

Playing the Changes
Improvisation, Metaphor, and COVID-19

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Article abstract

Erin Felepchuk and Ben Finley examine the use of improvisation within the language of crisis response. They argue that historic cultural anxieties have generated negative connotations for improvisation within such conceptual metaphors as “illness as war” (where improvisation is positioned as a defensive strategy) and, more broadly, “improvisation as disorder,” and draw on improvisation studies theory and discourse to propose alternate metaphors for disease and disease mitigation.

Playing the Changes: Improvisation, Metaphor, and COVID-19

Erin Felepchuk and Ben Finley

COVID-19 is an exceptional yet devious improviser—mutable, destructive, and metamorphic. At least from our current vantage point in the pandemic, the virus—like improvisation—“cannot readily be scripted, predicted, or compelled into orthodoxy” (Heble and Caines 2). It crosses cultural divides and national borders; it resourcefully adapts. Viruses are considered by most scientists to not be autonomous as they parasitize a host cell to replicate. Improvisation, like a virus, needs a host to activate its being. Both have historically occupied a grey area between living and nonorganic entities. Both are shapeshifters. Whether alive or not, they are both crucial evolutionary players. If a virus might be considered an improviser of sorts, how do we collectively improvise *with* this current virus, while building resiliency structures for future pandemics? We have scores—or records of our past constrained improvisations—to inform our playing of pandemics, but with each new virus, novel scores are co-composed. Could an understanding of the pandemic as a site of collective improvisation lead to the creation of participatory scores that assist in responding equitably, efficiently, and creatively to this crisis?

Since March 11, 2020, when the World Health Organization declared COVID-19 a pandemic, discourses about improvisation have been prevalent in the news media, on social media feeds, and in medical and scientific journals: describing hospital workers as being “forced to improvise”¹ personal protective equipment, restaurants improvising new ways of offering services to customers through curbside pick-up, and social media users posting about experimenting with improvised masks.² Many have been reluctant to improvise, and are thus “forced to,” as a necessary defensive measure against COVID-19. For some, improvisation is a vital tonic: an adaptive strategy that fosters creativity, collaboration, and humour—a practice that can transform the traumagenic reality of the pandemic into a narrative of togetherness. For others, improvisation is a threat in and of itself, its unpredictability exacerbating the chaos of the pandemic.

These emergent fears about the capriciousness of COVID-19 echo historic cultural anxieties about improvisation—often conceived of as a last resort or a survival tactic deployed as a result of bad planning or a lack of supplies. Improvisation is an offshoot of one of the most prominent metaphors used in discussing COVID-19: “*illness as war*” (Wicke and Bolognesi). Disease responses are often framed through the lens of battling or winning a war against a virus and politicians such as Emmanuel Macron, Giuseppe Conte, and Donald Trump have all discussed COVID-19 with imageries of battle and war. Boris Johnson, for example, stated in March 2020 that “this enemy can be deadly, but it is also beatable [. . .] we have the resolve and the resources to win the fight” (Semino 50). Improvisation has been discursively situated as a defensive tactic within the metaphorical framing of *illness as war*, which is a result of its association to the military through mottos such as “improvise, adapt, and overcome”—mottos that have populated business, medical, and public discourse throughout the COVID-19 pandemic. In this paper, we argue that improvisation has been embedded in the *illness as war* metaphor, and that this reinforces cultural anxieties about improvisation as antithetical to social order, planning, and collective solidarity. We examine improvisation within this larger context and then offer a new metaphor that distances improvisation from the militaristic imageries produced during the pandemic.

For the purposes of this essay, where we mention metaphor, we refer to the notion of *metaphorical concepts*. Metaphors are not only linguistic systems we use to explain connections between things. They are also “grounded in the body and in everyday experience and

knowledge,” existing in our conceptual systems and thought constructs (Lakoff and Johnson 39). The notion of metaphor in scientific research has long been contested by scholars such as George Lakoff and Mark Johnson, Christine Kelly and Michael Orsini, and Susan Sontag. Sontag, for example, famously argued that metaphor has no place in scientific research, as metaphors around disease impose stigmatizing moral frameworks, which are then imposed onto individual patients (*Illness* 6). On the contrary, epidemiologist Polyxeni Potter, Managing Senior Editor for Centers for Disease Control and Prevention, asserts that “art humanizes and enhances science content,” and argues that metaphors make scientific research possible by contributing “an intuitive perception of the similarity of dissimilars” (xi). Others, such as Hanne and Hawken, argue for a combination of both approaches, recognizing the dangers while offering useful applications of metaphor in discourses about illness. They argue that “metaphors tend to shape aspects of public health policy,” and advocate for a collaboration between health professionals, educators, and journalists in the “formation of metaphor clusters to communicate important medical information and advice in emotionally helpful ways” (98).

In newer research about the reframing of the COVID-19 pandemic, scholars have advocated for the approach of applying different metaphors to different situations—referred to as a “metaphor menu.” Philipp Wicke and Marianna M. Bolognesi argue that a metaphor menu would provide alternatives to the prevailing war metaphor that does not account for the complexity of situations that result from the pandemic and its aftermath and, further, that a metaphor menu may help facilitate better communications about the virus on social media and “support civilians in the expression of their feelings, opinions, and beliefs during the current pandemic” (Wicke and Bolognesi). Linguist Elena Semino argues that “a range of different metaphors should be made available or encouraged, to reflect different aspects, perspectives, and needs” (52). In her article “Metaphor Menu for People Living with Cancer,” Semino offers a music metaphor for the experience of cancer where healing is “convinc[ing] the cancer cells to sing in tune with the rest of the body” (qtd. in Semino 53). The idea of a metaphor menu has encouraged advocacy around shifting away from the dominant *illness as war* metaphor in COVID-19 discourse. For example, Semino’s #ReframeCOVID collective aims “to collect and share a wide range of metaphorical framings of the pandemic, for research and practical use, without endorsing any particular metaphors” (53).

In this paper, we do not try to reconcile this dialectic of metaphor as both dangerous to medical research and as necessary for understanding illness within biomedical and popular cultures. We simply work from the notion that cultural metaphors hold significance and implications beyond normative conceptions of the linguistic metaphor, and that these have the power to not only reflect but generate new meanings around improvisation, transdisciplinary improvisatory practices, the COVID-19 pandemic, and future crises. We are not medical professionals, but musicians and improvisation scholars, and our aim in this paper is not necessarily to draw any concrete strategies for becoming better pandemic improvisers (although these may emerge on their own for the reader). Instead, our aim is to illuminate discursive patterns, reveal metaphoric clusters that have emerged around improvisation during the COVID-19 pandemic, and propose an alternative to the *illness as war* metaphor by offering a conceptualization of disease and disease mitigation through the lens of collective improvisation. Like many others, we argue that there are better alternatives to the war metaphor and propose that improvisation theory can generate metaphors that negotiate personal and group agency rather than reinforce militaristic notions around disease response.

Our paper consists of three parts. In the first part, we reveal emergent and existent metaphors about COVID-19 in popular and medical discourse by examining the overarching metaphor of *illness as war*, and how this has been applied to the COVID-19 pandemic. In the second

section, we examine how improvisation has been framed within the broader *illness as war* metaphor as a defensive strategy. In the third section, we investigate the shared vocabularies of medical discourses and improvisation studies and propose that this shared terminology can act as a springboard for the invention of new metaphors about improvisation and COVID-19. We also offer a new metaphor—rooted in improvisation studies scholarship—and argue that collective improvisation may provide a useful framework for understanding adaptive mitigation responses during the pandemic. We ask: how has our collective pandemic improvisation been constrained by our current metaphoric concepts around improvisation in crisis? How might metaphors around improvisation be useful in explaining disease concepts? In the face of future crisis improvisations, how might metaphors enable preparedness and offer better improvisation strategies for public health officials, doctors, governments, and the public that do not rely on military culture?

Part I: The Battle Against COVID-19

Long used for conceptualizing illness and disability within both popular and medical culture, the *illness as war* metaphor has been prominently used throughout COVID-19 discourses in the news media, across social media, and in business, medical, and scientific communities. For example, in a letter to the *British Dental Journal*, Dr. F. Oluwajana reinforces this narrative by declaring: “my call to arms for the profession is this: let this be the time that dentists and DCPs come together . . . to fight this battle with our medical and nursing colleagues.” References to the war on, or battle against, COVID-19 also dominate the headlines of prominent newspapers, including a CTV News headline, “Young Guelph girl gifted superhero costume to help country battle COVID-19” (Turcotte); the CBC News opinion piece, “Why a flatter curve does not mean we’ve won the COVID-19 battle” (Smith et al.); and the CBC News story, “On the COVID-19 battle front lines at B.C.’s biggest hospital” (CBC News). The *illness as war* metaphor within the context of COVID-19 has been widely discussed and critiqued for a number of reasons, including its potential for stigmatizing patients diagnosed with the disease and its implications of “extreme violence and serious trade-offs” (Sanderson and Meade). As asserted by Semino, the framing of the COVID-19 pandemic through the lens of warfare also results in “inappropriately personifying the virus as a malevolent opponent, creating excessive anxiety, [and] potentially legitimizing authoritarian governmental measures, and implying that those who die did not fight hard enough” (Semino 50).

The *illness as war* metaphor also implies that there is a foreign enemy that we are at war *with*. Historical depictions of diseases and disabilities have been varied: many have conceptualized infectious diseases as invading armies, while others have described them as mythical beasts or monsters to be fought. For each disease and for each point in history, the enemy is imagined differently, but the war metaphor persists, reinforcing the language of battle and defense against a foreign enemy. During the COVID-19 pandemic, Nigerian filmmaker Niyi Akinmolayan created an animated video depicting the virus as a hungry green monster with giant teeth in order to explain the dangers of the disease to young children. As he explains, “there was a struggle to try and explain to my five-year-old what it meant for everyone to be on the lockdown . . . but beyond that was also to explain to them what the coronavirus was and how to get them washing their hands” (Solomon). These current metaphoric understandings of disease have their roots in Renaissance literary depictions of the plague where writers personified death and disease. Novelists and writers transformed the plague through the implementation of metaphors by, for example, depicting the plague as a “hungry monster consuming bodies” (Totaro and Gilman 10). Totaro and Gilman assert that these literary depictions of the disease “were not inoculations as we now know them, but they were first in a well-developed 16th and 17th century *line of defense*” (16, emphasis added).

For hundreds of years, the *illness as war* metaphor has situated diseases as foreign invaders. Cancer, for example, is a disease often portrayed as “invasive,” as “setting up outposts,” or as “coloniz[ing] the body” (Hanne and Hawken 93). In more recent years, the avian flu A(H5N1) has been similarly portrayed through this lens of warfare: as “enemy troops moving into place for an attack,” and as a “steadily advancing” disease which never stops “at state lines, any more than [it does] at national borders” (Hanne and Hawken 95). Like cancer, A(H5N1), and many more diseases and disabilities, COVID-19 has been described as a foreign invader, reinforced through war metaphors that reference its invasion of borders and the advancing of its troops. For example, Dr. Ngozi Okonjo-Iweala, chair of the Gavi Vaccine board, proclaims that the virus “doesn’t respect borders, which is why it will take a truly global response to defeat it” (“Gavi”). Alison Thomson, professor at the University of Toronto, states that “you can’t build a wall high enough to keep this out” (Kestler-D’Amours). And on October 6, 2020, Boris Johnson declared that: “your government is working night and day to repel this virus, and we will succeed, just as this country has seen off every *alien invader* for the last thousand years” (Semino 50, italics added).

Susan Sontag and others have argued that *illness as war* metaphors apply stigmatizing moral frameworks onto patients with the disease—and onto other disabled people³—but the metaphor also reinforces systemic racism by framing the disease as a foreigner, and disease responses as battling an “alien invader.” Through cultural anxieties about the war on COVID-19 and the invading virus, countless new cultural texts have emerged revealing new metaphor clusters that are now deeply embedded in the popular imagination and that reinforce systemic ableism and racism. These discourses within the COVID-19 pandemic have furthered jingoistic and anti-Asian rhetoric with the popularization of phrases such as the “Chinese virus” and “Wuhan flu.” Articulations of COVID-19 as a foreign invader within the metaphorical battle against COVID-19 reinforces the jingoism that is pervasive in the COVID era.

Part II: Improvise, Adapt, and Overcome

From within this larger metaphorical construct of *illness as war*, improvisation emerges, situated in discourse as a defensive strategy that citizens are forced to deploy. These notions about *improvisation as defense* are by no means new, but rather reflect a long history of military culture. Improvisation is embedded discursively in the *illness as war* metaphor: referenced in mottos and slogans; situated within cinematic and televisual portrayals of war that reinforce mythical aspects of battle in the popular imagination; and deployed in the maneuvering against improvised explosive devices (IEDs), fighting vehicles and other improvised weapons deployed by threatening *Others* in the so-called global War on Terror.

Improvisation, along with other related concepts such as flexibility and adaptability, are central to US Marine culture and the militaristic defense of US interests abroad, including in the War on Terror. These concepts are embedded particularly through two popular slogans: “Semper Gumby” and “improvise, adapt, and overcome.” *Semper Gumby* is a “dog latin” motto used by the US Marines that is a play on other military mottos including *Semper Paratus* (always ready), and *Semper Fidelis* (always faithful). *Semper Gumby*, however, references the television character Gumby, the green clay humanoid figure who stretches, bends, and moulds his body to adapt to the environments in which he finds himself. Therefore, the motto *Semper Gumby* means “always flexible,” and reinforces the notions of flexibility, adaptability, and improvisation that are central to USMC culture. Similarly, one of the US Marines’ most recognizable slogans, “improvise, adapt, and overcome,” is used in training forces to be prepared for surprise attacks, unforeseen obstacles, and moments of crisis, but was popularized by Clint Eastwood in the 1986 film *Heartbreak Ridge* (Coticchia and Moro 1). The line from the film—as well as the plot of

the film itself, which is centered on improvising against foreign enemies—became embedded in the popular imagination, and *improvise, adapt, overcome* is now applied in medical practice, business practice, and throughout varied discursive constructions of the COVID-19 pandemic as a site of battle. During the COVID-19 pandemic, where imageries of battle are overwhelmingly common, improvisation is wedded to militaristic notions of adapting and overcoming in the face of the chaotic and threatening Other. We argue that improvisation can be utilized in a discursive or metaphoric manner that is divorced from these war-framings.

Improvise, adapt, and overcome has been frequently referenced throughout pandemic discourse in social media posts, YouTube videos, and medical journals, its influence spanning much further than exclusively militaristic applications. In an article called “Selling During COVID-19: Improvise, Adapt and Overcome,” Colleen Stanley writes that “many salespeople might feel that they are in the middle of a battle as they deal with change and chaos,” and that in order to surmount these challenges, sales teams must improvise, which she defines as “making something from whatever is available” (Stanley). In a YouTube video titled “COVID-19 and Construction: Improvise, Adapt, Overcome,” a construction worker discusses the various ways in which he must improvise for his business to stay afloat. In “COVID-19 and Trauma Care: Improvise, Adapt, and Overcome!,” trauma anesthesiologists Drs. Dutton, Grissom, and Herbstreit assert that in order to manage practicing medicine within the pandemic, “like the U.S. Marines, we have improvised, we have adapted, and we will overcome!” (Dutton et al.). Improvisation is often robustly advocated, inside and outside of the military, as a core feature (and required skill) in crisis defense and disease mitigation.⁴

In this construction of improvisation as a defensive measure, the hope is for the public to *defeat the enemy* (COVID-19) by adapting quickly and improvising effectively. These improvised responses, however, are often not seen as voluntary, but instead are survival strategies that citizens and institutions must deploy in order to not lose the battle. Another line of defense is the improvisatory use of materials at hand in order to, for example, scrounge together personal protective equipment. The motto *improvise, adapt, and overcome* is said to have originated during a time when the Marines were ill-equipped—offered hand-me-down uniforms from other army factions—and therefore had to improvise in order to make up for a lack of proper equipment.⁵ During the COVID-19 pandemic, similar lines of defense have emerged through the improvisatory use of materials at hand in order to, for example, scramble together personal protective equipment. As described by Dr. Balasubramanian et al., “reports of surgical teams having to resort to creating their own PPE using garbage bags, glue, rubber bands, and plastic cover[s] of folders bought from stationary shops have emerged” (Balasubramanian et al.). Through these reports, and through the analysis of numerous articles, we saw a pattern emerge in which news articles deploy the phrase “forced to improvise” to describe these types of disease mitigation or adaptative strategies. Headlines such as “Still-Closed Fitness Facilities Forced to Improvise,” and “Health Workers Forced to Improvise as COVID-19 Treatment Needs Outstrip Protective Gear Supply” are prominent, and descriptions within articles of individuals and institutions being “forced to improvise” are prevalent as well.⁶ We found thousands of articles using this phrase, and we argue that this reflects (as articulated in the previous paragraphs) the defensive position and *involuntariness* from which improvisation is positioned in metaphors about the war on COVID-19, wherein hospitals have responded to the pandemic with institutional improvisations and forced adaptive strategies are the only means of survival. Headlines and medical journals often recognize improvisation as the only way of negotiating these lines of defense. As Drs. Wiedner, Croft, and McGivern acknowledge:

Crises, such as the COVID-19 pandemic, risk overwhelming health and social care systems. As part of their responses to a critical situation, healthcare professionals

necessarily improvise. Some of these local improvisations have the potential to contribute to important innovations for health and social care systems with relevance beyond the particular service area and crisis in which they were developed. (Wiedner et al.)

In many articles about COVID-19, improvisation is a last resort, an unfortunate practice that is a result of a lack of planning and foresight. Thus, improvisation is associated with failures around disease mitigation and disastrous institutional responses, and in many articles there are calls to “avoid improvisation.” For example, in a French article for *20 Minutes*, the Vice President of the European Commission, Margaritis Schinas, declares: “The virus is always around us, and is always spreading. We must therefore avoid improvisation” (“Coronavirus: L’Union européenne”). In a July 15 press release by the European Commission, Schinas states again that, “Drawing on the lessons of the past months we are planning ahead to avoid improvisation.” An article published by the *Harvard Business Review* articulates the necessity of finding ways for businesses to operate “without full-time improvisation,” and states that it is necessary to “remove the need for improvisation and heroics” (Edmondson). For many, it is not just the threat of the virus, but of improvisation itself that worsens the chaos of the pandemic. There are many more articles which situate improvisation as a threat—specifically, a disabling threat—and many associate its influence with the worsening of disease mitigation responses that result from last-resort measures.

A 2020 CBC News article, “How to Prevent Aches and Pains Caused by Makeshift Home Offices,” describes the toll that working from home can have on the physical body: back and neck injuries from precarious and “improvised” set-ups. The article features Fegan Decordova, one of many at-home workers now experiencing body injury, and states that “without much space, she’s had to improvise when it comes to an ‘office.’ Now she’s feeling the effects on her body” (Simmons). In this context, improvisation is the cause of physical ailments: aches and pains result from inexperienced, forced, and precarious improvisations. In this and many more articles, the term *improvise* is used to describe painful moments, the worsening of illness, and dangerous adaptive strategies. In addition to COVID-19, the disabling factor in this article is improvisation—a practice that has the potential to undermine the physical health of Canadian at-home workers.

Later in the article, different terminologies are used, which we would argue also evoke improvisation and improvisatory practice. For example, physiotherapist Matthew Laing speaks about various creative “adjustments” that can be implemented in at-home work set-ups that are more conducive to the physical health of at-home workers. He states, “You kind of have to get creative sometimes,” and, in order to avoid the slouching which causes back injuries, he recommends “stack[ing] up your old textbooks and elevat[ing] the laptop.” He also suggests rolling up a sweater and positioning it to support the lower back. We would point out that these practices are also improvisations. Essentially, where improvisation has failed (or is forced), terms like *improvise* or *improvisation* are often specifically used—and where improvisation has succeeded, other terms such as “creative” or “adaptive” are employed. We argue that contemporary discursive framings of improvisation have deep historical roots, whereby improvisation becomes a sociocultural harbinger of chaos and disorder. Improvisation’s supposed opposites—planning, orderliness, and predictability—are seen as assuring some semblance of social order and public health, while improvisation—in any of its forms—must be avoided, unless as a last act of desperation.

Part III: “Flatten the Curve”: Pandemics as Sites for Collective Improvisation

Concepts such as innovation, adaptation, invention, reproduction, destruction, and mutation emerge in both improvisation studies and in scientific discourses about infectious diseases. We argue that the imaginaries produced within these disciplines cannot so easily be separated. These shared terminologies reveal the potential for merging infectious disease discourse with improvisation studies discourse, allowing a fertile ground for revealing and inventing new metaphors about improvisation and disease.

Improvisation is often described using the language of biomolecular processes and likened to an organism. In *Free Play: Improvisation in Life and Art*, Stephen Nachmanovitch draws parallels between artistic forms of improvisation and theories of ecology. He writes that improvised music

is a conscious act that resembles the patterning of a living thing which, not limited by consciousness, evolved over long ages. We can see in the music, as in the organism, segmentation, branching, symmetry, spiraling, unity amid intricate diversity. We can see the compactness, economy, completeness, consistency, and open-endedness in its organization. (172)

For Nachmanovitch, improvisation is a living thing—an organism that is culturally situated, patterned, and playful. He writes that improvised performances often have “the structural tautness and symmetry of a living organism” (2).

Improvisation as a *living thing* is a metaphor often employed by scholars of improvisation. In *Playing for Keeps: Improvisation in the Aftermath*, Fischlin and Porter write that “the regenerative potential in improvisation thrives in opportunity, turning dissolution and degeneration into the potential for refiguration. Improvisation can, like fire pines, reproduce out of crisis and destruction” (18). Bassist-composer William Parker writes about improvisation as a shapeshifter, a source of environmental understanding, and a way of playing with the unknown. Parker describes improvisation as “a living thing . . . a being that alters our reality, a natural force like the wind, ocean, and rain. Improvisation is a bird in flight, it is also gravity” (Parker 450). For Parker, improvisation is necessarily adaptive and therefore often produces multiple (and contradictory) definitions when it is enacted; it can assume “a different identity” and “a different face” (450). Although there is no singular definition of improvisation, the *aliveness* of improvisation is often alluded to—its adaptive and responsive characteristics are described as present not only in human cultural practices (and in multi-species and ecological interactions), but also as a force that exists autonomously, as a living organism.

Language associated with improvisation is often used in the biomedical community to describe biological entities and to form adaptive strategies. Luis P. Villarreal, the director of the Center for Virus Research at the University of California, describes viruses with a terminology synonymous with improvisation. For instance, he describes how mutable, diverse, and adaptive viruses can be referred to by their ability to “invent” new genes, quicken their “replication,” shift their “mutation,” and creatively “change.” To cope with these improvisational features, scientists often employ improvisational strategies. Biologists Yoav Soen, Maor Knafo, and Michael Elgart advocate for “adaptive improvisation” as a “fundamental principle of organization,” and conclude that this organizing principle “may be implemented in complex systems beyond [the] life sciences” (Soen et al. 12). In the search for a COVID-19 vaccine, epidemiologists Ashesh Nandy and Subhash C. Basak share how improvisational thinking helped in their understanding of the virus. They write that, because of “mutational changes” and “genetic drifts,” they have

“improvised upon the usual techniques of identifications of acceptable epitopes” (Nandy and Basak 2). The unpredictability of medical work makes improvisational thinking a crucial skill, according to Dr. Sigrid Harendza, who asserts that:

for medical educators and medical students, such techniques of improvisational theatre seem to be useful . . . Medical work is unpredictable by its very nature. Medical students must learn to deal adequately with uncertainty inherent in medical problems . . . So let's stay tuned to improvised teaching—scientifically sound and creative. (Harendza)

When reflecting on the *Crepuscule* project—an extraordinary collective community improvisation that premiered in the University of Guelph's Arboretum in 2015—the composer, improviser, instrument builder, and community maker Douglas Ewart said, “I want us to realize the necessity to have a dynamic symbiosis between individuals and communities. The individual assists in creating a dynamic community and the community helps to create a dynamic individual. They are unified yet autonomous, unified yet diversified” (Ewart). In pandemics where negotiation and social cooperation are vital, Mr. Ewart's call to recognize relatedness suggests a powerful orientation for realizing just and dynamic community-making, transdisciplinary bridging, intergenerational coalitions, and environmental connection. Critical improvisation scholars Ramshaw and Stapleton describe these kinds of collectively improvised sites as a “*being-with*.” They explain that, “oft lauded as the expression of individual freedom, improvised creativity actually sits *between* individuality and collectivity, or constitutes a *being-with* of the singular and the general/plural” (Ramshaw and Stapleton 310). We contend that theories of collective improvisation have relevance far beyond arts-based disciplines, and by re-negotiating sites of connection between the individual and the collective, we can reframe discourses about the COVID-19 pandemic from an *us-versus-them* approach to a collaborative, kinship approach.

We suggest that “flatten the curve” can be conceptualized as a graphic score, an invitation from health officials (*composers*) to constrain the behaviour of the public (*performers*). There are two curves in this score. One curve represents a projection of COVID-19 infections that would go beyond the peak capacity of the health system; another, the flatter curve, represents a projection that would stay below the health system capacity through a coordinated effort to take prescribed protective measures. This graphical representation, demonstrating the importance of social cooperation in not overwhelming hospital resources, has proved to be exceptionally effective in communicating and heralding public health action. Performers have responded to this composition, collectively improvising new ways to “flatten the curve” because it is a comprehensible score to play. There is a sense of societal buy-in as incoming statistical information on our ability to play the curve engages our expectations and predictions, producing a common experience of solidarity in improvising together.

Conclusion

Following the early warnings of Sontag, and current discourses about improvisation and disease, we wish to problematize the metaphorical war-framing of pandemics. While declaring war on a disease may facilitate a sense of urgency and thus widespread behavioral change and mobilization, Susan Sontag warns against the dangers of doing so. She argues that if “a particular disease is treated as an evil, invincible predator, not just a disease” the patient diagnosed with the disease will be “demoralized by learning what disease they have.” The solution is to “rectify the conception of the disease, to de-mythicize it” (*Illness* 7). Hanne and Hawken write that this depiction of disease “tends to spill over into public attitudes towards those experiencing the disease” (93). However, they argue that “people are incorrigible users of

metaphor in thinking about sickness and health,” and it is an inevitability when communicating important (and potentially complex) medical concepts:

Health professionals often use metaphors to explain illness to patients. For example, a doctor may explain the workings of the digestive tract by implementing a plumbing metaphor. Patients often also create vivid personal metaphors to communicate their experience. A depressed person may say she is “drowning”; someone experiencing severe pain refers to it as a “red-hot poker”; and a grieving person declares that “losing your parents is like losing the tent poles out of a tent.” (94)

Like the use of metaphors to convey difficult concepts, improvisation during crisis is an inevitability. As articulated by Kathleen J. Tierney and James M. Dahlhamer, “improvisation is a significant feature of every disaster . . . if an event does not require improvisation, it is probably not a disaster” (17). The reframing of COVID-19 could be aided by improvisation studies in the ongoing cocreation of metaphors that are capable of negotiating the complexities of individual and collective agency, and that do not rely on war framings that reduce the pandemic to a series of racist and ableist military tropes. We would argue that disease mitigation as collective improvisation could be a useful addition to the “metaphor menu” and to our collective reframing of COVID-19. Populating the popular imagination with new understandings about improvisation (outside of the context of military framings) could assist non-improvisers in anticipating the aftermath of future crises. We should have metaphors in place that can be drawn upon to understand improvisation in difficult times—where people are inevitably called upon to improvise.

Notes

¹ This phrase is present in many news articles and videos, including: “Health Workers Forced to Improvise as COVID-19 Treatment Needs Outstrip Protective Gear Supply” (<https://youtu.be/QOJdNBdghqU>); “Containing COVID 19: Adamawa Tailor Improvising Face Masks as Government Enforces Order” (<https://youtu.be/0HrUT6hISEk>); and “Coronavirus: As Public Pools Remain Closed, Residents are Improvising to Stay Cool” (<https://youtu.be/uDLPztT-dZc>).

² There are several hashtags involving improvised PPE on social media platforms. On Instagram, for example, there are hashtags including “#ImprovisedMask” and “#ImprovisedMasks.”

³ The illness as war metaphor is present in descriptions of many diseases and disabilities. For more information see scholarship about autism metaphors, in which a “war on autism” is articulated by autism scholars such as Hannah Ebben. The illness as war metaphor is well documented by many scholars, including in *Illness as Metaphor* and *AIDS and Its Metaphors* by Susan Sontag.

⁴ For more information, see Iserson, *Improvised Medicine* and Livingston, *Improvising Medicine*. These works centre around resourcefulness in the face of scarcity through various case studies and personal experiences.

⁵ The history of the term “Improvise, Adapt, and Overcome” is difficult to pin down. While several accounts argue that the phrase has long been the unofficial motto of the US Marine Corps, Clint Eastwood’s use of the phrase in the 1986 film *Heartwood Ridge* increased widespread use

within and beyond military contexts. The motto can be seen on the “purpose” page of the official Marine Corps site (<https://www.marines.com/about-the-marine-corps/who-are-the-marines/purpose.html>), and the motto has been liberally applied to a variety of topics, ranging from life experience as a broad concept (<https://lifeasahuman.com/2010/current-affairs/military/adapt-overcome-and-improvise/>) to financial well-being (https://tciwealth.com/financial-planning/improvise_adapt_overcome/).

⁶ For more examples, Google search “COVID-19 ‘forced to improvise’” and click on any news articles that appear.

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