

Speak up for Change?
Understanding the Social Costs and Benefits of
Confronting Environmental Disregard.

Submitted by Katharine Steentjes to the University of Exeter
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Abstract

In the face of stagnation in efforts to tackle the global increase of greenhouse gas emissions, there is a great need to broaden our understanding of normative processes that maintain and change social norms in relation to environmentally (un)sustainable lifestyles. My research aims to address this gap in the literature by examining the normative processes associated with climate change. More specifically I focused on identifying the interpersonal costs and wider benefits (in terms of social change) associated with the interpersonal confrontation of environmental disregard. Firstly, to establish a meaningful point of comparison for subsequent studies, I compared the normative status of environmental disregard and racial prejudice (Studies 1 & 2). I then moved on to examining perceptions and consequences of interpersonal confrontation of environmental disregard over the course of six studies by placing participants in the position of an observer of an interaction in which the confrontation occurred. The results consistently identified high social costs (reduced feelings of closeness and warmth) associated with confronting environmental disregard (but not racism). The costs of confronting environmental disregard were partly determined by the morality of the issue, the appropriateness of the confrontation, the pre-existing attitude of the observer and the justification used by the confronter for their reaction. My studies also tested different strategies to reduce the social costs for the confronter (such as invoking morality in different ways) and also assessed the consequences of confrontation for changes in perceptions of social norms, climate change attitudes and behavioural tendencies amongst those bearing witness. In relation to the consequences for behavioural tendencies resulting from interpersonal confrontation, the findings suggest that confrontation of environmental disregard encourages pro-environmental action tendencies if a scientific justification for the confrontation is provided. The final chapter of the thesis explores the theoretical and practical implications of these findings in relation to engendering processes of social change.

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Chapter 1: Introduction

“A general change in attitude will only happen if people are convinced, emotionally as well as intellectually, that our relentless use of fossil fuels has become dangerous and morally wrong.”

(Mouhot, 2011, p.339)

In an attempt to provide compelling arguments for why our current carbon dependent lifestyle is “dangerous and morally wrong” Mouhot (2011) compares, in a controversial but compelling account, the usage of fossil fuels in Western societies to the ownership of slaves before the abolishment of slavery. He argues that the dependency on fossil fuels is fundamental to Western society’s current lifestyle and that humans are reluctant to implement or agree to significant modifications, despite moral implications associated with the current status quo. Mouhot’s arguably simplified analogy highlights that the issue of climate change itself needs to be perceived as fundamentally moral in nature in order to bring about far reaching changes on a political and economic level to reduce greenhouse gas emissions and react to the threat posed by inaction.

While, as Mouhot states, a significant modification of the current carbon intensive lifestyle in a democratic system may only happen if people feel strongly about the issue, this thesis will argue that a strong feeling of concern will only spread and have an impact if people communicate these feelings in a social (or even interpersonal) setting. I will argue in this thesis that the current stagnation of political and individual actions in relation to climate change can only be overcome through a consideration of the social processes involved in changing and maintaining social norms. Therefore, my research was designed to widen our understanding of the normative processes that are involved in maintaining current carbon intensive lifestyles or changing these lifestyles towards the realization of a more sustainable society. In particular I will focus on interactions involving social confrontation, that is, the interpersonal confrontation of extreme non-environmental opinions. To this end, I take the

approach of comparing the operation of such processes in relation to a widely moralised issue (racial equality) with the issue of climate change in order to directly examine the role of moralization and identify possibilities for changing social norms.

In this first chapter I will outline the psychological challenges climate change poses to humans before focusing on how people currently perceive the issue and why there is a great need to broaden our understanding of social norms, and the processes involved in maintaining or changing these, especially in relation to environmental issues such as climate change. Thereafter, I will outline the current literature on interpersonal confrontation before giving an overview of the empirical chapters of the thesis.

Challenges Posed by Climate Change

The latest report of the Intergovernmental Panel on Climate Change leaves little doubt regarding the increases in global temperature in the past century and the far reaching consequences of this climatic change (IPCC, 2013a). Substantial sea level rise, food scarcity, and the increased likelihood of extreme weather events are only a few examples of problems posed by a global temperature increase. The latest IPCC report further states, with a probability of 95-100%, that “human influence has been the dominant cause of the observed warming since the mid-20th century” (IPCC, 2013b, p.17). The IPCC has made it very clear that there is no scientific evidence to dismiss anthropogenic climate change. However, this scientific certainty does not constitute a public or personal acceptance of the responsibility for this global development, and it does not necessarily lead to the implementation of the mitigation or adaptation policies that scientific evidence would suggest as necessary. The issue of climate change is a very complex issue and it therefore poses very unique psychological challenges to humans. Politicians and the general public alike are faced with several psychological challenges that might stand in the way of reacting to this global threat

by supporting or implementing some of the interventions proposed by the IPCC (IPCC, 2007, 2014).

Psychological Challenges

A vast amount of literature has aimed to identify the psychological challenges (both barriers as well as opportunities) that are created by the specific characteristics of the issue of anthropogenic climate change. Stoknes (2014) recently summarized some of the psychological challenges posed by climate change that are most frequently cited in the existing literature. I will use his review to structure the subsequent summary of this research area. One widely discussed characteristic of climate change is that it is perceived as a distant (rather than proximal) threat to most people in the western world, which has implications for several dimensions of psychological distance. The impacts of a global increase in temperature are not immediate, rather, they will predominantly occur in the future, and in places far away from the countries that emit the majority of the global greenhouse gases (IPCC, 2013a). This temporal and geographical distance makes it easy for people in the Western world to dismiss the consequences of climate change simply because they may not be perceived as posing an imminent threat to the self (Popovski & Mundy, 2011). Moreover, the *social* distance between individuals in the West and those in countries who may indeed already be suffering the effects of climatic changes may also serve to dampen down more moralistic or altruistic motivations for action. Markowitz and Shariff (2012) highlight, in their review of why people struggle to categorize climate change as a moral issue that this social distance from victims of climate change makes it easier to dismiss the moral questions that might be raised by the climatic impacts resulting from a collective failure to take action to mitigate climate change. Moreover, Markowitz and Shariff claim that the recognition of climate change as a moral issue may be crucial in understanding why people will or will not engage with the issue and be motivated to engage in personal or political action to address it.

Another dimension of the psychological distance associated with climate change is the abstractness of the issue (Markowitz, 2012; Stoknes, 2014). Changes in the climate represent averages over years and are therefore more difficult to grasp than, for example, daily weather or weather changes. Even extreme weather events do not necessarily help to highlight the consequences of climate change because there is no clear way to disentangle the events caused by anthropogenic climate change from events that would have happened without increases in anthropogenic greenhouse gas emissions. The relevance of psychological distance in hindering action on climate change is supported by evidence that personal experience (e.g., with flooding) can increase concern about climate change and results in more efforts to reduce electricity usage (Spence, Poortinga, Butler, & Pidgeon, 2011). Therefore, Stoknes (2014) concludes that closer threats—i.e., those that are perceived as less distant in terms of time, space, emotional valence, and clarity—are likely to be dealt with more urgently than the currently distant threat of climate change (see also Gifford, 2011).

When engaging with climate change, people in the Western world face another psychological challenge, that being the need to come to terms with the feelings associated with having contributed to greenhouse gas emission themselves (Markowitz & Shariff, 2012; Stoknes, 2014). Being confronted with personal (partial) responsibility for an issue, rather than being able to simply direct one's outrage about an issue towards a clearly external cause, can lead to feelings of guilt and denial that might hinder positive engagement. Stoknes (2014) points out that the history of climate change being framed in negative or apocalyptic terms, or being combined with fear appeals, may only worsen this situation. As O'Neill and Nicholson-Cole (2009) have shown, the images that people ranked as giving them the feeling that climate change is important to them personally, e.g. images of starving children and famine, also left participants with the feeling that they are unable to do anything about climate change. However, framing climate change as apocalyptic and disastrous is the most dominant

way of presenting this issue in the media (Hulme, 2009; Weingart, Engels, & Pansegrau, 2000). When people face a situation of blame, at the same time as having restricted opportunities to take action to remedy the situation, the psychological defence mechanisms of denial of the risk or personal responsibility is a natural way of reacting to the stimulus. Therefore, it is not unlikely that biased processing (or denial) of the threat are triggered by being presented with information about the issue of climate change (e.g. Gifford, 2011; Markowitz & Shariff, 2012).

The issue of people's perception of reaction opportunities brings us to another psychological phenomenon that often occurs with regard to climate change: cognitive dissonance. Stoknes (2014) points out that many people living in a Western society only have restricted scope to reduce their personal carbon footprint. For example, many are currently locked in to a dependency on carbon-intensive forms of transport due to a lack of public transport provision. When people feel they do not have the possibilities to engage in the action related to their (possibly pro-environmental) attitude, this results in a need to reduce this cognitive dissonance between attitude and behaviour by using an alternative strategy. If no behavioural change is possible, then people will often change the attitude that clashes with their current behaviour (Festinger, 1962).

One structural intervention implemented some years ago in the Netherlands, is a good example of how cognitive dissonance can affect environmental attitudes. Regular car drivers travelling on a route that had one lane converted into a carpool lane were asked to indicate their transport related attitudes one month prior and one month after the opening of the carpool lane. After being confronted with a carpool lane, which most drivers did not feel was a realistic option for them to use, their attitudes changed in that they became more likely to point out flexibility as a primary criterion for their choice of transport and less likely to afford importance to the reduction in travel costs permitted by carpooling (Van Vugt, Van Lange,

Meertens, & Joireman, 1996). This example highlights that pro-environmental actions are often determined by the interplay between structural boundary conditions and psychological factors. If those two factors align or do not contradict each other, then it is likely that people engage in pro-environmental behaviours (Swim et al., 2009).

A more recent development that also makes reactions to climate change problematic is the political polarization of the issue. The literature on psychological barriers to engage with climate change highlights that the issue is very closely associated with certain political ideologies, potentially forming a barrier to positive engagement for those whose political ideology does not seem to be compatible with acknowledging greenhouse gas emissions as a problem (Gifford, 2011; Hart & Nisbet, 2011; Stoknes, 2014). Pidgeon (2012) highlights in his review that the association of climate change with certain political affiliations, or ideologies (e.g. egalitarianism vs. individualism) can lead to a biased interpretation of environmental threats, in that people tend to perceive the threat in a way that simply confirms their own pre-existing beliefs regarding the validity and importance of climate change, with such beliefs being strongly influenced by political ideology. Therefore, climate change threatens to polarise opinion, which is obviously detrimental to any process of reaching a consensus on taking action on the issue (Pidgeon, 2012).

One problem Stoknes (2014) did not discuss in his recent review on psychological barriers to engage with climate change, however, is the general mistrust in the information sources and communication channels. Mistrusting the evidence for anthropogenic climate change is an often reported and documented problem, and it provides people with a potential rationale for dismissing this psychologically challenging problem (Gifford, 2011; Lorenzoni, Nicholson-Cole, & Whitmarsh, 2007; Swim et al., 2009). Pidgeon (2012) suggests that the history of media coverage reporting potential biases in the scientific methods or intentions of scientists has been far from helpful in this regard. The leaking of an e-mail conversation by

researchers at the University of East Anglia discussing alternative methods to assess climate changes, a scandal known as ‘climategate’, is probably the most famous example of a trust-damaging event in the history of climate change communication (Nerlich, 2010). Therefore, the prevalent mistrust in information sources is a factor that is of particular relevance in the context of climate change and the role of trust (or mistrust) in information sources should be considered when choosing messengers of intervention information.

In conclusion, the issue of climate change poses several barriers that might undermine mitigation or adaptation efforts, levels of support for related political decisions, concerns about the issue or even the acknowledgement of climate change as a legitimate threat. To clarify whether these barriers indeed have undermined engagement with the issue, and the ways in which they have done so, I will next review the recent evidence on public perceptions of climate change.

Stagnated Efforts to Tackle Climate Change

Over the last five to ten years, the majority of people in the West have held the belief that the climate is changing and that humans have contributed to this development. Whereas in the United Kingdom 76% indicated in 2012 that they believe that “climate change is happening and that humans are, at least partly, responsible” (Park, Clery, Curtice, Phillips, & Utting, 2012, p. 66), in America a smaller majority was convinced that climate change is happening (63% in 2013) and only 49% believed that the increase in global temperature is mostly caused by human activities (Leiserowitz, Maibach, Roser-Renouf, Feinberg, & Howe, 2013).

Polls further show that a majority of people in Europe and the US indicate concern about the issue. An international comparison of 23 countries in 2006 revealed that over 65% of the people in Europe and America thought that climate change is a serious or somewhat serious problem (Lorenzoni & Pidgeon, 2006). In 2013, the Europabarometer survey assessed

attitudes towards climate change in all European member states and verified that this attitude did not show a great deal of change over the last few years, with 69% of Europeans indicating in 2013, 68% in 2011 and 64% in 2009, that they think that climate change is a very serious problem (Eurobarometer, 2011, 2014). In America, 51% expressed in 2013 that they are somewhat or very worried about global warming, with this number having been slightly higher in 2008 at 63% (Leiserowitz et al., 2013). These polls suggest that there is a stable concern about climate change amongst a (small) majority of the US and European public—a conclusion that receives support from the literature on public perceptions of climate change.

After reviewing literature on public perception of climate change, Pidgeon (2012) summarized the developments and trends of the last few years and suggested that a more nuanced consideration of public attitudes is needed. He argues that an assessment of the level of general concern is not sufficient to understand public perceptions of climate change and that it is more informative to understand the relative importance that people attach to climate change compared to other issues, such as world poverty (Pidgeon, 2012). Europeans currently rank climate change as the third most serious issue facing the world (after “Poverty, hunger and lack of drinking water” and “the economic situation) and only 16% of Europeans perceived climate change as the single most serious problem. Since 2011, when climate change was ranked second, the economic situation has gained more public attention and is now considered a more serious global problem than climate change (Eurobarometer, 2014). This data demonstrates that while people living in highly carbon-emitting countries are generally concerned about climate change, there are other global problems that are perceived as having higher priority. Moreover, this is before one even considers more local or personal problems that might also compete with global problems for the attention of individuals (Pidgeon, 2012).

The other interesting point Pidgeon (2012) makes in his review is that people do not seem to perceive that the responsibility to act on climate change lies predominantly with them as individuals. While data collected in the UK suggest that most people (62% UK) agree that every possible action should be taken (Poortinga, Pidgeon, & Lorenzoni, 2006), they see other players as carrying higher responsibility than themselves. The most recent poll among European citizens shows that people perceive national governments to be most responsible for tackling climate change. When asked to indicate who they perceived to be responsible (with more than one answer option possible), 48% of participants agreed that the national government carries responsibility for tackling climate change, while only 25% indicated that they themselves were responsible. Indeed the role of individual responsibility also showed a lower consensus in reacting to this global threat than did the role of business and industry (41%) and the role of the European Union (39%) (Eurobarometer, 2014). This data clarifies that the public predominantly looks to other players, mainly their national governments, to take action on climate change.

The literature on public attitudes towards climate change further implies that when considering personal action people are strongly influenced by what other people do. Whereas 55% of respondents indicated that they agree with the statement that everyone should reduce their car use for the sake of the environment, 47% of the same pool of respondents agreed that there is no point in reducing their car use unless others do the same (Park et al., 2012). Lorenzoni and Pidgeon (2006) note in their review of public perceptions of climate change that “Personal action was seen to be pointless in isolation” (Lorenzoni & Pidgeon, 2006, p. 85). This frequently voiced opinion reflects the fear of ‘free riders’, people who benefit from the actions of others without engaging in the costly behaviour themselves, in this case reducing their greenhouse gas emissions (Lorenzoni et al., 2007). This fear of free riders might, in addition to the psychological barriers discussed earlier, explain why people prefer

and expect governments to implement nationwide interventions to reduce greenhouse gas emissions. Governments have the tools to regulate and monitor certain environmental actions on a broader scale and this reduces the chances of free riding.

Taken together, the presented evidence suggests that many people in Europe and the US want decisive action from the government in implementing the necessary change that can mitigate climate change or improve the adaptation to the consequences of climate change (Pidgeon, 2012). Unfortunately, the global political players have, to date, struggled to agree on far reaching greenhouse gas commitments since the Kyoto protocol and many national governments will not meet the reductions they already committed to under this Protocol (Schiermeier, 2012). For the national governments of democratic countries, an aim of reducing their greenhouse gas emissions must be approached in conjunction with the (potentially incompatible) aim of maintaining support from their voters. This is particularly the case when the mitigation policies involved might be easily cast (at least by their local political opponents) as threatening aspects of the national interest or lifestyle elements that are considered important within the local political landscape (Kurz, Augoustinos, & Crabb, 2010).

A report collecting evidence from different European countries concerning climate change policies in democracies highlights that the political decision makers in these democracies will only implement policies that they think will be supported by the majority of their public, which in turn stresses how relevant the public perceptions of climate change are for both individual action as well as political decision making. The report states that elections form a barrier for far reaching policies, reporting that: “with a few exceptions, governments and other political authorities remain reluctant to take decisive action, even though most accept that strong measures are needed, because they fear that to do so would be politically damaging” (Compston & Bailey, 2008, p. 263).

This concern among the political players about their chances of re-election currently hinders the implementation of radical interventions in many Western countries. It seems that politicians do not perceive the willingness to reduce greenhouse gas emission to be strongly prevalent amongst their voters, leading to an expectation that arguing for, or implementing, stricter climate change policies will result in the loss of votes (Compston & Bailey, 2008; Pidgeon, 2012). Pidgeon (2012) labels this current political situation in relation to climate change, the ‘governance trap’, to describe the collective lack of action that occurs by bouncing back responsibilities between the public and the government.

To summarize, I would argue that a point has been reached at which many people are concerned about climate change but the percentage of people being concerned has stalled and concerns about other issues still tend to get greater priority. Despite a growing understanding of the science of climate change itself, public concern seems to be unaffected by these developments and has not increased relative to other global problems. At the same time, politicians struggle to implement significant changes to mitigate greenhouse gas emissions because they do not trust the public to support related policies.

Possible Solutions to Mobilize Action on Climate Change

Although concern about climate change is indicated by the majority in many western nations, members of the public in such nations have thus far failed to push politicians to take action on climate change through organized, publically-voiced support for far reaching climate change policies. To revive the currently stagnated situation, there is a need to identify new, or under-examined, research areas to understand how people perceive climate change, react to it, and act upon it.

The literature on climate change policies and climate change communication often suggests that climate change communication would benefit from a more positive framing to make people associate the issue with positive emotions instead of with loss or failure

(Giddens, 2009; Markowitz & Shariff, 2012; Pidgeon, 2012). For example, a recent study demonstrates that framing climate change action as a way of improving health leads to higher feelings of hopefulness in the audience than framing climate change as an environmental threat (Myers, Nisbet, Maibach, & Leiserowitz, 2012).

Another reoccurring appeal being made in the literature concerning climate change policies is the need to engage the public more in the policy making process (Lorenzoni et al., 2007; Pidgeon, 2012; Whitmarsh, O'Neill, & Lorenzoni, 2013). Pidgeon (2012) suggests in his review that, to escape the 'governance trap', policy makers should improve their efforts to consider the norms and beliefs of the public while designing and communicating climate change interventions. Lorenzoni et al. (2007) point out that policy makers currently disregard the structural conditions and social norms associated with contemporary carbon intensive lifestyles and that there is a need to incorporate the psychological barriers into the policy process. In their more recent paper on public engagement with climate change, Whitmarsh et al. (2013) also conclude that the current efforts to engage the public require innovative changes. They further suggest that empowering individuals and downscaling responsibilities (e.g., by supporting community initiatives) are important strategies to encourage citizens to take action on climate change. These bottom-up approaches (in contrast to top-down governmental campaigns) are argued by Whitmarsh et al. (2013) to deliver promising results and are currently underrepresented in the climate change policy process. The need for more public engagement and the potential of small-scale community projects is also recognised by the non-psychology literature. In the context of a discussion of the potential limits of society to adapt to climate change, Adger et al. (2009) recognises the success of small scale community projects in creating a context that allows for long term reductions of greenhouse gas emissions due to behaviour change. Adger discusses these success stories in the context of creating similar initiatives aimed at *adaptation* to the impacts of climate change.

One prominent example of a successful community intervention is the so-called EcoTeam programme, an international initiative aimed at increasing environmental household behaviour through community intervention. EcoTeams are documented to facilitate long term behaviour change by applying such a community approach (Nye & Burgess, 2008; Staats, Harland, & Wilke, 2004). The approach of this intervention is to combine personalized feedback, information provision, and social support to help motivated individuals to realize durable change to their household habits. Staats, Harland, and Wilke (2004) were the first to empirically evaluate this intervention. The examined EcoTeam, groups of 6-10 people of an existing social network (family, friends, etc.), met once a month, over a period of approximately 8 months, to discuss an assigned topic (such as waste reduction, water, or transport choices), with information material being provided. The teams were encouraged to share their experience with the group concerning efforts to engage in environmental household behaviours (reduce household waste; reduce usage of electricity, gas and water). Participants in this programme were found to increase their household environmental behaviour directly after the end of the programme, and they were able to continue their efforts and achieve an even larger increase 2 years after the completion of the intervention programme. The behavioural outcome, in this study, was measured by self-report measures and ranged over 38 environmental actions (e.g., separation of household waste, insulation of the house, use of energy saving appliances). As a point of comparison a sample of the general Dutch population was asked about the same environmental actions.

In order to identify the drivers of this durable behaviour change in the intervention group, Staats et al. (2004) examined the moderators and mediators of these results in more depth. Their analyses revealed that when participants indicated having experienced strong social influence within their EcoTeams, their initial intentions to change their behaviour to be more environmentally friendly predicted their actual behaviour change. In contrast to that,

participants who reported experiencing low social influence struggled to overcome strong habits that conflicted with the pro-environmental actions. In this case, the prior intentions to change were not predictive of the achieved behaviour change (Staats et al., 2004). What Staats et al. (2004) designated as “social influence” (p. 354) referred to items such as “Were you stimulated by your team members to take pro-environmental action in your household?”, akin to normative encouragement from fellow team members. Therefore, these results suggest that the social norms within the EcoTeam were the ‘key to success’, the factor that was responsible for the increase and the maintenance of pro-environmental actions. Taken together, this case study and the climate change policy literature suggest that there is a need for more bottom-up interventions that stimulate people to engage with climate change and to consider related responses. Despite the promising success of small-scale initiatives, such approaches have thus far received less attention than more top-down interventions.

To identify potential new ways to mobilize people to engage with these initiatives and to examine the processes that drive small communal initiatives I will now examine the strategies suggested that have been made by researchers regarding methods by which one might increase engagement with climate change and overcome the existing barriers that I have identified in the previous section.

In his review, Stoknes (2014) presents five new strategies to improve climate change communications. The majority of these suggested strategies approach the issue in a more individualistic way, such as through the above-mentioned positive framing of the issue, the simplification of messages, using so called ‘nudges’ to make the environmental behavioural alternatives more appealing, using vivid imagery and narratives to make messages more engaging for the audience and the creation and communication of metrics to measure and monitor change and subsequently increase individual motivation to act on climate change. However, in addition to these more individualistic strategies, Stoknes (2014) also suggests

the “use of social networks” (p. 6) in order to harness the power of social norms and the effects these norms have on environmental decisions. For example, by creating meaningful social comparisons with others in their social networks in relation to energy consumption, Stoknes argues, people can be motivated to reduce their energy usage. This latter strategy picks up on the scientifically established phenomenon that humans are strongly influenced by the actions and opinions of the people in their social environment (Cialdini, 2007; Elster, 1989), a phenomenon already identified as a key mechanism for the behaviour change initiated by the EcoTeam intervention.

However, Markowitz and Shariff (2012) also draw attention to the possible *negative* impact of social norms. In the same way that people are influenced by the norms encouraging environmental action, they are also influenced by other social norms that might conflict with a sustainable lifestyle, such as the expectation of owning a car. This highlights that social norms can go both ways and be categorized as a barrier as well as the basis of interventions to promote pro-environmental behaviour. Gifford (2011), who lists comparisons with others as one of the “seven dragons of inaction” (p. 290), supports the position that social norms are a crucial factor in the behavioural decision process. While he agrees that social norms can both promote and undermine engagement with climate change, depending on the social norm the individual is exposed to, this author points out that a carbon intensive lifestyle is currently the dominant norm and therefore social norms probably currently hinder environmental actions more than they promote them. Indeed some support for such a position can be gleaned from qualitative studies in which participants have been found to produce explanations or justifications of their own carbon intensive lifestyles in relation to their feeling of having to conform to expectations of the social environment (see Kurz, Donaghue, Rapley, & Walker, 2005; Lorenzoni et al., 2007).

Overall, the existing literature examining possibilities to encourage people to engage with climate change highlights the role of social processes in affecting individual choices to behave in pro-environmental ways, such as the choice between maintaining a carbon intensive lifestyle versus working towards changing this lifestyle to create a more sustainable society. To understand this purported power of social processes in more depth, I will at this point turn to the social psychological literature dealing with processes of normative influence, by first focusing on normative messages and subsequently on the processes of social interaction in which norms are entwined.

Understanding Normative Influence

Normative Messages

A vast amount of social psychological literature has contributed towards our understanding of how people attend to social norms and how normative messages affect people's actions. It has been demonstrated, in various experimental settings, that people are strongly influenced by the local social expectations that exist in relation to specific actions or opinions. These social expectations can manifest in two ways. The first relates to what the social environment defines as the supposedly appropriate or inappropriate reactions in certain situations (injunctive, or prescriptive, norms). The second relates to what other people in the social environment actually currently *do* in these same particular situations (descriptive norms). These two types of social norms can be (but are not always) in alignment with each other.

It has been found that information about what others think one should do and what they actually do can both crucially influence individuals' decisions to behave in a particular way, however they do so in different ways (Goldstein, Cialdini, & Griskevicius, 2008; Reno, Cialdini, & Kallgren, 1993; Schultz, Nolan, Cialdini, Goldstein, & Griskevicius, 2007).

Injunctive norms can be defined as general rules of society regarding which actions are approved of and which ones can expect social disapproval. Some research findings suggest that a salience of injunctive norms affects individual action even when there is reason to assume that other people do not follow this social norm (Reno et al., 1993). In their study Reno et al. (1993) demonstrated that watching another person picking up litter (high injunctive norm) led participants to restrain from littering at a later time point. This was the case for littering in the same situation as the confederate and in a different setting (park vs. parking lot). However, observing the confederate throwing their waste in a bin (high descriptive norm) only led to participants refraining from littering when they were in the same situation.

Despite the importance of injunctive norms, other literature suggests that action tendencies can be undermined if the associated descriptive norms are low. For example, research has found that when individuals think that the majority of people currently ignore an injunctive norm then they will be more likely to violate the norm themselves (Cialdini, 2003). This phenomenon has been demonstrated in a range of different contexts (Cialdini et al., 2006; Goldstein & Cialdini, 2007; Keizer, Lindenberg, & Steg, 2008). For example, Cialdini and colleagues (2006) showed that in relation to wood thefts from a forest, signs that asked people not to steal wood in combination with descriptive norm information concerning the high number of wood thefts in the area made it more likely that individuals reading that message would disregard the corresponding injunctive norm, which in this case was not to steal wood from a forest. The undermining effect of misaligned descriptive and injunctive norms can occur even when descriptive norms are communicated more indirectly. For example, when individuals are exposed to a social environment that indirectly signals (more general) low norm compliance, such as an environment with illegal graffiti on the wall

despite signs communicating the injunctive norm not to litter, people are more likely to break other social norms, indicated in this case by littering (Keizer et al., 2008).

On the other hand, the alignment of descriptive norms and injunctive norms has also been shown to be successful in promoting pro-social behaviour. Communicating high descriptive norms in combination with an appeal to care about the environment has been successfully used as an intervention strategy to increase pro-environmental actions, like reusing towels to save energy (Goldstein et al., 2008). Indeed it has been argued that it is the interplay of the two types of norms and the alignment of both norms that is crucially important in terms of resulting effects on individual action (Cialdini, 2003; Schultz et al., 2007). In a field experiment, Schultz et al. (2007) established that messages only communicating descriptive norms can backfire, something they designated as the ‘boomerang effect’. Households who received feedback about their energy usage indicating that they were currently above average in comparison to the average household in the neighbourhood were found to subsequently increase energy saving efforts. However, for households who already used less energy than their neighbours the descriptive normative message lead to an *increase* in energy usage (‘regression to the mean’, as it were). This (unintended) boomerang effect was eliminated, however, by adding approving emoticons to the message to signal to below average energy users that their energy saving was socially approved of (i.e. injunctively normative).

Additional research on the interplay between injunctive and descriptive norms has further clarified the influential effect of these norms by identifying the social identity of the comparison group as a crucial factor. Smith and Louis (2009) examined how injunctive and descriptive norms stemming from the participants’ own University (in-group) or from another University (out-group) affected attitudes, behavioural readiness, and actual behaviour in relation to taking action against tuition fees (operationalized through the signing of a

petition). Normative information characterizing the out-group's perspective and conduct in relation to the issue did not affect participants' attitudes or actions; while high injunctive and high descriptive norms relating to the in-group increased attitudes and actions as would be predicted by Cialdini's work (e.g. Cialdini, Kallgren, & Reno, 1991; Cialdini, Reno, & Kallgren, 1990). In this sample the injunctive norms increased behavioural attitudes, willingness and actions but even more so when descriptive norms were in line with injunctive norms (Smith & Louis, 2008).

The findings regarding the importance of an alignment between injunctive and descriptive norms provide an important contribution towards understanding the current stagnation of engagement with climate change, by illuminating the self-perpetuating cycle of not endorsing or engaging in pro-environmental actions because no one else is perceived to do so, despite clear injunctive norms that suggest people 'should'. I concluded earlier that many people do think that they should engage in actions to address climate change, which suggests high injunctive norms. However, these injunctive norms of environmentalism are not currently widely expressed in public or organized actions and the majority of people in the Western world prefer to, and indeed do, maintain their current carbon intensive lifestyle. As such, the descriptive norms regarding carbon-emitting behaviours are currently very much of a variety that suggests that a carbon intensive lifestyle is what most people (in the West) do. As has been suggested in the literature regarding the interplay between injunctive and descriptive norms, this prevalent status of low descriptive norms may provide a significant barrier for pro-environmental action and more engagement with the issue of climate change.

Although these ideas provide a compelling account of the normative factors underlying the maintenance of the environmentally unsustainable status quo, the issue of how social norms actually *change* remains less well examined. Social norms are traditionally measured in static ways, for example by explicitly assessing the social acceptability of

particular attitudes or actions (e.g., Bamberg, Hunecke, & Blöbaum, 2007; Cialdini et al., 1990). Despite often being measured in this rather static way, the very essence of social norms is that they represent what is approved or disapproved by the local social environment. As Elster (1989) put it: “For norms to be social, they must be shared by other people and partly sustained by their approval and disapproval. They are also sustained by the feelings (...) that a person suffers at the prospect of violating them” (Elster, 1989, pp. 99-100). This definition brings into focus the interactional nature of social norms as these are communicated, either through institutionalized rules or through interpersonally approving of desired actions and disapproving of non-desired actions (Elster, 1989). As such, the process of having one’s own actions evaluated by other people seems to be a key mechanism for changing behaviour and thus, collectively speaking, descriptive norms. Indeed the literature suggests that the evaluative aspect of social comparison is more important than the factual comparison. Several studies have demonstrated that factual feedback e.g. of one’s energy consumption, is not as effective in reducing energy consumption as feedback that evaluates the consumption relative to descriptive and social norms (Loock, Staake, & Landwehr, 2011; Schultz et al., 2007; Vossen, Ham, & Midden, 2009). In light of this, I would argue that a consideration of the more interactional nature of social norms might help us to more fully understand the social processes involved in communicating, discussing and potentially changing social norms.

Norms as a Feature and Product of Social Interactions

The social processes related to maintaining or changing social norms have been examined in much depth in the context of racism. Research interest in this area has been largely fuelled by a desire to explain the occurrence of racist incidents and the persistence of subtle racism in times of increased more general support for egalitarianism and decreased public expression of racism (e.g. Blanchard, Lilly, & Vaughn, 1991; Dovidio & Gaertner,

2000). With the acceptance of egalitarian norms in many societies throughout the latter part of the 20th century (Smith, 1985) and the blatant expression of racism becoming something that is very much kept to a minimum (Dovidio & Gaertner, 2000) there is generally little controversy about a dominant social norm to 'not be racist'. Despite this, racism still occurs on a daily basis (Kohut et al., 2007). Therefore, researchers have been interested in the seeming disconnect between dominant social norms and interactions that do not seem to reflect these norms.

Blanchard, Lilly, and Vaughn (1991) proposed what they later designated as "the social context approach", which proposes the idea that the lack of social regulation of everyday racist incidents encourages the perpetuation of racism. This idea was based on the notion that social regulations greatly affect people's attitudes, more specifically that social displays of one's opinion can increase related opinion in others (e.g., egalitarianism) or the failure to publically express one's opinion will give room for undesired opinions or actions (e.g., racism). Blanchard et al. (1991; 1994) tested this idea by examining whether overhearing others express racism affects one's own public and private expression of racism. The results revealed that witnessing racist remarks decreased participants' public and private expressions of anti-racist beliefs (Blanchard et al., 1991). They also found evidence that this social influence goes both ways. Participants who overheard another person expressing anti-racist beliefs also subsequently reported higher egalitarian beliefs (Blanchard, Crandall, Brigham, & Vaughn, 1994). This tendency to shift one's attitude towards the expressed attitudes of at least one other person was found to be independent from the ethnicity of that other person. These studies, together with the literature on normative messages, demonstrate the strong effect of normative influence on personal attitudes and actions. However, what is crucially important about these latter studies is that they accentuate the interpersonal character of social norms and argue that everyday interactions create opportunities to

encourage or discourage the specific (potentially normative) actions (Blanchard et al., 1994; Blanchard et al., 1991).

Moving away from normative messages and more towards the interactional character of social norms brings us back to Blanchard's (1991) idea of everyday interactions and their role in shaping norms. More recently, researchers have examined the discrepancy between expected and actual feelings when witnessing a racist act, in an attempt to explain the persistence of subtle racism (Kawakami, Dunn, Karmali, & Dovidio, 2009). These studies reveal that people overestimate their negative feelings when they witness a racist act as well as their desire to distance themselves from a racist comment maker. This absence of strong negative reactions towards an incident might lay the ground for creating an environment that does not sanction violations, thus allowing undesired incidents to happen in the social environment despite strong injunctive norms to the contrary.

Looking at these arguments the other way around, research suggests that strong interpersonal reactions to norm-violating incidents (e.g., racism) are necessary for norms to be enforced within the social environment and to actually regulate behaviour. Taking this one step further, the question arises whether complaining or expressing dissatisfaction about an incident might not only be important for *enforcing* (already widely agreed) social norms, but might also play a role in *changing* social norms. Crosby (1993) makes a case for the importance of complaining by arguing that expressing dissatisfaction about a current situation is necessary to bring about change. Furthermore, Crosby claims that the use of the word 'complaining' rather than 'protesting' draws attention to the fact that even small actions by one person can contribute to changing an undesired situation—given that that complaining is an action accessible to everyone, whereas protest may be seen to require more resources (Crosby, 1993). In the context of interpersonal interaction, the expression of dissatisfaction is

often directed towards the source of the offensive comment, such as a racist perpetrator, and in this case it is labelled as *confrontation* (Dodd, Giuliano, Boutell, & Moran, 2001).

There is a vast amount of literature on confrontation in relation to prejudice, which has shed light on the effects and costs of interpersonally confronting another person and the role this interaction plays in enforcing norms. The existing research findings demonstrate that the desire for and belief in change acts as a strong motivator for people to confront others (Kaiser & Miller, 2004; Rattan & Dweck, 2010; Swim & Hyers, 1999), that being confronted can act as a reminder to align actions with prevalent social norms (Czopp, Monteith, & Mark, 2006), and that reactions to confrontation reflect the degree of social acceptance of the behaviour that is being confronted (Czopp & Monteith, 2003). Recently, researchers have begun to examine confrontation in the context of non-environmental actions, and these results deliver initial evidence to suggest that receiving negative reactions towards non-environmental behaviour may result in individuals reconsidering this carbon intensive behavioural option in the future (Swim & Bloodhart, 2013). These initial investigations appear to suggest that people's tendency to confront (or not) during interpersonal interactions may be a key mechanism in maintaining and potentially changing social norms regarding environmental behaviour. As such, understanding this process in greater depth holds the potential to deliver valuable knowledge regarding potential ways to foster greater behavioural engagement with environmental issues such as climate change. While the normative influence of interactions is well researched in other domains such as racism and sexism, social processes involved in maintaining and changing environmental norms have been scarcely examined. Before outlining the few recent research findings on confronting anti-environmental actions, I will first provide a closer review of the existing literature on the social psychological features and consequences of confrontation. I will do this by focusing on

the costs and benefits of confrontation to understand how people decide whether to complain about a situation or to let it pass without judgement (Kowalski, 1996).

Costs of confrontation. The perceived costs of publicly expressing dissatisfaction with someone else's actions or opinions have been shown to be an important factor in an individual's decision to confront or not (Kowalski, 1996). These costs concern the expected negative evaluation by the confronted person as well as by other people in the situation (Kiesler, Kiesler, & Pallak, 1967; Shelton & Stewart, 2004). As studied extensively in the context of sexism, there appears to be a considerable discrepancy between women's desire to complain about sexist remarks and their actual reaction to such situations (Swim & Hyers, 1999; Woodzicka & LaFrance, 2001). This phenomenon has been explained in relation to the fact that there are social costs associated with confronting someone in a real interaction. While these costs become very salient to people when they are faced with a real interaction, it is suggested that people fail to fully consider these costs when being asked to anticipate their reaction to a hypothetical social interaction (Shelton & Stewart, 2004). Likewise, Woodzicka and LaFrance (2001) demonstrated that women tend to not consider the feelings of fear they would feel when being sexually harassed, which might explain why their actual reactions towards sexual harassment were less confrontational in a real interaction than in imagined or past situations. However, research clearly shows that people adapt their public claims of discriminatory treatment to avoid such social costs. For example, Stangor, Swim, Van Allen, and Sechrist (2002) placed participants into a situation that could be attributed as an act of discrimination or as a personal failure (in relation to a poor scores on a creativity test) and showed that members of a stigmatized group, women or African Americans, were more likely to attribute their failure to discrimination when reporting the evaluation of the situation privately or to another member of the stigmatized group than when making attributions for their negative outcome to an out-group audience. When having to express their evaluation in

front of a member of the non-stigmatized group, they tended to attribute their failure to personal ability rather than discrimination.

Other research findings suggest that complaining seems to have real, not just imagined, negative social consequences for a person expressing their dissatisfaction interpersonally. For example, Kaiser and Miller (2001, 2003) demonstrated that white participants perceived African Americans who attributed their failure in a job interview or a career test to discrimination, rather than to lack of ability, as more of a troublemaker, more of a complainer, and overall less favourably (although more 'true to themselves'). This overall unpleasant evaluation persisted even when the complaint was presented to research participants as being 100% likely to be justified (Kaiser & Miller, 2001) and when the racism the target encountered was blatant rather than subtle (Kaiser & Miller, 2003).

Research findings further suggest that these costs are at least partly determined by the relationship between the confronter and the audience who observes the interaction (e.g. Garcia, Schmitt, Branscombe, & Ellemers, 2010; Rasinski & Czopp, 2010). There is ample evidence suggesting that expressing dissatisfaction about another person's actions can result in negative evaluations by the audience, and that this can depend on the particular audience involved. In particular, individuals who confront discriminatory treatment are negatively evaluated by members of the perpetrator group, but this does not necessarily happen when they are evaluated by members of their own group. Indeed minority group members who confront discrimination can even socially benefit from their reaction, if judged by an in-group member of the same group, particularly if this is a highly identified group member (Garcia et al., 2010; Kaiser, Hagiwara, Malahy, & Wilkins, 2009).

Kaiser et al. (2009) has examined the role of group identification and has demonstrated that racial minority groups who highly identify with their group perceive a person who confronts discrimination against their group more favourably than person who

does not confront the discrimination. However, participants who only weakly identified with their racial minority group rated the confronter and the non-confronter as equally likable. While Kaiser and colleagues did not identify the same social benefits for a confronter of gender discrimination, Garcia et al. (2010) delivered evidence that a confronter of gender discrimination might experience similar social benefits from the in-group. In their study, women perceived a female who confronts a gender biased hiring decision as more likable than a woman who decided not to complain about the decision. Therefore, the relative group membership of the confronter and the audience is crucial in determining social costs or benefits for the person interpersonally confronting another person for their inappropriate behaviour. In other words, what is perceived as a complaint by some is perceived positively by others.

In addition to the relative group status of confronter and audience, it is important to consider whether or not the confronter is the direct victim of the comment. The same complaint made by the direct victim of mistreatment is not as well received by the confronted person as if it is made by a third party (Czopp & Monteith, 2003). Recent research has also clarified that a confrontation by a victim of the confronted comment is evaluated less favourably by observers of that interaction (Rasinski & Czopp, 2010). For instance, White participants who watched a video debate increased their agreement with a White speaker who made a racially biased remark when this speaker was confronted by a Black person in a public debate relative to when the racist speaker was confronted by another White person. Despite the exact same words being used to confront the biased remark, the confrontation was perceived as less rude and more convincing when the confronter of racism was White rather than Black (Rasinski & Czopp, 2010).

Other research findings highlight the role of the observer's attitudes on the issue being confronted (Rasinski & Czopp, 2010). As one might expect, compared to individuals low in

racial prejudice, highly prejudiced individuals have been found to perceive a person confronting racist remarks more negatively.

Another factor affecting how confrontation is perceived was identified by Becker and Barreto (2014). These authors clarified that the *type* of confrontation, i.e., whether it is aggressive or non-aggressive, alters support for the confrontation, from in-group members as well as out-group members. They showed that men as well as women preferred a non-aggressive confrontation over an aggressive confrontation of sexism, but that women who were highly committed to gender equality clearly preferred aggressive confrontation to no confrontation at all. The results suggest that female participants perceived the aggressive confrontation as potentially forming a threat for women, to the same extent that *not* confronting does. However, this research also shows that the social costs of confrontation only partially cause people to refrain from engaging in this form of behaviour, since female participants who were highly committed to gender equality preferred to undergo such costs than to leave the sexist comment unaddressed.

In summary, the vast amount of literature on confrontation of prejudice highlights that confrontation might have negative consequences for the confronter, mainly in relation to how they are evaluated by observers or the confronted person. The potential social costs associated with confronting depend on many factors of the situation such as the exact nature of the confrontation (offensiveness), the audience (individual prejudice levels, relative group status), and whether or not the confronter is the direct victim of the prejudiced remark. In light of the potential negative consequences for the confronter it is important to now consider the potential benefits of confrontation.

Benefits of confrontation. Despite the evidence that people who decide to confront others about their attitudes or actions should expect potential costs for their actions (depending on the audience), other research findings suggest that confrontation has other

significant advantages over letting an extreme (potentially non-normative) action pass without reaction. The option of *not* defending personally held beliefs can also evoke self-contradiction and feelings of guilt, when the targeted issue is important to the self (Shelton, Richeson, Salvatore, & Hill, 2006). This is especially true when people feel strongly about an issue. In such cases they are likely to accept possible negative consequences in order to defend their personal opinion (Coleman, 1994; Schwartz, 1977).

Kiesler et al. (1967) showed that people are more likely to confront someone else's inappropriate behaviour if they anticipate a future interaction with that person, suggesting that the desire to change the person's attitude or actions is a motivator for confrontation. Indeed, women who believe in social change and who are committed to fighting sexism were found to be more likely to confront sexist remarks (Swim & Hyers, 1999). Furthermore, Rattan and Dweck (2010) demonstrated that the expected effectiveness of confrontation, in terms of changing the comment maker's worldviews, increases the likelihood of confronting someone who discriminated against minority groups. It can be concluded that anticipated effects of interpersonal confrontation are a main motivation to engage in this (potentially costly) behaviour of confrontation. However, the question remains whether these anticipated benefits of complaining about someone else's actions are realistic and indeed alter the confronted persons' or observers' evaluations of the situation; or whether the anticipated benefits of confrontation merely reflect wishful thinking on the part of the confronter.

Czopp, Monteith, and Mark (2006) aimed to provide an answer to this question and examined whether being confronted stimulated actions that are in line with the confronters' position. By means of an online conversation and a photograph-sentence pairing task, the researchers placed participants in a situation in which they were led to express racially stereotypic responses. These biased responses were then confronted by a confederate in a virtual conversation. The results (Czopp et al., 2006; Study 2) showed that despite

perpetrators evaluating a confronter less favourably than a person who did not confront them about using stereotypes, the confrontation did lead to negative self-directed affect.

Furthermore, the confronted participants were more likely than the control group to reduce their use of stereotypes in a subsequent photograph-sentence task. Additionally, the results clarified that despite a hostile confrontation leading to more negative evaluation of the confronter than a less hostile confrontation, both confrontations led the confronted person to reduce their use of stereotypes on a subsequent occasion (Czopp et al., 2006). This study was the first to demonstrate that interpersonal confrontation can directly alter behaviour, a finding that fuels the idea that confrontation is an important interactional process in the context of maintaining or even changing the social or normative environment.

These potential broader benefits of confrontation highlight the relevance of not remaining too focused on the dyadic interaction between the confronter and the confronted person. Moreover, it is important to think about interpersonal interaction within the social context in which it occurs. A few research studies have examined whether witnessing a confrontation affects observers' attitudes in relation to the discussed issue. Rasinski and Czopp's study (2010) found altered observers' agreement with the respective positions of the confronted (e.g., racist) and the confronter (e.g., egalitarian). When a racist comment maker was confronted by a non-target confronter, observers reduced their agreement with the racist comment (relative to no confrontation), while the confrontation by an (out-group) member of the discriminated group increased agreement with the initial, biased comment. These results can be seen as an indication that a confrontation can be successful in changing observers' attitudes, at least when executed by a non-target, in-group member. However, it should be noted that the same confrontation did not *increase* observers' agreement with the position of the person reacting to the racist comment; it only decreased their agreement with the original racist comment. Although this reflects a null finding and as such must be interpreted with

caution, this is theoretically interesting as it suggests that from an observer's point of view confrontation does not necessarily increase support for the confronters' position, but it decreases support for the position of the confronted person.

Dickter, Kittel, and Gyurovski (2012) followed a similar approach and assessed observers' reactions to a confrontation and their agreement with the two social actors involved, i.e., a non-target confronter and the confronted person. In this study, observers rated confronters of a homophobic or racist comment more favourably (likable, respected, moral) than people who did not confront the same discriminating comments. In relation to the *effectiveness* of the confrontation, this research revealed that the comment maker was less respected when they were confronted assertively by a person who was not the victim of the discrimination.

In conclusion, the current literature from the domain of prejudice suggests that interpersonal confrontation can bring about attitudinal change, specifically in relation to the confronted person's actions and in relation to observers' agreement with the confronted position. These broader consequences of expressing disagreement highlight the relevance of this interaction in maintaining and potentially changing related norms.

Broader consequences of confrontation. The existing literature identifies a range of factors that determine whether or not someone would consider engaging in confrontation. These factors include the anticipation of successfully changing the comment maker's positions, the situational costs of the confrontation, the perceived offensiveness of the initial comment, the personal relevance of the discussed topic and the related emotional responses. From the position of an observer, the personal emotional response to the initial comment, the offensiveness of the comment and the relative group status of the confronter were identified as determining the perception of the social players involved and the agreement with the discussed positions.

In the broader context of norms and the interplay between social norms and interpersonal confrontation, the existing literature suggests that the strength of some of these factors (e.g., the emotional response, perceived offensiveness) is determined by social norms associated with the discussed issue. One study explicitly examined this by assessing how participants responded to being confronted for making a sexist or a racist remark (Czopp & Monteith, 2003). It was found that participants had more negative self-directed affect, stronger feelings of discomfort, and were more concerned about having upset someone after being confronted for discriminating against other ethnicities compared to when they were confronted for discriminating against women. Czopp and Monteith (2003) argued that the differential response to being confronted was a consequence of norms associated with not being racist being more prevalent than norms not to be sexist. These findings highlight that confrontation is not just a process that might change actions or individual attitudes, but that, at the same time, the reactions towards and perceptions of a confrontation also reflect the existing norms related to the confronted position.

In conclusion, the few studies directly assessing the potential of interpersonal confrontation to bring about change deliver evidence that this form of interaction can be successful in altering the behaviour of the confronted person (Czopp et al., 2006) and observers' agreement with the initial, confronted position (Dickter et al., 2012). At the same time, there is evidence that social perceptions of this interaction reflect current norms associated with the discussed issue (Czopp & Monteith, 2003). Despite these promising findings, the research on social interactions and their link to implementing, maintaining or changing norms is only just starting to close the gap between the suggested relevance of interpersonal interactions and the empirical evidence for these interactions to mobilize or hinder people to change behaviour. Therefore, I decided to focus my PhD research on broadening our understanding of the interactions that maintain or change norms in the

specific context of environmental behaviour. The recent research on confrontation of non-environmental actions delivers important support for this approach.

Confrontation in the Context of Environmental Issues

Researchers have only very recently started to examine interactional processes of confrontation in the context of environmental issues, in an attempt to shed light on this approach of challenging non-environmental actions (Swim & Bloodhart, 2013). These researchers were interested in the immediate behavioural responses to being confronted for choosing a non-environmental option (taking the elevator) above an environmental option (taking the stairs). Participants who took the elevator were responded to with disappointment and they were told that most people take the stairs not to waste electricity and to save the environment. This type of confrontation intentionally combined injunctive and descriptive messages. Results showed that experiencing the disapproving reaction resulted in participants being more likely to choose the pro-environmental alternative (the stairs) at a subsequent time point, compared to when they had not been confronted (Swim & Bloodhart, 2013).

It should be noted that this study delivered no evidence for specific emotions being able to explain the behaviour change that resulted from this negative social feedback. Some indirect evidence for the role of emotions in such processes is provided, however, by Mallett, Melchiori, and Strickroth (2013). In one study, these authors examined the role of positive and negative emotions, like guilt and pride, as potential mediators of the effect of interpersonal confrontation on behaviour. Their findings show that negative comparative feedback about personal carbon footprints elicited 'eco-guilt', which, in turn, increased support for pro-environmental groups. Interestingly, positive emotions provoked by positive comparative feedback failed to affect participants' subsequent tendency to support pro-environmental groups. These studies provide evidence that negative reactions to non-

environmental actions might stimulate people to reconsider their environmental actions, and might be more successful in encouraging pro-environmental actions than the provision of positive feedback on actions already taken.

While these studies suggest that it might be possible to stimulate eco-guilt and increases in pro-environmental behaviour via confrontation when this is formulated by a social psychological experimenter, when imagining the confrontation of extremely non-environmental actions as a social process in a natural setting, it is crucial to clarify how these actions are perceived by an audience. As we have learnt from Czopp and Monteith (2003), evaluation of the act of confrontation might reflect the wider societal support for the issue at hand and might give insight into the costs potential confronters have to consider. Czopp (2013) examined the role of leaders, and, in particular, how onlookers were affected by an environmental activist who either confronted an anti-recycling opinion, or failed to do so. Results showed that, contrary to expectations, witnessing the environmental activist confront did not increase onlookers' attitudes towards recycling. However, participants who expected the activist to confront the anti-recycling opinion but witnessed that they *failed* to do so reported lower recycling intentions than participants who observed a confrontation or did not expect a confrontation. This result mirrors those observed in the confronting racism literature and highlights how a failure to confront environmental disregard can have particularly damaging effects if the individual who fails to confront holds an identity or group membership that would lead others to expect them to do so.

All these recent findings imply that the expression or the failure to express dissatisfaction towards non-environmental viewpoints or actions can affect pro-environmental actions and therefore might be an important process in facilitating a change towards realizing a more sustainable society. This highlights the need to understand how and when social confrontation might occur naturally in real life interactions. Nolan (2013) has

recently pointed out that people are currently not willing to sanction anti-environmental actions. The alternative of giving positive feedback on things people are already doing is perceived by most as preferable as and more effective than social sanctioning. Consequently, engaging in interpersonal confrontation is a controversial social act that might be associated with high costs for the confronter. As already discussed in the context of racism, expecting high social costs can reduce people's tendency to confront despite their intention to do so (e.g. Shelton & Stewart, 2004). Considering the previously discussed pervasive commitment in the West to a carbon intensive lifestyle, it can be expected that a majority of people might indeed disapprove of a person who socially confronts environmental disregard. On the other hand, widespread (but static) public concern about climate change gives reason to assume that many people are generally prepared (at least in theory) to change this prevalent anti-environmental norm. Therefore, a public display of interpersonal activism might mobilize people to be more willing to act on their concern, as shown by Swim and Bloodhart (2013).

The literature reviewed in this chapter establishes that there is a need to understand the social, and particularly the social interactional, processes that might work to mobilize public engagement with environmental issues such as climate change. While the literature on normative messages in the domain of environmental issues is very well developed, there is a shortage of work examining the more interactive processes involved in communicating and changing social norms associated with environmental actions. However, although these interactive processes of interpersonal confrontation have been identified to be crucial in altering actions and communicating norms in other domains such as racial prejudice, they are under examined in the context of environmentalism in general, and climate change more specifically. Therefore, my research is designed to broaden our scarce understanding of the confrontation of environmental disregard, in particular the perception of the confronter and the consequences of witnessing a confrontation.

Racial Prejudice and Environmental Disregard in Comparison

The interactional process of interpersonal confrontation has, thus far, predominantly been examined in the context of prejudice against minority groups such as ethnic minorities or women (e.g. Garcia et al. 2010; Kaiser & Miller, 2001, 2003; Rasinski & Czopp, 2010). Therefore, when starting to extend the scarce literature examining interpersonal confrontation of *anti-environmental* actions or opinions, it is important first to consider the potential differences between well examined issues, such as racial prejudice, and the comparatively little studied subject of environmental disregard.

As discussed previously, the majority of people in the Western world are committed to their carbon intensive lifestyle and, on average, do not act in an environmentally friendly manner (e.g. Europabarometer 2014; Lorenzoni & Pidgeon, 2006; Pidgeon, 2012). Therefore, it can be concluded that acting environmentally friendly is currently not associated with strong (descriptive) norms. With relation to racism however, the literature suggests that acting in a blatant racist manner is perceived as a norm violation and as such is expected to be met with strong social disapproval (e.g. Gaertner & Dovidio, 1986). Gaertner and Dovidio (1986) demonstrated that people suppressed their racist tendencies because of the anticipated social disapproval of such actions. Czopp and Monteith (2003) more recently found that people reported higher feelings of guilt when being confronted for making a racist comment, than when being confronted for making a sexist comment. The researchers concluded that their result reflects the stronger norms associated with 'not being racist' relative to the norms associated with 'not being sexist'. The existing literature provides evidence to conclude that environmental actions in response to climate change are currently not perceived as a social norm (Pidgeon, 2012), while the issue of racial equality is perceived as a social norm and violations of that norm are socially disapproved. As this normative difference between the two issues of racial prejudice and environmental disregard is one of the assumptions my line

of research is based on, it is important first to discuss additional differences that (potentially) characterize interpersonal interactions associated with these two issues.

One potential difference between an issue that is associated with strong social norms (e.g. racism) and an issue that lacks this normative consensus (e.g. environmental disregard), is the individual attitudes that people hold about each issue. Previous research has demonstrated that personal attitudes play an important role in peoples' evaluation of interpersonal interactions (Czopp & Monteith, 2003; Rasinski & Czopp, 2010). Rasinski and Czopp (2010) delivered evidence that observers' own prejudice levels determined how favourably they evaluated a person confronting racism. For a more controversial issue, such as climate change, the prevalent attitudes are likely to be more heterogeneous than for racism (e.g. Pigeon, 2012). Therefore, the personal attitudes towards the target issue will be an important factor to consider when aiming to broaden our understanding of normative processes associated with environmental actions.

Another potential difference between two issues of differential normative status, is the cognitive dissonance that might be triggered through information provision or persuasion attempts. Cognitive dissonance describes a situation in which a person's attitudes are not in line with their actions (Brehm & Cohen, 1962; Festinger, 1962). Such a situation of cognitive dissonance is characterized by discomfort as people strive to be consistent in their attitudes and behaviours (Festinger, 1962). In the domain of environmental actions the discrepancy between prevalent attitudes and a lack of corresponding environmental actions is a frequently reported problem (e.g. Anable, Lane, & Kelay, 2006; Young, Hwang, McDonald, & Oates, 2010). I previously discussed cognitive dissonance as one psychological barrier associated with (the lack of) actions in response to climate change (Stoknes, 2014). Stoknes pointed out that cognitive dissonance may occur in relation to climate change as a result of a combination of strong persuasive messages (e.g. communicated by scientists, the media) and people's

perceptions of the difficulties in acting accordingly. Researchers further suggest that people often feel that structural boundary conditions restrict them, and do not allow them to respond to climate change in a way that would correspond with high concerns about this issue (e.g. Stoknes, 2014; Swim et al. 2009). Additionally, the existing literature provides evidence for an information deficit concerning local initiatives which would simplify environmental actions, e.g. local recycling schemes (Kennedy, Beckley, McFarlane, & Nadeau, 2009). Therefore it can be concluded that in terms of the issue of climate change, many people hold attitudes that do not align with their actions.

When people are made aware of possible discrepancies between their attitudes and actions, they have different options of how to reduce cognitive dissonance. The most obvious way to reduce dissonance is to change either their actions or their attitudes (Brehm & Cohen, 1962). However, as Stoknes (2014) discussed, in the context of climate change people often chose another way to respond to *unpleasant* information, they will try to dismiss the source that made them aware of the discrepancy. This is especially true when the behaviour change is perceived as unrealistic. For example, when faced with the suggestion of reducing one's personal carbon footprint, the dismissal of the credibility of the information source, or the denial of the problematic aspect of the message, is often perceived as an easy alternative (Stoknes, 2014). In the context of racism, given that the majority of people in the Western world do not perceive themselves as engaging in racist actions, cognitive dissonance is not a mechanism that can as easily be triggered by persuasion attempts. However, when comparing the normative processes associated with environmental disregard and racism, it is important to consider cognitive dissonance as a motivational factor in peoples' responses to climate change communication.

My Research

The research outlined in this thesis begins the process of empirically unpicking the important, but complex, relationships between social norms, interpersonal interactions, and social change. As a first step towards broadening our understanding of the interactional, normative processes, I report across my empirical chapters an investigation of the interplay of the normative status of an issue with the perception of a position that might be perceived as norm violation, as well as the perception of somebody confronting this ‘potential violation’. In the first set of studies (reported in Chapter 2) I adopt the approach of comparing how people perceive confrontation in the context of two normatively different issues: climate change and racial equality. Having identified the immediate costs and benefits associated with both the making and the confrontation of anti-environmental/racist comments, I then aim to further widen our knowledge associated with confronting the respective issues by investigating (in Chapter 3) potential moderators (credential of the confronter) and mediators (issue morality) of participants’ social evaluation of the situations in question. Having broadened our understanding of social perceptions of a confrontation of environmental disregard, I then (in Chapter 4) focus on the wider consequences of witnessing these types of interactions. This last set of studies was designed to examine whether socially confronting environmental disregard might affect observers’ attitudes and action tendencies in relation to climate change. In doing so, I attempt to clarify whether interpersonal confrontation is a process that can mobilize others to voice their concern and take action related to the issue of climate change. In the final chapter I summarized the findings of this line of research and discussed broader theoretical implications as well as more practical applications of the findings.

Chapter 2: Comparing Normative, Interactional Processes Associated with Environmental Disregard and Racial Prejudice

In relation to the global environmental threat posed by climate change, we currently face a situation of stagnated efforts to tackle this problem, and a failure to implement far reaching interventions to reduce greenhouse gas emission. Despite widespread belief in human-caused climate change, and high levels of concern about the impacts of this development in most Western nations, people are more concerned about other issues, and see the responsibility to act with their political leaders. Politicians on the other hand are uncertain about the public support for significant interventions, interventions that would be necessary to considerably change their society to be more sustainable. This uncertainty about public support leads to what researchers called a ‘lock down’ of political efforts to mitigate greenhouse gas emissions or adapt to the consequences of climatic changes (Pidgeon, 2012). To overcome this current dilemma, there is a call for more public engagement with the political process of responding to climate change. Therefore, we need to identify ways to increase peoples’ motivation to communicate their environmental concerns and to organize themselves in a way that clearly signals to politicians that a majority of people in the western world seem to be in favour of far reaching political interventions.

The literature on psychological barriers of climate change highlights the relevance of social norms in mobilizing people. However, at the same time, social norms can form a barrier to environmental efforts if they are perceived to be in conflict with environmental efforts (Gifford, 2011; Markowitz & Shariff, 2012). As most people currently fail to considerably change their behaviour, the current, carbon intensive lifestyle remains highly *normative* and, as such, generally passes without comment or confrontation. There is a vast amount of literature suggesting that individual behaviour, and the social norms they reflect,

relies at least in part on processes of interpersonal questioning and confrontation (Czopp et al., 2006; Elster, 1989). Therefore, it is important for those who seek to promote widespread pro-environmental behaviour to understand the micro-context of social interactions and the norms that frame these. Consistent with this approach, recent work has begun to demonstrate that interpersonal confrontation can promote pro-environmental actions (Czopp, 2013; Swim & Bloodhart, 2013). My research will extend this literature by first identifying key differences in how confrontation in this domain is perceived relative to confrontation in the more traditionally studied domain of racism, thereby offering further insights into the norms surrounding these two types of behaviour.

Interpersonal Confrontation of Environmental Disregard

The effectiveness of interpersonal disapproval in affecting environmental behaviour has been demonstrated by Swim and Bloodhart (2013) who found that expression of direct social disapproval for (arguably) energy-wastful behavior (i.e., taking the elevator versus the stairs) influenced subsequent choices in the same domain (i.e, to take the elevator versus the stairs). In line with the social context approach, highlighting how interactions shape individual attitudes and actions (Blanchard et al., 1994), recent work by Czopp (2013) shows that (non)confrontation by one individual can spill over into the environmental attitudes and behaviours of onlookers. Participants exposed to environmental activists who failed to confront another individual's anti-recycling opinion subsequently reported reduced pro-recycling attitudes relative to those who witnessed their confrontation of this same anti-recycling opinion.

Such findings suggest that confrontation of undesirable behaviours represents a key process through which behavioural inertia might be broken. However despite the potential power of confrontation to elicit desirable change, questions remain about the likelihood that confrontational behaviour will occur in naturalistic settings. It is known that the social costs

associated with expressing dissatisfaction with an undesired action can prevent these situations to occur in the first place (Good, Moss-Racusin, & Sanchez, 2012; Shelton & Stewart, 2004). However, we do not know the degree to which confrontation of environmental disregard carries costs for the confronter, independently of any positive effect it might have on the behaviour of others (e.g. Swim & Bloodhart, 2013). Work by Nolan (2013) shows that confrontation of environmental disregard is not a popular option for most people, suggesting that this may be a controversial social act (see Kaiser & Major, 2006 for a review in the context of racism).

The existing literature on interpersonal confrontation suggests that the evaluation of a confronter, as well as the emotional and behavioural responses to this interaction, depend on the broader social norms associated with the initial, confronted comment or action (Kawakami et al., 2009). Czopp and Monteith (2003) compared the two issues of sexism and racism by assessing the affective responses to being confronted for making a racist or sexist remark. The identified stronger feeling of guilt and concern about having offended the other person after being confronted for making a racist comment, relative to making a sexist comment, were attributed to stronger social norm associated with not being racist (compared to not being sexist).

This differential reaction towards confrontation of different issues was also identified for people simply observing this interpersonal interaction. Kaiser et al. (2009) found that confronters of a racist comment were perceived more positively than people not confronting the incident by strongly identified members of their own in-group. While this was the case for racism, confronters of a similar discriminating behaviour against women did not socially benefit from confronting the discriminating comment, even when evaluated by in-group members who strongly identify with the in-group (Kaiser et al., 2009). This study highlights that the social evaluation of a person expressing their dissatisfaction about an incident can be

costly or beneficial for the confronter and that the comparison of social evaluations of interpersonal confrontation situations can provide important insights into the social acceptance of the associated issues.

My research was designed to start shedding light onto the normative processes associated with maintaining or changing current norms related to environmental issues such as climate change. As we currently have very scarce knowledge about interpersonal confrontation in the context of climate change, I will compare the issue of environmental disregard with racial prejudice, as an issue that is well represented in the literature. Furthermore, although only shown under certain circumstances (e.g., high in-group identification; Kaiser et al., 2009), these positive assessment of a confronter of racism might reflect the fact that norms of racial equality are so pervasive and widely endorsed, at least at an explicit level (e.g., Gaertner & Dovidio, 1986), that confrontational behaviour in that domain is no longer (interpersonally) anti-normative. Therefore, this qualifies as a good point of comparison when aiming to broaden our understanding about the social norms associated with pro-environmental actions.

It should be noted at this point that my research is intentionally designed to focus on the processes associated with confronting extreme, potentially undesired actions. As well as being a process that it is relevant for changing or maintaining norms, it also reflects the existing norms associated with the confronted position. This indirect assessment of social norms is more subtle than explicit measures of social norms, and I argue also more relevant in the broader context of attempting to change social norms.

The acceptability of explicit social confrontation both reflects social norms and has implications for changing these. Returning to the environmental domain, one could argue that the very social process that might begin to bring about necessary changes to social norms (i.e., interpersonal confrontations) may be curtailed by norms that mitigate against such

processes (i.e., the anti-normative status of environmental confrontation). The current research represents a first attempt to unpack this conundrum by comparing the social acceptance of confrontation in the context of environmental issues with the social acceptance of confronting racism, with the aim of shedding further light onto the differential normativity of the two issues. To verify whether the two issues of racial prejudice and environmental disregard are indeed normatively different, in our first study we investigated how people perceive someone potentially violating the associated (pro-social) social norm, either disregarding the norm not to be racist or disregarding the norm to protect the environment.

Study 1

This study aimed to compare the relative strength of societal norms against environmental disregard and racial prejudice. To do this, I assessed how participants perceived individuals who *violated* each of these norms and how they think they would react to this violation. Participants read a scenario in which a target expressed either environmental disregard or racial prejudice and then reported their most likely reaction in the described situation, followed by assessments of how socially close they felt to the target and how warm they perceived them to be.

Method

Participants and design. Sixty-eight British students from the University of Exeter (55 women; $M_{age} = 20.16$ years, $SD = 2.18$) participated in this questionnaire study. I employed a two-cell design with issue (environmental disregard vs. racial prejudice) manipulated between-participants by way of random assignment.

Procedure. Participants were recruited around the campus of Exeter University. They were asked to imagine themselves as being part of a social scenario in which one person,

‘Sam’, made a comment either expressing environmental disregard or disregard for racial equality. The scenario read as follows (prejudiced condition between brackets):

It is the end of the term. You and three other students just gave a presentation about a project you were working on during the whole term. The presentation was a success and so was the entire group project. Before the term you didn’t know any of your group members but it turned out that you all seemed to get along really well. After the presentation you decide to go to the pub together to celebrate the completion of the course and the good work. In the pub the four of you chat about all sorts of things and you are having a good time. At one point the conversation turns to the issue of climate change [racial equality] and one of your group members, Sam, says:

"I really couldn't give a damn about climate change [racial equality]. To be honest, I intentionally go out of my way to do as many environmentally damaging things as I can [be as rude as I can to immigrants from other countries]"

It should be noted that the comment was deliberately extreme; to ensure that the majority of participants would, themselves, *disagree* with the statement to a similar extent in both conditions.

Dependent measures. Having read the scenario, participants were asked to describe, in their own words, their most likely outward reaction to the comment in their own words, “*What would you imagine doing or saying in response to this comment?*” Following this, participants rated how close they felt to the comment-maker and how warm they perceived this person to be. Closeness was measured on a 7-point Likert scale (from 1= *strongly disagree* to 7= *strongly agree*) in terms of agreement with each of four statements: “I would like to work with Sam on the next group project”, “I would like to get to know Sam outside university”, “I feel that Sam and I could become friends”, and “I would avoid spending time with Sam in the future” (reverse coded). To assess warmth, participants indicated on a 5-

point scale (from 1= *not at all* to 5= *extremely*) the extent to which they perceived the comment maker to be tolerant, good-natured, and warm,¹ following Fiske, Cuddy, Glick, and Xu (2002). An exploratory factor analysis with a Direct Oblimin rotation on the closeness and warmth items revealed two factors, explaining 76.38% of variance in total. The items intended to measure each construct loaded on the respective factors (all loadings $\geq .79$), formed reliable scales (closeness: $\alpha = .90$; warmth: $\alpha = .82$), and were thus averaged for the remaining analyses.²

I also measured participants' agreement with the comment using a single item (1= *strongly disagree* to 7= *strongly agree*). Finally, demographic information was collected and participants were debriefed and thanked for their participation.

Coding process. Participants' answers to the open ended question, in which they described their most likely outward reaction, were edited prior to the coding process to blind any instance where the comment made reference to the specific issue in question (see Appendix A for examples). These edited answers were then split into 5 questionnaires including 17, 18 or 19 of these answers³ and each questionnaire was given to 12 coders ($n=60$). The coders were volunteers, recruited around the campus of Exeter University. They were given an edited version of the scenario used in Study 1, with every reference to the issue blackened out. Then the coders were asked to indicate on a 7-point Likert scales how confronted the comment maker would have been made to feel by each reaction on a scale ranging from *not confronted* (1) to *highly confronted* (7), $\alpha = .88$, and how disapproving they felt the person displaying this reaction was of the initial comment ranging from *not disapproving* (1) to *highly disapproving* (7), $\alpha = .90$. The 12 scores, acquired for each initial

¹ One additional item (*sincere*) was excluded based on factor loading $< .30$ on both factors, and reducing α to .695

² Measured competence items (competent, confident, independent, competitive and intelligent) failed to form a reliable scale $\alpha = .467$, did not load on a respective factor and were therefore excluded from the analysis.

³ Each questionnaire was counter balanced

answer, were averaged to provide a mean level of *expressed disapproval* and *confrontational nature of the reaction* for each of the answers given by our original participants.

Results and Discussion

A t-test was performed on participants' agreement with the comment to identify differences between the two issues. As might be expected, participants agreed significantly more with the comment expressing environmental disregard ($M= 1.87, SD= 0.1.48$) than with the comment expressing racial prejudice ($M= 1.26, SD= 0.61$), $t(64)= 2.25, p= .028$.

However, in line with our intentions, both mean agreement values were significantly lower than the midpoint of the scale (4) indicating that people strongly disagreed with both comments, environmental disregard, $t(30)= -8.02, p< .001, d= -2.92$ and racism, $t(34)= -26.57, p< .001, d= -9.11$.

Another independent sample t-test was performed on the dependent measures (warmth, closeness, confrontation of reaction, disapproval of reaction), with issue as the independent variable. The analyses revealed that the issue had a significant effect on both variables assessing the perception of the comment maker (see Table 1). Participants reported feeling less close to the racist comment maker and rated them as less warm than they did the person expressing environmental disregard.

Table 1. *Mean Differences of Feelings of Closeness and Warmth between the Two Issues.*

	df	<i>t</i>	<i>p</i>	<i>M</i> (SE)	
				Racial Prejudice	Env. Disregard
Closeness	66	2.62	.011	2.93 (0.22)	3.81 (0.26)
Warmth	65	3.68	< .001	1.71 (0.11)	2.3 (0.12)

The harsher ratings of a person violating the norm not to be racist supports our prediction that racial equality is perceived as normatively stronger than environmental issues.

However, when it came to the predicted outward reactions that participants anticipated that they would have in response to the comment, there was no significant difference between environmentally disregarding and racist comments in terms of the extent to which participants assumed that they would respond in a way that signalled disapproval or performed confrontation (see Table 2 below).

Table 2. *Mean Differences of the Disapproval of the Reaction between the Two Issues*

	df	<i>t</i>	<i>p</i>	<i>M (SE)</i>	
				Racial Prejudice	Env. Disregard
Disapproval of reaction	60	-1.15	.255	5.11(0.17)	4.81 (0.19)
Confrontational nature of reaction	60	-952	.345	4.43 (0.23)	4.13 (0.21)

This failure to observe a difference in the disapproval or confrontation communicated by participants' imagined responses indicates that the difference between the two issues that drove differences in perceptions of the comment maker did not translate into participants imagining that they would make a more extreme response in the racial prejudice condition than in the environmental disregard condition. One potential conclusion could be that the normative status of an issue does not necessarily align with the personal willingness to express disapproval towards an opposing position. This explanation receives support from the confrontation literature that highlights how many different factors determine individual decision processes, the offensiveness of the comment only being one factor (e.g. Dickter & Newton, 2013; Kowalski, 1996).

Another possible explanation for this unexpected finding of Study 1 is provided by existing evidence that people are not very good at predicting their own proclivity to confront inappropriate actions or comments. In the context of confronting sexism, for instance, Swim and Hyers (1999) demonstrated that women tend to underestimate the potentially inhibitory

factors of a real life situation when asked to anticipate their most likely reaction towards a sexist comment (see also Woodzicka & LaFrance, 2001). Shelton and Stewart (2004) found that, when female participants predicted the likelihood with which they would confront a sexist comment in situations involving high and low costs, these negative situational consequences did not alter participants' predictions. However, a subsequent study further identified that situational costs *did* affect women's' *actual* behaviour such that they were more likely to confront sexist questions in a real interaction when costs were low (compared to high). Thus, the existing research findings suggest that, in the context of sexism, women tend not to consider the potential situational costs when anticipating their reaction towards a sexist comment. Based on this research, I argue that when asked about their most likely outward reaction, participants of Study 1 might not have considered the differential social costs associated with confronting a comment that is perceived as highly non normative (racism) compared to confronting a comment that is not perceived to be as clear a norm violation (environmental disregard).

However, the method used in this study to assess participants' most likely reactions might have also been prone to biases, biases that might have reduced potential differences between the two issues and which I wanted to address in a second before drawing definite conclusions about the Study 1 results. The results of Study 1 could have been affected by social desirability bias in two ways; firstly participants might have reported more disagreement and confrontation in response to environmental disregard if they assumed this to be the socially desirable reaction. A second possibility is that participants considered less confrontation reaction to be more socially acceptable and therefore had reservations about describing harsh reactions towards either comment. In this case the results of both conditions might have been skewed towards less confrontational reactions thus dampening down the

ability to detect significant differences across conditions. The next study was designed to address both of these possibilities.

In the next study I examined participants' likely reaction in response to environmental disregard and racial prejudice in more depth by means of an alternative assessment method to reduce potential biases in the method used in Study 1. Instead of asking an open-ended question about their most likely reaction towards a disregarding comment, I provided participants with discrete answer options to choose between that differed in their level of confrontation and disagreement. By providing these options, I not only avoid relying on participants' imagination, but more importantly providing these reactions to choose from arguably works to imply a potential social acceptance of all these reactions (ranging from agreement to physical confrontation).

Furthermore, Study 2 examined whether the perspective taken by the participant (imagining their own reaction versus the reaction of another) might have an effect on the anticipated reactions towards racism and environmental disregard that they report. Comparing differential (self vs other) perspectives will explore the possibility of social desirability bias leading to more confrontational reactions described in response to environmental disregard in Study 1. In the domain of consumer research researchers often use this type of indirect questioning ('what would another person do') in order to get a more truthful response to sensitive questions (Fisher, 1993). Both of these methodological modifications addressed potential biases that might have produced the findings of Study 1 concerning the confrontational character of the described reactions and it allowed a more in-depth understanding of how the differential feelings towards a racist or anti-environmental comment maker translated (or did not translate) into expected reactions.

Study 2

This study investigates reactions towards potential norm violations in more detail. Although Study 1 identified that perceptions of the person making comments expressing environmental disregard differed, this did not affect the estimated/expected personal reaction of participants towards the person making the comment. Study 2 was designed to test whether the same would apply when participants were asked to choose their most likely reaction rather than describing them in an open ended fashion. Additionally, this study also included a condition in which participants were asked to imagine what they thought would be the most likely reaction of another individual (i.e. not the self) in the same situation

Method

Participants and design. Sixty (41 female) students were recruited around the Exeter University campus to participate in this short questionnaire study ($M_{\text{age}} = 21.12$ years, $SD = 2.67$). The study was designed as a 2 x 2 between participants design with issue (racial equality vs. environmental disregard) and perspective of responder (self vs. other) as independent variables. Participants were randomly allocated to conditions.

Procedure and dependent measure. After giving their consent, participants were presented with the same scenario used in Study 1 describing a social situation in which one person (Sam) made either a comment expressing environmental disregard or racially prejudice. Half of the participants were asked to imagine them having a conversation with the person (Sam) who then expressed their environmentally disregarding/racist opinion, while half of the participants were asked to imagine the comment maker (Sam) having a conversation with another person (Alex). At the end of the scenario participants were either asked “What do you think Alex would do or say in response to this comment?” or “What do you think you would do or say in response to this comment?” Five answer options were given to participants to choose the one that best described the most likely reaction. The five answer

options differed with regard to their level of expressed confrontation (presented here in ascending level of confrontation ranging from 1-5): “Alex/I would nod, and say: “You have a point there Sam”, “Alex/I would be surprised and say: ‘What exactly do you mean? Could you explain your opinion a bit more?’”, “Alex/I would look angry and say: I really can’t agree with you Sam”, “Alex/I would look disgusted and say: I find this offensive and really can’t accept that point of view”, and “Alex/I would shove Sam in anger”. These answer options were shuffled up and presented as tick boxes to mask that these options reflected different levels of confrontation. Finally, demographics were assessed and participants were debriefed and thanked for their participation.

Results

An ordered logistical regression analysis was performed with the confrontation of the reaction as dependent variable with initially five answer options. However, as depicted in Table 3, only four of those answer options were chosen by participants. Issue (coded as racial prejudice = 0, environmental disregard = 1), the perspective of the responder (coded as me=0, others =1) and the interaction term of these two variables were entered as predictors into the analysis. Results verified that the assumption of parallel lines was not violated, $\chi^2 = 3.58$, $df = 6$, $p = .73$. Furthermore it could be assumed that the models including the two predictors is better than the model without the predictors as indicated by a significant difference between the two log likelihoods, $\chi^2 = 13.56$, $df = 3$, $p = .004$. Results showed that the interaction between perspective and issue was marginally significant Wald criterion = 3.21, $df = 1$, $p = .073$, 95% CI [-0.23; 5.02]. The shape of the interaction suggested that the perspective taken affected the choice of reaction when the issue was environmental disregard, Wald criterion = 6.86, $df = 1$, $p = .009$, 95% CI [-5.28; -0.76], with the most likely reaction of Alex being more confrontational than the most likely reaction of the *self*. By contrast, an ordinal regression including the reverse coded issue variable illustrated that the different perspectives

did not alter the level of confrontation when the issue was racial prejudice, Wald criterion= 0.001, $df= 1$, $p=.98$, 95% CI [-1.33; 1.30].

In another way, ordinal regression analysis revealed that there was no significant difference between the issues when it came to describing the reaction of *others*, Wald criterion= 0.81, $df= 1$, $p=.367$, 95% CI [-1.98; 0.73]. However, in the *self* condition the reactions towards environmental disregard were less confrontational than towards racism, Wald criterion= 4.34, $df= 1$, $p=.037$, 95% CI [-4.68; -0.14]. The Nagelkerke R^2 verified that the predictors explain 23% of the overall variance of the dependent variable, confrontational reaction.

Table 3. Total Number of Participants per Response Option Chosen to React to Environmental Disregard or Racism.

	Perspective taken	Response options				
		1 (Agreement)	2 (Interest)	3 (Anger)	4 (Disgust)	5 (Aggression)
Env. Disregard	Self	0	14	1	0	0
	Other	0	6	5	3	1
Racial Prejudice	Self	0	8	5	2	0
	Other	0	7	3	3	2

Discussion

This study was conducted to offer further insight into the pattern obtained in Study 1 concerning the most likely reaction towards a comment expressing environmental disregard or racism. Study 1 identified a normative difference between racial prejudice and environmental disregard indicated by harsher rating of a person making the disregarding comment in the racial prejudice condition. However, a difference between the two issues was

not detected when it came to the harshness of the most likely imagined reaction to the disregarding comment.

Even though existing research can explain this absence of issue-related differences in described hypothetical reactions by people's tendency to wrongly predict their reactions towards extreme comments (e.g. Swim & Hyers, 1999), I intended to examine this finding in more depth in the second study. To address potential biases, I changed the assessment method from an open-ended question to providing answer options that reflect different levels of disagreement (or agreement). Additionally, I included a (potentially) more indirect way to assess reactions towards environmental disregard and racism by altering the perspective taken by the participants to include that of imagining another person's reaction.

The results of Study 2 showed, contrary to the results of Study 1, that participants did indeed estimate that they would express a more confrontational reaction towards the racist comment maker than towards the person expressing environmental disregard. With regard to the anticipation of someone else's reaction, participants expected reactions towards environmental disregard to be equally confrontational than towards racism.

The differential findings between Study 1 and Study 2, concerning the predictions of one's own reactions towards environmental disregard or racism, are most likely to be a result of the variation of the methodology used. The open-ended assessment and the resulting necessary coding process used in Study 1 made the results prone to subjectivity on behalf of the coders. More importantly, an open-ended question requires participants to imagine their reactions freely, thereby relying on participants' imagination and their willingness to describe their imagined reaction truthfully. Therefore it is possible that participants in Study 1 did not consider as wide a range of reaction possibilities provided in Study 2 (e.g. "shove Sam in anger"). Additionally, and as intended, being offered these more extreme reaction possibility might have led participants in Study 2 to deem these reactions to be more socially acceptable

and therefore chose more confrontational reactions in response to the highly normative issue of racism (but not environmental disregard).

In conclusion, the results of Study 2 demonstrate that, when considering more extreme reactions, people make use of these confrontational reactions in response to racism but not environmental disregard. Therefore, Study 2 extends the findings of Study 1 in that people dislike a racist comment maker more and (under certain circumstances) are more willing to confront the racist comment maker than they are willing to confront a person expressing environmental disregard.

The other findings of Study 2 concern the differences between how participants think they would react versus how they think someone else would react to environmental disregard. Participants in Study 2 predicted that another person (Alex) would express a more confrontational reaction towards environmental disregard than participants assumed they would express themselves. It is possible that the participants' responses regarding how others would react reflects how participants thought others (but not they themselves) *should* react to environmental disregard. This differentiating between ideal behaviour and personal behaviour could simply be determined by the common injunctive norms prevalent in the context of environmental issues such as climate change. As previously discussed, despite high concerns about the impact of climate change and the general support for environmental interventions, people are less supportive of interventions affecting them personally (e.g. Pidgeon, 2012). One could argue that an 'intervention' in the form of one personally confronting others oneself perhaps also falls into this same category. The results of Study 2 can be interpreted as reflecting this contradiction between high injunctive norms ('other' perspective) and the lack of individual actions ('self' perspective) prevalent in the context of climate change. Put simply, participants felt that Sam needed to be (or should be) confronted by *someone*, but they were less willing to imagine doing it themselves.

This lack of willingness on behalf of participants to engage in interpersonal activism themselves might stem from a lack of personal motivation, or, alternatively, it could be an indication of situational inhibitory factors that people are concerned about for themselves but not for others. As discussed in the previous chapter, the willingness to confront an undesired opinion or action is determined by the anticipated benefits and costs associated with expressing dissatisfaction (e.g. Kowalski, 1996). Despite some evidence that costs were not considered when women anticipated their reaction to sexist remarks (e.g. Shelton & Stewart, 2004) the current results seem to suggest that participants were not even hypothetically willing to accept personal social costs in order to confront environmental disregard.

This question concerning the social costs associated with environmental disregard will be the main focus of the subsequent studies presented in this thesis. While personal proclivities to confront (or not confront) are determined by many assumptions (e.g. the anticipated costs) I will focus on the actual (rather than estimated/imagined) social costs of interpersonal confrontation and other consequences of this interaction for the wider social environmental. The aim of my research is to examine the broader normative processes associated with environmental issues such as climate change and perceptions of the theoretically relevant process of interpersonal confrontation. Therefore, in subsequent studies I will focus on perceptions and consequences of *witnessing* interpersonal confrontation of environmental disregard. The subsequent studies in the thesis focus on empirically examining the actual social costs of confronting environmental disregard versus racism. I am interested in how observers perceive social confrontation situations because I argue that evaluations of a person who confronts potential norm violations is determined by the normative status of the disregarded position. The identified normative difference in Study 1 concerning the evaluation of a person expressing environmental disregard or racism may suggest that

confronting racism is likely to be better received than confronting environmental disregard.

The subsequent studies were designed to test this prediction.

Study 3

Having established that the issues of racism and environmental disregard are perceived differently when it comes to potential *norm violators*, I next moved on to examining social confrontation from an observers' perspective. In particular, this study investigates how individuals who confront (versus fail to confront) particular attitudes in each of these domains are perceived. In so doing, I sought to examine the relative social costs that might befall confronters of each of these important social issues. Based on the differences between the two issues concerning the evaluations of the comment maker and the most likely reactions towards the potentially norm violating comment, I predicted that the different social norms attached to these issues would differentially guide reactions to confronting behaviour in each case.

Existing studies have followed a similar approach by comparing perceptions of confrontations of racism to confrontations of sexism to draw conclusions about the normative processes of these issues (Czopp & Monteith, 2003; Kaiser et al., 2009). Kaiser et al. (2009) showed that observers who highly identified with the racial minority group evaluated a confronter more favourably than a person who did not confront the racist comment. However, in the context of sexism confrontation was not associated with social benefits for the confronter but a person standing up for gender equality was either perceived less or equally favourable than a non-confronter, depending on observers' identification with the in-group.

Based on this, I expected the perception of a confronter to be determined by the normative status of the violated norm, in this case racial equality or environmentalism. Hence, I hypothesised that confrontation would decrease social evaluations of a confronter of

environmental disregard (relative to no confrontation) but increase social evaluations of a confronter of racism.

It should be noted that in my line of research the confrontational reaction was intentionally formulated very confrontational. This was done to create a situation in which the norm 'to be polite' stands in conflict with the urge to maintain or enforce the norm that had been broken by the comment maker. By creating a situation in which the confrontation could be perceived as controversial in itself, I expected that the context in which the confrontation takes place will be crucial when evaluating such an interaction. I will compare this very confrontational reaction, to a reaction that expresses disagreement with the comment, but does not form a personal attack on the comment maker. The main purpose for choosing a control condition which communicated clear disagreement (without confrontation) was to avoid that participants would perceive the non-confrontational reaction as expressing agreement with the comment maker. It was important to ensure that there was not much room for ambiguity as a more ambiguous response (e.g. silence) could have resulted in differential interpretation of that reaction, depending on the target issue. A similar control/ no confrontation condition has been used by Kaiser et al. (2009) who presented participants with essays, presumably written by an African American talking about a racist incident they experienced. In the no confrontation condition the writer of the essay expressed the intention but failure to confront the racist comment maker about the incident. In contrast to Kaiser et al. 's study in my study participants will be presented with an interaction, not the internal thought processes of the individuals, which is why it was important for the non-confrontational reaction to express a low level disagreement with environmental disregard or racism while still being perceived as less confrontational than the confrontational reaction.

Method

Participants and design. We⁴ recruited 71 British students for the study (44 women; $M_{\text{age}} = 20.80$ years, $SD = 1.82$). The study followed a 2 (issue: environmental disregard vs. racial prejudice) X 2 (reaction: confrontation vs. no confrontation) between-participants design, with participants randomly allocated to condition.

Procedure. The procedure was identical to that of Study 1 and 2, with the exception of the ending of the scenario (see Appendix B for full scenario). This time, following the anti-environmental or racist comment made (by Sam), a second person (Alex) reacted to this comment in a way that either did or did not directly confront the comment maker, as depicted in the following extract (no confrontation between square brackets):

Alex seems shocked and responds: “How can you even think something like that? I can’t believe that you just made such a stupid comment.” [“Really? That’s interesting. What makes you say that?”]

One of the other group members overhears pieces of the conversation and asks them what they are talking about. Alex answers: “We were just talking about climate change/racial equality, but I will not repeat what Sam just said about it [and are about to hear more about Sam’s position on this topic.]”

Dependent measures. In Study 1 I assessed social closeness and warmth towards the comment maker to assess social (dis)approval of environmental disregard and racism. In this study I used the same items to assess participants’ perceptions of the person who *reacted* to the comment (i.e., Alex).

Closeness to the confronter (Alex) was assessed by using the same 4-item scale used in Study 1. Participants indicated perceived warmth of the confronter on 4 items: good-

⁴ The data for the racial prejudice condition was collected by a British student who was running an internship in the department.

natured, warm, trustworthy, and friendly⁵ (responses on a 5-point scale, from 1= *not at all* to 5= *extremely*). An exploratory factor analysis on the seven social perception items with Direct Oblimin rotation demonstrated that the items used to measure closeness and the items used to measure perceived warmth loaded on two different factors (all loadings > .68) and explained 67.26 % of variance in total. Both scales proved to be reliable measures (closeness $\alpha = .86$; warmth $\alpha = .77$).

Even though this is not the main focus of this study, perceptions of the comment maker were assessed in a similar way as in Study 1. Perceived warmth was measured by asking participants: “How [sincere/ good natured/ warm/ friendly]⁶ is Sam?” ($\alpha = .66$) and the 4-item closeness scale was used to measure how close participants felt to the comment maker ($\alpha = .83$). The explanatory factor analysis with a Direct Oblimin rotation including the warmth and closeness items demonstrated that the two scales load on two different factors and explain in total 60.69% of the variance and $> .50$

To allow to test for the extent to which each response was perceived to communicate disagreement, participants were asked to indicate to what extent they thought Alex disagreed or agreed with Sam’s position on the topic (1= *strongly disagree* to 7= *disagrees*).

Additionally, I measured participants’ agreement with the initial, disregarding comment by asking participants to indicate to what extent they disagreed or agreed with Sam’s position on the topic, answer options ranged from 1= *strongly disagree* to 7= *strongly agree*. After completion of the questionnaire participants were debriefed and thanked for their participation.

⁵ Additional items (*sincere, tolerant*) were assessed but not included in the analysis because the factor analysis (direct Oblimin rotation) revealed that these two items loaded on a different factor than the other warmth items.

⁶ Additional items (*trustworthy, tolerant*) were assessed but not included in the analysis because the factor analysis (direct Oblimin rotation) revealed that these two items loaded on a different factor than the other warmth items.

Results

Preliminary analyses. A 2 (issue: environmental disregard vs. racism) x 2 (reaction: confrontation vs. no confrontation) ANOVA on perceived agreement of the responder (Alex) with the comment maker (Sam) revealed no main effect of issue, $F(1,66)= 2.69, p= .106, \eta_p^2= .039$, but a significant effect of reaction, $F(1, 66)= 11.05, p= .001, \eta_p^2= .143$. Consistent with the intention of the manipulation, participants perceived the confrontational reaction as communicating higher disagreement with the environmental disregarding or racist comment ($M= 1.82, SD= 0.25$) than the non-confrontational reaction ($M= 2.97, SD= 0.25$). This was not affected by the specific issue, as evidenced by the absence of a significant interaction, $F(1,66)= 2.13, p= .149, \eta_p^2= .031$. Crucially, however, agreement scores in *both* conditions were significantly lower than the midpoint of the 7-point scale (no confrontation: $t(34)= -7.40, p< .001, d= 2.53$; confrontation: $t(34)= -6.77, p< .001, d= 2.32$). In line with my intentions, all scenarios thus involved disagreement with the comment maker by the responder, with the degree of disagreement enhanced by the presence of explicit confrontation.

Main analyses. A 2 (issue: environment vs. racism) x 2 (reaction: confrontation vs. no confrontation) ANOVA⁷ on closeness to the responder revealed no significant main effects of issue, $F(1, 67)= 1.14, p= .289, \eta_p^2= .017$, or reaction, $F(1, 67)= 0.39, p= .534, \eta_p^2= .006$. However, the expected interaction between reaction and issue was significant, $F(1, 67)= 8.36, p= .005, \eta_p^2= .11$. Pairwise comparisons revealed that participants felt closer to the person who *did not* confront environmental disregard ($M= 5.24, SE= 0.20$) than to the person who did confront this issue ($M= 4.48, SE= 0.22$), $F(1, 67)= 6.45, p= .013, \eta_p^2= .088$, whereas confrontation did not shape closeness in the context of racial prejudice, $F(1, 67)= 2.47, p= .121, \eta_p^2= .036$, with the trend actually being in the opposite direction for

⁷ Entering agreement with the comment maker as covariate did not change the pattern of the results.

this issue (see Figure 1). Put simply, confronting racism did not affect the extent to which an onlooker felt socially close to the confronter, however the confrontation of environmental disregard lead onlookers to socially distance themselves from the confronter.

Examining this interaction the other way around, pairwise comparison showed that participants felt closer to a confronter of racism ($M= 5.33, SE= 0.21$), than a confronter of environmental disregard ($M= 4.48, SE= 0.22$), $F(1, 67)= 7.78, p= .007, \eta_p^2= .104$, while the issue had no effect on feelings of closeness to a person reacting without confrontation, $F(1, 67)= 1.68, p= .200, \eta_p^2= .024$.

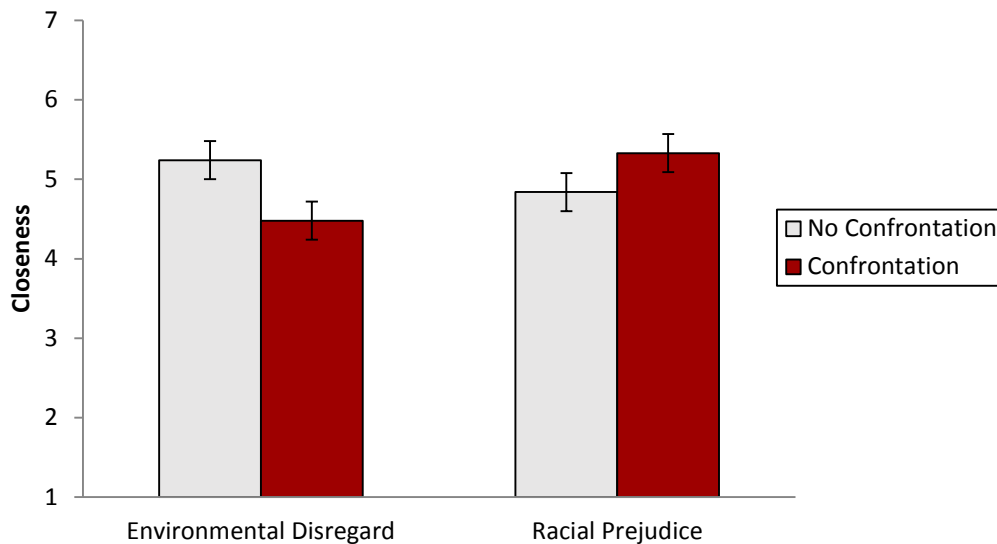


Figure 1. Participants' perceived closeness to the responder as a function of the issue being discussed and the type of reaction displayed.

The same analysis performed on the perceived warmth of the responder⁸ revealed no main effect of reaction, $F(1, 67)= 1.99, p= .163, \eta_p^2= .029$, but a significant main effect of issue, $F(1, 67)= 5.14, p= .027, \eta_p^2= .071$, which was qualified by a significant two-way interaction between reaction and issue, $F(1, 67)= 4.12, p= .039, \eta_p^2= .062$ (see Figure 2). Pairwise comparisons indicated that participants rated the confronter of environmental

⁸ Entering agreement with the comment maker as covariate did not change the pattern of the results.

disregard as less warm ($M= 3.18$, $SE= 0.14$) than the person who did not confront this same comment ($M= 3.65$, $SE= 0.13$), $F(1, 67)= 6.42$, $p= .014$, $\eta_p^2= .087$. However, in line with results observed for closeness, the type of reaction did not alter the perceived warmth of the person reacting to the racist comment, $F(1, 67)= 0.23$, $p= .633$, $\eta_p^2= .003$. Also in line with the pattern identified for closeness, pairwise comparisons further demonstrated that participants rated the confronter of environmental disregard as less warm ($M= 3.18$, $SE= 0.14$) than the confronter of racism ($M= 3.76$, $SE= 0.13$), $F(1, 67)= 9.46$, $p= .003$, $\eta_p^2= .124$. However, the perceived warmth of the non-confrontational responder was not affected by the target issue, $F(1, 67)= 0.01$, $p= .907$, $\eta_p^2 \leq .001$.

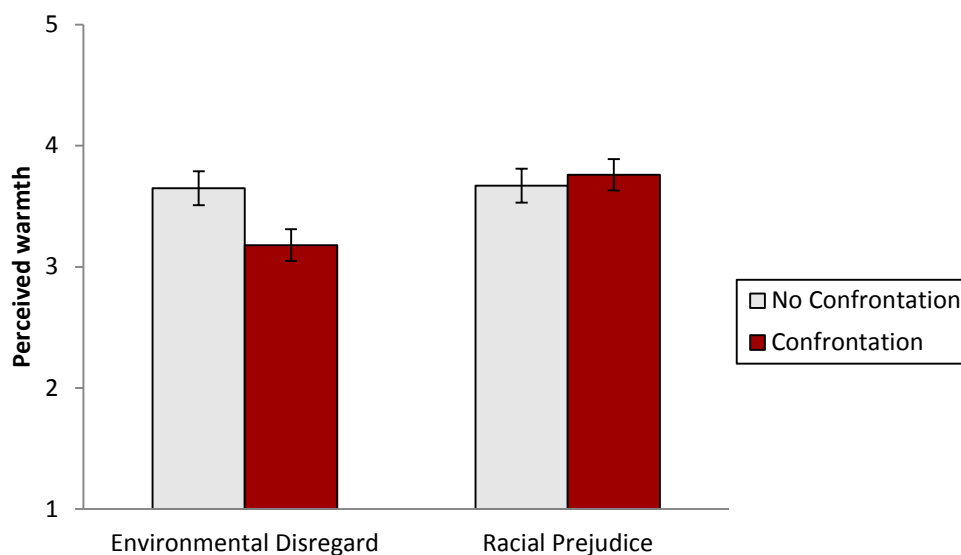


Figure 2. Participants' perceived warmth of the responder as a function of the issue being discussed and the type of reaction displayed.

Secondary analyses. The perception of the comment maker was analysed by performing another set of 2 (issue: environment vs. racism) x 2 (reaction: confrontation vs. no confrontation) ANOVAs on closeness to the comment maker and perceived warmth of that person respectively. The analysis of closeness revealed that there was no main effect of issue,

$F(1, 66) = 1.55, p = .217, \eta_p^2 = .023$, but a significant main effect of reaction $F(1, 66) = 4.11, p = .047, \eta_p^2 = .059$. Participants felt less close to the comment maker when the comment was met with confrontation ($M = 2.98, SE = 0.20$) compared to when the comment was not directly confronted ($M = 3.53, SE = 0.19$). A marginally significant interaction between issue and reaction on closeness, $F(1, 66) = 3.73, p = .058, \eta_p^2 = .054$, further qualified this relationship. When the issue was racial prejudice, the act of confrontation ($M = 2.54, SE = 0.28$) did reduce participants feelings of closeness towards the comment maker compared to a non-confrontational reaction, ($M = 3.63, SE = 0.29$), $F(1, 66) = 7.43, p = .008, \eta_p^2 = .10$. However, when the discussed issue was environmental disregard, the reaction to the comment did not affect participants feeling of closeness to the comment maker, $F(1, 66) = 0.005, p = .946, \eta_p^2 < .001$.

Even though the current results do not replicate the main effect of issue on perception of the comment maker, as identified in Study 1, the pairwise comparison showed that, as in Study 1, participants felt less close the comment maker who disregarded the environment ($M = 3.41, SE = 0.28$) than they felt towards the racist comment maker ($M = 2.54, SE = 0.28$), but only when the reaction to that comment was confrontational, $F(1, 66) = 4.94, p = .030, \eta_p^2 = .07$. When the comment was responded to without confrontation the perception of the racist or anti-environmental comment maker were not statistically significant, $F(1, 66) = 0.24, p = .625, \eta_p^2 = .004$.

The ANOVA including perceived warmth of the comment maker as dependent variable and issue and reaction as independent variables revealed no main effect of reaction, $F(1, 67) = 0.74, p = .392, \eta_p^2 = .011$, no main effect of issue, $F(1, 67) = 1.98, p = .165, \eta_p^2 = .029$ and no reliable interaction effect on the perceived warmth of the comment maker, $F(1, 67) = 0.72, p = .399, \eta_p^2 = .011$.

The same analysis was performed on the items measuring participants' agreement with the initial comment. Results indicated that there was no main effect of issue $F(1, 67) = 0.56$, $p = .456$, $\eta_p^2 = .008$ and a marginal main effect of reaction, $F(1, 67) = 3.31$, $p = .073$, $\eta_p^2 = .047$, which was qualified by a significant interaction effect of issue and reaction on the agreement with the initial comment $F(1, 67) = 7.35$, $p = .009$, $\eta_p^2 = .099$. Pairwise comparisons showed that the type of reaction affected participants' agreement with the initial comment when the disregarded issue was environmental disregard, $F(1, 67) = 10.70$, $p = .002$, $\eta_p^2 = .138$, but not when the issue was racial prejudice $F(1, 67) = 0.38$, $p = .539$, $\eta_p^2 = .006$. Participants strongly disagreed with the environmental disregarding comment when this comment was not confronted ($M = 1.20$, $SE = 0.26$), but this disagreement was less pronounced when the comment triggered a confronting reaction ($M = 2.47$, $SE = 0.29$). In other words, confrontation of environmental disregard actually *increased* onlookers' agreement with this anti-environmental comment, while the agreement with the racist comment was not adjusted based on the social reaction to that comment (confrontation: $M = 1.50$, $SE = .28$; no confrontation: $M = 1.75$, $SE = 0.29$).

Discussion

The results of Study 3 show that social disapproval, expressed through confrontation of environmental disregard, resulted in more negative perceptions of the person communicating that disapproval (i.e., less closeness and lower perceived warmth) than when disapproval was not voiced. This pattern was not observed in the context of racism where, if anything, there was a trend towards confrontation being perceived more positively than was non-confrontation. I argue that these patterns speak to the different social norms currently surrounding environmental regard and racial equality. In line with my initial theoretical model, this study provides evidence for the existence of social costs associated with confronting environmental disregard.

Furthermore, the negative consequences of confronting environmental disregard do not seem to be limited to the evaluation of the person engaging in the confrontation. Results demonstrate that confrontation also alters observers' ratings of the comment maker and observers' agreement with the initial comment. Results show that confrontation of environmental disregard led observers to feel less close to the initial comment maker in the context of racism but it did not have the same effect in the context of environmental disregard. This derogation of the comment maker, after being confronted with the norm violating nature of the comment, fits with the social context approach that highlights the social consequences of confrontation and its role in enforcing social norms (e.g. Blanchard et al., 1991). However, if the initial comment is not a clear violation of social norms, then confrontation does not lead to a distancing from the comment maker, as indicated by my current results.

Furthermore the results of Study 3 show that participants disagree less with the initial, anti-environmental position if that comment was responded to with confrontation, which means that there was a trend to go against the confronter's position. This finding fits with the assumption that social confrontation of environmental disregard is perceived negatively and comes with unwanted negative consequences. If, as I argue, observers' do not perceive the confronted position as a norm violation or as an undesired position (e.g. environmental disregard) then it is likely that this would lead to categorizing the confrontation of that position as an overreaction. This categorization and disagreement with the confrontation can explain why observers then sympathise more with the confronted person and side with their original position.

This explanation of the potential counter-productive effects of confronting environmental disregard receives support from the literature on reactance and peoples' reactions to external pressure. Plant and Devine (2001) showed that people who are only

externally but not internally motivated to respond without prejudice reacted with anger and felt threatened by external pressure to hire a black person for racial diversity reasons. It was further demonstrated that, once the pressure was released, these participants went against this exerted pressure and reacted counter the previously enforced position. This behavioural backlash was observed in a scenario study as well as in a situation where participants were asked to support a university policy on increasing ethnical diversity amongst students. The theoretical explanation for this negative response to external pressure is that any threat to people's freedom evokes strong counter action to regain control of the freedom of action, the so called psychological reactance (Brehm, 1966; Brehm & Brehm, 1981).

This sensitivity towards external pressure can also explain the observed reactions to social sanctioning if the confrontation is perceived as an overreaction. Other research findings show how easily a lack of support for a confrontation can lead to backlash effects in response to confrontation. Rasinski and Czopp (2010) demonstrated that observer reactions to the same confrontation of racism were altered when expressed by member of the discriminated group verses by a non-victim strongly altered observer reactions. Participants indicated the non-victim confronter to be more persuasive and, as in my results of Study 3, confrontation led observers to increase their agreement with the initial comment if the confrontation was expressed by a victim. This literature and my current findings suggest that interpersonal confrontation, if perceived as an overreaction, might evoke reactance effects in observers, characterized, in my Study 3, by reduced disagreement with the confronted position. In other words, I argue that the increase in support for the initial comment is a consequence of environmental disregard lacking the normative status that would have people see its social sanctioning as interpersonally justified.

In conclusion, the results of this study suggest that social confrontation of an issue for which norms are not sufficiently strong, like environmental disregard, is perceived differently

than the confrontation of a highly normative issue, like racial prejudice. The person engaging in confrontation of environmental disregard is perceived negatively, while the original comment maker does not suffer from any negative consequences caused by the social reaction. On the contrary, observers tend to side with the comment maker's position, at least more so than they would have done if the comment had passed without social disapproval. In contrast to this, confrontation of racism is not associated with social costs for the confronter, if anything, in our sample, observers liked confronters better than non-confronters. Moreover, participants distanced themselves more from a racist comment maker when that person's comment experienced social confrontation, indicating that observers tend to support confrontation when the issue at stake is highly normative.

General Discussion

The studies reported in this chapter constitute the first step towards understanding the normative process of social confrontation in the context of environmental disregard. By comparing responses to environmental disregard with responses to a clearly anti-normative attitude, racial prejudice, I was able to draw conclusions about the normative status of environmental disregard. Additionally, this comparison offers insights into how differential normative strengths affect social interactions, in particular, the act of interpersonal confrontation.

The results of Study 1 support our basic prediction that environmental issues (like climate change) and racial equality are indeed normatively different, as indicated by lower agreement with comments that constitute a potential violation of those norms and also less positive evaluations of those making the comment in question. Furthermore, results of Study 2 imply that people are less motivated to confront environmental disregard than they are to confront racism, if more confrontational reactions are provided and considered. However, as

this difference was not identified in Study 1 when using an alternative assessment method, the results in relation to this specific issue remain slightly inconclusive. Furthermore results of Study 2 can be interpreted to demonstrate clear injunctive norms to confront racism but not environmental disregard as indicated by the expectation of other people expressing more confrontational reactions towards racism than towards anti-environmental opinions.

The third study presented in this chapter incorporated social confrontation into the scenario that participants were presented with. Observers' evaluations of the person engaging in social confrontation were assessed to provide insight into the actual social costs associated with openly disapproving of environmental disregard or racism. This study showed that participants were less impressed with someone who confronted environmental disregard than with someone who confronted racism. I conclude that there is a potentially circular dilemma in that confrontation might be a process that affects environmental actions (Swim & Bloodhart, 2013) and therefore could have a role to play in enforcing pro-environmental norms, norms that seem to be prevalent on an injunctive but not descriptive level (Pidgeon, 2012). However, this lack of strong normative association with the issue results in social costs befalling a confronter of environmental disregard and through this, the current non-environmental norms might undermine the opportunities for a change towards more environmental norms via processes of confrontation.

In addition to the risk of negative social evaluation, the research outlined in this chapter also examined the consequences of social confrontation in terms of outcomes other than evaluations of the confronter, such as an onlookers' orientation to the original comment. Seminal research in this area showed that the importance of confrontation lies precisely in highlighting the problematic nature of the original comment (e.g. Blanchard et al., 1991) and this is what observed with regard to the racist comment maker, who was more derogated when confronted than when no confrontation took place. However, I also observed that

confrontation of an issue that has weaker social norms associated with it runs the risk of actually increasing agreement with the initial comment. These negative effects of confrontation are not uncommon in the related literature. Rasinski and Czopp (2010) also showed that a confrontation can increase bystanders' agreement with the initial racist remark if the confrontation was performed by a victim rather than non-victim. In our sample, witnessing confrontation of racism did not increase observers' agreement with the racist comment, but it did in the case of confrontation of environmental disregard. This speaks to the idea that there seems to be a fine line between positive effects and reactance effects in response to confrontation if the confrontation is perceived as in any way unnecessary or inappropriate. Confronting a comment that is not in violation of a sufficiently normatively valenced issue seems to constitute such an unnecessary confrontation.

Furthermore, the results of Study 3 regarding the issue of racism fit with the suggestion in the literature that social confrontation might have a role to play in changing or reminding people of social norms (Czopp et al., 2006). Our findings suggest that confrontation of racism is associated with social costs for the comment maker whilst slightly improving evaluations of the confronter compared to a person expressing disapproval but no confrontation.

The main conclusion of this initial examination of normative processes associated with environmental disregard raises the question of whether the identified social costs signify a circular dilemma in that befalls issues that are not widely accepted as being sufficiently normative to warrant conformation, thus inhibiting the very kinds of interactional processes that might bring about social change on the domain of environmental issues.

This then raises the somewhat perplexing question, however, of how such processes might ever be successfully recruited in the context of environmental issues given that the social costs associated with confronting environmental disregard appear to be (currently) so

likely to inhibit people from engaging in such acts. What is more, the evidence from Study 3 suggests that such confrontation may actually backfire in terms of its effect on the attitudes of onlookers, due to its perceived ‘inappropriateness’. In the next chapter of the thesis I will start examining potential mediators and moderators of these social costs of confronting environmental disregard in an attempt to understand both what might be driving negative evaluations of confronters of environmental disregard, and whether there are any conditions under which we might see this pattern eliminated, or even reversed.

Chapter 3: Further Understanding the Social Costs of Confronting

Environmental Disregard: Credentials, Politeness, and Morality

The empirical studies presented in the previous chapter identified the potential social costs associated with confronting environmental disregard. Having done this, my next set of studies aimed to expand our knowledge surrounding the normative process of social confrontation further by attempting to identify boundary conditions to this effect, that is, contexts or cognitive states that might reduce or reverse the negative consequences of confronting anti-environmental opinions. Furthermore, in the studies reported in this chapter I also began to explore potential process mechanisms (mediators) that might be driving this differential response to confrontation across the two domains of racism and environmental disregard.

I will firstly examine more closely the characteristics of the confronter and the information that is provided about this individual. Source-related characteristics have been found to be an important factor when it comes to rejecting or complying with persuasive messages and messengers, both in the persuasion literature in general (Chaiken, 1980; Chaiken & Maheswaran, 1994; Petty & Cacioppo, 1984) and specifically in the domain of environmental issues (Gifford, 2011; Lorenzoni et al., 2007). The heuristic-systematic model (Chaiken, 1980; Chaiken & Eagly, 1989) introduced the idea of a dual processing account of the processing of persuasive messages, with such messages either being processed in great depth (via a systematic pathway) or more superficially (via a heuristic pathway). Within this model, source credibility has been identified as one factor that is very likely to affect the influence of a message, especially under conditions such as when the content of the message is ambiguous or there is or there is low motivation of the message receiver (Chaiken & Maheswaran, 1994).

In the specific context of climate change communication, (dis)trust in information sources has been found to determine climate change beliefs and actions (Gifford, 2011; Moser, 2010; Whitmarsh et al., 2013). As just one example, Hmielowski, Feldman, Myers, Leiserowitz, and Maibach (2013) identified that trust in scientists mediated the role of media use on climate change beliefs, suggesting that media use affects levels of trust in climate change scientists and higher trust was associated with higher certainty about anthropogenic climate change. Knowledge of these important effects of source credibility suggests that this may also play an important role in the processes investigated in this thesis. Although my research is not focused on persuasive communication *per se*, my studies investigate the communication of social information and, as a result, one might therefore expect similar factors to play a role in evaluations of a person who *sends* social messages. In short, one might consider social confrontation as a particular case of persuasive communication, raising the question of whether information affecting source credibility might play a role in reactions to confronters.

When criticizing another person, someone's credibility would seem to derive from them being seen to act in line (or not) with the same standards they are defending. In the case of environmental disregard, a person not having a record of acting in an environmentally friendly way might be perceived as a hypocrite if they then confront another person for expressing non-environmental views. Given the highly common nature of carbon intensive lifestyles, one could imagine such a charge being widely applicable in a context where the confronter's specific green credentials are not made explicit, or are in some way questionable. This would mean that providing evidence for one's pro-environmental record might help to reduce the social costs of confrontation identified in Study 3 by effectively warding off potential perceptions of hypocrisy.

However, throughout the thesis thus far, I have argued that the ways in which people evaluate a socially meaningful interaction, such as one involving confrontation, reflects the normative status of the issue discussed. If that is indeed the case, then the personal credentials of the confronter perhaps should not outweigh the negative consequences of confronting a more normatively ambiguous issue like environmental disregard. In other words, the negative evaluations of the confronter of environmental disregard may stem less from a perceived hypocrisy on their behalf, and more from the extent to which the environment (unlike racism) is simply not seen as a domain in which it is acceptable to confront others, regardless of one's own green credentials. In order to further explore this argument, it is crucial to unpack the potential differences between the two issues of racism and environmental disregard a little further and to consider how such differences have the potential to inhibit or accelerate social change differentially in each case.

Issue Morality

One aspect that needs to be considered in relation to normative change is the extent to which morality is perceived to be relevant to the issue and the actions associated with it. People strive to be moral and to be seen as moral by others (Haidt, 2007). As a consequence, norms that are understood in moral terms have been argued to be more influential than norms that are framed in non-moral terms (Bratanova, Loughnan, & Gatersleben, 2012; Ellemers, Pagliaro, Barreto, & Leach, 2008). If morality is key to normative strength, then the more an issue is perceived in moral terms, the stronger reactions to anti-normative behaviour should be, and the more likely such strong reactions will be perceived as acceptable. For example, strong norms against racism in western societies (Hodson, Dovidio, & Gaertner, 2004) have led people to avoid being seen as racist, to strongly avoid seeing themselves as racist (Monin & Miller, 2001), and to feel guilty when they unwittingly display a racial bias (Czopp & Monteith, 2003). Thus, one could argue that racial equality has clearly achieved the status of

a moral norm. However norms against environmental disregard appear to be less morally tinged (Jamieson, 2010; Markowitz & Shariff, 2012).

In the context of racism there is a clearly-defined human victim of acts or comments, and this might help to highlight the direct moral implications at play. Although there is scientific consensus that the consequences of climate change will also affect significant numbers of “climate change victims” (Popovski & Mundy, 2011, p. 5) there are many psychological barriers to perceiving climate change as a moral issue. Markowitz and Shariff (2012) identified a range of reasons why humans may struggle to define climate change as a moral imperative. The six psychological challenges they are listing in their review are the abstractness of the issue, the psychological distance to the impacts and victims, the fact that the damaging of the environment was never an intended outcome, the self-defensive biases triggered by guilt, unrealistic optimism about the consequences, and the trivialization of the issue based on the increasing political polarization.

Markowitz (2012) showed that indeed only 42% of respondents of his sample of American college students categorized climate change as an “ethical or moral issue” (p. 486) while 23% indicated they did not categorize this issue as ethical or moral and 36% were unsure (Study 1). In a second correlational study Markowitz identified that personal moral obligation to respond to climate change correlated with pro-environmental intentions.

Additionally, the research area that focuses on explaining individual pro-environmental actions delivers plenty of evidence for the role of the so-called personal norms or moral norms to significantly affect pro-environmental actions. A vast amount of literature, that is based on Schwarz norm-activation theory (1968; 1977), demonstrates in different domains how personal feelings of an obligation to act a certain way (or the lack thereof) is a factor that can help predicting individual intentions to act environmentally friendly (or fail to do so) (e.g. Bamberg & Möser, 2007; Thøgersen, 1996). Thereby the perception of the

consequences of personal actions for others or the environment, and the personal responsibility associated with these consequences define these personal/moral norms (Harland, Staats, & Wilke, 1999).

The above literature suggests that the perceived morality of environmental issues is an important factor in understanding the ways in which people think about and engage in environmental actions. In light of this, it would seem important to consider the implications of this for the ways in which the issue is invoked, managed and debated within social interactions, and in particular the specific interactional act of social confrontation. The two subsequent studies were designed to investigate the social costs associated with confronting environmental disregard in more depth through an examination of the roles that individual confronter credentials (Study 4), and the perception of issue-related morality (Study 5) might play in shaping such costs.

Study 4

Study 4 tests whether providing information about the credentials of the confronter can mitigate the apparent costs of confronting an issue around which such an act is less normative (e.g. environmental disregard). To do this, I experimentally manipulated the confronter's credentials and examined how this affected evaluations of confrontation (versus not) as a function of issue (environmental regard versus racism).

If the social costs associated with environmental disregard do reflect the low normativity this issue, we can expect to replicate the findings of Study 3 (unqualified by the manipulation of credentials). If, however, credentials play an important role when evaluating a confronter of environmental disregard, then we should find that when credentials are experimentally manipulated orthogonally to issue then the difference between reactions to confronters of environmental disregard versus racism should be eliminated. In order to

increase the external validity of our findings, in these studies I also move away from presenting participants with hypothetical scenarios and instead present them with a transcript of a (putatively) real social interaction.

Additionally, in this study I assessed the perceived competence of the responder as an additional social perception variable. I hypothesized that rating of competence would be affected by the manipulation of responder credentials but not by the normatively different issues of racism and environmental disregard. In other words, I hypothesized that I would replicate the previous findings and identify social costs associated with confronting environmental disregard (but not racism) for the dimensions of warmth and closeness but not competence. The logic behind this hypothesis was that a person expressing disagreement about someone else's comment or action demonstrates to be in a position of dominance, which should lead to high ratings of competence independent from the nature of the confronted comment (Cuddy, Fiske, & Glick, 2008). However, because the credentials of the responder are directly related to competence it was important to distinguish between evaluations concerning the personal feelings towards the responder and the more objective dimension of competence.

Method

Participants and design. This study was completed by 217 British Exeter University students (111 women; $M_{age} = 20.48$, $SD = 2.31$). Participants were randomly assigned to one of eight conditions within a 2 (issue: environmental disregard vs. racial prejudice), X 2 (reaction: confrontation vs. no confrontation) X 2 (credentials of the responder: low vs. high) between-participants design.

Procedure. Participants were approached on campus⁹ in the same way as in the first three studies. Participants read part of what was, in reality, a bogus transcript of a focus group conversation. However they were told that this discussion had been held a couple of weeks prior and that the researchers were interested in their perceptions of the people involved in the transcribed discussion. The topic of the putative conversation was either “What do you do to try to prevent climate change?” or “Improving the experience of international students at the University of Exeter”.

During the early part of the transcribed discussion, one person of unspecified gender (Alex) described their behaviour in relation to the topic of discussion. To manipulate Alex’s credentials, in the high credentials condition this description was characterized in the climate change focus group by various pro-environmental actions (e.g., “I sold my car recently and bought a bicycle instead”). In the international students focus group Alex made reference to various positive interactions with people from other countries (e.g., “I’m a member of the international [student] society”).¹⁰ In contrast, for the low credentials conditions, the described behaviour was characterized in the climate change case by the failure to engage in a great deal of pro-environmental behaviour (e.g., “I recycle occasionally, and walk to campus. But um, I have family in New Zealand, and I fly there every year to see them”) or in the racial prejudice case as the intention but failure to engage with people from other countries (e.g. “I talk to Erasmus¹¹ students occasionally, which can be an interesting thing to do, but um I have to admit, most of my close friends are from here”). Please see Appendix C for complete credentials manipulations.

⁹ The data was collected in collaboration with two final year students (environmental disregard conditions) and one British student who was running an internship in the department.

¹⁰ Note: Alex him/herself was clearly presented as a *British* student, not an international student, thus making membership of such a society quite a meaningful piece of information.

¹¹ International exchange program

At this point of the transcript, another person (Sam) made a comment either expressing environmental disregard or expressing racial prejudice similar to the comment used in the previous studies (racial prejudice condition presented below second between brackets):

Well you know, people are making too much of a big deal out of the whole issue. [The world's not going to die in my lifetime so I don't really care / I've got no intention of working in some other country, so I don't really care about understanding other cultures]. [I still fly frequently, and have two cars, and generally lead a good life / I just prefer hanging out with people that are similar to me in social class and race, and generally just live life the way I want to]. To be honest, sometimes I even go out of my way to [do non-environmentally friendly things because I know it'll piss off greenie-type people/ make jokes about the international students because I know it'll piss off politically correct type people]. People pretend to be all [green / tolerant], but, let's be honest, who really cares?

After being invited to express their opinion by the focus group moderator, Alex then either confronted the comment maker or disagreed without confrontation (no confrontation between brackets):

Alex: Hmm...

Moderator: Alex, did you have something to add?

Alex: Um...Well...I'm just really shocked about what Sam just said, to be honest. How can you make such a stupid comment? [Um... Well...I'm not sure I agree, but I'm interested to hear more about Sam's position on this. What makes you say that Sam?]

Dependent measures. After reading the transcript, participants answered the four-item scale (1= *strongly disagree* to 7= *strongly agree*) measuring their closeness to the confronter (Alex). To assess warmth, participants indicated the extent to which they saw Alex as good-natured, cold (reversed), tolerant, and likable (from 1 = *not at all* to 5 = *extremely*). Perceived competence of the confronter was measured using confident, skilled, competent, and intelligent (on a 5-point scale, from 1 = *not at all*, to 5 = *extremely*). An exploratory factor analysis with Direct Oblimin rotation on the items used to measure closeness, warmth, and competence demonstrated that the items loaded on the three expected factors (all loadings > .46), together explaining 56.50% of the total variance. Reliability estimates were adequate for closeness ($\alpha = .81$) and competence ($\alpha = .68$) but relatively low for warmth ($\alpha = .57$).¹²

In addition, we measured the extent to which participants agreed with the comment maker's point of view and how much they thought the responder agreed with the comment maker's position on the topic (from 1= *strongly disagrees* to 7= *strongly agrees*). The assessment of the perception of the person making the original comment (Sam) was reduced to the 4-item scale measuring the feelings of closeness to the comment maker, $\alpha = .82$.

Results

Preliminary analyses. A 2 (issue: environment, racism) x 2 (reaction: confrontation vs. no confrontation) x 2 (credentials: low vs. high) ANOVA on perceptions of the responder's (i.e., Alex's) agreement with the original comment maker's opinion revealed a significant main effect of reaction, $F(1, 209) = 27.37, p < .001, \eta_p^2 = .116$, such that perceived agreement of Alex with Sam was always lower after confrontation ($M = 1.51, SE = 0.09$) than no confrontation ($M = 2.19, SE = 0.10$). This expected effect of reaction was, however, qualified by a significant interaction with issue, $F(1, 209) = 13.18, p < .001, \eta_p^2 = .059$,

¹² Perceived morality of the confronter (sincere, moral, honest, selfish) were measured but items failed to load on a respective factor and were not included in the analysis

reflecting the fact that confrontation was taken as a stronger indicator of disagreement in the context of the environmental issue (confrontation: $M= 1.27$, $SE= 0.12$; no confrontation: $M= 2.43$, $SE= 0.12$), $F(1, 209) = 44.99$, $p < .001$, $\eta_p^2 = .153$, than in response to the issue of racism (confrontation: $M= 1.74$, $SE= 0.13$; no confrontation: $M= 1.95$, $SD= 0.15$), $F(1, 209) = 1.14$, $p = .287$, $\eta_p^2 = .009$. This stronger indication of disagreement of the identical confrontation in the context of environmental disregard can be explained by the high costs befalling the confronter of this comment relative to the confronter of racism. Observers might simply assume that engaging in a confrontation that is associated with social costs must require higher levels of disagreement than the similarly worded confrontation that is not associated with high social costs.

Furthermore, it is important to note that that participants in every condition rated the reaction as expressing disagreement, with all mean scores being significantly lower than the midpoint of the 7-point scale, as indicated by one-sample t-tests, all $t_s < -9.28$, $p_s > .001$. Thus, participants always felt that Alex was in disagreement with the comment maker (Sam) on the topic in question, regardless of the type of issue and regardless of whether Alex confronted or did not confront.

Main analysis. An ANOVA¹³ on *closeness* to the responder (Alex) revealed no main effects of reaction, $F(1, 209) = 0.07$, $p = .797$, $\eta_p^2 < .001$, issue $F(1, 209) = 1.68$, $p = .196$, $\eta_p^2 = .008$, or credentials, $F(1, 209) = 0.68$, $p = .412$, $\eta_p^2 = .003$. The results also delivered no evidence for an interaction between issue and credentials, $F(1, 209) = 0.05$, $p = .816$, $\eta_p^2 < .001$ or credentials and reaction $F(1, 209) = 0.52$, $p = .471$, $\eta_p^2 = .002$. However, as expected, and in line with Study 3, we observed a marginal interaction between issue and reaction, $F(1, 209) = 2.94$, $p = .088$, $\eta_p^2 = .014$. Pairwise comparisons revealed that participants indicated more closeness to the person who confronted racism ($M= 5.07$,

¹³ Entering agreement with the comment maker as covariate did not change the pattern of the results.

$SE= 0.13$) than to the person who confronted environmental disregard ($M= 4.67, SE= 0.13$), $F(1, 209) = 4.95, p= .027, \eta_p^2 = .023$, while feelings of closeness towards a person reacting without confrontation were not affected by the issue at stake $F(1, 209) = 0.08, p= .777, \eta_p^2 < .001$.

Despite the replication of the overall interaction, in contrast to findings of Study 3, additional pairwise comparisons demonstrated that the confrontation (compared to no confrontation) in this sample did not significantly reduce feelings of closeness to the responder to environmental disregard, $F(1, 209) = 1.21, p= .272, \eta_p^2 = .006$, nor to the responder of racism, $F(1, 209) = 1.73, p= .191, \eta_p^2 = .008$.

Most importantly, there was no evidence of credentials altering the interaction between issue and reaction, as indicated by the absence of a 3-way interaction between issue, reaction and credentials on feelings of closeness, $F(1, 209) = 1.56, p= .21, \eta_p^2 = .007$.

The same analysis on perceived warmth¹⁴ revealed no main effect of credentials $F(1, 208) = 0.52, p= .470, \eta_p^2 = .003$ but significant main effects of reaction, $F(1, 208) = 9.39, p= .002, \eta_p^2 = .043$, and issue, $F(1, 208) = 11.07, p= .001, \eta_p^2 = .051$, which were qualified by significant two-way interactions between reaction and issue, $F(1, 208) = 4.76, p= .030, \eta_p^2 = .022$, and between credentials and issue, $F(1, 208) = 8.94, p= .003, \eta_p^2 = .041$. These two way interactions appeared to be embedded within a three way interaction between issue, reaction, and credentials, $F(1, 208) = 2.68, p= .10, \eta_p^2 = .013$, although this failed to reach significance. Despite this, given our predictions, we unpacked the total pattern by exploring how confrontation affected warmth as a function of both issue and credentials.

In line with the results of Study 3, and as depicted in the left panel of Figure 3 below, the overall pattern suggests that, in the domain of environmental disregard, confrontation elicited lower ratings of warmth of the responder, than did non-confrontation in a way that

¹⁴ Entering agreement with the comment maker as covariate did not change the pattern of the results.

was unaffected by the presence of high credentials ($M_s = 3.29$ & 3.77 , $SEs = 0.09$ & 0.09 , respectively), $F(1, 208) = 13.31$, $p < .001$, $\eta_p^2 = .060$, or low credentials ($M_s = 3.56$ & 3.82 , $SEs = .092$ & $.092$, respectively), $F(1, 208) = 3.94$, $p = .049$, $\eta_p^2 = .019$.

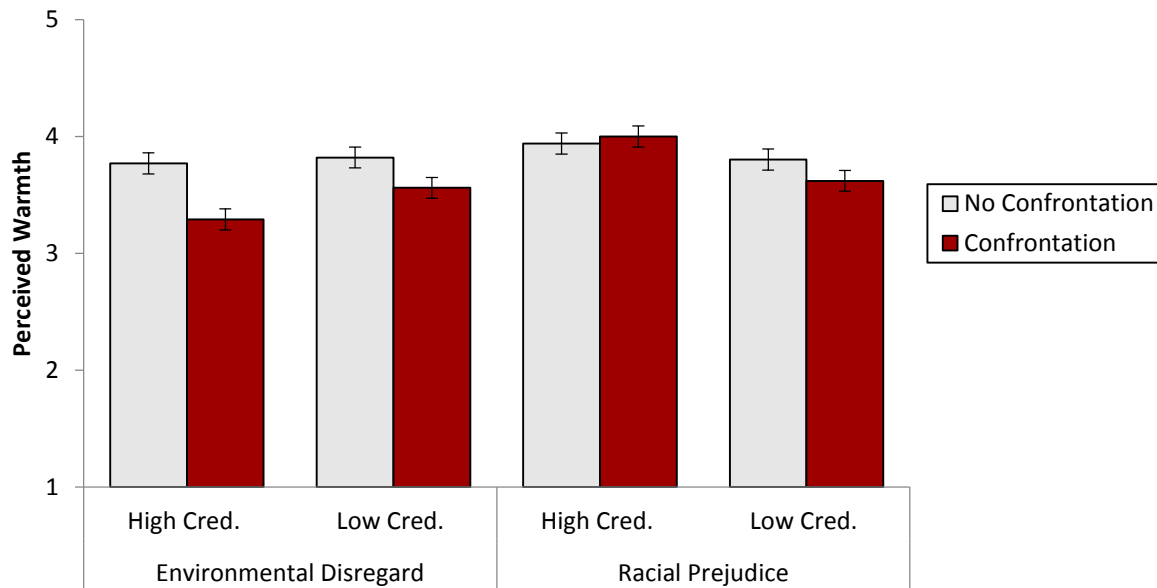


Figure 3. Participants' perceived warmth of the responder as a function of the disregarded issue, the type of reaction and the credentials of the responder.

In comparison, in the context of racial prejudice, credentials slightly altered the effect of confrontation, which is what appears to be driving the marginal 3-way interaction. In the context of high credentials, reactions did not further determine perceptions of warmth, $F(1, 208) = 0.15$, $p = .701$, $\eta_p^2 = .001$, whereas in the absence of credentials the confronter of the racist comment was seen as slightly less warm ($M = 3.62$, $SE = 0.10$) than the non-confronter ($M = 3.86$, $SE = 0.10$), $F(1, 208) = 1.60$, $p = .208$, $\eta_p^2 = .008$.

The other comparison creating the marginal 3-way interaction is the difference between how participants rated a high credential confronter of racism ($M = 4.00$, $SE = 0.09$), compared to a high credential confronter of environmental disregard ($M = 3.29$, $SE = 0.09$), which demonstrates that high credential accentuate the differences between the two issues in

relation to observers' ratings of perceived warmth of the responder, $F(1, 208) = 29.59$, $p < .001$, $\eta_p^2 = .13$. Overall, the results demonstrate that, in line with my predictions, the social costs of confronting environmental disregard were not mitigated by the credentials of the confronter.

Perceived competence. I observed a main effect of credentials on the perceived competence of the responder, $F(1, 206) = 15.86$, $p < .001$, $\eta_p^2 = .072$. As might be expected, the responder with higher credentials was rated as more competent ($M = 3.62$, $SE = 0.05$) than the low credentials responder ($M = 3.34$, $SE = 0.05$). There was also a main effect of reaction, $F(1, 206) = 8.26$, $p = .004$, $\eta_p^2 = .039$, with the confronter being perceived as more competent ($M = 3.58$, $SE = 0.05$) than the person reacting without confrontation ($M = 3.38$, $SE = 0.05$). No other significant effects were revealed, $F_s < 1.32$, $p_s > .25$, $\eta_p^2 < .006$. Of most theoretical importance was the fact that the confronter of environmental disregard was *not* judged to be less competent as a result of this act, only less warm and less socially close.

Agreement with comment maker. An ANOVA analysis including credentials of the responder, issue and reaction as independent variables and agreement with the initial comment maker as the dependent variable identified a main effect of reaction, $F(1, 209) = 5.38$, $p = .021$, $\eta_p^2 = .025$. Participants agreed less with the initial comment when this comment was met with a confrontational reaction ($M = 1.98$, $SE = 0.12$) compared to when it was met with a non-confrontational reaction ($M = 2.38$, $SE = 0.13$), regardless of the type of issue and the credentials of the confronter. No other effects were statistically significant on this dependent variable, $F_s < 1.53$, $p_s > .218$, $\eta_p^2 < .007$.

Closeness to the comment maker. Analyses of feelings of closeness to the comment maker also revealed a main effect of reaction $F(1, 209) = 4.62$, $p = .033$, $\eta_p^2 = .022$ in that confrontation decreased participants' feelings of closeness towards the comment maker ($M = 2.64$, $SE = 0.10$) compared to when the reaction was not confrontational ($M = 2.96$,

$SE= 0.11$). However, this effect was further qualified by a three-way interaction depicted in Figure 4, $F(1, 209) = 4.96, p= .027, \eta_p^2= .023$. Pairwise comparison showed that the reactions only affected observers' feelings of closeness to the comment maker when the issue was environmental disregard, but not when it was racism. If a person with low pro-environmental credentials confronted environmental disregard, observers felt less close to the initial comment maker ($M= 2.24, SE= 0.20$) than they would if the reaction was not confrontational ($M= 3.17, SE= 0.20$), $F(1, 209) = 10.75, p= .001, \eta_p^2= .049$. However, if the responder had high credentials the reaction had no effect on the feelings of closeness to the anti-environmental comment maker, $F(1, 209) = 0.22, p= .637, \eta_p^2= .001$. When the issue was racial prejudice, I did not observe this negative effect of confrontation on feelings of closeness, not for the high credential responder, $F(1, 209) = 1.43, p= .233, \eta_p^2= .007$, nor for the low credential responder, $F(1, 209) = 0.13, p= .722, \eta_p^2= .001$. Looking at the contrast the other way around, being confronted for expressing environmental disregard only had negative consequences for the comment maker if the confronter had low credentials ($M= 2.24, SE= 0.20$) rather than high credentials ($M= 2.93, SE= 0.20$), $F(1, 209) = 5.87, p= .016, \eta_p^2= .027$. Credentials of the responder did not significantly alter the remaining contrasts, $F_s < 1.77, p_s > .19, \eta_p^2 < .008$.

No other main or interaction effects were identified on closeness to the comment maker, $F_s < 1.63, p_s > .203, \eta_p^2 < .008$.

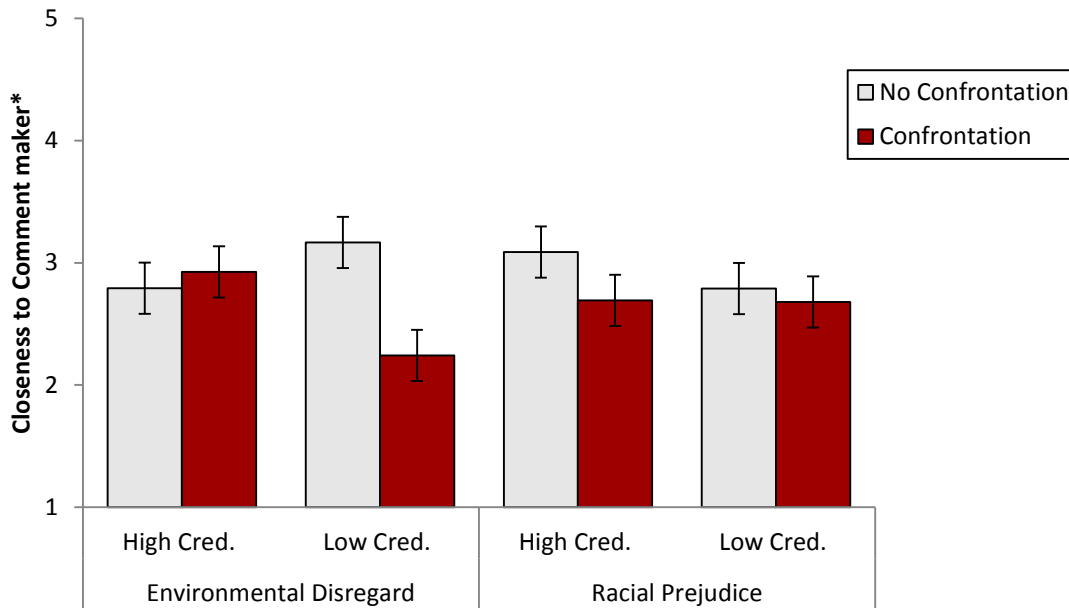


Figure 4. Participants' feelings of closeness to the comment maker as a function of the disregarded issue, the type of reaction and the credentials of the responder.

*closeness was assessed on a 7-point answer scale.

Discussion

The results of Study 4 support the findings of the earlier studies by showing that confronting environmental disregard is more socially costly than confronting racism with regards to warmth and closeness (but not competence). While confronters of racism improve their social evaluation by the act of confrontation, the opposite is true for a confronter of environmental disregard. Despite the interaction on closeness only being marginally significant in the current sample, the pattern and the results on the perceived warmth of the confronter are consistent with this conclusion. In addition, the current study established that a confronter of environmental disregard having highly environmental credentials did not improve their negative ratings, while credentials had a positive effect on the rating of a confronter of racism. In relation to the consequences of confrontation for the comment maker, the highly environmental credentials even eliminated the negative consequences

(reduced feeling of closeness) for the comment maker. Therefore, highlighting ones' credibility in relation to the issue of climate change does not seem to be a good strategy to adopt from the perspective of the confronter.

Furthermore, the current study verified that the negative rating of a person socially confronting environmental disregard do not affect ratings of competence of the confronter. Thus one could argue that the negative evaluation of a pro-environmental confronter is restricted to more (inter)personal dimensions. Put simply, it seems that participants saw the pro-environmental confronter as 'rude' rather than as 'a green loon'.

This study also gives further insights into the consequences of confrontation for the person being confronted (or not). The social act of confrontation decreased observers' agreement with the comment and feelings of closeness to the comment maker (in the environmental disregard condition only when the credentials were low). While this finding fits with the idea that social confrontation is tied to consequence for both the comment maker and the confronter, this is not identical to the findings of Study 3. In Study 3 observers also felt less close to the comment maker when they were confronted, however this difference was only observed in the context of racism. Furthermore, Study 3 identified that confrontation even increased observers' agreement with the anti-environmental comment, something that we explained in terms of a reactance towards confrontation of opinions on non-normative issues. In the current study, observers' disagreement with the initial comment was more accentuated when the comment was met with confrontation, for both the racist and the anti-environmental comment, therefore not showing a backlash effect for the issue of environmental disregard in this case.

It is possible that the contradictory findings can be explained by the different methodology used in Study 3 and Study 4. The scenario used in Study 3 asked participants to imagine being in a pub setting to socialize and celebrate the end of a group project with other

students while imagining the confrontation (or non-confrontation) situation. In the current Study 4, I changed the method and asked participants to read a transcript of a focus group discussion in which the manipulated interaction took place. The purpose and the social expectations associated with a pub interaction or an interaction within a focus-group discussion are quite different and might be able to explain why confrontation of environmental disregard backfired when imagined in a pub setting (where being 'nice' is perhaps more salient) but not in a focus-group setting (where expressing one's opinion is perhaps more salient).

As discussed previously in relation to the backlash effect in Study 3, research on racism has identified backlash responses to being externally pressured (Plant & Devine, 2001) or when observing a confrontation of a target (e.g. black person) rather than a non-target of prejudice (Rasinski & Czopp, 2010). Further evidence from the context of sexism highlights that the type of confrontation (e.g. aggressive versus non aggressive confrontation) can significantly change observers' perception of the interaction (Becker & Barreto, 2014). The existing findings demonstrate that even in the context of racism there seems to be a fine line between the social support for a confrontation and a negative (backlash) reaction towards the confrontation. To put it differently, when circumstance e.g. group identity, or the type of confrontation make the act of confrontation more inappropriate, then confrontation is met with negative reactions.

Therefore, I conclude that a confrontation being expressed in a focus-group discussion where people are invited to express their opinions and discuss potential disagreements is likely to be perceived as more appropriate than a confrontation in a more casual, social setting. It seems that in Study 3 we seemed to have crossed the fine line between observers' acceptance of the confrontation (and their adjustment of the ratings of the comment maker) and a backlash effect resulting in a tendency to go against the confronters' position and

decreasing disagreement with the initial comment (as observed in Study 3). This however, in the context of the current research findings, only seems to make a difference for the normatively less established issue of climate change and not for racial equality.

It is worth pointing out however that while I did not observe a backlash effect in the context adopted during Study 4, this social setting being more acceptable of expressions of opinions did not eliminate the social costs associated with confronting environmental disregard.

In conclusion, study 4 extended my initial findings in study 3 by showing that establishing one's credentials did not help the confronter of environmental disregard avoid being perceived negatively, whereas having credentials seemed to help the confronter of racism maintain their positive interpersonal perceptions. Thus, this study again reveals differences in how confrontation behaviour is responded to across the domains of environmental attitudes and racial prejudices, and supports the idea that the lack of strong norms against environmental disregard shape social evaluation of confrontation in this domain more than the personal credentials of those debating the issue.

Study 5

Thus far I have demonstrated that the confrontation of environmental disregard is associated with more social costs than the confrontation of racial prejudice. Furthermore, I have shown that the costs of confronting environmental disregard are not eliminated when the confronter has displayed their environmental credentials. The question that remains hitherto unanswered, however, is which specific process might underlie the observed differences in responses to confrontation across these two domains. In advancing my hypotheses, I have argued that these differences reflect the different normative status of racial equality and environmental protection. That is, racial equality is a firmly established social norm, and

even though not everyone may be motivated by this norm to the same degree, behaviour that contravenes the expectation of racial equality is quickly identified as deviant and punished. Environmental protection, though widely expressed in the form of concern, has not yet achieved the status of being a consensual social norm. As such, behaviour that contravenes or questions environmental protection or concern remains morally ambiguous, and indeed confrontations of this behaviour may be perceived as less (interactionally) appropriate than the behaviour itself. Along these lines, the extent to which the issue might be perceived as moral in nature might explain the different reactions to confrontation within each domain. Although the patterns observed in the previous studies are consistent with this reasoning, these studies did not directly test the role of moral perceptions in guiding responses to confrontation. Filling in this gap was the primary goal of Study 5.

A further issue that I explored in this study was the specific form taken by the act of confrontation itself. Although the previous studies demonstrated that confrontation came at a social cost to the confronter of environmental disregard, even when the individual has displayed personal credibility, these studies did not consider the level of politeness utilized by the confronter in the interaction. The degree to which a confronter adheres to conversational norms of politeness would appear potentially important in this context given that confronting another's opinion/behaviour is, in itself, conversationally non-normative (Becker & Barreto, 2014; Czopp et al., 2006). As mentioned earlier, one might postulate that if a conversational actor is going to violate politeness norms by openly challenging another's conduct then they will be perceived negatively, *unless* the conduct they are confronting is regarded as sufficiently norm-violating as to warrant this departure from normative conversational politeness. I argued earlier that the social setting in which the interpersonal confrontation took place might have made one confrontation (Study 3) more inappropriate than another confrontation (Study 4) of a very similar anti-environmental comment, which in turn altered

observer's evaluations. If the above reasoning is accurate, then one might also expect that the differential costs of confronting these issues should be amplified by the level of impoliteness displayed in the conversational act of confrontation, and attenuated by displays of politeness. In this study I directly manipulated politeness of confrontation as an independent variable to test these theoretical propositions.

Method

Participants and design. One-hundred and sixty two British students (117 female, $M_{age} = 20.67$, $SD = 2.18$) of the University of Exeter completed the study, which involved a 2 (issue: environmental disregard vs. racial prejudice) X 3 (reaction: no confrontation vs. polite confrontation vs. impolite confrontation) between-participants design.¹⁵

Procedure. This study used a shorter version of the focus group transcript used in Study 4. The topic of the focus group meeting was either "Climate change and the reduction of greenhouse gas emissions" or "Tolerance towards other cultures and their integration into our society". The depicted discussion began with one person (Sam) making the same comment as used in previous studies that either expressed environmental disregard or racial prejudice, which was then followed by the reaction of a second person (Alex). In both the no confrontation condition and polite confrontation conditions the focus group moderator directly asked 'Alex' to express their thoughts in response to Sam's comment. In contrast, in the impolite condition the responder (Alex) *interrupted* the comment maker to condemn the comment made. In both confrontation conditions Alex was seen to say "How can you even think something like that? I can't believe that you just made such a stupid comment." Whereas in the no confrontation condition the reaction was: "Really? That's interesting. What makes you say that?"

¹⁵ The data for the racial prejudice condition was collected by a British student who was running an internship in the department.

I created 4 items to assess the extent to which participants saw the confronted issues in moral terms: “Climate change/ racial prejudice is a moral issue”, “Climate change/ racial prejudice causes human suffering”, “In an ideal world there would be no greenhouse gas emission/ racial prejudice” and “I can accept that people have a different opinion on Climate change/ racial equality” (reverse coded).¹⁶ Participants had to indicate on a 7-point Likert scale how much they disagree (1) or agree (7) with each statement. All assessed morality items loaded on the same factor as verified by a Direct Oblimin rotated factor analysis. Together they explain 48.43 % of variance and formed a reasonably reliable scale ($\alpha = .63$).

Closeness to the responder was assessed with the 4-item scale used in the previous studies. To measure the perceived warmth, participants were asked “How good natured/ cold (reversed)/ trustworthy/ sincere is Alex”. Answers were indicated on a scale from *not at all* (1) to *extremely* (7). An exploratory factor analysis with Direct Oblimin rotation revealed that the social perception items loaded on the intended two different factors (loadings $> .47$),¹⁷ and together explain 61.60% of variance. Both formed reliable scales (closeness: $\alpha = .86$; warmth: $\alpha = .65$).

As in previous studies we also measured closeness to the original *comment maker* using the 4-item scale ($\alpha = .86$).¹⁸ Additionally, we included here two questions aimed at picking up on the intended differences in appropriateness between the two confrontation manipulations. Participants were asked to indicate their agreement with two statements on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), namely, “Alex’s reaction was

¹⁶ One additional item “There is no clear right or wrong when it comes to racial prejudice” reduced α to .286 and was therefore excluded from the remaining analysis

¹⁷ The lowest being “cold”, excluding this item would not have increased α and was therefore included in the remaining analysis.

¹⁸ Items measuring the perceived warmth of the comment maker did not form a reliable scale ($\alpha=.44$), did not load on one respective factor and was therefore excluded from the analysis.

in line with social conventions” and “In the transcribed situation, Alex reacted appropriately”. Those two items shared a reliability of $\alpha=.66$.¹⁹

Results

Preliminary analysis. An ANOVA analysis on the politeness manipulation check, including reaction and issue as independent variables, identified a main effect of issue $F(1, 172)= 9.15, p= .003, \eta_p^2= .051$, a main effect of reaction $F(2, 172)= 3.68, p= .027, \eta_p^2= .041$, but no interaction between those variables on the perceived appropriateness of the reaction, $F(2, 172)= 0.43, p= .655, \eta_p^2= .005$. Unsurprisingly, overall, the reactions towards the racist comment were perceived as more socially appropriate ($M= 4.92, SE= 0.14$) than any of the three reactions towards environmental disregard ($M= 4.36, SE= 0.13$). More importantly, as intended, participants perceived the non-confrontational reaction as more socially appropriate ($M= 4.98, SE= 0.16$) than the polite confrontation ($M= 4.57, SE= 0.16$) whilst the impolite confrontation was rated as least appropriate ($M= 4.37, SE= 0.16$).

Main analysis. A 2 (issue: environmental disregard vs. racial prejudice) X 3 (reaction: no confrontation vs. polite confrontation vs. impolite confrontation) ANOVA²⁰ on *closeness* to the responder revealed a significant main effect of issue, $F(1, 172)= 11.61, p= .001, \eta_p^2= .063$, and a marginal main effect of reaction $F(2, 172)= 2.65, p= .074, \eta_p^2= .030$, both of which were qualified by a significant interaction between reaction and issue, $F(2, 172)= 3.43, p= .035, \eta_p^2= .038$. Replicating Studies 2 and 3, type of reaction affected closeness for environmental disregard, $F(2, 172)= 6.25, p= .002, \eta_p^2= .068$, but not for racial prejudice, $F(2, 172)= 0.33, p= .721, \eta_p^2= .004$ (see Figure 5).

In the environmental disregard condition participants indicated greater closeness to the responder when their reaction was non-confrontational ($M= 4.79, SE= 0.20$) than when

¹⁹ One additional item “Alex created a socially awkward moment” – reduced α to .479 and was excluded from the remaining analysis.

²⁰ Entering agreement with the comment maker as covariate did not change the pattern of the results.

they confronted politely ($M= 4.27$, $SE= 0.19$) or impolitely ($M= 3.81$, $SE= 0.19$). Polynomial contrasts demonstrated that this pattern in the environmental disregard conditions followed a linear trend, $p= .001$, $SE= .21$, 95% CI [-1.11, -0.28], however no significant linear trend was observed in the case of racial equality, $p= .78$, $SE= .20$, 95% CI [-0.34, 0.44]. In sum, confronting environmental disregard led to less closeness than not confronting, and this was especially so when the confrontation was impolite. The presence of confrontation, and the form that it took, had no consequence, however, when the issue in question was racial prejudice.

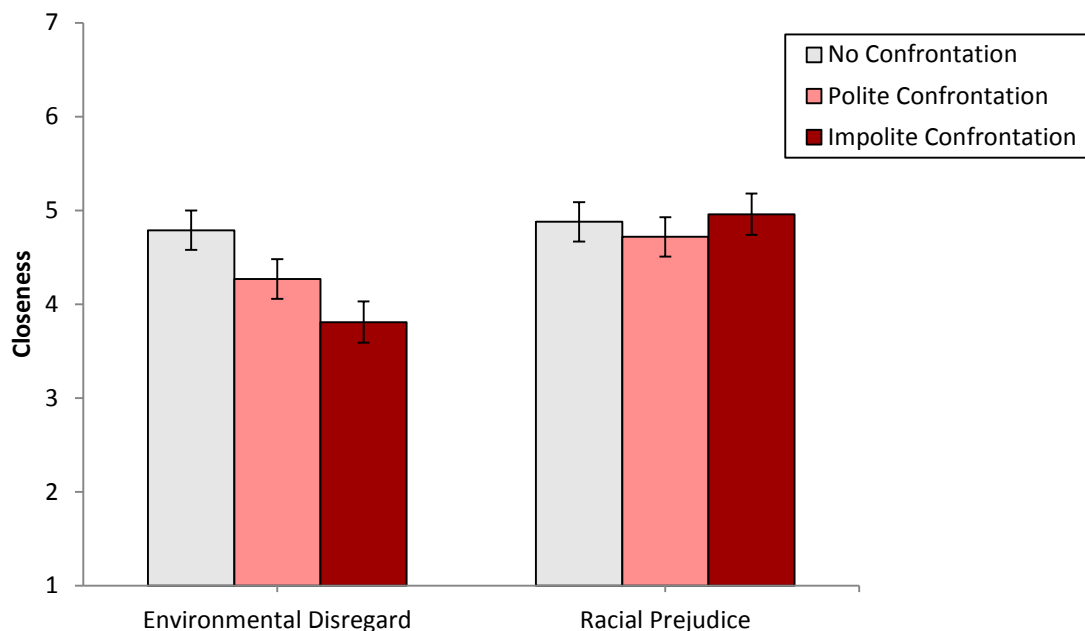


Figure 5. Participants feeling of closeness to the responder, showing a linear trend for the effect of reaction on closeness when the issue was environmental disregard.

The same analysis on perceived warmth²¹ revealed a significant main effect of issue, $F(1, 172)= 2.55$, $p= .035$, $\eta_p^2= .026$. Consistent with previous findings, the person reacting to the racist comment was evaluated as being warmer ($M= 4.62$, $SE= 0.08$) than the person reacting to environmental disregard ($M= 4.38$, $SE= 0.08$), regardless of the type of reaction.

²¹ Entering agreement with the comment maker as covariate did not change the pattern of the results.

Additionally, there was a significant main effect of reaction, $F(2, 172)= 4.03, p= .020, \eta_p^2= .045$, such that the person responding without confrontation was perceived as being warmer ($M= 4.71, SE= 0.10$) than the polite confronter ($M= 4.48, SE= 0.10$) and the impolite confronter ($M= 4.31, SE= 0.10$). Although there was no further interaction between the variables, $F(2, 172)= 1.77, p= .174, \eta_p^2= .020$, the pattern for warmth in the environmental disregard condition was identical to that observed for closeness and the linear trend of the three reaction conditions was also significant, $p=.001, SE= .13, 95\% CI [-0.72, -0.21]$, whereas the simple effect of reaction was not significant in the context of racial prejudice, $p=.514, SE= .15, 95\% CI [-0.41, 0.21]$, see Figure 6.

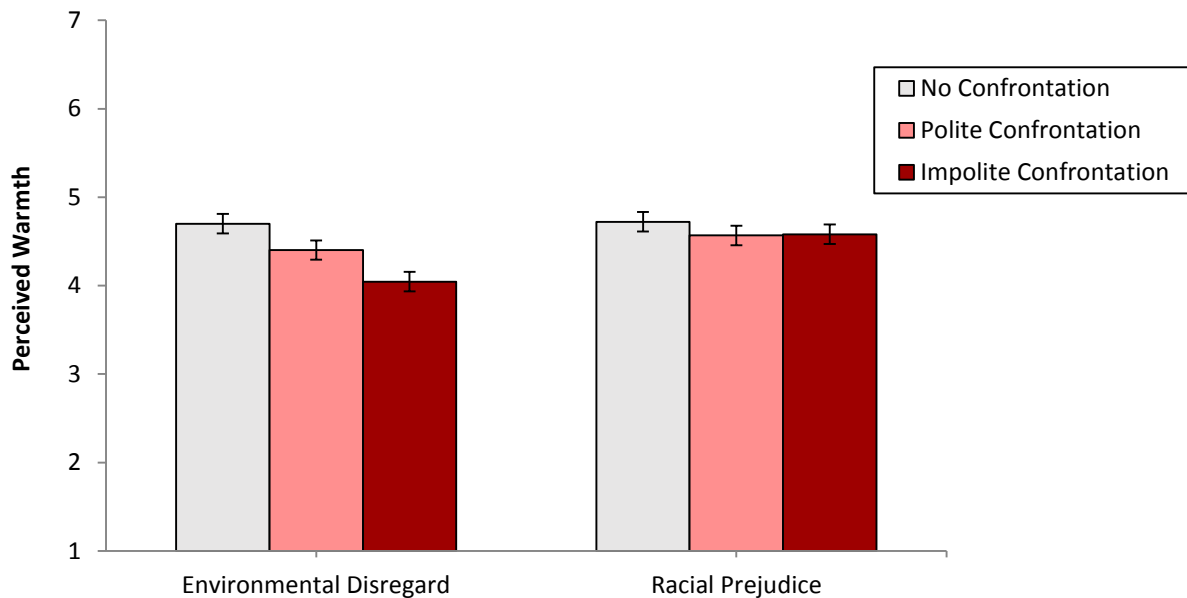


Figure 6. Participants perceived warmth of the responder, showing a linear trend for the effect of reaction on closeness when the issue was environmental disregard. Reaction (no confrontation, polite confrontation, impolite confrontation) showed no effect on perceived warmth when the confronted issue was racial prejudice.

A final ANOVA examined the combined effects of issue and reaction on the morality measure. Here, as predicted, there was a significant main effect of issue, $F(1, 171)= 88.67, p< .001, \eta_p^2= .341$, with participants in the environmental disregard condition indicating that the issue was less of a moral one to them ($M= 4.24, SE= 0.09$) than participants in the racial

prejudice condition ($M= 5.49$, $SE= 0.10$). Perceptions of morality were not further shaped by reaction, either independently, $F(1, 171)= 1.84$, $p= .162$, $\eta_p^2= .021$, or in interaction with issue, $F(1, 171)= 0.32$, $p= .727$, $\eta_p^2= .004$.

Closeness to comment maker. The analysis of the feelings of closeness to the comment maker revealed no statistically significant effect of reaction, $F(2, 172)= 0.65$, $p= .522$, $\eta_p^2= .008$, or issue, $F(1, 172)= 1.35$, $p= .248$, $\eta_p^2= .008$, nor an interaction of those two independent variables $F(2, 172)= 1.08$, $p= .341$, $\eta_p^2= .012$.

Mediation analyses. My argument was that the reason people respond differently to confrontation in relation to the environment, as opposed to racial prejudice, is because these domains are differentially perceived in terms of morality. The above analyses already demonstrate the differential perceptions of morality across domains and the different reactions to confrontation within them. To fully test my reasoning, however, I explored the role of perceived issue morality in explaining differential reactions to confrontation across domains. Specifically, I tested whether the direct effect of issue on morality indirectly determines (and thereby explains) responses to confrontation. This model was tested using PROCESS (Hayes, 2012) Model 17, with 1000 bootstrap samples, in which the independent variable (issue), the mediator (morality), the interactions between the independent variable and moderator (confrontation condition) and interactions between the mediator and moderator were used as predictors of closeness and warmth. Conditional indirect effects between issue and outcome via morality as a function of confrontation condition were also examined. To perform this analysis, the three-level reaction variable was first recoded into two dummy variables that represented the contrast between the control and two confrontation conditions (dummy1: $-.667$, $.33$, $.33$) and the orthogonal contrast comparing the two confrontation conditions to each other (dummy2: 0 , $-.5$, $.5$), thereby permitting analysis of

this multi-categorical variable within the regression-based PROCESS framework (e.g. see Hayes, 2012).

The analysis performed on closeness confirmed the effect of the issue (the IV) on morality (the mediator), $b = -1.25$, $SE = .13$, $t = -9.39$, $p < .001$, and revealed a significant interaction between this mediator and dummy1 (confrontation versus not), $b = .45$, $SE = .20$, $t = 2.25$, $p = .03$. Moreover, bootstrapping revealed a significant indirect pathway between issue and closeness via morality under conditions of confrontation, effect = $-.53$, $SE = .16$, 95% CIs = $-.93$ & $-.25$, but not under conditions of non-confrontation, effect = $.03$, $SE = .21$, 95% CIs = $-.30$ & $.55$. Thus, the reason why people socially distance themselves from someone who engages in confrontation in the environmental (versus racial) domain is because this issue is perceived less strongly in terms of morality.

In the analysis of closeness, there was also a marginally significant interaction between the independent variable (issue) and dummy2 (polite versus impolite confrontation), $b = -.95$, $SE = .49$, $t = -1.94$, $p = .055$. This reflects the fact that over and above the indirect effect of confrontation on closeness via morality, impoliteness was still perceived more negatively in the environmental domain (i.e., there was a residual direct effect of issue unexplained by morality perceptions in response to impolite confrontation, $b = -.61$, $SE = .32$, $t = -1.90$, $p = .058$, but not polite confrontation or non-confrontation, $ts < 1$).

The analysis performed on warmth also confirmed the effect of issue on morality, $b = -1.28$, $SE = .13$, $t = -9.82$, $p < .001$, but in this analysis there were significant interactions between issue (the IV) and dummy2 (politeness versus impoliteness), $b = -.36$, $SE = .16$, $t = -2.29$, $p = .02$, and between morality (the mediator) and dummy2, $b = -.78$, $SE = .34$, $t = -2.30$, $p = .02$. Analysis of the indirect effects revealed a pathway between issue and warmth via morality only in response to polite confrontation, effect = $-.39$, $SE = .16$, 95% CIs = $-.70$ & $-.11$. There was no indirect pathway via morality in response to impolite

confrontation, effect= $-.01$, $SE = .15$, 95% CIs= $-.32$ & $.31$, nor was there any indirect pathway via morality in response to non-confrontation, effect= $-.01$, $SE = .15$, 95% CIs= $-.32$ & $.28$. Thus, the reason why people perceive someone as less warm when they engage in polite confrontation in the environmental (versus racial) domain is because this issue is perceived less strongly in terms of morality.

However, as was the case for closeness, people apparently perceive someone as less warm when they engage in impolite confrontation in the environmental domain for reasons other than morality, as evidenced by the significant issue x dummy 2 interaction reported above, and the residual direct effect of issue on warmth in response to impolite confrontation, $b = -.49$, $SE = .22$, $t = -2.23$, $p = .03$, but not polite confrontation or non-confrontation, $ts < 1$.

To summarise, these analyses show that the reason people feel less close to someone who is confrontational in the environmental domain (politely or impolitely), and the reason they perceive this person as less warm (at least when they engage in polite confrontation), is because the environmental domain is not perceived to be sufficiently moral to permit such confrontation. People also respond negatively to impoliteness for reasons other than morality; however it is interesting that these additional costs of impoliteness are similarly limited to environmental confrontation.

Discussion

Study 5 broadens our understanding of the social costs associated with confronting environmental disregard in three ways. Firstly, the results demonstrate that the method of confrontation, polite or less polite, affects the social evaluation of the confronter of environmental disregard, with impolite responses resulting in even higher social costs than a polite confrontation. By contrast, evaluations of a person confronting racism were not sensitive to politeness concerns. This speaks to the role of appropriateness of confrontation

and suggests that small changes in the confrontation itself (or the context) will alter observers' perception of the confrontation of environmental disregard.

Importantly, this study showed that racial equality and climate change are indeed perceived as morally different, with racial equality being defined in more moral terms than was climate change. Moreover, this difference in perceived morality explained the differential reactions to confrontation as a function of issue. Interestingly, this pattern of indirect effects via morality was clearest for polite confrontation: even polite confrontation of environmental issues (versus racism) attracted sanctions in terms of closeness and warmth because this issue is not perceived as sufficiently moral to warrant such behaviour. Impolite confrontations of environmental disregard attracted especially negative reactions; however the additional cost of impolite confrontation (over and above confrontation *per se*) was not explained by issue morality, especially when it came to ratings of target warmth.

Speculatively, and linking this specific finding back to Study 4, it could be that impolite confrontation or a highly credentialed confronter (Study 4) leads to inferences about the confronter that go beyond issue morality to explain the negative reactions they received – for example that this person may be seen as some kind of 'extremist'. As I discussed in the previous chapter, there is a fine line between positive evaluations of a confrontation and potential backlash effects (Becker & Barreto, 2014; Plant & Devine, 2001; Rasinski & Czopp, 2010). Highlighting one's own environmental credentials or confronting in an impolite way seem to both tip observers towards going more strongly against the external social pressure they are observing, perceiving it as more inappropriate than polite confrontation or confrontation by someone who has less pro-environmental credentials. Although seemingly plausible, this alternative explanation would need to be substantiated empirically in future research.

Overall, this study suggests that when people perceive an issue to be sufficiently moral in nature they will be less inclined to socially distance themselves from someone who confronts another in relation to that issue. Conversely, even polite confrontation of an issue that is perceived as insufficiently moral can attract social sanctions. Those sanctions are amplified when confrontational behaviour breaks conversational norms of politeness; however this additional cost of impolite confrontation is not explained by issue morality alone.

General Discussion

In the previous chapter we identified different consequences for an actor who confronted the normatively consensual issue of racial equality versus the less normatively consensual issue of climate change. The two studies in this chapter consistently replicated and extended this finding. A target who confronted environmental disregard was perceived more negatively than a target that did not, whereas the reverse was consistently apparent for confrontations of racial prejudice. These negative evaluations of confronters in the environmental domain were particularly evident on social evaluations (i.e., closeness and warmth) and not on perceptions of competence (which was higher in response to confrontation regardless of issue; Study 4).

Interestingly, displaying credentials did not buffer the confronter against negative evaluations (Study 4), and although conversational politeness did attenuate negative reactions to confrontation relative to impoliteness, there were still costs associated with polite confrontation of environmental disregard that were not apparent in the context of racial equality, with the politeness of confrontation being shown to not matter in that context (Study 5). Importantly, Study 5 confirms that the social costs of confrontation in the environmental domain are explained by the insufficient morality of this issue relative to racial prejudice,

especially with respect to the costs of polite confrontation. Impolite confrontation in this domain had further costs that seem to go beyond issue morality alone, but, again, impolite confrontation of racial prejudice was not similarly sanctioned.

In terms of the potential consequences of confrontation for the comment maker and how witnessing confrontation affects an observers' agreement (or disagreement) with extreme comments, the results of the studies are thus far mixed. While there is evidence that confrontation decreases feelings of closeness and feelings of agreement with the comment maker, these results have not been identified consistently.

In light of this, subsequent studies were required to elaborate on the consequences of confrontation, in ways that go beyond the evaluation of the person confronting or the comment maker to also consider consequences beyond the immediate interaction (such as perceptions of social norms, climate change attitudes, or action tendencies).

Theoretical implications

The findings of this chapter broaden our scarce understanding of the interactional process by which social norms might be maintained, an important first step towards understanding how these social norms might change. Whereas the existing literature can tell us a great deal about how norm-manipulating messages, socially comparative feedback, and norm-cueing social environments affect individual actions (Keizer et al., 2008; Schultz et al., 2007; Vossen et al., 2009), there remains a need to understand how current social norms play out in interpersonal interactions and the ways in which such processes might be meaningful in terms of changing lifestyles. Indeed, recent literature on interpersonal confrontation has drawn attention to the role of social sanctioning processes in promoting environmental actions (Czopp et al., 2006; Swim & Bloodhart, 2013). However, extending these insights, our research identifies that currently the expression of dissatisfaction about extremely non-environmental viewpoints is negatively evaluated. These high social costs might speak for the

strength of the current (anti-environmental) norms and this might undermine a change towards a more sustainable society.

Given the diffuse normative climate surrounding environmental disregard, in contrast to the clear moral norm against racism, it might be hard for individual actors to interpersonally affect the kind of changes that lead these norms to shift in a more pro-environmental direction, for example through confronting environmentally-damaging behaviour. The question, therefore, remains as to how one can break this cycle and eliminate the social costs associated with confronting environmental disregard to allow for positive change.

In relation to this question, our findings clarify that personal credentials are not able to protect a confronter against negative social evaluations. If anything, the pro-environmental credentials only resulted in *more* negative evaluations, a finding that fits in with existing literature on psychological reactance showing that people easily dismiss attempts to curtail personal freedom that are perceived as illegitimate (Brehm, 1966). In the context of environmental issues, reactance and mistrust is a commonly occurring reaction towards attempts to persuade the public to change their lifestyles or even the simple provision of information about climate change (Gifford, 2011; Swim et al., 2011). Unsurprisingly then, even a credentialed confronter did not have the legitimacy to question another's environmental conduct. Similarly, while it does seem that polite attempts to confront are met with less negative reactions than impolite confrontations, even polite confrontation of environmental disregard attracted punishments that were not metered to confronters of racial prejudice, regardless of their politeness. Thus conversational strategies like being polite also seem insufficient to break through the non-normative status of environmental confrontation.

Instead, the findings in relation to issue morality suggest that this is what needs to change for interpersonal confrontation of environmental disregard to be more acceptable,

which echoes some recent suggestions in the literature (Bratanova et al., 2012; Markowitz, 2012; Markowitz & Shariff, 2012). Climate change certainly has *the capacity* to be defined as a moral issue due to it involving human responsibility for inflicted harm on other humans (Popovski & Mundy, 2011; Stern, Dietz, & Black, 1985). However many psychological barriers make it difficult to identify climate change as a moral imperative (Jamieson, 2010; Markowitz & Shariff, 2012) and thus may interfere with attempts to reframe it as such. My subsequent studies reported in the final empirical chapter of the thesis will address different ways of potentially increasing either the perceived morality of the issue itself, or the moral justification for confrontation of environmental disregard more specifically. In so doing I hoped to clarify whether morality is the key to counteracting social costs of confrontation such that processes of social interaction might positively affect social change in the domain of environmental issues.

The first five studies of the thesis formed an exploratory first step towards understanding the relationships between normative process and processes of interpersonal confrontation. One obvious limitation of all of these studies, however, is that they are confined to either scenario methods or perceptions of formulated transcripts of (putatively real) interactions. Therefore, when designing subsequent studies, I considered it crucial to consider possibilities for investigating responses to social confrontation in more realistic settings, bearing in mind that the ways that participants experience and interpret more 'real' forms of interaction might be somewhat different to their reactions to something that they either know to not be real, or which at the very least they are not a part of themselves. As such, the final three studies, in addition to their focus on manipulations of morality, also each explored a different methodology for examining reactions to confrontation in a more realistic setting.

Chapter 4: Consequences of Witnessing Confrontation and Further Exploration of the Role of Morality

The studies presented in chapters 2 and 3 allowed for an initial understanding of the interactive processes that reflect, communicate and potentially change social norms. However what has also become evident from these studies is that a deeper understanding of these interactive processes of normative influence is clearly needed for such micro-level interpersonal behaviours, like confrontation, to be harnessed to promote, rather than impede, attempts to address broader societal problems like climate change. The studies presented in this chapter aimed to shed light on the consequences of witnessing social confrontation and will test different strategies that can help to foster pro- environmental action.

The previous studies increased our scarce knowledge of how social norms play out in interpersonal interactions and delivered evidence for high social costs associated with confronting environmental disregard. These results further identified perceived issue morality as a factor that can partly explain why high social costs befall the confronter of some issues (like environment disregard) but not others (like racism). Therefore, this chapter will focus, among other things, on issue morality and will investigate how to integrate morality or moral information into the confrontation situation. Even though the previous studies put forward morality as a factor that might be able to reduce social costs associated with confronting environmental disregard, the subsequent studies also consider other variables that might render social confrontation more successful. The sense with which I refer to ‘more successful’ is twofold in this case. Firstly, reduced costs befalling a person engaging in the confrontation, and secondly, a *successful* confrontation might actually affect observers’ attitudes or actions in relation to the issue in a way that aligns with the confronters position on the issue at hand.

It is important to note at this point that these two criteria are not necessarily dependent on each other. As Czopp, Monteith, and Mark's (2006) findings in the context of racial prejudice suggest, it might be the case that, despite negative evaluations of the confronter, witnessing a social confrontation still alters onlookers' attitudes or behaviour towards the confronted issue. The social costs of confronting environmental disregard, as identified by my previous studies, do not, therefore, necessarily undermine the possibility that witnessing this interaction could have effects on onlookers (or even the confronted individual themselves) that might be considered positive from a pro-environmental perspective. However, social costs can discourage individuals from confronting problematic behaviour in the first place (e.g., see Shelton & Stewart, 2004). Therefore, in the subsequent studies, I still consider the social costs of confrontation, and ways to reduce them. However this occurs alongside examining additional consequences of socially confronting environmental disregard that extend beyond the social implications for the individual who confronts. To bridge my current findings to recent literature on interpersonal confrontation and its effect on behaviour (Czopp et al., 2006; Swim & Bloodhart, 2013), the subsequent studies aim to investigate how confrontation affects individual attitudes and actions of those witnessing that interaction. I will consider different actions relevant in the context of environmental issues such as climate change: climate change attitudes, policy support, behavioural intentions and also immediate actual behavioural actions.

Another goal of the studies presented in this chapter was to examine social confrontation in a more realistic social setting than in my previous studies. The studies presented in previous chapters used a hypothetical scenario and a (bogus) focus group transcript to present participants with a social confrontation situation that had occurred in the past, however existing literature on confrontation raises doubts about people's ability to successfully imagine being part of a confrontation situation. For example, as referred to

earlier, female participants have been found to overestimate their tendency to confront sexist remarks and they were even found to anticipate their psychological reactions incorrectly (Swim & Hyers, 1999; Woodzicka & LaFrance, 2001). While this literature concerns anticipated actions and emotions of potential victims, my research puts participants in the less engaged role of an observer. The differences between anticipated and actual feelings might not be as drastic from an observer's point of view. However, it is important to make the experimental setting as realistic as possible to allow for conclusions that are diagnostic of how these processes might unfold in the real world, especially when aiming to examining behavioural responses. The studies in this chapter used a variety of methods to increase the realism of the confrontation. These ranged from asking participants to listen to an audio recording of an interaction (Study 8), exposing them to a virtual (chatroom) environment (Study 7) or placing participants in a lab environment to witness a confederate (ostensibly) engaging in confrontation of another participant (Study 6).

In summary, the three studies presented in this chapter will examine the role of issue morality in more depth than in prior chapters, while increasing reality and examining consequences of social confrontation that go beyond those befalling the confronter and the immediate conversational situation (e.g. perceived social norms, subsequent behaviour, climate change attitudes, policy support, and behavioural intentions).

Study 6

The main objective of this experimental lab study was to replicate the previous findings obtained in the studies reported in Chapters 2 and 3 in a more realistic confrontation situation. Instead of reading a scenario or focus group conversation and imagining being part of that described situation, participants witnessed a confederate actually confronting environmental disregard or racism in a group setting within the lab.

Furthermore, this study attempted to experimentally manipulate (increase) the perceived morality of the target issue to expand on Study 5's finding that pointed to issue morality as a factor that partly explained why confronters of environmental disregard were perceived negatively, while confronters of racism were more positively evaluated when engaging in the act of confrontation. The logical next step, given this finding, was to experimentally manipulate issue morality and to test the hypothesis that increasing the association between morality and environmental issues can eliminate (or reduce) the social costs associated with confronting environmental disregard.

In addition to this extension, two new dependent variables were introduced into this study: the perception of social norms associated with the issue and a behavioural measure assessing willingness to engage with the issue at stake (pro-environmental actions or pro-egalitarian actions, according to condition). Existing literature on normative influence highlights the importance of injunctive and descriptive norms when framing normative messages (e.g. Schultz et al., 2007). Swim and Bloodhart's (2013) work (to date the only research investigating confrontation of environmentally harming actions) intentionally included information about high injunctive and descriptive norms into the admonishing message used in their research. Therefore, it remains unclear whether normative signalling plays a role in the effectiveness of confrontation. The current study aims to answer the question of whether the act of social confrontation 'communicates' social norms, which would broaden our theoretical understanding of interpersonal confrontation. Witnessing someone socially confronting a comment maker could remind witnesses that the comment maker broke a social norm and act as a reminder of what people *should* be doing (injunctive norms). Alternatively (or perhaps in addition), the confrontation could also act as an indicator that other people *do* act in line with these norms and that their actions even extend to standing up for it in public (descriptive norms). In conclusion, the current study is designed to deliver

insight into whether the act of social confrontation sends normative messages to the social environment.

As a final objective of this study, the inclusion of a behavioural measure allows for a first indication of whether witnessing confrontation of another might affect observers' tendency to act in line with the confronters' position themselves.

Method

Participants and design. The study followed a 2 x 2 x 2 between-participants design with issue (environmental disregard vs. racial prejudice), reaction (confrontation vs. no reaction), and issue morality salience (morality salient vs. morality not salient) as independent variables. The dependent variables assessed in this study were the perception of the responder (closeness, warmth, competence), the perception of the descriptive and injunctive norms associated with the issue, and a behavioural measure of engaging with climate change or racial equality. I recruited 145 (30 male)²² Exeter University students to participate in this study ($M_{age} = 19.94$ $SD = 2.22$) in return for either £5 cash or course credits. The study was designed for a group of three, four, or five participants and the group of participants in each session was randomly assigned to the same experimental condition.

Procedure. Three, four or five participants arrived at the lab at the same time, together with one female confederate who pretended to also be a participant. I welcomed everyone and explained the structure of the session after everyone had given his or her written consent. It was explained that the main part of the study was a group discussion about a particular social issue. It was explained that, before that discussion could take place however it was necessary to go through a couple of preparatory stages. Everyone would firstly get some time to think individually about the assigned topic. For this first part of the study I sent the participants and the confederate to separate (individual and private) desks,

²² 8 participants were excluded from the analysis because they had participated in previous studies of this line of research.

which were spread out around the lab space. Two of the desks were in closed off cubicles while the other four desks were spread out in the two main rooms of the lab, divided with partitions to ensure that there was no doubt about the confidentiality of participants' answers. The confederate always went into one of two separate cubicles to make sure her presence would not interfere with participants' answers at any point during the study.

When everyone was seated, I handed out a questionnaire including three open-ended questions about either the issue of climate change or the issue of racial equality (according to condition). This part of the study served the main purpose of creating a situation that allowed for the disregarding comment to be read out in a way that made participants believe that the comment was written by one of the participants present in that session. The questions were "1. How strongly do you feel about climate change/racial equality?", "2. How much does the issue of climate change/ racial equality affect your own life? It might help to think about an example.", and "3. Do you think there is anything that needs to change (e.g. on a political, social, economic level) in relation to climate change/ racial equality?"

Participants assigned to the morality condition were given an additional sheet with an example of how a previous participant had answered the first question while participants in the no morality condition were given no such information. It was within this text that the morality manipulation was embedded. It read:

I guess I feel strongly about climate change. I think we have a moral duty to care about this; we have to take responsibility for our actions. I don't think it is right that people suffer because of the ignorance of others. Not thinking about any consequences of our actions is easy but wrong. We are far away from being on the right track which is why we should care and think about what we can do to be more sustainable society.

When everyone had finished answering the open-ended questionnaire I invited participants to come together and sit in chairs placed in a circle. I then explained that I would read out some random answers, allegedly provided by the participants present in that session, to give everyone an idea of what other future discussion partners thought about the given issue, but that this would be done without revealing who wrote which comment. I pointed out that paper and pencil were provided in case they wanted to take notes or write down issues or thoughts they would like to bring up later during the actual group discussion.

I then read out three, presumably random, answers to the three questions. In reality those answers were pre-constructed and were identical in every session (see Appendix D for the complete material) the answer to the second question “How much does the issue of climate change [racial equality] affect your own life?” contained the disregarding comment and read as followed (racial equality condition presented in parentheses):

Not at all. I couldn't care less about being all green [tolerant] cause really what is the point? It rather pisses me off when people try to be overly politically correct. I don't like it when other people tell me how to act. So I make sure I am not listening to them and even do the opposite. So I am as environmental harming [intolerant] as I can be.

After that, the confederate either confronted or did not confront this comment. In the confrontation condition, the confederate said in a contemptuous voice “That is ridiculous. I can't believe someone said that.” However, in the non-confrontational condition, the confederate did not say anything and let the moment pass without a reaction. Meanwhile, as experimenter, I made sure that I did not react to the disregarding comment or the confrontation and moved on to read out the third (constructed) answer.

After that, it was announced that there would be another part of the study to go through individually prior to the discussion. I explained that one aim of the study was to

investigate how people form perceptions of others based on how they act during a discussion. Therefore, everyone would be asked to indicate their individual perception of other discussion partners at two time points, once prior to the discussion and once afterwards. In reality this was only a cover story for getting participants to rate the confederate and this rating process only took place once. To make this quicker, each participant only had to rate one other participant. At the beginning of the study each participant (and the confederate) was given name tags showing to identify each person. A draw was constructed by placing pieces of paper with a letter representing a participant, on two separate pots. Each participant (and the confederate) drew one letter (referring to one person present) out of each of the two pots. Each pot presumably contained all participants' letters, but in reality one pot contained only the letter referring to the confederate while the other pot contained the letters referring to the participants (and not the confederates' letter). This procedure was designed to give participants the impression that the assigned letters were randomized across participants, even though they all actually rated the confederate and one other person (randomly).

Once the names were assigned, participants (and the confederate) went back to the separate desk spaces and I individually handed out the questionnaires including the social perception questions. When participants were done with this questionnaire they were given a final questionnaire as a final assessment of their attitudes prior to the discussion. While talking to participants, I also drew participants' attention to some flyers and a box that had been on each desk since the beginning of the study. This flyer provided an opportunity to sign up for a student society project related to the target issue and constituted the behavioural measure. At the end of the study, when participants came back together, I revealed that the discussion was merely part of a cover story and would not take place. Participants were fully debriefed as to all the deception used in the study, were given the opportunity to ask questions, and were thanked and compensated for their participation.

Dependent measures. Participants were asked to indicate their perception of the confederate by indicating their feelings of closeness to the confederate and the perceived warmth and competence of that person. As in previous studies, the 4-item scale of feelings of closeness was used ($\alpha = .84$). To assess the perceived warmth participants were asked how good-natured, likable, warm, kind, helpful, and friendly that person was ($\alpha = .91$). Furthermore, four items (confident, skilled, intelligent, competent) were included in the social perception questionnaire as a measure of perceived competence ($\alpha = .80$). A factor analysis was performed on all the social perception items, showing that together they explain 71.30% of the total variance and confirming that the respective items load ($\geq .74$) on three separate factors.²³

The final questionnaire was designed to measure perceptions of social norms related to the target issue. Participants were asked to indicate their agreement (ranging from 1 = *strongly disagree* to 7 = *strongly agree*) with seven statements assessing injunctive and descriptive norms related to climate change or racial prejudice, depending on the issue assigned to the group. Three statements participants answered were: “People around me think that everyone should care about climate change [racial equality]”, “Most people expect everyone to be environmental friendly [to behave in unprejudiced ways]”, “Most people think that we should try to reduce carbon emissions [racial prejudice]”, “Most people do whatever they can to reduce their carbon footprint [racial prejudice]”, “Most people don’t really care about climate change [racial equality]”, “I think most people try to minimize their carbon footprint [biases against other groups]” and “Few people worry about being environmentally harming [racist].”

A factor analysis on the descriptive and injunctive norm items (Direct Oblimin rotation) showed that the items loaded on one factor and explained 50.80% of the total

²³ Three additional items (honest, trustworthy, and sincere) loaded on the same factor as competence and were therefore excluded from the analysis.

variance.²⁴ Therefore, I decided to combine the two measures into one singular norm perception measure and averaged participants' answers to the six social norm items for subsequent analyses. The six items formed a reliable scale with $\alpha = .80$.²⁵

The behavioural measure was included in this study to get an indication of whether witnessing social confrontation affects participants' tendencies to do something to support the disregarded issue. Flyers were designed to appear as an advertisement of an existing student society called "Be the Change" - a society that supports and initiates various community projects. The flyer described a (bogus) new project of the society and gave the opportunity to sign up for this project. Depending on condition, the project either was either aimed at promoting environmental sustainability and waste reduction on campus, or aimed at promoting the integration of international students and the reduction of conflicts on campus. The flyer offered three tick boxes, space to leave comments and space to leave personal contact details (see Appendix E for the exact layout and wording of the flyer). The three options given on the flyer read as follows: "I don't want to leave my details, but I will give my opinion/ideas"; "I want to receive updates/ more information on this project"; "I want be contacted to get involved in volunteering for this project". When drawing participants' attention to the flyers it was explained that that filling out the flyers was optional and not part of the study. There is reason to assume that this was believable as the majority of the participants (61.5 %) indeed ignored the flyers.²⁶ The three options on the flyer reflected different ways to get involved with the target issue and therefore it cannot necessarily be assumed that the coding of the answer options constitutes a *continuous* measure of behaviour.

Prior to the analysis, the four different behavioural outcomes were coded as follows:

0 indicating no response to the flyer (set as reference group), 1 indicating leaving a comment,

²⁴ Three additional items were excluded from the analysis because they loaded on three separate factors.

²⁵ Separate analyses on descriptive and injunctive norm items delivered identical results to the combined social norm scale.

²⁶ Four participants were member of the student society 'be the change' and were therefore removed from the analysis of this variable.

2 indicating leaving details and requesting more information and 3 indicating leaving details and expressing willingness to volunteer for the project.

Additional measures. To verify whether or not the morality manipulation had the intended effect and increased participants' ratings of issue morality, three questions were included in the final questionnaire. Participants indicated on a 7-point Likert scale (ranging from 1= *strongly disagree* to 7= *strongly agree*) how much they agreed with three statements: "Climate change [Racial equality] is a moral issue", "People have a moral duty to reduce their carbon footprints [duty to treat people from other countries without prejudice]", and "Climate change [Racial equality] causes human suffering". The three items formed a reliable scale ($\alpha = .77$) and were averaged prior to analysis.

The open-ended questionnaire given to participants at the beginning of the study was, initially, solely included to create a cover story for reading out the disregarding comment which was (ostensibly) written by one of the participants present in the room. However, having collected the data, it occurred to me that it also seemed to provide an additional opportunity to analyse the information provided and consider it as a potential proxy measure for participants' own attitudes towards the issue in question. Therefore, two independent coders coded the open-ended answers to the first question "How strongly do you feel, personally, about climate change/racial equality?". However, the coding process on the racial equality data demonstrated that there was no variance in the described feelings towards this issue. Therefore, this post hoc analysis of pre-existing attitudes towards the issue was only performed for the issue of environmental disregard (53 participants). Coders used a 4-point scale, where 1 indicated scepticism about anthropogenic climate change (n= 4), 2 indifference about the issue (n= 22), 3 recognition of the importance of climate change but failure to act upon it (n= 17) and 4 strong feelings that climate change is of high relevance (n= 10) (see Appendix F for examples). I will refer to the scores on this scale as indicating climate change

attitudes, ranging from scepticism to perceiving the issue itself and related actions as highly relevant.

Results

Preliminary analyses. An ANOVA including morality, issue, and reaction as independent variables and the perceived morality of the issue as the dependent variable showed that there was a reliable main effect of issue, $F(1, 137) = 54.21, p < .001, \eta_p^2 = .284$. As expected, racial equality ($M = 6.24, SE = 0.11$) was perceived as more of a moral issue than climate change ($M = 5.12, SE = 0.11$). However, contrary to what was intended, the analysis demonstrated that the morality manipulation did not affect ratings of issue morality, $F(1, 137) = 0.007, p = .93, \eta_p^2 < .001$ (morality salient $M = 5.69, SE = 0.11$; morality not salient $M = 5.67, SE = 0.11$). No other effects on the morality manipulation check measure were significant, $F_s(1, 137) = \leq 0.83, p_s \geq .36, \eta_p^2_s \leq .006$.

Testing for nested design. Due to the group setting of the data collection, the independence assumption of the individual data points could not be assumed without additional analyses. Despite keeping interactions between participants to a minimum, I had to consider the possibility that the individual data points are nested within the session level. To test this possibility, I ran an empty multilevel model analysis with restricted maximum likelihood for every dependent variable to examine whether there was a high amount of between-group variance that had to be considered when analysing these variables. Table 4 shows the Intraclass coefficient for the dependent variables and shows that only 1.3% of the variance of warmth, 2.6% of the variance of closeness, and 8.2% of the variance of the behavioural outcome was observed between groups (sessions). This means that the nested structure can be ignored for these two variables. However for the perceived competence and social norm ratings the hierarchical data structure should be considered as an alternative when analysing these variables, $\rho \geq .18$.

Table 4. *Intraclass Coefficients Retrieved from The Empty Models on each Dependent Variable.*

	σ^2 random intercept variance	σ^2 level 1 residual variance	ρ Intraclass coefficient
Closeness	.024	.881	.026
Perceived warmth	.010	.760	.013
Perceived competence	.151	.585	.207
Social norms	.188	1.873	.177
Behavioural outcome	.115	1.279	.082

Main analyses.

Closeness to responder. An ANOVA examined the effects of issue, reaction, and morality salience on participants' feelings of closeness to the responder. The results clarified that no main effects or two way interactions were significant, $F_s(1, 136) \leq 2.99$, $p_s \geq .09$, $\eta_p^2 \leq .021$. However, there was evidence for a 3-way interaction between morality salience, issue, and reaction on closeness, $F(1, 136) = 4.17$, $p = .043$, $\eta_p^2 = .03$ (Figure 7).

While participants who observed the confederate confronting environmental disregard felt less close to the confederate ($M = 4.19$, $SE = 0.21$) than participants who did not witness her confront ($M = 4.62$, $SE = 0.24$) when morality was not made salient, this difference did not reach statistical significance, and therefore did not fully replicate our previous findings, $F(1, 136) = 1.79$, $p = .18$, $\eta_p^2 = .013$. When the morality of climate change was made salient, this tendency for participants to feel closer to the confederate when she did not confront ($M = 4.54$, $SE = 0.23$) than when she confronted ($M = 4.53$, $SE = 0.22$) disappears completely, $F(1, 136) = 0.003$, $p = .96$, $\eta_p^2 < .001$.

However, the current results for the issue of racial prejudice (at least in the non-morality salient condition) concur with previous findings in that participants expressed feeling closer to the confederate when she confronted racism ($M = 4.91$, $SE = 0.23$) than when she did not ($M = 4.29$, $SE = 0.22$) when morality was not salient, $F(1, 136) = 3.91$, $p = .049$,

$\eta_p^2 = .028$. In contrast to this, in the presence of the morality manipulation the positive effect of confrontation disappeared and the confederate's reaction did not alter feelings of closeness towards that person, $F(1, 136) = 0.67, p = .41, \eta_p^2 = .005$ (confrontation: $M = 4.07, SE = 0.22$, no confrontation: $M = 4.32, SE = 0.22$).

Additional pairwise comparisons demonstrate that, as in previous studies, in the absence of morality salience participants felt less close to the confronter when she confronted environmental disregard ($M = 4.19, SE = 0.21$) than when she confronted racism ($M = 4.91, SE = 0.23$), $F(1, 136) = 5.45, p = .021, \eta_p^2 = .039$. With the morality manipulation this difference between the closeness to the racism confronter and the environmental disregard confronter disappeared, $F(1, 136) = 2.23, p = .138, \eta_p^2 = .016$. This seems to be caused by the significantly lower feelings of closeness towards the confronter of racism after morality was made salient ($M = 4.07, SE = 0.22$), $F(1, 136) = 7.26, p = .008, \eta_p^2 = .051$.

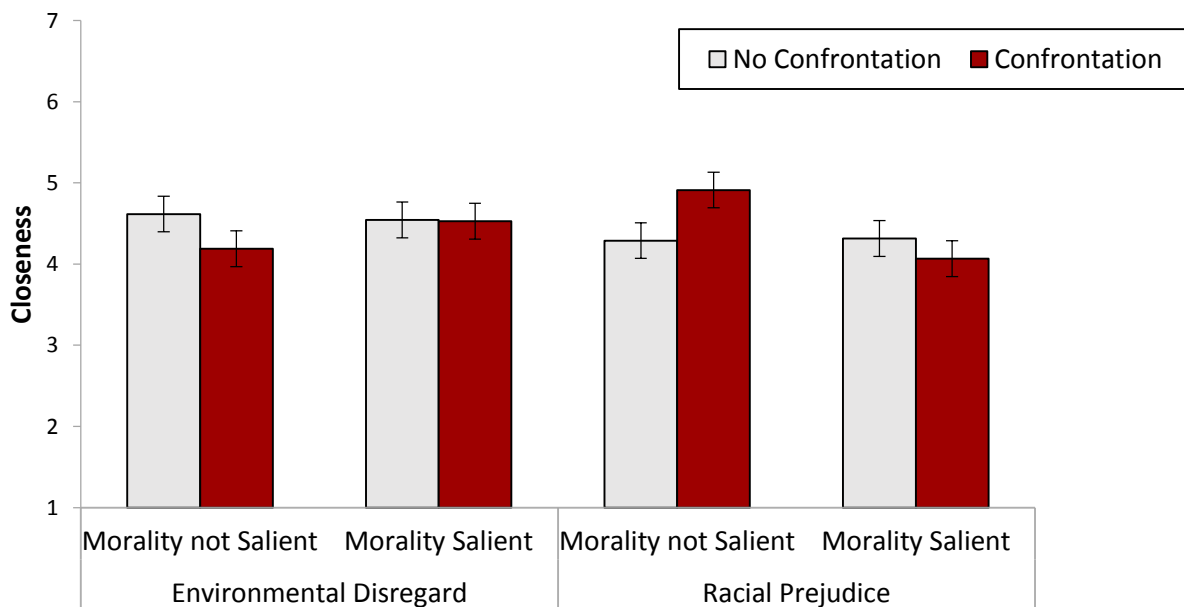


Figure 7. Feelings of closeness to the responder as a function of reaction, morality salience and issue.

Warmth of responder. An ANOVA on perceived warmth of the responder identified no significant main or interaction effects of the morality salience, issue, or reaction on ratings of warmth (see Table 5). This means that in the current sample there is no evidence for confrontation increasing or decreasing observers' perceived warmth of a responder to environmental disregard or racism.

Table 5. Results of the ANOVA Analysis Examining Effects of Issue, Reaction and Morality Salience on the Perceived Warmth of the Responder.

	$F(1, 136)$	p	η_p^2
Issue	0.10	.749	.001
Reaction	.003	.954	< .001
Morality salience	2.29	.133	.017
Issue* reaction	2.58	.110	.019
Issue*morality salience	1.83	.179	.013
Morality salience * reaction	.10	.750	.001
Issue*morality salience *reaction	1.36	.246	.010

Competence of responder. The ANOVA examining the third perception variable, perceived competence of the responder, delivered evidence for a main effect of reaction, $F(1, 136)= 28.44, p < .001, \eta_p^2 = .173$. The confederate was perceived as more competent when she confronted the disregarding comment ($M= 5.08, SE= 0.09$) compared to when she did not confront the comment ($M= 4.39, SE= 0.09$). Furthermore, neither issue, $F(1, 136)= 0.24, p = .876, \eta_p^2 < .001$ nor morality, $F(1, 136)= 1.26, p = .264, \eta_p^2 = .009$ had main effects on perceived competence. However, results revealed a significant interaction between morality salience and reaction, $F(1, 136)= 6.65, p = .011, \eta_p^2 = .047$ (Figure 8). Pairwise comparisons clarified that confrontation lead to significantly higher competence ratings of the confederate when morality was not made salient, $F(1, 136)= 30.72, p < .001, \eta_p^2 = .184$. When morality was made salient, confrontation still lead to slightly higher competence ratings, however this difference fell just short of significance in this condition

$F(1, 136) = 3.86, p = .051, \eta_p^2 = .028$. In short, the competence boost accrued was much higher in a context when the morality of the issue had not already been made salient. No other main effects or interactions on competence were significant, $F_s(1, 13) \leq 2.25, p_s \geq .136, \eta_p^{2s} \leq .016$.

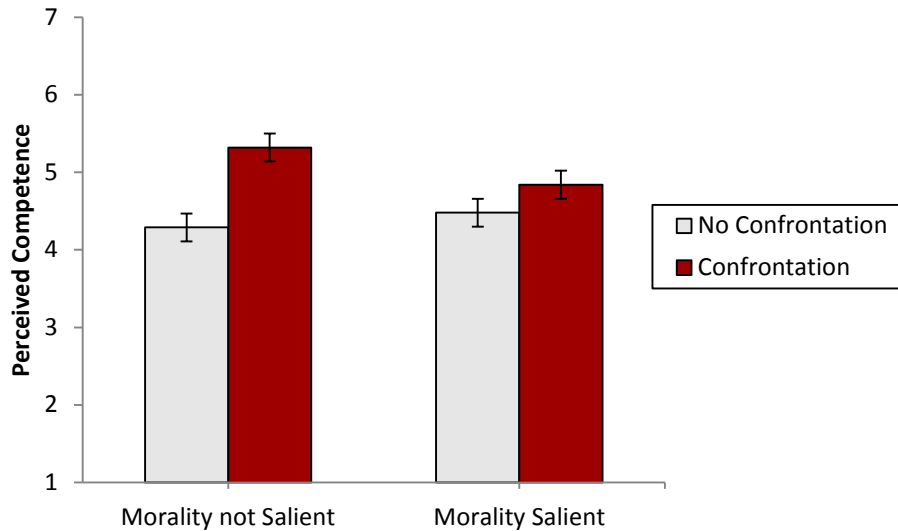


Figure 8. Perceived competence of the responder as a function of reaction and morality.

The multilevel model analysis with restricted maximum likelihood on perceived competence of the confederate revealed no additional insights into the effects of reaction, issue, morality salience, or the interaction terms of the three independent variables (see Table 6). However, the calculation of the Intraclass coefficient showed that after including these predictors into the model 2.3% of the between group variance of competence were not accounted for.

Table 6. Results of the Multilevel Analysis of Perceived Competence Identified the Same Results as the ANOVA

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Issue	-0.01	.067	-0.11	.910
Reaction	0.34	.067	5.12	<.001
Morality salience	-0.07	.067	-1.08	.289
Issue* reaction	-0.0001	.067	-0.003	.998
Issue*morality salience	-0.17	.067	-2.49	.019
Morality salience * reaction	-0.10	.067	-1.48	.151
Issue*morality salience *reaction	0.58	.067	0.86	.398

Perceived social norms. The ratings of social norms associated with the issue at stake were first analysed using multilevel model analysis with restricted maximum likelihood. However, results demonstrated that after including the group level predictors, reaction, morality salience, issue and the full factorial design the between group variance was completely explained $p < .001$. Therefore, the hierarchical structure could be ignored and an ANOVA analysis was performed.

The results delivered evidence for a main effect of issue, $F(1, 137) = 32.92, p < .001, \eta_p^2 = .194$ and a main effect of reaction, $F(1, 137) = 6.03, p = .015, \eta_p^2 = .042$ but no main effect of morality salience, $F(1, 137) = 0.01, p = .914, \eta_p^2 < .001$. With regards to issue, as expected, racial equality was overall rated as having higher social norms ($M = 4.42, SE = 0.11$) than environmentalism ($M = 3.79, SE = 0.11$). In relation to reaction, results showed that the confrontational reaction towards an issue led observers to perceive the associated social norms as higher ($M = 4.17, SE = 0.11$) than was the case in the absence of a confrontational reaction ($M = 3.79, SE = 0.11$).

While the three 2-way interactions did not predict ratings of issue related social norms, $F(1, 137) \leq 0.57, p \geq .452, \eta_p^2 \leq .004$, results further identified a marginally significant

3-way interaction of morality salience, issue and reaction $F(1, 137)= 3.84, p= .052, \eta_p^2= .027$, depicted in Figure 9. Pairwise comparisons clarified that when morality of environmentalism was not made salient, the act of social confrontation increased perceptions of social norms ($M= 3.86, SE= 0.21$) compared to social norm ratings of participants who did not witness a confrontation ($M= 3.29, SE= 0.24$), $F(1, 137)= 3.16, p= .077, \eta_p^2= .023$. This marginal increase in social norm rating disappeared when morality of climate change was made salient, $F(1, 137)= 0.01, p= .904, \eta_p^2 < .001$. After increasing issue morality the reaction of the confederate of environmental disregard had no effect on ratings of social environmental norms (confrontation $M= 3.49, SE= 0.22$; no confrontation $M= 3.53, SE= 0.22$).

The opposite was true for the issue of racial equality. In this case, confrontation did not alter social norms ratings in the absence of a morality manipulation, $F(1, 137)= 0.38, p= .539, \eta_p^2= .003$. However, when issue morality was made salient, witnessing a social confrontation of racism increased perceptions of social norms associated with racial equality ($M= 4.87, SE= 0.21$) above what they were in the no confrontation condition ($M= 4.07, SE= 0.21$), $F(1, 137)= 7.10, p= .009, \eta_p^2= .049$.



Figure 9. Perceptions of social norms associated with the issue as a function of reaction, morality salience and issue.

Behavioural measure. A multinomial logistic regression analysis investigated whether issue, reaction or morality salience were able to predict how participants behaved in relation to the flyer sign-up opportunity at the end of the study. I tested for a full factorial design to be able to detect main effects as well as all possible 2-way and 3-way interactions. The null response, of not filling out the flyer at all, was set as reference group for this analysis and therefore compared the likelihood of not filling out the flyer with each of the other behavioural options (1= leaving a comment, 2= leaving details and requesting more information, 3= leaving details and expressing willingness to volunteer for the project).

Results of the interaction factors dropped out of the analysis by the statistical programme, which shows that they were not able to explain additional variance of the behavioural outcome. However, the simple model including the main effects of reaction, issue, and morality salience showed a good fit with the data, Pearson $p = .77$, Deviance $p = .67$. The result further identified that there was a main effect of reaction, $\chi^2(3) = 14.48$, $p = .002$, on the behavioural outcome, while neither the type of issue, $\chi^2(3) = 1.83$, $p = .61$, nor

morality salience, $\chi^2(3) = 0.95, p = .81$, were able to predict how participants responded to the flyers.

Parameter estimates clarify that reaction had no effect on whether participants left a comment in the box or did not fill out the flyer at all, $b = -0.87$, Wald $\chi^2(1) = 1.84, p = .18$. However, witnessing the confederate confronting the disregarding comment did increase the likelihood that participants would want to receive updates or more information on the project rather than not filling out the flyer, $b = 1.36$, Wald $\chi^2(1) = 3.93, p = .047$. The odds of expressing interest in the project increased by 3.88, 95% CI (1.02; 14.81) (relative to not filling out a flyer) by witnessing the confederate confronting racism or environmental disregard.

In contrast, the parameter estimates revealed the opposite effect of reaction on the likelihood of indicating willingness to volunteer for the project. Results suggest that the chances that participants would want to get involved with the project relative to not even filling out a flyer decreased by 0.30, 95% CI [0.11; 0.83] when they witnessed a confrontation. To put it differently, participants who witnessed a confrontation were *less* likely to indicate that they would want to get personally involved with the issue-related project than participants who had not witnessed a confrontation, $b = -1.21$, Wald $\chi^2(1) = 5.34, p = .020$.

Additional analyses: Pre-existing climate change attitudes. A number of moderated regression analyses were performed for the environmental disregard conditions using PROCESS (Hayes, 2012) to test the effect on the dependent variables of our (post-hoc) pre-existing climate change attitudes measure derived from the coding of the open-ended responses. To test the effect of reaction, morality salience, and climate change attitudes I first grand mean centered the continuous attitude variable, and recoded reaction (no confrontation = -1, confrontation = 1) and morality salience (morality not salient = -1,

morality salient = 1) following (Aiken & West, 1991) recommendation for using unweighted effects codes to get a weighted representation of all groups in the analysis. I then entered the independent variables in the PROCESS Model 3 and ran separate analyses on each dependent variable. The PROCESS Model 3 represents the testing of three predictor variables, their respective 2-way interaction terms and the 3-way interaction term as predictors of the dependent variable (Hayes, 2012).

Closeness to responder. The moderated regression analysis on feelings of closeness did not reveal any reliable effects, $|t| \leq 1.26$, $ps \geq .22$. Therefore, our data provides no evidence that pre-existing climate change attitudes affected feeling of closeness to a confronter of environmental disregard.

Warmth of responder. However, the analysis of perceived warmth of the responder using the moderated regression PROCESS Model 3 showed that pre-existing attitude was positively correlated with ratings of warmth, $b = .30$, $SE = .15$, $t = 2.02$, $p = .05$. Moreover, a marginal interaction between reaction and climate change attitudes was also observed, $b = .29$, $SE = .15$, $t = 1.93$, $p = .06$. No other predictors in this regression analysis explained perceived warmth of the responder, $|t| \leq 1.12$, $ps \geq .27$. Results showed that this model explained 23% of the total variance between participants, $R^2 = .23$.

To further probe the identified 2-way interaction on warmth, a separate analysis using PROCESS Model 1 was performed. This model represents a regression testing a simple moderation including a predictor variable, a moderator and their interaction as potential predictors of the dependent variable. I included morality salience as a covariate into this analysis. As depicted in Figure 10, the simple slopes of the interaction between climate change attitudes and reaction showed that participants with low climate change attitudes (-1SD) perceived the confronter as less warm than the person not reacting to environmental disregard, effect = -0.88, $SE = 0.19$, $t = -1.68$, $p = .099$. Although not significant, the reverse

appeared to be the case among participants with strong pro-environmental attitudes (+ 1SD), effect= .19, $SE= 0.17$, $t= 1.11$, $p= .275$.

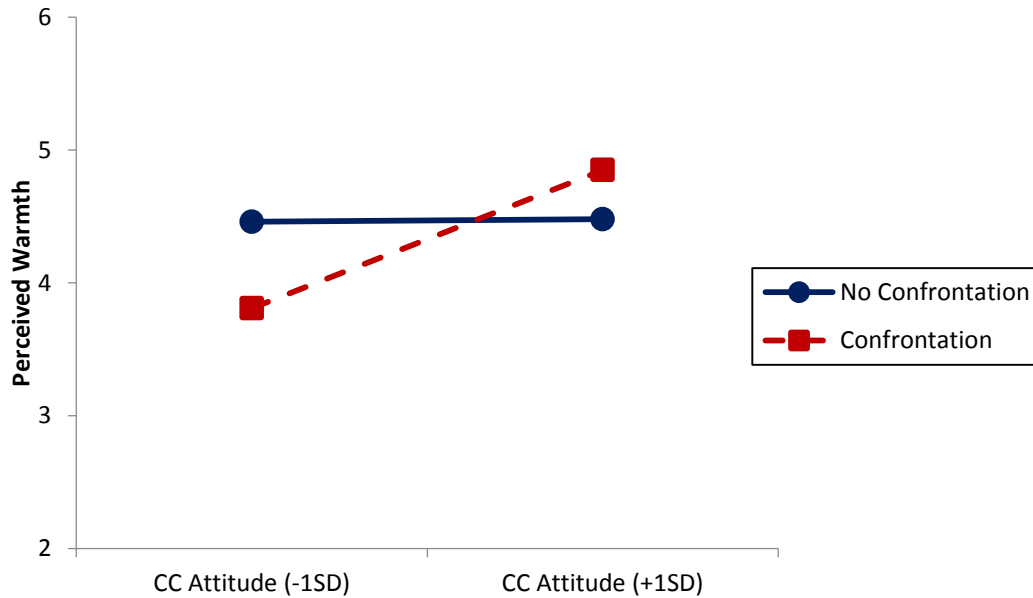


Figure 10. Simple slopes of the interaction between climate change attitudes and reaction on perceived warmth of the responder.

Competence of responder. The third perception variable, perceived competence of the responder was also analysed by running moderated regression, PROCESS Model 3. The results are summarized in Table 4 and show (in addition to the aforementioned main effect of reaction) that pre-existing climate change attitudes only affected ratings of competence through a marginal 3-way interaction of reaction, morality, and pre-existing climate change attitudes, $b= .25$, $SE = .14$, $t = 1.77$, $p = .084$.

Table 7. *PROCESS Model 3 Analyses on Perceived Competence Revealed a Marginal 3-way Interaction.*

	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Pre-existing climate change attitude	.20	.14	1.39	.172
Reaction	.35	.12	2.79	.008
Morality salience	.14	.12	1.16	.252
Attitude* reaction	.18	.14	1.30	.200
Attitude*morality salience	-.01	.14	-0.08	.936
Morality salience * reaction	-.29	.12	-2.36	.023
Attitude*morality salience *reaction	.25	.14	1.77	.084

Closer examination of this marginal interaction (see Figure 11) revealed that witnessing a confrontation increased ratings of competence when morality was not made salient, both for participants with high climate change attitudes (+ 1SD), effect= 0.58, $SE= 0.25$, $t= 2.33$, $p= .024$, and for participants with low climate change attitudes (- 1SD), effect= 0.70, $SE= 0.27$, $t= 2.59$, $p= .013$. When morality was made salient and depicted in Figure 12, participants with high climate change attitudes (+ 1SD) again rated the confronter as more competent than the non-confronter, effect= 0.44, $SE= 0.22$, $t= 2.03$, $p= .048$. However, this effect disappeared when participants had low climate change attitudes (- 1SD), effect= -0.33, $SE= 0.26$, $t= -1.27$, $p= .210$.

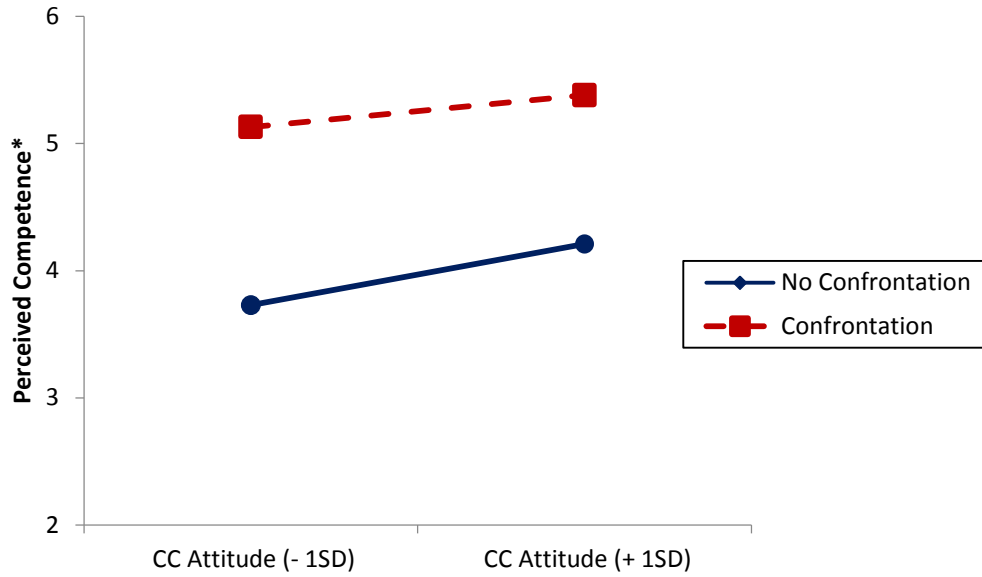


Figure 11. Simple slopes of the interaction between climate change attitudes and reaction on perceived competence when morality was not made salient.
*competence was assessed on a 7-point answer scale.

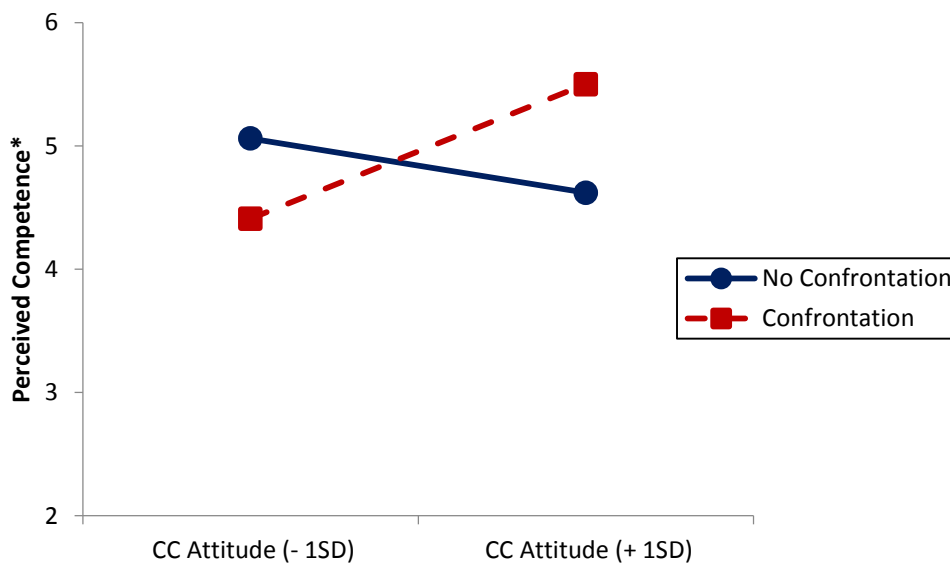


Figure 12. Simple slopes of the interaction between climate change attitudes and reaction on perceived competence when morality was made salient.
*competence was assessed on a 7-point answer scale.

Perceived social norms. I also examined whether pre-existing climate change attitudes affected perceptions of social norms associated with the issue of environmental disregard. Results of the moderated regression (PROCESS Model 3) including reaction,

morality salience, and climate change attitudes and ratings of social norms as the dependent variable delivered evidence for an interaction between attitudes and reaction, $b = .32$, $SE = .14$, $t = 2.28$, $p = .027$. No other variables or interactions were able to predict social norm ratings, $|t| \leq 1.26$, $ps \geq .214$. The entire model explained 16 % of the total variance, $R^2 = .16$.

A separate moderated regression (PROCESS Model 1) gave insight into the pattern of the interaction between climate change attitudes and reaction, while controlling for morality salience. As depicted in Figure 13, for participants with low pre-existing climate change attitudes (-1SD), witnessing the confederate confronting environmental disregard led to lower ratings of social environmental norms relative to the no confrontation condition, effect = -0.27, $SE = .18$, $t = -1.48$, $p = .145$. The opposite seems to be the case for participants with high climate change attitudes (+1SD), effect = 0.29, $SE = .16$, $t = 1.80$, $p = .078$. Despite not being statistically significant it seems that when participants had high climate change attitudes confrontation increased ratings of social norms compared to no confrontation.

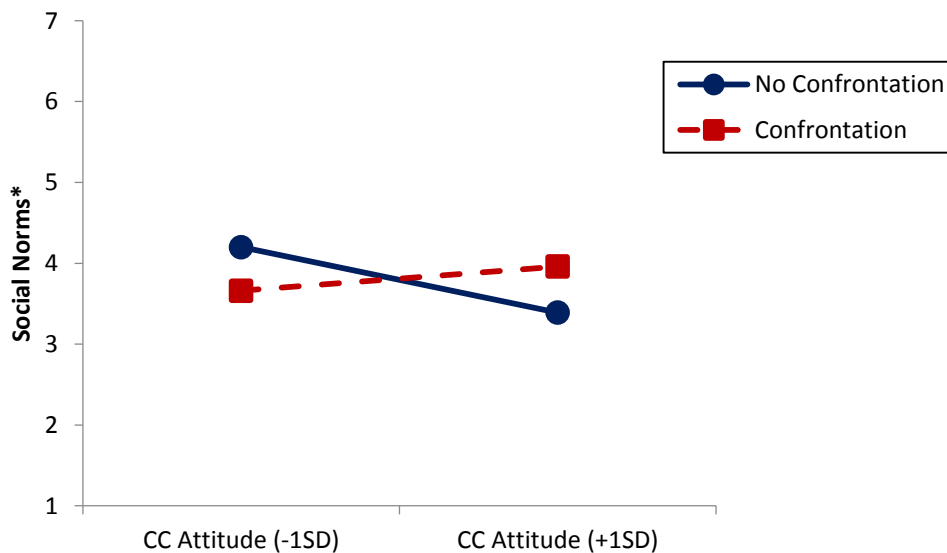


Figure 13. . Simple slopes of the interaction between climate change attitudes and reaction on social norm ratings.

Discussion

The current study investigated the social costs and consequences of witnessing a real confrontation of environmental disregard versus racism. One objective of doing this was to investigate whether the previously identified social costs of confronting environmental disregard would hold in a real interaction. The results replicate this pattern (in the absence of morality salience) in that the act of confrontation increased feelings of closeness when the confronted issue is racism, while confrontation does not have such consequences for the confronter of environmental disregard. However, in contrast to previous findings, this same pattern was not identified for the perceptions of warmth.

In addition to the increased realism of the confrontation, this study also introduced issue morality as an experimentally manipulated variable. Results of Study 5 delivered evidence for the hypothesis that the perceived morality of the issue might partly explain why confronters of racism are perceived differently to confronters of environmental disregard. On this basis, I examined whether increased issue morality would reduce the social costs associated with confronting an extreme non-environmental opinion. On the basis of Study 6's findings, this seems indeed to be the case for feelings of closeness towards the confronter but again the current results do not deliver statistically significant evidence for this hypothesis. Overall, morality salience dampened the effect of confrontation on the feelings of closeness to the confronter, whether these effects are positive (in the case of racism) or negative (in the case of environmental disregard). A similar pattern was verified for ratings of competence where, independent from the issue at stake, morality salience eliminated the higher competence associated with confrontation, relative to no confrontation. It is possible that making morality salient might have led participants to be less impressed with the assertiveness that was displayed by confronting a controversial comment. These results of morality salience could indicate that externally 'induced' morality might backfire if the

perceived morality is already high (in case of racism) but might be able to lead to slightly less harsh evaluations of confronters of an issue that is not associated with strong social norms (climate change).

The assessment of social norms associated with the issue gave a first insight into the consequences of witnessing a confrontation that go beyond perceptions of the immediate interaction. The results show that, overall, witnessing someone confronting another person increased an onlooker's perception of norms associated with the issue being confronted. Examining this in more depth, the results suggest that this was the case for an issue with strong social norms (racism) as well as for an issue with a more ambiguous normative status (environmental disregard) but under different circumstances. Without an additional morality manipulation, observers indicated higher social norms after having witnessed a confrontation of environmental disregard; however this same reaction did not lead to the boost in social norm ratings when morality was made salient. It seems that the social act of confrontation did not signal additional information concerning social norms associated with climate change if combined with a morality manipulation. However, the results concerning social norms and the role of morality were reversed in the context of racism. While perceived social norms associated with racial equality were consistently higher than for climate change, witnessing a confrontation does not seem to add any new information concerning the social norms in the absence of morality salience. However, when the morality of this issue was externally made salient, then the reactions towards the racist comment mattered and witnessing someone confronting racism in a social setting increased perceptions of social norms. It is possible that the quite direct, external manipulation of morality of racism made participants more sensitive to signals from the social environment. As existing literature suggests, people do not want to be seen as racist (Plant & Devine, 1998), and being reminded of the moral implication of this issue might have led participants to *boost* their social norm ratings even more.

Taken together these findings strengthen my argument that social confrontation might have an important role to play in communicating social norms, especially in relation to an issue of weak or ambiguous normative status and in the absence of other information sources (morality salience).

However the results of the morality salience manipulation could also be explained by experimental demand and should be evaluated with caution. The text participants read in the morality salience condition may have made the goals of the experiment more obvious and produced experimental demand effects. This possibility would explain why the morality manipulation led to more accentuated evaluations of the social norms associated with racial equality. However, such demand effects would make it difficult to identify whether participants rated the confronter of environmental disregard less harshly because of the salience of morality or because they assumed that they were supposed to be more environmental friendly. This possibility of bias is supported by the fact that the manipulation check did not reveal an effect on perceived issue morality. Therefore, conclusions concerning morality salience have to be treated with caution at this point.

Another goal of the current study was to give a first insight into whether behavioural changes might be expected in witnesses of social confrontations. The results show that witnessing a confrontation increased engagement with some, but decreased engagement with other, behavioural options provided to participants. Witnessing the confederate confront the comment made it more likely that participants indicated that they wanted to receive more information on the student project but made it less likely that participants indicated they wanted to get involved with the student society. It seems that the confrontation increased observers' general interest in the topic and the intention to engage in related actions. However, at the same time, confrontation made it less likely that observers would want to interact directly with people that are likeminded with the confronter. This explanation fits

with previous research that found support for confrontation to affect behavioural outcomes to be aligned with confronter's position, despite negative evaluations of the person expressing the confrontation (Czopp et al., 2006). Put simply, witnessing the confrontation may possibly have made participants think that the issue was more important, but also that those who support it might be slightly 'extreme' and thus less likely to want to get involved in a student society full of such people. However, it should be noted that the overall variance of the behavioural options was very low, which means that the results of these measures can only be an initial indication of behavioural tendencies that should perhaps be interpreted with caution.

In addition to these intended insights, this study also identified another important variable that has not been considered in this line of research so far, the pre-existing individual attitudes of the participants. I found that participants' climate change attitudes determined their evaluation of the responder in that it they determined whether a confronter of environmental disregard was perceived as more or less warm than a non-confronter and more or less competent (when morality was made salient). These results further qualify the previously high social costs associated with confronting environmental disregard by demonstrating that the evaluation of a confronter are (at least partly) determined by observers' personal opinion. Furthermore, observers' pre-existing attitudes affected whether confrontation increased or decreased perceptions of perceived social norms associated with climate change.

In explaining these effects of morality salience on the effects of attitudes, it seems that witnessing someone confronting environmental disregard may intensify the reactions to this interaction to be more in line with the attitudes observers already hold in relation to climate change. In other words, a person with high climate change attitudes will take the confrontation as an indication of high social norms (relative to no confrontation) while a person with low climate change attitudes will take the confrontation as an indication of low

social norms. This pattern of results is in line with the confirmation bias which describes that people are not objective when selecting new information but they tend to select information that confirm their existing attitudes or beliefs (e.g. Evans, 1989; Nickerson, 1998). Another bias that might be relevant in this context is the false consensus effect, describing the tendency to overestimate the consensus concerning one's own position (Ross, Greene, & House, 1977). In the context of climate change it was found that people especially overestimate the prevalence of the opinion that climate change is not happening (Leviston, Walker, & Morwinski, 2013). The current results of Study 6 fit in with these research findings and suggest that observers evaluated a confrontation to communicate high or low levels of environmental, social norms depending on their pre-existing attitudes in relation to that topic.

In relation to ratings of competence the pre-existing climate change attitudes also mattered, but only when morality was made salient. The results suggest that the morality manipulation reminded participants of their own opinion on the topic and led them to rate a confronter as competent if he acted in line with these personal opinions.

Overall, the current results highlight the role of pre-existing attitudes in evaluations of socially displayed interactions that are associated with environmental issues. This relevance of attitudes fits with the existing literature on pro-environmental behaviour that identified attitudes, next the perceived behavioural control, social and moral norms to be the predictors of individual intentions to engage in environmental actions (Harland et al., 1999; Schwartz, 1977). In addition to that the current findings highlight that personal attitudes also determine how people perceive the confrontation of environmental disregard. These findings would appear to qualify the previously identified social costs associated with environmental disregard in the first two empirical chapters of the thesis and would also suggest implications for possible intervention strategies (as discussed in Chapter 5). However, these findings using

a post hoc proxy measure first needed to be replicated in an additional study before firm conclusions could be drawn. Therefore, the next study aimed to clarify in greater depth the role of pre-existing attitudes when witnessing a social confrontation while at the same time providing further insights into how interpersonal confrontation might affect observers' perception of the situation and their environmental attitudes.

Study 7

This study was designed to examine with more precision the role that pre-existing climate change attitudes play in determining social costs associated with environmental disregard. Moreover, this study aimed to further broaden our understanding of the potential consequences of social confrontation by assessing whether witnessing a confrontation of environmental disregard might affect observers' subsequent own climate change attitudes, in particular the extent to which observers think that climate change should be regarded as a top political priority. As discussed in the introduction chapter, Pidgeon (2012) argued that the relative prioritization of climate change relative to other issues (e.g. economic situation) is a more relevant assessment of climate change attitudes than is measuring levels of general concern about the issue. Therefore, assessing how strongly participants rated climate change as a political top priority presented itself as the most relevant climate change attitude to focus on.

As a second objective, the current study aimed to examine the role of invocation of morality *by the confronter* as a possible moderator of the social costs associated with confronting environmental disregard. For environmental disregard as well as for racial prejudice, the morality salience manipulation in Study 6 led observers to adjust their ratings of the confronter and also their perception of related social norms. The previous findings delivered some evidence that the morality manipulation decreased the social costs associated

with environmental disregard, a finding that was hypothesised based on the mediation of issue morality established in Study 5. However, one cannot preclude the possibility that the results of Study 6 were driven by demand characteristics. The decision to make morality salient by handing participants an example answer might have made the experimental intentions slightly too obvious to participants. One argument that would support this notion is the effect morality had in relation to the issue of racial prejudice, in that participants were more sensitive to the displayed reaction after being exposed to the morality manipulation (e.g. in relation to their social norm ratings). The manipulation check delivers further support for the assumption that the manipulation might not have had the intended effect of increasing participants' perception of morality associated with the issue.

Moreover, existing literature points out that the method of delivering strategies that are aimed to reduce negative consequences of a confrontation can be crucial in determining the success of that strategy. Stone, Whitehead, Schmader, and Focella (2011) show that instructions are predominantly delivered by an experimenter within studies currently in the literature, a strategy that can provoke backlash effects (Plant & Devine, 2001). In their study Stone et al. (2011) tested the effect of perspective taking in reducing bias towards Arab-Americans and showed that the perspective taking strategy only reduced bias when combined with self-affirmation questions. The researchers argued that the self-affirmation questions avoided participants perceiving the perspective taking instructions as externally imposed pressure. Based on this literature, I aimed in Study 7 to manipulate morality by using a more subtle method and made morality more relevant within the interaction itself. To do this, I embedded the moralization of the issue into the reaction that was expressed towards environmental disregard. An additional advantage of this change to the morality manipulation was that provided a more realistic representation of a strategy that could be applied by potential confronters in real life situations.

Another change to the current study was that it focused solely on the issue of environmental disregard, rather than also including racial prejudice. After having established the differences between the normatively different issues of racial prejudice and environmental disregard over the course of six studies, I decided for the final two studies to focus on the main objective of my research: examining the normative processes associated with environmental issues such as climate change.

Therefore, this study was designed to examine observers' reactions to witnessing someone confronting (or not confronting) environmental disregard, the role of moralization of the issue by the confronter and the role of pre-existing attitudes in determining consequences of confrontation in relation to the immediate interaction (observers evaluation) and in relation to observers' climate change attitudes. On this occasion I conducted the study in a more controlled setting without losing the realistic character of the interaction. I did this by means of an online chatroom conversation.

Prior to the study I hypothesized that pre-existing climate change attitudes would moderate participants' perception of the responder (closeness, warmth) such that participants with high pre-existing climate change attitudes would evaluate the confronter of environmental disregard more favourably than a person not confronting this comment. However, for participants with low climate change attitudes I expected to find the opposite result such that these participants would evaluate the non-confronter more favourably than the confronter.

In relation to the moralization of the issue, embedded within the interaction, I hypothesized that this strategy would work to offset the negative evaluations of confrontation (relative to no confrontation) by participants with low climate change attitudes and will further improve evaluations of the confronter by participants with high climate change attitudes. Despite not having identified this 3-way interaction of attitude, reaction and

morality in Study 6, I postulated that this was caused by the lack of relevance of the morality manipulation for the immediate interaction. In Study 7 I thus replaced this quite broad morality salience manipulation with one which embedded the morality *within* the confronting comment itself.

Concerning the effect of witnessing a confrontation of environmental disregard on climate change attitudes, while this was a more explorative examination, I expected to find the same interaction between reaction, pre-existing climate change attitudes and moralization on climate change attitudes as hypothesized for the perception of the responder outlined in the previous paragraphs.

Method

Participants and design. The study manipulated reaction (confrontation vs. no confrontation) and implied morality of the issue (moralization vs. no moralization) between participants and measured pre-existing climate change attitudes as a third independent variable. In this study (and the final study reported subsequently) I focus exclusively on environmental disregard, in an attempt to unpack the role of participant attitudes and morality more specifically in relation to this issue. One hundred and twenty-six²⁷ students from the University of Exeter (104 female, $M_{age} = 19.94$, $SD = 4.88$) participated in this lab study. Participants were randomly assigned to conditions.

Procedure. Participants signed up via an online booking system and were offered course credits or £5 cash in return for taking part in this study. Upon arrival at the lab participant were told that the study consisted of two parts. First they would discuss a number of topics with other participants in an online chat-room and in the second part they would be asked questions about the conversation, the people involved, and the topics discussed. Most importantly, I explained that some participants would log in from other departments and that

²⁷ 29 participants expressed suspicion about the authenticity of the chat-room conversation and were excluded from subsequent analyses.

the chat-room setting would have restricted interactive functions for the purpose of this study. Participants were then seated at a computer and I logged them into the (pre-programmed) chat-room. When being logged in the participant saw that two other people appeared to be online in this chat-room: Sam and XoX. In reality, the conversation was programmed prior to this study and was identical for all participants, with exception of the participant's nickname and answers. Participants saw on the screen a virtual moderator starting the conversation by explaining that everyone will take turns to express their opinion on each given topic. A rota in the corner of the screen indicated whose turn it was to type their answer. During the first, 'practice' round participants were asked their opinion about a popular TV-show (X-factor). The second topic introduced by the moderator was the raise of tuition fees in Britain. Afterwards the moderator asked the participant their opinion about climate change by saying "Okay thanks everyone. [Participant nickname] the next topic is climate change. What do you think about the climate change issue?" To assess their pre-existing opinion (Time 1) on climate change participants were asked at this point to indicate on a sliding scale how much they agreed with the statement "I agree that climate change should be the top priority of the British government", before they had the chance to type their answer to be sent to the chat-room (see Figure 14 for a screenshot example). The answers to the sliding scale question were not made public to the chatroom.

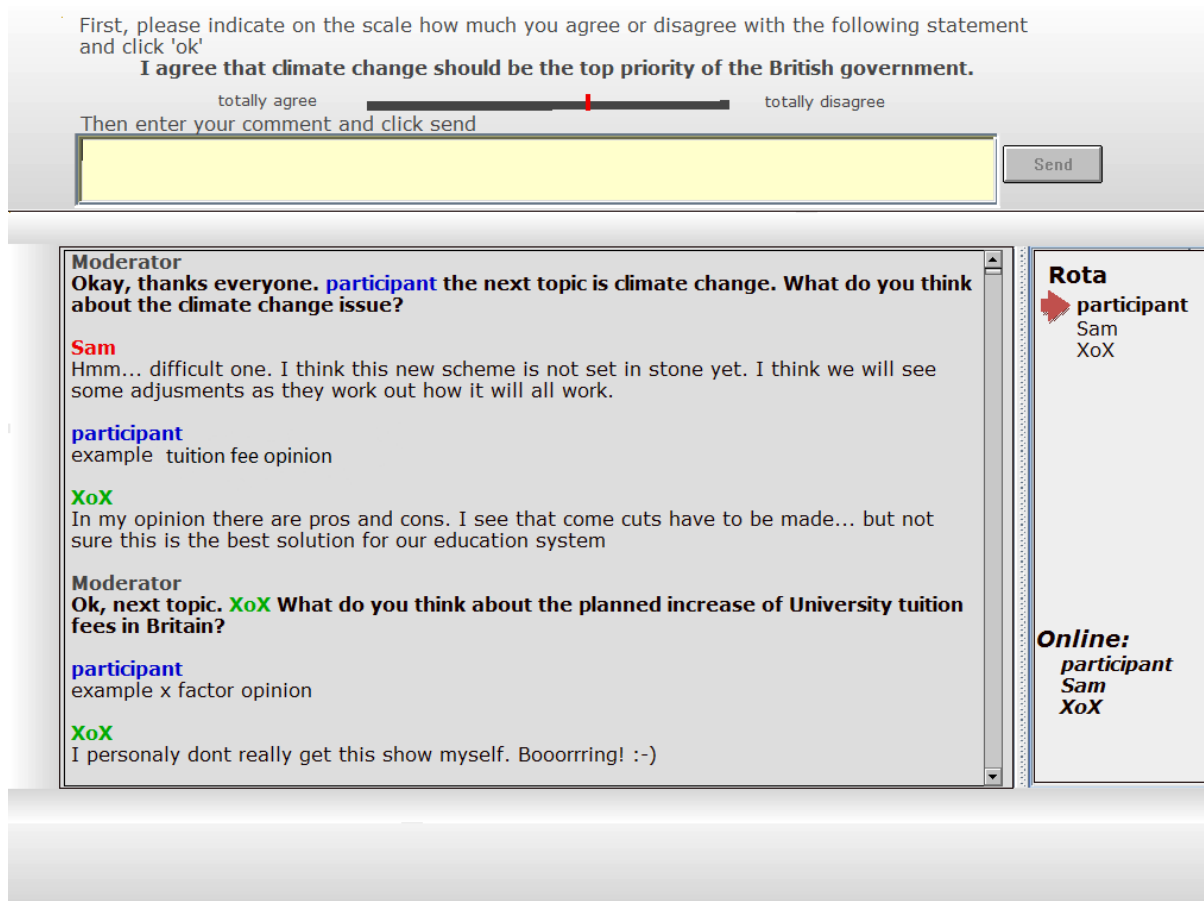


Figure 14. Screenshot showing the chat-room conversation at the moment of participant indicating their pre-existing climate change attitudes
 Note: conversation runs from bottom to top

Afterwards, one other person (Sam) said “I don’t give a damn about climate change to be honest. I’m not going to stop doing things I enjoy when there is no decent evidence anyways.” The other person (XoX) responded with one out of four possible comments depending on the respective condition. The first part of the comment either moralised or did not moralise the topic by saying “I think people’s opinion towards this topic really says a lot about them” (moralization of the issue) or “Everybody is certainly entitled to their own point of view on this topic” (no moralization of the topic). The second part of the reaction either confronted or did not confront Sam’s initial comment with the words “how can you even think something like that? I can’t believe that you just made that comment!!” (confrontation)

or “that is an interesting comment. It’s a shame that I can’t ask you to explain your opinion in more detail” (no confrontation). The moderator then moved the conversation towards a new topic (the EU debt crisis). For both filler topics (EU debt crisis, the raise of University tuition fees) the procedure first asked participants to indicate their opinion in relation to the topic (“I agree that the EU debt crisis (University tuition fees) should be the top priority of the British government”) before then letting them type in their response in an open ended manner (see Appendix G for complete material).

After expressing their opinions about the third topic the chat-room conversation ended and participants were asked to answer a number of questions (on the computer screen) about the conversation and the people involved. Upon completion I gave participants the opportunity to express doubts about the authenticity of the chat-room by asking them about how the chatroom conversation went and whether they liked the discussion. Participants were then fully debriefed about the real purpose of the study and thanked them for their participation.

Dependent measures. At the end of the chat-room discussion participants’ were asked to indicate, as before on a sliding scale how much they agreed that each topic (tuition fees, climate change, and the EU debt crisis) should be the top priority of the British government and how much they think the other people in the chat would agree with each statement. Assigned scores ranged from 0 to 300 with higher scores indicating higher agreement with these statements.

As in previous studies, I also assessed how close participants felt to the confronter (XoX) and how warm they perceived that person to be. Closeness was measured using the four-item scale used in previous studies. To assess perceived warmth of the confronter participants were asked how likable cold (reversed) and good natured²⁸ XoX was with answer

²⁸ Additional item ‘tolerant’ reduced the reliability of the scale to $\alpha = .66$ and was removed.

options ranging from *not at all* (1) to *extremely* (7). Additionally I asked participants how honest, moral and sincere participants perceived that person (XoX) to be to get a measure of perceived morality of the responder.²⁹

To establish that the three variables measured different constructs an exploratory factor analysis with Direct Oblimin rotation was performed. The respective items loaded on the three expected factors relating to closeness, warmth and morality (all loadings > .73) and formed reliable scales (closeness $\alpha = .85$, warmth $\alpha = .75$, morality $\alpha = .71$).

Results

Preliminary analysis. I first analysed the perception of how much the responder (XoX) disagreed with the statement that climate change should be a top priority by performing an ANOVA including reaction and moralization as independent variables and the responder's (XoX) climate change attitude as the dependent variable. Results revealed a main effect of reaction $F(1, 122) = 38.76, p \leq .001, \eta_p^2 = .214$, a main effect of moralization $F(1, 122) = 5.12, p = .025, \eta_p^2 = .040$ and no interaction between the two independent variables $F(1, 122) = 0.64, p = .424, \eta_p^2 = .005$. As intended, the confrontation was perceived as indication that the responder had higher climate change attitudes ($M = 216.39, SE = 5.66$) than the responder not confronting environmental disregard ($M = 163.88, SE = 6.43$). The main effect of moralization showed that moralizing the comment also led to the assumption that the responder would have higher climate change attitudes ($M = 199.42, SE = 6.03$) than the responder who did not use moralization in their response ($M = 180.04, SE = 6.08$).

Attitude measure. A first analysis of the climate change attitude measure verified that participants' answers spread out over the whole scale provided to them (see Table 8 for descriptive information of the measures).

²⁹ Competence items were assessed but failed to load on a respective factor and were therefore excluded from the analysis.

Table 8. *Descriptive Statistical Information Concerning the Climate Change Attitude Measures (Time 1 and Time 2)*

CC attitude	Minimum	Maximum	M	SD	n scoring ≤ M
Time 1	0	297	101.78	68.31	75
Time 2	0	296	103.62	75.53	72

I expected the manipulated independent variables (reaction and moralization) and the pre-existing climate change attitude (Time 1) to affect ratings of climate change attitudes at Time 2 through a 3-way interaction. This hypothesis was tested by running a moderated regression model using PROCESS Model 3 (Hayes, 2012). This model allows one to test the effect of three predictor variables, their 2-way interactions and the corresponding 3-way interaction on the dependent variable. Prior to the analysis, Time 1 climate change attitudes (continuously measured) were grand mean centred and reaction and moralization of the issue were coded as -1 and 1; no confrontation = -1, confrontation = 1; no moralization = -1, moralization = 1 (Aiken & West, 1991). Results showed that there was no evidence for the expected 3-way interaction between the three predictors on climate change attitudes at Time 2, $b = -1.25$, $SE = .06$, $t = -0.70$, $p = .483$. However, a 2-way interaction between Time 1 climate change attitude and moralization on Time 2 climate change attitudes was identified, $b = 0.19$, $SE = 0.06$, $t = 3.36$, $p = .001$. The only other significant effect detected was the (highly expected) relationship between Time 1 and Time 2 climate change attitudes, $b = 0.88$, $SE = 0.06$, $t = 15.47$, $p < .001$. No other interaction terms or correlations were statistically significant, $|ts| \leq 0.88$, $ps \geq .377$. This model was able to explain 72% of the total variance of the dependent variable $R^2 = 0.717$.

To visualise the exact nature of the Time1 Attitude x Moralization interaction, the simple slopes of this interaction were examined. To this end, a separate moderated regression model was performed, this time using PROCESS Model 1, a model that tests simple

moderation. I entered climate change attitude Time 1 and reaction as predictors, moralization as covariate and the climate change attitudes Time 2 as dependent variable. Including moralization as covariate allowed me to examine the simple slopes of the 2-way interaction without changing the overall model.

The results again delivered evidence for the significant interaction between reaction and climate change attitude (Time 1), $b = 0.37$, $SE = 0.11$, $t = 3.32.39$, $p = .001$, and the results further demonstrated that participants who strongly agreed that climate change should be a top priority (+ 1 SD) reacted to the moralizing comment with even higher levels of agreement with this prioritisation of climate change at time 2 than in the absence of the moralization of the issue, $effect = -13.34$, $SE = 5.39$, $t = -2.47$, $p = .015$. However the moralizing reaction had the opposite effect on participants who indicated low climate change attitudes at Time 1 (- 1 SD), $effect = 12.14$, $SE = 5.25$, $t = 2.31$, $p = .022$ (see Figure 15). For those with low initial prioritising of climate change attitudes, witnessing someone moralising the topic of climate change reduced their Time 2 attitudes about climate change's political relevance to an even lower level than was the case when this moralising was absent. This model explained 71% of the variance, $R^2 = .712$.

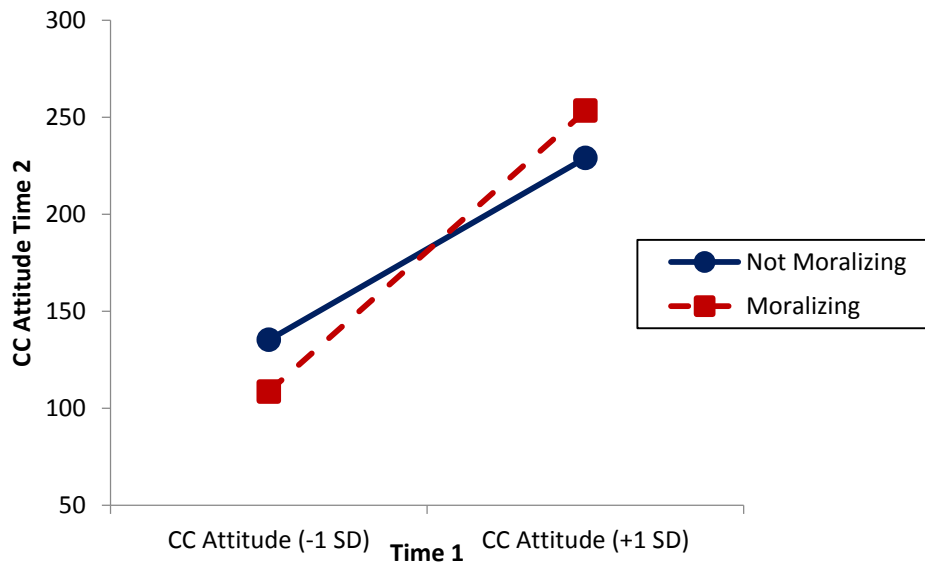


Figure 15. Simple slope depicting the interaction between climate change attitudes (Time 1) and moralizing on climate change attitudes at Time 2.

Closeness to responder. The same PROCESS Model 3 moderated regression, with reaction, moralization of the issue and Time 1 climate change attitudes as predictors, was performed on the three perception variables, closeness, warmth, and morality of the responder. Contrary to the hypothesis, the analysis on closeness to the responder revealed no evidence for a 3-way interaction between climate change attitude (Time 1), reaction, and moralization of the issue, $b < .001$, $SE = .001$, $t = -0.74$, $p = .460$. This time the climate change attitude (Time 1) did not predict closeness rating $b < .001$, $SE = .001$, $t = 0.45$, $p = .655$. However, as they did in Study 6 in relation to attitudes, in this sample climate change attitudes at Time 1 moderated the effect of moralization on closeness, $b = .003$, $SE = .001$, $t = 2.71$, $p = .008$. I also observed an interaction between reaction and climate change attitude (Time 1) on closeness, $b = .003$, $SE = .001$, $t = 2.10$, $p = .002$. No other effects were statistically significant, $|ts| \leq 1.11$, $ps \geq .28$. This model explained 17% of the total variance in closeness, $R^2 = 0.175$.

Two separate moderated regression analyses (PROCESS Model 1) clarified the patterns of the identified Attitudes x Moralization and Attitudes x Reaction interactions. The

regression including moralization of reaction and Time 1 climate change attitudes as predictors and reaction as covariate showed that participants who had high climate change attitudes at Time 1 (+ 1 SD) felt closer to the responder when a moralizing comment was used compared to when the same person expressed a non-moralizing reaction, effect= 0.21, $SE= 0.10$, $t= 2.07$, $p= .040$. However, participants who had low climate change attitudes at Time 1 (- 1 SD) felt marginally less close to a person using moralistic attributions than to a person using no moralistic invocation, effect= -0.20, $SE= 0.10$, $t= -1.19$, $p= .058$ (see Figure 16).

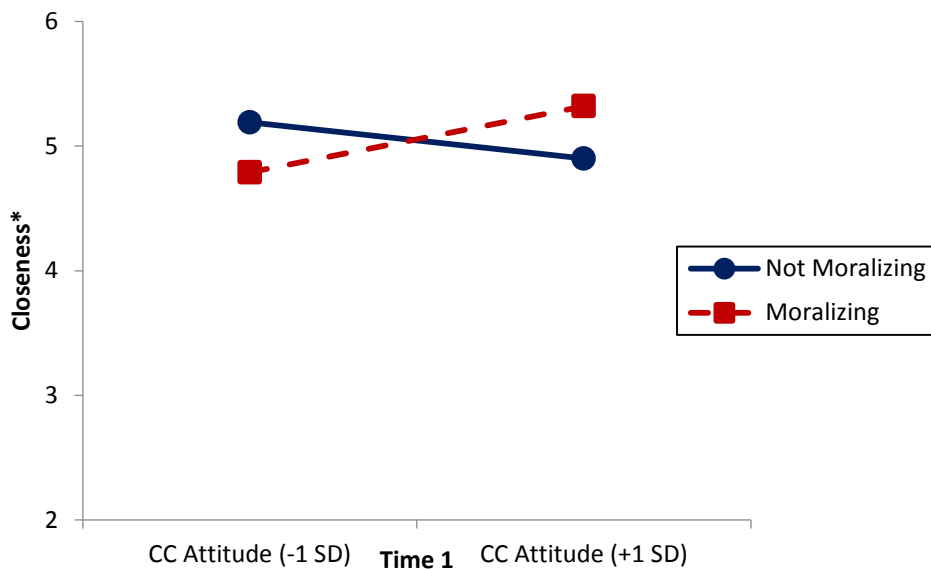


Figure 16. Simple slope depicting the interaction between climate change attitudes (Time 1) and moralizing on feelings of closeness to responder.

*closeness was assessed on a 7-point answer scale.

A second moderated regression analysis (PROCESS Model 1) was run that included reaction and climate change attitudes (Time 1) as predictors, with moralization as covariate in this case. The simple slope analysis of the interaction between reaction and climate change attitude indicated that participants with high Time 1 (+ 1 SD) attitude scores also reacted

more positively towards a confrontational reaction, in that they felt closer to the confronter than a non-confronter, effect= 0.27, $SE= 0.10$, $t= 2.68$, $p= .008$. In contrast to that, and as depicted in Figure 17, participants with low climate change attitudes (- 1 SD) prior to the confrontation felt less close to a confronter than a person reacting without confrontation, effect= -0.24, $SE= 0.10$, $t= -2.43$, $p= .017$. The identified effect of climate change attitudes and reaction in relation to feelings of closeness to the responder are in line with the hypothesis and replicate the results of Study 7.

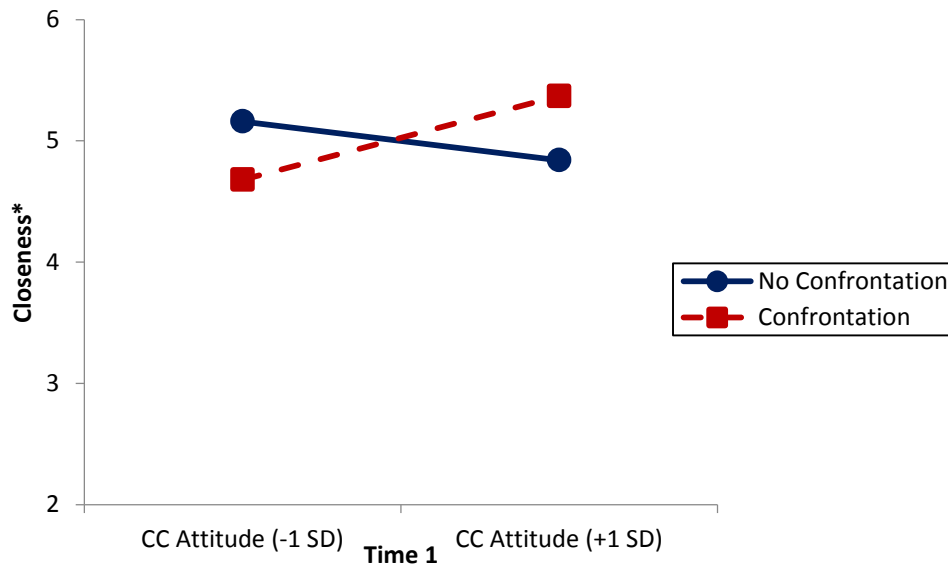


Figure 17. Simple slope depicting the interaction between climate change attitudes (Time 1) and moralizing on feelings of closeness to responder.

*closeness was assessed on a 7-point answer scale.

Warmth of responder. The moderated regression including perceived warmth of the responder as dependent variable and reaction, moralization of the issue and climate change attitudes (Time 1) as predictors again revealed that there was no 3-way interaction, effect < .001, $SE= .001$, $t= 0.72$, $p= .470$. Just as was the case with closeness however, the effect of reaction on perceived warmth was moderated by climate change attitudes (Time 1),

effect= .002, $SE= .001$, $t= 2.38$, $p= .019$, although the interaction between moralization of reaction and climate change attitudes fell just short of statistical significance effect= .002, $SE= .001$, $t= 1.68$, $p= .096$. No other effects were detected $|ts| \leq 1.24$, $ps \geq .215$, overall $R^2 = 0.097$.

A separate regression (PROCESS Model 1) gave insight into the patterns of the interaction between reaction and climate change attitudes (Time 1). Moralization was included as a covariate. Participants with high climate change attitude at Time 1 (+ 1 SD) rated the confronter as warmer than the person reacting without confrontation, effect= 0.19, $SE= 0.09$, $t= 2.10$, $p= .037$. However, participants who disagreed that climate change should be a top priority (- 1 SD) perceived the non-confronter as being warmer than the confronter, effect= -0.17, $SE= 0.09$, $t= -1.88$, $p= .062$ (see Figure 18 for the simple slopes).

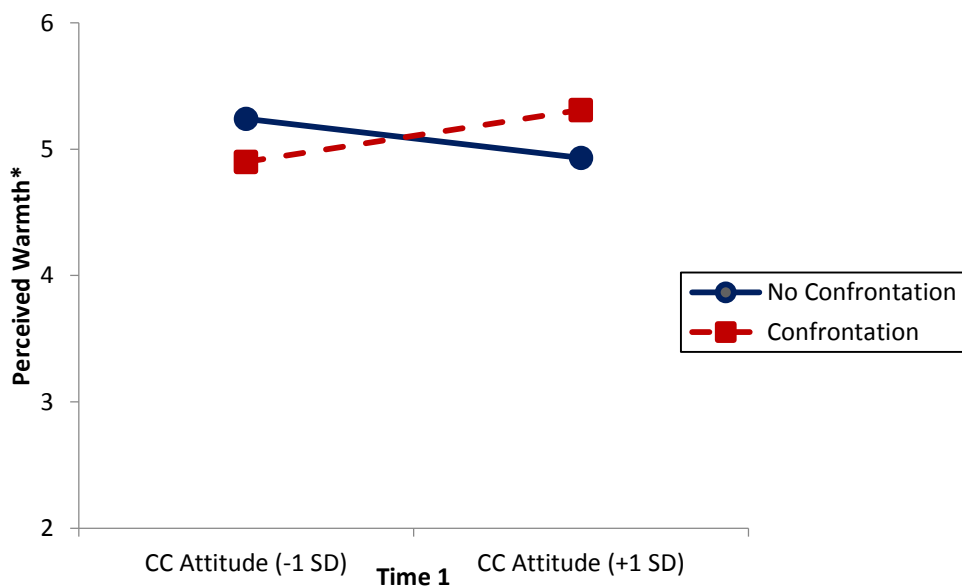


Figure 18. Simple slope depicting the interaction between climate change attitudes (Time 1) and reaction on perceived warmth of the responder.

*perceived warmth was assessed on a 7-point answer scale.

Morality of responder. To examine the effects of reaction, moralization of reaction and Time 1 climate change attitudes on perceived morality of responder, another moderated

regression analysis (PROCESS Model 3) was performed. Results of this analysis delivered no evidence for an interaction between reaction, moralization, and climate change attitudes (Time 1) on perceived morality, $b = .001$, $SE = .001$, $t = 0.91$, $p = .367$. However, results identified main effects of reaction, $b = 0.13$, $SE = .06$, $t = 2.06$, $p = .041$ and moralization, $b = 0.17$, $SE = .06$, $t = 2.69$, $p = .008$. No other predictors had significant effects on ratings of perceived morality, $|ts| \leq 1.12$, $ps \geq .267$.

Therefore, a separate ANCOVA on perceived morality of the responder gave further insight into the pattern of the detected main effects. Moralization and reaction were included as independent variables in this analysis while climate change attitudes (Time 1) were treated as a covariate. Results demonstrate that participants rated the confronter of environmental disregard as more moral ($M = 5.23$, $SE = 0.08$) than the person not confronting environmental disregard ($M = 4.98$, $SE = 0.09$), $F(1, 121) = 4.17$, $p = .043$, $\eta_p^2 = .033$. The responder (XoX) was also rated as being more moral when using moralizing invocation ($M = 5.27$, $SE = 0.09$) compared to when they did not imply morality in their comment ($M = 4.95$, $SE = 0.09$), $F(1, 121) = 6.99$, $p = .009$, $\eta_p^2 = .055$. The interaction between moralization and reaction was not significant, $F(1, 121) = 0.55$, $p = .462$, $\eta_p^2 = .004$.

Discussion

The main purpose of this study was to examine more closely the role of pre-existing environmental attitudes in determining responses to witnessing a confrontation of environmental disregard. At the same time, it was investigated whether moralization (or not) of the target issue (environmental disregard) by the individual who confronted would affect participants' responses to the confrontation, both in terms of consequences for the confronter (social perception of confronter) and in terms of consequences that go beyond perceptions the immediate interaction (participants' subsequent climate change attitude).

Overall, this study delivers strong evidence for the hypothesis that pre-existing environmental attitudes affect responses to social confrontation or moralizing comments regarding climate change. Participants' pre-existing perception of climate change as a political top priority determined how they evaluate the interpersonal confrontation of environmental disregard with regard to the closeness to the responder, the warmth of the responder. More specifically, the results of this study reveal that participants who initially rated climate change as a top political priority perceived the confronter to be warmer and felt closer to that person than was the case in relation to a non-confronter. However, participants who initially did *not* think that climate change should be a top political priority perceived a confronter less favourably (reduced ratings of warmth and closeness) than a non-confronter. These results replicate results of study 6 and qualify previous findings (ours and others') in that whether or not a confronter of environmental disregard will suffer from social costs for their reaction depends on the attitudinal inclinations of the audience who witnesses the social interaction in question (Czopp et al., 2006).

This dominant role of pre-existing attitudes in determining whether confronters experience negative or positive evaluations raises the question why results of Study 3-5 consistently provide evidence for high social costs associated with confronting environmental disregard. One possible explanation is that prevalent climate change attitudes amongst Exeter University students might have changed over the course of this line of research. If one was to assume that the majority of participants in previous samples had lower climate change attitudes than the later samples then this could explain the differences across the studies. However, the fact that including participants' agreement with the environmentally disregarding comment as a covariate in the analyses did not affect the results at all raises doubts about this explanation. A more likely explanation is that the personal attitudes matter more in more realistic settings. While Studies 3-5 were questionnaire studies, Study 6 and

Study 7 both exposed participants to more realistic confrontations. Despite this being the most plausible explanation, another methodological detail needs to be considered at this point. It is possible that the simple fact of asking participants about their opinion about climate change prior to witnessing the confrontation might have made participants more aware of their attitudes. This process could have motivated participants with high climate change attitudes to adjust their evaluations of the interaction more in favour of the confronter than would have been the case if we had not made their attitudes salient. Therefore, at this point it remains unclear whether the identified results solely reflect the relevance of attitudes or whether they are caused by the *salience* of pre-existing climate change attitudes.

Additional research should address this alternative explanation by collecting the attitudinal data from participants at a prior point in time in a setting that is unrelated to the interpersonal confrontation, to disentangle the assessment and the salience climate change attitudes.

Furthermore, the current results show that ratings of climate change as a political top priority are not affected by witnessing someone being confronted for their anti-environmental opinion, regardless of pre-existing attitudes of participants or the level of morality invoked by the confronter. Therefore, this study does not deliver evidence for my hypothesis that confrontation not only affects the subsequent attitudes of the person being confronted, as suggested by previous research, but also has a broader effect on observers of confrontation. Instead, the results show that being exposed to someone moralizing the issue of climate change actually *polarizes* pre-existing attitudes towards the issue. Participants shifted more towards the extreme ends of the spectrum after being exposed to moralization of the issue by the responder, increasing their initial agreement or disagreement that climate change should be a top priority of the government. This same trend was also identified in relation to feelings of closeness to the confronter. Observers who initially held high climate change attitudes felt closer to a person trying to moralize the issue at stake, whereas observers who initially

thought climate change should *not* be a top priority felt less close to this person who tried to moralize the issue.

One remarkable and unexpected finding of this study was that moralization of the issue did not interact with reaction in determining closeness, warmth or Time 2 climate change attitudes. This means that attempts by a responder to moralize the topic at hand prior to confronting anti-environmental sentiment of another did not alter the social costs (or benefits) associated with this action. It is worth noting at this point, however, that this study did deliver evidence that the act of confrontation itself is perceived as a moral act, as evidenced by the fact that confronters were perceived as more moral than non-confronters, independent of whether they moralised climate change or not prior to their response.

Overall the current results suggest, contrary to my original hypothesized interaction between moralization and reaction, that the act of moralizing the issue and the act of confrontation both independently led observers to intensify their perception of the responder (i.e. they both interacted with time 1 attitudes but did not interact with one another). Furthermore, whether a responder moralized the issue in their response (or not) was found to affect participants' climate change attitudes at Time 2, with the nature of this effect depending on participants' pre-existing attitudes. While moralization of the issue increased climate change attitudes and improved evaluations of a responder in observers predisposed to caring about climate change, observers who cared less about climate change react with a backlash to the external stimuli (in terms of negative responder evaluations and even lower subsequent climate change attitudes). In relation to observers' feeling of closeness to the responder, both moralization and the type of reaction interacted with pre-existing climate change attitudes, but did so separately. Participants with high climate change attitudes (Time 1) felt closer to a person moralizing climate change (compared to a person not moralizing climate change) and they also felt closer to a confronter (compared to a non-confronter). The

opposite preference was found for participants with low climate change attitudes at Time 1, preferring the responder who did not moralize the issue and the non-confrontational responder. These results deliver no evidence for the moralization of the issue changing observers' perception of the reaction this person displayed in response to environmental disregard. Therefore, I need to conclude that, contrary to my hypothesis, the moralization and confrontation were both perceived as independent stimuli and each had an independent effect on participants' perceptions rather than doing so in interaction with one another.

The results further suggest that the act of confrontation itself might be perceived as a moral act, as indicated by the increased ratings of the perceived morality of the confronter (relative to a non-confronter). The potential moral signalling of the act of confrontation could explain why the moralization did not improve evaluations of the confronter. If the act of confrontation itself communicates to the audience that the confronted issue should be considered as moral, then the strategy of embedding morality within the confrontation might simply be redundant. In light of this possibility of issue morality not being successful in avoiding or reducing social costs associated with confronting environmental disregard, my final study went on to consider an alternative strategy of confrontation.

Therefore, in the final study of the thesis my main focus was on testing different strategies to reduce the risk of social costs for the confronter and ideally increase observers' behavioural tendencies, independent from their climate change attitudes. The results of the current study demonstrated that the moralization of the issue did not seem to be relevant for the confrontation, despite the fact that it was embedded within the confrontation. The next study went one step further by involving the provision (by the confronter) of different justifications for the act of confrontation, in an attempt to make the information even more relevant for the confrontation. Additionally, I examined another strategy that I have not examined in this context yet, that being the use of scientific arguments in combination with

confronting environmental disregard. By testing these different methods of confrontation, the last study will attempt to clarify whether there *is* a way to confront environmental disregard ‘successfully’, a question that the previous studies were not able to answer satisfactorily

Study 8

In this final study I wanted to return to the idea of examining whether interpersonal confrontation has a role to play in promoting pro-environmental actions. Up to this point, the results of my studies had not delivered any clear evidence regarding this issue. Having, to this point, identified various nuances to the social costs and benefits of confrontation of environmental disregard, I was interested in drawing some conclusions about whether or not there might be a successful way to confront, to ‘stand up for climate change’. Therefore, in this final study, I tested how observers’ perception of the confronter and the issue of climate change itself would be affected by the type of subsequent justification provided (by the confronter) for the confrontation, with such justifications being either moral, scientific, or completely absent. In addition to highlighting moral aspects of climate change as a justification, the choice of scientific arguments as a possible confrontation justification stemmed from its relevance in the specific context of climate change. Given that the past literature has shown that people tend to identify their lack of knowledge about the issue or the scientific uncertainty associated with it as barriers of pro-environmental actions (Lorenzoni et al., 2007), I sought to examine the relative efficacy of a confrontation that worked to reduce that scientific uncertainty, relative to one that worked to highlight the moral dimension of the issue.

In addition to the perception of the confronter, this final study also investigated a range of explicit measures of environmental actions, support for national climate policy, support for local climate policy interventions and behavioural intentions to reduce own

emissions. By doing this I hoped to either support or dismiss the possibility that confrontation might hold the potential to affect observers' pro-environmental tendencies.

The previous literature on confrontation in the context of environmental actions suggests that confrontation can encourage pro-environmental actions over non-environmental behavioural alternatives (Swim & Bloodhart, 2013). Across my first seven studies, however, my findings do not clearly support this idea that confrontation encourages environmental behaviour. Regarding the wider consequences of observing someone confronting environmental disregard over and beyond perceptions of the immediate interaction, my results demonstrated that witnessing a confrontation a) increased observers' agreement with the initial comment (Study 3), b) increased observers' interest in related projects but reduced signing up to being involved in these projects (Study 6), and c) increased perceptions of wider social norms (Study 6). At this point I concluded that confrontation could affect observers' attitudes or behavioural tendencies to be more in line with the confronters' position, but confrontation could also provoke a backlash effect and could result in negative evaluations of the issue. My studies further identified that a backlash reaction could be 'provoked' by the nature of the social setting (Study 3), the credentials of the responder (Study 4), the impoliteness of the confrontation (Study 5) and the personal (low) climate change attitudes of the observer (Study 6/7). To add to these findings, the last study of this thesis was designed to examine the broader consequences of witnessing a confrontation in more depth by directly examining the effect of different confrontation strategies on observers' policy support, support for local interventions and behavioural intentions.

In this final study I did not consider individual differences of pre-existing attitudes. This was because I was particularly interested to test interventions that would be most successful across different audiences. More importantly, I decided not to measure pre-

existing attitudes because I wanted to avoid potential attitude priming effects that could have affected the results of Study 6 and Study 7.

Method

Participants and design. This final study followed a 2 x 3 between-participant design with reaction (confrontation vs. no confrontation) and justification of reaction (no justification vs. moral justification vs. scientific justification) as independent variables. As in previous studies, Exeter University students were recruited to participate in this study. The 135 participants (95 female) had a mean age of 19.40 ($SD = 1.74$). Participants signed up to participate in this study via an online booking system and they received £5 or course credits as compensation for their time.

Procedure. Upon arrival at the lab, participants were told that they would take part in two separate studies, one being a questionnaire assessing their impression of a focus group conversation and the other a short opinion survey. After giving their written consent, the experimenter³⁰ explained to participants that the aim of the first study was to get objective ratings of a focus group conversation and the people involved in it. Participants were then asked to listen to an audio recording of the (bogus) focus group conversation and were also provided with a written transcript of the same conversation to read along with while they listened. The audio tracks were recorded prior to the study with five people speaking different parts of the conversation. In that recording, the moderator (played by myself) gave a short introduction and then asked “I’m just going to start off by asking what comes to mind when you think about climate change.” Two people (Thomas, Charlotte) then gave their opinion on climate change which was intentionally impartial about the topic (see Appendix H for the exact wording). After that, a third person (Jack) made a comment expressing environmental disregard by saying:

³⁰ The data was collected in collaboration with a student who was running an internship in the department.

Yeah, I really couldn't give a damn about climate change, to be honest. I mean, people are just making too much of a big deal out of the whole issue. Um... yeah to be honest, I even actually enjoy acting in a kind of non-environmentally friendly way because I know it'll annoy greenie-type people. People pretend to be all green, but, let's be honest, who really cares?

The last person in that conversation (Daniel) then reacted either with a non-confrontational reaction "Well... I can't say I agree but I am always open to new ideas and viewpoints" or with a confrontational reaction "Really? I cannot believe you just said that, that is so wrong." After that initial reaction, Daniel either gave no further explanation and the recording ended at this point, or Daniel provided a justification for his reaction. In the moral justification condition Daniel said:

Maybe you should think about the horrible consequences for all these people in the world. I mean we can't imagine... I can't imagine what it would be like to fight for your basic needs every single day. And it's the most vulnerable- the most vulnerable people who are gonna be hit the most by this extreme weather and all the consequences that come from that. And I just can't – I can't stand the idea that it is that ignorant way of living that is contributing to other peoples' suffering. I mean whether you believe in the exact details or not, whether you agree with everything, people are already suffering because of how we treat the environment and this is only gonna get worse in the future.

When participants were assigned to the scientific justification condition they heard Daniel say:

Maybe we should think about really all the mass amount of scientific evidence for climate change. The vast amount of scientists, over 95%, they think the

world is getting warmer, the effects are irreversible and that is at least partly a consequence of human activity. Now, that is about as certain as science gets. So whether, you know, whether you believe in everything, whether you believe in the exact details or not, our lifestyle has to have an effect on the environment. This is only gonna get worse in the future.

Please note that, in order to eliminate possible confounds associated with minor differences in the ‘performances’ of the actors across recordings, the audio recording were edited in such a way that the recordings were totally identical in all aspects other than the parts that contained a different manipulation (e.g., the identical initial audio sequence was edited into all confrontation conditions).

After participants finished listening to the audio recording, the experimenter handed them a questionnaire, including the perception measures, and told them that every participant was asked to answer the questions for only one of the people involved in the (bogus) focus group discussion and that they were assigned to rate their impressions of Daniel (the responder to environmental disregard). After they had filled out the questionnaire the experimenter asked participants to sign a new consent form for the second study, which was a survey to assess students’ support for different kinds of political interventions. This second questionnaire contained the questions assessing policy support, support for local interventions, and behavioural intentions. This questionnaire also included questions relating to other social issues (gender equality, equality for people with disabilities). This was done for two reasons. Firstly, it acted as a way to disguise the goals of the study. Secondly, it allowed us to examine whether witnessing social confrontation specifically affects support for interventions related to the discussed topic, or whether it might simply affect a more general willingness to act more pro-socially. After completing this questionnaire, participants

were fully debriefed about the aims of the study, compensated, and thanked for their participation.

Dependent measures. After indicating their closeness to the responder (Daniel) on the previously used 4-item closeness scale, participants were asked to indicate on 7-point answer scales (1= *not at all*, 7= *extremely*) how warm (items: warm, good natured, kind, friendly), competent (items: confident, skilled, intelligent, confident), and moral (items: sincere, trustworthy, honest) they perceived Daniel to be.

An exploratory factor analysis with a Direct Oblimin rotation including closeness, perceived warmth, competence, and morality items revealed that closeness and warmth items loaded on separate factors (loadings $\leq .74$) while the items measuring competence and perceived morality of the confronter loaded on the same factor (loadings $\leq .74$). However, because my previous studies verified that these two constructs, competence and morality, behaved differently in the context of evaluating a confronter of environmental disregard, I decided to include both scales separately in the subsequent analysis. All four scales measuring perceptions of the responder were reliable: closeness $\alpha = .85$, warmth $\alpha = .89$, competence $\alpha = .81$, morality $\alpha = .74$.

In the second questionnaire participants were asked to indicate on a 7-point Likert scale, ranging from *strong opposition* (1) to *strong support* (7), how much they supported five different national environmental policies (e.g., “A doubling of the number of onshore and offshore wind farms in the UK.”; “A ‘carbon’ tax on goods and services based on their associated emissions”) and four University-wide interventions to reduce the institution’s negative impacts on the environment (e.g., “Introducing fines for not recycling household waste in student housing” ; “Reducing car parking space on campus and increasing public transport connectivity to stimulate car sharing, cycling and the use of public transport”). The five-item scale assessing support for environmental policies had a reliability of $\alpha = .67$.

However, the four items measuring support for local pro-environmental interventions had a low reliability of $\alpha = .47$ ³¹ even though all items loaded on a single factor when included in a factor analysis with Direct Oblimin rotation explaining 39.18% of the overall variance (see Appendix I for complete scales).

Furthermore the questionnaire included questions that measured participants' future pro-environmental behavioural intentions. Participants indicated how likely it was that they would engage in 11 different behaviours in the next 3 months (answer options: 1= *very unlikely* to 7= *very likely*). Some examples of these behaviours were: "Dry clothes on the drying rack instead of using the tumble dryer", "Buy new appliances that are energy efficient", "Keep my showers to under 4 minutes". The 11 items formed a reliable scale ($\alpha = .72$) and were averaged prior to the analysis (see Appendix I for complete scales).

The filler items concerning other social issues assessed how much participants supported policies to aid people with physical or cognitive disabilities (2 items, e.g., "Increasing benefit payments for people who are unable to work due to a physical disability"), local interventions for social causes (2 items, e.g., "Oblige every student to spend 10 hours a year engaging in mentoring of first year or international students"), and behavioural intentions to engage in other pro-social actions (2 items "Volunteer for charity work"; "Sign up to act as a student mentor for first year or international students").

Furthermore, because in this study participants were presented with more elaborate scientific information about the consequences of climate change I thought that it would be relevant to assess levels of climate change scepticism. Measuring whether participants believed in anthropogenic climate change would allow me to check whether the levels of scepticism would alter participant's responses to witnessing the interaction. Therefore, participants were asked to choose one of the three statements to reflect their overall view on

³¹ Exclusion of single items did not increase the values of α .

climate change: “I believe climate change is occurring, and human activities are having significant effects on climate change” ($n= 117$), “I believe climate change is occurring, but human activities are not having significant effects on climate change” ($n= 13$) or “I do not believe climate change is occurring.” ($n= 1$). The one participant indicating to not believe that climate change is happening was excluded and climate change scepticism was entered as a covariate throughout the subsequent analysis.

Results

A set of ANCOVA analyses were performed on the separate dependent variables, including reaction and justification of reaction as independent variables and climate change scepticism as a covariate.

Perception of the responder.

Closeness to responder. The analysis examining feelings of closeness to the responder revealed no significant main effect of reaction, $F(1, 122) = 1.42, p= .236, \eta_p^2 = .011$, but did show a main effect of justification, $F(2, 122) = 3.95, p= .022, \eta_p^2 = .061$. However, this main effect of justification was qualified by a significant interaction between justification and reaction, $F(2, 122) = 4.91, p= .009, \eta_p^2 = .074$, as depicted in Figure 19.

Pairwise comparisons demonstrated that reaction only altered feelings of closeness when the responder (Daniel) used scientific arguments to justify his reaction, $F(1, 122) = 8.12, p= .005, \eta_p^2 = .062$. Participants felt closer to Daniel when he reacted without confrontation and gave scientific justification ($M= 4.98, SE= 0.21$) relative to when he confronted environmental disregard before giving the same scientific arguments ($M= 4.16, SE= 0.20$). The confrontation did not significantly affect participants’ feeling of closeness to Daniel in the no-justification situation, $F(1, 122) = 2.54, p= .114, \eta_p^2 = .020$, or in the moral justification situation, $F(1, 122) = 0.84, p= .363, \eta_p^2 = .007$.

One should also note that, despite not being statistically significant, the results of the no-justification condition reveal a trend that somewhat contradicts my previous findings in that participants felt closer to the confronter ($M= 4.89, SE= 0.22$) than the non-confronter of environmental disregard ($M= 4.41, SE= 0.21$) when no justification was given.

Decomposing the interaction between reaction and justification in a different way, pairwise comparison further revealed that the justification given significantly altered ratings of the confronter, $F(2, 122) = 4.80, p= .010, \eta_p^2= .073$, and the person reacting without confrontation, $F(2, 122) = 4.23, p= .017, \eta_p^2= .065$. Participants felt significantly more distant to the scientific confronter compared to the confronter using moral arguments ($p= .005$) or no justification ($p= .016$). However, when looking at the contrast between the non-confrontational responders it turns out that participants felt closer to the responders providing arguments than to the person not providing arguments (no justification/scientific justification $p= .051$; no justification/moral justification $p= .005$).

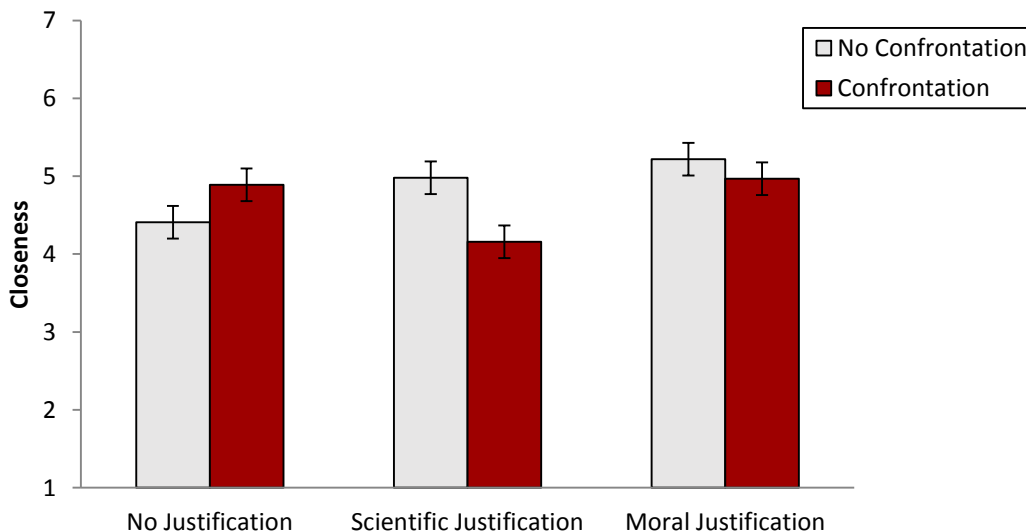


Figure 19. Means scores depicting the interaction between justification and reaction on ratings of closeness to the responder.

Warmth of responder. The same analysis on perceived warmth of the responder delivered evidence for a main effect of reaction, $F(1, 121) = 48.94, p < .001, \eta_p^2 = .288$. Daniel

was overall perceived as warmer when he reacted without confrontation ($M= 5.07, SE= 0.11$) than when he confronted the environmental disregard comment ($M= 3.95, SE= 0.11$).

Furthermore no main effect of justification, $F(2, 121) = 2.17, p= .118, \eta_p^2= 0.27$ and no interaction effect between the two independent variables was observed on perceived warmth, $F(2, 121) = 0.28, p= .756, \eta_p^2= .005$.

Morality of responder. The ANCOVA including perceived morality of the responder as the dependent variable verified that both independent variables, reaction and justification of reaction, had main effects on perceived morality (reaction: $F(1, 121) = 3.95, p= .049, \eta_p^2= .032$, justification: $F(2, 121) = 4.51, p= .013, \eta_p^2= .069$). The responder was perceived as more moral when he used scientific ($M= 5.18, SE= 0.13$) or moral arguments ($M= 5.17, SE= 0.13$) than when he gave no justification for his reaction ($M= 4.69, SE= 0.13$). Independent from justification given, and contrary to expectations, observers rated Daniel as being more moral when he reacted without confrontation ($M= 5.16, SE= 0.11$) compared to when he confronted environmental disregard ($M= 4.86, SE= 0.11$). The interaction between the two independent variables was not significant, $F(2, 121) = 1.29, p= .279, \eta_p^2= .021$.

Competence of responder. Another ANCOVA investigated the effect of reaction and justification on perceived competence of the responder. There was no main effect of reaction, $F(1, 121) = 0.65, p= .422, \eta_p^2= .005$ on competence, but I did observe a main effect of justification, $F(2, 121) = 22.23, p< .001, \eta_p^2= .269$. This main effect is further qualified by a significant Reaction x Justification interaction on perceived competence of the responder, $F(2, 121) = 8.04, p= .001, \eta_p^2= .117$ (see Figure 20). Pairwise comparisons identified that confrontation increased ratings of competence of the responder when no justification was given (no confrontation: $M= 3.91, SE= 0.18$, confrontation: $M= 4.87, SE= 0.20$), $F(1, 121) = 13.44, p< .001, \eta_p^2= .100$. Reaction had no statistically significant effect on

ratings of competence when a moral or scientific justification was given (moral

$F(1, 121) = 1.49, p = .225, \eta_p^2 = .012$; science $F(1, 121) = 1.48, p = .227, \eta_p^2 = .012$).

Looking at the interaction the other way around, pairwise comparisons demonstrate that justifications given significantly affected the perceived competence of the non-confrontational responder, $F(1, 121) = 28.50, p \leq .001, \eta_p^2 = .320$. Compared to the no justification condition, scientific arguments $p \leq .001$ as well as moral arguments $p \leq .001$ significantly increased observers' ratings of competence of the non-confronter. The assessment of the contrast between the justification conditions when rating the competence of the *confronter* was only marginal significant, $F(1, 121) = 2.67, p = .073, \eta_p^2 = .042$. Interestingly, confronting environmental disregard by using scientific arguments led participants to rate the confronter as more competent than the confronter who does not use a justification $p = .031$ but the moral justification does not increase competence ratings relative to no justification $p = .578$.

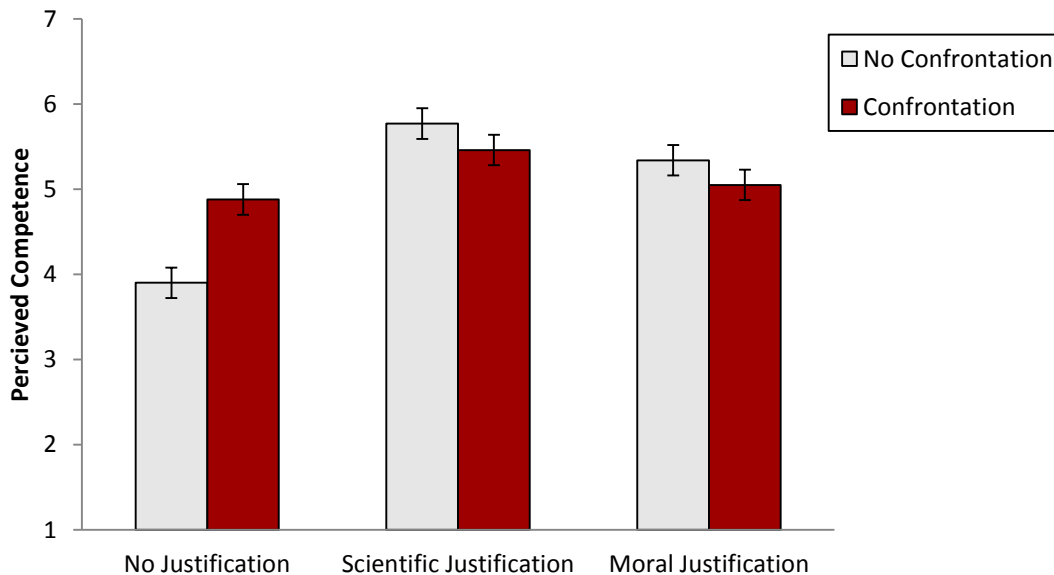


Figure 20. Means scores depicting the interaction between justification and reaction on ratings of competence of the responder.

Pro-environmental attitudes/ intentions.

Policy support. A separate ANCOVA examined the effect of reaction and justification on indicated support for national climate change policies. This analysis showed that support for national environmental polices was unaffected by reaction, $F(1, 123) = 1.73, p = .109, \eta_p^2 = .035$, justification, $F(2, 124) = 0.75, p = .476, \eta_p^2 = .021$, or an interaction of both variables, $F(2, 123) = 1.89, p = .172, \eta_p^2 = .015$.

Support for local interventions. In contrast, however, the ANCOVA including support for local interventions as the dependent variable provided evidence for a significant interaction between justification and reaction, $F(2, 124) = 2.98, p = .054, \eta_p^2 = .046$, as depicted in Figure 21 (no main effects were significant, reaction $F(1, 124) = 1.73, p = .190, \eta_p^2 = .014$, justification $F(2, 124) = 0.73, p = .483, \eta_p^2 = .012$). Pairwise comparisons gave insight into the interaction and demonstrated that the confrontational reaction only altered support for local environmental interventions when a scientific justification was given, $F(1, 124) = 7.53, p = .007, \eta_p^2 = .057$. No effect of confrontation was observed when no justification was given, $F(1, 124) = 0.14, p = .710, \eta_p^2 = .001$, nor when moral arguments were presented for the responder's reaction, $F(1, 124) = 0.01, p = .934, \eta_p^2 < .001$. As shown in Figure 21, witnessing a responder reacting with confrontation while also giving scientific arguments increased support for local environmental interventions ($M = 4.41, SE = 0.22$) compared to witnessing the same person giving the same arguments but not confronting the comment maker ($M = 3.56, SE = 0.22$).

Pairwise comparisons further showed that, in the cases where confrontation was involved, the justification mattered (marginally), $F(1, 124) = 2.49, p = .087, \eta_p^2 = .039$, whereas justification did not matter so much within the non-confrontational reaction conditions, $F(1, 124) = 1.28, p = .283, \eta_p^2 = .020$. Using scientific arguments after having confronted environmental disregard lead to significantly higher support for local

interventions than a confrontation using moral arguments, $p = .031$ but the difference between scientific confrontation and a confrontation without justification was not significant, $p = .142$.

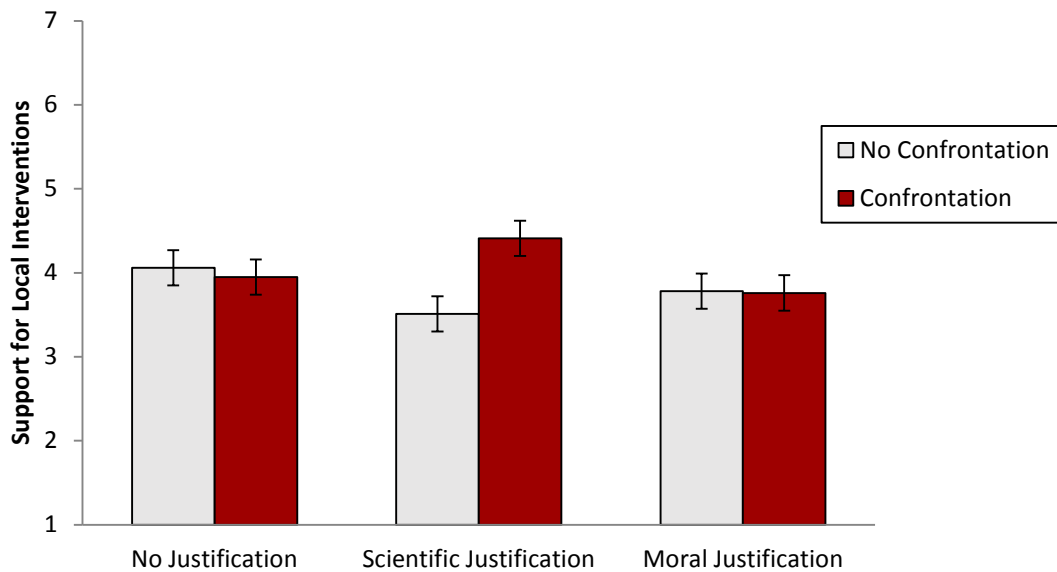


Figure 21. Means scored depicting the interaction between reaction and justification on expressed support for local, environmental interventions.

Behavioural intentions. A similar pattern was detected in the ANCOVA examining effects of the independent variables on pro-environmental behavioural intentions. No main effects of justification, $F(2, 122) = 0.15$, $p = .864$, $\eta_p^2 = .002$, or of reaction, $F(1, 122) = 1.71$, $p = .193$, $\eta_p^2 = .014$ were identified on behavioural intentions. However, there was evidence for a significant interaction between reaction and justification, $F(2, 122) = 4.35$, $p = .015$, $\eta_p^2 = .067$. As was the case for support for local policy initiatives, confrontation increased observers' own individual pro-environmental behavioural intentions ($M = 4.73$, $SE = 0.19$) compared to no confrontation ($M = 3.87$, $SE = 0.20$) only when scientific arguments were given, $F(1, 122) = 10.00$, $p = .002$, $\eta_p^2 = .076$ (see Figure 22). The type of reaction had no significant effect on behavioural intentions when the responder used a moral justification, $F(1, 122) = 0.02$, $p = .898$, $\eta_p^2 < .001$, or gave no justification, $F(1, 122) = 0.51$, $p = .475$, $\eta_p^2 = .004$.

However, when further examining the differences it was revealed that scientific arguments significantly reduced pro-environmental intentions when the responder did *not* confront, (compared to no justification, $p = .052$, moral justification, $p = .048$), with this overall effect of justification in the non-confrontational condition being marginally significant, $F(1, 122) = 2.60$, $p = .079$, $\eta_p^2 = .041$. When looking within the confrontation condition, pairwise comparisons revealed that the scientific confrontation lead to marginally higher behavioural intentions than a confrontation using no justification, $p = .069$ or a moral justification, $p = .995$. However, the overall effect of justification is not significant in the confrontation conditions, $F(1, 122) = 1.85$, $p = .161$, $\eta_p^2 = .029$.

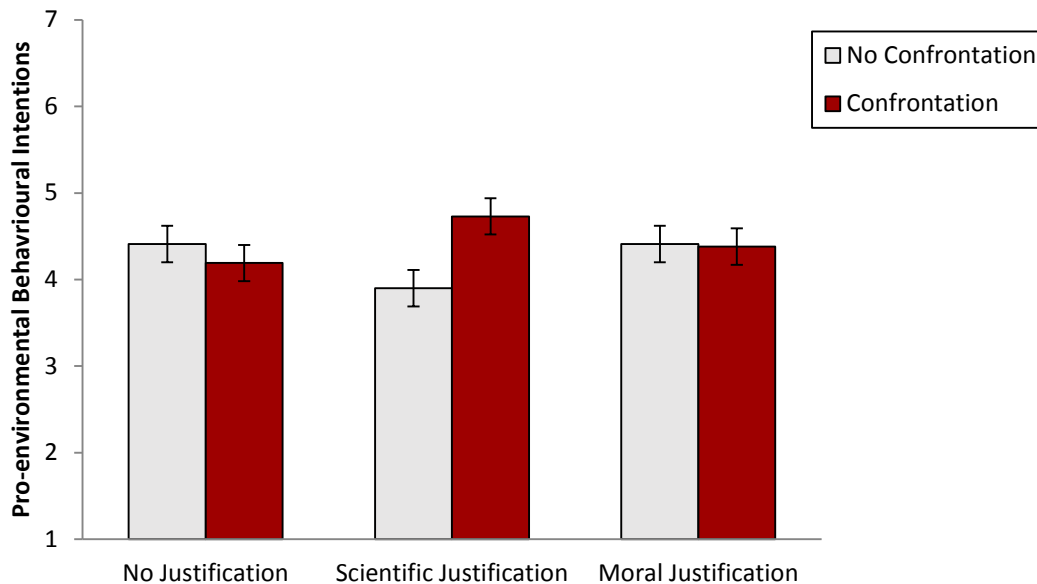


Figure 22. Mean scores depicting the interaction between reaction and justification on pro-environmental behavioural intentions.

Filler items. Three ANOVAs were performed to check whether witnessing a social confrontation affected pro-social orientation in general or whether the identified effects are restricted to pro-environmental support and actions. The results are depicted in Table 9 and demonstrate that the only effect of the independent variables across these dependent variables was a significant effect ($p = .05$) of reaction on intentions to engage in action on other social

issues. Participants were more motivated to act generally pro-social after having listened to the confrontation ($M= 4.80, SE= 0.17$) compared to having listened to the non-confrontational recording ($M= 4.31, SE= 0.17$).

Table 9. *Results of the ANOVA Analyses Examining Support for Filler Items (Policies, Intervention and Behavioural Intentions related to other social issues)*

		$F(df, 126)$	p	η_p^2
Support for policies concerning the integration of people with disabilities	Reaction	1.65	.202	.013
	Justification (df= 2)	0.17	.840	.003
	Reaction * Justification	0.61	.548	.019
Support for local pro-social interventions	Reaction	0.67	.413	.005
	Justification (df= 2)	2.15	.121	.033
	Reaction * Justification	1.22	.198	.019
Pro-social behavioural intentions	Reaction	3.91	.050	.030
	Justification (df= 2)	0.20	.820	.003
	Reaction * Justification	1.94	.335	.017

Mediation analysis. In light of the above analysis demonstrating that the scientific justification increased ratings of competence relative to the other two justification conditions, I wanted to test whether these high ratings of competence could explain the subsequent results produced by the scientific justification. In other words, based on the identified results it seems plausible that the high competence, which is associated with using scientific arguments, is responsible for observers adjusting their behavioural consequences accordingly depending on whether this competent person confronted or failed to confront environmental disregard.

To test this possible explanation, two separate analyses were performed to test whether the interaction between the scientific justification (relative to no justification or

moral justification) and reaction on the support for local interventions and behavioural intentions could be explained by the effect of the scientific justification on perceived competence of the responder. Prior to analysis justification was dummy coded (0, 0, 1) to compare the scientific justification (coded 1) with the other two justification conditions (coded 0). The two mediation models were tested using PROCESS (Hayes, 2012) Model 15 with 1000 bootstrap samples, including the dummy coded justification variable (independent variable), competence (mediator), the interaction between the independent variable and the moderator (reaction) and the interaction between the mediator and the moderator as predictors of support for local interventions and behavioural intentions. Scepticism in human caused climate change was entered as a covariate.

The first mediational model on indicated support for local interventions confirmed the effect of justification (science vs. others) on competence $b = 0.91$, $SE = .24$, $t = 4.57$, $p < .001$. However, the results did not deliver evidence for an interaction of competence (mediator) and reaction (moderator) on support for local interventions, $b = -0.18$, $SE = .20$, $t = -0.09$, $p = .926$. Only the interaction of justification (science vs. others) and reaction (moderator) predicted how much participants' supported local interventions, $b = 0.90$, $SE = .41$, $t = 2.19$, $p = .030$. Unfolding this interaction, the analysis showed that the scientific justification led to more support for local interventions when the reaction was confrontational, effect = $.69$, $SE = .28$, $t = 2.48$, $p = .015$, but did not affect support for local interventions when the reaction was non-confrontational, effect = $-.21$, $SE = .30$, $t = -0.70$, $p = .486$. More importantly, the indirect path between justification (science vs. others) and support for local interventions via competence was not significant for the non-confrontational reaction, effect = $-.12$, $SE = .11$, 95% CIs = $-.36$ & $.08$, nor for confrontation, effect = $-.14$, $SE = .11$, 95% CIs = $-.43$ & $.04$.

The second mediation analysis on pro-environmental behavioural intentions identified a direct effect of justification (science vs. others) on competence (mediator), $b = 0.83$,

$SE = .18$, $t = 4.64$, $p < .001$. However, just as for support for local interventions, the interaction between competence (mediator) and reaction (moderator) did not predict behavioural intentions, $b = 0.08$, $SE = .17$, $t = -.45$, $p = .652$. The indirect path from justification (science vs. others) and behavioural intentions via competence was not significant (no confrontation: effect = .01, $SE = .09$, 95% CIs = -.15 & .21, confrontation: effect = .08, $SE = .12$, 95% CIs = -.14 & .34). Instead of delivering support for a mediation, the analysis showed that justification (science vs. others) directly, $b = -0.55$, $SE = .26$, $t = -2.09$, $p = .038$, and via an interaction with reaction, predicted behavioural intentions, $b = 0.32$, $SE = .36$, $t = 2.80$, $p = .006$. The analysis revealed that the scientific justification (compared to the other two) marginally increased behavioural intentions when used in combination with confrontation, effect = .45, $SE = .24$, $t = 1.86$, $p = .065$ and significantly decreased behavioural intentions when combined with a non-confrontational reaction, effect = -.55, $SE = .26$, $t = -2.09$, $p = .038$.

Discussion

The main purpose of this study was to test different ways to confront environmental disregard in order to identify whether one confrontational strategy might be more successful than others when it comes to the consequences of the confrontation, both in terms of social costs befalling the confronter as well as consequences for environmental orientations and actions of onlookers. More specifically, it explored whether providing different kinds of *justifications* for one's response (either scientific or moral in nature) might attenuate the effects demonstrated in earlier studies. The results show that witnessing someone confronting environmental disregard together with a scientific justification is the one confrontation strategy that reliably and consistently affects observers' tendency to engage in pro-environmental actions (as identified by increased support for local environmental interventions and increased personal behavioural intentions). However, despite this tendency of the observer to adjust their environmental action tendencies to be more in line with the

confronters' position, this specific form of confrontation (using scientific arguments) was also shown, paradoxically, to be the one strategy that was particularly *costly* for the person engaging in it.

The results show that confronters of environmental disregard were always perceived as less warm than people reacting without confrontation, independently of the justification used for the reaction. However, in relation to feelings of closeness, the results are more nuanced. Social costs of confrontation only befell a confronter who used scientific arguments, while confrontation had no effect on observers' feelings of closeness when the responder used no justification or used moral arguments. It should be noted that, surprisingly, there were no reduced feelings of closeness to the confronter in the no justification condition, which contradicts my previous findings which had showed that costs were on average higher for a confronter than for non-confronters (when setting aside individual difference in climate change attitudes). This could either be a result of this sample on average holding high climate change attitudes or it could be a bias caused by the audio recording. It is possible that the audio recording of the actor speaking Daniel's part made the confronter sound more sympathetic in the confrontation recording. However, both explanations, a sympathetic confronter and a sample being more on the pro-environmental side, would mean that this would also be true for the other two confrontation conditions (scientific and moral). Therefore, this would make the identified social costs (lower ratings of closeness for the confronter) in the scientific confronter even more noteworthy, in light of such baseline conditions.

In contrast to previous studies, only the scientific confronter experienced social costs for confronting environmental disregard (relative to no confrontation), whereas the confronter using moral arguments, or no arguments, did not suffer negative social consequences for their actions. These reduced feelings of closeness to the scientific confronter can be explained via

reactions to cognitive dissonance. As previously discussed, it is possible that people dismiss an information source if the provided information makes people aware of a discrepancy between their attitudes and actions (Festinger, 1962).

It is possible that the combination of scientific arguments and interpersonal activism made participants aware of the discrepancy between their (potential) agreement with the scientific evidence and their own personal (lack of) environmental actions; a controversy which is well documented in the context of climate change (Stoknes, 2014). On the other hand, the moral confronter, and the confronter who does not use any arguments, might simply not have triggered any feeling of discomfort, meaning participants might not have had a reason to degrade these confronters.

The most interesting findings of this study, however, concern the behavioural tendencies of observers of the confrontation. The current results are (to the author's knowledge) the first to deliver evidence that confrontation can indeed increase *observers'* support for local, environmental policy interventions and even increase their behavioural intentions. However, observers' *only* altered their pro-environmental action tendencies when the confronter used scientific justifications. When confronters used moral justifications, or no justification, the confrontational reaction did not make participants reconsider their future environmental actions. In conclusion, across the two dimension of support for local interventions and behavioural intentions the integration of a scientific justification for the confrontation was identified as the most successful confrontation strategy in relation to promoting environmental actions.

However, the results also present us with an unexpected twist to these findings. The person using scientific arguments seems to be able to make observers' increase their environmental action tendencies if they confront, but at the same time, scientific rhetoric seems to reduce the observers' action tendencies if they fail to confront (with regards to

behavioural intentions). This result concerning the scientific responder *failing* to confront is in line with Czopp's (2013) findings, discussed earlier. In their study Czopp (2013) demonstrated that participants who watched an environmental activist fail to confront led them to reduce their recycling intentions (if participants reported to have expected a different reaction). However, in Czopp's study witnessing an environmental activist confront anti-environmental viewpoints, in contrast to my current results, had no positive effect on observers' recycling intentions.

Furthermore Study 8 demonstrated that the scientific confrontation led observers' action tendencies to be more in line with the confronter's position, despite negative evaluations of this person (indicated by reduced feelings of closeness). The seemingly paradoxical result has previously been identified by Czopp, Monteith, and Mark (2006), who demonstrated that being confronted for giving stereotypic responses during a photograph-sentence task led to reduced stereotype use at a later point, even though participants evaluated the confronter negatively. The findings further showed that a person engaging in a hostile confrontation was evaluated less favourably than a person confronting in a non-hostile manner, however both types of confrontations resulted in the same behavioural adjustments. Based on the existing literature and the findings of Study 8, it can be concluded that negative evaluations of a confronter do not undermine the possibility that the confrontation changes peoples' behaviour to be more in line with the confronter's position.

In relation to the perceived competence of the person responding to an anti-environmental comment, it seemed that giving justifications (moral or scientific) *or* engaging in confrontation were both associated with high ratings of competence. Only when a person gives no further explanation for their reaction and chooses to disagree but not confront environmental disregard was the responder perceived as low on competence. However, the results further demonstrate that when looking at the competence of the confronters using the

three tested strategies, only the scientific confronter was perceived as more competent than the confronter who does not use any arguments. The moral confronter did not significantly increase his competence by justifying his reaction with the moral information regarding climate change. These findings suggested a potential explanation for the effect the scientific justification had on observers' behavioural tendencies. As discussed previously in Chapter 3, the persuasion literature shows that an information source with high credibility is likely to be perceived as more persuasive than non-credible information sources (Chaiken, 1980; Chaiken & Eagly, 1989). Therefore, it seemed plausible that in the current study the high competence ratings of the responder using scientific arguments are the reason for the *success* of this strategy, despite the results of Study 5 contradicting this possibility. However, the post hoc mediation analysis did not support this explanation and verified that the high ratings of competence associated with the scientific justification were not able to explain the effect of this scientific strategy on pro-environmental action tendencies. However, it is worth noting that the measure of competence relates to a general feeling of competence. As an alternative explanation, it is possible that the use of scientific arguments gave the impression that this person was more knowledgeable about the specific issue of climate change. When someone is perceived as more of an expert on the specific topic then their actions could carry more *weight*, which would explain the current results in relation to scientific arguments. However, future studies are needed to identify why exactly the audience may have reacted so differently to the person using a scientific justification for their reaction.

Regarding moral justification, the current results suggest, similarly to the results of Study 7, that moral arguments or information do not seem to add anything to the *success* of confrontation. The current results demonstrate that the moral justification itself improves the evaluations of the responder in relation to closeness and competence for the confronter and non-confronter alike. However, in relation to the consequences of confrontation that go

beyond perceptions of the immediate interaction, the moral justification is not any more successful than the responder who does not use a justification. Interestingly, and contrary to previous findings, the confronter was even perceived as less moral than the person reacting without confrontation which speaks against the idea that confrontation is perceived as a moral act and moral information embedded into the confrontation therefore do not communicate additional information to the observers of this interaction. However, because of the inconsistencies concerning the baseline perception of the confronter in this audio recording study, I would not want to rule out the notion that confrontation is perceived as a moral act based on the current study. In conclusion, while the provision of moral justification seems to hold the potential to eliminate backlash effects in relation to social evaluations of a confronter or the negative effect of a failure to confront on observers' behavioural tendencies, it is not a successful strategy to promote environmental actions.

Another result of this study that requires further investigation is the fact that participants' support for national climate change policies remained unaffected by reaction and the justification given. In light of the consistent pattern across support for local environmental interventions and pro-environmental behavioural intentions this non-result on national policy support is very noticeable. One possible explanation for the lack of changes in policy support derives from the nature of the interaction this thesis focuses on. One of the psychological barriers that makes it difficult to engage with climate change is the fact that it is a global and therefore rather distant problem (Gifford, 2011; Pidgeon, 2012). Witnessing a confrontation between two members of their own immediate social environment, in this case University students from the University of Exeter, seems able to affect people's support for local, University-wide interventions and personal actions, but not nationwide policies. It is plausible that this was because the observed interaction is perceived to be directly relevant for

the *local* norms and therefore for had effects on the two behavioural/attitudinal dimensions that were more relevant to this local context.

It should be noted that the current results identified that witnessing a confrontation of environmental disregard did also increase observers' tendency to have higher behavioural intentions in relation to other social issues. This results draws attention to the possibility that confrontation may communicate general pro-social actions, rather than only more specific environmental actions. However, the effects of the different justification strategies were limited to the specific context of climate change related actions, indicating that the more nuanced results of this study seem to only apply to the more environmentally-specific outcome variables. Future studies are needed to clarify further this interplay of confrontation and general pro-social action tendencies.

In conclusion it can be said that the current study delivers evidence for the *power* of confrontation to promote environmental action tendencies if combined with a justification that outlines the scientific evidence for climate change. However the current results also highlight the flip side of this strategy. The scientific confrontation is also associated with high social costs for the confronter and the use of scientific arguments without an act of interpersonal activism can discourage observers from engaging in pro-environmental actions.

General discussion

The studies presented in this chapter were designed to explore the consequences of witnessing someone confronting environmental disregard in realistic settings while also examining in more detail the role of issue morality. The obtained results broaden our knowledge of the processes surrounding confrontation and give an indication of whether this interpersonal process might play a role in maintaining or changing environmental norms and actions.

Initially, the results in the realistic interactional setting of Study 6 replicated the higher social costs associated with confronting environmental disregard (relative to confronting racism). However, Study 6 and Study 7 further qualify the findings of the earlier studies by identifying the moderating role of pre-existing climate change attitudes in determining whether the confronter of environmental disregard is perceived as more or less favourable as a person not confronting the same comment. This dominant role of climate change attitudes could be more pronounced in more realistic situations (rather than scenario studies), which would explain the dominant social costs identified in the prior scenario studies. The existing literature on individual pro-environmental behaviour supports the crucial role of related attitudes in determining behaviour intentions (e.g., Stern et al., 1985). The exact pattern of the results of study 6 and 7 in relation to pre-existing climate change attitudes deliver evidence that people tend to evaluate the observed interaction in a way that fits with their existing attitudes and witnessing the confrontation seemed to actually further accentuate their pre-existing attitudes.

This calls into question how negative evaluations of the confronter and other backlash effects on climate change attitudes can be avoided (at least among people with low climate change attitudes) or, to put it differently, how personal attitudes and normative processes interact. Smith and Louis (2009) addressed this question and proposed the idea that personal attitudes determine behaviours more strongly in the absence of norm information from a relevant social group. The researchers further point out that we currently lack an elaborate understanding of how and when attitudes and norms influence each other. In relation to this, it might be interesting to consider other related concepts, such as individual biospheric values. In the context of pro-environmental actions the role of biospheric values in determining beliefs and personal intentions has been extensively researched (Steg, Dreijerink, & Abrahamse, 2005; Stern & Dietz, 1994). To place my research findings within the existing

literature, additional studies need to clarify whether the identified effects are caused by specific climate change attitudes (political priority of climate change) or whether they are determined by higher-order biospheric beliefs. Determining what exactly causes the identified attitude effects, identified in Study 6 and 7 will help to clarify how attitudinal backlash effects can be reduced or avoided in response to interpersonal confrontation.

The second main objective of the studies presented in this chapter was to examine the role of issue morality in reducing social costs and increasing potential broader benefits of confronting environmental disregard. The external manipulation of issue morality (Study 6) backfired in the context of racial equality but did not have significant effect on the evaluation of a responder to environmental disregard. In an attempt to make the morality manipulation more relevant for the interaction, I took a different approach in Study 7 by having the confronter themselves make morality salient prior to their confrontation. The results revealed that even after integrating the morality of the issue in a more subtle way within the interaction, its presence polarized the audience even more in their attitude about the discussed issue, in addition to polarising perceptions of the responder.

Moralization of the issue and the displayed reaction both turned out to be important stimuli that observers respond to in adjusting their perception of the responder and their climate change attitude. However, results further demonstrated that, contrary to predictions, these two factors did not interact but had separate effects on observers. To put it differently, the moralization of the issue did not improve evaluations of the confronter (or the non-confronter). This could be explained by the evidence that the confrontation itself is perceived as a moral act, therefore additional moral information might simply not add much more to a confrontation in terms of communicating morality. Having in mind this possibility of issue morality not being able to add moral information to a confrontation, Study 8 explored a very direct integration of moral arguments into the reaction and compared it to an alternative

confrontation strategy, the use of scientific arguments. However, the final study also did not provide evidence for the hypothesis that morality can increase the *effectiveness* of social confrontation in fostering environmental actions when used as a confrontation strategy, with scientific justification for confrontation proving more effective. However, the results of the final study also identified backlash effects (in terms of perceptions of the confronter) for the use of a scientific justification, backlash effects that were not observed when a moral justification was applied. I conclude that the use of moral information in interpersonal interaction therefore seems to protect the responder from experiencing negative consequences, however it also reduces the chances of acts of interpersonal activism producing the potential benefits (in terms of social change) that might have motivated the act in the first place.

An additional aim of the studies presented in this chapter was to empirically examine the assumption that social confrontation has more far reaching consequences that go beyond the immediate interaction. The results of study 6 supported this claim in showing that social confrontation helps communicate high social norms. However, the results of Study 6 and Study 7 failed to produce additional evidence for the broader consequences of confrontation as participants failed to change their attitudes or behaviour after having witnessed a social confrontation, at least not in the case of those who were less pro-environmentally inclined to begin with. However, results of Study 8 identified a strategy that may be effective in making people reconsider their environmental actions. Witnessing someone who confronts environmental disregard and provides scientific justification for the relevance of climate change led to an increase in support for local environmental policy interventions and to an increase in pro-environmental behavioural intentions. Scientific arguments seem to provide the expertise that makes this person's social actions more meaningful for the audience than these actions would be otherwise (either without justification or with moral arguments). It is

important to note that just providing a scientific justification for one's position did not, in itself, simply increase environmental action tendencies. Rather, it is crucial whether they themselves act upon their beliefs by confronting environmental disregard (or not). The results of study 8 showed that this 'scientific expert' also had the power to *decrease* environmental actions of onlookers if they *failed* to confront environmental disregard. This finding fits nicely with Czopp's (2013) finding, which showed that witnessing an environmental activist's failure to confront anti-environmental opinions reduced future recycling intentions of the audience. Therefore, if someone has the expertise or the reputation to be pro-environmental and then does not act on their own beliefs (through confrontation) then this seems to result in a non-environmental normative message being communicated to those in the social environment who bear witness to the interaction.

The strong response of participants to the person using scientific information in response to environmental disregard could be explained in relation to the crucial role of (mis)trust in information sources in the context of climate change communication. As mentioned before, existing literature demonstrates that people often mistrust scientific information associated with this particular issue (Gifford, 2011; Lorenzoni et al., 2007; Swim et al., 2009). Pidgeon (2012) explained this phenomenon with the psychological challenges associated with climate change and the fact that a dismissal on the grounds of scientific uncertainty of the issue might help people to rationalise not having to take actions to tackle climate change. Additionally, the history of miscommunication of climate change information, such as the so called 'climategate' affair, further undermined trust in climate scientists as information sources (Nerlich, 2010). The prevalent mistrust in relation to the issue might explain why people react strongly to a person who used scientific arguments but failed to confront environmental disregard. Despite being rated as highly competent, the person not acting up on 'what they preach' can be easily dismissed as a hypocrite and

untrustworthy. On the other hand, a highly competent, knowledgeable person who confronts environmental disregard might be seen as a highly trustworthy and credible role model.

At this point I wish to draw a comparison with the results of Study 4, which manipulated the credentials of the confronter. In Chapter 3, I argued that highlighting one's own environmental credentials is not a strategy that a confronter should adopt as it did not improve social evaluations of a confronter of environmental disregard. If anything, it increased the social costs. Furthermore, highlighting high environmental credentials also backfired in relation to other measures and led to increased feelings of closeness to the original anti-environmental comment maker. However, in Study 4 I did not measure behavioural consequences and therefore I am unable to draw conclusion about whether the environmental credentials might have the same behavioural consequences as the scientific justification when combined with a confrontational reaction. Using scientific arguments and giving evidence of personal efforts to engage in pro-environmental actions both led to more negative evaluations by the audience, especially when used in combination with an act of interpersonal activism. Despite this, giving a scientific justification for one's confrontational response *worked* in that it increased observers' pro-environmental action tendencies. Therefore, there is the possibility that highlighting personal environmental credentials might have similar effects on the audience's action tendencies, something that needs to be addressed in future research.

However, at this point I can only draw conclusions about the use of scientific arguments embedded within an interpersonal confrontation. With regards to stimulating the audience to consider environmental action tendencies, this strategy was successful. More generally, the effectiveness of scientific information combined with interpersonal confrontation highlights the relevance of these interpersonal interactions in shaping social

norms, especially in relation to taking action on an issue that struggles to establish credible information sources.

Another remarkable finding of Study 8 should be discussed at this point. In line with Czopp et al. (2006) findings, scientifically-justified confrontation seemed to be effective (in changing attitudes and behavioural intentions) *despite* more negative perceptions of the confronter as an individual. This finding seems to stand in contrast to the persuasion literature, which suggests that more favourable information sources might be perceived as more persuasive. However, the persuasion literature specifies that the likability of the communicator does not consistently determine the success of a persuasion attempt, but only does so if the message is processed via the heuristic route (Chaiken, 1980). When, for example, the message receiver is not motivated to process the message in great depth, then superficial factors, such as source characteristics, as opposed to argument quality, determine whether a message receiver conforms with the message or dismisses it (Chaiken & Eagly, 1989; Chaiken & Maheswaran, 1994). However, researchers also established that inconsistent source characteristics, e.g. low source likeability combined with high expertise, led message receivers to increase the scrutiny with which they evaluate the message content (Ziegler, Diehl, & Ruther, 2002). Subsequently, higher scrutiny caused message receivers to be persuaded by the message when the presented argument was of high quality, and dismiss the message when the argument was of low quality. It was concluded that inconsistent source characteristics can result in a higher relevance of the message content and quality. On the other hand, when the source characteristics were consistent (e.g. a likable source with high expertise), the quality of the arguments was less likely to determine whether or not the message was perceived as convincing (Ziegler, Diehl, & Ruther, 2002).

With regard to the result of Study 8, it is possible that the negative evaluation of the confronter of environmental disregard, in combination with the scientific arguments, resulted

in a more in-depth examination of the interaction, and the quality of the presented arguments. Furthermore, it is possible that the confronter, who provided no arguments, or moral arguments, was either perceived as having consistent characteristics or the provided arguments were too weak to affect observers' action tendencies. Therefore it can be concluded that the combination of negative evaluations, combined with high expertise and high quality arguments can explain the identified behavioural tendencies of participants to conform with the (scientific) confronter's position. Whilst the persuasion literature provides an interesting explanation of why the scientific confronter might have been successful in changing observers' environmental actions, it does not explain why the scientific confronter was perceived more negatively (reduced feelings of closeness) in the first place.

One possible motivation for dismissing the scientific confronter is that he made observers aware of their own shortcomings with regard to environmental actions. As discussed previously, people tend to dismiss information sources that cause them to be aware of possible attitudes-behaviour discrepancies, a discrepancy that is a widespread problem in the context of climate change (Stoknes, 2014).

Furthermore, my line of research will not be able to answer at this point whether the identified high social costs associated with confronting environmental disregard while using scientific arguments, might still have other consequences that might hinder the spread of social change in other ways, such as reducing observers' tendencies to confront other people themselves in the future. However this is a crucial area for future research for this domain to follow up.

Overall, this chapter provides important insights into the individual costs and potential societal benefits of interpersonally confronting environmental disregard. The theoretical and practical implications of these findings and an identification of which questions still need to be answered will be discussed in more detail in the final chapter of this thesis.

Chapter 5: General discussion

The research presented in this thesis was designed to deepen our scarce understanding of the normative processes involved in maintaining and changing social norms associated with environmental issues such as climate change. In particular the research sought to explore the consequences of interpersonal confrontation of environmental disregard—consequences for the person engaging in this act of interpersonal activism as well as the broader consequences of such an action that might contribute to realizing a more sustainable society.

A detailed understanding of how social norms change is something that is of particular interest in the context of climate change, an issue that presents humans with numerous psychological challenges, and an issue that has yet to be responded to with widespread mitigation interventions despite the urgency of the calls for such action by climate scientists (IPCC, 2014). The literature suggests that we currently face a governance trap, a situation that is characterized by a stagnation of efforts to tackle climate change (Pidgeon, 2012). Paradoxically this is occurring at times of high levels of public concern about the consequences of the global increase in temperature and a general support, at least in theory (if not practice), for far reaching changes. The current lack of significant efforts to mitigate climate change comes down to a lack of sufficient public engagement with the topic. Despite many being concerned, people do not want to take action themselves and appear either insufficiently motivated or enabled to successfully communicate their concerns to politicians (Compston & Bailey, 2008).

One strategy that has been put forward by researchers to revive the current stagnation of climate change efforts is to consider small scale activism, such as through community projects (Adger et al., 2009; Whitmarsh et al., 2013). This call for localized community projects is motivated by the social norm literature that highlights the relevance of the direct social networks within which individuals are embedded in determining actions. The social

norm literature delivers ample evidence for the relevance of social norms in influencing individual action in general and in the domain of environmental actions specifically (e.g. Cialdini, 2003; Keizer et al., 2008; Schultz et al., 2007). However, in the specific context of climate change, researchers have also suggested that the current social norms associated with the prevalent carbon intensive lifestyle of Western societies form more of a barrier to, rather than a facilitator of, environmental actions (Gifford, 2011; Markowitz & Shariff, 2012). The fact that social norms can be a double-edged sword, due to them potentially acting to promote or undermine changes to the current lifestyle, highlights the importance of reaching a precise understanding of the processes that are involved in maintaining and changing environmental social norms.

In the context of other social issues (e.g., racism, sexism) ample evidence has been gathered that highlights how norms are enforced and even changed through interpersonal interactions (e.g. Blanchard et al., 1991; Czopp et al., 2006; Kowalski, 1996). More specifically, the research on interpersonal confrontation of racist or sexist incidents draws attention to the relevance of expressing disagreement with such incidents in order to discourage them in the future (Kawakami et al., 2009). Past literature has also found that interpersonal confrontation can have negative consequences for the confronter (Kaiser & Miller, 2001; Stangor et al., 2002) but, on the other hand, can discourage the confronted actions in the future and can therefore have broader benefits for the enforcement of the associated social norm (Czopp et al., 2006; Dickter et al., 2012).

While people's perceptions of confronters, the likelihood with which they might confront, and the consequences of confrontation, are extensively researched in the context of prejudice, researchers have only very recently started to examine confrontation in the context of sustainable actions (Czopp, 2013; Nolan, 2013; Swim & Bloodhart, 2013). Examining interpersonal confrontation in relation to an issue that lacks clear normative support raised the

question of whether this interaction could bring about change, not just in the immediate action of the confronted person but in the broader social and normative context.

My research sought to integrate these two hereto separate areas of research, that is, research on interpersonal confrontation and research on responses to climate change. More specifically, I set out to bring the vast amount of knowledge about interpersonal confrontation gained in the domain of prejudice, into the specific context of climate change, in an attempt to deepen the scarce understanding of the ways in which normative processes associated with environmental actions might be maintained and/or changed via processes of interpersonal interactions.

Summary of Findings

To be able to draw conclusions concerning how current social norms play out in social interactions, I started this line of research by comparing the issue of climate change with the normatively different issue of racial prejudice. The results of Study 1 showed that participants evaluated a racist comment maker more negatively than a person expressing environmental disregard. However, despite this difference between the issues, Study 1 delivered no evidence for the hypothesis that this differential evaluation of the comment maker would also result in different anticipated reactions to the comment on behalf of the participants themselves.

Study 2 addressed the anticipated response to a racist or anti-environmental comment more directly and demonstrated that, when participants were provided with a range of reaction options that reflected different levels of confrontation, then participants indicated that they would be more likely to confront a racist comment than an anti-environmental comment. These two studies provided an initial, exploratory, comparison of the normative processes associated with the two issues, climate change and the chosen point of comparison,

racial prejudice. Therefore, these first two studies provided the necessary starting point for the subsequent studies, which moved on to examine the more specific factors that influenced the outcomes of acts of interpersonal confrontation.

Next, Study 3 examined the perception of the person confronting or failing to confront the disregard of the normatively different issues of racial equality and climate change. As hypothesised, the results identified high social costs (indicated by reduced feelings of closeness and perceived warmth) befalling a confronter of environmental disregard but not racism. In addition, this study delivered evidence for potential benefits of confronting, at least in the case of racism. The act of confrontation (compared to a non-confrontational reaction) decreased evaluations (feelings of closeness) of the original racist comment maker. In the context of environmental disregard on the other hand, I did not observe such benefits, but rather, a backlash effect of observers going against the confronters' position and actually feeling more positive towards the original comment maker and the environmentally disregard position they took (compared to when the reaction was non-confrontational). Witnessing someone confronting another person because of their anti-environmental position on climate change led observers to disagree less with the anti-environmental position.

The third chapter of this thesis focused more specifically on understanding the social costs associated with environmental disregard by examining possible moderators or mediators of these negative consequences. In particular, three potentially relevant variables suggested by the literature were examined in more detail, the credibility of the information source (credentials of confronter), the morality of the issue, and the politeness with which the confrontation was delivered.

Firstly, Study 4 aimed to replicate the initial results of Study 3 and examined the evaluation of a confronter of environmental disregard (relative to a confronter of racism) in the slightly different context of a focus group conversation. In relation to the social costs

associated with confronting environmental disregard (but not racism) the results indeed replicated the findings of Study 3. However, in the context that might have made the confrontation more appropriate (focus group discussion) the confrontation of environmental disregard did not trigger unwanted backlash effects, which was in contrast to Study 3. In Study 4, the confrontation of both disregarding comments led to reduced feeling of closeness to the original comment maker and reduced agreement with the confronted position. Therefore, this study supports that idea that interpersonal confrontation can have consequences for observers' opinion about the target issue.

Furthermore, Study 4 examined whether the credentials of the confronter were able to eliminate the social costs associated with confronting environmental disregard (but not racism). The results demonstrate that high environmental credentials did not reduce the social costs befalling the confronter of environmental disregard and even eliminated one positive consequence of confrontation, the reduced feelings of closeness towards the comment maker. Overall, I concluded the results of Study 4 as supporting the idea that the evaluation of the act of interpersonal confrontation is determined by the normative status of the associated issue, and cannot simply be explained by the assumed low credibility (thus 'hypocrisy') of the confronter.

For the next study I moved on to test whether the extent to which the specific issue is seen as moral mediated the high social costs associated with confronting on behalf of one issue (climate change) but not on behalf of the other (racial equality). A second objective of Study 5 was to test the hypothesis that the politeness of the confrontation moderates the evaluation of the confronter of environmental disregard (but does not affect evaluations of a confronter of racism). Indeed, in this study the impolite confrontation was associated with higher social costs than the polite confrontation when the issue confronted was environmental disregard, while levels of politeness did not affect the evaluations of a person confronting

racism. Furthermore, a mediation analyses revealed that the difference in the social costs befalling the confronter of one issue but not another could be explained by the extent to which each issue was regarded as moral. The lower morality associated with climate change led participants to reduce their feelings of closeness and perceived warmth towards the confronter, relative to a person not reacting with confrontation. However the differential evaluation of the polite confronter relative to the impolite confronter was not mediated by issue morality.

The research presented in the fourth chapter aimed to examine the role of issue morality and the broader consequences of witnessing a confrontation of environmental disregard in more detail. Additionally, the final three studies utilised methodologies that increased the realism of the observed interaction to improve the ecological validity of this line of research. Firstly, Study 6 tested observers' evaluations of a confederate who confronted (or did not confront) environmental disregard (or racism) in a group setting in the lab, while issue morality was (or was not) made salient externally to the interaction. In addition to assessing the perception of a responder in a real interaction, this study examined the consequences of witnessing a confrontation for the perceived social norms and for behavioural tendencies in relation to the issue (getting involved with a student project).

The results of Study 6 revealed that (in absence of morality salience), as in previous studies, participants felt closer to the confronter of racism than to the confronter of environmental disregard. The study did not allow me to answer the question whether increasing the association between the issue and moral concerns can reduce the costs and increase the benefits associated with confronting environmental disregard. Despite suggesting that morality salience might (marginally) improve evaluations of a confronter of environmental disregard these results do not reach significance. In relation to the potential benefits of confrontation, an increase of associated social norms my findings demonstrate that

confrontation increased perceived pro-environmental social norms (relative to no confrontation) but only if the morality was *not* made salient.

Overall, the morality manipulation eliminated the differences between the evaluations of a confronter compared to a non-confronter for both issues (in relation to rating of competence and closeness to the confronter). However, based on the fact that the morality manipulation did not increase participants' ratings of the morality of the issue (manipulation check), I was not able to rule out the possibility of the identified results concerning morality salience being biased by demand characteristics. Therefore the conclusions concerning the effectiveness of issue morality remained unclear following this study.

Concerning the broader consequences of witnessing a confrontation, Study 6 delivered evidence for an increase of perceived social norms in relation to both issues, through interpersonal confrontation and the response also altered the behavioural tendencies of participants towards the issue involved. The findings suggested that participants who witnessed a confrontation were more likely to indicate that they wanted to hear more about a related student project but they were less likely to sign up for the student project. These mixed effects of confrontation on observers' action tendencies remained inconclusive and were picked up again in Study 8.

In addition to the hypotheses that were set out prior to conducting Study 6, this study identified another variable as being very relevant in evaluating interpersonal confrontation, namely, observers' climate change attitudes. A post hoc analysis of the effects of pre-existing climate change attitudes expressed by participants in an open-ended fashion pointed out that these attitudes determined whether the confrontation of environmental disregard was (subsequently) evaluated positively or negatively. More specifically, participants who indicated that they did not care much about climate change evaluated the confronter as less warm and less competent than a person reacting without confrontation. Moreover,

confrontation (relative to no confrontation) led these participants to perceive the issue-related social norms as weaker. Interestingly, observing a person confronting environmental disregard led participants who indicated that climate change was of higher relevance to evaluate the confronter as warmer and more competent than a non-confronter. These participants also reported stronger social norms associated with taking action on climate change, after witnessing a confrontation (relative to not witnessing a confrontation).

Based on the findings of Study 6, Study 7 was designed to investigate more directly the role of climate change attitudes in relation to observers' responses to interpersonal confrontation. The results delivered strong evidence for this hypothesis. On this occasion, pre-existing climate change attitudes were measured quantitatively by asking participants to indicate to what extent they agreed that climate change should be a top political priority. I found that participants' pre-existing climate change attitudes determined whether the confronter of environmental disregard would socially benefit from the confrontation (when observers had high climate change attitudes) or would experience social costs (when observers had low climate change attitudes). To put it differently, participants' evaluated the confrontation of environmental disregard in such a way that intensified their pre-existing position on the topic.

Additionally, Study 7 again tested the role of issue morality but this time used a different manipulation by embedding the moralization of the issue into the reaction itself. The results suggest that the moralization of the issue by someone who reacts to environmental disregard is a stimulus observers react to by polarizing their climate change attitudes and their feelings of closeness to the responder. Independent from whether or not the responder confronted the anti-environmental position, the moralization led observers, who expressed the attitude that climate change should be a top political priority, to increase their climate change attitudes and feel closer to the responder. However, a moralization of the issue had the exact

opposite on observers who do not agree that climate change should be a top priority. Most interestingly, and contrary to my prior hypothesis, this response to moralization was not affected by the reaction of the responder. The reaction and the moralization both turned out to be important stimuli observers reacted to, but the moralization of the issue had not effect on how observers perceived a confrontation. I argued that this finding can be explained by the act of confrontation itself being perceived as a moralistic act (as suggested by the high perceived morality of the confronter).

Finally, in light of the inconclusive results of Studies 6 and 7 in relation to the broader consequences of confronting environmental disregard, Study 8 set out to answer the question of whether there was a strategy of confrontation that would be successful in increasing observers' pro-environmental action tendencies. Therefore, I compared three strategies of using a scientific, moral, or no justification for the responders' reaction and compared the respective social costs associated with the confrontation and the effects these strategies had on participants' subsequent pro-environmental action tendencies (national climate change policy support, support for local interventions, behavioural intentions). The results of this study demonstrated that confrontation justified with scientific arguments was associated with high social costs for the confronter, but *also* increased participants' support for local interventions and pro-environmental behavioural intentions. However, the use of a scientific justification also had the potential to backfire if it was combined with a *non*-confrontational response towards environmental disregard, in which case it decreased observers' pro-environmental action tendencies (support for local interventions, behavioural intentions). In conclusion, the use of scientific arguments was identified as being the most successful confrontation strategy in relation to triggering pro-environmental action tendencies of those bearing witness to the confrontation. However, this strategy was also the one resulting in the most negative social consequences for the confronter. Furthermore, it was established that

using scientific arguments (more generally) can easily backfire if they are not combined with an act of social activism. Additionally, the results showed that the use of arguments that highlighted the morality of climate change did not result in backlash effects towards the confronter; however they also did not alter observers' action tendencies in relation to climate change.

Theoretical Implications

The studies reported in this thesis combined research insights pertaining to the examination of the effects of interpersonal confrontation of prejudice with the literature on public engagement with climate change. Prior to conducting the studies, I argued that the interactional process of interpersonal confrontation has a role to play in changing actions and potentially norms associated with environmental issues. The scarce research findings examining the interplay of interpersonal confrontation and sustainable actions had verified that being confronted for taking the elevator (over taking the stairs) led participant to subsequently choose the pro-environmental behaviour option (Swim & Bloodhart, 2013). However, the existing literature further identified that a failure to confront can reduce observers' recycling intentions (Czopp, 2013) and overall people prefer rewarding strategies over the sanctioning or confronting of anti-environmental actions (Nolan, 2013).

Firstly, my initial studies began by identifying how current norms associated with taking action on climate change are translated into interactions. By comparing perceptions of confrontation across two normatively different issues, the results give insight into how different issues are associated with different social dynamics. The idea of comparing perceptions of interpersonal confrontation of two issues to get a better understanding of not just the explicit norms, but of the interactional processes that maintain and enforce these norms, has been applied previously to compare racial prejudice and sexism (Czopp &

Monteith, 2003). However, a similar approach has never been used to understand normative processes associated with climate change, or other environmental issues.

As hypothesized previously, the results reported in this thesis demonstrate that not caring about the environment is not as harshly sanctioned as being racist. This direct comparison actually supports Mouhot's (2011) claim that, despite the similarities between slavery and the extensive use of fossil fuels, the latter is currently not perceived as "morally wrong" (p. 339). Furthermore, my findings support the idea that the normative status of an issue is translated into perceptions of interpersonal interactions. More specifically, if an issue is not perceived as highly normative, an act of confrontation can lead to negative social consequences for a person who stands up against a disregarding position. In addition to the negative consequences of confronting environmental disregard, the current studies identified that the confrontation in this context can easily backfire. More specifically, the results show that when the confrontation is perceived as inappropriate (e.g., depending on the social setting, or politeness of the confrontation), or the observer does not deem climate change to be an issue of high relevance then this can actually lead observers to go against the confronters positions.

A similar backlash effect was also identified by previous research in the context of prejudice, for example when people with external motives to act without prejudice felt externally pressured to comply with norms that were not in line with their personal beliefs (Plant & Devine, 2001), or when the confrontation was executed by a target (vs. a non-target) of prejudice (Rasinski & Czopp, 2010). However, the current results outlined in this thesis demonstrate that the threshold that can set off backlash effects is lower for the issue of climate change than for racial equality. Therefore, the findings speak to the notion that the norms currently associated with taking action on climate change are not enforced at an interactional level.

One possible mechanism which might explain the negative reactions towards a confrontation of environmental disregard is the phenomenon of cognitive dissonance. As discussed previously, cognitive dissonance can arise when personal attitudes are out of line with personal actions. An issue such as climate change, which is not associated with strong social norms, is characterized through a lack of associated action (e.g. reduction of personal carbon footprint). However, researchers demonstrated that personal environmental attitudes are often misaligned with the lack of actions, as many people agree that it would be beneficial to care more for the environment but do not change their lifestyles accordingly (e.g. Lorenzoni & Pidgeon, 2006; Pidgeon, 2012). Having this in mind, the negative reaction towards a person that highlights one's own shortcomings with regard to environmental actions/opinions is likely to be perceived as a threat to many people. Despite not being directly confronted about their lack of action, observers might automatically relate the confrontation back to their own (lack of) effort to conquer climate change. In an attempt to escape this uncomfortable cognitive state, people often try to dismiss the source of the discomfort, in this case the confronter (Brehm & Cohen, 1962). However, additional studies are needed to clarify whether cognitive dissonance is indeed the reason for the high social costs associated with confronting environmental disregard.

Another theoretically important finding of the reported studies concerns the role of pre-existing climate change attitudes in determining observers' evaluation of the interpersonal activism. In the literature on interpersonal confrontation (e.g., Czopp & Monteith, 2003; Rasinski & Czopp, 2010), as well as in the context of explaining pro-environmental behaviour (e.g., Guagnano, Stern, & Dietz, 1995; Schwartz, 1977), attitudes have been shown to play a crucial role. The current findings of this thesis revealed that confrontation polarized participants' evaluation of the situation, as a function of their pre-existing attitudes. This phenomenon of evaluating information in a way that is in line with

pre-existing beliefs or attitudes is well documented in the literature (e.g. Lord, Ross, & Lepper, 1979). However, the only other study (to date) examining attitude polarization in the context of climate change did not verify this effect when examining peoples' reactions to an editorial that reflected uncertainty concerning climate change predictions (Corner, Whitmarsh, & Xenias, 2012). The results of my research show that attitude polarisation occurs when people evaluate acts of interpersonal activism in relation to climate change. Hence, the current research suggests that campaigners should be aware of the pre-existing attitudes of the target audience if they wish to avoid backlash. On a more theoretical level, one can conclude that, in the same way as has been observed for prejudice, interactions that involve confrontation of unwanted environmental positions are evaluated in a biased way, according to the observers' own attitudes on the topic.

Furthermore, the final study of this thesis delivered support for the hypothesis that interpersonal confrontation can affect behavioural tendencies. Thereby my research extends the existing evidence on behavioural consequences of interpersonal confrontation that showed so far that interpersonal confrontation alters the actions of the person being confronted to be more in line with the confronter's position (Czopp et al., 2006; Swim & Bloodhart, 2013) and that a failure to confront can reduce behavioural tendencies of observers (Czopp, 2013). In contrast to the only other study to date examining how *observing* a confrontation can affect action tendencies, Study 8 of this thesis demonstrated that a confrontation (when using scientific arguments) *increases* action tendencies to support local pro-environmental interventions and to engage in pro-environmental actions (relative to no confrontation and other confrontation strategies). Czopp (2013) did not observe an *increase* in recycling attitudes after the observation of an environmental activist confronting anti-recycling opinions, rather, they only saw a *decrease* when this person failed to confront. These contradicting findings might be explained with the fact that in his study Czopp

presented participants with a TV-debate, which was most likely perceived as an out-group interaction. The participants in Study 8 of this thesis, on the other hand, were listening to a discussion between fellow students. Therefore, in my line of research the observed social interaction might have been perceived as more relevant to participants and therefore more likely to affect their action tendencies. However, it should be noted that the negative effects of failing to confront were identified both in my final study as well as in Czopp's (2013) study.

Furthermore, Study 8 identified that watching another person confronting environmental disregard by giving scientific arguments, led participants to adjust their pro-environmental action tendencies according to the confronter's position, while simultaneously distancing themselves from the confronter. This finding is in line with that of Czopp et al. (2006), who observed that a confronter was not liked by the person being confronted, but the confronted person still adjusted their actions accordingly. In the persuasion literature the phenomenon whereby a messenger is disliked, but their message is still persuasive is explained in terms of message scrutiny (Ziegler, Diehl, & Ruther, 2002). The existing literature demonstrates that inconsistent source characteristics lead to a more in-depth analysis of the message content and the argument quality, than a source with consistent characteristics e.g. likably and high expertise (Ziegler, Diehl, & Ruther, 2002). Therefore, it is possible that the negative evaluation of the scientific confronter might (indirectly) be responsible for a more in-depth processing of the presented arguments. Whether this combination of inconsistent source characteristic is the reason for the success of the scientific confrontation needs to be examined more explicitly in future studies.

The *success* of the scientific justification in the final study cannot be completely explained at this point without conducting additional research. To this point we can conclude that when presented separately neither the scientific arguments nor the confrontational

reaction increased observers' pro-environmental action tendencies. Only when the scientific justification was combined with the act of interpersonal activism did it trigger participants to reconsider pro-environmental actions.

The scientific information my manipulation included was the fact that a majority of scientists agree on the irreversible effects of climate change. Therefore, the scientific justification used in this research mainly communicated scientific certainty of anthropogenic causes of climate change and the certainty of negative consequences. The uncertainties of climate change science, combined with a distrust of climate scientists, are well-documented problems within the climate change literature and have been identified as a barrier for public engagement (Gifford, 2011; Lorenzoni et al., 2007; Swim et al., 2009). However, on the basis of my findings, it would appear that addressing uncertainty while confronting environmental disregard might be a successful communication strategy.

This mix of information and interpersonal interaction turned out to be a successful mixture, a conclusion that fits with the existing behaviour change literature. In the literature it has been established that mere information provision in the context of climate change is not sufficient to encourage pro-environmental actions (Nisbet & Scheufele, 2009; Whitmarsh et al., 2013). Whitmarsh et al. (2013) pointed out that for information provision to be successful, it needs to be combined with tailored intervention strategies that consider the knowledge and behavioural options of the target audience. This claim fits with the social marketing approach, an approach that is based on the idea that social interactions are more successful in changing individual actions compared to big scale information campaigns (McKenzie-Mohr, 2000). Social marketing campaigns target specific actions, identify barriers and develop strategies to encourage these behaviours by e.g. using social nudges and personal interactions. The social marketing literature is not the only one highlighting that personal interaction might be a key mechanism that can effectively change behaviours. Maibach,

Roser-Renouf, and Leiserowitz (2008) reviewed the communication and marketing interventions aimed at changing environmental actions and pointed out the success of the so-called 'block leader' approach in changing behaviour within existing social networks. In his study Burn (1991) was the first to test 'block leaders' as an intervention that aimed to increase recycling behaviour. The intervention targeted neighbourhoods and particular members of these communities to commit to talking to their fellow neighbours about the benefits of recycling. This strategy of combining block leaders with information provision was more successful in encouraging recycling than information provision on its own. Additional research findings suggest that using block leaders is more successful than other strategies, e.g. prompting or information provision (Hopper & Nielsen, 1991)

The existing literature on climate change communication and behaviour change highlight the relevance of personal interactions when delivering climate change information or aiming to change people's behaviours. More specifically, as demonstrated by the block leader approach, information provided by members of the personal social network who already engage in that behaviour themselves seems to be especially effective in stimulating others to adopt these actions as well. Burn (1991) identified this to be a successful behaviour change strategy in the context of recycling but if applied to the context of interpersonal activism this logic provides an explanation for the effectiveness of the scientific confrontation identified in Study 8. Seeing a member of their own social network (University students) confronting environmental disregard while also providing relevant information seems to provide an impetus to reconsider one's own pro-environmental actions.

The finding of Study 8 concerning the specific success of the scientific confrontation in affecting more *locally relevant* actions/policy support fits with the idea that the fact that the confrontation took place within an existing social network is one reason for the behavioural consequences. My results demonstrated that witnessing a confrontation justified

with scientific arguments affected behavioural intentions and support for local interventions, but did not affect support for national climate change policies. Therefore, it may be the case that interpersonal confrontation might not alter general climate change actions but rather encourages people to change their more localized efforts.

At this point I would like to link my findings back to the problem of stagnated efforts to act on climate change. As outlined in the first chapter of this thesis, a majority of people in Western countries are concerned about the issue but fail to significantly change their own behaviour and also fail to communicate their concerns to political leaders (Compston & Bailey, 2008; Pidgeon, 2012). However, based on my findings, I argue that discussing climate change in daily interactions, despite initially polarizing opposing viewpoints on this matter, has the capacity to revive the currently stagnated situation. Especially the people who are already concerned about the issue (which, according to opinion pools, is a majority) might be encouraged by acts of interpersonal interaction to express their concerns publically. Given Visser and Mirabile's (2004) finding that people tend to hold stronger attitudes if they are in a social network with homogenous attitudes, it would appear that interpersonal discourse is important for laying the basis for potential change in climate change attitudes. If interpersonal confrontation can encourage the concerned majority of the population to actually transfer their attitudes into their daily interactions then this might, as I argue, encourage a shift towards realizing a more sustainable society.

Limitations and Future Directions

At this point I would like to highlight the most pressing questions that currently remain unanswered and outline recommendations for future research. Firstly, I would like to point out that, despite efforts to increase the realism of the interaction in the later studies, one

can legitimately criticise the interactions I examined in the current studies on the grounds that they all occurred in controlled settings.

Under consideration of the pioneering nature of this line of research I decided that it was crucial to first understand the basic principles of the interpersonal confrontation in this specific context of climate change. Only after developing a deeper understanding of the interactive normative processes, it will it make sense to examine interactions in a less controlled and more naturalistic setting. However, examining more naturally-occurring discussions in relation to environmental disregard will be highly relevant in order to pinpoint how and when the confrontation of environmental disregard is likely to occur naturally outside the experimental setting. As a first step, it would be valuable to observe how research participants in a lab setting react to a comment that expresses environmental disregard and whether confrontation would be a natural response to an anti-environmental comment. As a next step, it would also be helpful to conduct a study that involves two confederates acting out the confrontation situation to record the reactions of observers and record the social dynamics that *follow* the confrontation. The potential reactions of observers that could follow the confrontation (e.g., confronting the confronter or supporting the confrontation) could completely change how observers perceive the interaction as a whole and what conclusions they draw from it. Recording and observing free discussions of the issue of climate change and the confrontation of environmental disregard would help to understand in what form an confrontation of environmental disregard might (or might not) occur naturally and the dynamics it might set in motion. In addition to examining such free responses within more contrived experimental settings, it would also be helpful for future research to explore more truly ‘naturally occurring’ interactions in which such confrontations might take place, with ‘naturally-occurring’ being defined in this case in a more discourse-analytic way (Potter, 2002). A challenge for future research could be to identify instances of publically available

naturally-occurring discourse in which individuals might engage in confrontation of other's non-environmental behaviours to look at how such discursive manoeuvres are performed, responded to, and the consequences for the unfolding interaction that follows.

Another question that I have not addressed directly in the presented studies is whether identification with the social group the interaction was set in (University of Exeter students) affected evaluations of the confrontation and the people involved in the situation. Throughout the studies I intentionally placed the observed interaction within an intragroup setting to examine how interpersonal confrontation affects other in-group members from the same social group. However, I did not explicitly measure whether observers perceived the provided scenarios to describe an in-group interaction. The literature from the domain of prejudice highlights that group membership and identification with the in-group can alter the social costs incurred by a confronter (Garcia et al., 2010; Kaiser et al., 2009) and peoples' tendency to confront themselves (Good et al., 2012). Therefore, future research should examine whether and how group membership and the identification with that in-group affect perceptions of and reactions to an interpersonal confrontation. In relation to the behavioural consequences of witnessing a confrontation, I would predict that identification with the in-group moderates support for local interventions in that higher identification with the in-group (shared with the confronter) increases support for local, pro-environmental interventions. However, future studies should address the role of group membership more directly.

Furthermore, additional studies are needed to clarify how observing confrontation might alter different types of behaviour. The results of my final study suggest that witnessing another in-group member confronting environmental disregard has consequences for behavioural intentions concerning ones' own actions and support for local small scale University-level interventions. However, witnessing a confrontation did not alter support for national, pro-environmental policies. I argued that this suggests that interpersonal activism

might be of relevance only for the establishment and regulation of local norms associated with the social group in which the confrontation was observed. Future studies should address the question of exactly which environmental actions are affected by incidents of interpersonal activism and whether they are indeed particularly relevant for intragroup actions. It may also be the case that there are ways of enacting a confrontation that make a higher level of group membership relevant, thus enabling increases in more national-level policies, perhaps through an invoking of notions of national identity in the confrontation itself. Of course it would also be relevant to examine behavioural tendencies more directly by using behavioural measures.

Another related question that currently cannot be answered is whether witnesses of social confrontation will be more or less likely to consider a confrontational reaction themselves in a similar situation. If, as I argue, interpersonal confrontation has a role to play in changing social norms associated with environmental issues such as climate change, then it is crucial to determine whether and how responses to single incidents trigger other acts of interpersonal activism. Future studies need to delve deeper into this theoretically important question if we want to answer the question of whether interpersonal confrontation can contribute to bringing about a 'cascade' of social change. Based on the current findings, I would hypothesise that observing someone confront environmental disregard will encourage observers who already think that climate change is an important issue to consider expressing their opinion more publically. However, I would not expect observers who hold low climate change attitudes to be more likely to confront anti-environmental opinions after having witnessed this interaction.

Good et al. (2012) established in their research that the social costs and benefits associated with a confrontational response determined whether an observer will decide to confront, in the same way as costs and benefits determined the confrontation a sexist incident from a victim's perspective. Therefore, observing someone confronting extreme anti-

environmental opinions might remind observers of the cost or benefits (depending on their own attitudes) associated with the confrontation and might affect how they anticipate costs and benefits in the future. It would also be beneficial for future research to explore other potential consequences of witnessing interpersonal confrontation, such as the affective responses of observers or resulting tendencies to join more collective protest movements.

As stated earlier, my research contributes to the climate change literature by contributing to our currently scarce understanding of how social norms can be changed to encourage a change towards a more sustainable society. However, more research is needed before the research on interpersonal confrontation can inform policy makers or social campaigns.

First, additional research should aim to identify the underlying mechanisms that might explain the success of witnessing a confrontation justified with scientific arguments in influencing behavioural consequences, as identified in Study 8. To shed light on why the scientific confrontation led observers to adjust their behavioural tendencies future studies should disentangle the information provided and test whether, as I argued the combination of uncertainty related information and an example of a member of the own social network acting up on these information explains the adjusted action tendencies. It would be interesting to test different types of information messages, e.g. concerning local impacts of climate change, or specific mitigation effects would have similar or different behavioural consequences.

Second, in relation to the relevance of the current findings to efforts of political institutions and non-governmental organisations, additional research is required to examine how campaigns or structural changes might be able to prompt interpersonal activism. The main focus of my research was to look at the interactional factors and therefore neglected the contextual factors in which interaction took places. Despite not being a main purpose of my research, my findings delivered evidence for the situational context being able to change the

perception of the interaction completely and even lead to (or avoid) backlash effects.

Therefore it would be important to identify which contextual factors encourage or discourage interpersonal discourse in relation to climate change. To put it differently, future studies should clarify which external factors make it more likely that people stand up against environmental disregard and which external factors increase behavioural consequences.

Practical Applications and Concluding Remarks

The eight studies I presented in this thesis form an important contribution to the understanding of the interactive normative processes related to the pressing issue of climate change. The findings help us to understand how interactions reflect underlying social norms and how they can hinder or encourage social change. As argued in the opening paragraph of this thesis, a fundamental shift towards a more sustainable society that tackles environmental problems such as climate change can only happen if people transfer their (potential) concerns into their daily social interactions. It is not sufficient to accept that the use of greenhouse gases is “dangerous and morally wrong” (Mouhot, 2011, p. 339). It is crucial that this conviction is also accompanied with social dynamics that enforce these standards and discourage opposing positions. With the research presented in this thesis, I have attempted to make a case for the relevance of small-scale, interpersonal actions in changing (or maintaining) existing carbon intensive lifestyles. The results of my studies demonstrate that addressing or even discussing issues that do not receive strong social support can easily backfire. Based on the current results, I conclude that interpersonal confrontation might not be a quick fix or even intervention tool to promote environmental actions. However, even if on a first glance these daily interactions are not bringing about quick and far reaching changes, they may represent a necessary first step towards a more sustained and long-term societal shift away from carbon intensive lifestyles.

As the literature suggest, the majority of people in the western world is concerned about climate change and would, at least in principle, support far reaching national interventions (Pidgeon, 2012). However, this willingness to support actions on climate change is not communicated to politicians, and as my findings suggest also not translated into interpersonal interactions. Encouraging concerned people to act on their concern, by expressing their dissatisfaction with extreme anti-environmental opinion, may be an important first step to trigger more actions on climate change.

With additional research clarifying boundary conditions could stimulate (or undermine) interpersonal activism, this research will have important applications for social campaigners or policy makers. One potential idea would be to stimulate discussion about climate change in educational curricula. The focus of such an intervention should not be to provide scientific information but to stimulate pupils to think about direct applications and daily situation in which they encounter impacts of the issue and in which the issue actually gets discussed socially.

Another possible (to be tested) strategy could be to provide people with prompts or social signalling stimuli. One such campaign could involve stickers that encourage people to stand up against environmental disregard (e.g. “say no to climate sceptics”, in a similar vein to the ‘say no to racism’ campaigns). However, more importantly the current study, as the literature on social marketing and block leaders also shows, highlights the importance of interpersonal contact when providing information and it also draws attention to the potential impact of (knowledgeable) members of one’s own social network on environmental actions. These insights should be considered by policy makers and campaigners when designing interventions to promote actions on climate change.

In conclusion my line of research presented in this thesis highlights the relevance of understanding normative processes that have the potential to encourage (or discourage)

environmental actions. Only when we manage to implement prevalent concerns about climate change into our daily, interpersonal interactions, then we might be able to revive the currently stagnated efforts to tackle this global issue. I think that only many small acts of interpersonal activism might accumulate and provoke significant and sustainable changes in the future, or to say it with an old African saying: If a lot of small people in a lot of small places do a lot of small things, they can change the face of the world.

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Appendices

Appendix A: Examples of (neutralized) descriptions of participants' anticipated reaction (Study 1)

Example 1

I feel very strongly about the *[topic]* and doing what I can do to support the issues surrounding it, so I strongly disapprove of this comment and I would try and argue they should not behave like this.

Example 2

I would be surprised it would show in my face.

I would ask why they *[engaged with this issue]* if they felt this way and I would be interested to hear their reasons as to why *[he feels this way]*.

Example 3

I'd probably seem surprised (as I would be) & ask why they held that view, share my own & in the nicest possible way tell them I think they have a quite inappropriate viewpoint.

Example 4

I would be taken aback at their honesty but laugh maybe out of discomfort!

I might say he's made an ignorant comment.

Appendix B: Scenario used in Study 3 (environmental disregard/confrontation condition)

First we would like you to read the following scenario carefully. It is really important that you imagine this situation happening in real life.

It is the end of the term. A group of students just gave a presentation about a project they working on during the whole term. The presentation was a success and so was the entire group project. Before the term the group members didn't know each other but it turned out that they all seemed to get along really well. After the presentation they decide to go to the pub together to celebrate the completion of the course and the good work. In the pub they chat about all sorts of things and everybody is having a good time.

At one point one of them, Alex, is having a conversation with one of the other group members, Sam, about the issue of climate change.

During this conversation Sam says:

"I really couldn't give a damn about climate change. To be honest, I intentionally go out of my way to do as many environmentally damaging things as I can"

Alex seems shocked and responds:

"How can you even think something like that? I can't believe that you just made such a stupid comment."

One of the other group members overhears pieces of the conversation and asks them what they are talking about.

Alex answers:

"We were just talking about climate change. But I will not repeat what Sam just said about it."

Appendix C: Focus group transcript used in Study 4 (confrontation condition)

Low credentials condition/environmental disregard

Moderator: Thank you all for coming today. As you know, climate change is an issue that the University is interested in, both in terms of research we do and our own operations as a campus. Um...I'm just going to start off by asking if you care about climate change at all and whether you feel that there is anything you can do as a student to tackle this climate change issue?

Jamie: I don't have any friends or family members outside the UK...Um...So I don't really fly much...and if we go on holiday, my family usually takes the train or coach. So I guess that's being carbon friendly.

Alex: I recycle occasionally, and walk to campus. But um, I have family in New Zealand, and I usually fly there every year to see them. Yeah, I guess my housemates and I try not to put the heating on till November, but once you see your own breath in your room, I guess it's about time ((laughs)). It's difficult to be green, especially when you're a student and you have a low budget.

Sam: Well you know, people are making too much of a big deal out of the whole issue. The world's not going to die in my lifetime so I don't really care. I still fly frequently, and have two cars, and generally lead a good life. To be honest, sometimes I even go out of my way to do non-environmentally friendly things because I know it'll piss off greenie-type people. People pretend to be all green, but, let's be honest, who really cares?

Alex: Hmm...

Moderator: Alex, did you have something to add?

Alex: Um...Well...I'm just really shocked about what Sam just said, to be honest. How can you make such a stupid comment?

High credentials condition/ environmental disregard

Moderator: Thank you all for coming today. As you know, climate change is an issue that the University is interested in, both in terms of research we do and our own operations as a campus. Um...I'm just going to start off by asking if you care about climate change at all and whether you feel that there is anything you can do as a student to tackle this climate change issue?

Jamie: I don't have any friends or family members outside the UK...Um...So I don't really fly much...and if we go on holiday, my family usually takes the train or coach. So I guess that's being carbon friendly

Alex: I sold my car recently and bought a bicycle instead. Figured I don't really need one in Exeter. My housemates and I have signed up to an electricity company that gathers their energy from renewable sources. It is a bit more expensive, but its carbon friendly. It also comes with a monitor that tells you how much electricity you're using per month, and for what. It's quite handy, since as students, we have to budget.

Sam: Well you know, people are making too much of a big deal out of the whole issue. The world's not going to die in my lifetime so I don't really care. I still fly frequently, and have two cars, and generally lead a good life. To be honest, sometimes I even go out of my way to do non-environmentally friendly things because I know it'll piss off greenie-type people. People pretend to be all green, but, let's be honest, who really cares?

Alex: Hmm...

Moderator: Alex, did you have something to add?

Alex: Um...Well...I'm just really shocked about what Sam just said, to be honest. How can you make such a stupid comment

Low credentials condition/racial prejudice

Moderator: Thank you all for coming today. As you know, the University regards it as being important for international students to feel welcomed here. Um...I'm just going to start off by asking whether you care about this at all whether you feel that there is anything you can do as a student to tackle the broad issue of tolerance towards other cultures and their integration into our society.

Jamie: Yeah...There are loads of international students on my course, but I have to admit that most of my friends are from here.

Alex: I talk to Erasmus students occasionally, which can be an interesting thing to do, but um I have to admit, most of my close friends are from here. I suppose I don't really make a particular effort to get to know international students. I sometimes feel bad about the fact that the international students often end up having to work together, but it can be difficult working in groups when there is a language barrier.

Sam: Well, you know, I think people are making too much of a big deal out of the whole issue. I've got no intention of working in some other country, so I don't really care about understanding other cultures. I just prefer hanging out with people that are similar to me in social class and race, and generally just live life the way I want to. To be honest, sometimes I even go out of my way to make jokes about the international students because I know it'll piss off politically correct type people. People pretend to be all tolerant, but, let's be honest, who really cares?

Alex: Hmm...

Moderator: Alex, did you have something to add?

Alex: Um... Well... I'm just really shocked about what Sam just said, to be honest. How can you make such a stupid comment?

High credentials condition/ racial prejudice

Moderator: Thank you all for coming today. As you know, the University regards it as being important for international students to feel welcomed here. Um...I'm just going to start off by asking whether you care about this at all whether you feel that there is anything you can do as a student to tackle the broad issue of tolerance towards other cultures and their integration into our society.

Jamie: Yeah...There are loads of international students on my course, but I have to admit that most of my friends are from here.

Alex: I did a year of study abroad last year in China, where I had a go at learning two foreign languages. Figured it might be useful since I'm a member of the international society in Exeter. My housemates and I are a part of the International Buddy Scheme that involves local students like us, helping international students settle in to their new environments when they arrive in Exeter. It is a bit of effort, but it's for a good cause. Having an understanding of other cultures can help if you plan on getting into a global company and need experience with different mindsets.

Sam: Well, you know, I think people are making too much of a big deal out of the whole issue. I've got no intention of working in some other country, so I don't really care about understanding other cultures. I just prefer hanging out with people that are similar to me in social class and race, and generally just live life the way I want to. To be honest, sometimes I even go out of my way to make jokes about the international students because I know it'll piss off politically correct type people. People pretend to be all tolerant, but, let's be honest, who really cares?

Alex: Hmm...

Moderator: Alex, did you have something to add?

Alex: Um... Well... I'm just really shocked about what Sam just said, to be honest. How can you make such a stupid comment?

Appendix D: Constructed answers used in Study 6 (including the environmental disregarding comment, see Question 3)

1. How strongly do you feel, personally, about racial equality?

Not so sure about this. I guess I should think about this more a bit more, to at least have an opinion about it. Other things just seem more important: exams, jobs, or even other things in the news. So many other things that happen at the moment are really worrying. I am very concerned about the economic crisis for example. So guess I have to say that climate *change/ racism* it is currently not really on my radar to be honest. sorry

2. How much does the issue of racial equality affect your own life?

It might help to think about an example.

Not at all. I couldn't care less about being all *green/ tolerant* cause really what is the point? It rather pisses me off when people try to be overly politically correct. I don't like it when other people tell me how to act. So I make sure I am not listening to them and even do the opposite. So I am as *environmental harming/intolerant* as I can be.

3. Do you think there is anything that needs to change (e.g. on a political, social, economic level) in relation to climate change?

I think that *climate change/ racial equality* should always be on the political agenda. I see it as a general objective that we should aim for, within society. Ideally the aim to reduce the *greenhouse gas emission/ to treat every individual equally* should affect decisions made in politics, economics and in our private life.

Appendix E. Sample of the flyer of the behavioural measure (Study 6)



Be the change a fairly new society, founded in 2010 by a group of students who wanted to make a difference and bring about change both in the local area and internationally.
 To anyone with an interest in playing an active role in improving the world's problems, Be The Change is the place to come and be heard.

Check us out in more detail on facebook and on our website for more information! <http://bethechange.webs.com/>

**We want to set up a new community project:
Help us to promote environmental sustainability and waste reduction on campus!**

We want to gather ideas and get as many students involved in this as possible.

If you are interested or you just want to give your opinion, just leave your details.

- I want to receive updates/ more information on this project
- I want be contacted to get involved in volunteering for this project.

Name: _____

E-mail: _____

Mobile: _____

- I don't want to leave my details, but I will give my opinion/ideas

Comments:

Appendix F: example of coded answers (Study 6)

Open ended answers to the question:

How strongly do you feel, personally about climate change?

Example coded as 1b (scepticism about anthropogenic climate change)

I do not feel very strongly about climate change because I think the earth goes through cycles of temperature rise and fall over 1000s of year.

Example coded as 2 (indifference about the issue)

I don't feel that strongly towards climate change. I try to conserve energy as best as I can but I do not think about the topic that much.

Example coded as 3 (recognition of the importance of climate change but failure to act upon it)

I would not say I feel particularly strongly about climate change but I do feel it is important. That we try and reduce our carbon footprint where/ when possible and help the plane as bet as we can. I would like to do more and know I should do more to reduce the effect of climate change but unfortunately I'd say I am reluctant to change my own habits beyond say doing the recycling or turning light off.

Example coded as 4 (strong feelings that climate change is of high relevance)

I feel quite strongly about climate change; I feel changes do need to be changed on a vast scale. It is our planet and so we need to look after it. I think more changes need to be done in terms of countries rather than locally but everything helps in reducing the risk

Appendix G: Scripted chat-room conversation use in Study 7

Moderator

Welcome everyone. During this discussion we want to hear everybody's opinion on four different topics. You will get the chance to express your opinion towards every topic. We will rotate the order in which you the chance to outline your point of view.

Let's start with a practice round.

Sam what is your opinion on the X-factor (as in the tv show)?

Sam

I love X-factor...

XoX

I personally don't really get this who myself. Boooring! :-)

Participant

[typed answer by participant]

Moderator

Ok next topic Xox what do you think about the planned increase of University tuition fees in Britain?

XoX

In my opinion there are pros and const. I see that come cuts have to be made... but not sure this is he best solution for our education system.

Participant

[typed answer by participant]

Sam

Hmm... difficult one. I think this new scheme is not set in stone yet. I think we will see some adjustment as they work out how it will all work.

Moderator

Okay thanks everyone [Participant name] the next topic is climate change. What do you think about the climate change issue?

Participant

[typed answer by participant]

Sam

I don't give a damn about climate change to be honest. I'm not going to stop doing things I enjoy when there is no decent evidence anyway.

XoX (no moralization and no confrontation in parentheses)

I think people's opinion towards this topic really says a lot about them (Everybody is certainly entitled to their own point of view on this topic); how can you even think something like that? I can't believe that you just made that comment!! (that is an interesting comment. It's a shame that I can't ask you to explain your opinion in more detail)

Moderator

The last topic we want to discuss is the European debt crisis. Sam what is your opinion about recent developments?

Sam

I am not up-to-date on the recent developments/ Should look into this a bit more.

XoX

I think it is just confusing... good thing hat we can take a backseat. We'll see...

Participant

[typed answer by participant]

Moderator

This is the end of our discussion. Thanks everyone!

Appendix H: Transcript used in Study 8 (morality justification/confrontation condition)

Extracted from a focus group discussion recorded 20th February 2013

Extract number: 021

Moderator	<p>Ok, thanks everyone for coming. As you know, we will be talking about a number of social issues today. Um... I will ask questions from time to time but the idea is that we will have a free discussion about the issues.</p> <p>So please feel free to say whatever comes to your mind, really.</p> <p>Um... I hope everyone is fine with that?</p> <p style="text-align: center;"><i>Sounds of agreement</i> <i>(several members of the group nod)</i></p> <p>Great. Ok, um... I'm just going to start off by asking what comes to mind when you think about climate change.</p>
Thomas	<p>Um... not much really. I mean I do think that we should take care of the environment and all that but I don't know much about climate change specifically.</p>
Charlotte	<p>Um... yeah, I think climate change is an important issue. I ... I wouldn't call myself an expert or anything and it is actually quite hard to get your head around the details. Um, I think it is understandable that most people get distracted by other things that just seem more important or fun to deal with.</p>
Jack	<p>Yeah, I really couldn't give a damn about climate change, to be honest. I mean, people are just making too much of a big deal out of the whole issue. Um... yeah to be honest, I even actually enjoy acting in a kind of non-environmentally friendly way because I know it'll annoy greenie-type people. People pretend to be all green, but, let's be honest, who really cares?</p>
Daniel	<p>Really? I cannot believe you just said that, that is so wrong. Maybe you should think about the horrible consequences for all these people in the world. I mean we can't imagine... I can't imagine what it would be like to fight for your basic needs every single day. And it's the most vulnerable- the most vulnerable people who are gonna be hit the most by this extreme weather and all the consequences that come from that. And I just can't – I can't stand the idea that it is that ignorant way of living that is contributing to other peoples' suffering. I mean whether you believe in the exact details or not, whether you agree with everything people are already suffering because of how we treat the environment and this is only gonna get worse in the future.</p>

Appendix I: Measures used in Study 8

Policy support (5 items)

- A doubling of the number of onshore and offshore wind farms in the UK.
- A ‘carbon’ tax on goods and services based on their associated emissions
- A shift towards a greater amount of renewable energy, even if this leads to a temporary increase of energy prices.
- The use of government funding generated from income tax to provide energy efficient technology to households for free (e.g. smart meters, loft insulation)
- More strict building regulations to require UK housing to be more energy efficient.
-

Support for local interventions (4 items)

- Introducing fines for not recycling household waste in student housing
- Reducing car parking space on campus and increasing public transport connectivity to stimulate car sharing, cycling and the use of public transport).
- The showers in the student housings and communal spaces (e.g. gym) automatically turning themselves off after a set period of time (e.g. 2 minutes) and requiring you to manually turn it on again if you wish to continue showering for longer.
- Increasing the costs per sheet of printing on campus in an attempt to encourage more efficient use of paper.

Behavioural intentions (11 items)

- Wash only full loads of laundry
- Eat vegetarian meals whenever possible.
- Cook in an energy efficient way (e.g. using lids, not filling the kettle more than is needed)
- Turn off electrical equipment instead of leaving it on standby.
- Buy more recycled goods (e.g. toilet paper).
- Where possible, avoid air travel by using ferries, train or buses instead.
- Dry clothes on the drying rack instead of using the tumble dryer.
- Sign up with the power company for energy from renewable resources.
- Buy new appliances that are energy efficient.
- Set the thermostat to a maximum of 17 degrees centigrade during winter
- Keep my showers to under 4 minutes.