Constructive

Climate

Communication

IN WEALTHY DEMOCRACIES

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SECTION 1

Climate Change and Peace

The global average surface temperature of the Earth has risen by over 1°c since pre-industrial times due to human activity (IPCC, 2023). Industrial activities, such as the burning of fossil fuels and land alteration, emit Greenhouse Gases (GHGs) into the atmosphere and intensify a naturally occurring, heat-trapping process (IPCC, 2023). The result is climate change, and its effects have already been, and will continue to be, felt worldwide (IPCC, 2023).

Fig. 1. Global Average Surface Temperature (NOAA, 2022).
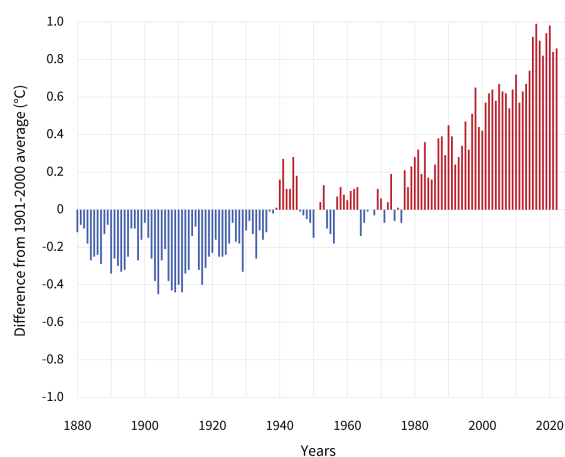
Climate change is a barrier to peace and human security. Environmental Peace Studies have traditionally focused on the logical causality between scarcity of natural resources (like food or water) and geopolitical conflict (Ide, et al., 2023; Ani, et al., 2022). As climate change will increase scarcity, military experts, like Klare (2019), identify it as one of the largest threats to national security. However, critical literature suggests that rather than a direct cause, climate change has been, and will continue to be, a background factor exacerbating existing tensions (Daoudy, 2020).

Climate change not only poses a threat to peace due to its relationship with conflict, but also because of its negative impacts on human security (Ide, et al., 2023). More frequent and intense climatic changes and extreme weather events, such as droughts, floods, and variability in temperature and precipitation, will cause health epidemics, food and water shortages, and other human security crises (Ide, et al., 2023; IPCC, 2023; Ani, et al., 2022; Klare, 2019). For example, a change in seasonal agriculture patterns may reduce a region's crop yield, making food prices in that area prohibitively expensive for many. Ani, et al. (2022) explore this scenario, not as a hypothetical speculation, but as the reality of food insecurity in Nigeria. Climate change is a human security risk for the 3.3 to 3.6 billion people who live in the regions and contexts which are particularly exposed to climate change (IPCC, 2023). Therefore, mitigating and

adapting to climate change is essential for peace.

Technological and policy-based solutions and adaptations to climate change exist, but too many governments and too many people are not taking action to implement them (Weber and Constantino, 2023). There is a misconception that a decision to not implement a solution or adaption to climate change must be the product of rational deliberation; Weber and Constantino (2023) suggest that often, when people do not act, it is an emotional choice, influenced by messaging and what they believe to be possible. This report implores all climate communicators – whether they be journalists, activists, NGOs, concerned members of the public, or governments – to employ more thoughtful and constructive climate communication (which takes into consideration emotional response), to promote climate action.

Personal Efficacy in Democracies

Climate Communication is a field of study which targets civil society rather than governments or corporations. The literature generally assumes that individual opinions and actions are of consequence and can at least somewhat influence the larger challenge of mitigating, or adapting to, climate change (personal efficacy). This section will strive to justify this fundamental assumption.

Two groups are able to alter the direction of climate change mitigation and adaptation: civil society and institutions (i.e., governments and markets) (Bickerstaff, et al., 2008). In the context of democracies, the former affects the latter. A general study (unrelated to climate change) found that in democracies, public opinion shapes political policy to some extent 75% of the time (Burstein, 2003). Civil society can also affect collective consumption patterns and market priorities (O'Neill and Nicholson-Cole, 2009).

Therefore, civil society can affect the direction of climate change mitigation and adaptation in two ways: (1) through individual lifestyle change (for example, household decarbonization contributes to the lowering of collective domestic emissions); and (2) by influencing political and market-based priorities and climate related choices (O'Neill and Nicholson-Cole, 2009). The term for the latter is proxy efficacy: the appraisal that if positively influenced by civil society, institutions have the capacity to implement effective climate policy (Marlon, et al., 2019). Confidence in proxy efficacy is correlated to high personal engagement in civil society (Bickerstaff, et al., 2008).

This report acknowledges that governments are often a source of human insecurity and conflict and may not be perceived by readers as institutions capable of implementing positive change. However, the overwhelming majority of the literature agrees that governments are at least somewhat necessary to address climate change (Ide, et al., 2023). Therefore, it is still a fruitful endeavour to explore how to effectively communicate climate-related information and appeals to civil society, given civil society's relational ability to affect institutions like governments.

Individuals have personal efficacy – civil society can affect the direction of the climate crisis. Constructive climate communication, in its ability to socialise norms, affect emotion regarding climate change, and promote engagement and support, has the power to effect climate change and peace (Leiserowitz, 2006).

Attitude-Behaviour Gap

Western democracies, which have historically contributed the most to the climate change problem, are relatively less exposed to the adverse effects of climate change (IPCC, 2023). This is due to geographic differences and the ability of wealthier nations to financially compensate for adverse consequences of climate change (for example, during an agricultural shortage, a wealthy nation can import food) (Stoknes, 2015). Therefore, civil society in Western nations does not perceive climate change to be a great personal risk; climate change becomes is a temporally and spatially distant problem (Leiserowitz, 2006).

A study by Leiserowitz (2006) found that Americans who believe in climate change may simultaneously support international-level climate policies (like national participation in UNFCCC treaties) and oppose climate mitigation policies which would affect their lifestyles (like gas taxes) (Stoll-Kleemann, et al, 2001). The contradiction between their generally supportive attitude for international climate policies and their reluctance to alter their behaviour is called the Attitude-Behaviour Gap: their theoretical support for climate change mitigation and adaptation measures only exists on an abstract level and does not correlate to action (Maartensson and Loi, 2022).

The Attitude-Behaviour Gap is prevalent in Western nations because of the lack

of perceived personal risk (Capstick and Pidgeon, 2014; Maartensson and Loi, 2022). If an individual perceives climate change to be of little personal consequence, then the social benefit of altering their behaviour will not be seen to outweigh the personal benefit of maintaining their behaviour (Stoll-Kleemann, et al, 2001).

Problematically, because climate change is a transboundary issue, Western nations must implement pro-environmental policy (on both international and local levels) if global mitigation and adaptation is to occur (Kinley, et al., 2020). Many Western nations are major emitters; inaction from major emitters constrains the positive mitigation and adaptation efforts of other nations, and disproportionately affects populations outside of their borders (IPCC, 2023; Kinley, et al., 2020).

This report will consider what constructive climate communication in Western democracies, not currently experiencing major adverse personal consequences of climate change, should look and sound like to prompt action and behavioural change.

SECTION 2

Two of the most common emotional reactions to climate change – fear and false hope – are predictors of non-engagement and opposition to climate policy (Marlon, et al., 2019). Deliberately invoking fear or false hope are common, but counterproductive, climate communication strategies (O'Neill and Nicholson-Cole, 2009).

Fear

Governments, activists, media, and any other individuals or groups communicating climate-related information should refrain from alarmist and deliberately fear-provoking imagery and language. While fear initially attracts attention and may prompt a short burst of immediate action, it is ineffective as a climate communication strategy (Marlon, et al.,

2019). Multiple studies show that for numerous reasons upon which this section will expound, fear is not associated with high support for climate change policy (Marlon, et al., 2019; O'Neill and Nicholson-Cole, 2009; Smith and Leiserowitz, 2014).

First, fear is an unsustainable emotion and follows the Law of Diminishing Returns (O'Neill and Nicholson-Cole, 2009). Over time, individuals build up a tolerance to fear-based messaging, and in the future, even more alarming imagery or language is needed to provoke the same level of concerned reaction (O'Neill and Nicholson-Cole, 2009).

Second, fear distances the public as it is one of the easiest emotions to externalize (Smith and Leiserowitz, 2014; Stoknes, 2015). In the context of climate change, fear causes individuals to pass responsibility to others, and even to deny the reality of climate change in order to refute the basis for their fear (Smith and Leiserowitz, 2014; O'Neill and Nicholson-Cole, 2009).

Third, fear about climate change causes fatalistic doubt and thus reduces individuals' personal efficacy and sense of agency (Marlon, et al., 2019; Capstick and Pidgeon, 2014). Fatalistic doubt refers to the feeling of resignation that climate change is too massive for individual or collective action to have an effect (Marlon, et al., 2019). An individual with this mentality questions the point of acting at all, and is disempowered (Marlon, et al., 2019; O'Neill and Nicholson-Cole, 2009).

Communicating the reality of climate change is inherently worrying without deliberately using alarmist or dramatized imagery and language. For example, all the major UK media networks which reported on the IPCC Group I Report used reactive language like "terrifying," catastrophic," and "devastating" in the articles they ran, even though the IPCC Group I Report did not use these adjectives (O'Neill and Nicholson-Cole, 2009).

False Hope

False hope about climate change – a coping mechanism which denies reality – is an equally counterproductive emotion for climate change policy and action (Ojala, 2023). An individual under false hope may believe that either God, nature, or some external entity will solve climate change without any necessity to make personal behavioural changes (Marlon, et al., 2019). Alternatively, false hope may take its form in epistemic scepticism: doubt in the "physical

existence, human component and severity of climate change" (Capstick and Pidgeon, 2014). Thus, False hope is a direct predictor of opposition of climate change policy (Marlon, et al., 2019)

SECTION 3

Constructive Climate Communication

This report for climate communication suggests a dual goal: to provoke enough worry to engage civil society, but also to empower personal efficacy through constructive forms of hope. Constructive worry and constructive hope can co-exist; individuals can simultaneously hope that there is a possibility that climate change can be mitigated to a certain extent, and adapted to, and worry that this possibility will not come to fruition unless action is taken (Marlon, et al., 2019). Worry without hope, and hope without worry, are not as strongly correlated to pro-environmental behaviour as the experience of both emotions at the same time (Ojala, 2008). Both constructive worry and constructive hope are sustainable, long-term emotions. Neither are polarising emotions (unlike fatalistic fear or false hope), and thus promote non-partisan climate engagement (Weber and Constantino, 2023).

Constructive Worry

Constructive worry is a distinguishable emotion from fear (Smith and Leiserowitz, 2014). Worry is not doomist; rather, it exists on a spectrum of doubt as to whether individuals and institutions will change their behaviour in a significant enough or timely enough manner (Marlon, et al., 2019). Some who worry about climate change may recognize the faults in human nature which may result in inaction (Marlon, et al., 2019). A realistic, but not hopeless, judgment of human nature is correlated to a heightened sense of personal responsibility (Marlon, et al. 2019). Worry is the strongest emotional predictor of consistent support for climate policy (Smith and Leiserowitz, 2014).

Worry relates to personal risk perception (Maatersson and Loi, 2022). For climate change to be a high enough priority for individuals to support mitigation policies and change their consumption habits and lifestyles, they must worry that climate change poses a personal risk (Leiserowitz, 2006). Constructive risk perception is correlated with willingness to change behaviour (Maartensson and Loi, 2022).

Climate communication should emphasize the ways in which climate change connects to a viewer or reader's everyday context in order to heighten personal risk perception and constructive worry (Stoknes, 2015). The most effective imagery and language is not the most threatening, but rather that which de-globalises the problem, brings climate change spatially closer to home, and makes it more relatable (O'Neill and Nicholson-Cole, 2009). Making climate change an urgent priority will not be accomplished through more alarmist headlines, but rather through stories which a reader can see themselves in (Stoknes, 2015).

Constructive Hope

Constructive hope is the emotion, or cognitive choice, that there is a possibility that climate change can be mitigated or adapted to (Ojala, 2023). It is not equivalent to optimism as there is a simultaneous acknowledgement of the possibility of a negative outcome (Ojala, 2023). Someone with constructive hope thinks about the future in both a realistic and agentic manner (Weber and Constantino, 2023). They do not convince themselves that the future will inherently be positive by denying the facts of climate change, but they believe in their own personal efficacy, particularly in relation to helping to realize climate mitigation and adaptation measures (Maartensson and Loi, 2022).

Constructive hope is linked to pro-environmental behaviour or support for climate policies (Ojala, 2023; Maartensson and Loi, 2022). Eden (1993) suggests that constructive hope leads to pro-environmental behaviour because of the emotion's ties to personal efficacy; someone with personal efficacy feels a heightened sense of personal responsibility.

Positive emotions, including constructive hope, are the most sustainable motivators of action (contrary to an emotion like fear); therefore, constructive hope, like constructive worry, encourages consistent climate action over time, instead of bouts of inconsistent activity (Weber and Constantino 2023).

Examples of climate-related narratives to highlight to build constructive hope:

Growing awareness of climate change and the increasing participation rate of the younger generation in activism (Ojala, 2023; Marlon, et al., 2019)
Ongoing technological innovation (Ojala, 2023)

Resilience of nature if it is given the opportunity to bounce back (Stoknes, 2015)
Happiness stemming from sources other than consumerism (Stoknes, 2015)
New opportunities offered by climate change: novel types of industry and energy systems, economic development, global collaboration, and a more equitable society (Stoknes, 2015; O'Neill and Nicholson-Cole, 2009)

These examples focus on ongoing and future endeavours, rather than past accomplishments. Focusing on progress that has already been made and implemented can be demoralizing for some if it has not visibly translated into substantial mitigation of, or adaptation to, climate change (Marlon, et al., 2019).

SECTION 4

This report has referenced mitigation and adaptation strategies as if they are one goal, but there are diverse opinions as to whether they should be prioritized differently. Some, like Al Gore (1992), have speculated that focusing on climate change adaptation will lower the incentive to avoid the worst of climate change through mitigatory measures. Others emphasize the inevitability of some amount of climate change and the consequent necessity of adaptation (Kwadijik, et al., 2010). While a compensatory effect between mitigation and adaptation strategies has been predicted because of competition for finite financial resources, some suggest that the two strategies also theoretically compete for cognitive and emotional mental space (Urban, et al,

2021; Adger, et al., 2009; Klein, et al, 2007). Therefore, the debate is of relevance for climate communication.

The case for the prioritization of mitigation strategies and of adaptation strategies will be considered here so that communicators accurately nudge audiences towards the most valuable goal and understand the cognitive and emotional implications of a focus on both.

Mitigation

Fig. 2. Projected Emissions Pathways (Hayhoe, 2017).
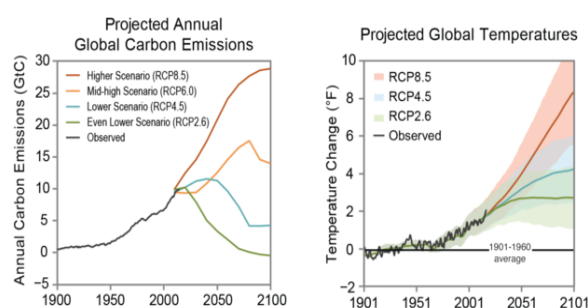
Mitigation strategies have the potential to greatly reduce the severity of the impacts of climate change in the present and future. The most common mitigation policy umbrella is GHG emission reduction; *Figure 2* illustrates that different warming projections

(which are associated with different, and increasingly consequential impacts), depends on global annual carbon emissions. If GHGs were to be rapidly phased out around the world, global average warming would eventually plateau.

The case for the prioritisation of mitigation strategies highlights the limits to adaptation. Adaptation measures may not be technologically or physically able to protect civil society from climatic changes (Adger, et al., 2009). For example, after a high amount of sea-level rise, which would accompany a little-to-no-mitigation strategy, an adaptive coastal defense system may not be able to physically protect the area that it is designed to (Adger, et al., 2009). To rely solely on adaptation measures would also imply that there is an allowable degree of physical and cultural loss, introducing the question of which nations get to make that decision (Adger, et al., 2009; Klein, et al., 2007). Western nations (excluding Indigenous peoples) generally have less of a reliance and cultural connection with the natural elements than non-western nations ; Western nations may suggest a higher

threshold of allowable loss to be adapted to, than non-western nations (Klein, et al., 2007).

Adaptation

Even if the lowest possible emissions scenario were to be adhered to, the climate has undergone irreversible damage. The majority of the emissions pathways (shown in *Figure 2*), suggest that the climate will continue to warm (albeit at different intensities depending on global emissions).

Tipping points are thresholds beyond which an environmental system is not likely to return to its original state and will continue to reproduce patterns of damage without an external driver (Adger, et al., 2009). Certain tipping points have already been exceeded (like the irreversible melting of the Greenland ice sheet), and new tipping points are quickly approaching (Kwadijik, et al., 2010). Mitigation strategies are not as useful in these scenarios, and adaptation strategies are unequivocally needed to adjust to reality beyond these tipping points (Kwadijik, et al., 2010).

Because climate change is a transboundary issue, for mitigation strategies to be effective, all major emitters (largely concentrated in the West) would have to decarbonize and adhere to defined goals from the most recent UNFCCC treaty (Kinley, et al., 2020). With the recent rise in conservative and populist governments in Western democracies, sufficient mitigation seems unlikely in the immediate future. Realistically, adaptation measures are essential if climate change mitigation is not yet a global goal.

Dual Focus For Constructive Emotional Reinforcement

Both mitigation and adaptation are unequivocally necessary in some combination. However, at first glance, they seem to require different emotional emphases – which makes effective climate communication more difficult. Building constructive hope (that damage can be stopped or even reduced) is the priority when attempting to motivate engagement with mitigation strategies. Conversely, developing higher levels of constructive worry in a population may direct them towards adaptation strategies.

However, a study by Urban, et al. (2021) demonstrates that rather than an emotional or cognitive trade-off between mitigation and adaptation

strategies, engagement in one supports the development of the necessary constructive emotion for the other. For example, participating in adaptation efforts may increase both constructive worry and constructive hope in an individual, inclining them towards mitigation efforts. Participation in adaptation efforts heightens perception of personal risk to climate change (building constructive worry) and exposes the public to climate-related

information while presenting a realistic solution to the consequences (building constructive hope) (Urban, et al., 2021). Climate communication which directs an audience towards engagement with mitigation or adaptation strategies indirectly reinforces the emotion necessary for engagement with the other. This positive feedback loop has yet to be fully explored in a study, but is discussed by Urban, et al. (2021).

CONCLUSION

Climate change is a major threat to peace, particularly given its negative implications for human security. The ways in which communicators share information about climate change influences emotional reactions to climate change, and consequently, whether or not individuals engage in pro-environmental (and peacebuilding) behaviour.

To bridge the Attitude-Behaviour Gap, climate communication to audiences in Western democracies should simultaneously invoke constructive worry and constructive hope, both of

which acknowledge the negative reality of climate change while understanding that the potential for legitimate mitigation and adaptation exists. These two emotions should be directed at either mitigation or adaptation strategies, as engagement with one reinforces the constructive emotions which stimulate engagement with the other.

This report is by no means comprehensive, nor does it expound a detailed framework of examples and suggestions. It calls for communicators to consider the implications of their

words or imagery and how they can best encourage pro-environmental engagement

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