

From Polarisation to Policy: The Role of Moral Framing in Climate Communication

Amy Britten

Funded by CONSTRAIN

Contents

1. Abstract.....	3
2. Background	3
3. Main Body	6
3.1. Moral Framing and Political Polarisation	6
3.1.1. Moral differences between liberals and conservatives.....	6
3.1.2. Moral similarities across the political spectrum	10
3.2. Policymakers	13
3.2.1. The Psychology of Policymaking (and why this matters).....	13
3.2.2. Moral Framing and Policymakers	14
4. Practical Implications and Future Research.....	16
4.1. Strategies for climate communicators.....	16
4.2. Future Research	19
5. Conclusion.....	20
6. References	21

1. Abstract

This literature review explores the application of Moral Foundations Theory to climate communication as a means of overcoming political polarisation. Moral Foundations Theory hypothesises that there are five universal moral foundations that form our perception of the world: care/harm, fairness/cheating, authority/subversion, sanctity/degradation, and loyalty/betrayal. Liberals tend to rely on care/harm and fairness/cheating (known as individualising moral foundations) in decision-making, and conservatives tend to prefer authority/subversion, sanctity/degradation, and loyalty/betrayal (known as binding moral foundations) in decision-making. A growing body of literature has found that when using binding moral values in climate messages, conservatives are far more likely to have positive climate intentions, and liberals are more likely when exposed to individualising moral foundations. However, this still poses a challenge for climate communicators as climate messages cannot be expected to change each time a new political audience is introduced, and most audiences are not politically exclusive. This paper, therefore, provides valuable insight by evaluating the literature on Moral Foundations Theory to examine whether there are possible strategies that may be used to overcome these political complexities. The present paper not only evaluates the application of Moral Foundations Theory on the general public, but also explores whether moral framing may effectively engage influential policymakers. Decision-making at a collective level is not consistent with individual level decision-making, and therefore questioning whether these strategies could be applied to policymakers addresses a significant gap in climate psychology. The second half of the paper will address practical applications for climate communicators and identify potential knowledge gaps for future research.

2. Background

Climate psychologists have made significant progress in understanding the influence of certain communication strategies on the decision-making processes of the general public. One strategy is known as value-based messaging; it appeals to an audience's values to connect them to a particular topic on a deeper, emotional level (Nisbet, 2013). These values are principles that are perceived as important - such as loyalty, humility, and compassion - and are involved in decision-making. Value-based messaging is effective as it aligns with the audience's belief systems (Brehm, 1966) and creates an emotional common ground between the message and the audience. For instance, frugal values may be appealed to by framing climate change as an economic issue (Bain et al., 2012). The political left and the political right, however, often differ in their values: conservatives tend to value security and achievement, while liberals typically value universalism and benevolence (Caprara et al., 2006). Crucially, an audience may reject messages when they represent the values of an alternative political group (Kahan, 2017, p.6). This poses a challenge for climate communicators as 1) science dissemination is often to both sides of the political spectrum, 2) certain strategies will only be effective on certain political groups, and 3) the remaining groups may regress.

These issues may be overcome by using moral framing to bridge the political divide. Moral framing is a type of value-based messaging; it appeals to a person's moral values. Moral Foundations Theory (MFT; Graham et al., 2011) hypothesises that there are five moral concerns, known as 'moral foundations,' that navigate our decisions about right or wrong. These moral foundations are as follows; care/harm, which draws on compassion for others; fairness/cheating, which draws on a sense of justice; loyalty/betrayal, a sense of patriotism; authority/subversion, a sense of respect for leaders; and sanctity/degradation, a sense of purity. Care/harm and fairness/cheating are known as individualising moral foundations, which focus on the needs of individual people, while loyalty/betrayal, authority/subversion, and sanctity/degradation are known as binding moral foundations, which focus on the needs of the group. The political right tends to prioritise binding

moral foundations and the political left tends to prioritise individualising moral foundations (Graham et al., 2009). This literature review aims to analyse the studies applying this theory to climate messaging across political contexts, in the hopes of finding an answer to how the challenges of climate communication may be overcome.

However, MFT has yet to be applied to climate policymaking. The participants in the studies to be evaluated are mostly members of the public, with no study exclusively investigating policymakers. This raises the question of whether moral framing is equally as engaging to influential audiences? Policymaking is a complex process that involves more than the policymakers' values. Often the values of their representative dictate their decision-making (Willis, 2018) which develops into a heuristic – a mental shortcut – that 'filters out' information that does not align with the representative claim (Steenbergen, 2018). There is also pressure to meet the standards of their political co-workers, as failure to act in line with the party's manifestos may lead to being outcasted. Whether morality can overcome this complexity of decision-making remains unclear. This paper, therefore, further intends to provide an outline of the policymaking process before expanding on studies that have looked at MFT in other policy debates to investigate whether moral framing is likely to work in these environments.

Taken together, this literature review sets out to evaluate the effectiveness of moral framing as a communication strategy to overcome political polarisation on climate change. This paper will first analyse the empirical research on MFT before discussing whether these findings could be applied to policymakers. The second half will touch on practical applications for connecting policymakers to their morality, including how to communicate IPCC's science more morally. Finally, avenues for future research will be outlined.

3. Main Body

3.1. Moral Framing and Political Polarisation

3.1.1. Moral differences between liberals and conservatives

Liberals typically have more concern for climate change than conservatives (Dunlap et al., 2001) and are more likely to support pro-environmental policies (Stollwerk, 2022). This may be explained by the historic use of liberal appeals in climate change messaging (Hart & Nisbet, 2012), which mostly include the care and fairness moral foundations, and not the binding moral foundations. For example, climate communication tends to stress the direct and indirect health impacts of climate change (care/harm), and how this may affect future generations (fairness/cheating). However, conservatives tend to not consider climate change as harmful or as much an injustice as liberals (Clayton et al., 2013) and these moral foundations can even lead to backlash effects (Ditto & Koleva, 2011).

A considerable amount of literature has been published on the effect of different morally framed messages on liberals and conservatives. One of the first studies in the climate change context was conducted by Feygina et al. (2009) who examined the effect of system justification, which is a desire to preserve the status quo (Jost & Banaji, 1994) and draws on the loyalty moral foundation. Participants completed self-report measures on political identity, general system justification (Kay & Jost, 2003), environmental attitudes (Dunlap et al., 2001), and environmental behaviours. It was first confirmed that conservatives tended to be higher in system justification tendencies (relative to liberals), suggesting that the loyalty moral foundation is more important to the political right. Higher system justification tendencies were associated with a greater denial of climate change, and less willingness to sign a pro-environmental petition. Crucially, the third study investigated whether this negative effect would be eliminated after exposure to a pro-environmental message framed to present ecological problems as a threat to the system:

“Being pro-environmental allows us to protect and preserve the American way of life. It is patriotic to conserve the country’s natural resources.”

It was found that the relationship between high system justification tendencies and less willingness to be pro-environmental was eliminated after exposure to the message. This is a particularly promising finding as it reflects that conservatives are not completely against climate action.

One key point to emphasise here, however, is that the authors do not attempt to differentiate between different types of moral foundations. As there was only a control message and no individualising moral foundation frame, it is difficult to conclude whether the negative effect was reduced because of the loyalty appeal or simply a moral appeal. Additionally, only investigating the loyalty moral foundation undermines the complexity of moral decision-making; often multiple values interact with each other to produce a decision outcome (Rokeach, 1968). While the study aimed to look specifically at system justification and not moral foundations, it has been used by scholars as an example of the morality of climate change (e.g. Feinberg & Willer, 2019). Without a wider range of moral foundations, it is unknown whether conservatives are less pro-environmental than liberals due to traditional climate change messaging. Nevertheless, this study was novel in demonstrating that moral framing is an effective communication strategy for conservatives.

A more comprehensive approach was exemplified by Kidwell et al. (2013, Study 4) who studied all five of the moral foundations. This study differs from Feygina et al. (2009) in a number of important ways: it compares individualising moral foundations and binding moral foundations; it measures a possible mediator variable (perceived fluency); and it directly compares liberals’ and conservatives’ responses. This will clarify whether it is the difference in moral foundations that increases conservatives’ pro-environmentalism instead of just the inclusion of a moral foundation. This study employs an experimental design featuring three independent groups; participants were randomly assigned to be exposed to a message including either the individualising or binding moral foundations or a control message. All three conditions were exposed in the first paragraph:

“Did you know that recycling helps the planet? This is a global initiative to clean up our environment. Recycling drastically reduces the impurities in our water and air. We need your help today!”

The control condition simply included the first paragraph, while participants in the binding and individualising moral foundations conditions were exposed to a second paragraph:

Individualising moral foundations: *“You can make a difference by recycling because you know it’s the right thing to do. Your actions can help care for others and allow the greatest good for society.*

Because of people like you, we can reduce the harm to others and the environment by recycling. You CAN make a difference!”

Binding moral foundations: *“You can join the fight by recycling with those like you in your community. Your actions can help us do our civic duty because recycling is the responsible thing to do in our society. Because of people like you, we can follow the advice of important leaders by recycling. You CAN join the fight!”*

Following this, the participants completed a fluency measure that included questions on how clear, compelling, or easy to follow the message was, and a recycling intentions measure, that included questions on willingness to complete specific recycling actions. The results of this study found that liberals were significantly more likely to report recycling intentions when exposed to a message with individualising moral foundations, while conservatives were significantly more likely to report recycling intentions when exposed to a message with binding moral foundations. This finding advances that of Feygina et al. (2009) as it demonstrates that moral framing is effective even when more complex decision-making is involved and that moral framing is effective on both sides of the political spectrum. Perhaps the even more interesting finding is that the relationship was mediated by perceived fluency, which may be related to ideologically motivated reasoning (Kahan, 2007). This refers to the cognitive process where people selectively interpret information that is consistent with their ideological beliefs. It may be that the ideologically consistent message was perceived as more fluent due to a reduced cognitive load; information that is consistent with existing beliefs requires

less cognitive effort to process. These findings therefore support the idea that moral framing is a successful strategy for climate communication.

However, the authors overlook the fact that the 'neutral' paragraph – referring to the impurities in the water and the air – draws on the sanctity moral foundation. This is a binding moral foundation that is associated with conservative values (Graham et al., 2009) and is related to maintaining physical and spiritual purity. Impure water and air, therefore, defies sanctity. This introduces a potential source of confusion; the study lacks a clear manipulation of the independent variable (type of moral foundation) which presents a challenge in concluding that the observed differences were truly down to the type of morals included in the message.

An excellent example of research that captures the true effects of binding and individualising moral foundations is by Wolsko et al (2016). Through a series of three experiments, participants were randomly assigned to a binding moral appeal or an individualising moral appeal, before completing measures on environmental intentions, climate change attitudes, and willingness to donate to an environmental organisation. The environmental messages were similar to the second paragraphs used by Kidwell et al. (2013), however, no moral foundations were overlapping and each moral foundation was in line with MFT. The researchers found that conservatives generally reported higher conservation intentions, and more positive climate change attitudes, and gave more donations when exposed to the binding moral appeal. One somewhat surprising result, however, is that there was no significant change for liberals between each condition. Liberals were high in pro-environmentalism across conditions. This may reflect the differences between conservatives and liberals; liberals may view climate change as a moral issue more instinctively. A possible explanation for this might be the use of individualising moral foundations in traditional climate change messaging, which may facilitate deeper engagement in liberals and transpire into long-lasting attitudes and beliefs.

This section has reviewed the key studies that investigated the effect of moral framing in climate contexts. It has described the moral differences between conservatives and liberals and argued that

traditional climate change communication strategies are ineffective in appealing to conservatives. Conservatives are capable of climate action, as long as the message aligns with their moral values. However, this still creates difficulty for climate communicators as audiences are not exclusively liberal or conservative. Most audiences will be at any point across the political spectrum. The next section moves on to consider how a communicator may overcome these barriers.

3.1.2. Moral similarities across the political spectrum

It has been shown that conservatives do still value care/harm and fairness/cheating, but just to a lesser extent than authority/subversion, loyalty/betrayal, and sanctity/degradation (Graham et al., 2009). If care and fairness are presented in isolation, this may trigger defensive information processing as conservatives may perceive the message as socially polarised (Cohen, 2003) and immediately dismiss the information to 'defend' their political belief. However, if individualising moral foundations facilitates climate action in liberals, and binding moral foundations increase climate action in conservatives, it seems fitting to use all five of these moral foundations simultaneously.

There is a relatively small body of literature that is concerned with using all five moral foundations, despite its promising attributes. Hurst & Stern (2020) was the first study to evaluate the possibility of using all five moral foundations: participants were exposed to a message containing either all five moral foundations or the two individualising moral foundations, before completing quantitative measures on whether the United States should transition away from fossil fuels, and whether they felt more likely to support the transition after reading the message. These messages were implied to be from either a liberal, conservative, or nonpartisan message source. Below is a summarised version of the five moral foundations condition:

"Emissions from burning fossil fuels [...] makes people sick. [...] Many U.S. companies are developing ways of making renewable energy more efficient and affordable. They are creating thousands of jobs in the process. [...] We can maintain our competitive advantage by encouraging our leaders to create

policies that support these safer and healthier technologies. [...] We can cut ties with terrorist nations and reclaim our rightful status as the proud and independent economic leader of the world. We can uphold our sacred duty of stewarding the earth and protect our children's health."

Perhaps the most important results were that using all five moral foundations is effective in engaging conservatives in the transition away from fossil fuels, and liberals were not alienated by the presence of the binding moral foundations. This advances previous research by demonstrating that both sides of the political spectrum may engage in climate action through the use of all five moral foundations. It is worth noting, however, that this study and a large majority of the aforementioned studies were conducted in the U.S., a particularly politically charged country. Topics such as climate change remain quite controversial, with the U.S. being the second largest population of climate deniers in the world (Buchholz, 2020). As the political environment there is so vastly different to other countries, questions remain on whether this communication strategy will be effective internationally.

Building upon previous research, Nisbett and Spaiser (2023) conducted a study looking at moral framing solely in the United Kingdom. The authors generated several statements that drew on each moral foundation, and even on being a 'good ancestor', a moral foundation separate from the MFT that refers to leaving a positive legacy. Liberal and conservative participants were exposed to each statement and rated their convincingness using a Likert scale of 1-6. While this study confirmed that political affiliation is a large indicator of perceived convincingness, it also found that statements drawing on care/harm, ancestral legacy, and fairness/cheating were the most convincing arguments for both liberals and conservatives. This outcome is contrary to previous studies which have suggested that care/harm and fairness/cheating alone are ineffective on conservatives (Kidwell et al., 2013; Wolsko et al., 2016). One possibility is that binding moral foundations were still included in the survey, so conservatives may have formed a moral understanding of climate change based on those moral foundations before being even more convinced by care/harm and fairness/compassion.

One unanticipated result was that ancestral legacy was rated the most convincing statement, ‘the Earth is our only home, and we have a responsibility to protect it,’ suggesting that this moral foundation may resonate with both sides of the political spectrum. This challenges the notion that there are only five universal moral foundations and raises intriguing questions regarding the nature of morality across the political spectrum. It may be that climate communicators would also benefit from referring to ancestors in their messages to increase climate action from both conservatives and liberals.

To conclude this chapter, the literature identifies that using all five moral foundations will increase climate action in conservatives and not alienate liberals (Hurst & Stern, 2020), and perhaps ancestral legacy should be included as a moral foundation that independently contributes to bridging the political divide on climate change. The ultimate limitation of all the aforementioned studies, however, is that the participants are from the general public. Policymaking differs from regular decision-making (Willis, 2018) and therefore these findings may not apply beyond the general public. The next chapter will therefore turn to the literature on policymaking and evaluate whether moral framing will be a useful communication strategy in these contexts.

3.2. Policymakers

3.2.1. The Psychology of Policymaking (and why this matters)

Policymaker’s decisions are not simply a consequence of their understanding of a particular topic. In fact, most policymakers have been shown to recognise the risk of climate change (Willis, 2018).

While interpreting evidence is still a large part of policymaking, the extent of this is dependent on contextual factors, such as time, potential, political narratives, and costs. These factors may interact to affect climate change decision outcomes that may be perverse or undesirable. Therefore, to communicate effectively with policymakers to avoid such outcomes, there needs to be a foundation of knowledge on how policymaking systems work and interact with the political environment in which they operate (Cairney & Kwiatkowski, 2017).

A fundamental aspect of policymaking is to work with the broader social, economic, and political structures that make up society. According to Willis (2018), policymakers view their decisions in the context of both a professional and representative identity (Willis, 2018). That is, policymakers perceive themselves as an embodiment of the representative claim, to show to both the public and their colleagues that they are members of their political group. One MP said that policymakers 'have to create this persona of who and what you are, and then you have to try to publicly live up to it,' which demonstrates that often decisions are made as a matter of political ideology rather than independent values (Willis, 2018).

As decisions are often required to be quick, policymakers will develop heuristics that allow them to rapidly process information and 'filter out' the content that does not align with their representative identity's worldviews (Steenbergen, 2018) and deem it irrelevant (McConnell & Hart, 2019). Haidt (2001) argues that such a representative demand for specific outcomes may lead to someone looking for justifications for this reasoning rather than analysing a message authentically because the values of the representative become so ingrained that one becomes blind to their own individual values and beliefs (Haidt, 2001).

Clearly, policymaking is an ingrained process of selecting issues that are relevant to their representative claim, and excluding issues that are not. How, then, is it possible for communicators to overcome this?

3.2.2. Moral Framing and Policymakers

Nightingale et al. (2020) argue that policymakers are also receptive to value-based messaging. In particular, they argue that climate messages that aim to be apolitical are implicitly based on values, as policymakers still have to respond quickly so are likely to make instinctual choices formed from values. These values are typical of their political group (Graham et al., 2011). Therefore, if climate communicators are aware of the politically affiliated morals, then messages may be able to start steering decision-making. The authors argue that values should be placed at the centre of climate

change communication to allow for them to not only be an implicit part of decision-making but also become a conscious, openly discussed process of pro-environmental climate choices.

The benefit of morals in policymaking has been shown in the context of drug policy and harm reduction debates (Zampini, 2018). A participatory qualitative research approach is employed in this study: policymakers were interviewed on their opinions and decision-making processes for drug policy and found that the majority indicated that decisions are not usually made based on strong evidence. Instead, data is used selectively 'to support a prior position, rather than seeking to look at the evidence [...] with a purported objectivity' and 'people will latch on to policy recommendations and conclusions that fit with [...] their view of the world.' These accounts suggest that morals act as barriers to evaluating evidence objectively. It appears the neutralising purpose of evidence-based messaging is not possible. Policies will continue to be viewed emotionally. In this perspective, this warrants that communicators should use moral framing as well as relevant evidence as a tool for encouraging policies to be decided holistically, in the hopes that the climate policies will more clearly show how the representative claim will still be intact.

The key problem with this study is that drug policy is often an emotionally charged topic. The dangers of drugs are particularly well-known (Bonnet et al., 2020) and some policymakers may even have personally experienced drug abuse within their relationships. This could make morals more explicit in drug policy conversations and therefore decision-making processes may utilise values more (relative to other policy decisions). For climate scientists and communicators, the emotional aspect of climate change is clear, however, this is sometimes missed from policymakers who have not had first-hand experience of the severity of global warming. This is known as psychological distance; the degree to which people feel removed from a phenomenon (Trope & Liberman, 2010). Policymakers may feel removed from climate change and be able to view the evidence more objectively.

Interestingly, it appears that even policymakers use moral framing in their policy documents and debates. Erku et al. (2023), analysed the material provided from Ethiopia's government debate on tobacco excise tax using MFT. Policy actors in both the public health camp and tobacco industry were involved and used different moral framings to gain support for their contrary policy objectives. It was found that while the tobacco industry utilised the care, fairness and authority moral foundations, the public health camp used moral rhetoric to challenge those exact moral foundations. Crucially, the Ethiopian Food and Drug Authority (EFDA) bill was passed unanimously, showing that not only are multiple moral foundations used amongst policymakers but targeting the specific moral foundations used by the political opponent is highly effective. While this study may have similar limitations to that of Zampini (2018) in that tobacco use is quite controversial, this study still provides important insights into how moral framing is used in the political landscape. It may be that climate communicators can target specific moral foundations used in political speeches, such as Rishi Sunak's speech on Net Zero in September 2023 (Sunak, 2023), and morally reframe the speech when participating in policy debates. While this experimental approach has not been utilised in the context of climate change and MFT, it gives hope to moral framing working in a policy environment.

Taken together, this body of research sheds light on whether moral framing could be effective on not only the public but also on policymakers, and on the open questions that remain. It seems that as long as the representative claim is taken into account when generating messages, the barriers to persuading the status quo and ideologically motivated reasoning can be more easily overcome. The challenge however is gaining insight from empirical studies looking specifically at policymakers and moral reframing in the context of climate change. Once research goes beyond interview techniques, which are descriptive in nature, this literature on morality will have far more ecological validity.

4. Practical Implications and Future Research

4.1. Strategies for climate communicators

The purpose of the IPCC is to inform policymakers across the political spectrum of the scientific evidence of the effects of climate change. Crucially, the IPCC aims to take a neutral approach to science dissemination to not seem policy prescriptive. This creates a reluctance to communicate climate change in methods above just evidence-based messaging, despite the possible policy advances that would come from climate change science being presented alongside emotion.

This misalignment has recently led to academics exploring how the IPCC's information may be disseminated in an emotionally indicative way while remaining policy-neutral (McLoughlin, 2021). McLoughlin (2021) argues that using communication strategies to create a space for emotional responses is not equal to the act of persuasion; it is acknowledging that people do not immediately connect statistics to themselves so needs it to be explicit. Policymakers have even called for less 'impersonal' data and instead, evidence should have an emotional aspect (Zampini, 2018). As long as this communication strategy is made clear to the audience, the communicator's credibility (Kotcher et al., 2017) and trustworthiness (Cologna et al., 2021) should not be undermined.

Building on the literature as a whole, it seems that IPCC's information may be communicated more effectively by matching evidence with all five moral foundations and should be used in discussions, speeches, and workshops to ensure that no political party is alienated. Below, this paper has adapted messages from the IPCC WGIII AR6 report (IPCC, 2022) to include both binding and individualising moral foundations, as well as ancestral legacy, on policies that have been unsuccessfully implemented in the United Kingdom this year. The first example includes adaptations of the Transport Chapter (Jaramillo et al., 2022), and the second example includes adaptations of the Buildings Chapter (Cabeza et al., 2022):

1. Ending sales of new petrol and diesel cars by switching to electric vehicles (EVs)

Emissions from burning fossil fuels are damaging our lives and our only home. Such a large contributor to these emissions is the transport sector, which represents the largest energy-consuming sector in 40% of countries worldwide. On-road passenger and freight vehicles dominate global-transport-related CO2 emissions; luckily, they also offer the largest mitigation potential. We can protect our country (loyalty) and humanity (care) by ending sales of new petrol and diesel cars.

We can maintain our competitive advantage as a country (loyalty) by our leaders building new alternative opportunities (authority) such as electric cars (EVs), which offer the greatest low-carbon potential for land-based transport. Climate change impacts coming partially from the transport sector may lead to intense rainfall leading to flooding, more intense winds and/or storms, and sea level rise can seriously impact transport infrastructure, operations, and mobility for road. Therefore, switching to EVs will help maintain the status quo (sanctity) by preventing the extinction of passenger vehicles (fairness). By taking responsibility as ancestors (ancestral legacy) we can show our love to humanity (care) and our country (loyalty) by ending sales of new petrol and diesel vehicles in 2030.

2. Landlords to improve the energy efficiency of their homes

Total global greenhouse gas (GHG) emissions in the building sector reached 12 GtCO₂-eq in 2019, equivalent to 21% of global GHG emissions that year. Actions are needed to adapt buildings to future climate while ensuring well-being for all (fairness). Luckily, renewable energy can be designed to reduce buildings' vulnerability to climate change impacts. We as a country can pave the way in the energy transition (loyalty) by cutting ties with the nations we rely on for gas by becoming more self-sufficient. This can be done by empowering landlords to take charge of the efficiency of their own homes (authority). The expected heatwaves will inevitably increase cooling needs to limit the health impacts of climate change; the status quo will only be preserved if homes are prepared for these risks. We have a responsibility as stewards (sanctity) and ancestors (ancestral legacy) to create energy-efficient homes for future generations (care).

These are overt examples, with each moral foundation being very explicit. However, these paragraphs intend to demonstrate the basics of how moral framing may coincide with CONSTRAIN's science so that professional communicators can use the core concepts in their development of messages.

In practice, communicators could work with policymakers to encourage them to reflect on their own moral values when evaluating climate science. Making climate change morally clear will allow for more deeper engagement and encourage reflection. One way of doing such is to actively involve the public in policymaking; policymakers will then be exposed to contrary moral beliefs outside of their political bubble. Hopefully, this will facilitate critical thinking from a moral perspective to resolve any internal conflict. This may work especially well if members of the public across the political spectrum contribute, as morals may work as a common ground that will facilitate discussion, not confrontation. Public engagement is also important for democracy so may help to legitimise the representative claim and make acting on climate change more justifiable.

An alternative strategy is to discuss climate change morally by using examples of individual experiences, particularly from people in their own country. For example, in the United Kingdom, there was severe flooding in mid-October 2023, where families were left homeless and approximately seven people died. If members of the public who lost their homes or even family members were given easier access to policymakers, they would be able to relay their stories and represent at least the individualising moral foundations. It may even trigger the loyalty foundation, as seeing members of their own country struggle with climate change creates a need for policymakers to be loyal to their country. Again, this may work particularly well if the members of the public were of the same political affiliation.

These discussions could be coupled with emphasising opportunities for participation in climate policymaking specifically for policies that tackle their moral values. This focus on action could be completed through action-based storytelling (De Meyer et al., 2020) where people are given

examples of previous successes to build a sense of agency. In terms of policymakers, climate communicators could demonstrate climate advancements that have been made by other policymakers, perhaps of the same political affiliation. This could facilitate ideologically motivated reasoning. Alternatively, examples of successes from politically neutral actors, such as NGOs, may work at engaging policymakers across the political spectrum by simulating that of the group they are affiliated with (Lammers et al., 2023).

This section has demonstrated how moral framing research may be applied to climate communication and ultimately develop strategies to promote climate action amongst policymakers. Let us now turn to identifying the knowledge gaps and possible avenues for future research to be explored.

4.2. Future Research

There is abundant room for further progress in determining whether all five moral foundations are needed to reach both sides of the political spectrum. It appears that liberals may be indifferent to moral framing (Wolsko et al., 2016; Hurst & Stern, 2020), possibly due to climate change being overtly against their moral values. It may be that care/harm and fairness/cheating do not need to be included, which would not only be less time-consuming for generating climate messages but could be more effective at reasoning with conservatives. To develop a full picture of the effectiveness of all five moral foundations, additional studies will be needed to investigate whether conservatives are more convinced by all five moral foundations or just binding moral foundations.

Another knowledge gap is whether all five moral foundations are effective in increasing support for specific climate policies. The aforementioned studies have mostly measured environmental intentions (Kidwell et al., 2013), convincingness (Nisbett & Spaiser, 2023) and attitudes (Wolsko et al., 2016). Hurst & Stern (2020) was the only study to look specifically at policy support. It has been shown that policy may mediate the effect of framing (Luong et al., 2019), especially if one policy is

more controversial than the other. Further work is needed to determine the barriers to the effectiveness of all five moral foundations in persuading conservatives on different policies.

The ultimate research question that could be asked is whether moral framing is effective on policymakers in climate contexts. While this paper aimed to narrow this question by applying interdisciplinary areas of research into the context of a policymaker, there needs to be more concrete studies investigating the five moral foundations in environments that involve the representative claim and heuristics. Moral framing cannot be applied to policymakers until it is made more certain whether it is effective in these contexts.

5. Conclusion

This review has aimed to provide a deeper insight into whether moral framing is an effective communication strategy in overcoming political polarisation on climate change and intended to evaluate how the literature could be applied to policymakers.

To summarise, the relevance of moral framing is clearly supported by the literature. The research has found that generally moral framing is effective in increasing climate action in conservatives when messages are morally framed to include the binding moral foundations of authority/subversion, loyalty/betrayal, and sanctity/degradation (Feygina et al., 2009; Kidwell et al., 2013; Wolsko et al., 2016). The presence of these moral foundations has also been found not to alienate liberals (Hurst & Stern, 2020; Nisbett & Spaiser, 2023), and care/harm and fairness/cheating have been shown to not alienate conservatives (Graham et al., 2009; Hurst & Stern, 2020). These results seem to suggest that moral framing could reach people across the political spectrum if all five moral foundations are included in climate messaging, as it allows for both parties to connect with climate change through a moral lens. Insight from Nisbett & Spaiser (2023) also suggests that MFT could include ancestral legacy as a new moral foundation that appeals to both sides of the political

spectrum (Nisbett & Spaiser, 2023). Future research, however, is still needed to support these findings on the political appeal of ancestry.

Whether moral framing is effective for policymakers remains ambiguous. Implicit in this is the limited studies that have applied MFT to the context of climate policymaking, making it difficult to conclude whether moral framing should be used in this area of communication. However, it appears that policymakers do use morals in their decision-making (Erku et al., 2023), and have even requested morals to be addressed in policy discussions (Zampini, 2018). The literature as a whole suggests that by using morals that align with their representative claim (Willis, 2018), policymakers will be more aware of how climate change relates to them on a moral level, which will help reduce the amount of information that is 'filtered out' through ideologically-motivated reasoning (Kahan, 2018).

Taken together, this paper will prove useful in expanding our understanding of how moral framing may be used in climate communication. It has been one of the first attempts to thoroughly examine the literature on moral framing in overcoming political polarisation specifically in policymakers. It seems that morals are both implicitly and explicitly involved in decision-making, and therefore should not be avoided in policy conversations. Nevertheless, several questions remain to be answered, 1) will similar patterns be found in policymakers in the context of climate change, 2) are all five moral foundations essential, or are binding moral foundations sufficient, and 3) is moral framing effective regardless of the policy? This would be a fruitful area for further work.

6. References

Bain, P. G., Hornsey, M. J., Bongiorno, R., & Jeffries, C. (2012). Promoting pro-environmental action in climate change deniers. *Nature Climate Change*, 2(8), 600–603.

<https://doi.org/10.1038/nclimate1532>

Bonnet, U., Specka, M., Soyka, M., et al. (2020). Ranking the Harm of Psychoactive drugs including Prescription Analgesics to Users and Others—A perspective of German Addiction medicine experts. *Frontiers in Psychiatry*, 11. <https://doi.org/10.3389/fpsy.2020.592199>

Brehm, J. W. (1966). A theory of psychological reactance. *Academic Press*.

Buchholz, K. (2020, December 3). Where climate change deniers live. Retrieved November 2, 2023, from <https://www.statista.com/chart/19449/countries-with-biggest-share-of-climate-change-deniers/>

Cabeza, L. F., Q. Bai, P. Bertoldi, J.M. Kihila, A.F.P. Lucena, É. Mata, S. Mirasgedis, A. Novikova, Y. Saheb, 2022: Buildings. In IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [P.R. Shukla, J. Skea, R. Slade, A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M. Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA. [doi: 10.1017/9781009157926.011](https://doi.org/10.1017/9781009157926.011)

Cairney, P., & Kwiatkowski, R. (2017). How to communicate effectively with policymakers: combine insights from psychology and policy studies. *Palgrave Communications*, 3(1), 1-8. <https://doi.org/10.1057/s41599-017-0046-8>

Caprara, G. V., Schwartz, S. H., Capanna, C., Vecchione, M., & Barbaranelli, C. (2006). Personality and Politics: values, traits, and political choice. *Political Psychology*, 27(1), 1–28. <https://doi.org/10.1111/j.1467-9221.2006.00447.x>

Clayton, S., Koehn, A., & Grover, E. R. (2013). Making sense of the senseless: identity, justice, and the framing of environmental crises. *Social Justice Research*, 26(3), 301–319. <https://doi.org/10.1007/s11211-013-0185-z>

Cohen, G. L. (2003). Party over policy: The dominating impact of group influence on political beliefs. *Journal of Personality and Social Psychology*, 85(5), 808. <https://doi.org/10.1037/0022-3514.85.5.808>

Cologna, V., Knutti, R., Opecckec, H., & Siegrist, M. (2021). Majority of German citizens, US citizens and climate scientists support policy advocacy by climate researchers and expect greater political engagement. *Environmental Research Letters*, 16(2), 024011. <https://doi.org/10.1088/1748-9326/abd4ac>

De Meyer, K., Coren, E., McCaffrey, M. S., & Slean, C. (2020). Transforming the stories we tell about climate change: from 'issue' to 'action.' *Environmental Research Letters*, 16(1), 015002. <https://doi.org/10.1088/1748-9326/abcd5a>

Ditto, P. H., & Koleva, S. (2011). Moral empathy gaps and the American culture war. *Emotion Review*, 3(3), 331–332. <https://doi.org/10.1177/1754073911402393>

Dunlap, R. E., Xiao, C., & McCright, A. M. (2001). Politics and environment in America: Partisan and ideological cleavages in public support for environmentalism. *Environmental Politics*, 10(4), 23–48. <https://doi.org/10.1080/714000580>

Erku, D. A., Yigzaw, N., Tegegn, H. G., Gartner, C., Scuffham, P. A., Garedew, Y. T., & Shambel, E. (2023). Framing, moral foundations and health taxes: interpretive analysis of Ethiopia's tobacco excise tax policy passage. *BMJ Global Health*, 8. <https://doi.org/10.1136/bmjgh-2023-012058>

Feinberg, M., & Willer, R. (2019). Moral reframing: A technique for effective and persuasive communication across political divides. *Social and Personality Psychology Compass*, 13(12). <https://doi.org/10.1111/spc3.12501>

Feygina, I., Jost, J. T., & Goldsmith, R. E. (2009). System justification, the denial of global warming, and the possibility of "System-Sanctioned change." *Personality and Social Psychology Bulletin*, 36(3), 326–338. <https://doi.org/10.1177/0146167209351435>

Graham, J., Haidt, J., & Nosek, B. A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology*, 96(5), <https://doi.org/10.1037/a0015141>

Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Koleva, S., & Ditto, P. H. (2011). Mapping the moral domain. *Journal of Personality and Social Psychology*, 101(2), 366–385.

<https://doi.org/10.1037/a0021847>

Haidt, J. (2001). The emotional dog and its rational tail: a social intuitionist approach to moral judgment. *Psychological review*, 108(4), 814. <https://doi.org/10.1037/0033-295X.108.4.814>

Hart, P. S., & Nisbet, E. C. (2012). Boomerang effects in science communication: How motivated reasoning and identity cues amplify opinion polarization about climate mitigation policies.

Communication Research, 39(6), 701-723. <https://doi.org/10.1177/0093650211416646>

Hurst, K., & Stern, M. J. (2020). Messaging for environmental action: The role of moral framing and message source. *Journal of Environmental Psychology*, 68.

<https://doi.org/10.1016/j.jenvp.2020.101394>

Jaramillo, P., S. Kahn Ribeiro, P. Newman, S. Dhar, O.E. Diemuodeke, T. Kajino, D.S. Lee, S.B.

Nugroho, X. Ou, A. Hammer Strømman, J. Whitehead, 2022: Transport. In IPCC, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth

Assessment Report of the Intergovernmental Panel on Climate Change [P.R. Shukla, J. Skea, R. Slade,

A. Al Khourdajie, R. van Diemen, D. McCollum, M. Pathak, S. Some, P. Vyas, R. Fradera, M.

Belkacemi, A. Hasija, G. Lisboa, S. Luz, J. Malley, (eds.)]. Cambridge University Press, Cambridge, UK

and New York, NY, USA. [doi: 10.1017/9781009157926.012](https://doi.org/10.1017/9781009157926.012)

Jost, J. T., & Banaji, M. R. (1994). The role of stereotyping in system-justification and the production of false consciousness. *British Journal of Social Psychology*, 33(1), 1-27.

<https://doi.org/10.1111/j.2044-8309.1994.tb01008.x>

Kahan, D. M. (2017). Misconceptions, misinformation, and the logic of Identity-Protective Cognition. *Social Science Research Network*. <https://doi.org/10.2139/ssrn.2973067>

Kay, A. C., & Jost, J. T. (2003). Complementary justice: effects of "poor but happy" and "poor but honest" stereotype exemplars on system justification and implicit activation of the justice motive. *Journal of Personality and Social Psychology*, 85(5), 823. <https://doi.org/10.1037/0022-3514.85.5.823>

Kidwell, B., Farmer, A., & Hardesty, D. M. (2013). Getting liberals and conservatives to go green: political ideology and congruent appeals. *Journal of Consumer Research*, 40(2), 350–367. <https://doi.org/10.1086/670610>

Kotcher, J. E., Myers, T. A., Vraga, E. K., Stenhouse, N., & Maibach, E. W. (2017). Does engagement in advocacy hurt the credibility of scientists? Results from a randomized national survey experiment. *Environmental Communication*, 11(3), 415-429. <https://doi.org/10.1080/17524032.2016.1275736>

Lammers, J., Schulte, A., & Baldwin, M. (2023). Does framing climate change policies to fit with epistemic needs for predictability reduce conservatives' opposition? *Analyses of Social Issues and Public Policy*, 23(3), 571–591. <https://doi.org/10.1111/asap.12362>

Leiserowitz, A., Roser-Renouf, C., Marlon, J., & Maibach, E. (2021). Global Warming's Six Americas: a review and recommendations for climate change communication. *Current Opinion in Behavioral Sciences*, 42, 97-103. <https://doi.org/10.1016/j.cobeha.2021.04.007>

Luong, K. T., Garrett, R. K., & Slater, M. D. (2019). Promoting persuasion with ideologically tailored science messages: A novel approach to research on emphasis framing. *Science Communication*, 41(4), 488-515. <https://doi.org/10.1177/1075547019862559>

McConnell, A., & 't Hart, P. (2019). Inaction and public policy: understanding why policymakers 'do nothing'. *Policy sciences*, 52, 645-661. <https://doi.org/10.1007/s11077-019-09362-2>

McLoughlin, N. (2021). Communicating efficacy: How the IPCC, scientists, and other communicators can facilitate adaptive responses to climate change without compromising on policy neutrality.

Climatic Change, 169(1-2), 5. <https://doi.org/10.1007/s10584-021-03232-8>

Nightingale, A. J., Eriksen, S., Taylor, M., Forsyth, T., Pelling, M., Newsham, A., Boyd, E., Brown, K., Harvey, B., Jones, L., Kerr, R. B., Mehta, L., Næss, L. O., Ockwell, D., Scoones, I., Tanner, T., & Whitfield, S. J. (2019c). Beyond Technical Fixes: climate solutions and the great derangement.

Climate and Development, 12(4), 343–352. <https://doi.org/10.1080/17565529.2019.1624495>

Nisbet, E. C., Hart, P. S., Myers, T., & Ellithorpe, M. (2013). Attitude change in competitive framing environments? Open-/closed-mindedness, framing effects, and climate change. *Journal of*

Communication, 63(4), 766–785. <https://doi.org/10.1111/jicom.12040>

Nisbett, N., & Spaiser, V. (2023). How convincing are AI-generated moral arguments for climate action? *Frontiers in Climate*, 5. <https://doi.org/10.3389/fclim.2023.1193350>

Rokeach, M. (1968). A theory of organization and change within value-attitude systems. *Journal of Social Issues*, 24(1), 13–33. <https://doi.org/10.1111/j.1540-4560.1968.tb01466.x>

Steenbergen, M., & Colombo, C. (2018). Heuristics in political behavior. In A. Mintz, & T. Lesley (Eds.), *The Oxford handbook of behavioral political science*. Oxford University Press.

<https://doi.org/10.1093/oxfordhb/9780190634131.013.9>

Stollwerk, J. (2022). Framing for future: a systematic literature review on how to convince people with conservative attitudes of environmentally friendly behaviour. Retrieved November 2, 2023, from <https://nbn-resolving.org/urn:nbn:de:gbv:27-dbt-20230302-080208-004>

Sunak, R. (2023, 20 September). *PM speech on net zero* [Speech transcript]. GOV.UK.

<https://www.gov.uk/government/speeches/pm-speech-on-net-zero-20-september-2023>

Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological distance. *Psychological Review*, 117(2), 440–463. <https://doi.org/10.1037/a0018963>

Willis, R. (2018). Constructing a 'Representative Claim' for Action on Climate Change: Evidence from Interviews with Politicians. *Political Studies*, 66(4), 940–958.

<https://doi.org/10.1177/0032321717753723>

Wolsko, C., Ariceaga, H., & Seiden, J. (2016). Red, white, and blue enough to be green: Effects of moral framing on climate change attitudes and conservation behaviors. *Journal of Experimental Social Psychology*, 65, 7–19. <https://doi.org/10.1016/j.jesp.2016.02.005>

Zampini, G. F. (2018). Evidence and morality in harm-reduction debates: can we use value-neutral arguments to achieve value-driven goals? *Palgrave Communications*, 4(1).

<https://doi.org/10.1057/s41599-018-0119-3>