive phenomenon employs metaphors, rhetoric, and other cognitive frameworks to facilitate reasoning. This study examines the role of metaphors in conceptualizing global warming in contemporary English environmental discourse, drawing on Conceptual Metaphor Theory, Critical Metaphor Analysis and Framing Theory. 30 key environmental communication pieces and reports from BBC Environment, The Guardian, National Geographic, and NASA Climate News (2019–2024) were analyzed. With the Metaphor Identification Procedure, the qualitative analysis identified four metaphorical patterns: GLOBAL WARMING IS A DISEASE, WAR, FIRE, and MORAL PUNISHMENT. These metaphors affect people's emotions and morality and their cognitive understanding of global warming. The study found that metaphorical framing can increase environmental awareness but also reinforce anthropocentric and crisis-based worldviews. The work allows enables cognitive linguistics, ecolinguistics, and environmental discourse research to collaborate through metaphor, which mediates knowledge and generates meaning in the context of global warming communication.

Keywords

metaphors, global warming, environmental discourse

1. Introduction

Global warming, an issue that requires immediate attention in the 21st century, is both a scientific fact and a social phenomenon. The natural scientists, for one, can tell that the phenomenon is happening according to the indicators they gain from non-living things, such as the rise in temperature, the amount of greenhouse gases, and the changes in the ocean,

while the general opinion of global warming is still very much bound up with the way it is framed and talked about in language (Boykoff, 2011; Larson, 2011). The use of language does not simply act as a mirror reflecting the existing reality, but it really influences how people and societies understand the world. The use of a metaphor makes it easier for

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individuals to think of the imperceptible and abstract elements of the planet's climatic system in terms of a concrete and familiar experience. Lakoff (2010) said it succinctly, “language evokes frames, and frames shape how we reason about the world.” The cognitive-linguistic approach treats metaphors as necessary in all the ways that global warming is portrayed as something real, urgent, and morally important. These metaphoric expressions not only convey the ‘sickness’ of the planet but also imply that it needs treatment, hence, the phrases like, “the planet has a fever,” “we are in war with climate change,” or “nature is taking vengeance” are used to comprehend the warming of the globe through other significant areas of human life - health, war, and ethics. The ‘mappings’ through which the public sees the planet and acts accordingly are based on these three metaphors: if the planet is sick, cure it; if climate change is the enemy, fight it; if nature is punishing us, repent. Past research has demonstrated that metaphors related to the environment are not merely neutral rhetorical instruments, but rather highly potent cognitive and ideological factors (Charteris-Black, 2004; Nerlich & Koteyko, 2009). The metaphors affect the public's understanding, as well as the setting of policy priorities, the shaping of the media narrative, and the determination of moral discourse. Nevertheless, integrative qualitative studies that present metaphorical patterns across various sources of environmental communication are still very few in number, especially in the Southeast Asian context. Thus, the present research explores the metaphor of global warming in environmental discourse worldwide through the English language. Through the identification and interpretation of metaphorical expressions found in current media and institutional texts, this study aims to uncover the cognitive patterns and moral frameworks that influence people's perceptions of climate change. Additionally, this work is also concerned with the implications for environmental education and science communication, where the metaphor is a primary pedagogical tool for presenting the complexity of the issue and maintaining the audience's interest.

2. Literature review and Theoretical background

2.1. Literature review

Since the publication of *Metaphors We Live By* (Lakoff & Johnson, 1980), research into conceptual metaphor has undergone a transition through various paradigms. The central idea that Conceptual Metaphor Theory (CMT) is built upon is that metaphors provide human thought with a structure: we grasp one conceptual area (the target) through another, which is more concrete (the source). This theory not only

revolutionized linguistics but also confirmed the idea that metaphor is not merely a figure of speech but a manifestation of embodied cognition (Gibbs, 2017; Kövecses, 2010). In the area of environmental communication, the application of CMT by researchers aimed to understand how metaphors depict ecological crises. Charteris-Black (2004, 2014) introduced Critical Metaphor Analysis (CMA), which examines metaphors as channels of ideology, persuasion, and emotion. He has demonstrated that the use of metaphors like “climate change is a battle” or “the planet is ill” has the effect of endorsing certain attitudes and actions. In a communication process that changes with context, Cameron (2003) discusses metaphor as a discourse process, extending the perspective.

Nerlich & Koteyko (2009) scrutinized the discourse of climate change, and they found the manifestations of EARTH AS A BODY and CLIMATE CHANGE AS A DISEASE, which not only stressed the obliviousness in the public perception of science but also brought human experience closer to the phenomena. Likewise, Flusberg, Matlock, and Thibodeau (2017) studied the different metaphorical framings - war, race, and journey—they showed that these very different frames bring about different motivations and thus their respective public engagement. While Boykoff (2011) and Larson (2011) examined metaphors in the media, the former discovered a conflict between the scary and hopeful narratives, whereas the latter found the opposite. The latest studies (Stibbe, 2015; Dryzek, 2013; Hulme, 2009) conducted across disciplines have tended to equate metaphor with ecolinguistics and environmental discourse analysis, and thus have pronounced that the selection of words affects environmental awareness. Stibbe (2015) introduced the term “stories we live by,” a concept aimed at examining whether the dominant patterns of language throughout history had been supportive of or challenging to unsustainable worldviews. This line of thought considers metaphor as a significant narrative tool that molds environmental consciousness.

Vietnamese metaphor studies have paralleled the rise of cognitive linguistics, a trend that began in the early 2000s. Some of the ways metaphor has been analyzed include the works of Đỗ Hữu Châu (2001), who examined the semantic and cultural basis that underpins the use of metaphors in the Vietnamese language. Trần Văn Cơ (2009) interpreted the virtual nature of Vietnamese figurative expressions in the context of the embodied experience. Lê Hùng Tiến (2015) investigated the intercultural and interlinguistic metaphors of emotion and nature with cognitive linguistics and disclosed the culturally specific mappings. Recently, Nguyễn Hoàng Phương (2020) scrutinized the environmental rhetoric in the Vietnamese press, noting that the metaphors of “natural balance” and “human–nature harmony” highlight a collectivist worldview, in contrast to Western anthropocentric frames. Lê Quang Thiêm (2004) and Nguyễn Đức Tồn (2012)

also noted that the cultural cognitive roots of the yin-yang philosophy and agrarian cosmology influence the Vietnamese metaphor. Nevertheless, the Vietnamese research has rarely tackled the issue of global warming and the corresponding conceptual metaphors in English or international discourse. The majority of studies have focused on metaphors of emotions, time, or culture rather than ecological or climate-related topics. Therefore, this research not only fills a significant gap but also applies a cognitive-discursive framework to the study of environmental communication, combining insights gained from both Western and Vietnamese metaphor scholarship.

2.2. Theoretical background

2.2.1. Conceptual metaphor theory (CMT)

The Conceptual Metaphor Theory, articulated by Lakoff and Johnson in 1980, posits that metaphorical thinking is integral and foundational to human cognitive processes, and cannot be viewed solely as a rhetorical device. In CMT, the metaphor is a tool to understand and grasp one idea (the target) by connecting it to another more salient (the source). This is essential for understanding abstract subjects, especially 'time', 'morality', or 'climate', and for linking them to more tangible experiences (Kövecses, 2010; Gibbs, 2017).

A foundational idea in CMT is embodied cognition, which means that a person's thinking is influenced by their experiences, whether physical, sensory, or cultural. This is one of the reasons why certain metaphorical expressions like "the temperature is rising" or "the Earth is heating up" draw from and invoke the mental images and emotional states caused by heat and discomfort in order to explain and articulate one's feelings about global warming (Lakoff & Johnson, 1999).

CMT describes different types of metaphors. Structural metaphors compare complex ideas, like GLOBAL WARMING IS A DISEASE. Orientational metaphors use directions or space, such as TEMPERATURE IS UP. Ontological metaphors give human traits to non-human things, for example, THE PLANET IS SICK. Each type shapes how we talk about global warming.

However, Cameron (2003) and Steen et al. (2010) note that metaphors evolve and are context-dependent. If we focus only on how people think, we might miss their social and ideological roles. This is why later research also looks at discourse analysis and critical viewpoints.

illustrate the relationships between the two realms. Paradigms consist of a source domain, a target domain, and a mapping from the source domain to the target domain.

2.2.2. Critical metaphor analysis (CMA) and the discourse perspective

Critical Metaphor Analysis (CMA), developed by Charteris-Black (2004, 2014), extends CMT by examining how metaphors function in society. CMA shows that metaphors affect not just how we think, but also how we persuade others and express beliefs. It focuses on three key aspects: identifying metaphorical language, connecting source and target ideas, and examining the speaker's intentions, power, or beliefs. This method helps study environmental language, where metaphors can motivate people or place blame. For example, saying "We must fight climate change" makes climate change seem like an enemy, which creates urgency and supports policy action (Flusberg et al., 2017). On the other hand, "The Earth needs healing" encourages empathy and care (Nerlich & Koteyko, 2009).

CMA shares an analytical foundation with Critical Discourse Analysis (CDA) (Fairclough, 1995), which views language as a social practice deeply entwined with power relations. Through analyzing the use of metaphors in climate discourse, CMA identifies how discursive practice is a projection of underlying sociopolitical ideologies, such as human exceptionalism, economic expansion, or environmental stewardship. In conclusion, CMA spans the cognitive and social domains by preserving the cognitive precision of CMT while demonstrating how metaphors function in discourse as a means of persuasion, moralization, or naturalization of a worldview.

Framing Theory is also an important concept in this research work. This concept was pioneered by Goffman in 1974, but it was developed by Entman in 1993 and by Lakoff in 2010. A frame is a cognitive component that facilitates our understanding of issues, identifies a problem, assigns responsibility, and proposes a remedy. A metaphor is a robust frame because it ascribes a new meaning to an existing understanding of a concept, making it more transparent or easier to understand. Take, for instance, describing climate change as a war or a disease.

In terms of environmental communication, metaphor plays a crucial role in determining whether climate change is perceived as a technological, political, or moral issue (Nisbet, 2009; Larson, 2011). Researchers have argued that a compelling environmental message should be conveyed through a metaphorical framework that fosters empowerment rather than hopelessness (Maibach, Roser-Renouf, & Leiserowitz, 2008). An understanding of metaphorical relations and the use of metaphorical framing in such discourse enables communicators to present a constructed reality that fosters constructive engagement rather than apathy. Environmental Discourse Theory (EDT) is an interdisciplinary field that draws on linguistics, ecology, and sociology. This was described as a group of narratives, such as "sustainability," "ecological modernization," and "survivalism," that define a society's perception of environmental issues (Dryzek, 2013). EDT is metaphorical in

that it is described as a “constellation of narratives” that define a society's perception of reality (Dryzek, 2013, p. 9) in terms of an “ensemble of ideas, concepts, and categorizations” that guide an individual's perceptions of reality in meaningful ways (Dryzek, 2013, p. 9).

Ecolinguistics, as Stibbe (2015) builds upon EDT, examines the patterns of use of symbols produced in human society that influence human relations with the natural world. Stibbe developed a metaphorical framework related to a “communication of narratives that we live by.” This metaphorical framework examines “common ways of speaking that either improve or impair our ecology” (Stibbe, 2015).

Examples of “narratives that we live by” include “Mother Nature,” “Balance of Nature,” and “Carbon Footprint,” which define society's values of “nature” in Stibbe's metaphorical framework. From an application of EDT and Ecolinguistics, it is clear that metaphor is both descriptive and prescriptive in terms of its influence on society's public opinions and its value judgments of issues such as global warming. This was said to have been

Another insight is provided by research in Vietnam. Researchers such as Nguyễn Hoàng Phương in 2020 and Lê Hùng Tiến in 2015 have highlighted that Vietnam's use of environmental terms is impacted by its culture. In Vietnam's culture, metaphors often represent harmony and balance, emphasizing the collective responsibility of the whole community rather than conflict.

3. Research Methodology

3.1. Approaches

This research falls under the interpretivist paradigm, which posits that meanings are constructed through elements of language, culture, and discourse, rather than being discovered as objective truth (Creswell & Poth, 2018). From a particular epistemology, qualitative methodology is most suitable for analyzing metaphor because it functions as a discourse of interpretation in understanding how people comprehend complex events in society (Cameron & Maslen, 2010). This research does not aim to quantify metaphors in terms of their use, but rather to gain an understanding of their cognitive and communicative power in addressing issues related to global warming.

In qualitative research paradigms, particularly, this research incorporates a cognitive-discursive methodology that draws upon the precepts of Conceptual Metaphor Theory, as proposed by Lakoff & Johnson in 1980, as well as those of Critical Metaphor Analysis, as articulated by Charteris-Black in 2004. This is because a cognitive-discursive methodology recognizes that a metaphor is a cognitive artifact embedded

within discourse; thus, it is not merely a linguistic aspect.

This is supported by the proposed study's perspective that environmental communication is a form of knowledge mediation. This is because, according to Dryzek (2013) and Stibbe (2015), environmental discourse is a determinant of how society constructs its understanding of nature, responsibility, and sustainability issues. This study is therefore not only a linguistic study but also a cognitive study of society.

3.2. Research methods and techniques

3.2.1. Data collection

The data for this research includes thirty English-language documents produced between 2019 and 2024, all of which come from respected sources of environmental communication such as BBC Environment, The Guardian, National Geographic, NASA Climate News, and UN Climate Reports.

Criteria for selection included:

1. The text clearly focuses on global warming or climate change.
2. It has metaphorically dense language that is meant for a broad audience.
3. The journal is known for its scientific credibility and impact in public discourse.

Each article was downloaded and electronically archived in its original form. This body of work contained roughly 60,000 words. This particular study specifically dealt with lexico-semantic metaphors—i.e., word or phrase-level metaphorical expressions, as opposed to pictorial or graphic ones (such as in figures or photographs).

3.2.2. Data analysis procedures

To identify and examine metaphors, the study followed the Metaphor Identification Procedure – Vrije Universiteit (MIPVU), as proposed by Steen et al. (2010). This procedure was modified to be applied in environmental discourse in a multi-step manner:

1. Comprehensive reading: Every text was read several times in order to have a holistic understanding of it.
2. Lexical unit identification: The sentences were broken down into units for analysis.
3. Metaphor identification: Phrases or words are classified as metaphors if their intended meanings in a particular context differ from a simpler literal meaning and can be resolved through a process of analogical reasoning.
4. Source & target domain coding: Categorization of metaphors was done based upon their source domains (e.g., DISEASE, WAR, FIRE, MORALITY).
5. Interpretive grouping: Similar metaphors were grouped in terms of conceptual patterns that were interpreted.

A coding form was created for transparency. To improve inter-coder reliability, two independent coders with a background in cognitive linguistics coded a subset of the text (20%). They achieved a high kappa statistic of 0.86, indicating a high degree of inter-coder agreement (Miles, Huberman, & Saldaña, 2020).

The analysis framework embraced three levels of interpretation:

- Cognitive level: identifying conceptual mappings (Lakoff & Johnson, 1980)
- Discursive level: analyzing rhetorical and communicative function (Charteris-Black, 2004)
- Socio-ecological level of understanding: interpreting broader implications in terms of environment and morality (Stibbe, 2015; Hulme, 2009).

Through triangulation of these threefold aspects, it was possible to achieve an in-depth analysis in terms of cognition, language, and ideology.

4. Findings and Discussions

4.1. Overview of Metaphorical Patterns

The qualitative analysis of the thirty environmental texts revealed four dominant conceptual metaphors through which global warming is represented in English-language environmental discourse. These are:

GLOBAL WARMING IS A DISEASE

GLOBAL WARMING IS WAR

GLOBAL WARMING IS FIRE / HEAT

GLOBAL WARMING IS A MORAL PUNISHMENT OR RETRIBUTION

Every metaphor involves a web of source-target mappings that provide us with cognitive, emotional, and moral engagement with climate change. The subsections that follow examine these mappings in detail, illustrating their functioning as part of more extensive discursive frames.

4.1.1. Global warming is a disease

The most prevalent metaphorical schema in the data set conceptualizes global warming as a disease of the Earth. Phrases such as “the planet has a fever,” “the Earth is sick,” and “we need to heal the planet” emerged with remarkable frequency, especially in articles from both the BBC Environment and National Geographic. This particular mapping relies on the source domain of human health, applying bodily experiences - such as pain, fever, and healing - to planetary systems. From a cognitive perspective, this metaphor conceptualizes global warming and aligns with the embodied cognition principle of CMT (Lakoff & Johnson, 1999). The conceptual abstraction of temperature rising becomes embodied and thus tangible through the bodily

schema of fever, which most readers have intuitive access to. In essence, as Gibbs (2017) points out, embodied metaphors create empathy by engaging embodied or visceral knowledge; readers feel the suffering of the Earth.

Discursively, the disease metaphor positions humanity to be both the disease and the cure. The repeated collocation “human activity has infected the planet” constructs Earth, in a sense, as a willing participant, and attributes moral agency to humans. This aligns with the “healer-patient” model described by Nerlich and Koteyko (2009), in which science and technology serve as the doctor, diagnosing and treating the environmental ills and motivating an agency of remediation - a belief that we can restore ecological health through human intervention (e.g., renewable energy, conservation, etc.).

The disease metaphor implies fragility and dependence as well. By framing Earth as a passive patient, it risks reaffirming anthropocentrism: humanity maintains a central position and retains all responsibility for whether the cure succeeds or fails. In the Vietnamese ecological philosophy, the natural world, too, is sometimes framed with day to day situations analyzing a framework of care, but rather than being framed as a patient, the relational partner is framed and called into being as a framing of *thiên-địa-nhân hòa hợp* (harmony of Heaven, Earth, and Humans) (Lê Hùng Tiến, 2015). This distinction is again a consideration of culturally specific metaphorical cognition.

4.1.2. Global warming is war

The metaphor of war is ubiquitous in political and journalistic discussions surrounding climate change, as evidenced by headlines such as “Fighting Climate Change” and “The Battle Against Global Warming,” as well as the phrase “a race to save the planet.” The war metaphor portrays climate change as an enemy, one that will necessitate collective mobilization to defeat it.

Cognitively, this conceptual schema activates the PROBLEM IS WAR model of understanding, where the problem (global warming) is an enemy and the solution (mitigation) is the fight. Therefore, the war metaphor naturalizes thinkers' imagining the urgency, conflict, and sacrifice of combat (Flusberg et al., 2017). For example, consider The Guardian (2022), which explains that scientists are on the frontline of the fight against climate change: “Scientists are on the frontline of our fight against climate change.” In this wording, “frontline” visualizes imagery of battle and positions scientists as soldiers organizing to defend humanity.

Charteris-Black (2004) argued that the metaphors of struggle accomplish persuasive functional effects by appealing to emotions of courage and solidarity. In the context of climate, they create a mobilization frame that legitimizes

the possibility of intervention and international cooperation. Lakoff (2010) provides a similar account, explaining that these metaphors activate moral frames related to protection and heroism.

Nevertheless, this metaphor can induce psychological fatigue. When a problem is perceived as an ongoing battle, the audience may feel hopeless or disengaged from the issue. Boykoff (2011) cautioned that alarmist and combative language in media coverage may lead to “climate fatigue,” resulting in decreased motivation to engage in the long term. Thus, although the war metaphor can be effective in mobilizing action, people still need to be engaged in frames that encourage cooperation and care.

4.1.3. Global warming is fire/ heat

The heat or fire metaphor literally correlates with the rise in global temperatures, but in the context of climate communication, it becomes more sensational through figurative discourse. Phrases such as “our world is burning,” “the planet is on fire,” and “human greed stokes the flames” were often present in BBC and NASA Climate news. This metaphor also operates at moral levels, heat represents destructiveness and purification. From a cognitive perspective, the heat or fire metaphor utilizes the intensity schema, which is one of the most primordial embodied experiences (Kövecses, 2010). Increasing heat equals danger or discomfort; thus, to exacerbate the perception of threat that our Earth is “burning” is fitting. From a discursive perspective, to further sensationalize climate change, the metaphor further turns data into emotional stories.

The fire metaphor also operates within moral discourse. When journalists say, “Our planet burns because of human greed,” the source domain of fire combines with moral punishment, suggesting that humanity's sins have caused retribution. Hulme (2009) refers to this as “the apocalyptic narrative” of climate change, where the imagery of fire connotes cleansing or the end of civilization. While this intensifies moral urgency, it can also foster a sense of fatalism - the notion that destruction is something that will inevitably happen rather than something we have a chance of preventing.

Intriguingly, we see similar imagery in the discourse of Vietnamese culture, since “fire” (lửa) connotes both destruction and life force. “Giữ lửa” (keeping the fire) conveys liveliness, but “cháy rừng” (forest burning) conveys destruction. The connotation “fire” illustrates that this same metaphor is woven with opposite cultural meanings - confirming the need for contextualized meaning-making.

4.1.4. Global warming is a moral punishment or retribution

The fourth metaphorical pattern characterizes global warming as a moral punishment, as a result of humanity's

arrogance and exploitation. Opinion pieces and environmental campaigns sometimes feature phrases like “Mother Nature is striking back,” “the earth is taking revenge,” and “we are paying for our sins.”

This metaphor reflects the moral framing discussed by Lakoff (2010), as it interprets nature as a moral agent. It embodies what Stibbe (2015) referred to as the “ecological morality narrative,” which depicts environmental decline as a karmic consequence. Such metaphors are effective in activating ethical sensibilities, humility, and repentance.

However, this metaphor may unintentionally ascribe intentionality to natural systems. Critics (Larson, 2011) warn that moral metaphors can facilitate ideas of moral causality that extract scientific causation, shifting the focus from policy solutions to emotional guilt. Regardless, this metaphor may resonate with local cosmologies in religious or cultural frameworks, particularly in Southeast Asia, where nature is often viewed as sentient or spiritual. For instance, in Vietnamese folk beliefs, disasters are often interpreted as an indication that there is an imbalance (mất hòa khí với trời đất). In this sense, Nature's revenge serves as a helpful metaphor for linking scientific and cultural interpretations of global warming.

trần và phá tan mọi thứ.” (Cánh đồng bất tận)

“The old man's anger rose, higher than the **floodwaters**, **overwhelming** and **destroying** everything.” (*The Endless Field*)

His rage rises like a flood, surpassing everyday natural phenomena like floodwater. It is well observed that fury signifies intensity and destruction that sweeps away everything and leaves nothing but permanent destruction. Anger is presented as uncontrollable, powerful, and destructive, while the water imagery shows that it can sweep away reason and human relationships.

4.2. Interactions among Metaphors: A Cognitive–Discursive Network

Although these four metaphors can be examined individually, the data demonstrate that all metaphors function in a significant and interactive manner with one another. The disease and war metaphors frequently co-occur, resulting in hybrid terms such as “fighting to heal the planet” or “a global battle to cure the fever of Earth”. This conceptual blending (Fauconnier & Turner, 2002) illustrates that cognitive systems are capable of integrating multiple frames to create complex meaning.

Likewise, the fire and punishment metaphors also intertwine within apocalyptic discourse. Headlines such as “Our sins have set the world on fire” combine illustrations of both physicality and morality, conveying a theological narrative of retribution. However, these cross-domain blends enhance emotional engagement and moral salience, while also

polarizing a public counter-narrative by framing climate change as a moral drama, rather than a scientific challenge.

This supports Cameron's (2003) assertion that metaphor is not a fixed concept, but rather a concept that is dynamically constructed in discourse. Instead, metaphor changes as discourse adapts to communicative purposes and the audience's knowledge and expectations. Therefore, the interaction, transformation, and accumulation of these metaphors are indicative of the representative complexity of climate discourse in its various and dynamic aspects, encompassing scientific, political, moral, and emotional dimensions. However, climate change is much more complex (this is a different research agenda).

4.3. Implications for Environmental Communication and Education

Metaphors remain valuable resources for communicating scientific knowledge and for environmental education, because, as Larson (2011) noted, they can clarify scientific concepts while shaping people's values and behaviors. The implications of this for future practice are outlined in the following three concepts:

1. One can build a balance of urgency and hope: Using wartime and fire metaphors may provide fear and paralysis. Instead, educators and journalists should incorporate healing, cooperation, and stewardship metaphors to promote ongoing engagement.
2. Culturally resonant metaphors lead to more inclusive environmental messages: Framing environmental messages with culturally resonant frames - such as harmony and reciprocity in an Asian context - has advantages over simply importing Western, often antagonistic metaphors.
3. Foster reflexive awareness: Communicators should reflect on their metaphors and understand the cognitions and ethics involved in the metaphors. As Stibbe (2015) advised, ecological discourse should develop life-giving and sustaining "stories we live by."

These points are also of pedagogical value to English language teaching; the analysis of metaphors can be incorporated into EFL courses and utilized to develop students' critical language awareness and environmental consciousness, supporting sustainability in education.

5. Conclusion

5.1. Recapitulation

The current research has explored how contemporary global warming is conceptualized by metaphor in the English language environmental discourse. Drawing on Conceptual Metaphor Theory (CMT) (Lakoff & Johnson, 1980), Critical

Metaphor Analysis (CMA) (Charteris-Black, 2004), Engaging Framing Theory (Lakoff, 2010), and Environmental Discourse Theory (Dryzek, 2013; Stibbe, 2015) highlighted the predominance of metaphor as a method of structuring human comprehension, moral reasoning, and communicative framing of the climate crisis. The overall qualitative analysis of thirty articles and reports from major international media and institutional sources, drawing on the period from 2019 to 2024, identified four major metaphorical patterns: GLOBAL WARMING IS A DISEASE, GLOBAL WARMING IS WAR, GLOBAL WARMING IS FIRE, and GLOBAL WARMING IS A MORAL PUNISHMENT.

The disease metaphor portrays the planet as a patient suffering from a disease caused by human activities. It makes global warming comprehensible through our embodied experience of sickness and health, and subsequently encourages empathy and a sense of responsibility.

The war metaphor constructs climate change as a threat external to the human population, which must be fought. This framing legitimizes some sense of urgency, collective solidarity, and political intervention. It guides us toward mobilizing action-oriented decision-making and collective solidarity.

The fire metaphor dramatizes the environmental crisis with images of heat, combustion, and destruction. It heightens the perception of risk and moral consequences, which helps shift sensibilities from technical problems to existential problems caused by climate change. However, when combined with other moral punishment metaphors, it references apocalyptic narratives in which nature serves as a moral agent that punishes human excess.

Combined, these metaphors form a cognitive-discursive network through which we collectively understand global warming. The metaphors frame climate change as simultaneously scientific, moral, and emotional questions—a bridging of empirical data and human experience.

5.2. Implications

In multiple ways, this analysis contributes to cognitive linguistics and the study of environmental discourses. First, it extends Conceptual Metaphor Theory to a complex and focused socio-ecological domain where cognition and ideology come together.

Second, using Critical Metaphor Analysis integrates cognitive and critical traditions of metaphor. It establishes that metaphor is an arena of ideology: linguistic representations represent moral hierarchies, agency, and power. Third, since Framing Theory (Lakoff, 2010; Entman, 1993) is incorporated into this research, the study demonstrates how metaphor actuates moral and emotional reasoning. Each metaphor, as mentioned, invokes different moral schemas: care (disease), protection (war), and justice (punishment).

Finally, applying the analysis to Environmental Discourse Theory and Ecolinguistics (Dryzek, 2013; Stibbe, 2015) emphasizes that metaphors are more than just linguistic phenomena; they are also ecological ones—metaphors shape human–nature relationships. This study contributes to the growing field of ecolinguistics by demonstrating how particular dominant metaphors reinforce or challenge anthropocentric epistemologies.

The results of this work also have far-reaching implications related to environmental communication, education, and policy discourse. Effective climate communication requires metaphors that create urgency, but also offer hope. When relying too heavily on metaphors that conjure apocalyptic outcomes or a combative mentality, fear or paralysis may result instead of action. In global contexts, it is important to consider cultural differences in metaphor interface. The inclusion of metaphors shared in cultural contexts can promote a more profound sense of inclusivity and emotional impact in international environmental campaigns.

The analysis of metaphors can afford beneficial pedagogical resources in English language teaching as well as sustainability education. By examining how language constructs ecological thought, students will develop critical language awareness and cultivate ecological literacy. Similarly, policymakers and journalists can use the findings of this study to reflect on the ethical and cognitive implications of the language used. Using an example of a common practice, such as moving from “fighting climate change” to “caring for our planet,” reframes responsibility.

5.3. Limitations and suggestions for further study

This research acknowledges some limitations, despite its contributions. First, the study examined solely English-language texts, meaning the findings may not be reliably generalized across other languages. Future studies would benefit from comparing metaphorical conceptualizations of global warming in Vietnamese and Chinese, or exploring regional discourses that highlight cultural differences in environmental thinking.

In addition, the study focused on examining verbal metaphors; another rich area to explore would be visual and multimodal metaphors, for example, pictures, infographics, and advertisements. These are all related metaphors. Of greater interest is whether multimodal discourse analysis provides a deeper understanding of how metaphor operates as a social process across modes.

Lastly, while this study employed qualitative analysis, it may be worthwhile to investigate the topic through a mixed-methods approach that combines quantitative corpus linguistics and qualitative discourse analysis, which could enhance validity and reveal statistical trends. Perhaps, we

would enhance the triangulation of metaphor frequency, audience response, and policy influence.

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