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Health Communication

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/hhth20

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To cite this article: Elena Semino (2021) "Not Soldiers but Fire-fighters" – Metaphors and Covid-19, Health Communication, 36:1, 50-58, DOI: 10.1080/10410236.2020.1844989

To link to this article: https://doi.org/10.1080/10410236.2020.1844989

Published online: 10 Nov 2020.

HEALTH COMMUNICATION
2021, VOL. 36, NO. 1, 50–58
https://doi.org/10.1080/10410236.2020.1844989

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"Not Soldiers but Fire-fighters" – Metaphors and Covid-19

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ABSTRACT

Metaphors have been widely used in communication about the Covid-19 pandemic. The virus has been described, for example, as an "enemy" to be "beaten," a "tsunami" on health services and even as "glitter" that "gets everywhere." This paper discusses different metaphors for the pandemic, and explains why they are used and why they matter. War metaphors are considered first, as they were particularly frequent and controversial at the beginning of the pandemic. An overview of alternative metaphors is then provided, drawing from the "#ReframeCovid" crowd-sourced multilingual collection of metaphors for Covid-19. Finally, based on both the #ReframeCovid collection and a systematic analysis of a large corpus of news articles in English, it is suggested that Fire metaphors are particularly appropriate and versatile in communication about different aspects of the pandemic, including contagion and different public health measures aimed at reducing it.

On 17th March 2020, 5 days before the United Kingdom was put under lockdown due to the Covid-19 pandemic, the Prime Minister, Boris Johnson, made an official statement that included the following:

> Yes this enemy can be deadly, but it is also beatable – and we know how to beat it and we know that if as a country we follow the scientific advice that is now being given we know that we will beat it.
>
> And however tough the months ahead we have the resolve and the resources to win the fight. (Johnson, 2020a)

On 6th October 2020, after 42,369 official UK deaths from Covid-19 and enormous societal and economic damage, Johnson made the following statement in his speech to the Conservative Party Conference: "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" (Johnson, 2020b).

Metaphorical descriptions of the pandemic as a war (e.g., "enemy," "alien invader," "fight" in the quotes from Johnson) have been widely used since early 2020, including by many other political leaders, such as Xi Jinping in China, Macron in France, Conte in Italy and Trump in the USA. These metaphors have also been widely criticized, however, for inappropriately personifying the virus as a malevolent opponent, creating excessive anxiety, potentially legitimizing authoritarian governmental measures, and implying that those who die did not fight hard enough. The following are two of many media headlines expressing these criticisms: "We are not at 'war' with coronavirus" (Sanderson & Meade, 2020); and "Using military language to discuss coronavirus is dangerous and irresponsible – the US must stop" (Tamkin, 2020).

In this paper, I begin by addressing some questions that arise from the scenario I have just outlined: Why is the pandemic talked about metaphorically? Why are War metaphors in particular used for the pandemic? Are the critics of War metaphors right to be concerned? Should metaphors be avoided altogether? Which metaphors should be used, and which avoided?

I then introduce an initiative aimed at collecting and promoting alternatives to War metaphors for the pandemic – #ReframeCovid – and go on to discuss a type of metaphor that, based on an extensive analysis of its usage, seems to be particularly appropriate and versatile – that of Covid-19 as a fire, and specifically a destructive and hard-to-control fire.

Why is the pandemic talked about metaphorically?

Metaphor involves talking and, potentially, thinking, about one thing in terms of another, where the two things are different but some similarities or correspondences can be perceived between them. For example, when Boris Johnson talks about a "fight" in his statement from March 17th, 2020, he talks about the attempt to reduce infection, illness, and death from the new coronavirus in terms of a violent physical confrontation with an opponent. The two things are obviously different, but we can perceive similarities between them. For example, both are difficult and dangerous enterprises that require effort and concentration, and both involve harm to people, and, in some cases, death.

Metaphorical expressions are frequent in language. Different studies, using broadly similar identification methods, have found them to occur, on average, between 3 and 18 times per 100 words (e.g., Cameron, 2003; Cameron & Stelma, 2004; Steen et al., 2010). More importantly, there are both theoretical accounts and empirical evidence of the role of metaphors as crucial cognitive as well as communicative tools. Conceptual metaphor theory (Lakoff & Johnson, 1980) famously used

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evidence from patterns of conventional metaphorical expressions in language to propose the existence of conceptual metaphors – systematic mappings (or sets of correspondences) across different conceptual domains whereby a "target" domain (e.g., LIFE) is understood in terms of a "source" domain (e.g., JOURNEY). From this perspective, a metaphorical expression such as "I need some direction in my life" is a linguistic realization of the conceptual metaphor LIFE IS A JOURNEY.

Target domains tend to correspond to relatively complex, abstract, subjective, and sensitive experiences (such as life, death, time, and the emotions), whereas source domains tend to correspond to relatively simpler, more image-rich, and intersubjectively accessible experiences (such as motion, combat, people, and animals). Illness, including both physical and mental illness, is precisely the kind of subjective and sensitive experience that tends to be talked about, conceptualized and even experienced through metaphor (Demjén & Semino, 2017; Tay, 2017).

Crucially, however, metaphors are not neutral ways of perceiving and representing reality, as each source domain highlights some aspects of the target and backgrounds others, facilitating different inferences and evaluations (Lakoff & Johnson, 1980). For example, War metaphors for illness highlight the need to eliminate it completely through swift action, and background the possibility of adapting to and living with it. As such, in communication, metaphors are important rhetorical devices, especially when the aim is explanation or persuasion.

It is therefore not surprising that a new virus, causing illness and death throughout the world, and requiring urgent and radical responses from governments and citizens, would often be talked about through metaphors.

Why are War metaphors in particular used for the pandemic?

The most frequent and conventional metaphors tend to draw from basic, embodied, sensorimotor experiences. For example, being faced with an aggressive person or animal that threatens our ability to achieve our goals, or, at worst, to survive, constitutes a basic, physical and image-rich "problem" scenario, with strong emotional associations. This scenario can then be exploited metaphorically to think and talk about a whole range of less tangible problems, such as illness, debt, or grief. All of these can all be "struggled with," "fought," and "defeated." Grady (1997) captured this tendency via the "primary" metaphor DIFFICULTIES ARE OPPONENTS. Aggressive military powers and invaders are the most extreme examples of opponents, and wars are the most extreme examples of dealing with them. This explains why War metaphors have been found in communication about difficulties ranging from cancer to climate change (Atanasova & Koteyko, 2017; Semino et al., 2018b), as well as why a new, urgent and very serious problem such as the Covid-19 pandemic has been talked about through metaphors of fights, battles, and wars (see also Flusberg et al., 2018 on War metaphors generally, Wicke & Bolognesi, 2020 on War metaphors for Covid-19 on Twitter).

In addition, there are several potential structural correspondences between the conceptual domains of WAR and PANDEMIC, such as between the virus and an enemy, health professionals and an army, sick or dead people and casualties, and eliminating the virus and victory. Indeed, War metaphors have been found to be used for previous epidemics, including, for example, Zika in Brazil in 2015–16 (Ribeiro et al., 2018).

Are the critics of War metaphors right to be concerned?

Critics of War metaphors are right to be concerned, but War metaphors can also have useful functions, depending on the context.

As I have already suggested, there is considerable empirical evidence that metaphors have framing effects, i.e. they influence how we think and feel about problems and solutions (for overviews, see Gibbs, 2017; Landau & Keefer, 2014; Thibodeau et al., 2017). Such evidence is usually provided via experiments where different groups of people read different versions of a text about a particular issue (e.g., crime, climate change, cancer), and are then asked the same set of questions about that issue. The stimulus texts differ only in terms of whether the issue is described literally or metaphorically, and/or using different metaphors. Typically, differences in the answers provided by each group can be explained in terms of the metaphors to which they were exposed, with evidence of metaphor framing effects on reasoning and inferences. With regard to health messages specifically, for example, Scherer et al. (2015) found that metaphorical descriptions of influenza (as a beast, riot, army, or weed) increased expressions of willingness to be vaccinated, as opposed to a literal description. In addition, there is evidence that metaphorical descriptions of particular situations tend to elicit greater emotional responses than literal counterparts (Citron & Goldberg, 2014).

Studies investigating the framing effects of War metaphors in particular have identified both potential strengths and weaknesses, depending on the context and other factors (Flusberg et al., 2018). On the one hand, War metaphors can increase people's perceptions of problems as serious and urgent, and their willingness to modify their behaviors accordingly, for example, in relation to climate change (Flusberg et al., 2017). In this sense, if one sets aside any reservations about using war-related terminology at all, War metaphors could be argued to have been appropriate at the beginning of the pandemic, to convey the dangers posed by the virus, justify the need for radical changes in lifestyle, and generate a sense of collective responsibility and sacrifice for a common purpose (cf. Flusberg et al., 2018). With regard to health messages specifically, Landau et al. (2018) found that Enemy metaphors for skin cancer can affect the degree of worry about the disease and the resulting intention to use sunscreen as a preventative measure. However, the framing effects of the metaphor depended on "resonance" and "fit," i.e. they were observed for participants who had a greater fear of physical aggression (resonance), and when solutions were also described in terms of the same metaphor, e.g., with sunscreen providing an

"armour" against sun rays (fit) (see also Thibodeau & Boroditsky, 2013 for the influence of political orientation on susceptibility to metaphors).

On the other hand, however, War metaphors have also been shown to have potentially counterproductive framing effects. For example, in the context of cancer prevention, Battle metaphors have been found to increase fatalism and to decrease people's willingness to engage in self-limiting behaviors to lower cancer risk, such as drinking less alcohol (Hauser & Schwarz, 2015, 2020). Fatalism is a particularly relevant concern for a long-term pandemic, especially as the clear-cut victory suggested by War metaphor becomes more and more elusive. Similarly, as the pandemic requires most citizens to refrain from their normal activities, framing the virus as an enemy or an invader to be fought could run counter to public health messages about reducing contact with others and staying at home more than usual (see also Wicke & Bolognesi, 2020).

Other studies of War metaphors for cancer have found that they can increase the attribution of guilt to a patient who does not recover, as compared with Journey metaphors (Hendricks et al., 2018). This is a well-recognized problem with the metaphorical representation of sick people as "fighters." Although for some people, in some contexts, that metaphor can be empowering (Semino et al., 2018a, 2017), it frames lack of recovery, or death, as defeat, as is indeed shown by the cliché, in obituaries, of the deceased person having "lost their battle" with cancer. With regard to the pandemic, the representation of, for example, populist leaders such as Boris Johnson and Donald Trump as too strong to be beaten by the virus can indeed reinforce the perception that recovery depends on character, rather than a combination of demographic characteristics, genetics, circumstances, and medical treatment. Dr Rachel Clarke questioned this metaphor particularly poignantly when describing her attendance at the bedside of a man dying of Covid-19 in an article in the *Guardian* newspaper:

> I look down at the bedsheets, stained with sweat, and the coil of limbs squirming in fear. It could not be plainer to anyone here that Winston is no participant in a battle. He is, instead, merely the battlefield. His body, worn out to begin with, is being methodically disposed of by a virus so primitive it scarcely qualifies as life. Character has precisely nothing to do with it. It never does in the real world of the hospital where the good, the bad, the brave and the timid all kneel alike before cancers and microbes. (Clarke, 2020)

More generally, studies of the framing effects of metaphors involving an aggressor of some kind are also relevant to the pandemic. People exposed to the metaphor of crime as a wild beast (i.e. a potentially violent aggressor) as opposed to a virus, were found to be more likely to support law-enforcement solutions as opposed to social reform initiatives (Thibodeau & Boroditsky, 2011). This supports the concern that War metaphors may legitimize authoritarian measures that could in fact be disproportionate, and that could go well beyond the specific response to the pandemic. Indeed, the establishment of martial law and or warlike powers for the executive in different countries reveals the potentially fuzzy boundary between the literal and metaphorical status of military references during the pandemic.

Should metaphors be avoided altogether?

Calls for metaphors to be avoided altogether, in view of the potential harm they can cause, have a long history (e.g., Hobbes, [1661] (1996); Locke, [1690] (1979); Sontag, 1979). However, eliminating metaphors is neither feasible nor desirable. Talking and thinking metaphorically is, as I have mentioned, a central and often unconscious characteristic of human beings that cannot be eliminated. But, more positively, metaphors are too precious a resource to do without. They greatly expand our conceptual and communicative abilities, as we can draw from the knowledge and language associated with a rich source domain to reason and communicate about a target domain for which we may otherwise have little vocabulary and conceptual structure. In the same way as they can be used to deceive and prevaricate, they can also be used to enlighten and comfort. The issue is not whether or not they should be used, but *how* they should be used.

Which metaphors should be used, and which avoided?

There are at least a few metaphors that can be safely described as generally inappropriate or even immoral, such as describing human beings as vermin or parasites (Musolff, 2010). However, in most cases, what makes a metaphor appropriate or inappropriate, helpful or unhelpful, empowering, or disempowering is not the type of metaphor itself but the way in which it is used in a specific context for a specific purpose for a specific audience (Semino et al., 2018a). As we have seen, an argument can be made even for War metaphors to be used to suggest that an urgent threat requires an immediate collective effort. Similarly, while War metaphors for cancer can have the harmful effects I have already described, there is also evidence that they can be empowering for some people with cancer, in specific situations (Semino et al., 2017).

In addition, any metaphor can only ever convey a partial representation of a particular phenomenon. The more complex and long-term a phenomenon, the more we need different metaphors to capture different facets and phases, and to communicate with different audiences. In a following section, I am going to argue that Fire metaphors are particularly appropriate for the Covid-19 pandemic. However, in contexts as different as science education and communication about cancer, it has been suggested that a range of different metaphors should be made available or encouraged, to reflect different aspects, perspectives, and needs.

In relation to cancer, for example, my colleagues and I have developed, on the basis of extensive linguistic research (Semino et al., 2018b), a "Metaphor Menu for People Living with Cancer" – a collection of different metaphors based on the language used by patients, to provide a variety of alternative framings and encourage people to develop their own (http://wp.lancs.ac.uk/melc/the-metaphor-menu/; Demjén &

Semino, 2020). The Metaphor Menu includes, for example, a Music metaphor for the experience of having cancer: "to heal is to convince the cancer cells to sing in tune with the rest of the body."

The (metaphorical) idea of a "menu" of metaphors inspired a similar initiative in relation to Covid-19, to which I now turn.

The #ReframeCovid collection of metaphors

In late March 2020, while most of Europe and other parts of the world were in lockdown, a group of researchers interested in metaphor used Twitter to come together and launch an initiative aimed at collecting alternatives to War metaphors for Covid-19. The initiative – #ReframeCovid – was launched by two Spanish academics, Paula Pérez-Sobrino (La University of La Rioja) and Inés Olza (University of Navarra), and was soon joined by Veronika Koller and myself at Lancaster University (https://sites.google.com/view/reframecovid/home). For a detailed account of the initiative, its development and engagement with the media, see Olza et al. (in press). Here I will focus on the core of the initiative – a crowdsourced collection of metaphors for Covid-19 other than War metaphors in any language, which anybody can contribute to and use via an open-source document covered by a Creative Commons license (https://docs.google.com/spreadsheets/d/1TZqICUdE2CvKqZrN67LcmKspY51Kug7aU8oGvK5WEbA/edit#gid=781680773). At the time of writing, the collection includes over 550 examples in 30 languages, as well as some visual and multimodal metaphors, contributed by approximately 100 individuals.

The metaphors included in the collection vary in terms of the areas of experience from which they draw, the aspect of the pandemic that they capture, and the ways in which they frame that aspect of the pandemic. Some Sports metaphors, for example, share some similarities with War metaphors, namely, the positioning of the virus as an opponent and the contrast between winning and losing, as in this extract from a speech by the WHO Director-General (NB: When quoting from the #ReframeCovid collection, I include, in italics, the name of the person who contributed that example to the collection, except where I contributed the example):

1. You can't win a football game only by defending. You have to attack as well. (Ghebreyesus, 2020; *Isabel Solana*)

Other metaphors emphasize the need for patience and sustained effort over a very long period, as in this statement by the Swedish Prime Minister:

2. Vi befinner oss i ett maratonlopp och måste vara förberedda på att det här kommer att vara med oss länge.

   We are in a marathon and have to be prepared for the fact that this will be with us for a long time. (Ronge & Eriksson, 2020; *Anna W. Gustafsson*)

Journey metaphors can similarly suggest a long and difficult process with an uncertain conclusion, as in this quote from the President of Bavaria:

3. Daher sind wir noch nicht über den Berg.

   That's why we're not over the mountain-[top] yet. ("Osteransprache des Ministerpräsidenten", 2020; *Aleksandra Salamurovic;* https://www.marktspiegel.de/nuernberg/c-lokales/osteransprache-des-ministerpraesidenten-dr-markus-soeder-ruft-zu-geduld-und-durchhalten-auf_a56910)

Metaphors involving weather events or natural disasters tend to focus on the consequences of Covid-19 for health systems, but also background the role of the governments responsible for properly funding those health systems:

4. He [Professor Hugh Montgomery] said there would be a "tsunami" of cases coming in the next 2 weeks in London. (Triggle, 2020; *Iona Walker*)

5. Es en Madrid donde mayores tensiones existen para soportar la avalancha que sufre el sistema sanitario.

   It is in Madrid that there are the greatest tensions to withstand the avalanche suffered by the health system. (Cué, 2020; *Isabel Solana*)

Some metaphors are more strikingly original, such as descriptions of the virus as a "a coiled spring ready to get out if we don't stay on top of it" and as "glitter" that "gets everywhere," or this Norwegian re-framing of what counts as heroic behavior in pandemic times:

6. hvis man skal være helt i dise tider, skal man gjøre som pinnsvinet. Ikke brøle som en løve eller slås som en titan, men rulle seg sammen og vente, håper på bedre tider.

   if one is going to be a hero in these times, one should act like a hedgehog. Don't roar like a lion or fight like a giant, but roll up in a ball and wait, hope for better times. (Isakstuen, 2020; *Susan Nacey*)

The metaphor of the hedgehog (explicitly) contrasts with combative/competitive metaphors by encouraging the kind of self-limiting behavior that most people have to adopt to reduce the transmission of the virus (see Pérez-Sobrino et al. in press, for a discussion of creative metaphors in the collection).

The rationale for collecting and sharing alternatives to War metaphors was an awareness of the dominance of military imagery at the beginning of the pandemic, and the potential shortcomings of this imagery. However, the initiative aims to collect and share a wide range of metaphorical framings of the pandemic, for research and practical use, without endorsing any particular metaphors. This is consistent with the non-prescriptive approach that is part of the professional ethos of researchers on language use. Nonetheless, alongside the other members of the #ReframeCovid collective, I am often asked for an opinion about what metaphor or metaphors are most appropriate for the pandemic, and it is in fact possible to provide some answers based on previous research on what makes for an effective metaphor (Grady, 2017; Thibodeau et al., 2017) and of systematic analyses of communication about the unfolding pandemic. In the next section, I draw from the #ReframeCovid collection and a large corpus of news articles in English to suggest that Fire metaphors, and specifically metaphors

involving forest fires, are particularly appropriate and useful for communication about the pandemic.

Fire metaphors for Covid-19

The question of what makes a metaphor effective has been discussed from different perspectives, including laboratory-based experimental studies (e.g., Thibodeau et al., 2017), and surveys regarding public messaging initiatives on topics such as climate change (Grady, 2017). Overall, effective metaphors tend to involve (a) complex and abstract target domains that are not linked to preexisting strongly held beliefs and evaluations; (b) source domains that are widely accessible, well-delineated and image-rich, (c) precise and clearly applicable mappings from source to target domains, which make a metaphor "apt."

Whereas (a) highlights the potential influence of all metaphors, especially at the start of the pandemic, different metaphors for Covid-19 can be contrasted in terms of (b) and (c). Fires are vivid, or image-rich; they are familiar, even if not necessarily through direct experience; they can be of different kinds (e.g., forest fires, house fires, dumpster fires); they have multiple elements and participants (e.g., arsonists, trees, fire-fighters, victims, etc.); and they have a clear evolution (causes, beginnings, middles, ends, and aftermaths). Therefore, they are a suitable area of experience for metaphorical exploitation, as shown by previous studies of Fire metaphors for emotions and of a variety of other phenomena, from sexual desire to social movements (e.g., Charteris-Black, 2017; Kövecses, 2000). However, the fact that fires can be destructive and hard to control has also been shown to make Fire metaphors useful tools for inspiring awe and exercising power in religious and political texts from different cultures and historical periods (Charteris-Black, 2017), and for legitimizing forceful law-enforcement interventions in response to social unrest (Hart, 2017).

Concerning the aptness of Fire metaphors, fires cause harm and destruction by progressively increasing in size and intensity, and are therefore a suitable source domain for any phenomenon that cause damage by "spreading" (Charteris-Black, 2017; Hart, 2017). This clearly applies to a highly contagious virus for which there is no, or little, immunity in humans. In what follows I point out several other respects in which Fire metaphors can be shown to be apt for the pandemic more generally, and for arguably "beneficial" rhetorical purposes.

Finding Fire metaphors for Covid-19

The discussion of Fire metaphors that follows is based on two sources of data:

- The #ReframeCovid collection of metaphors.
- The Coronavirus Corpus (https://www.english-corpora.org/corona/) – an online collection of news articles in English from around the world from January 2020 onwards; at the cutoff point for my data collection (30th September 2020), the corpus consisted of just over 600 million words.

Concerning the #ReframeCovid collection, I searched for fire-related terms in the column of the spreadsheet that captures the source domain of the relevant metaphor. That resulted in seven verbal Fire metaphors from six different languages (Dutch, English, German, Greek, Italian and Spanish). Concerning the Coronavirus Corpus, I searched for "coronavirus" or "covid-19" in a span five words to the left and five words to the right of "fire." That generated 946 hits, or "concordance" lines. I then used the metaphor identification procedure proposed by Pragglejaz Group (2007) to identify metaphorical uses of fire-related vocabulary. I included fire-related similes and other "direct" metaphors (Steen et al., 2010). I excluded fire-related metaphors for topics other than Covid-19. That resulted in 54 examples of relevant Fire metaphors (see Semino, 2020 for an earlier discussion of Fire metaphors in a smaller dataset).

What Fire metaphors can do

In the specific data, I have analyzed, Fire metaphors are used flexibly and creatively for multiple purposes, particularly to:

- convey danger and urgency;
- distinguish between different phases of the pandemic;
- explain how contagion happens and the role of individuals within that;
- explain measures for reducing contagion;
- portray the role of health workers;
- connect the pandemic with health inequalities and other problems; and
- outline post-pandemic futures.

Danger and urgency

Fires can spread quickly, be hard to control, and grow very large, causing large-scale and irreparable damage. These characteristics can be exploited metaphorically to convey the dangers posed by the coronavirus, and the need for urgent action. In a Spanish example from the #ReframeCovid collection from March 2020, the coronavirus is described by an anthropologist as needing to be approached as "un gran fuego" ("a large fire"), while a Canadian news report from the Coronavirus Corpus from August 2020 explains that the US–Canada border is closed "because of the raging COVID-19 dumpster fire in the U.S." (Sims, 2020). When the focus is on uncontrollable spread, what is evoked is often a forest fire. For example, in June 2020 a Pakistani minister described the coronavirus as "spreading like a fire in the jungle" in the rural areas of the country, while, in June 2020, the director of the Center for Infectious Disease at the University of Minnesota talked about a "forest fire that may not slow down."

Different phases

The life cycle of fires can be exploited metaphorically to distinguish between different phases in the seriousness of the pandemic, in terms of numbers of new infections and success or failure in reducing those numbers. In April 2020, when new daily infections were increasing fast on Rhode Island, a New York Times article described it as a "a state where the coronavirus is a fire raging" (Powell, 2020). In

contrast, in May 2020, the Irish Prime Minister combined Fire and War metaphors when he stated that, in Ireland, the coronavirus was a "fire in retreat" but "not defeated," adding: "We must extinguish every spark, quench every ember." Nerlich (2020) quotes New Zealand Prime Minister Jacinda Arnden, who was widely praised for her leadership during the pandemic, as similarly talking about the importance of "actively testing those who might be at risk of Covid-19 as we hunt to find any burning embers of the virus."

References to metaphorical embers are particularly useful to suggest that danger still persists even when the number of infections has substantially decreased.

How contagion happens

Explaining how contagion happens is a particular challenge in public health communication about the coronavirus: the process is not just invisible, but it also involves asymptomatic people and takes place during the most ordinary daily activities. There is also a fine balance to strike between persuading people to reduce the chance of being in danger, or being a danger to others, on the one hand, and, on the other hand, avoiding excessive blame on individuals. Here Fire metaphors can be particularly useful.

In a semi-technical explanation from the medical website *Medscape*, people are trees that provide fuel to a forest fire driven by wind:

7. Think of COVID-19 as a fire burning in a forest. All of us are trees. The R0 is the wind speed. The higher it is, the faster the fire tears through the forest. But just like a forest fire, COVID-19 needs fuel to keep going. We're the fuel. (Wilson, 2020)

In other forest fire metaphorical scenarios, people are "kindling,' "sparks being thrown off" (when infecting others) and "fuel" (when becoming infected). In these cases, Fire metaphors convey the dangers posed by people being in close proximity to one another, but without directly attributing blame: People are described as inanimate entities (trees, kindling, fuel) that are consumed by the fire they contribute to spread.

A variant of this metaphor, by three scientists writing for *The Atlantic*, involves an urban fire:

8. Think of the coronavirus pandemic as a fire ravaging our cities and towns that is spread by infected people breathing out invisible embers every time they speak, cough, or sneeze. Sneezing is the most dangerous – it spreads embers farthest – coughing second, and speaking least, though it still can spread the embers. These invisible sparks cause others to catch fire and in turn breathe out embers until we truly catch fire – and get sick. (Tufecki et al., 2020)

Here the reference to "invisible embers" is a particularly vivid way to portray the danger posed by something as seemingly innocuous as breath.

Measures to reduce contagion

The use of Fire metaphors to explain how contagion happens often sets the scene for explaining how new infections can be stopped. The extract from *Medscape* above (example 7), for instance, where people are "trees" and "fuel", goes on to exploit the forest fire scenario to convey the effectiveness of quarantines and social distancing:

9. A few fire lines – quarantines and social distancing measures – keep the fire from hitting all the trees. (Wilson, 2020)

Similarly, the metaphor where people breathe out "invisible embers" (example 8 above) is used to justify face masks as an effective measure against the spread of the virus:

10. If we could just keep our embers from being sent out every time we spoke or coughed, many fewer people would catch fire. Masks help us do that. And because we don't know for sure who's sick, the only solution is for everyone to wear masks. This eventually benefits the wearer because fewer fires mean we're all less likely to be burned. My mask protects you; your masks protect me. (Tufecki et al., 2020)

As time went on, Fire metaphors were also used as part of debates about different approaches to dealing with the pandemic. In the extract below, from the 30th September edition of the BBC Radio 4 program *The World Tonight*, UK virologist Chris Smith makes an explicit comparison with forest fires to argue that the resurgence of the virus in the North of England in September 2020 could only be addressed by stopping contact between people (as opposed to more limited measures taken at the time, such as closing pubs early):

11. the way that you stop a disease spreading is in the same way as if we have a forest fire and we want to stop the fire, pouring water on it immediately where the fire is doesn't actually work, you've got to get downwind of the fire and you rob it of fuel, you create a fire break by cutting the trees down, so what that translates to in human terms is you know where the activity is, you stop those people transmitting, you stop them moving and giving it to other people, so you cut off the supply of fuel and oxygen to the fire

Also, in September 2020, US epidemiologist William Hanage was quoted as using the metaphor of a house fire to counter the notion, that had been put forward at the time, that the best approach to the pandemic was to shield the vulnerable population and allow everyone else to live normally, until herd immunity was achieved:

12. William Hanage, a professor of epidemiology at Harvard, likens the strategy to protecting antiques in a house fire by putting them all in one room, standing guard with a fire extinguisher but simultaneously fanning the flames.
"If the blaze outside the room were adequately controlled then maybe, just maybe, they would be able to stamp out all the embers," he said. "But this approach is to actively encourage the fire. The risk is that too many sparks make it through and all you're left with is ashes." (Sample, 2020; *Christopher Hart*)

Nerlich (2020) mentions a contrasting use of a house fire metaphor by a citizen of New York to suggest that the consequences of containment measures may be too high for society and the economy: "Just because the fire was put out doesn't mean the house wasn't burned down."

Healthcare workers

Within Fire metaphors, healthcare workers are normally positioned as firefighters who "run into raging blazes" for the sake of everyone else. This emphasizes the risks that healthcare workers run, and can therefore be used to stress the need to respect social distancing rules and/or wear face masks. For example, the description of the importance of face masks in example 8 above is followed by: "Plus, our firefighters would no longer be overwhelmed" (Tufecki et al., 2020).

Making health inequalities and other problems worse

Fire metaphors can be used to emphasize the additional vulnerability of people who live in cramped conditions. For example, a South African commentator pointed out that the virus could spread particularly fast in informal settlements: "Look at how shack fires happen: you light one fire, and the whole place burns down" (Kiewit & Smit, 2020). In July 2020, a US judge was quoted as writing that ICE's family detention centers "are on fire [with coronavirus] and there is no time for half measures" (Travassos et al., 2020).

In a few cases, Fire metaphors are used to suggest that the coronavirus is making existing problems or crises worse. In these cases, the metaphorical fire was already burning, and the coronavirus "add[s] fuel to the fire" or "throws gasoline on the fire," for example, in the context of preexisting tensions in US prisons, or, at the individual level, in the context of long-term mental health problems.

The future

Fire metaphors can also be adapted to paint different pictures of a post-Covid-19 future. In such cases, the focus in on being better prepared for future pandemics, or trying to prevent them altogether. Nerlich (2020) quotes microbiologist Peter Piot as using a Fire metaphor to argue for regular investment in the people and resources who are needed to deal with pandemics:

13. I hope the lesson will really be that we can't afford to recreate the fire brigade when the house is on fire, we need the fire brigade ready all the time, hoping that it never has to be deployed. (Hamill, 2020)

Italian commentator Paolo Costa includes a reference to the future in a lengthy forest fire metaphor, from a piece entitled "Non soldati, ma pompieri" ("Not soldiers, but fire-fighers"):

14. Non solo ci sono continuamente focolai da spegnere e, quando la sorte si accanisce, giganteschi fronti di fuoco da arginare, ma è dovere di tutti collaborare quotidianamente alla bonifica del terreno affinché scintille, inneschi, distrazioni più o meno colpevoli non provochino adesso o in futuro disastri irreparabili.

Not only are there constant outbreaks to extinguish and, when our luck gets worse, gigantic fronts of fire to control, but it is everyone's duty to collaborate daily in the reclamation of the soil, so that sparks, triggers, and more or less guilty distractions do not cause irreparable disasters now or in the future. (Costa, 2020)

Here the idea of collective responsibility for soil reclamation to prevent new fires suggests that lifestyles will have to change long-term in order to avoid future pandemics.

Conclusion

Metaphor is too pervasive and useful a tool for communication and thinking to be avoided or censored because it can do harm as well as good. However, some metaphors are more apt than others, depending on the topic and context, and I have shown that Fire metaphors can be particularly appropriate and versatile in communication about the Covid-19 pandemic, especially as compared with War metaphors. Of course, no metaphor can cater for all aspects of something as complex and long term as a global pandemic, nor for all contingencies and audiences. For example, Fire metaphors are not best suited to highlight the danger of asymptomatic transmission of the virus; they may be less effective for people with no strong fears of fires (cf. resonance in Landau et al., 2018); or, conversely, they may be inappropriate in parts of the world where literal forest fires are a regular or current threat. Initiatives such as #ReframeCovid can be particularly useful to bring together the widest possible range of metaphorical tools for the pandemic, from marathons to glitter. As I hope to have shown, a well-informed and context-sensitive approach to metaphor selection can be an important part of public health messaging.

Funding

This work was supported by the Economic and Social Research Council, part of UK Research and Innovation. [ES/R008906/1].

References

Atanasova, D., & Koteyko, N. (2017). Metaphors in *Guardian Online* and *Mail Online* opinion-page content on climate change: War, religion, and politics. *Environmental Communication*, *11*(4), 452–469. https://doi.org/10.1080/17524032.2015.1024705

Cameron, L. (2003). *Metaphor in educational discourse*. Continuum.

Cameron, L., & Stelma, J. H. (2004). Metaphor clusters in discourse. *Journal of Applied Linguistics*, *1*(2), 107–136. https://doi.org/10.1558/japl.2004.1.2.107

Charteris-Black, J. (2017). *Fire metaphors: Discourses of awe and authority*. Bloomsbury.

Citron, F. M., & Goldberg, A. E. (2014). Metaphorical sentences are more emotionally engaging than their literal counterparts. *Journal of Cognitive Neuroscience*, *26*(11), 2585–2595. https://doi.org/10.1162/jocn_a_00654

Clarke, R. (2020, May 30). "This man knows he's dying as surely as I do:" A doctor's dispatches from the NHS frontline. *The Guardian* https://www.theguardian.com/books/2020/may/30/this-man-knows-hes-dying-as-surely-as-i-do-a-doctors-dispatches-from-intensive-care

Costa, P. (2020, March 28). Emergenza coronavirus: Non soldati, ma pompieri *Settimana News* http://www.settimananews.it/societa/emergenza-coronavirus-non-soldati-ma-pompieri/

Cué, C. E. (2020, March 22). Sánchez advierte de que llega la "ola más dura"y pide fortaleza y unidad. *El País* https://elpais.com/espana/2020-

03-21/sanchez-advierte-de-que-llega-la-ola-mas-duray-pide-fortaleza-y-unidad.html
Demjén, Z., & Semino, E. (2017). Using metaphor in healthcare: Physical health. In E. Semino & Z. Demjén (Eds.), *The Routledge handbook of metaphor and language* (pp. 385–399). Routledge.
Demjén, Z., & Semino, E. (2020). Communicating nuanced results in language consultancy: The case of cancer and the Violence metaphor. In L. Mullany (Ed.), *Professional communication: Consultancy, advocacy, activism* (pp. 191–210). Palgrave.
Flusberg, S. J., Matlock, T., & Thibodeau, P. H. (2018). War metaphors in public discourse. *Metaphor and Symbol*, *33*(1), 1–18. https://doi.org/10.1080/10926488.2018.1407992
Flusberg, S. J., Matlock, T., & Thibodeau, P. H. (2017). Metaphors for the War (or Race) against climate change. *Environmental Communication*, *11*(6), 769–783. https://doi.org/10.1080/17524032.2017.1289111
Ghebreyesus, T. A. (2020). *WHO Director-General's opening remarks at the media briefing on COVID-19-23 March 2020*; https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19—23-march-2020)
Gibbs, R. W., Jr. (2017). *Metaphor wars: Conceptual metaphors in human life*. Cambridge University Press.
Grady, J. (1997). *Foundations of meaning: Primary metaphors and primary scenes* [Unpublished doctoral dissertation]. University of California at Berkeley.
Grady, J. (2017). Using metaphor to influence public perceptions and policy: How metaphors can save the world. In E. Semino & Z. Demjén (Eds.), *The Routledge handbook of metaphor and language* (pp. 343–354). Routledge.
Hamill, J. (2020, May 21). *Coronavirus: Millions could be left with health complications and a vaccine may never be found, scientist warns. The Herald* https://www.heraldscotland.com/news/18467082.coronavirus-millions-left-health-complications-vaccine-may-never-found-scientist-warns/
Hart, C. (2017). "Riots engulfed the city": An experimental study investigating the legitimating effects of fire metaphors in discourses of disorder. *Discourse & Society*, *29*(3), 279–298. https://doi.org/10.1177/0957926517734663
Hauser, D. J., & Schwarz, N. (2015). The war on prevention: Bellicose cancer metaphors hurt (some) prevention intentions. *Personality and Social Psychology Bulletin*, *41*(1), 66–77. https://doi.org/10.1177/0146167214557006
Hauser, D. J., & Schwarz, N. (2020). The war on prevention II: Battle metaphors undermine cancer treatment and prevention and do not increase vigilance. *Health Communication*, *35*(13), 1698–1704. https://doi.org/10.1080/10410236.2019.1663465
Hendricks, R. K., Demjén, Z., Semino, E., & Boroditsky, L. (2018). Emotional implications of metaphor: Consequences of metaphor framing for mindset about cancer. *Metaphor & Symbol*, *33*(4), 267–279. https://doi.org/10.1080/10926488.2018.1549835
Hobbes, T. ([1661] (1996)). *Leviathan* (R. Tuck, ed.). Cambridge University Press.
Isakstuen, M. (2020, April 24) Ropingen min trengs ikke mer. Morgenbladet https://morgenbladet.no/ideer/2020/04/ropingen-min-trengs-ikke-mer
Johnson, B. (2020a). *Prime Minister's statement on coronavirus (COVID-19): 17 March 2020* https://www.gov.uk/government/speeches/pm-statement-on-coronavirus-17-march-2020
Johnson, B. (2020b). *Prime Minister's keynote speech at the 2020 Conservative Party Conference* https://www.conservatives.com/news/boris-johnson-read-the-prime-ministers-keynote-speech-in-full
Kiewit, L., & Smit, S. (2020, June 4). Virus spreads like fire in the Cape. *Mail & Guardian* https://mg.co.za/news/2020-06-04-virus-spreads-like-fire-in-the-cape/
Kövecses, Z. (2000). *Metaphor and emotion: Language, culture, and body in human feeling*. Cambridge University Press.
Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. University of Chicago Press.
Landau, M. J., Arndt, J., & Cameron, L. D. (2018). Do metaphors in health messages work? Exploring emotional and cognitive factors. *Journal of Experimental Social Psychology*, *74*(2018), 135–149. https://doi.org/10.1016/j.jesp.2017.09.006
Landau, M. J., & Keefer, L. A. (2014). This is like that: Metaphors in public discourse shape attitudes. *Social and Personality Psychology Compass*, *8*(8), 463–473. https://doi.org/10.1111/spc3.12125
Locke, J. ([1690] (1979)). *An essay concerning human understanding* (P. H. Nidditch, ed). Oxford University Press.
Musolff, A. (2010). *Metaphor, nation and the Holocaust*. Routledge.
Nerlich, B. (2020, September 18) *Metaphors and realities: Coronavirus and climate change*. https://blogs.nottingham.ac.uk/makingsciencepublic/2020/09/18/metaphors-and-realities-coronavirus-and-climate-change/
Olza, I., Koller, V., Ibarretxe-Antuñano, I., Pérez-Sobrino, P., & Semino, E. (in press). The #ReframeCovid initiative: From Twitter to society via metaphor. *Metaphor and the Social World*.
Pérez-Sobrino, P., Semino, E., Ibarretxe-Antuñano, I., Koller, V., & Olza, I. (in press). Acting like a hedgehog in times of pandemic: Metaphorical creativity in the #ReframeCovid collection. *Metaphor and Symbol*.
Powell, M. (2020, April 28) Rhode Island pushes aggressive testing, a move that could ease reopening. *New York Times* https://www.nytimes.com/2020/04/28/us/coronavirus-rhode-island.html
Pragglejaz Group. (2007). MIP: A method for identifying metaphorically used words in discourse. *Metaphor and Symbol*, *22*(1), 1–39. https://doi.org/10.1080/10926480709336752
Ribeiro, B., Hartley, S., Nerlich, B., & Jaspal, R. (2018). Media coverage of the Zika crisis in Brazil: The construction of a "war" frame that masked social and gender inequalities. *Social Science & Medicine*, *200*(March2018), 137–144. https://doi.org/10.1016/j.socscimed.2018.01.023
Ronge, J., & Eriksson, C.-F. (2020, March 10). Löfven om coronaviruset: "Ett maratonlopp". Expressen https://www.expressen.se/nyheter/lofven-om-coronaviruset-ett-maratonlopp/
Sample, I. (2020, October 7). Why herd immunity strategy is regarded as fringe viewpoint. *The Guardian* https://www.theguardian.com/world/2020/oct/07/why-herd-immunity-strategy-is-regarded-as-fringe-viewpoint
Sanderson, B., & Meade, D. (2020, May 5). We are not at "war" with coronavirus. *Ecologist*. https://theecologist.org/2020/may/05/we-are-not-war-coronavirus
Scherer, A. M., Scherer, L. D., & Fagerlin, A. (2015). Getting ahead of illness. *Medical Decision Making*, *35*(1), 37–45. https://doi.org/10.1177/0272989X14522547
Semino, E. (2020, July 1) *"A fire raging": Why fire metaphors work well for Covid-19*. http://cass.lancs.ac.uk/a-fire-raging-why-fire-metaphors-work-well-for-covid-19/.
Semino, E., Demjén, Z., & Demmen, J. (2018a). An integrated approach to metaphor and framing in cognition, discourse and practice, with an application to metaphors for cancer. *Applied Linguistics*, *39*(5), 625–645. https://doi.org/10.1093/applin/amw028
Semino, E., Demjén, Z., Demmen, J., Koller, V., Payne, S., Hardie, A., & Rayson, P. (2017). The online use of Violence and Journey metaphors by patients with cancer, as compared with health professionals: A mixed methods study. *BMJ Supportive and Palliative Care*, *7*(1), 60–66. https://doi.org/10.1136/bmjspcare-2014-000785
Semino, E., Demjén, Z., Hardie, A., Rayson, P., & Payne, S. (2018b). *Metaphor, cancer and the end of life: A corpus-based study*. Routledge.
Sims, J. (2020, August 8). COVID-19 adds new dangers to border-crossing float down from U.S. to Sarnia. *The London Free Press*. https://lfpress.com/opinion/columnists/column-covid-19-adds-new-dangers-to-ill-advised-and-sometimes-deadly-port-huron-float-down
Sontag, S. (1979). *Illness as metaphor*. Allen Lane.
Steen, G. J., Dorst, A. G., Herrmann, B. J., Kaal, A. A., Krennmayr, T., & Pasma, T. (2010). *A method for linguistic metaphor identification: From MIP to MIPVU*. John Benjamins.
Tamkin, E. (2020, April 1). Using military language to discuss coronavirus is dangerous and irresponsible – The US must stop. *New Statesman* https://www.newstatesman.com/world/north-america/2020/04/using-military-language-discuss-coronavirus-dangerous-and-irresponsible
Tay, D. (2017). Using metaphor in healthcare: Mental health. In E. Semino & Z. Demjén (Eds.), *The Routledge handbook of metaphor and language* (pp. 371–384). Routledge.

Thibodeau, P. H., & Boroditsky, L. (2011). Metaphors we think with: The role of metaphor in reasoning. *PloS One*, *6*(2), e16782. https://doi.org/10.1371/journal.pone.0016782

Thibodeau, P. H., & Boroditsky, L. (2013). Natural language metaphors covertly influence reasoning. *PLoS One*, *8*(1), e52961. https://doi.org/10.1371/journal.pone.0052961

Thibodeau, P. H., Hendricks, R. K., & Boroditsky, L. (2017). How linguistic metaphor scaffolds reasoning. *Trends in Cognitive Sciences*, *21*(11), 852–863. https://doi.org/10.1016/j.tics.2017.07.001

Travassos, M. A., Foppiano Palacios, C., & Openshaw, J. J. (2020, July 25). Government Putting Immigrant Detainees at COVID-19 Risk. *Medpage Today*. https://www.medpagetoday.com/infectiousdisease/covid19/87737

Triggle, N. (2020, April 3) *Coronavirus: Is the NHS ready for the surge in cases?* https://www.bbc.co.uk/news/health-51714498

Tufecki, Z., Howard, J., & Greenhalgh, T. (2020, April 22). The real reason to wear a mask. *The Atlantic* https://www.theatlantic.com/health/archive/2020/04/dont-wear-mask-yourself/610336/

Wicke, P., & Bolognesi, M. (2020). Framing COVID-19: How we conceptualize and discuss the pandemic on Twitter. *PloS One*, *15*(9), e0240010. https://doi.org/10.1371/journal.pone.0240010

Wilson, F. P. (2020, March 31). COVID-19 death predictions: What do we need to know? *Medscape* https://www.medscape.com/viewarticle/927791