
COMMENTARY

Climate and wartalk: Metaphors, imagination, transformation

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Fossil fuel divestment activists re-imagine how the war metaphor can be used in climate change action to transform thinking around what will lead to a sustainable society. Through the naming of a clear enemy and an end goal, the overused war metaphor is renewed. By casting the fossil fuel industry in the role of enemy, fossil fuel divestment activists move to a re-imagining of the climate change problem as one that is located in the here and now with known villains who must be challenged and defeated. In this scenario, climate activists move away from the climate and national security framing to a climate and human security way of thinking.

Keyword: Climate change; Metaphor; Fossil fuel divestment movement

Think of 2013 as the Year Zero in the battle over climate change, one in which we are going to have to win big, or lose bigger. ... The reasons for acting may be somber, but the fight is a gift and an honor. What it will give you in return is meaning, purpose, hope, your best self, some really good company, and the satisfaction of being part of victories also to come. But what victory means needs to be imagined on a whole new scale as the news worsens. ... Its victories also capture what a lot of our greenest gifts look like: nothing. The regions that weren't fracked, the coal plants that didn't open, the mountaintops that weren't blasted by mining corporations, the children who didn't get asthma or mercury poisoning from coal emissions, the carbon that stayed in the Earth and never made it into the atmosphere. ... This is, among other things, a war of the imagination: the carbon profiteers and their politicians are hoping you don't connect the dots, or imagine the various futures we could make or they could destroy, or grasp the remarkably beautiful and complex ways the natural world has worked to our benefit and is now being sabotaged, or discover your conscience and voice, or ever picture how different it could all be, how different it will need to be.
(Solnit, 2012)

The epigraph above comes from an article boldly titled "2013 Will Be Year Zero In Our Climate Battle" written by Rebecca Solnit, a climate activist and one of America's most articulate writers on contemporary events. Using the war metaphor for climate action might indeed be effec-

tive. Given the rise of opposition to the Keystone XL and Dakota Access pipelines, in particular during the Obama presidency, one could argue that these terms worked. The physical standoffs between protestors and heavily armed security forces at various sites along the proposed pipeline routes also looked like warfare of a sort with military-style armored vehicles confronting protestors and rubber bullets being fired upon them (Mufson, 2016; Thomson Reuters, 2016). Veterans joining the protests made the war metaphor more real than imagined (Johnston, 2016).

The prevalence of climate discussions rendered in terms of war and security pose the basic political questions about how to proceed and how climate is linked to popular imagination and effective policies. If climate change is a crisis, one serious enough to get top priority in human affairs, then it is not surprising that it is frequently discussed as analogous to war. How then, this commentary asks, are war analogies and military metaphors used in the climate change discussion. We look at the use of the war metaphor by the policymakers and the military, and then we turn to the fossil fuel divestment (FFD) movement. The FFD movement has its origins in the United States, but it has spread across Canada and Europe as well, particularly across college and university campuses (Ayling and Gunningham, 2017; Mangat, Dalby and Paterson, 2018). FFD is where the war metaphor has been used in a slightly different way than the dominant war on/war of climate change constructions. Their re-imagining of the war metaphor could transform the conversation on what climate action looks like and what kind of sustainability we must bring about as the climate continues to change.

A rapid, transformative change would require building a movement, and movements require enemies. As John F. Kennedy put it, 'The civil rights movement should thank God for Bull Connor. He's helped it as

much as Abraham Lincoln.' And enemies are what climate change has lacked. But what all these climate numbers make painfully, usefully clear is that the planet does indeed have an enemy ... we need to view the fossil-fuel industry in a new light. It has become a rogue industry, reckless like no other force on Earth. It is Public Enemy Number One to the survival of our planetary civilization.

(McKibben, 2012)

Here, Bill McKibben, the best-known spokesperson of the divestment movement, reinvigorates the war metaphor by naming the enemy: fossil fuel industries. FFD activists also name a clear action: divestment from fossil fuel companies. They envision a sustainable world that emerges from a transformation of the existing social, political, and economic systems. They seed the idea of this transformation in the minds of the public by asking them to imagine a world where fossil fuel industries do not hold so much power that their profits matter more than human lives. The war metaphor is the mechanism by which McKibben and other FFD activists spark the thought of fighting, not climate change, but those corporations that contribute most heavily to climate change through their political actions and/or economic activities. Fossil fuel companies are *exacerbating* climate change, not only through their product, but also through their disinformation campaigns to discount climate science while protecting themselves and their interests (see, Jacques 2009, and the Twitter hashtag #ExxonKnew); their profit-over-planet orientation (as McKibben alleges); and what appears to be their willful, if not immoral, ignorance of how humanity is affected. McKibben et al. call the public to arms to defeat the fossil fuel industry and take their planet back.

By reinventing the war metaphor, the FFD movement encourages the public to imagine what could be. Imagining different possibilities can change the way we understand and respond to problems. Transformation is a comprehensive and all-encompassing change. From an organizational management perspective, to transform is “to reinvent the organization ... based on a vision for the future” (Ashkenas, 2015). Reinventing the way various social, political, and economic systems are organized based on a vision of the climate-changed future is what climate activists are striving towards, and language is their tool for communicating this to the public.

Because the world is metamorphosing due to climate change and what we face is epochal change in our move from the Holocene to the Anthropocene, transformation of thought is almost inevitable (Beck, 2016, p. 5). Living in a rapidly changing world alone is enough to transform the way we think about problems. For instance, after experiencing three consecutive years of “500-year” floods, it is likely that the people of Houston are thinking differently about the weather, particularly the impact of climate change on it (Ingraham, 2017). The number of people interested in and turning out for events such as the People’s Climate March shows that more people are concerned about climate change overall (Giacomini and Turner, 2015). These people are quite likely either

living or imagining living in a climate-changed world for themselves or for future generations.

Sustainability is the end goal. Divestment focuses on specific companies and directs them away from harmful activities. Investor control over company action is a key tactic to rein in the worst excesses of unregulated capitalism, not destroy the whole system. This is an essential point to keep in mind, particularly because climate change is going to challenge the existing systems – local, national, regional, international, and global – potentially to the breaking point. These systems will get overwhelmed and fatigued and might give way. Transformation, even systemic transformation, must lead to stability, preferably a better stability than the one that currently exists. Transformation is inevitable, particularly as we trip the planetary tipping points (Lenton et al., 2008; Young, 2012), but it is a matter of shaping the type and direction of transformation through our words and actions, our metaphors and imaginations such that we arrive at a sustainable state for the planet. But how to do this, and which metaphors will be most efficacious in reworking political imaginations, isn’t simple to figure out. This commentary engages just one dominant metaphor in contemporary political discourse: war. But first we need to make a few theoretical points on how metaphor, imagination, and transformation are linked together.

Metaphor, imagination, transformation

The connections the FFD movement creates between metaphor, imagination, transformation, and sustainability are what make the movement’s take on the war leitmotif interesting. Metaphor is “a figure of speech in which a word or phrase is applied to an object or action to which it is not literally applicable” (Knowles, 2005). For instance, calling members of the public sheep does not mean that people are now woolly mammals; rather, it means that those called by the name sheep are gullible followers of a trend, ideology, person, etc. The cognitive work involved in imagining the similarities and differences between humans and sheep and how the sheep metaphor could apply to people is what makes the sheep metaphor work (Charteris-Black, 2011).

As Ricœur (1991, p. 85) notes, “Metaphor shatters not only the previous structures of our language, but also the previous structures of what we call reality. When we ask whether metaphorical language reaches reality, we presuppose that we already know what reality is. But if we assume that metaphor redescribes reality, we must then assume that this reality, as redescribed, is itself novel reality. My conclusion is that the strategy of discourse implied in metaphorical language is ... to shatter and to increase our sense of reality by shattering and increasing our language.” In other words, metaphor forces us to imagine.

Metaphor and imagination are inextricably linked. As Christensen and Wagoner (2015, pp. 517–518) note, “The use of metaphors is an *imaginative process*” [original emphasis]. Metaphors are, therefore, tools to access and potentially shape the imagination. Inventing a metaphor and interpreting a metaphor both require cognitive work. Using and interpreting the war metaphor, particularly

within the security context, can require a little more work to differentiate between real and metaphorical war. The war on terror, for instance, has been both metaphorical and real (the wars in Iraq and Afghanistan). This is a problem that any formulation of a war on climate change will also encounter. The U.S. military has been speaking of the threat of climate change at least since 1990 but recently has heightened the importance given to it in security planning (Werrell and Femia, 2017).

With the war metaphor missing a clear objective, the imagination was free to roam the possibilities of how to mitigate or adapt to climate change. Imagination, after all, allows us to go beyond the known reality in order to see what is possible and how it might be made so. Imagination plays two main roles: first, it allows us to move away from the current reality and think of alternative realities in various spaces and times, and second, it allows us to relate those alternatives to our current reality when we return from imagined planes (see Christensen and Wagoner, 2015; Geniusas, 2015). Metaphors “facilitate insight and help to create meaning through a process of enabling an [abstract] object or concept to be understood by reference to another [concrete] object or concept” (Oswick and Marshak, 2012, p. 105). So a metaphor is one of the mechanisms by which we translate what is imagined to what is currently understood and vice versa.

Metaphors are a way of sparking the imagination, so that we can visualize possibilities other than those that existing reality might present. While imagining may occur “outside” reality, the alternatives it brings to light can provide ideas on how to move people and organizations towards change and even transformation to a different reality. In the case of climate change, that alternative reality is one where life on the planet goes on because of the transformation of existing human systems so that the planetary systems will hold, allowing life to be sustained. War is a frequently recurring metaphor in not only the climate change conversation, but also in politics at large (Charteris-Black, 2011). The war metaphor is so commonly used that some argue that it might fail to provide the inventive spark in thought expected of metaphors (Atanasova and Koteyko, 2015; Pawelec, 2006; Woods, Fernández, and Coen, 2012). Because “it has lacked a clear, culturally available metaphor to bridge scientific and lay understanding,” climate change is ripe for metaphorical invention (Atanasova and Koteyko, 2015, p. 15). We think that the fossil fuel divestment (FFD) movement engages in metaphorical invention through a reimagining of the war metaphor’s use, in particular by naming the enemy.

Militaphors, wartalk, and climate change

War often implies a struggle, a contest, and one in which victory is the goal; defeat has, if not existential threats, then very unpleasant consequences. War and conflict-related formulations run through modern culture in which competition and struggle are interwoven with heroic narratives of combat, whether it is in business, or even in such places as hospital wards where patients fight disease with chemical interventions that help immune systems defeat bacteriological invasions. One beats a

disease, wins the fight with infirmity, or overcomes an adversary, usually with the help of the technological acumen of medical experts, and of course, one’s own courage to struggle heroically. These are, to borrow a term from Molloy’s pre-9/11 dissertation, a matter of military metaphors, or as she termed them “militaphors” (Molloy 1999). Cohn (1993), in another relatively neglected neologism from the 1990s, called this “wartalk.”

The idea of declaring war on climate change is by no means new. As early as the 1980s, UK Prime Minister Margaret Thatcher warned that getting a grasp on the coming climate problem would “entail a long and arduous campaign” with the British media joining in declaring “war on the greenhouse effect” (Cohen, 2011, 204). The urge to utilize the war metaphor results largely from a dissatisfaction with the “anemic metaphors that have been used to date to capture the quintessence of global warming” and as such “a diverse group of discursive entrepreneurs has been working to build a new conceptual frame around the problem ... a widening circle of people in the UK is now describing climate change as a challenge tantamount to war” (Cohen, 2011, 215). The war metaphor in the UK is particularly useful because it brings up memories of both individual and communal as well as industrial efforts from rationed food and victory gardens to munitions production.

The war metaphor has also been used in the U.S. quite frequently. In 2008, TIME magazine’s cover was an illustration recreating the famous Raising the Flag on Iwo Jima photo, except in this case the soldiers are raising a tree with the words “How to Win the War on Global Warming” printed next to the image. The magazine article talks about the need for a World War II level of industrial mobilization. More recently, McKibben (2016) has echoed that call in his *New Republic* article calling for industrial retooling to manufacture solar panels and wind turbines at the rate that weapons, ammunition, and other necessities of war were produced during World War II. Nordhaus and Shellenberger (2007) referenced the need for several Manhattan Projects to tackle climate change.

A decade ago, Mabey (2007) suggested that the military in Western states at least had an obligation to raise the alarm about climate change. Noting that no other institution in modern states had the mandate, indeed the central mission, to think about existential threats to states, he suggested that the military had a responsibility to raise the alarm about the trajectory of fossil fuel use and the potential dangers climate change posed. That having been accomplished, as the recognition of the necessity to act in the Paris Agreement suggests (United Nations, 2015a), a decade later, it is unclear whether further raising the alarm will be more politically productive (see Buzan, Waeber, and Wilde, 2013 on the limits of securitization). It was in 2007 that the U.S. military acknowledged that climate change would be a “threat multiplier,” so the military has already made the case for climate change as one among numerous other factors that will complicate national security (CNA Corporation, 2007). In other words, climate change is an important threat, but certainly not the only one nor the primary one in the military’s mandate.

President Obama used the war metaphor and the national security framing to urge and encourage actions to prevent climate change whereas other political and technocratic elites have used this metaphor to create, maintain, or widen social, political, and economic rifts. For instance, Senator Mitch McConnell's concerns about the "War on Coal" being waged by President Obama disappeared overnight with the election of Donald Trump (Davenport, 2015; Desrochers, 2016). The war metaphor has often been divisive, highly restrictive, and not useful for imagining inclusive futures. The focus instead has been on continuing to make profit, while getting prepared for the disruptions caused by climate change at home in the U.S. and abroad. War has been a way of establishing/emphasizing state power, often in service of big corporations.

The urgency of tackling climate change and the seriousness of its consequences do suggest a situation analogous to the emergency of warfare. There is danger and the need to act to prevent harmful consequences. This knowledge requires action, that is, there is an ethical and moral imperative to prevent harm to oneself and others when the potential of harm is known. War is a matter of extraordinary and exceptional circumstances, justifying actions beyond the normal range of routine life. All of this frequently seems to apply to climate change.

Key climate activists invoke war and the language of conflict frequently. Sometimes the analogies are very direct such as Solnit's epigraph above or Klein's (2014) references to the Blockadia confrontations between locals and fossil fuel interests happening in communities all across the world. And sometimes more general metaphors invoke militaristic language to galvanize a response, justify taking action, or present moral tales to reframe how climate change is understood in cultural terms. "Fighting" climate change is, after all, *de rigueur*. The war metaphor restricts the problem of climate change to a particular understanding of security and defence, an understanding that excludes other ways of thinking about the world that might emerge on the other side of rising temperatures. What makes the FFD movement interesting is that it has re-imagined the war metaphor beyond security.

Fossil fuel divestment and the war metaphor

While McKibben is encouraging divestment from fossil fuels in particular, his language suggests that fossil fuels are themselves a metaphor for the existing social, political, and economic systems. Fossil fuels are deeply embedded in the economic life of individuals and industry and state, from the daily commute to the office to the supply chains that create and deliver across the world to the military that guzzles oil which is what makes this issue so complicated (Bulkeley, Stripple and Paterson, 2016). On the political side, the fossil fuel companies' deep pockets are behind many a politician, think tank, and civil society group, whose aim is to further these companies' profits. As Jane Mayer (2016) documents in great detail, the Koch brothers are one key example of how entrenched fossil fuel money is in political parties and systems in the U.S. Once people begin to see fossil fuel companies as the

enemy, they can begin to see how deeply the enemy has infiltrated systems meant for the public good.

The fossil fuel divestment (FFD) movement re-imagines the war metaphor. The metaphorical use of war in the "war on climate change" can be interpreted as either battling climate change or fighting climate science. The latter interpretation is unfortunate, but the former interpretation makes the same mistake that war on drugs, poverty, terrorism, etc. make – fighting the effects rather than the causes. By declaring war on fossil fuel companies, McKibben and other divestment activists ask people to look at the causes of global warming – deforestation, farming practices, burning of fossil fuels, etc. The FFD movement takes the inherent existential threat of the war metaphor and adds to it a clear and tangible enemy whose defeat represents not only survival, but also system change. The activists argue that these companies are willing to continue selling and burning their oil even if the planet gets wrecked as long as the companies can count on profits. McKibben (2012) calls fossil fuel companies "Public Enemy Number One." So far, the "war on climate change," with its multiple interpretations, lacked an enemy. Now people can put fossil fuel companies in the seat of villain as they imagine the war on climate change and what it would take to win.

Unlike in the previous uses of the war metaphor, the divestment movement's war metaphor provides a clearly defined target: the fossil fuel industry. It is an entity that the public can take on. Climate change itself is many things at once, and fighting climate change can mean many, many things. Fighting fossil fuel companies can also take a variety of forms, but there are fewer and better-defined options for that. By narrowing climate action to just one thing – the end of fossil fuel companies, the divestment movement simplifies what the people need to achieve. Solnit (2013) captures exactly what the divestment movement does right – breaking down the complex and often overwhelmingly scientific and technical sounding problem of climate change into an actionable task that any person can take on:

The crucial thing here isn't the financial logistics of divestment; it's the necessity of grasping the scale of things, understanding the colossal nature of the problem and the need to address it, in part, by pressuring one small group or one institution in one place. To grasp this involves a feat of imagination and, I think, a leap of faith: a kind of conviction about what matters, about living according to principle, about understanding what is too big to be seen with your own eyes, about correlating data on a range of scales. (Solnit, 2013)

This is not to say that ending or even reigning in climate change or ending the fossil fuel industry is a simple task, but breaking down the complexity of the problem to a more manageable level helps the climate activists get more traction from the public and gives the public well-known tools to fight – marching in the streets, writing letters to

and calling their democratic representatives, and casting their votes.

The war metaphor also helps FFD activists get the public to imagine the toll that investments in fossil fuel companies take. Wallis (2015), taking a moral and religious stance, notes that our consumption is having a negative impact on a variety of aspects of life:

Our society's addiction to fossil fuels has had an unconscionable impact on the state of our Earth and on future generations. Coal-fired power plants are giving people cancer and asthma. Oil pipelines are spilling and destroying sacred lands. Natural gas fracking waste is leaking underground, threatening water sources. Through our consumption of coal, oil and gas, we have enabled this toxic activity. ... True repentance requires us to put our money where our mouth is when it comes to fossil fuels. That's why I have started the process of divesting my retirement fund and other savings from fossil fuel companies. (Wallis, 2015)

Divestment from fossil fuels, however, is not only, or even primarily, about economics; it is about the politics of change. As McKibben and Naidoo (2013) note, divestment might not financially bankrupt fossil fuel companies, but it will bankrupt them politically, making their job of "dominating the planet's politics that much harder." Klein (2014) considers divestment one tactic among many to delegitimize and stigmatize the fossil fuel industry, the first step to reducing their political power. Divestment is climate action where the people whose lives are being affected by climate change get to fight those who are profiting most by causing climate change. The movement's rhetoric encourages citizens to utilize their political power to effect change starting with divestment, but moving, potentially, to other tactics as well.

FFD is also about the immorality of investing in a product that is wrecking the planet. For instance, in speaking of the losses from Typhoon Haiyan, Henn (2013) argues that those who invest in fossil fuel companies are responsible for the damage and loss of property and life:

Any institution or investor that has large amounts of money in the fossil fuel industry should take [a] hard look at the devastation caused by Haiyan. Own a few shares of Exxon? Perhaps that fallen tree or knocked-over wall is your dividend. Own an entire company? Start claiming entire towns that have washed away. Count your profit in lives lost. (Henn, 2013)

There is no doubt that fossil fuel consumption is having both short- and long-term effects on the people and the planet. And yet there is limited action to reign in the fossil fuel industry. In the 1980s, public health and medical organizations such as the American Public Health Association, American Cancer Society, and World Health Organization divested from tobacco because smoking was contrary to their mission of promoting

public health (Ansar, Caldecott, and Tilbury, 2013, p. 49). FFD is essentially asking the same of the public – take your money out of companies whose products are killing people around the world and wrecking the planet.

Taking on climate change requires "deep transformation of the culture ... away from unnecessary consumerism and towards a new ethos of responsibility, care, and natural integration" (Irwin, 2010, p. 9). The transformation that the FFD activists envision is to a just world based on the principle of the equality of all. Sustainability to these activists is about sustaining lives – *all* lives – instead of profits and existing systems. If we were to use the security framing, this is about human, not national, security for FFD activists. The standard description of human security speaks to "safety from chronic threats such as hunger, disease, and repression, and protection from sudden and hurtful disruptions of daily life" (United Nations Development Programme, 1994, p. 23). The larger discussion focuses on basic freedoms for all and policies to ensure livelihoods (Dalby, 2013). These themes, if not the language of human security specifically, run through the current United Nations (2015b) Sustainable Development Goals. Climate change will contribute to both chronic threats as economic disruptions in rural areas accelerate and disruptions of daily life of people while also presenting a threat to existing states considering how sea level rise will lead to loss of territory quite literally.

Thus the goal of sustainability, if the FFD activists are to be taken seriously, must not be allowed to become a rallying cry for things to change just a little. Sustainability can easily become the notion that "we have to change radically, but within the contours of the existing state" in order that capitalist systems can continue to thrive (Swyngedouw, 2010, p. 219). Sustainability is a weak goal state if viewed from this perspective because it does not lead to the transformation that we need to prevent climate change in a just and equal manner. In declaring war on the fossil fuel industries, McKibben and other FFD activists utilize capitalistic language such as carbon bubble and stranded assets not because they want to sustain capitalism, but because this is the fastest way to catch the attention of investors whose money is being risked in order to ruin the planet. The tactical decision is to devastate the control that fossil fuel industries exercise over our social, political, and economic systems, which will eventually lead to system change. Sustainability here is not merely about recycling more or biking to work; rather, it is a step towards a re-imagined *system* that, unlike neoliberal capitalism, puts the values of social justice and equity above profits. Several fossil fuel divestment activists have mentioned the social justice perspective of the divestment, but Fulton (2015) captures it best:

Our side sees a future built on not only surviving, but thriving. Our side fights for a future where amenities such as food, water, shelter, education, clean air and healthcare are considered basic rights, not luxury commodities. It is a future where work is valued regardless of its ability to generate profit for the 1 percent, and that recognizes the

abundance of the earth and the people living on it. It is a future where Black lives matter, where First Nations' treaty rights are honored, and where a person's citizenship status does not determine their character. It is a future where workers have family-sustaining jobs building the vital infrastructure that will carry us through a just transition away from fossil fuel dependency. (Fulton, 2015)

Fulton (2015) definitely sees two sides to the issue of climate change and notes that "our side" – a phrase that captures the belligerent nature of divestment – fights for all the inhabitants of the planet. Fulton also moves further from sustainability because divestment is aimed at thriving, not just surviving.

Sustainability can feel closer to survival and burdened with the notion of carrying on as we were with lots of lip service and little change to show for all the verbiage. It is important that when we speak about sustaining the biosphere and the planetary systems that make life possible, we talk about how everyone should have the right and ability to, at very least, survive the coming metamorphosis of the planetary systems. Neoliberalism and capitalism – represented by the fossil fuel industry deeply embedded in the state and other systems of governance – are not systems that make basic life possible; therefore, they can be, or as the divestment movement argues, *must be* transformed into other ways of being on and governing the planet. It is an exceptional undertaking because of the persistence and pervasiveness or what Bulkeley, Paterson, and Stripple (2016) would call the "stickiness" of high-carbon devices and desires associated with them.

Divestment uses the capitalist tool of investing to draw attention to the pervasiveness of fossil fuels in the economy as well as everyday life when teachers, congregants, and city residents realize that their pensions, church donations, and municipal funds are partaking of fossil fuel profits that might destroy, or are already destroying, their communities. Students in particular are concerned about university endowments invested in the fossil fuels destroying their futures. While divestment might not bankrupt fossil fuel companies because someone will likely buy the shares that divesters sell, these companies' reputations will take a hit and the en masse exodus of investors will drive down stock prices as well as the social and political power of these companies (Klein, 2014). More importantly, however, divestment will bring people's attention to the presence of fossil fuels in their lives and provide them one tactic, which may lead them to look for other tactics, to reduce the stickiness of high-carbon devices and desires not only at the individual level but also the communal, social, political, and economic levels. Divestment makes enemies of fossil fuels and defenders of the people, who can then begin to see where enemy influence exists and, ideally, work to change the systems to reduce or do away with that influence.

The *sustainability of the people and the planet* then relies on the transformation of existing social, political, and economic systems in ways that allow all life to flourish. Klein (2014, p. 424) urges a system-wide transformation

with a move to a "worldview based on regeneration and renewal." This transformation requires that people put their lives and bodies on the frontlines to block extraction of resources in a way that destroy ecosystems and lives (Klein, 2014). Using the metaphor of war, McKibben attempts to spark people's imaginations to envisage a world without fossil fuels.

Transformation talk

Climate change is a complex problem that involves multiple biological, physical, meteorological, geographical, chemical, political, economic, and social factors interacting with each other. Imagining the scope of the true impact of climate change is difficult, if not, impossible for most. What the divestment movement has done to make the process of climate action simpler is use the war metaphor to name an enemy – the fossil fuel industry. Because of how deeply fossil fuels are embedded in everyday life, the destruction of this enemy will require transformation(s) of existing systems, particularly the political and economic systems. People will need to fight to transform these systems to create a sustainable world in the face of entrenched enemies that often have access to both political and economic power.

The FFD movement's invention in relation to the war metaphor is that of naming the enemy. Fighting the fossil fuel enemy is a simplification of the action(s) it will take to tackle the complex problem of climate change. War comes close to capturing the numerous moving parts of the climate problem from technologies and individual life to politics and human civilization. Opponents of the divestment movement's combative take on climate action argue that because fossil fuels are so deeply embedded in everyday life, they cannot simply be done away with (*Nature* Editorial Board, 2015). Wolak, a Stanford economist, asks, "How can you vilify the consumption of something that you use every day?" (as cited in Tollefson, 2015). Others argue that activists must work cooperatively with the fossil fuel industry towards solutions other than divestment (see Domonell, 2013).

As activists and some of these naysayers themselves acknowledge, however, divestment is about attracting attention to the issues created by the fossil fuel industry. When people and organizations divest, someone else will buy the fossil fuel shares, but the reputation of the companies will suffer (Skjærseth and Skodvin, 2003). The campaign also attracts attention to the systemic problems that have allowed the power of fossil fuel companies to grow so great that in some cases they overshadow the state. Casting them in the role of the enemy is a tactic to raise awareness of the fact that democratically elected governments often find their hands tied on energy policy due to the deep pockets of the fossil fuel industry.

Utilizing war to make the case for divestment has some benefits as we have noted above, but there are some drawbacks as well. The overuse of the metaphor, particularly with failed or failing policy initiatives such as the war on drugs and war on terror, can make people wary of the effectiveness of this approach. Labelling all fossil fuel companies as the enemy might alienate companies

working to improve their energy portfolio by moving to renewable energy options. Total and Statoil, for instance, are investing heavily in solar and wind power, respectively (Macalister, 2016; see also Clark, 2017). As these companies move to renewable energy, they might become supporters of decarbonization and no longer the enemy.

The war metaphor can also bring the military into solving the problem because of the robust association of war and military. The U.S. military, as aware as it is about the climate change problem, is one of the largest polluters in the world and looks at climate change from a threat management perspective instead of thinking of it as a system-based problem (Hynes, 2014; see also Buxton, 2017; Roberts, 2018). As Deudney (1990) pointed out long ago at the beginning of the discussions of environmental security, the securitization and militarization of environmental change could create dangerous nationalistic approaches to the global problem. Thinking about climate change from a national security perspective, a perspective that the war metaphor can evoke, creates a competitive instead of collaborative system.

The non-FFD uses of the war metaphor discussed in the previous section assume inevitable rivalry in a world where power is inherently conflictual. FFD rhetoric challenges the state-based assumptions of security thinking. The task for earth system scientists, as for all other academics, is now to work on how to facilitate *sharing* a crowded world rather than trying to replicate strategies by the rich and powerful to dominate a divided one. Hence the importance of imagining post carbon fueled futures and using appropriate metaphors to effectively advocate for the suitable 'mobilizations' to achieve this future. As the painful lessons of confronting climate change denial should have taught us, this will require much more than speaking truth to power and expecting policy to change as a result of the persuasiveness of technical reason. We live in a political world, not a reasonable one.

What is needed at least as much, if not more than, technical innovations, are models of directed social change that move innovation ahead rapidly and do so while gaining widespread public support (see Olsson et al., 2017 for an in-depth treatment of this point). Perhaps, just perhaps, there are lessons in war history where brisk innovation is so often necessary that might help thinking about how to quickly close what Galaz (2014) calls the Anthropocene gap. This gap between what earth system science suggests needs to be done and the human institutions' slowness and inaction in doing the needful requires all our attention. That attention will be all the more useful if we are conscious of the metaphors we use in our political reasoning and the subjectivities we use to invoke the need for 'action' to quite literally make a sustainable future for our species and many others simultaneously. The war metaphor, if used carefully, has the potential to spark a transformation.

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