# CLIMATE PANDEMIC: UNDERSTANDING CLIMATE CHANGE THROUGH THE POLITICS OF METAPHOR

by

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#### **Abstract**

Climate metaphors are cognitive devices that leverage our knowledge of a more common issue to make sense of a different, more complex issue. In this thesis, I use Conceptual Metaphor Theory and a climate justice lens to examine why a pandemic-based metaphor for climate change offers a more apt and just way of thinking about climate change as a consequence of fossil fuels over other common climate metaphors. In this analysis, I look at three climate metaphors—climate emergency, slow violence and war—through a high-level climate justice lens of right, fair and appropriate. I find the metaphor of emergency too vague to advance a meaningful understanding of climate change's sociopolitical challenges and overall nature. The metaphor slow violence problematically distorts aspects of climate violence as a matter of vast timescales, rather than an issue of oppressive sociopolitical systems that mask climate harms inflicted on racialized and marginalized populations. War as a climate metaphor is fundamentally unsound due to extensive adversarial, binary and reductionist narratives that tend to create "Us" vs "Them" narratives and opens opportunities for justifying unjust actions to win a "climate war." I then use these three climate metaphors to help situate and map out the climate metaphor "climate change is a pandemic"—positioning fossil fuels as the virus of a climate pandemic—to demonstrate how a COVID-19 pandemic model helps to capture and convey the urgency, speed, scale and sociopolitical dynamics of climate change. I suggest more research is needed to further understand how a climate pandemic metaphor influences public perceptions of climate change, how it might shape the types of solutions and policies mobilized for climate action and how this metaphor might help, harm or advance climate understanding according to climate justice principles.

#### **Lay Summary**

Metaphors help people make sense of the world and shape how we think and act. Thus, climate metaphors are often used to help people make sense of complicated climate related issues.

Depending on the climate metaphor, each can influence how we respond to climate challenges.

This paper uses Conceptual Metaphor Theory and a climate justice perspective to explore how climate metaphors like climate emergency, slow violence, and war shape our thinking and actions. I then develop a new climate pandemic metaphor to map parallel social and political overlap between the COVID-19 pandemic and climate change. The outcome of this research finds climate emergency is too vague, the slow violence metaphor inaccurate and the war metaphor precarious for addressing climate change. Though the climate pandemic metaphor also has limitations, it may offer a more suitable and just narrative for climate discourse.

## Preface

This thesis is the original, unpublished, independent work by the author, Meghan Wise.

## **Table of Contents**

ABSTRACT	iii
LAY SUMMARY	iv
PREFACE	v
TABLE OF CONTENTS	vi
LIST OF FIGURES	vii
ACKNOWLEDGEMENTS	viii
DEDICATION	ix
1. INTRODUCTION	1
1.1 Background	5
2. CONCEPTUAL METAPHOR THEORY AND A CLIMATE JUSTICE LENS	11
2.1 What is Conceptual Metaphor Theory?	12
2.2 Significance of Conceptual Metaphors in Risk and Issue Perception	15
2.3 A Climate Justice Lens for Climate Metaphors	17
2.4 Limitations	21
3. EMERGENCY, VIOLENCE, AND WAR: CLIMATE METAPHORS IN ACTION	23
3.1 Climate Emergency	23
3.1.1 Climate Emergency: Right, Fair, Appropriate	25
3.2 Slow Violence	27
3.2.1 Slow Violence: Right, Fair, Appropriate	
3.3 Climate War	31
3.3.1 Climate War: Right, Fair, Appropriate	33
4. BIRTH OF A METAPHOR: CLIMATE PANDEMIC	37
4.1 Making Early Connections to Climate Pandemic	39
4.2 Conceptually Mapping a Climate Pandemic	42
4.4 Climate Pandemic: Right, Fair, Appropriate	44
5. CONCLUSION	47
WORKS CITED	51

## **List of Figures**

Figure 4.1 Hypothetical conceptual mapping based on love is a journey	42
Figure 4.2 Hypothetical conceptual mapping based on climate change is a pandemic	43

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Thank you to my parents, who always fostered and encouraged imagination, ingenuity, empathy, defiance in the face of injustice and a sense of reverence and respect for the natural world. Thank you to L and T, who held me up, encouraged me, fed me and offered unconditional love and care as I moved through this work.

## **Dedication**

Dad,

Thank you for your unconditional love. You are forever loved and forever missed.

#### 1. Introduction

I want to begin with a thought experiment. When I say "climate emergency," what do you think of? What comes to mind specifically when you hear the phrase "climate emergency?" Go ahead and think about it for a moment. I'll wait.

Did you think of magnifying natural disasters? What about a magnifying global health emergency due to extreme heatwaves or fossil fuel air pollution? How about low-lying cities and island nations being consumed by rising sea-levels and forced climate migration? Or, maybe, you thought of something different altogether. The point of this thought exercise is to highlight how a metaphor like climate emergency—though helpful in providing a sense of urgency and building awareness climate change is important—may not sufficiently communicate more contextually what a climate emergency actually is, what causes it and how we ought to respond to climate change challenges. The old adage that language matters is poignant here because the language we use to talk about climate change actively shapes how we think and act towards it.

Metaphors like climate emergency are simultaneously figurative and cognitive devices humans use to denote one concept or issue in place of another less defined concept or issue to suggest likeness and to make sense of it. The concept of emergency, when paired with climate change, for example, tends to foster a sense of urgency and need for quick action. A key function of mobilizing climate metaphors is to *aptly* convey climate change and raise public understanding of causal relationships, processes and impacts. The goal of a climate metaphor should seek to shift public thinking towards understandings, behaviours and attitudes that align with climate

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<sup>&</sup>lt;sup>1</sup> Anne K Armstrong et al., "Using Metaphor and Analogy in Climate Change Communication." *Communicating Climate Change: A Guide for Educators.* Ithaca: Cornell University Press, 2018. 70.

knowledge, scientific data and accurately reflect the scope and scale of the issue.<sup>2</sup> The ability of metaphors to generate enduring ideas and images that trigger our emotions and shape our responses makes climate metaphors a powerful and potentially strategic communication tool for public and political climate change discourse. Here discourse means, how humans think and communicate about society, issues, people and the relationships between these areas.<sup>3</sup>

As the urgency of climate change expands, so too does the need for engaging climate metaphors that are sufficiently affective and informative in mobilizing political will towards efficacious climate action. Yet, after decades of experts warning about the perils of CO2 emissions accelerating atmospheric warming, implications for human health, wellbeing, and security, international efforts have been slow to materialize on a level that matches the urgency of the destabilizing effects and public health consequences of exponentially rising CO2 emissions.

In contrast to climate inaction, is the mobilization witnessed around the Sars-CoV-2 (COVID-19) pandemic, which was generally hasty and industrious at government, policy and public levels due to the serious public health threat it posed. In many ways, the COVID-19 pandemic demonstrates a type of thinking and scale of mobilization needed for addressing climate change. Further, COVID-19 impacts mirror many challenges brought on by climate change due to human caused emissions. Engaging a public health centered pandemic metaphor for climate change may help highlight how climate change is also causing a global health calamity.

For this paper, human health and wellbeing can generally be regarded as an ongoing state of holistic and regenerative mental, emotional, social, and physical wellbeing, not just an absence

<sup>&</sup>lt;sup>2</sup> Susan Bales et al., "How to Talk about Climate Change and the Ocean," *Frame Works Institute* (September 10, 2015). 11.

<sup>&</sup>lt;sup>3</sup> Mike Hower, "Why We Need to Rethink These Three Climate Metaphors," *GreenBiz.* (July 13, 2021).

of malady or disease.<sup>4</sup> However, *The 2018 report of the Lancet Countdown on health and climate change*, identifies how a rapidly changing climate is increasingly undermining global public health. The report notes that climate threats stemming from extreme heat, flooding, forest fires, rise in infectious diseases, heightened food and water insecurity and air pollution continue to generate and magnify significant health and wellbeing challenges on a global scale.<sup>5</sup> Critically, as with COVID-19, climate change impacts exacerbate pre-existing inequity and vulnerability. Indigenous, Black and communities of colour, women and girls, the elderly, the unhoused, LGBTQ2+ and those living with disabilities face disproportionate and acute climate change consequences.<sup>6</sup>

The mobilization around the COVID-19 pandemic—rooted in a public health and wellbeing mindset—has provided an invaluable and potentially more apt pathway for conceptualizing climate change as a dire public health and wellbeing calamity with fossil fuels as a type of virus driving climate change. Therefore, this thesis seeks to develop and explore why the conceptual metaphor "climate change is a pandemic" is a more apt and just framing for reflecting key sociopolitical impacts of climate change over other common climate metaphors of emergency, slow violence and war.

I develop this new climate pandemic metaphor in four parts. In section two, I provide an overview of what conceptual metaphors are, how they work and why they are significant in influencing the way humans think about, understand and mobilize around complex global

<sup>&</sup>lt;sup>4</sup> Eija Meriläinen et al. "Puppeteering as a metaphor for unpacking power in participatory action research on climate change and health," *Climate and Development*. (2021). 1.

<sup>&</sup>lt;sup>5</sup> Nick Watts et al., "The 2018 Report of the Lancet Countdown on Health and Climate Change: Shaping the Health of Nations for Centuries to Come." *The Lancet*, November 2018, 2479-2514.

<sup>&</sup>lt;sup>6</sup> Eija Meriläinen et al., 2021. 4.

problems like climate change. This section also explores the importance of bringing a climate justice lens to the climate metaphor landscape. In section three, I use Conceptual Metaphor Theory and a high-level climate justice lens of what is right, fair and appropriate to undertake a qualitative comparative analysis of three common climate metaphors used in political, academic and popular discourse to assess how these climate metaphors help or harm climate change understanding, and whether they promote or inhibit climate justice principles. The three metaphors I engage for analysis are "climate change is an emergency," "climate change is slow violence," and "climate change is a war." In section four, I first explore the early overlapping of COVID-19 and climate change language and knowledge. I then hypothetically map the conceptual metaphor of climate pandemic using Metaphor Position Mapping. Finally, I engage the right, fair and appropriate analysis. In conclusion, this paper reflects on why we should be more mindful of the climate metaphors we mobilize, potential pushback on using a pandemic metaphor and potential next steps for exploring a climate pandemic as a more targeted and instructive metaphor for understanding the complexities of climate change as a critical public health and wellbeing threat.

This paper adds to the global environmental politics literature in three ways. First, it offers a new way to conceptualize how a climate pandemic metaphor might situate amid other climate metaphors to mobilize public understanding of climate change or influence decision making, policy and planning. Nurturing a climate pandemic metaphor at international, policy-making and public discourse levels may constructively leverage a globally relatable public health concept to help identify and understand the magnifying, destructive and unjust impacts of climate change. Second, this paper addresses a gap in the literature by bringing a climate justice lens to climate metaphor analysis, something that, to my knowledge, is not yet established in the climate metaphor

literature. Finally, it helps to expand the limited qualitative comparative analysis of climate metaphors across climate literature.

#### 1.1 Background

As a process, climate change is heavily interwoven with fossil fuels. For this paper, fossil fuels include coal, different types of crude oil and natural gas. In just 200 years, the global rise of fossil fuel infrastructure, dependence, and spin-off products like plastics and petroleum-derived chemicals have expediated a global health storm. If we place the trajectory of fossil fuels in the context of geological and evolutionary time scales, the industrial rise, use and impacts of fossil fuels have taken place in the proverbial blink of an eye. By putting the rise of fossil fuels in a more contextualized timescale, their swift rise and ramifications reflect the kind of speed, trajectory and devastation witnessed when COVID-19 swept across the world in a matter of a few months.

Locally to globally, communities are experiencing increasing—and increasingly inequitable—public health-related climate trauma as hurricanes, heatwaves, wildfires, flooding, air pollution and processes of ecological degradation overlap. This threat is so encompassing and significant that during the 2019 World Health Assembly in Geneva, Richard Horton, the editor of the *Lancet*, urged nations and the World Health Organization secretariat to declare a planetary emergency that signals a profound public health threat.<sup>7</sup> At the same conference, the seychelles' minister of health demanded the world recognize climate change as a primary public health issue.<sup>8</sup>

Expanding and overlapping climate-driven traumas are also feeding into an escalating mental health crisis. This is being documented due a notable increase in rates of depression, anxiety

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<sup>&</sup>lt;sup>7</sup> Andrew Harmer et al., "WHO Should Declare Climate Change a Public Health Emergency" *BMJ*. 2020.

<sup>&</sup>lt;sup>8</sup> Harmer et al. 2020.

and PTSD due to climate related impacts like heatwaves, flooding, forest fires sea-level rise and impacts of air pollution.<sup>9</sup> It is also being noted that youth and low to middle income nations are particularly vulnerable and hard hit.<sup>10</sup> In 2020, the *Lancet* published an urgent warning about the growing psychosocial effects of climate change with a targeted warning for how climate change impacts the mental health and wellbeing of youth globally.<sup>11</sup>

Compounding the public health crisis of climate change is a lack of prioritizing inequities within and across global systems that magnify disproportionate burdens and impacts depending on race, gender, region, age, class, ability, and income. The inequitable dynamics of climate change impacts bring an ethical and human rights weight to the climate metaphors used to communicate climate change in political, academic and public narratives. Given the magnitude of threat posed by climate change, we need climate metaphors that advance public understanding of climate change issues while also capturing and reflecting the sociopolitical and psychosocial impacts to help foster acceptance, action and accountability for urgent systemic transformations.

Over the last two decades, the climate change metaphor landscape has expanded in efforts to explain the complexity of climate change. Common climate metaphors include, but are not limited to, climate emergency, a form of slow violence, a tipping point, a house on fire, a greenhouse effect, carbon capture, a climate race and a type of climate war. However, it is not clear how or if these metaphorical framings befittingly capture and denote the magnitude of urgency and the types of socio-political and psychosocial harms and risks posed by a rapidly

<sup>&</sup>lt;sup>9</sup> Susan Clayton Whitmore-Williams. (2017). Mental Health and Our Changing Climate: Impacts, Implications, and Guidance. *American Psychological Association*. 22, 23.

<sup>&</sup>lt;sup>10</sup> Lawrence Palinkas and Marleen Wong, "Global Climate Change and Mental Health," *Current Opinion in Psychology*, April 2020, 12.

<sup>&</sup>lt;sup>11</sup> Judy Wu, Gaelen Snell and Hasina Samji, "Climate Anxiety in Young People: A Call to Action." *The Lancet Planetary Health* 4, no. 10 (2020): 436.

changing climate—notably driven by the burning of fossil fuels. <sup>12</sup> Though there is a growing body of literature seeking to explore the efficacy and impact of climate metaphors on public awareness and understanding of climate change, research comparatively analyzing how different climate metaphors influence public thinking and response remains sparse. There is also a critical lack of engaging a climate justice lens to reflect on who is helped or harmed when we engage different climate metaphors.

The need to understand the power and dynamics of climate metaphors grows ever more urgent. Expanding research on the impact of climate metaphors indicates that when a climate metaphor is not well "matched" to the size, scale, or scope of the climate issue, it can have adverse and unintended consequences. These include contributing to fatalistic attitudes of climate change, masking key issues and relevant causal relationships, and perpetuating notions that climate change is too big or complex of a problem to fix. What we increasingly need are more didactic climate metaphors that draw on global cultural understandings of public health and wellbeing to help make sense of climate change through a more just lens, and to signify attainable pathways of action. This is where the COVID-19 pandemic may offer a valuable opportunity for thinking about climate change.

The sudden rise and spread of the COVID-19 virus highlighted disturbing and distressing inequities across race, gender, age, class, ability and income and more. COVID-19 also put a global spotlight on the profound mental health and wellbeing impacts wrought by pandemic challenges. Inequitable COVID-19 health impacts and burdens on mental health and wellbeing are not

<sup>&</sup>lt;sup>12</sup> Intergovernmental Panel on Climate Change, "Ch. 5. Drivers, Trends and Mitigation" 2014. 354.

<sup>&</sup>lt;sup>13</sup> Climate Interpreter, "Metaphors Can Counter Misinformation about Climate Change," December 02, 2016.

dissimilar from documented impacts of climate change processes and events. In fact, many disproportionate and wellbeing impacts of these two processes mirror each other, which is why the development and mobilization of a climate pandemic metaphor may be a timely and apt way to advance public understanding of climate change and political will to address primary causes of climate change.

To address primary causes of climate change means we must address fossil fuels. Here, I want to take a moment to offer clarity on the selection of fossil fuels as the primary feature of this metaphor. The positioning of fossil fuels as the viral agent of this climate pandemic metaphor, reflects the dominant role fossil fuel emissions have played in human caused atmospheric warming trends feeding into climate change consequences. When we consider pre-industrial revolution CO2 emissions, we saw a relatively regulated pattern of carbon cycling between major natural systems of atmosphere, oceans and lands that kept CO2 around or below 300 parts per million (ppm) for millennia. In contrast, in less than 200 years, CO2 concentration in the atmosphere has recently reached over 415 ppm—the highest CO2 levels in the last 800,000 years. It has also happened at a breakneck pace. Normally a change of this magnitude and speed would take place naturally over thousands of years. In comparison, human fossil fuel use has driven this irregular CO2 rise in less than 200 years.

The focus on fossil fuels in this paper seeks to emphasize how fossil fuel extraction, processing and consumption continue to function as a primary source of global warming emissions, and an ongoing key cause of climate change consequences. In 2016 *Our World in Data* 

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<sup>&</sup>lt;sup>14</sup> Intergovernmental Panel on Climate Change. 2014.

<sup>&</sup>lt;sup>15</sup> Dieter Lüthi et al., (2008). "High-Resolution Carbon Dioxide Concentration Record 650,000–800,000 Years before Present."

finds fossil fuel GHG emissions made up 73.2 percent of global GHG emissions—primarily fossil fuels used for electricity, heat and transportation. <sup>16</sup> The next highest sector for GHG emission is agriculture, forestry and land use at 18.4 percent of global GHG emissions.

As identified in the Statistical Review of World Energy put out by The British Petroleum Company (BP)—an important primary source for global energy data—fossil fuels accounted for 84% of primary energy consumption globally in 2019.<sup>17</sup> And though global emissions may have dipped briefly in 2020 during the COVID-19 pandemic, overall, the International Energy Agency has projected global CO2 emissions are expected increase by five percent in 2021 as the world rebounds from economic shock due to the pandemic. This would constitute the largest single increase of CO2 emissions since the 2008 economic recovery.<sup>18</sup> Meanwhile, CO2 emissions are projected to rise approximately 0.6% per year through to 2050, according to the Energy Information Agency.<sup>19</sup> This ongoing glut of CO2 emissions is something the Intergovernmental Panel on Climate Change has clearly asserted is not sustainable for collective human and ecological wellbeing.

My intention to highlight fossil fuels as the primary source of climate change does not suggest other issues and processes are not notably contributing to the expanding climate change crisis. I acknowledge deforestation processes, mining and large-scale monocropping also play serious roles in driving different aspects of climate change. This paper is not seeking to discredit

<sup>&</sup>lt;sup>16</sup> Hannah Ritchie and Max Roser. "CO<sub>2</sub> and Greenhouse Gas Emissions," 2020.

<sup>&</sup>lt;sup>17</sup> The British Petroleum Company, "Statistical Review of World Energy 2020, 69th Edition." 4.

<sup>&</sup>lt;sup>18</sup> International Energy Agency. "Global Energy Review," 2021.

<sup>&</sup>lt;sup>19</sup> U.S. Energy Information Administration, "Energy and the Environment Explained: Outlook for Future Emissions." February 16, 2021.

or ignore the dire importance and impacts of other compounding climate change issues. My aim here is to acknowledge and identify a principal driving force of climate change.

Root causes of climate change—like fossil fuel emissions—must be urgently prioritized at municipal, national and international levels in the coming years and decades to proactively mitigate some of the most profound and destructive consequences of climate change. Leveraging public knowledge of COVID-19 through metaphor to understand causal harms of fossil fuelled climate change could be a yet untapped but important part of this process.

#### 2. Conceptual Metaphor Theory and a Climate Justice Lens

Much like the COVID-19 pandemic, fossil fuel driven climate change requires urgent, systemic, structural, economic and societal changes and adaptations at local, national, and international levels. When addressing global issues like fossil-fueled climate change, one challenge, amid many, is locating and motivating common ground perceptions, thinking, or solutions across different demographics, values, needs, systems, nations, and policy domains. Here is where metaphors offer an intriguing point of reflection and opportunity in climate awareness and mobilization. The role of metaphor in influencing human risk perception, issue evaluation, and solution generation to complex problems raises compelling questions about the importance of how and which metaphors are used for scaffolding how we think about climate change challenges.

This is because metaphors function as a cognitive device that directly impacts our thinking process by relating one thing to a different unrelated thing to convey shared qualities or characteristics.<sup>20</sup> This means metaphors serve a more complex cognitive role than just literary or poetic flare. They are part of how we think and can fundamentally shape how we act and respond to an issue. In the following section, I explore what conceptual metaphors are, why they are significant in shaping our thinking, how they influence our perception of issues and associated risks and what a climate justice lens brings to the climate metaphor landscape. Lastly, this section reflects on limitations that may impact this analysis.

<sup>&</sup>lt;sup>20</sup> George Lakoff and Mark Johnson, *Metaphors We Live By*. 1980. 3.

#### 2.1 What is Conceptual Metaphor Theory?

Conceptual Metaphor Theory research has established that metaphors can help create coherence on abstract issues in scientific, public, political, and policy areas. This is because metaphors function to conjure and leverage different knowledge networks to build meaning and coherence.<sup>21</sup> Research has also found that the specific metaphors we engage to represent climate issues can create particular influences on the types of solutions we see as warranted or legitimate.<sup>22</sup> In this context, metaphors become more than just descriptive language. Metaphors are a fundamental process humans use to help build cognitive scaffolds to better conceptualize, understand, and respond to complex, abstract processes and issues.

Conceptual Metaphor Theory distinguishes metaphors as a cognitive systematic process humans use to map understanding of one conceptual domain through an understanding of a different conceptual domain. For example, conceptual domain A is conceptual domain B. In this system, Domain A represents a more abstract concept (known as a target domain). Domain B represents a more concrete or familiar concept (known as a source domain) which serves to cognitively map and understand Domain A.<sup>23</sup> For this paper, the term metaphor represents this type of Domain A and Domain B cognitive conceptual mapping, while also encompassing the more customary understandings of metaphor as an analogy due to a similar cross-domain mapping

<sup>&</sup>lt;sup>21</sup> Khadidja Merakchi and Margaret Rogers, "The Translation of Culturally Bound Metaphors in the Genre of Popular Science Articles: A Corpus-Based Case Study from Scientific American Translated into Arabic," (2013); Stephen Flusberg et al., "Metaphors for the War (or Race) against Climate Change," (2017); Haddad Haddad and Montero-Martínez, "The 'Carbon Capture' Metaphor: An English-Arabic Terminological Case Study" (2019).

<sup>22</sup> Paul H. Thibodeau et al., "Metaphor Police: A Case Study of the Role of Metaphor in Explanation," Psychonomic

<sup>&</sup>lt;sup>22</sup> Paul H. Thibodeau et al., "Metaphor Police: A Case Study of the Role of Metaphor in Explanation," Psychonomic Bulletin & Review 24, no. 5 (2017): 1385.

<sup>&</sup>lt;sup>23</sup> Zoltán Kövecses, *Extended Conceptual Metaphor Theory: What is Metaphor*, (Cambridge University Press, 2020) 4.

process that functions to represent shared features of the same phenomenon.<sup>24</sup> This is to say, the understanding of metaphor for this paper is both cognitive in nature as well as reflective.

Though literary metaphors have been around for centuries, the roots of a cohesive Conceptual Metaphor Theory stem from George Lakoff and Mark Johnson's 1980 publication, *Metaphors We Live By*. This publication was a seminal piece of work laying a new foundation for thinking about the role of metaphor in human cognition.<sup>25</sup> Lakoff and Johnson argue that metaphors are not only a universal and pervasive practice but also an essential cognitive conceptual system within cultures that are leveraged to structure, restructure and create meaning and relational understanding about the world around us.<sup>26</sup> Further, they suggest we may do so without being fully aware of the fact that we engage this type of cognitive metaphor-driven mapping in our daily activities and lives.<sup>27</sup> To explain how conceptual metaphors shape human thinking and responses, Lakoff and Johnson use the metaphor "argument is war."

In this example, they note how the concept of argument is widely articulated in terms of taking sides, counter attacks, defending positions, strategizing, demolishing opponents, and winning and losing ground.<sup>28</sup> The argument is war metaphor thus serves more than just a combination of words that sound dramatic. Such metaphors actually shape how we structure our thinking and actions of argumentation. War thus becomes a way of configuring our fundamental understanding and action toward the process of argumentation.

<sup>&</sup>lt;sup>24</sup> Johanna Viimaranta, "Analogy or Conceptual Metaphor? Coming Concretely and Abstractly Close in Uses of the Russian Prefix Pod." *Sky Journal of Linguistics*, 25 (2012), 210-13.

<sup>&</sup>lt;sup>25</sup> Lakoff and Johnson, 1980.

<sup>&</sup>lt;sup>26</sup> Zoltán Kövecses, "A Brief Outline of 'Standard' Conceptual Metaphor Theory and Some Outstanding Issues," In *Extended Conceptual Metaphor Theory*, 1–21. Cambridge: Cambridge University Press, 2020. 1.

<sup>&</sup>lt;sup>27</sup> Paul H. Thibodeau et al., "The Role of Metaphor in Communication and Thought." *Language and Linguistics Compass* 13, no. 5 (2019): 1-18. 4.

<sup>&</sup>lt;sup>28</sup> Lakoff and Johnson, 4, 5.

An important takeaway from this early research is how linguistic metaphorical expressions strongly connect to metaphorical concepts in systematic ways. This means the metaphorical can become embodied in how we think, act, and structure our lives. Thus, the metaphorical nature of the concepts we use and how we pair them offers insight into everyday thinking and activities. This is a critical dynamic when we consider how or why certain climate metaphors are leveraged in society and how they shape perceptions and responses to climate change without knowing it.

In the four decades since Lakoff and Johnson's theory spawning publication, the field of Conceptual Metaphor Theory has expanded. Over the last four decades, several comprehensive literature reviews have helped identify three core traits of Conceptual Metaphor Theory. These three traits are: a universality, a conceptual nature, and a systematic nature.<sup>29</sup> The first trait of universality implies the use of metaphor is a global phenomenon. This means some metaphors hold a universal meaning that spans cultural and linguistic differences. Over human history, the practice of using metaphors is deeply infused in written and oral communication across cultures and languages and may even form a basis for how we think.<sup>30</sup> This universal nature gives rise to countless culturally situated metaphors. But some metaphors reach across cultural and language boundaries in how they are cognitively mapped for meaning. Examples of such metaphors include "ideas are food," "theories are buildings," or "love is a journey."<sup>31</sup>

<sup>&</sup>lt;sup>29</sup> Keith Holyoak and Dušan Stamenković, "Metaphor Comprehension: A Critical Review of Theories and Evidence" (2018); Fan, "Literature Review on the Cognitive Approach to Metaphor." (2018); Kovecses, Metaphor: A Practical Introduction (2002).

<sup>&</sup>lt;sup>30</sup> LiPing Fan, "Literature Review on the Cognitive Approach to Metaphor." Procedia Computer Science 131, (2018): 926.

<sup>&</sup>lt;sup>31</sup> Fan, 926.

The second trait acknowledges metaphors are conceptual. Conceptual metaphors reflect thought as a process of cognitive organization informed through the object of language.<sup>32</sup> This dynamic reiterates the example of how argumentation is informed by our understanding of war. The concept of war shapes thinking and action for processes of argumentation. The third trait notes conceptual metaphors are systematic. This means metaphors can generate a wide array of linguistic expressions and alternate metaphors that can work together as a systematic network of meaning that underpins our thinking and responses between target and source domains.<sup>33</sup>

#### 2.2 Significance of Conceptual Metaphors in Risk and Issue Perception

Since the 1980s, conceptual metaphor research has been primarily taken up by linguists, psychologists, philosophers, and communications researchers. A consistent finding across this body of research is the finding that engaging metaphors to explain complex and abstract problems can be a powerfully effective tool that notably influences people's thinking, issue perception, and the types of responses they choose to mobilize around a given problem or issue.<sup>34</sup> Below, I highlight two studies that help to demonstrate this influential impact of metaphor.

With wildfires on the rise due to global warming trends, the power of metaphor in shaping public risk perception towards wildfire evacuation compliance is taken up by Matlock et al. Their study found increased public acceptance and adherence to evacuation messaging when a wildfire was represented through a monster metaphor, rather than just stating there is a major wildfire threat.<sup>35</sup> The study findings suggest the monster metaphor activated conceptual schemas that

<sup>&</sup>lt;sup>32</sup> Fan, 926.

<sup>33</sup> Fan, 962.

<sup>&</sup>lt;sup>34</sup> Holyoak and Stamenković, 2018.

<sup>&</sup>lt;sup>35</sup> Teenie Matlock et al., "Monster Wildfires and Metaphor in Risk Communication." *Metaphor and Symbol* 32, no. 4 (2017): 256.

associate wildfire with "eating up" or "devouring" homes and land, thus affecting emotional responses that influenced reasoning and risk perception resulting in more public uptake and compliance with evacuation measures.<sup>36</sup>

A different study carried out by Thibodeau and Boroditsky in 2013 compared a beast and virus metaphor to assess public perception and response to city crime. They found when crime was depicted as a type of beast preying on a city, it fostered stronger support for law enforcement-based solutions to city crime issues—more policing. In comparison, the virus metaphor induced stronger support for social reform-oriented solutions—promoting economic and educational reform.<sup>37</sup>

The authors propose two reasons for their findings. One, the virus metaphor did not offer the same degree of apt mapping schema transfer for issues of crime. For example, the causes for crime were too dissimilar from how we understand viruses to work. Whereas the idea of crime as a beast, created the idea of an immediate violent threat requiring urgent intervention. They also found the beast metaphor may have been more culturally prominent, meaning the general public held a more consistent knowledge network around the meaning and associated implications of a "beast" on the loose causing harm, and how this then mapped onto the issue of crime "terrorizing" a city. <sup>38</sup> The findings of this study help underscore the importance of considering aptness in the mobilization and uptake effect of a given metaphor.

The findings of this last study engaging a virus metaphor also holds particular significance for this paper for three reasons. First, the authors note each metaphor had consistent explicit and

<sup>37</sup> Paul H. Thibodeau and Lera Boroditsky, "Natural Language Metaphors Covertly Influence Reasoning." *PloS One*, no. 1 (2013)

<sup>&</sup>lt;sup>36</sup> Matlock et al., 770.

<sup>&</sup>lt;sup>38</sup> Thibodeau and Boroditsky, 2013.

implicit influence on how people perceived and made sense of an abstract issue. Second, the kind of metaphor used—beast vs. virus—inspired different types of solutions seen as legitimate or warranted to the problem at hand—punitive or systemic reform. Third, the finding a virus metaphor elicited systemic social reform views towards a complex issue. Though the contexts differ—crime vs. climate change—the finding that a virus metaphor triggered notable endorsement for social reform thinking is encouraging given my interest in mobilizing a virus-focused metaphor on an abstract issue requiring systemic level changes.

It is also important to note both studies found respondents appeared largely unaware of how the different metaphors used to characterize wildfires and crime were actively impacting their reasoning and decision making. Since climate change discourse remains an active and evolving dialogue with a broad scope of stakeholders, decision-makers, views, values, and interests, it is germane researchers, scholars, political leaders, and international organizations be attentive to the deployment of climate metaphors and their implicit and explicit influence. Each climate metaphor has the power to shift and shape public and political assumptions of risk and perceptions of which solutions or resources ought to be mobilized.

#### 2.3 A Climate Justice Lens for Climate Metaphors

Climate change is increasingly being situated as an issue of justice which recognizes responsibility and accountability for causes of climate change, the inequitable burdens of climate change impacts and an awareness of intersecting vulnerabilities and structural injustices.<sup>39</sup> The esteemed journal *The Lancet* acknowledges how inequitable and disproportionate impacts of

17

<sup>&</sup>lt;sup>39</sup> Peter Newell et al., "Towards Transformative Climate Justice: Key Challenges and Future Directions for Research," July 2020. *IDS Working Paper 540*, Brighton: Institute of Development Studies.

climate change reveal deeper questions of justice that intersect with social and economic inequalities between different populations and nations.<sup>40</sup> And though there is no singular theory or explicit set of principles that neatly clarifies or categorizes climate justice, in a broad sense, the concept of climate justice seeks to address intersecting harms and impacts of climate change across social, political, economic, and ecological issues. At a high level of concept and practice, climate justice might generally be thought of as advocating for what is right, fair, appropriate or deserved in relation to climate change.<sup>41</sup> Under these broad categories fall a variety of more nuanced articulations of what climate justice is thought to be and represent.

Some of these variations include thinking about climate justice as forms and processes of distributive justice, procedural justice and restorative justice.<sup>42</sup> There are also various Indigenous concepts of climate justice based on different Indigenous ontologies that take holistic, land-based, and interconnected systems approach to climate change processes and issues. For example, linking water justice, land justice, and rights of nature to understanding climate justice, rather than just a human-centric approach. Indigenous nations have also advanced different declarations at international levels that engage anti-colonial world views to address underlying causes and drivers of climate and ecological crisis.<sup>43</sup> Meanwhile, international bodies like the United Nations articulates climate justice through a more anthropocentric lens of human rights and a mindset of

<sup>&</sup>lt;sup>40</sup> Nick Watts et al., "The 2020 Report of the Lancet Countdown on Health and Climate Change: Responding to Converging Crises." *The Lancet (British Edition)* 397, no. 10269 (2021): 129.

<sup>&</sup>lt;sup>41</sup> Royal Irish Academy, "The Geography of Climate Justice: An Introductory Resource to the geography of climate justice." May 2011. 2.

<sup>&</sup>lt;sup>42</sup> University of British Columbia, "UBC Climate Emergency Engagement: Final Report and Recommendations." 2021. 136.

<sup>&</sup>lt;sup>43</sup> Deborah McGregor et al., "Indigenous Environmental Justice and Sustainability." *Current Opinion in Environmental Sustainability* 43, (2020): 36.

collaborative and equitable solution building across regions and nations to address environmental and climate change related injustice.<sup>44</sup>

In the arc of climate justice evolution, marginalized, racialized, and vulnerable communities have long been the activist foundation from which contemporary climate justice principles and thinking have emerged. Historical and ongoing activism driven by Indigenous Peoples, Black communities, People of Colour and folks advocating for gender and disability equity and rights, mobilized grassroots movements fighting persistent impacts of environmental racism. Such movements laid the ideological, ethical, and political foundations for the iterations of climate justice we see today. More recently, calls for climate justice have been notably driven by a global youth climate movement spearheaded by climate activists like Greta Thunberg and Vanessa Nakate through movements like Fridays for Future and Youth Climate Strike.

Over time, climate justice discourse and principles have evolved into a framework for signifying, recognizing, accounting for, and responding to complex moral, ethical, historical and ongoing harms, inequities, and oppressions that intersect with processes and impacts of climate change. A central feature of climate justice thinking is to focus attention on the disproportionate and differentiated impacts of climate change and how climate change consequences are experienced based on factors of race, gender, class, age, ableism, wealth, and power. In sum, advocates of climate justice understand the systemic and disproportional impacts of global climate

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<sup>&</sup>lt;sup>44</sup> Martin, "Climate Justice." *United Nations Sustainable Development*, May 31, 2019.

<sup>&</sup>lt;sup>45</sup> Brian Tokar and Tamra Gilbertson, "Climate Justice and Community Renewal: Resistance and Grassroots Solutions." London; New York, NY; Routledge, 2020. 4.

<sup>&</sup>lt;sup>46</sup> Tokar and Gilbertson, 4.

change, and that those most harmed and at risk have contributed least to global GHG emissions and the driving forces and systems causing climate change.<sup>47</sup>

In researching and reviewing climate metaphors for this paper, there was a notable lack of addressing how climate change metaphors interact with or promote our understanding of climate justice principles. This omission spanned educational, scientific, popular, and media-based climate metaphor literature. As a trend, there seems to be little focus or awareness on how current climate metaphors influence or situate climate justice. Climate metaphors commonly used to discuss and convey sociopolitical impacts of climate change—for example in political or popular statements asserting climate emergency or climate war—may require more attention and analysis of how these metaphors convey or don't convey principles of climate justice. Not taking climate justice principles into consideration regarding common public climate metaphors could be a glaring shortcoming in the climate discourse arena. This oversight could potentially perpetuate climate harm and misunderstanding of the severity of climate change and effects on public health and wellbeing when unjust metaphors are deployed.

For the purpose of this paper, I take a high-level approach to using a climate justice lens by engaging the general principles of what is right, fair, and appropriate. I have chosen not to engage the category of deserved in this analysis for two reasons. First, as a way to maintain a manageable scope. And two, I felt that the combination of right, fair, and appropriate offers a sufficient starting point for capturing key principles that help to reflect issues of climate justice as it relates to the use of climate metaphors. In this analysis, the concept of right is conceptualized as accurately reflecting the processes and impacts of climate change. The concept of fair accounts for

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<sup>&</sup>lt;sup>47</sup> Tokar and Gilbertson. 3.

systemic inequity and vulnerability. While the concept of appropriate considers whether the metaphor is an apt framing that helps advance a just understanding of climate change issues.

#### 2.4 Limitations

When discussing and presenting climate metaphors, I acknowledge that though climate change is universal, climate metaphors may not offer universal meaning due to how lived experience and language connect to culturally created knowledge domains. 48 Metaphor meaning often depends on how different groups from different cultures and languages experience and translate the world around them and thus situate the language and meaning of a given metaphor. Differing world views and global systems like patriarchy, capitalism, neoliberalism, and white supremacy can also impact different regions in different ways. Likewise, historical and ongoing legacies of Imperialism and colonialism shape different regional and cultural experiences and knowledge in ways that may create different understandings and experiences of climate change. As someone situated within a Westernized culture and English as my primary language, I am aware this may influence how I present and evaluate each climate metaphor's potential universality throughout this analysis. However, my intention in this paper is not to quantitatively measure universality, but to start qualitatively reflecting on how climate metaphors may hold potentially universal public health and wellbeing consequences.

The second limitation for this paper stems from a concern for leveraging an important medical event—pandemic—to explain climate change. I am aware the concept and language of pandemic comes with a preexisting history and holds an important public health and wellbeing role in society. I acknowledge the concept of pandemic should not be frivolously applied to issues

<sup>&</sup>lt;sup>48</sup> Kövecses, 2012, 4.

that do not pose grave public threat and harm so as not to "dilute" the urgency and significance of the term and concept in public use. However, the sociopolitical and psychosocial consequences of climate change reflect many similar urgent public health, impacts we see happening as a result of COVID-19. Some similarities include disproportionate impacts on racialized communities, inequitable access to needed resources, disproportionate impacts on women and girls and a global rise in mental health and wellbeing challenges. For example, between March 2020 and March 2021, COVID-19 caused approximately 3 million premature deaths. In 2018, air pollution from fossil fuels caused 8.7 million premature deaths and has increased millions of cases of asthma and associated respiratory illnesses globally.<sup>49</sup> We also see parallels in expanding illness, rising death tolls, and systems strain. With the profound threat and risks that stem from fossil fuel driven climate change in mind, it is not with frivolity that I seek to use the pandemic metaphor. As I see it, pandemic is the most accurate way to capture and acknowledge the moral, ethical and physical harms of climate change on a global scale. Therefore, I do not seek to dilute the use of pandemic, but use it in a valid sense.

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<sup>&</sup>lt;sup>49</sup> Vohra et al., "Global Mortality from Outdoor Fine Particle Pollution Generated by Fossil Fuel Combustion." Environmental Research 195, (2021): 110754. 1.

#### 3. Emergency, Violence, and War: Climate Metaphors in Action

This section uses Conceptual Metaphor Theory and a climate justice lens of what is right, fair, and appropriate—in relation to climate change causes, processes, and impacts—to undertake a qualitative comparative analysis of three common climate metaphors. Right as a factor considers if the metaphor is a functionally accurate representation between the source domain in relation to the target domain, for example, how accurately does the concept of emergency reflect the sociopolitical nature of climate change. Fair considers if the metaphor accounts for and addresses systemic vulnerability, differentiated risk and inequity. Appropriate evaluates whether the metaphor is an apt or germane framing that can help advance a more just public understanding and engagement with climate change processes and impacts. For this analysis, a climate metaphor was selected from political, academic and popular discourse based on prominence. The three conceptual metaphors are climate emergency, slow violence, and climate war.

#### 3.1 Climate Emergency

The climate metaphors of emergency and crisis abound. On the surface, emergency and crisis may seem interchangeable and are even given the same definition in the *Oxford Learner's Dictionaries* as situations that require immediate action to mitigate climate change to prevent serious and permanent damage to the environment. Often times, media or analysis will use emergency or crisis as interchangeable climate metaphors. This idea of interchangeability is noted in *The Guardian's* 2019 release of its new climate language guide for covering climate change which suggests using either emergency or crisis to describe climate change. For this paper, I engage the metaphor of emergency over the metaphor of crisis for two reasons.

One, though the concept of crisis and emergency both suggest urgent action is required to address a problem, a crisis may not always rise to the level of emergency. Meanwhile, emergencies

tend to already imply an existing crisis. To give you an idea of crisis vs. emergency, say there is a grass fire on the side of a road. This is a crisis needing urgent attention to extinguish it. Now suppose the grass fire continues to burn out of control and head towards a town. In this case the crisis evolves into an emergency needing more coordinated, interdisciplinary action to address the threat. In the case of climate change, it is not unreasonable to acknowledge climate change has evolved past the more contained notion of crisis, into a full-blown emergency, which simultaneously denotes a crisis. Two, emergency rather than crisis, has become a more common term used in official political communications on climate change (e.g., the growing trend of governments of all levels asserting climate emergency declarations).

The idea of calling on governments and political leadership to assert a climate emergency declaration arose through the circulation of a Climate Emergency Declaration Petition in Australia in 2016. The petition caught the attention of Australian Greens councilor Trent McCarthy in Darebin, Melbourne. The petition initiative was successful, and on December 5th, 2016, Darebin declared a climate emergency at the municipal level. Since then, the idea of declaring a climate emergency has snowballed into a global phenomenon at regional, national, and international levels. Currently, at least 38 nations have declared a national level climate emergency with dozens of local governments also taking up the call.

The mounting political pressure calling for climate emergency declarations is underscored through calls to action by influential figures like the United Nations Secretary General, who in December 2020, urged every nation to declare a climate emergency. Emergency was also the language used in the 2020 global call to action by 11,000 scientists in an open letter urging

<sup>&</sup>lt;sup>50</sup> City of Darebin, Climate Emergency Declaration." December 5, 2016.

governments and policy decision-makers to heed a rapidly unfolding global "climate emergency." <sup>51</sup>

Government climate emergency declarations are largely a public and symbolic act. As a process, climate declarations tend to be non-binding, but may include aspirational goals, benchmarks or strategies. But they can also be problematically vague. Their vague yet symbolic nature tends to mean they to do little to create direct power structures or policy for rapid systemic level changes. Sometimes governments will use the announcement of a climate emergency declaration as an opportunity to reference or reaffirm commitments to larger climate change agendas like the Paris Agreement—an international treaty that seeks to limit global warming to 1.5 degrees Celsius in relation to pre-industrial GHG emissions levels. Or they might reference the need to adhere to the IPCC, *Special Report: Global Warming of 1.5C*, which also warns of the need to reduce GHG emissions and keep to a global 1.5C warming target.

In sum, climate emergency declarations may foster a much-needed sense of urgency across public and political landscapes and act as a catalyst for future action, but as a process and mechanism tend to not be systematically paired with any significant high level policy changes.

#### 3.1.1 Climate Emergency: Right, Fair, Appropriate

Right—is it an accurate representation? What this particular metaphor does well is provide an accurate sense of urgency between the source and target domain. It leverages a universal emotive and cognitive understanding of what the concept of emergency stands for and the need to stop a harmful event or imminent threat quickly. Using climate emergency language at the national level also helps to foster public awareness and political momentum towards more ambitious

<sup>&</sup>lt;sup>51</sup> William Ripple et al., "World Scientists' Warning of a Climate Emergency." Bioscience 70, no 1 (2020;2019): 8.

emission reduction targets, which could be seen as headed in the right direction. However, this particular metaphor remains too broad and ambiguous a narrative to really help people map an *understanding* of why a climate emergency is happening, what the issues are and *how* to take action.

Fair—does it account for vulnerability, inequity or harm? The Oxford Learner's Dictionary definition of climate emergency specifically signals prevention of permanent and serious damage to the *environment*. And even though humans fundamentally depend on the environment in all regards, there is a significant sociopolitical complexity to the climate emergency than just threats to the environment. On a fundamental level, the emergency metaphor does not offer an effective cognitive representation that helps people map meaningful connections for how climate change possesses are harming and permanently damaging people and communities in significant and disproportionate ways. For example, the way climate emergency is more tangibly experienced in Bangladesh, Honduras, Afghanistan, or the Maldives via prolific flooding, drought or extreme storm events may not correspondingly translate to perceptions and experiences of what constitutes a climate emergency for those living in Canada, Norway or New Zealand who experience less sever impacts on a regular basis and have access to more public services and resources to mitigate climate change induced harms.

Appropriate—is it apt? This critique is not to suggest the emergency metaphor is not helpful when talking about global climate change. I agree emergency is an emotive metaphor that may play an essential role in raising needed climate awareness and political and public will globally. My concern however, is it might be harmfully ambiguous due to its lack of ability to highlight critical causal relationships between climate change causes and consequences and the differentiated sociopolitical impacts these processes are having globally. For example, the concept

of emergency alone does not advance global understanding of how fossil fuel emissions magnify heatwave, forest fire, air pollution and flooding events that then intersect with inequitable systems that generate disproportionate burden and harm across marginalized and racialized communities and regions. The lack of clarity and accountability mechanisms accompanying the climate emergency metaphor may not make it the most apt approach to framing climate change issues.

#### 3.2 Slow Violence

Scholar Rob Nixon put forth our second climate metaphor in the 2011 book, *Slow Violence* and the Environmentalism of the Poor. In this publication, Nixon forms the concept of climate change is slow violence. Since its release in 2011, it has been cited widely in peer-reviewed journals, books, and other publications across multiple fields such as sociology, anthropology, geography, medicine, critical theory, ecological economics, and political science. Slow violence as a concept may not have been the core focus of each of the almost 5000 citations listed in google scholar. Yet, the high volume of citations offers extensive reach of this climate metaphor across an array of academic literature and beyond.

Nixon's book asks readers, "how can we turn the long emergencies of slow violence into stories dramatic enough to rouse public sentiment and warrant political intervention, these emergencies whose repercussions have given rise to the most critical challenges of our time?" Nixon's concept of slow violence proposes processes and impacts of climate change such as deforestation, thawing permafrost and warming and acidifying oceans are so gradual and dispersed across time and space it obscures the extent of climate violence. The idea of "long dyings" is

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<sup>&</sup>lt;sup>52</sup> Rob Nixon, "Slow Violence and the Environmentalism of the Poor." *Cambridge, Mass: Harvard University Press*, 2011. 3.

<sup>&</sup>lt;sup>53</sup> Nixon, 2.

also interwoven with slow violence, suggesting climate-related casualties are also staggered and dispersed over time and space. This dispersal, Nixon implies, causes these deaths to become discounted or minimized due to an inability to fully perceive and contextualize this process in how we plan our systems and communities, and the inability for these long processes to be retained in human memory as climate change spans generations.<sup>54</sup>

Nixon then asserts that climate violence is "slow" because "violence" is customarily conceived as an event or action that is immediate in time, explosive and spectacular in space and eruption of instant sensational visibility." The overarching suggestion here is that climate change is fundamentally not perceived by the masses as an explosive, immediate tangible violence in the here and now. But when we look at the extreme rupture, ferocity and annual death toll inflicted by magnifying climate change processes and events, a paradox emerges when we cognitively play out climate change is slow violence. In many ways, such a metaphor may inadvertently cause harm due to promoting misconceptions about the speed, urgency, and consequences of climate change happening all around us.

# 3.2.1 Slow Violence: Right, Fair, Appropriate

*Right—is it an accurate representation*? Does the domain of slow violence accurately reflect the speed of violence due to climate change? In short, no.

Suppose we place fossil fuel driven climate change in the longer arc of geological, ecological, biological, and evolutionary time scale and perspectives. Within these broader arcs of time, there is a jarring and alarming speed and amplification of destabilizing effects of human-caused climate change. As the IPCC notes, increases in global CO2 concentration just since the

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<sup>&</sup>lt;sup>54</sup> Nixon. 2.

year 2000 is 20 ppm per decade, a rate ten times faster than any other sustained rise in CO2 over the past 800,000 years. Meanwhile, the rapid rise of fossil fuel commodification has taken just 200 years, with most of global GHG's being added the atmosphere since the 1970s—just 60 years. This exponentially lightning quick rise of GHG emissions has played a primary role in the rapid degradation of foundational ecological systems and the acceleration of profound threats to global biodiversity, human wellbeing and human-built systems.

Calling these rapid environmental and sociopolitical impacts "slow" and imperceptible violence due to time is a bit like suggesting tsunamis are a type of slow flooding.

Fair—does it account for vulnerability, inequity or harm? When discussing human-caused climate change, we must also contextualize the idea of "gradual" and "long emergencies" against lived experience, and consider whose lived experiences are being noted and valued and whose are not. The violence of climate change is historical and ongoing. Over the last five years, millions have faced immediate, explosive, and spectacular climate violence daily, weekly, monthly and annually. Violence looks like climate magnified forest fires burning 37.2 million hectares globally in 2019 and 2020, leaving many communities displaced, traumatized or in ashes.

Communities ravaged by climate intensified hurricanes due to warming oceans and atmosphere may feel differently about positioning strengthening hurricanes as a lack of immediate spectacle. A snapshot of this includes Hurricane Irma scraping the entire Barbuda community of 1,600 from their island in 2017. Or hurricane Dorian flattening Marsh Harbour on Great Abaco Island in the Bahamas in 2019. It also looks like tropical cyclone Idai in 2019—the most

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<sup>&</sup>lt;sup>55</sup> IPCC, "Summary for Policymakers" In: *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate*. 2019. 72.

destructive southern hemisphere cyclone recorded—killing hundreds and forcibly displacing hundreds of thousands from homes and communities in Mozambique, Malawi and Zimbabwe.

There is also a profound amplification of storm surge flooding in Bangladesh during cyclones due to climate change driven sea-level rise. In 2020 alone, flooding demolished 1.3 million homes, caused the forced displacement of hundreds of thousands, and was responsible for hundreds of premature deaths.<sup>56</sup>

Climate violence also looks like fossil fuel air pollution causing 8.7 million premature deaths in 2018 alone. For those experiencing these ongoing climate augmented traumas, these events may not feel like gradual emergencies or "slow dyings," and it may not be ethically or morally fair to suggest there is anything underwhelming or unspectacular about these climate change related deaths and harms. In fact, many of these events are often tracked in real-time thanks to ever advancing research, non-governmental organization oversight, and the rise of social media platforms, meaning the world often watches these devastating events take place as they unfold. This raises questions about the ethics of climate narratives and what they might mask or downplay according to whose perspective.

Appropriate—is it apt? This analysis does not suggest Nixon fails to acknowledge people and communities harmed via climate change processes. The awareness of harm to marginalized and vulnerable groups is made clear. My issue lies in how slow violence as a conceptual climate metaphor may distort how people build their understanding of climate change harms and threats. Nixon uses the phrase "slowly unfolding environmental catastrophes," but this is just not cognitively coherent for hundreds of millions of people facing immediate and severe climate

<sup>&</sup>lt;sup>56</sup> Imtiaz, "The Nation Learning to Embrace Flooding." *BBC*: Future Planet. December 1, 2020.

threats and violence every single day. This cognitive incoherence makes this climate metaphor of slow violence very narrow in it use and function on a mass public engagement level.

Understandably, the metaphor of slow violence intends to help explain and make sense of the dynamic of climate change as a complex process over time. Yet, such a metaphor may have an undesirable unintended influence on how the general public, decision-makers, and political leaders perceive and think about climate change, its associated harms, and the potential solutions required. Using a slow violence metaphor may diminish a much-needed sense of urgency for systemic policy and behavioural shifts. Positioning climate change as a slow phenomenon perpetuates a misconception we have more lenient timeframes to mobilize climate action before crucial tipping points are triggered—meaning when ecological systems hit thresholds that activate positive feedback loops that lead to rapid systems decline. When framing climate change through metaphor, we must be scrupulous about how violence is presented and whether those experiencing ongoing climate trauma are helped or harmed by the idea and narrative put forth.

### 3.3 Climate War

The final conceptual metaphor I want to explore is climate change is war. War is a common metaphor used in literature, news media and in public and political discourse. In the 1980s, Margaret Thatcher evoked a climate war metaphor by claiming climate change would "entail a long and arduous campaign." Here, "campaign" is intended as a common synonym for war. British media at the time also declared a "war on the greenhouse effect." Since these early war connections to climate, war has continued to proliferate as a common narrative for discussing

<sup>&</sup>lt;sup>57</sup> Rupinder Mangat and Simon Dalby, "Climate and Wartalk: Metaphors, Imagination, Transformation." *Elementa Science of the Anthropocene*. (Washington D.C.) 6, no.1 (2018):58. 3.

climate change. Recently there has been a flurry of climate books published using the war metaphor.

Climate scholar and activist Michael Mann's book, *The Climate War: The Fight to Take back Our Planet*, the climate war metaphor has helped to move the climate war metaphor more conspicuously into the popular climate lexicon in Western nations. The publication of Canadian climate activist Seth Kline's book, *A Good War, Mobilizing Canada for the Climate Emergency* and American journalist Todd Miller's book, *Storming the Wall: Climate Change, Migration, and Homeland Security*, have also added to popularizing the climate war metaphor. Recently, Sun Tzu's famous book, *The Art of War*, has also been used as a medium to situate issues of climate change as a form of war in an opinion piece called, *The Art of the Climate Change War* by The Regulatory Review in 2020.<sup>58</sup>

Popular news media are also circulating climate war language. For example, an article spotlighting Steve Keen from the University College London's Institute for Strategy, Resilience, and Security called for "a war-level footing" on climate change.<sup>59</sup> An opinion piece in the Bloomberg by James Stavridis—a retired US Navy admiral, former supreme allied commander of NATO and dean emeritus of Fletcher School of Law and Diplomacy at Tufts University—was unsurprisingly titled "Biden and the Pentagon Can Declare War on Climate Change." While

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<sup>&</sup>lt;sup>58</sup> Joseph Aldy and Richard Zeckhauser, "The Art of the Climate Change War," *The Regulatory Review*. September 29, 2020.

<sup>&</sup>lt;sup>59</sup> Karen Gilchrist, 'War' Footing Needed to Correct Economists' Miscalculations on Climate Change, Says Professor." *CNBC*. May 23, 2021.

<sup>&</sup>lt;sup>60</sup> James Stavridis, "Biden and the Pentagon Can Declare War on Climate Change." *Bloomberg.Com*, January 13, 2021.

media outlet, The Conversation, published an article titled, We must fight climate change like it's World War III—here are 4 weapons to deploy.<sup>61</sup>

The evoking of the war metaphors for climate change, however, can be deeply problematic. Most notably because language and concepts—particularly a concept like war—hold pre-existing histories, connotations, and networks of meaning that can be hard to disentangle from new intended meanings which may ultimately cause more harm than good.

# 3.3.1 Climate War: Right, Fair, Appropriate

Right—is it an accurate representation? Framing climate change through war can increase feelings of urgency, influence perception of risk, leverage a wide network of schematic knowledge and mobilize populations to act. But does a war metaphor accurately reflect what climate change is and what is needed in the short, medium and long term to overcome the challenges of climate change? Yes and no.

A sense of urgency and the desire to come together to mobilize around a threat are advantageous in a source domain concept for a climate metaphor. But war narratives can be oversimplistic and harmful. This is because what the climate war metaphor may fail to accurately capture is the need for non-adversary, collective and inclusive processes rather than binary, reductionist narratives of an "Us" against a "Them" to ensure meaningful and effective solution-building across nations, populations, and policy. Underscoring an important point about international collaboration on complex global threats is an editorial piece in the Journal Nature, which used the COVID-19 pandemic as an example of the urgent and effective international

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<sup>&</sup>lt;sup>61</sup> David Blair, David Franklin Treagust and Malcolm McCulloch. "We Must Fight Climate Change like It's World War III – Here Are 4 Potent Weapons to Deploy." The Conversation. May 15, 2020.

cooperation to successfully mitigate a complex threat.<sup>62</sup> Though the editorial is addressing COVID-19, it is not a stretch to see how this call for cooperation also might apply to climate change issues.

War thinking and processes tend to offer less collaborative thinking in favour of more unilateral power and decision making. Using a war schema can problematically distort the true nature, complexity and interconnectedness of climate issues and the humanity attached to those issues by placing climate change into combinative and simplistic binaries, which may restrict reasoning or prevent and delay effective and inclusive solutions.<sup>63</sup>

Fair—does it account for vulnerability, inequity or harm? Concepts of war typically engage philosophies of domination and oppression as a way of gaining and maintaining power. War also tends to justify loss of life through "cost of war," "collateral damage," or "ultimate sacrifice" narratives to promote the cause of "winning."

It is also not uncommon for bellicose war narratives to rationalize the devaluing of public health, equity, protecting the most vulnerable and need for environmental preservation in the name of doing what it takes to win the war. When war metaphors act as our source domain for understanding climate change, we run the risk of embedding and normalizing—unintentionally or intentionally—thoughts and perceptions of hopelessness, attrition, enemies and death as a "normal" part of the way we see and anticipate climate change process and solutions. Conjuring war knowledge may also cause public distress and even have a counter-productive effect of causing

<sup>&</sup>lt;sup>62</sup> Nature, "Coronavirus: Three Things All Governments and Their Science Advisers Must Do Now." *Nature* 579, no. 7799 (March 17, 2020): 319–20.

<sup>63</sup> Flusberg et al., 2018. 22.

the public to disengage from the issues.<sup>64</sup> We also run a risk of war-like influences in governmental policy making and justifications for who is helped or lawfully harmed in times of climate crisis.

Another critique of war metaphors comes from authors Harry Boyte and Trygve Throntveit who warn about using war metaphors for the COVID-19 pandemic. In the article, *War Is a Poor Metaphor for this Pandemic*, they state, "metaphors do not just describe reality; they help create it." This statement links back to Critical Metaphor Theory and the understanding of how metaphors actively shape our actions. The authors warn that mobilizing the language of war can create unintended war like actions that may divert critical attention and resources away from the activation of a population's diverse talents and energies into concentrations of power, "enemies" and binaries. <sup>65</sup>

Boyte and Throntveit additionally suggest war metaphors download the responsibility of "fighting" a pandemic (or, in our case it would be climate change) onto individuals in problematic ways. This is because war narratives tend to indiscriminately call on the very communities who contribute least to these issues—Indigenous Peoples, Black communities, People of Colour, women and girls, the poor, to equally "sacrifice" or "combat" climate change, rather than create a culture and perception of the need for institutions, corporations and governments to be accountable for equitable and systemic changes across social, economic and political systems.<sup>66</sup>

Appropriate—is it apt? Research by Mangat and Dalby in, Climate and Wartalk: Metaphors, imagination, transformation, suggests that when using and interpreting war metaphors, the distinction between real and metaphorical war can become hard to differentiate at

<sup>65</sup> Harry Boyte and Trygve Throntveit, "War Is a Poor Metaphor for This Pandemic." *YES! Solutions Journalism*. May 24, 2020.

<sup>&</sup>lt;sup>64</sup> Flusberg et al., 2018. 23.

<sup>&</sup>lt;sup>66</sup> Boyte and Throntveit, 2020.

generate unintended and counterproductive consequences for the target concept the metaphor is meant to explain.<sup>67</sup> Given the many problematic pre-existing connotations that come with metaphors of war, is it suitable or ethical to mobilize war metaphors and language around issues of climate change that distort key causes and harms, especially if other narratives can mobilize a similar sense of urgency, risk, and mobilization? I suggest it is not.

If we cannot ensure a just mobilization of a war metaphor for climate change, we need to be mindful about situating climate change as a type of war. These kinds of reductionist binaries and adversarial mentalities are potentially more harmful than helpful in trying to mobilize collective action and policy to overcome urgent challenges. Though temporarily useful to foster awareness, interest and mobilization, war narratives may not offer the sustainable and just narratives and language we need to address climate change in the short, medium and long term.

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<sup>&</sup>lt;sup>67</sup> Mangat and Dalby, 2018. 7.

# 4. Birth of a Metaphor: Climate Pandemic

Over the last year, the world watched a pandemic grip city after city and community after community as disaster mounted. We witnessed millions of lives lost. Watched millions face growing economic insecurity. We heard experts warn of devastating impacts and the immediate need to reduce the exponential curve. We bore witness to systemic inequities that fostered disproportionate harm and loss across racialized and marginalized communities during crisis. We observed the pandemic magnify rates of gender inequity and gender-based violence. We also collectively witnessed, and in many cases deeply felt, a tsunami of mental health anguish grip the world as it tried to process the magnitude and urgency of the calamity at hand. It was a year of shock, loss, grieving, inequitable burden, risk and a deep questioning of what "normal" ought to look like moving forward.

I want to pause here for a second. I want you to reflect on what you think the above passage is talking about. Am I talking about the COVID-19 pandemic in 2020? Or am I talking about the consequences of climate change in any one of the last 5 years?

Though you might think this introduction refers to the COVID-19 pandemic, I am actually talking about the impacts of fossil fueled climate change as a pandemic. But I understand how you might have related the impacts noted above as stemming from the COVID-19 pandemic event. Perhaps the reason for this is due to striking parallel impacts between the two phenomena. First, both phenomena function as threat multipliers, meaning they exacerbate pre-existing societal, economic or ecological tensions like housing insecurity, poverty, political conflict and can

drastically stress public health systems.<sup>68</sup> Other notable parallels include strong messaging of consensus from scientific and expert communities on the urgency and need to mitigate rising fossil fuel emissions driving climate change and the virus driving a pandemic. The progression of climate change and the COVID-19 pandemic both exhibit exponential growth patterns. Each phenomenon generates high death tolls within short time periods. Both processes see disproportionate harm and impacts on racialized and vulnerable communities and magnification of gender inequities. Both processes have given rise to a global increase in mental health impacts such as anxiety, grief, depression and PTSD. Lastly, both phenomena require systemic level changes to meaningfully, justly, and sustainably address and overcome the threat.

Growing awareness of parallel consequences between these phenomena has meant an increase in leveraging understanding and language of the COVID-19 pandemic to discuss climate change. But leveraging and normalizing the climate pandemic metaphor requires more nuanced attention and exploration. Therefore, this section offers a more explicit mapping of the climate pandemic metaphor using fossil fuels as the metaphorical virus. I develop this metaphor in three parts. First, I reflect on early use of climate pandemic. Second, I use the Conceptual Mapping Position method to show how the source domain of pandemic could map onto the target domain of climate change. Third, I qualitatively reflect on this metaphor using the right, fair, appropriate lens.

<sup>&</sup>lt;sup>68</sup> Patrick Huntjens and Katharina Nachbar. (2015) "Climate change as a threat multiplier for human disaster and conflict: policy and governance recommendations for advancing climate security." *The Hague Institute for Global Justice*. 2015. 2, 5.

### **4.1 Making Early Connections to Climate Pandemic**

Similarities between the pandemic and climate change have been relatively quick to percolate. In this section, I want to focus on two articles that stood out based on how they began to trace and articulate relationships between these two occurrences. The first article is titled, *There's another pandemic under our noses, and it kills 8.7 million people a year*, by author and climate activist Rebecca Solnit.

In an April 2021 op-ed, Solnit states, "a lot of attention was paid to whatever actions might have caused COVID-19 to cross from animals to humans, but the actions that take fossil fuels out of the ground to produce pollution that kills 8.7 million annually, along with acidifying oceans and climate chaos, should be considered a far more outrageous a transgression against public health and safety." Here, Solnit begins to implicitly encourage readers to think about fossil fuels as a type of virus also impacting public health at a magnitude far greater than the COVID-19 virus.

However, Solnit does not lean in to expand on a full climate pandemic metaphor. Instead, Solnit pivots to the climate is slow violence metaphor and the assertion climate change lacks urgency due to the expanse of climate change over time and space. This is emphasized in the passage, "[c]limate change is invisible, in everyday political consciousness, because it occurs on a scale too vast in time and space to see with the naked eye and because it concerns imperceptible phenomena such as atmospheric composition."<sup>70</sup>

Drawing on the metaphor of slow violence in this last quote seems to be used as a way to contrast the sense of urgency seen in the pandemic against the lack of urgency directed at mounting

<sup>&</sup>lt;sup>69</sup> Rebecca Solnit, "There's Another Pandemic under Our Noses, and It Kills 8.7m People a Year." *the Guardian*, April 2, 2021.

<sup>70</sup> Solnit.

fossil fuel emission deaths over a "scale too vast in time." However, I argue climate change is far from invisible in the political consciousness due to time. Air pollution deaths are increasingly tracked and reported across communities making invisibility due to large expanses of time a difficult line of argumentation to defend. The premature death of 8.7 million people in 2018 as a result of fossil fuel air pollution was reported in 2021. This is not a vast amount of time.

Rather than a time issue, I suggest these deaths are a matter of vast and normalized systems of injustice and inequity—white supremacy, neoliberalism, patriarchy, legacies of Imperialism, colonialism—intersecting with marginalized and vulnerable communities as they experience the quickening violence of climate change. Essentially, it is not climate change that is itself slow violence, but human built systems and practices that function to mask mass death and harm without mitigation. The myth of climate change as slow violence has become a problematic scapegoat narrative to explain and justify violence and death on a scale that dwarfs COVID-19.

I also want to touch on a study published in the *International Journal of Sociology and Social Policy* by David Cooper and Joane Nagel, titled *Lessons from the pandemic: climate change and COVID-19*. This study examined official and public responses to the COVID-19 pandemic across America to look for future policy and public response guidance for dealing with climate change. Their findings included the need for elasticity of public responses to crisis and underscored the importance of recognizing and prioritizing the interconnectedness of environment, public health, systems of racism and social injustice. It also highlighted the need for effective governance and fostering and promoting of resilience across natural and built systems.<sup>71</sup>

<sup>&</sup>lt;sup>71</sup> David Cooper Heath and Joane Nagel. "Lessons from the Pandemic: Climate Change and COVID-19." *International Journal of Sociology and Social Policy* (2021).

Overall, the study sought to glean insights from the pandemic as lessons to be heeded for climate change. Though the study plotted out parallels between COVID-19 and climate change, interestingly, they did not make the assertion that we might conceptualize climate change through a climate pandemic metaphor. Instead, this study also explicitly draws on Nixon's slow violence metaphor to create a temporal understanding of how the COVID-19 and climate change phenomena fundamentally differ. The introduction of the article notes, "Nixon's concept of 'slow violence' captures the often-unnoticed progression of climate change and its adverse consequences." The conclusion of the study states, "[t]he spectacular assault of the pandemic, especially on those individuals and groups most historically disadvantaged, stands in contrast to the slow erosion of health and wellbeing of climate change." The first though that pops to mind however, is, does it stand in contrast? Is it accurate or just to suggest the floods, heatwaves, drought and famine faced by hundreds of millions of people globally is a slow erosion?

If we were to survey the "groups most historically disadvantaged," would they agree with this narrative about their lived experiences of lost homes, disrupted jobs, flooded homes, burn forests, heatwave trauma or air pollution health impacts? Would the most impacted communities articulate their own destruction, displacement, medical, psychological and economic upheaval as a "slow erosion" of their wellbeing? I'm not so sure.

A point I find interesting about these two articles is how each begins to trace metaphorical connections between COVID-19 and climate change but then pivot to situate climate change as a form of slow violence. The perception that climate change is slow violence appears deeply embedded in how each author thinks about and articulates climate change. This reflects Lakoff

<sup>&</sup>lt;sup>72</sup> Cooper and Nagel, 2021.

and Johnson's suggestion of how metaphors—like argument is war—function to shape how we fundamentally conceptualize issues.

# 4.2 Conceptually Mapping a Climate Pandemic

This section conceptually maps the metaphor climate change is a pandemic to spotlight how the source domain of pandemic can inform our understanding of fossil fuels as a virus driving a climate pandemic. The Conceptual Mapping Position is a process that allows us to map a transfer of relations from a source domain to understand a target domain.<sup>73</sup> In, *Metaphor Comprehension:* A Critical Review of Theories and Evidence, Keith Holyoak and Dušan Stamenković demonstrate this mapping process using the love is a journey metaphor.<sup>74</sup>

In the image below, the source concept of journey maps onto the target concept of love. In this example, travelers are lovers, the vehicle a relationship and so forth. Each source concept leverages our understanding of a process, item, or action and translates that to a new network of meaning about the target concept.

METAPHOR COMPREHENSION

# LOVE JOURNEY travelers vehicle common goals problems obstacles

Figure 1. Hypothetical conceptual mapping based on love is a journey

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<sup>&</sup>lt;sup>73</sup> George Lakoff. 1993. The contemporary theory of metaphor. In A. Ortony (Ed.), *Metaphor and Thought*. Cambridge University Press. 203.

<sup>&</sup>lt;sup>74</sup> Holyoak and Stamenković, 649.

Using the principles of the Conceptual Mapping Position approach above, in the following diagram, I map out what this might look like between the source domain of COVID-19 pandemic and target domain of fossil-fueled climate change. Holyoak and Stamenković call this mapping process a kind of forced reasoning. This means the metaphor helps us retrieve relevant mappings in our understanding rather than computed the target issue through new complex reasoning. Ultimately, this means someone who does not have an in-depth understanding of relationships between fossil fuels and climate change can still leverage preexisting knowledge about connections between exponentially rising COVID-19 cases and medical system strain to build meaning and understanding of exponentially rising fossil fuel emissions and ecosystem strain.

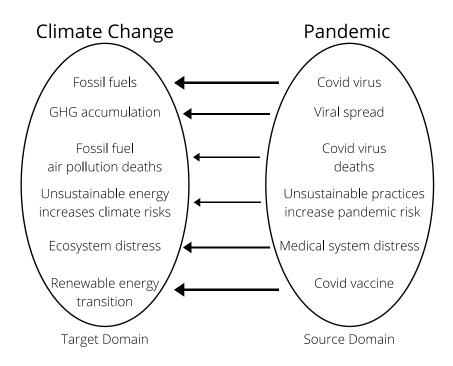


Figure 2. Hypothetical conceptual mapping based on climate change is a pandemic

<sup>&</sup>lt;sup>75</sup> Holyoak and Stamenković. 649.

In the above conceptual mapping model, the source concept functions to generate informative interpretations of information for the target issue. The factor of aptness here is critical. As noted, research has found that aptness rather than metaphor conventionality—the use of common cultural metaphors over newly created metaphors—is a stronger determinant of metaphor preference. Further, engaging poorly thought-out metaphors can lead to bad or lazy policy creation. Thus, it is important to mindfully pair source and target domain overlap to offer a more universal and accessible approach for conceptual understanding and uptake.

### 4.4 Climate Pandemic: Right, Fair, Appropriate

Right—is it an accurate representation? Situating pandemic—notably the COVID-19 pandemic—as the source domain offers a perception of urgency, which is critical and accurate for a climate change metaphor. Similarly, the inference of rate of spread and exponential magnification helps to reflect a more authentic understanding of the speed and intensification of climate change. Additionally, like pandemics, climate change is a significant public health and wellbeing risk with similar disproportionate burdens inflicted on race, gender and pre-existing vulnerabilities.

Fair—does it account for vulnerability, inequity or harm? As the COVID-19 pandemic began to take root across the globe, clear and disturbing patterns of impact began to emerge across racialized communities, genders and mental health. Such realities are underscored by a systemic review conducted by The Lancet on COVID-19 infections based on ethnicity and clinical outcomes. The study analyzed almost nineteen million patients from 50 different studies in the

<sup>&</sup>lt;sup>76</sup> Bales et al., 2015.

<sup>77</sup> Thibodeau and Boroditsky, "Natural Language Metaphors Covertly Influence Reasoning."

United States and United Kingdom. Across the data set, Black, Asian and Hispanic ethnicities were experiencing disproportionately higher rates of COVID-19 infection and death than White individuals.<sup>78</sup>

Another Lancet study published in May 2020 explicitly stated socioeconomic and environmental inequities exacerbated disproportionate COVID-19 impacts across ethnic and racialized communities. These types of systemic inequities tend to affect individuals according to race and gender due to systemically lower income, a larger share of high-risk working conditions, closer proximity to toxic environmental settings, exposure to intensified air pollution and inequitable access to healthcare. In many ways, the inequitable outcomes of the pandemic mirror historical, ongoing and structural injustices that stem from legacies of Imperialism, colonialism, patriarchy, neoliberalism, and white supremacy. These systems, along with other factors, can generate similar risks and outcomes for Indigenous, Black, People of Colour and other marginalized demographics amid the processes and impacts of climate change. Understanding how these issues played out across the COVID-19 pandemic, how they were addressed or how not addressing them exacerbated harm, could aid climate action thinking, decision-making and policy choices.

Appropriate—is it apt? The relationship between ecological degradation and increasing pandemic risk, and that of fossil fuel extraction and climate change, hold important cross domain coherence that could be a helpful explanatory narrative for climate change on a global scale. On the source domain side, we have knowledge of the COVID-19 pandemic. As a process the COVID-

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<sup>&</sup>lt;sup>78</sup> Shirley Sze et al, "Authors' Reply: Ethnicity and Clinical Outcomes in COVID-19: A Systematic Review and Meta-Analysis." *Eclinicalmedicine* 31, (2021): 100686-10068.

<sup>&</sup>lt;sup>79</sup> Bhala et al., "Sharpening the Global Focus on Ethnicity and Race in the Time of COVID-19." The Lancet (British Edition) 395, no. 10238 (2020): 1673.

19 pandemic might generally be understood as an outcome of unsustainable exploitation of nature. Ongoing exploitation increases interactions between humans and wild species. Human encroachment increased risk of novel virus exposure and a new virus was introduced to the human population. Over a short time, we saw rapid exponential viral spread. This gave rise to a global pandemic with subsequent illness, suffering, community strain, mass death, a rise in global awareness of the need to target a clear threat—the COVID-19 virus—and the mobilization of systems to address that threat.

On the target domain side is climate change, we have industrial discovery of fossil fuels, which led to further extraction, production and use—this introduced novel fuel emissions into the atmosphere. Over a short time, there was rapid, exponential rise of CO2 and GHG emissions, giving rise to global climate change and subsequent illness, suffering, community strain, mass death, and a need to address a clear target, fossil fuels. As a metaphor to aid understanding of process and causal relationships, the pandemic metaphor offers a series of relatable linkages that offer a more explicit and explanatory narrative of climate change.

# 5. Conclusion

This paper has used Conceptual Metaphor Theory and a climate justice lens to explore why the metaphor "climate change is a pandemic," is a potentially influential cognitive device to more aptly capture and convey the sociopolitical nature, scope and scale of climate change over other climate metaphors. Given the power climate metaphors have in shaping our thoughts, actions and how we visualize solutions to complex problems, this research helps to understand potential benefits or harms of mobilizing different climate metaphors—notably emergency, slow violence and war—using a high-level climate justice lens.

On the surface, climate emergency as a metaphor provides an illusion of right, fair, and appropriate in communicating climate change. However, due to the broad and amorphous nature of what climate emergency actually is and represents—emergency as an apt and just metaphor ultimately lacks critical nuance, direction and explanatory connections that aid conceptual mapping opportunities to influence targeted climate action.

Slow violence as a climate metaphor arguably fails to offer a right, fair or appropriate metaphorical understanding of climate change. This is due to the highly contextual approach to conceptualizing the speed of climate violence. The level of timescale used to understand climate change can radically alter how climate impacts are perceived. Timescales are subjective depending on location, race, gender, class, and age and lived experience. The idea of slow violence problematically situates blame as a vastness of time issue, rather than directing blame towards unjust systems that allow for climate change impacts to take an inequitable toll on marginalized populations. Slow violence as a concept relating to climate change may advance misconceptions about the immediacy of climate impacts and undermine lived experiences of climate violence, making it difficult to reconcile this metaphor as right, fair, or apt.

Lastly, the climate metaphor of war is highly contentious and potentially harmful. Given the nature of metaphors to influence and shape our thinking and actions, the language of war can quickly become problematic. Granted, there may be potential benefits to a war narrative for climate change—like fostering of a sense of urgency and mobilizing collective action. However, the adversarial, binary and reductionist nature of war thinking can intentionally or unintentionally generate "Us" against "Them" narratives and foster justifications for unjust actions and policies from governments. From a climate justice perspective, the inability to ensure a just use of war metaphors for climate change messaging, means it is not reasonable or just to suggest war metaphors are fair or appropriate as a guiding narrative given the many sociopolitical vulnerabilities and inequities that intersect with the dynamics of climate change.

As with the other metaphors, the proposition of the climate pandemic metaphor also comes with potential challenges. Using a climate pandemic metaphor may see a transfer of backlash sentiments towards the COVID-19 pandemic—like lockdown measures and masking mandates—towards any mobilization of sweeping climate policies or mandates. It may also trigger criticism from medical professionals who may feel using a climate pandemic metaphor could dilute or distract from the efficacy of pandemic meaning or processes. This approach may also incite pushback from environmentalists or climate action advocates who may feel climate pandemic creates too narrow of a focus on fossil fuels, thus side-lining other issues like deforestation, overfishing, plastic pollution or climate migration. These limitations should be kept in mind, but should not hold back exploration of what the climate pandemic metaphor could offer for building climate awareness and action. Further, how such a metaphor might actually aid in addressing these other climate challenges.

For example, how targeting fossil fuel practices, via a climate pandemic metaphor, may help reduce plastic pollution as the public health impacts of fossil fuel practices are brought to light. Or, how pandemic language for climate change may increases awareness of how fossil fuels are cultivating a deadly public health outcome. A climate pandemic type model of thinking may also help to better understand and address underlying sociopolitical and socioeconomic issues—like wealth and power inequity—issues that can also drive different aspects of illegal deforestation. The rapid targeting of fossil fuels via a climate pandemic metaphor may also mean a swift mobilization in reducing the GHG emissions driving many devastating climate change impacts—flooding, drought, hurricanes—causing mass human displacement and climate migration.

Understandably, there is no perfect climate metaphor. But it is fair and accurate to suggest some climate metaphors are more just, apt and explanatory than others. The nature and swiftness of this pandemic has potentially activated a universal knowledge domain network that could provide critical explanatory power as a source domain to help people understand the complex sociopolitical dynamics and urgency of climate change.

A pandemic approach may also help to situate fossil fueled climate change as a manageable process and surmountable public health calamity. Identifying and illuminating more explicit cause-and-effect relationships between fossil fuels, climate change, and public health may help us better understand where climate harms originate from, how it affects wellbeing, issues of equity and vulnerability and how to mobilize to address key climate challenges.

The next steps for this research are three-fold. First, there is a need for more qualitative and quantitative comparative analysis of climate metaphors to consider how different climate metaphors portray climate change issues and how they influence public feelings, perception, decision making and policy choices. Second, more work needs to be done to see how a climate

justice lens can be incorporated into climate metaphor analysis and research. The lack of climate justice analysis across climate metaphors is a significant gap in the literature. Third, further analysis and research could be mobilized to test the efficacy and influence of the climate pandemic metaphor in public thinking, issue perception and solution mobilization.

Our collective civilization was already living through a global pandemic when COVID-19 came along—the climate pandemic. COVID-19 is a rare opportunity that can teach us how to recognize and confront some of the key issues feeding into and magnifying climate change. These lessons and experiences should not be squandered. Developing and expanding this climate pandemic metaphor across political, academic and popular language may offer a more fitting balance of climate urgency, action and justice.

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