

Mobilizing strategies for environmental change

More than just a click: Investigating the effects of 'efficacy' messages on emotions to mobilize public involvement in environmental issues

Student name: Josta Valk
Student number: 432948
Email address: 432948jv@student.eur.nl

Supervisor: Dr. Jay Lee PhD

Master Media Studies – Media and Business
Erasmus School of History, Culture and Communication
Erasmus University Rotterdam

Master's Thesis
August 14, 2016

Abstract

In recent years, there has been a shift in the ways in which people support charities and non-profits. While environmental groups and non-governmental organizations (NGO) earlier depended on traditional media and grassroots campaigns to get their messages heard, nowadays social media offers an additional distribution method for their messages. However, up to now, the potential of online activism to bring about social or political change has been debated. Advocates contend its positive contribution to participatory democracy. Critics however, deride it as being so-called “slacktivist” activity that bears minimal societal gain. The term ‘slacktivist’ is often used by critical scholars and practitioners who describe a new type of activist whose participation solely entails partaking online and whose activity bears minimal societal gain. As the act of ‘slacktivism’ becomes more and more commonplace, there is much concern amongst charities and non-profits that this would conflict with or even replace traditional forms of activism or political participation, such as donating money or partaking in a rally or protest.

This study contributes to this discussion amongst scholars and practitioners by analyzing the mobilizing effects of efficacy messages on behavioral intent of environmental political participation. The positive mobilizing effects of efficacy messages on political participation have been discussed in the literature; however, minimal attention has been given to its specific effects on environmental political participation. By means of an online experiment with a Dutch national sample ($N = 215$), this study examines whether a fear-inducing or efficacy (internal, external, response) frame in (newspaper) messages is a better predictor for environmental political participation. Furthermore, the mediating effects of three discrete emotions (hope, fear, and anger) and the moderating effects of being considered a mere slacktivist or activist are included in the conceptual model.

The findings of this study indicate that emotions fear and anger have a positive effect on environmental political participation. When evaluating the effect of efficacy information on environmental political participation, it appeared that such messaging had no significant effect on perceived efficacy. Yet, the most important finding of this study is the existence of an indirect mediation effect, meaning that the experiment reduces fear but then the reduction in fear overall reduces participation level, despite fear’s positive contribution towards participation. Moreover, this indirect mediation effect only happened significantly for slacktivists. The results of this study can serve as a foundation for future studies that aim to research the effectiveness of efficacy information and emotions on environmental political participation. As well as for practitioners in the field of environmental communication in their mobilization strategies.

Keywords: environmental political participation, mobilization, internal efficacy, external efficacy, response efficacy, slacktivism, activism, mediation effects, hope, fear, anger

Table of Contents

Abstract and keywords

| | |
|---|-----------|
| 1. Introduction..... | 5 |
| 1.1. Problem background..... | 5 |
| 1.2. Research question..... | 7 |
| 1.3. Academic relevance..... | 8 |
| 1.4. Societal relevance..... | 9 |
| 1.5. Chapter outline..... | 10 |
| 2. Theoretical framework..... | 11 |
| 2.1. (Online) political participation..... | 11 |
| 2.1.1. Engagement levels..... | 12 |
| 2.2. A difference in attitude: what is activism and what is slacktivism?..... | 13 |
| 2.3. Media framing on environmental issues..... | 16 |
| 2.4. What are efficacy messages..... | 18 |
| 2.4.1 Efficacy messages and their effect on emotions..... | 20 |
| 2.4.2. The emotions hope, fear, anger..... | 21 |
| 2.5. Hypotheses..... | 23 |
| 3. Methodology..... | 25 |
| 3.1. Choice of method..... | 25 |
| 3.1.1. Testing..... | 26 |
| 3.2. Sample..... | 26 |
| 3.2.1. Sampling method..... | 26 |
| 3.2.2. Sampling size..... | 27 |
| 3.3. Measurements and operationalization..... | 28 |
| 3.3.1. Slacktivist versus Activist..... | 28 |
| 3.3.2. Credibility..... | 30 |
| 3.3.3. Emotions..... | 31 |
| 3.3.4. Environmental political participation..... | 32 |
| 3.3.5. Ecological beliefs..... | 32 |
| 3.3.6. Demographics..... | 34 |
| 3.4. Manipulation checks..... | 34 |
| 3.4.1. Timer..... | 34 |
| 3.4.2. Efficacy Measures..... | 35 |
| 3.5. Stimulus Material..... | 37 |
| 3.5.1. De Energie Dialoog..... | 37 |
| 3.5.2. De Volkskrant and ANP..... | 39 |

| | |
|---|-----------|
| 3.5.3. Efficacy messages..... | 39 |
| 3.6. Experimental procedure..... | 40 |
| 3.7. Data analysis..... | 41 |
| 4. Results..... | 42 |
| 4.1. Descriptive results..... | 42 |
| 4.1.1. Results on the question “what do you think this study was about”?..... | 43 |
| 4.1.2. Participation intent and behavior..... | 43 |
| 4.2. Manipulation checks..... | 44 |
| 4.2.1. Distribution of the respondents to experimental conditions..... | 45 |
| 4.3. Univariate Analysis of Variance (ANOVA)..... | 45 |
| 4.3.1. Hope..... | 46 |
| 4.3.2. Fear..... | 48 |
| 4.3.3. Anger..... | 50 |
| 4.4. Mediation with SPSS PROCESS macro..... | 52 |
| 4.4.1. Mediation design..... | 52 |
| 4.4.2. Control variables..... | 54 |
| 4.5. Indirect mediation..... | 58 |
| 4.6. Hypotheses..... | 59 |
| 5. Discussion and conclusion..... | 61 |
| 5.1. Main findings..... | 61 |
| 5.1.1. Hope..... | 61 |
| 5.1.2. Fear..... | 62 |
| 5.1.3. Anger..... | 63 |
| 5.2. Theoretical and practical implications..... | 63 |
| 5.3. Research Limitations..... | 65 |
| 5.4. Directions for further research..... | 67 |
| 5.4. Conclusion..... | 68 |
| References..... | 70 |
| Appendix A. Online survey including stimulus material..... | 82 |
| Appendix B. Factor loadings questionnaire items..... | 95 |
| Appendix C. English translation of online survey (experiment)..... | 98 |
| Appendix D. English translation of stimulus material (experiment)..... | 108 |

1. Introduction

The digital age has altered the way we live our lives, do business, socialize and even find love. What makes this digital sphere of Web 2.0 unique is its highly interactive nature (Jenkins, 2006). This so-called participatory culture changed and caused an evolution in civic engagement and activism as well (Jenkins, 2006). Digital activism allows for a broad range of creative forms and rhetoric (both visually and auditory), that would have been impossible to express simultaneously through analogue media (Goodling, 2015). Consequently, what emerges is the potential for a broad distribution and effective circulation of online engagement and activism through “liking”, “sharing”, and “retweeting”. This digitally mediated space allows for immense potential for outreach, information dissemination, and influence, and ultimately may result in social change (Goodling, 2015). These characteristics in conjunction with digital media’s potential to effectively disrupt existing power dynamics, such as political or media power, makes use of digital media an ideal strategy for activists to reach their goals (DoSomething.org, 2012). Similarly, online spaces, as a medium, have the ability to draw in those who were previously disinclined to participate in activism due to its accessibility, convenience, and simplicity of use (Warner, 2005). More specifically, social media provide opportunities for marginalized groups, that do not feel recognized or represented as such in mainstream discourse or the ‘dominant culture’, and are thus able to act as a purveyor of the ideals and interests of “counter publics” (Warner, 2005, p. 113).

1.1. Problem Background

While there has been much written about the expectation for high levels of public participation on new media platforms, there seems to be a paradox in which most individuals online are passive and do not engage with organizations easily (Davis, 2010; Morozov, 2009). Moreover, much of the engagement organized online has been rejected from being considered bona fide activism due to the perception that such acts of support require minimal personal effort and investment from the individual (Gladwell, 2010; Morozov, 2009; White, 2010). Critics of digital activism have coined the term “clicktivism”, which in general entails a minor support of a digital media entity through solely a click (White, 2010). These actions include liking or sharing of cause-relevant information or hashtagging and retweeting on *Twitter*. Malcolm Gladwell (2010) argues that online activism is ineffective, since raising awareness for an issue seems to have become a goal in itself and is often not followed by meaningful action. Gladwell (2010) conceptualizes this superficial engagement with the term “slacktivism”, emphasizing the possible negative effects digital (networking) sites can have on civic responsibility and political participation (Goodling, 2015). Klafka (2010) argues that so-called clicktivists and slacktivists are only clicking to make themselves feel better, and in reality do not really care about the cause since they do not perform the actual work associated with change (in Breuer & Farooq, 2012, p.4). This commonplace attitude is also addressed by a donation campaign of UNICEF Sweden, made in 2013:

My name is Rahim. I'm ten years old. Sometimes I worry that I will get sick, like mom got sick. Then who will look after my brother? But I think everything will be all right. Today Unicef Sweden has 177.000 likes on Facebook. Maybe they will reach 200.000 by summer. Then we should be alright. – Likes don't save lives. Money does. – UNICEF.

This campaign was aimed at UNICEF's followers who solely gave virtual support for their cause, by either liking or sharing content via their social media accounts, but no further meaningful action such as donating money (Khazan, 2013).

As this research will focus on the topic of mobilization strategies for environmental change, this commonly heard criticism about the minimal impact of digital activism is also relevant for organizations, practitioners, and scientists working in the fields of environmental mobilization, communication, and research. Besides the debate on the issue of slacktivism, another enduring challenge for environmental NGOs and science communicators is how to best discuss politically controversial topics such as global warming and the resulting challenge of climate change (Hart & Feldman, 2014). Consequently, this adds another particularly challenging feature to these organizations' mobilization efforts since the issue of climate change cannot be verified directly with our senses, which makes it an exceptionally abstract and highly conceptual issue (Leviston, Price & Bishop, 2014; O'Neill & Hulme, 2009). Because of this intangibility, it is argued that it is challenging for people to develop informative thoughts about the true risks involved with climate change (Budescu, Broomell, & Por, 2009; Whitmarsh, 2009). Due to its multiplex features, some scholars have also indicated climate change as a 'wicked problem' (Karl et al., 2011; Lazarus, 2009). Accordingly, the importance of the right communication, especially when addressing climate change solutions, is an often addressed matter of contention (Stoknes, 2015). Pessimistic climate change imagery in the media for instance, is often criticized since it may weaken public response and cause psychological distancing (Leviston, Price & Bishop, 2014).

To address this issue, prior studies have shown that perceived efficacy (i.e. "judgments of how well one can execute courses of action required to deal with prospective situations" (Bandura, 1982, p.122)) is a critical predictor for an individual to take action on an issue (Lutz, Hoffman & Meckel, 2014; Rosenstone & Hansen, 2003; Ryu et al., 2009; Witte, 1992). A recent study done by Feldman and Hart (2014) identified three forms of efficacy messages, that when presented to individuals are likely to drive political participation with regards to climate change. First, 'internal efficacy' message, which informs a citizen the ease with which the citizen can take action in the political sphere. Second, 'external efficacy' message, which highlights the likelihood that elected officials will respond to public sentiment and public calls to action. And third, 'response efficacy' message, which stresses the potential success of a proposed policy for slowing down or reducing the negative impacts of climate change (Hart & Feldman, 2014). In a subsequent study, Feldman and Hart (2015) argue that the mobilizing effects

of efficacy messaging may stem from its effects on emotions (Feldman & Hart, 2015). As the discrete emotions hope, fear, and anger do play an important role in risk communication (Lazarus, 1991; Valentino, Gregorowicz & Groenendyk, 2009; Witte, 1992), it is argued that these three emotions are especially relevant with regards to the context of climate change since they embody reactions to an external threat (Feldman & Hart, 2015). Traditional appeals made by environmental NGOs often make use of shocking, negative imagery and language while emphasizing the threat of environmental issues and the potentially catastrophic consequences (Nisbet, 2009). While such traditional, fear inducing, appeals are known to attract people's attention to climate change, there is a growing concern that fear negatively affect genuine personal engagement (O'Neill & Nicholson-Cole, 2009). For this reason, it is argued that efficacy messages might be more effective since they frame climate change as an addressable problem (Feldman & Hart, 2015). In spite of emotions being important to this debate, there is little empirical evidence on whether different types of appeals can prompt different emotional responses, as well as whether these different responses induced by different appeals impact public engagement with regards to environmental issues (Feldman & Hart, 2015), which is a gap that this research aims to address.

1.2. Research question

By exploring the background of (online) environmental political participation, while drawing on earlier work and views of academics and practitioners, a specific research problem has been identified. While practitioners in the field have already acknowledged the issue of slacktivism and the growing need for effective mobilization tactics on environmental issues, research on the effects of efficacy messages on environmental political participation is still very scarce (Feldman & Hart, 2015). More specifically, there is little knowledge of the effects of media content containing information about political efficacy, on both political participation and on potential mediator variables such as the discrete emotions, hope, fear, and anger. Accordingly, Feldman and Hart (2015) state that, by inferring from literature on risk communication (Witte, 1992), and political science (Craig, Niemi & Silver, 1990), huge potential lays in research that focus on the efficacy of messages leading to an increase in civilian political engagement around the topic of climate change. This research will incorporate Feldman and Hart's (2015) research as point of departure. Hence, the following research question is proposed: *To what extent do different types of efficacy messages (internal, external, response) affect emotions (hope, fear, anger), and how do these different types of efficacy messages affect an individual's behavioral intent to take action on environmental issues?* As an exploratory research question, we consider to what extent the current political participation intensity of an individual, ranging from either being categorized as an activist or slacktivist, will moderate the effects of efficacy information on emotional responses and political behavior.

1.3. Academic Relevance

In a recent study of the theoretical aspects in communication and Internet research, the topic of online participation was identified as one of the six emerging global themes (Rice & Fuller, 2013). However, efforts to mobilize public involvement around environmental issues are not new. Environmental psychology, a field of research that developed in the US in the 1960s, has already examined at the multitude of complex interplay between individuals and the environment (Kollmuss & Agyeman, 2002). Ever since, many psychologists and sociologists have aimed to find what motivates people to engage in direct or indirect environmental action (Bain et al., 2012; Blake, 1999; Dietz & Stern, 2002; Gardner & Stern, 1996; Hale, 2010; Hines, Hungerford & Tomera, 1986; Jensen, 2002; Kollmuss & Agyeman, 2002; O'Neill & Hulme, 2009; Terracina-Hartman et al. 2013; Whitmarsh, 2009). Specifically, direct environmental actions are intended to directly decrease the impact on the environment, and therefore encompass recycling, reducing carbon footprint, buying organic food, etc. (Jensen, 2002; Kollmuss & Agyeman, 2002). Indirect environmental actions on the other hand, are intended to influence other people or political structures with the aim to decrease the impact on the environment. Such activities are considered to be very important, but have no direct impact on the environment. Such actions include donating money, attending political activities, environmental writing, etc. (Jensen, 2002; Kollmuss & Agyeman, 2002). This study aims to contribute more on the latter, indirect environmental behavior.

The concept of efficacy messages has been widely studied in psychology (Bandura, 1982), and practitioners in the field of political participation have further acknowledged a growing interest in the effect of efficacy messages on activism (Craig, Niemi, & Silver; 1990; Easton & Dennis; 1967; Finkel, 1985; Iyengar, 1980; Madsen, 1987; Nabatchi, 2007; Park, 2015; Tausch et al., 2011; Valentino, Gregorowicz & Groenendyk, 2009). However, research on this topic with regards to environmental issues is still very scarce and incomplete (Feldman & Hart, 2015; Roser-Renouf, Maibach, Leiserowitz, & Zhao, 2014). This research therefore aims to give several notable contributions to the literature. First, it provides empirical investigation of the effects of efficacy conditions (internal, external and response) on environmental political participation and the moderating role of previous slacktivist or activist behavior. Second, it explores if and to what extent efficacy messages affect diverse emotions (hope, anger, fear) and subsequently influence behavioral intent toward environmental action. Third, this study examines whether a traditional fear appeal or an efficacy messaging frame is a better predictor for adequately mobilizing people to take action on environmental issues. Fourth, it will answer which of internal, external, or response efficacy messaging frames is a better predictor for environmental political participation.

1.4. Societal relevance

The findings from this research will be relevant for environmental organizations and their quest for mobilization tactics. Environmental organizations want people to care, to engage, to click on a link, like a page, or follow them. However, they also want to know how to sustain people's attention. It is thus important for these organizations to know how to successfully create such mobilizing communication and know what kinds of narratives work well within specific contexts and for particular topics. These are not only relevant questions that weigh heavily on environmental organizations, but also a broad range of organizations in both the private as the public sector (Khazan, 2013; Nisbet, 2009; O'Neill & Nicholson-Cole, 2009; Reestorff, 2015; Rosenblatt, 2010; Terracina-Hartman et al., 2013; White, 2013).

Moreover, global warming is seen as one of the world's most pressing problems. The 2015 United Nations Climate Change Conference in Paris once again stressed the severe impacts and the various issues surrounding climate change. In total, 196 countries approved the Paris Climate Agreement in December 2015 (McGrath, 2016), which is part of the United Nations Framework Convention on Climate Change (UNFCCC), and set a historically significant standard for greenhouse gas emissions mitigations from 2020 (Nuttall, 2015). Despite that the often spoken argument that our current way of life is unsustainable, relatively little is done to take action on environmental issues (White, 2013). With regards to combating climate change, Hale (2010) states that politicians, corporations and the public all point to each other for much needed leadership to take action on this issue. Since governments and corporations are constricted by democratic and market forces in which they operate, they are less likely to take this leadership role (Hale, 2010). Therefore, Hale (2010) argues that this role should come from the third group, consisting of national and international non-profit organizations, community groups, trade unions, and volunteers. "The third sector holds the key to mobilising public concern, behaviour and political mobilisation, and to success in the struggle against climate change" (Hale, 2010, p. 264). Moreover, Smith and Leiserowitz (2014) state that although technological advancements, and internationally coordinated laws and policies are essential for change, the public has an important role by means of consumer behavior such as energy consumption, social norms and as well public support for climate and energy policies. Accordingly, academics and diverse environmental activist groups emphasize the great value of grassroots citizen engagement in pressurizing policymakers to address this universal threat and to take consequential measures (Ockwell, Whitmarsh, & O'Neill, 2009). It is often argued however, that this third group is relatively passive when it comes to combating environmental issues. On the other hand, it is also argued that environmental awareness among the public is high (Eurobarometer 295, 2008; Eurobarometer 416, 2014). This contradiction between relatively high environmental awareness, on the one hand, and low active participation on environmental issues, on the other hand, shows that there is a gap between the two, a gap that this research aims to address by exploring the mobilizing role of efficacy information.

Up until now, literature on the effects of efficacy messaging in environmental political participation and mobilization is limited and there is hardly any evidence that efficacy messaging is sufficiently effective with regards to this issue (Feldman & Hart, 2015). Hence, knowing whether efficacy messages could be an effective predictor for environmental political participation, as well as knowing its effects on the discrete emotions, hope, fear, and anger, could have great benefits for practitioners in the field. Furthermore, it is not known whether efficacy messages, and the subsequent evoked emotions, have a differing effect on activists as opposed to slacktivists. As more information on mobilization tactics are urgently needed to make large-scale environmental change possible, research on this topic will make a substantial contribution for those handling participatory support for environmental causes, by showing how mobilization practitioners can minimize slacktivist tendencies.

1.5. Chapter Outline

To contribute to the reading fluency, this paper will be organized according to a logical structure of reasoning. In the theoretical framework, previous research on the key concepts ‘environmental political participation’, ‘slacktivism’, and the strategy of showing ‘efficacy information’ are discussed, and the mediating variables ‘hope’, ‘fear’ and ‘anger’ are introduced. Also, literature regarding the effectiveness of the differing efficacy messages (internal, external, response) as opposed to a traditional fear inducing appeal will be explored and applied to argue for the proposed hypotheses and the conceptual model of which a visual presentation will be presented. The third chapter discusses the methodology for this research. More specifically, the rationale for the choice of an online experimental research design will be given. Furthermore, this chapter elaborates on the chosen sample, data collection, the stimulus material, the experimental procedure and operationalization of the different variables. This chapter will provide a foundation for the fourth chapter, where the data will be analyzed through mediation and moderation statistical models and the results will be statistically presented while confirming or rejecting the formulated hypotheses. The fifth chapter contains a discussion of the research findings, providing theoretical and practical implications of this study and suggestions for further research. Finally, this thesis concludes with a high-level discussion on the main research question.

2. Theoretical Framework

Social media has shown its powerful capabilities for connecting social and environmental causes with potential supporters (Goodling, 2015). However, environmental organizations also need to consider the limited effects of hashtags, likes and online videos especially when they do not bring about real change, or more specifically, reach an organizations' premeditated goal of change. There has to be a strategic plan that ensures that supporters stay engaged once they have clicked, as well as when the hashtag stops trending and the goal is still not achieved. Widespread awareness is stage one, but for campaigns to be truly effective, online activism must be endorsed with a mere 'deepened' form of activism, which includes writing letters to government officials, going to advocacy meetings, attending public demonstrations, donate money, among other activities (Lutz, Hoffman & Meckel, 2014). So one might ask, how does slacktivism translate into real activism and, what prompts enduring engagement and intent toward activism.

2.1. (Online) Political Participation

As indicated earlier, in recent years there has been developed an increasing debate in the academic field with regards to the political role of digital media and the Internet. The considerable role of such digital technologies in political events as Obama's online media strategy in the 2008 U.S. Presidential Election, as well as their revolutionary role in the Arab Spring in 2011, has stimulated the debate on the compelling impact of such tools on political outcomes at the macro level of contemporary society (Cammaerts, 2015; Williams & Gulati, 2008). The Web 2.0 is unique due to its highly interactive nature and paved the way for a so-called participatory culture with a particular "property of culture" (Jenkins, 2006). Consequently, Jenkins (2006) conceptualizes a "participatory culture" on the web as having five dimensions and thereby states it a culture:

With relatively low barriers to artistic expression and civic engagement; with strong support for creating and sharing one's creations with others; with some type of informal mentorship whereby what is known by the most experienced is passed along to novices; where members believe that their contributions matter; where members feel some degree of social connection with one another (p. 7).

Lutz, Hoffman, and Meckel (2014) argue that the most apparent dimension in the context of online participation includes a motivation or drive to influence others, or to change the status quo to a certain extent. Accordingly, Jenkins (2006) emphasizes that online contributors need to have a certain conviction that their contribution matters, or more specifically, that their effort for change has affected someone or something.

A broad range of online activities can be perceived as political participation or civic engagement. Lutz, Hoffman, and Meckel (2014) state in their meta-analysis that these are commonly

operationalized as “political information search and consumption, donating money, writing an e-mail message to a government representative or politician, connecting with like-minded individuals in online communities, sharing photos, videos or sound material, protests, boycotts, and e-voting” (p. 5). This broad spectrum of possible activities shows that the concept varies to a large extent in intensity of activity. Furthermore, there is a lack of a generally accepted definition of both online political participation and offline political participation (Lutz, Hoffman & Meckel, 2014). Based on their systematic literature review, Lutz, Hoffman, and Meckel (2014) defined the term *online* political participation as “the creation and sharing of content on the Internet addressed at a specific audience and driven by a social purpose” (p.2). Civic participation is defined as “individual and collective engagement in public affairs” (Park & Perry, 2008, p. 191). Additionally, several studies cite the definition of Verba et al. (1995), who conceptualize political participation as “an activity that is intended or has the consequence of affecting, either directly or indirectly, government action” (p. 7). This last definition of political participation will be used for the purpose of this research.

2.1.1. Engagement levels

The ways consumers can engage in supporting an issue or a cause are multifold. These activities range from wearing a bracelet or pin in support of a cause, or engaging in various forms of online support such as liking or joining a page on Facebook and donating money or volunteer (Kristofferson, White & Pelozo, 2014). Rosenblatt (2010) argues that civic engagement is essential to building a sustainable society. This is because it constitutes power, which on its turn has the ability to influence decision-making which shapes society and thereby affects the planet (Rosenblatt, 2010). However, not all forms of political engagement are created equal. Since there are many various ways someone can participate in political activities, a distinction can be made between “*deep*” and “*lightweight*” (Rosenblatt, 2010) or “*high*” and “*low*” engagement (Neiger et al., 2012). Both will be discussed here.

Rosenblatt (2010) created a so-called engagement pyramid. The idea is that the base of the pyramid is more technology-centric and instinctive, and the higher forms of engagement are becoming more personal and labor-intensive. The engagement pyramid can be seen as an integrated approach that traverses both online and offline actions. The proposed engagement pyramid entails the following steps: 1) observing, 2) following, 3) endorsing, 4) contributing, 5) owning, 6) leading (Rosenblatt, 2010). The nature of engagement of the first level ‘observing’ is mere sporadic and indirect communications, an individual may decide to visit an organization’s website for instance. The second level of engagement, ‘following’, is characterized with more direct and regular communications. This can be exemplified by an individual providing contact information or reading direct communications from an organization. The third level of engagement, ‘endorsing’, comprise more straightforward, single-step communication and transactions. Examples of this are forwarding emails and signing petitions. Becoming a fan on Facebook or a follower on Twitter can also be seen as a low-level of endorsement. In the fourth level

of engagement, 'contributing', the commitment towards the organization is deepened, and engagement is characterized by multi-step assignments, which include making personally significant donations, as well as attending events. For the fifth level of engagement, 'owning', the nature of engagement is characterized by ongoing, collaborative actions. The individual is deeply involved in a volunteer program, blogging or otherwise distributing information about the organization's work. The top of the engagement pyramid, is characterized by a 'leading' engagement level, where individuals show ongoing acts of leadership. Examples include community organizers who invest time and skills in their community or organization, or become board members and, in this way, take real lead and governance of an organization (Rosenblatt, 2010).

Similarly, in their research on the use of social media in health promotion, Neiger et al. (2012) created a framework to subdivide diverse forms of engagement into a hierarchy of activities. The framework includes Key Performance Indicators (KPIs) and evaluation metrics. Although these scholars did a study on a different social issue, the framework may still be useful while discussing the division of different engagement patterns, ranging from low-engagement to high-engagement. Accordingly, low engagement appraises the degree to which people are solely acknowledging they have an affinity or prefer and endorse certain content. KPIs would include ratings, such as likes or dislikes on online content and pages, and the frequency of favorites. Medium engagement assesses the degree to which people are involved in sharing or as well creating content and the extent in which these actions influence others. KPIs would include ratings, such as Klout Scores, post and comment rate, user generated content (e.g. videos), frequency of new discussions, the number of mentions and retweets, and the number of times a post or link is shared. High engagement involves substantial participation in offline events, which may be an extension of someone's online activity, as either a consumer, program partner, volunteer, or as a sponsor. Hence, KPIs would include the number of individuals signing up for services, or participate in offline advocacy events, as either participant, sponsor or volunteer.

2.2. A difference in attitude: Activism vs. slacktivism

An array of factors, including the rapid increase in social media presence among advocacy groups and charities, has simplified the manner for consumers to engage in or express support for causes (Goodling, 2015; Kristofferson, White & Peloza, 2014; Warner, 2005). Previous research offers ambivalent predictions with regards to how much an initial token display of support for an issue - such as signing a petition, wearing a button, or joining a Facebook group - will drive subsequent action (Kristofferson, White & Peloza, 2014). Kristofferson, White and Peloza (2014) argue, in their research done on this topic, that two primary motivations help determine subsequent helping behavior: "a desire to present a positive image to others" and "a desire to be consistent with one's own values" (p. 1149). Moreover, the researchers identify two types of engagement behaviors. On the one hand, they identified 'token support', which entails that individuals may affiliate with a cause to show their support, but at the same

time includes only limited effort or costs. On the other hand, they identified ‘meaningful support’, which is defined as individual actions that make tangible contributions to a cause, and thereby requires significant cost, effort, or change in behavior such as volunteering or donating money (Kristofferson, White & Pelozo, 2014).

Charitable organizations and NGOs are thus inflicted with a problematic dilemma. Campaigns are created to engage a wide range of consumers for a cause with the aim to create a wide reach and awareness. On the other hand, organizations such as UNICEF Sweden have already advocated against so called token support in an effort to refrain people from slacktivist behavior (UNICEF Sweden, 2013). Whether and how individual’s use of digital media affects their subsequent political engagement is therefore a question widely studied in political science (Breuer and Farooq, 2012; Lutz, Hoffman, & Meckel, 2014). In their meta-research, Lutz, Hoffman and Meckel (2014) have identified three opposing perspectives in this academic debate. First, the group labeled as *optimists* who claim that the internet *boosts and encourages engagement*. According this point of view, the Web would thus strengthen democracy since it would allow for an extensive range of the population to engage politically. Second, a group called *pessimists* argue that the Internet *distracts* from formerly political and civic engagement (Putnam, 2000). Third, a group being called *realists* who state that the Web has *minimal effect* on political participatory practices (Bimber, 2001).

Among the group labeled optimists, some researchers acclaim that these so-called token endorsements can be seen as positive means toward more substantial forthcoming forms of social engagement (Fox, 2012). This is because individuals incline to maintain a certain consistency with one’s own values and previous behavior (Bem 1972; Festinger, 1962; Kristofferson, White and Pelozo, 2014), meaning that consumers are likely to accommodate their actions on their foregoing behavior. According to this argument, individuals would be more inclined to aid a cause, once they responded to an earlier call to action, which means that token-support may thus be effective, but mostly among those who are deeply connected to a cause or organization. Similarly, Brady et al. (1995) argue based on a resource perspective of political participation, that a positive connection exists between the individual’s exposure and adoption to digital media and the degree of its political engagement. This is among other things because digital media has significantly lowered the barrier related to political activities and learning (Breuer and Farooq, 2012). Through the Internet individuals have access to multiple Social Networking Sites (SNS) platforms, such as Twitter, Facebook and YouTube which has extended the possibilities for both the retrieval and dissemination of political information (Goodling, 2015). This means that individuals get more access points to political information and activities which as well comes with little costs, in terms of money, time and effort. Another study of Vitak et al. (2011) among American students showed that low-threshold actions of political participation, liking a political party’s post for instance, are not only very common but are also indicative of further, more resource-intensive modes of participation. Moreover, the study of Conroy et al. (2012) found a positive relation between

online political group membership and offline political engagement. Additionally, Lutz, Hoffman and Meckel (2014) found that Web use related to information objectives, such as browsing for news, were positively related to both online and offline participation. On the other hand, media consumption based on entertainment objectives was negatively associated with both online and offline participation.

Amongst the realists, Bimber and Copeland (2011) argue that the impact of digital media adoption on political participation estimates on the individual level remained “underwhelming”. A meta-analysis done by Boulianne (2009) on 38 studies shows a positive but moderate impact of the internet on political activity. Breuer and Farooq (2012) argue that these modest effects may emerge from moderating factors of standard predictors of political participation such as social capital (Gibson, Howard & Ward, 2000) and political interest (Xenos and Moy, 2007). Bimber et al. (2009) argue that digital media rather supplement activities of people who are already interested in politics rather than that digital media induces higher levels of participation automatically. Accordingly, there is little evidence for individuals indifferent towards political activity to suggest that the use of digital media will make these people more likely to engage in politics (Breuer and Farooq, 2012). Moreover, Di Gennaro and Dutton (2006) found in their studies that online political participation and civic engagement were not a common activity among the common public. Similarly, Baumgartner and Morris (2009) state that the politically apathetic become more engaged through digital media, often for political activities that are solely internet based.

Among the group pessimists, a growing number of academics have expressed their concerns about the lack of online form of political participation translating into offline forms of political engagement. They all argue that it becomes a legitimate problem once individuals estrange themselves from conventional forms of political participation and civic engagement and solely act on mere “slacktivist” forms of participations that require both little effort and little real-world impact (Shah, Kwak et al. 2001; Shah, McLeod et al., 2001; Jennings & Zeitner, 2003; Morozov, 2009; Gladwell, 2010; White, 2010). Morozov (2012) states that the almost thoughtless act of clicking the like button on SNS’s cannot be considered as actual political participation or engagement since it is mainly serving as appeasement of someone’s conscience or considered as an act of self-staging. Furthermore, critics state that slacktivism can even harm “meaningful” civic participations such as donating to charity, attending protests, and community volunteerism (Gladwell, 2010; Lee & Hsieh, 2013). Similarly, Christensen (2012) reports three claims used by academics stating the negative effects of the Internet on civic or political engagement. First, there is detachment, which identifies online participation as slacktivism considering that participants are detached from the “formal political sphere” (Putnam, 2000). Second, there is inactivity, meaning that online participation may be seen as slacktivism because the participants do not engage in mere conventional political, civic or offline movements or activities (Morozov, 2009). Third, they mention competence, where online participation may be seen as slacktivism since participants do fall short on elemental political competence and consequently do not

have the skills to operate purposefully in influencing political decisions (Christensen & Bengtsson, 2011). Slacktivist actions may thus discourage other political participation since an individual's inner drive to take action has been compensated by their action in low-threshold online participation (Shulman, 2009). This attitude can be explained by studies on moral balancing psychology. Current research on this issue has shown that individual who performs an act of kindness redeems one's conscience and show less intent to perform a different, subsequent prosocial action (Khan & Dhar, 2007; Mazar & Zhong, 2010; Meritt, Effron & Monin, 2010; Sachdeva, Iliev & Medin, 2009). Lee and Hsieh (2013) therefore explored in an online experiment how slacktivism affects consecutive civic action, more specifically, if citizens' participation in online activism reduces their subsequent civic participation. They found that participants who signed an online petition were significantly more prone to donate money to an associated charity, indicating a consistency effect. Moreover, participants' not signing the petition donated significantly more money to an unrelated charity, thereby showing a moral balancing effect. Exposure to online forms of activism may thus influence individual decision making on subsequent civic actions, regardless whether action was taken or not. In this case, initial participation, actually raised subsequent participation (Lee & Hsieh, 2013). Accordingly, one needs to contemplate this alternative effect as well when examining the efficacy of slacktivism. According to cognitive dissonance theory people are motivated to lessen dissonance by altering their behavior and cognition to be consistent (Efron & Monin, 2010). According to this philosophy, it may thus occur that under certain circumstances, partaking in slacktivism may increase people's tendency or attempt in subsequent civic (political) action since people want their behaviors to be consistent (Lee & Shieh, 2013). Consequently, if they contribute to a pro-environmental cause, they may be more likely to contribute to a similar cause again.

2.3. Media framing on environmental issues

With regards to communicating climate change, policy action on this issue is confronted with the dilemma that in some countries, anthropogenic (i.e. human-made) climate change is part of great political controversy (Stern, 2012; McCright & Dunlap, 2011). Climate scholars therefore attribute this situation to a deficiency in proper communication, whereas a more competent education on climate phenomena may benefit the policy debate. However, it is also argued that this knowledge deficit is a naïve perspective of the problem since the way people form opinions and are mobilized to act on environmental policy issues is a more complex process (Gardner & Stern, 1996; Dietz & Stern, 2002).

Currently, environmental issues such as natural disasters, poverty or starvation are often communicated with a proposed possibility to act, generally in the form of a donation. An array of tactics can be used to raise the effectiveness of a message (Hibbert et al., 2007). Framing of messages is an often used strategy and research has been done extensively on its effects on subsequent behavior (Entman, 1993). Climate issues are framed too, such as by scientists, governments, action groups, and

media, who all join this practice to mobilize the thoughts of individuals and incite people to take action. Hereby, it is often expected by scholars that fear of climate change and its consequences will prompt the public in supporting climate policies. However, Per Espen Stoknes (2015) argues in his book *What We Think About, When We Try Not to Think About Global Warming*, that portraying doomsday scenarios about climate related work backfire. He thereby argues that an article should consist up to a maximum of 25 percent of mischief and bad news, if you want to achieve something with your message. This is because on average our brain disengages if more than a quarter of a message includes doom in an article about climate solutions, since our brain does not know what to do with this information. In line with this study, Stern (2012) argues that climate change is often perceived as an emotional issue. Scientific researchers typically communicate their research findings to the public by emphasizing the negative consequences of climate change for both the environment and society if nothing is done to mitigate the issue (Nisbet, 2009; Stern, 2012). The idea behind these kinds of messages is that they should evoke fear to prompt action (Stern, 2012). Research demonstrates that such fear appeals may be effective under certain conditions, but they can also have an opposite effect (Stern, 2012). This is because people experiencing fear want to reduce the perceived threat and people are most prone to reduce this feeling of danger once a message proposes practical actions one can take, actions that recipients consider to be actually beneficial to avert the feared outcomes (Witte & Allen, 2000). Whereas if no such measures are available, recipients generally reduce the feeling of fear without reducing the actual danger, this can be either by refuting there is anything to be afraid of or by concluding that the so-called fear appeal was an attempt to manipulate by an unreliable source (Witte & Allen, 2000). Individuals, who have bypassed or diminished fear by refuting the message of climate change consequences, can be seen as climate change deniers (Stern, 2012). Stern (2012) advocates that climate change deniers do not acknowledge such “fear appeal” messaging, but on the other hand may be more open to positive appeals which may change their perspectives. In the attempt for finding the best way to ‘frame’ climate change issues with the aim to influence thoughts, feelings and actions, emphasizing the negative impacts of climate change does not have an influence of these individuals. Bain et al. (2012) explored a different framing technique: instead of focusing on the fear appeal they emphasized on hope appeals. They found that policy choices emphasizing different human values such as community good feeling and scientific and technological progress affected the ‘denier’ population more effectively. This also indicates that pro-environmental action is closely linked to individuals’ fundamental values (Stern et al., 1999). Stern (2012) argues that the study of Bain et al. (2012) is an important admonition that discussions about climate change policy are not solely about climate nor fear appeal effects, but that these public debates need to consider the ways in which policy choices may touch upon a multitude of individual and societal values.

2.4. Efficacy messages

An important question that needs to be asked is what are important antecedent factors for an individual's political participation? Best and Krueger (2005) argue that *demographics* are essential in comprehending political interest and participation. These are measures such as education, income, age, social and employment status, which should be taken into account while studying the topic of political participation. Valentino, Gregorowicz and Groenendyk (2009) argue that political behavior is triggered by means of an array of material and cognitive resources, amongst them is political efficacy. Similarly, Lutz, Hoffman and Meckel (2014) state that an individual's interests and self-efficacy are compelling antecedents in online political participation and civic engagement. While cultural capital, such as income and education may be more stable, some psychological forces such as political efficacy seem to be more variable (Valentino, Gregorowicz & Groenendyk, 2009). Therefore, before understanding what efficacy messages entail, we must further conceptualize efficacy itself. The initial definition of perceived self-efficacy is given by Bandura (1982), who stated that the concept "is concerned with judgments of how well one can execute courses of action required to deal with prospective situations" (p. 122). Terracina-Hartman et al. (2011) emphasize the importance of efficacy in the process of mobilization since it influences thought patterns, emotional arousal, decisions, and actions. Furthermore, it is argued that self-efficacy is able to determine future activity based on perceived competency. Bandura (1982) already stated that perceived efficacy is an important determinant for initiated coping behavior, the extent of effort that will be given, as well as the duration of sustained effort once one encounters obstacles and unpleasant experiences. With reference to environmental organizations' (social) media efforts, perceived efficacy is thus an important determinant for one's personal conviction to regard the call to action of the organization as something he or she can accomplish. Similarly, Bandura (1982) found that the higher the level of induced perceived-efficacy, the more capable someone evaluates himself and, the more inclined he or she is to act on the goal and his or her ultimate successful pursuance of this goal. Efficacy can thus be conceptualized as "capital" used to overcome challenges associated to (political) participation (Valentino, Gregorowicz & Groenendyk, 2009).

Hart and Feldman (2014) defined three modes of efficacy information motivate citizen political engagement specifically around the issue of climate change, namely internal efficacy, external efficacy and response efficacy information. Similarly, in research of campaign strategies on environmental communication, it is stated that huge potential lies in the research with a focus on the use of efficacy messages to increase civilian political engagement around the topic of climate change (Roser-Renouf et al., 2014), mainly because these messages depict climate change as an addressable problem (Feldman & Hart, 2015). Nisbet (2009) has argued that communication on climate change often points out the peril of climate change and its likely hazardous impacts on people and the environment. The argument made is that this approach leaves humans feeling helpless doing anything about climate change, and

thus fails to mobilize people who are concerned about the dangerous consequences of climate change (Feldman & Hart, 2015). Or as Ethan Zuckerman puts it, “when you have news, and there’s nothing you can do, it’s incredibly disempowering” (Xie, 2013). Valentino, Gregorowicz and Groenendyk (2009) therefore argue that an individual is most likely to participate in political activities once someone is convinced that the actions he or she makes are able to make an impact on, or exert some influence over public affairs.

Although there is a great deal of literature examining efficacy messages in psychology and political behavior more generally (Bandura, 1982; Craig, Niemi, & Silver, 1990; Easton & Dennis, 1967; Finkel, 1985; Iyengar, 1980; Madsen, 1987; Nabatchi, 2007; Park, 2015; Tausch et al., 2011; Valentino, Gregorowicz & Groenendyk, 2009), to date, there is relatively little research focusing specifically on its effect on environmental political participation (Feldman & Hart, 2015; Roser-Renouf, Maibach, Leiserowitz, & Zhao, 2014). This makes the impact of efficacy messages a promising communication strategy to study with the aim to increase political participation around environmental issues. Accordingly, this study will focus on the three different efficacy types as studied by Feldman and Hart (2015), namely internal efficacy, external efficacy, which are the two components of political efficacy, and response efficacy. Political efficacy can be defined as an amalgamation of an individual’s sense of competence in the political sphere as well as an individual’s assessment of the responsiveness of the system (Campbell et al., 1954, Nabatchi, 2007). As indicated above, political efficacy can be divided into two types, internal efficacy and external efficacy. Research shows that there is a difference in the mobilizing effects of internal efficacy and external efficacy (Valentino, Gregorowicz & Groenendyk, 2009). Nabatchi (2007) states that internal and external political efficacy encompass one of the most frequently used measures of general political attitudes, as well as highly mutually related with political participation and mobilization (Conway, 2000; Finkel, 1985). Furthermore, Craig, Niemi, and Silver (1990) argue that internal and external political efficacy are perceived to be important pointers of the overall well-being of democratic systems.

In this research, we apply the following definition of internal efficacy: “the extent to which people believe they can understand, influence policy and competently participate in politics” (Craig, Niemi & Silver, 1990; Valentino, Gregorowicz & Groenendyk, 2009). Hence, an internal efficacy message maintains the ease with which a citizen can take action in the political sphere (Feldman & Hart, 2015). This means that a person high in internal efficacy considers himself to be able to take part in politics, and are thereby not daunted by the challenges, debates or disagreements that appear in that field.

In this research, we apply the following definition of external efficacy: “external efficacy refers to an individual’s belief in the openness and responsiveness of the political system” (Craig, Niemi & Silver, 1990; Valentino, Gregorowicz & Groenendyk, 2009). Consequently, an external efficacy message maintains the likelihood that elected officials will respond to public sentiment and public calls

to action. A person high on the external efficacy condition considers the system to be responsive once pressure is applied by citizens, disregarding whether or not the individual is willing or able to perform this activity himself. When applying this theory to politics, we would predict that under threat, an individual who is confident about their ability to politically participate should also be more likely to act. When it is successful, this participation should reinforce internal efficacy. Finkel (1985) has found that participation during a political campaign significantly boosted external efficacy during the following election cycle, especially when people participate successfully. Madsen (1987) has found that successful petitioning boosts internal efficacy as well. Accordingly, if citizens engage in political activities, their positive (or negative) experience adds to their perception that the system is responsive or not, which then has an effect on the likelihood on participating the following election (Valentino, Gregorowicz & Groenendyk, 2009). Finally, response efficacy is defined as the extent to which a person believes whether a suggested activity or proposal will indeed avoid the threat one is experiencing (Witte, 1992). Hence, a response efficacy message, stresses the potential success of a proposed policy for slowing down or reducing the negative impacts of climate change (Feldman & Hart, 2015).

2.4.1. Efficacy messages and their effect on emotions

Research points out that climate change is often seen as a rather abstract and distant threat (Leiserowitz, 2005; Moser, 2010). Therefore, the challenge for climate communicators is to simultaneously increase the feeling of threat as well as evoking a sense of collective and personal efficacy (Smith & Leiserowitz, 2014). Previous research indicates that perceived efficacy is a relevant individual-level predictor to know whether someone will take action on an issue (Feldman & Hart, 2015). Feldman and Hart (2015) similarly argue that efficacy messages may increase civilian political engagement around the topic of climate change since climate change is framed as an addressable problem.

It is argued that efficacy information helps motivate political participation by means of its effects on emotions (Feldman & Hart, 2015, Nabi, 2002). Importantly, NGOs and charities often rely on the emotional response evoked by distress (Hudson et al., 2015). Emotions are commonly perceived as internal mental states depicting evaluative reactions to events, agents or objects that differ in intensity (Ortony, Clore & Collins, 1990). Usually emotions are short-lived, intense and directed at external stimuli, (Nabi, 2002). Nabi (2002) summarized the fundamental principles of literature on functional emotion theory in four statements:

First, emotions have inherent adaptive functions. Second, emotions are based on events that are personally relevant. Third, each emotion has a distinctive goal or motivation represented in its state of action readiness or tendency to action designed to arouse, sustain, and direct cognitive and/or physical activity. Fourth, emotions are organizers and motivators of behavior (p. 290).

Different emotions evoke different actions, and, for this research, there is a chosen focus on the emotions of anger, fear and hope and their mediating effects of efficacy messages on political participation. This is in line with earlier research done by Feldman & Hart (2015). Fear, anger, and hope are so-called discrete emotions, all having in common that they represent reactions to an external threat (Feldman & Hart, 2015), making these emotions notably relevant in the research on climate change communication.

2.4.2. The emotions hope, fear, anger

Although emotions are present on a daily basis, at certain points in time we can enter a higher state of arousal, in which we experience heightened physiological activity and more extreme emotion (Berger, 2011). Accordingly, emotions can be divided in high-arousal and low-arousal emotions (De Choudhury, Counts & Gamon, 2012). Arousal can be both a positive or negative experience and, in the context of this current research, both fear and anger are perceived as being negative emotions provoked by a threatening situation. When arousal is caused by a threat, this either prompts a fight or flight reaction, depending on the experienced immediacy and severity of the threat (Berger, 2011; Witte & Allen, 2000). Literature suggests that both emotions can have different effects on subsequent action.

Fear is typically incited once a situation is being perceived as threatening to one's physical or psychological self as well as being outside of one's control (Frijda, 1986; Lazarus, 1991; Nabi, 2002; Scherer, 1984). Up until now, literature on the effects of fear appeals on eliciting subsequent action has shown to be rather contradicting as well (Witte & Allen, 2000). Similarly, Nabi (2002) argues with a meta-analysis that no single fear appeal model is well supported by empirical studies. Nabi (2002) also argues that according to previous research, fear is generally positively correlated with both attitude and behavior change. However, age and efficacy perceptions may moderate such relationships (Boster & Mongeau, 1984; Mongeau, 1998). Much of fear-related persuasion findings show that those experiencing fear wish for protection (Nabi, 2002). Accordingly, many scholars have found that fear's reaction is flight from a threatening situation, one type of avoidance behavior (e.g. Frijda, 1986; Lazarus, 1991; Scherer, 1984). Nabi, however, suggest due to contradictory research findings that both message processing and acceptance are dependent on the experienced level of fear and the perceived practicality that the message information is offering for the desired protection from a threat. For this research, we use Witte's (1992) definition of fear: "Fear is a negatively valenced emotion, accompanied by a high level of arousal, and is elicited by a threat that is perceived to be significant and personally relevant". When fear arises from a situation that seems to be outside an individual's control, anger emerges from assessments of individual agency over the threat (Hart & Feldman, 2015).

Anger is often evoked by the presence of obstacles hindrances interfering with goal-oriented behavior or humiliating offenses against oneself or one's loved ones (Averill, 1982; Hampton, 1978; Izard, 1977; Lazarus, 1991; Plutchik, 1980). Anger is seen as contributive to constructive problem

solving, and considered to be contributive to mobilizing and sustaining high levels of energy (Averill, 1982). However, the impulsiveness often related to extreme anger may on the other hand be counterproductive (Averill, 1982). For this research, we use the following definition: “anger is a strong, uncomfortable, emotional response to a real or perceived provocation” (Videbeck, 2011). Anger can thus be provoked if someone is frustrated, feels hurt or threatened (Videbeck, 2011). Similarly, Graham, Priddy and Graham (2014) define anger with regard to the expectations and assumptions we have about the world we live in. As a result, anger is often times evoked when we are “expecting the world to be different than it is”.

In this research, hope is considered to be a positive emotion. However, according to Lazarus (1991), hope is a problematic emotion since it is often perceived as a positive emotion, but on the other hand stems from negative circumstances. Lazarus (1991) states that hope exhibits an aspiration for a better situation than the one present, generally when a positive outcome is not guaranteed. Furthermore, hope is only stimulated in a threatening situation once a desirable prospective outcome is assumed to be possible (Lazarus, 1991). Hope often times comfort and mitigate (but not alleviate) emotional distress, it may prevent one from attempting to obtain more realistic goals (Nabi, 2002). For this research, we use the definition of Snyder, Irving and Anderson (1991): “a positive motivational state that is based on an interactively derived sense of successful (1) agency (goal directed energy) and (2) pathways (planning to meet goals)” (p.287).

Feldman and Hart (2015) argue that efficacy messages around the topic of climate change possibly influence fear, hope, and anger differently. In their studies of affective intelligence, Marcus, Neuman, and MacKuen (2000) explored the immediate effects of emotions in driving political action, learning, and campaign involvement. According this theory, heavily inspired on neuroscience theories, emotional reactions to politics would thus affect participation. They argue that a threat in the environment causes anxiety, which subsequently boosts attention to prevailing information, interrupts habitual behavior and mindset, and promotes learning. Research done by Brader (2006) also found compelling evidence for negative emotions interrupting political habits of thought. Efficacy messages depicting climate change as an addressable threat are hypothesized to diminish fear. This is in line with the academic predictions of the Extended Parallel Process Model (EPPM; Witte, 1992; Feldman & Hart, 2015), where it is argued that the incorporation of efficacy information helps individuals to cognitively encounter the anticipated danger, when confronted with a fear-based message appeal. This way fear is alleviated, which consecutively motivates someone to take action which also alleviates the danger. Efficacy messages are thus hypothesized to increase hope. Chadwick’s (2015) research on hope appeals relating to the perils of climate change found that disclosure to a message asserting the opportunity that citizens can take action to ameliorate the climate increased personal feeling of hope.

Central to cognitive appraisal theory (Lazarus, 1991) is the idea that behavior results from coping strategies that individuals apply while acting upon a situation, which then provokes strongly felt

emotions (Roseman et al. 1986). Discrete emotions thus arise from the judgments of the relationship between a person and his surroundings (Valentino, Gregorowicz & Groenendyk, 2009). Two central dimensions of appraisal are certainty and control over a threatening stimulus, situation, or event. These two dimensions are essential to ascertain whether fear or anger will arise once an individual encounters an external threat (Smith & Ellsworth, 1985). Fear appears once outcomes are uncertain and the situation is perceived to be outside the individual's control, whilst anger occurs once an individual considers himself to be in control of the threat (Lerner & Keltner, 2001). It is therefore hypothesized that the sense of control and certainty is relatively high amongst highly efficacious individuals. Valentino et al. (2009) found that feelings of internal political efficacy evoked anger in relation to a policy threat. However, there is also empirical evidence of a negative relationship between political efficacy and anger (Tausch et al., 2011). Lazarus (1991) states that anger is evoked once someone's goals become frustrated, and efficacy may involve the removal of these obstacles to goal attainment, thus decreasing anger. It is thus predicted that anger will have a distinguishable mobilizing effect since anger prepares individuals to fight in, for this instance, the political sphere.

2.5. Hypotheses

This thesis will use Feldman and Hart's (2015) proposed framework for encouraging (online) political engagement with environmental issues by making use of the theoretical approaches of internal efficacy, external efficacy, and response efficacy. Since this thesis makes for the most part use of the method of Feldman and Hart (2015), the hypotheses of the quantitative part of the research are similar. Based on the literature review, we pose three sets of hypotheses exploring the role of efficacy messages (internal, external, response) on the emotions (fear, hope, and anger) and the mediating effects of these emotions on environmental political participation. Employing an experimental design, we can more precisely outline the causal chain between efficacy messages, emotions and environmental political participation.

The H1 hypotheses address the effect of the efficacy messages on emotions:

H1a: A climate change message including any efficacy information will increase hope, compared to a message that does not include efficacy information.

H1b: A climate change message including any efficacy information will decrease fear, compared to a message that does not include efficacy information.

H1c: A climate change message including any efficacy information will decrease anger compared to a message that does not include efficacy information.

The H2 hypotheses address the effects of emotions on the dependent behavior:

H2a: Hope will be positively related with climate-related political participation.

H2b: Fear will be negatively related with climate-related political participation.

H2c: Anger will be positively related with climate-related political participation.

The H3 hypotheses address the indirect effect of the disclosure of efficacy information on participation by the respective emotion.

H3a: Hope will mediate a positive indirect effect of the disclosure of efficacy information on participation.

H3b: Fear will mediate a positive indirect effect of the disclosure of efficacy information on participation by fear.

H3c: Anger will mediate a positive indirect effect of the disclosure of efficacy information on participation by anger.

In addition, this research will explore the extent to which the current political participation intensity of an individual, ranging from slacktivism to activism, will moderate the effects of efficacy information on emotional responses and political behavior. Figure 2.5 displays a conceptual diagram of the models to be tested and includes the moderation of activism level.

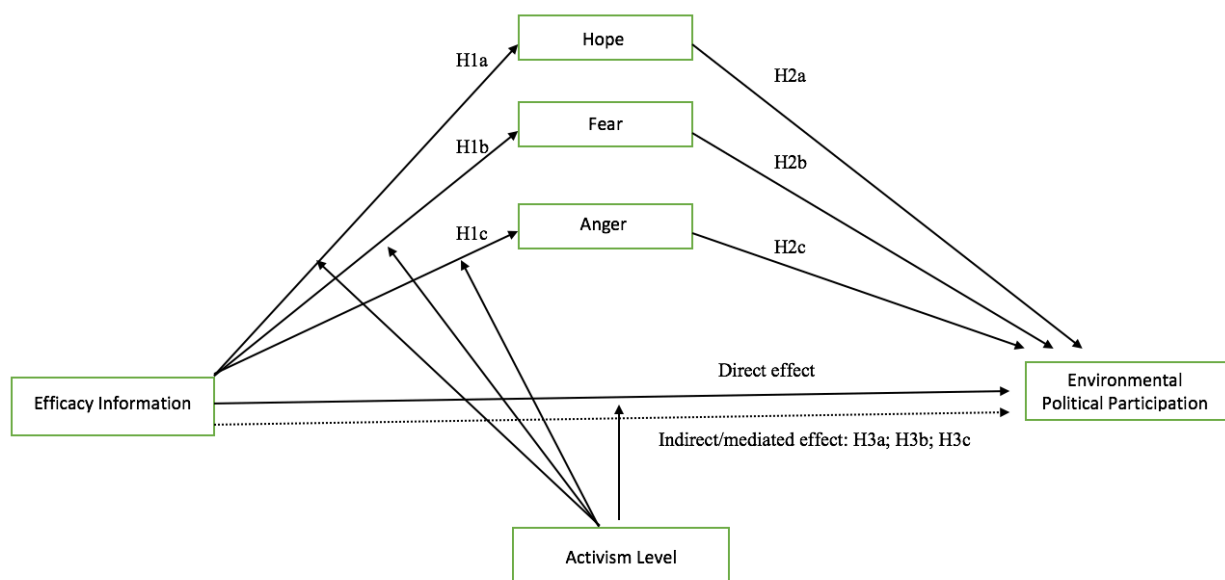


Figure 2.5. Conceptual model

3. Methodology

After having evaluated prior studies on the topic of environmental political participation, the issue of slacktivism, and the potentially beneficial effects of efficacy messaging on diverse emotions and environmental political participation, this chapter will discuss the methodology of this research. In the first section, the choice of research methods, an online experiment, is motivated. Subsequently, in the second section, the sample and used sampling methods are presented. The third section, a discussion of the measurements is reported. Furthermore, the dependent variable (environmental political participation) and independent variables (3 efficacy messages) are operationalized as well as the mediators (fear, hope, anger) and the moderating variable, activism level. In the fourth section, the manipulation checks will be discussed. In the fifth section, the stimulus material will be reviewed. The sixth section, discusses the procedure of the experiment. Finally, the seventh section discusses the type of data analysis.

3.1. Choice of method

As the main objective of this research is to measure the possible effects of efficacy messages on emotions and their combined effects on subsequent acts of environmental political participation, the decision for a quantitative research method was considered most appropriate for this study. More specifically an online experiment was chosen over other quantitative research methods as this method is best fitted for answering the research question as it allows for a direct testing and comparison of the four different conditions caused by the manipulation of the independent variable (Zhou & Sloan, 2009). Moreover, a quantitative study was deemed useful, since it is challenging to collect data from a large number of respondents or to make generalizations and predictions when using interviews, focus groups or any other qualitative method (Saunders et al., 2003). Similarly, this research method permits both testing of the hypotheses as well as exploring the relationships between the variables (Punch, 2003), as opposed to qualitative approaches which treat variables and related concepts in a merely descriptive manner. Additionally, a published theoretical approach was adapted; thus, the subsequent developed hypotheses demand a quantitative research approach. Therefore, it is important to note that we take on a deductive approach, meaning that we commence from a theoretical grounding that suggests an expected pattern, where after we assess whether this pattern actually appears (Babbie, 2007). Moreover, the research design of experiments can be subdivided into two distinct types; an in-between-subjects and between-subjects design. The design of this research will make use of a between-subjects design, which allows the researcher to compare between groups of individuals. The online experiment is followed by a survey, mainly used for gathering demographic data, opinions from participants, and the foreseen participation level. This questionnaire was developed based on the conceptual framework and literature presented in the previous chapters. Furthermore, the theoretical framework discussed the

explanations of the different measures and contributed to the proposal of nine theoretically expected hypotheses.

3.1.1. Testing

After the stimulus material and survey were designed, a pre-pilot study was conducted with the support of 3 experts as well as a panel of 12 participants. The main objective was to improve the stimulus material, the survey questions and to test respondents' comprehension and clarity before the definite questionnaire was executed (Saunders et al., 2003).

3.2. Sample

Before elaborating on the sampling methods, first the description of the target population needs to be clarified. Given the fact that this study was aimed at Dutch citizens, the entire sample comprised Dutch respondents covering all age groups above 18 years old. The decision for this age range was due to this study's consideration that climate change and policy choices around this issue impacts a wide population (Stern, 2012). Since demographics may influence the results (Best and Krueger, 2005), these are taken into consideration and controlled for when analyzing the effects of different efficacy messages and their respective emotion and intended participation behavior. The development of strategies within climate change communication can be devised at an international, national, and/or local level, and thus encompass a different size of area or focus upon a specific topic or aspect of climate change (Oepen, 2006; Shome & Marx, 2009). Since the "Nationale Energie Dialoog", the topic discussed in the stimulus material, is concerned around a Dutch political issue, the online experiment was limited to participants residing in the Netherlands. Another important reason to choose for a national sample was the language, meaning that because we are manipulating an intrinsic message feature (presence of efficacy information or not), we needed all participants to share a similar understanding of the newspaper article, which could only be achieved if everyone has the same proficiency of the Dutch language. All people who did not meet these requirements were excluded from the experiment. Altogether, this sample best corresponds with the aim of this study.

3.2.1. Sampling method

As this study uses an experimental research design, survey data was collected in the period between the end of May and end of June 2016. The participants were recruited online, solicited via email and different media platforms such as *Twitter*, *Facebook*, *LinkedIn*. Participants were also contacted via the social media channels of Greenpeace, *Greenwire*¹ and the Facebook page of *De Klimaatbeweging*², who lend their internal channel to gather participants. Participants were requested to share and forward

¹ The online platform for all volunteers of *Greenpeace*

² A Facebook page for likeminded individuals and organizations who are engaged in campaigning on the theme of climate change

the link amongst their peers. The use of convenience sampling in combination with a snowball method allowed the researcher to reach a broader and more diverse group from the broader population beyond the individual network. However, it must be mentioned that snowball sampling has limitations. The quality of the data and specifically a selection bias which may limit the validity of the sample are the primary concerns of this type of research (Van Meter, 1990). For de-biasing of the sample, Best and Krueger (2005) state that demographic measures such as age, gender, social status among others, need to be taken into account while studying (online) political participation. A recent study of Turpijn, Kneefel and van der Veer (2015) has shown that in the Netherlands the entire adult population (18 - 65+) are present on social media. Therefore, the argument that online data collection methods will neglect older age groups may be dismissed to some extent.

3.2.2. Sampling size

For experimental research, Christensen (2007) argues that 30 to 50 cases are needed for each experimental condition. Since this research involves four different conditions, a minimum of 120 and a maximum of 200 participants are required. However, this research also contains multiple regression analyses which also have specific terms for sample size. There are different rules of thumb about collecting enough data to obtain a reliable regression model. A common used rule of thumb is that you should have 10 cases of data for each predictor in the model (Field, 2009, p.222). Stevens however (1996, p. 72) suggests that for social science research, around 15 cases are needed per predictor for a reliable regression model. Tabachnick and Fidell (2007, p. 123) also give a formula for sample size requirements in multiple regression while taking into account the number of independent variables (IV) in the equation: $N > 50 + 8m$, where m is the number of IVs. This experimental research design consists of 4 conditions (internal, external, response and control), meaning that a minimum of 120 cases of data needed. However, the mediating variables (hope, fear, anger) and moderating variable (activism level) can also be seen as independent variables. Therefore, a minimum of 32 extra participants are needed in the model. In total, this means that a sample size of $N = 152$ is needed. However, it must be noted that the models controlled for demographic variables: age, gender, educational level, employment status, average income, ecological beliefs, political voting preference, and credibility of the news message. These variables were treated as covariates. Consideration of these covariates in the minimum sample size raises the conservative minimum to 208 units³, and to 162 less conservatively.

³ The more conservative formula is as follows: minimum for experiment ($n = 120$), 3 emotion mediators ($n = 24$), 8 control variables ($n = 64$), meaning altogether $N = (8*(8+3) + 120 = 208$. This is more conservative than the formula of Tabachnick & Fidell (2007), whereas 8 control variables ($n = 64$), 3 emotion mediators ($n = 24$), and three conditions ($n = 24$). $N = 50 + (8+3+3)*8 = 152$. Note that the four conditions reduces to 3 (conditions) in the formula as the fourth condition is left out of the model as it is mathematically inferable.

The total number of individuals who clicked on the link to participate in the experiment was $N = 296$. After closing the survey, it appeared that 74% finished the survey, $N = 218$. However, due to testing of assumptions, which will be discussed in further detail in the results section, the total amount of participants contributing to the experiment was $N = 215$ respondents, exceeding the conservative minimum.

3.3. Measurements and operationalization

Several measurements assessed the effect of efficacy information on environmental political participation and the mediating effects of emotions, which is the main objective of this study. This section will discuss these measurements and operationalization of them and other various variables used in this research. Most variables were measured on a 7-point Likert scale. Each set of conceptually related variables were subject to separate factor analyses. Below the rotated varimax factor loadings per variable are reported (or unrotated loadings when only one component was exposed). The first question, which aimed to distinguish *slacktivists* from *activists*, was not asked according the format of a Likert scale, but had a different setup as described in sub section 3.3.1. At the end of this section, a brief overview of subject-related variables is given, which mainly entail demographics.

3.3.1. Activist versus slacktivist

The current level of political activism was measured on a 4-point scale. Participants were asked the question “with regard to environmental issues, how often did you participate in the following activities in the past 12 months”. Furthermore, a clear definition of the concept “environment” was given: “by environment, we mean the organic climate (the atmosphere, soil, water) that affects the well-being of plants, animals, and humans”. Answers were partitioned as 1) never, 2) once this year, 3) between two or four times this year, and 4) more than five times this year. For the purpose of analysis, these were ultimately recoded into a binary indicator/dummy variable, distinguishing between slacktivists and activists (details below). All this was done based on the earlier described literature on engagement levels of Rosenblatt (2010) and Neiger et al. (2012). Each respondent’s assignment to slacktivism/activism was thus obtained through a set of items assessing participants’ types of engagement in environmental issues (i.e., slacktivist or activist) and their amount of engagement in each level of engagement (i.e., low- and high-threshold engagement).

Table (3.3) shows that 6 items measured low threshold engagements, and 6 items measured high threshold engagement. Since the answering grid allowed for the answers; ‘never’, ‘once this year’, ‘between two and four times this year’, and ‘more than five times this year’, respondents only received 1 point for answering ‘once this year’ or more frequent categories. Hereafter, low and medium threshold engagement items were multiplied by 1. Items with high threshold engagement were multiplied by 2, meaning that if a respondent filled in ‘never’ for a question he or she would receive 0 points for that

specific activity and 2 otherwise. Consequently, a minimum amount of points a participant could obtain at the end of this question block was 0, and the maximum amount of points was 18. The dividing line was set on (0-9) points for being considered a slacktivist, and (10-18) points for being considered an activist. Of the 215 participants, 70.2% were considered to be slacktivists ($n=151$), and 29.8% were considered to be activists ($n=64$).

Table 3.3. Division activism level

| Participation Activity | Rosenblatt (2010) | Neiger et al. (2012) | Slacktivist (1) Activist (2) |
|---|-------------------------|----------------------|---------------------------------|
| 1. Liked a page/post/tweet/ video/picture on social media | Following | Low engagement | 1 |
| 2. Shared a page/post/tweet/ video/picture on social media | Endorsing | Medium engagement | 1 |
| 3. Posted news or comments online | Endorsing | Medium engagement | 1 |
| 4. Got information online or on a social networking site | Observing | Low engagement | 1 |
| 5. Signed an (online) petition | Endorsing | Medium engagement | 1 |
| 6. Boycotted an event or product | Endorsing/ contributing | Medium engagement | 1 |
| 7. Written about environmental issues (e.g. public media, own blog) | Owning | High engagement | 2 |
| 8. Contacted government officials to urge them to take action | Owning | High engagement | 2 |
| 9. Participated in a crowdfunding campaign or raised money | Contributing | High engagement | 2 |
| 10. Donated money to an environmental organization | Contributing | High engagement | 2 |
| 11. Participated in a rally or protest | Contributing | High engagement | 2 |
| 12. Volunteered | Owning | High engagement | 2 |

3.3.2. Credibility

Recent years, several scales have been crafted to measure source credibility, mostly by employing pairs of antonymous adjectives to form a scale rating the credibility of the speaker. “By definition, the term ‘source credibility’ describes positive characteristics that will lead to the acceptance of a message” (Ohanian, 1990). For measuring the credibility of the stimulus material, the validated scale by Appelman and Sundar (2015) was employed. This scale best corresponds with the aim of the study since the stimulus material of this research consists of a news article and this is the only scale that exclusively measures message credibility, specifically in the context of news (Appelman & Sundar, 2015). The scholars argue that message credibility can be measured by asking respondents to what extent content can be characterized by three adjectives: accuracy, authenticity and believability. Accordingly, the measure of credibility averages together responses for “the content is accurate”, “the content is believable” and “the content is authentic”. These three items, measured on a seven-point Likert scale (1 = strongly disagree – 7 = strongly agree) were subjected to principal component analysis (PCA). First, the appropriateness of the data for factor analyses was assessed. The analysis of the correlation matrix showed that all of the coefficients were above .3 as well as the Bartlett’s Test of Sphericity was statistically significant as well, which supports the factorability of the correlation matrix. Principal component analysis (Table 3.3.2) reported the presence of only one component with an eigenvalue exceeding 1 (Eigenvalue = 2.30), explaining 76.81% of the variance respectively. An inspection of the scree plot revealed a clear break after component 1. All items loaded with a minimum of .45 on component 1, whereby the item ‘The content is accurate’ has the highest component loading. The subsequent reliability analysis showed that it was a good reliable scale with a Cronbach’s alpha of .85 (Landis & Koch, 1977). The reliability of this scale could be improved to a Cronbach’s alpha of .88 by deleting item “the content is authentic”; however, this was not found to be necessary since we already had a highly reliable scale.

Table 3.3.2. Factor and reliability analyses: Credibility ($N = 215$)

| Item | |
|---|-------------|
| The content is accurate | .923 |
| The content is believable | .890 |
| The content is authentic | .812 |
| <hr/> | |
| <i>Cronbach’s Alpha r</i> ($p < 0.1$) | .85 |
| <i>Eigenvalue</i> | 2.30 |

3.3.3. Emotions

The emotion measure consisted of three discrete emotions: hope, fear and anger. The items were inspired by a similar research done by Feldman and Hart (2015). The participants were asked to what extent they did feel the following emotions while reading the news article. The measure of hope is derived from averaging together responses for “hopeful” and “enthusiastic”. The measure of fear is derived from averaging together responses for “fearful” and “anxious”. Anger was measured using a single item that indicated how “angry” participants reported they felt while reading the news article.

These five items, measured on a seven-point Likert scale (1 = strongly disagree – 7 = strongly agree, were subjected to principal components analysis (PCA). The correlation matrix revealed the presence of all the coefficients of .3 and above, and Bartlett’ Test of Sphericity reached statistical significance, supporting the factorability of the correlation matrix. Principal component analysis informed the presence of two main components. An inspection of the scree plot revealed a clear break after these two components. Component 1 included fearful, anxious, angry, and had an eigenvalue exceeding 1 (Eigenvalue = 2.22), explaining 44.30% of the variance respectively. The subsequent reliability analysis showed that it was a good reliable scale with a Cronbach’s alpha of .83. Component 2 included hopeful, and enthusiastic. The reliability analysis showed it was a good reliable scale with a Cronbach’s alpha of .82. We decided to split the scale of negative emotions for the purpose of the earlier mentioned hypotheses, derived from the literature, which suggested that fear and anger have distinctive dynamics in the development of political participation (Feldman & Hart, 2015; Valentino, Gregorowicz & Groenendyk, 2009). Since the item ‘angry’ is removed from the scale the new Cronbach’s alpha is a bit lower than the fear and anger combined, namely, .810 instead of the earlier mentioned .829 with a mere difference of .019. However, the scale still has good reliability (Landis & Koch, 1977). We decided that the scale combining the items ‘fearful’ and ‘anxious’ was called *fear*. The scale combining the items ‘hopeful’ and ‘enthusiastic’ was called *hope*. And, the item ‘angry’ became a single item measurement and was called *anger*.

Table 3.3.3. Factor and reliability analyses: Emotions (N = 215)

| Item | Hope | Fear | Anger |
|-------------------------------------|-------------|-------------|-------------|
| Hopeful | .923 | | |
| Enthusiastic | .918 | | |
| Anxious | | .892 | |
| Fearful | | .869 | |
| Angry | | | .832 |
| <hr/> | | | |
| <i>Cronbach’s Alpha r</i> (p < 0.1) | .82 | .81 | |
| <i>Eigenvalue</i> | 1.70 | 2.26 | |

Note. The component loading of anger belongs to component 1, as well as the Eigenvalue stated under fear.

3.3.4. Environmental political participation

For the different levels of environmental political participation, five items were constructed that measured the extent to which the participants intended to engage in diverse political actions specifically aimed at moderating climate change over the next 12 months. The items were inspired by a similar study by Feldman and Hart (2015), who intended to measure the effects of efficacy messages on political participation as well. Measured activities included 1) contact government officials to urge them to take action to reduce climate change; 2) participate in a rally or protest in support of action to reduce climate change; 3) sign a petition in support of taking action to reduce climate change, 4) join or volunteer with an organization working to reduce climate change and 5) donate money to an organization working to reduce climate change. These five items, measured on a seven-point Likert scale (1 = very unlikely – 7 = very likely) were subjected to a principal component analysis (PCA). This analysis confirmed that the five items indeed form a one dimensional scale: only one component has an eigenvalue above 1 (eigenvalue of 3.18), explaining 63.53% of the variance respectively. After this first component, one can see a clear bend in the scree plot. All items positively correlate with this first component, whereby the item ‘participate in a rally or protest in support of action to reduce climate change’ has the highest component loading. The scale has good reliability, Cronbach’s alpha = .86 (Landis & Koch, 1977). The scale could not be further improved by deletion of any of the items. We decided the scale was called *environmental political participation*. For the purpose of this research, the final measure consisted of an average of these five items. Consequently, a minimum amount of points a participant could obtain at the end of this question block was 1, and the maximum amount of points was 7.

Table 3.3.4. Factor and reliability analyses: Environmental Political Participation ($N = 215$)

| Item | |
|---|-------------|
| Participate in a rally or protest in support of action to reduce climate change (2) | .851 |
| Join or volunteer with an organization working to reduce climate change (4) | .843 |
| Sign a petition in support of taking action to reduce climate change (3) | .799 |
| Donate money to an organization working to reduce climate change (5) | .750 |
| Contact government officials to urge them to take action to reduce climate change (1) | .736 |
| <hr/> | |
| <i>Cronbach’s Alpha r ($p < 0.1$)</i> | <i>.86</i> |
| <i>Eigenvalue</i> | <i>3.18</i> |

3.3.5. Ecological beliefs

Feldman and Hart (2015) argue that while studying environmental political participation, ecological attitudes should also be controlled for in the analysis. For this research, ecological beliefs will be measured by using a subset of seven items of the original New Environmental Paradigm scale, which

consisted of fifteen items (Dunlap & van Liere, 1978). Because the survey is already quite long we decided to use the validated scale by Stedman (2014) as used by Feldman and Hart (2015), which includes the following items: 1) the balance of nature is very delicate and easily upset by human activities; 2) ecological, rather than economic factors must guide our use of natural resources; 3) we attach too much importance to economic measures of the well-being of our society; 4) we are approaching the limit of the number of people the earth can support; 5) when humans interfere with nature, it often produces disastrous consequences; 6) humans must live in harmony with nature in order to survive; and 7) there are limits to growth beyond which our industrialized society cannot expand. These seven so-called ecological beliefs, measured on a seven-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*) were subjected to principal component analysis (PCA). First, the appropriateness of the data for factor analyses was assessed. The analysis of the correlation matrix showed that all of the coefficients were above .3. Bartlett's Test of Sphericity was statistical significant, supporting the factorability of the correlation matrix. Principal component analysis reported the presence of only one component with an eigenvalue exceeding 1 (Eigenvalue = 3.14), explaining 44.80% of the variance respectively. An inspection of the scree plot revealed a clear break after component 1. All items loaded with a minimum of .45 on component 1. The subsequent reliability analysis shows that it is a substantial reliable scale with a Cronbach's alpha of .79 (Landis & Koch, 1977). We decided to call this variable *ecological belief*. For the purpose of this research, the final measure consisted of an average of these seven items. Consequently, a minimum amount of points a participant could obtain at the end of this question block was 1, and the maximum amount of points was 7.

Table 3.3.5. Factor and reliability analyses: Ecological beliefs ($N = 215$)

| Item | |
|---|------|
| We attach too much importance to economic measures of the well-being of our society (3) | .729 |
| Humans must live in harmony with nature in order to survive (6) | .727 |
| There are limits to growth beyond which our industrialized society cannot expand (7) | .726 |
| Ecological, rather than economic factors must guide our use of natural resources (2) | .716 |
| When humans interfere with nature, it often produces disastrous consequences (5) | .619 |
| We are approaching the limit of the number of people the earth can support (4) | .596 |
| The balance of nature is very delicate and easily upset by human activities (1) | .547 |
| <hr/> | |
| <i>Cronbach's Alpha r</i> ($p < 0.1$) | .79 |
| <i>Eigenvalue</i> | 3.14 |

3.3.6. Demographics

In order to check for randomization and possible alternative explanations, a number of control variables were included. Best and Krueger (2005) state that demographics play an essential role in political interest and participation. Therefore, measures such as age, gender, highest educational level, current employment status, income and voting preference were solicited from participants and controlled for in the regression analysis. Furthermore, respondents were finally asked the question “What do you think this study was about?” to ensure they did not know (either *a priori* or afterwards) the underlying idea of this experiment.

3.4. Manipulation checks

The research on which this study is based did not include a manipulation check on perceived efficacy (Feldman & Hart, 2015). They argued that this was not needed since the manipulation material is an intrinsic message feature, meaning that the stimulus material either includes or does not include efficacy information of different types. More specifically, similarly as in our study, the main focus was on whether the inclusion of efficacy information in a message impacts emotions and political participation, disregarding whether it makes respondents feel more efficacious (Feldman & Hart, 2015). Furthermore, Feldman and Hart (2015) refer to other researchers, who also manipulated the inclusion of efficacy information in news coverage examining affective and behavioral outcomes (Dahlstrom et al., 2012). However, two arguments can be made to include manipulation checks regarding such research. First, they ensure if the text has actually been read. Second, they explore if the efficacy information has an effect on feeling more efficacious, because several researchers have argued that feeling efficacious is an important predictor for political participation (Bandura, 1982; Craig, Niemi, & Silver, 1990; Lutz, Hoffman & Meckel, 2014; Terracina-Hartman et al., 2011; Valentino, Gregorowicz & Groenendyk, 2009).

3.4.1. Timer

A timer of 30 seconds was added to the stimulus, which is a survey mechanism that *Qualtrics* offers. This implies that participants could only click to the next question once the time has elapsed. This was done primarily to ensure participants started reading through the text. Secondly, because the stimulus material loaded on the computer screen within a few seconds, the text may have appeared somewhat slower on the screen. Thus, people could not click to the next question by accident and thus missing the stimulus material.

3.4.2. Efficacy measures

Although the news articles include an intrinsic message feature, namely including or not including a specific message (O'Keefe, 2003), it is still important to pay attention to whether efficacy information makes respondents feel more efficacious. For this reason, manipulation checks were included for the three efficacy messages. The measure for political efficacy (both internal and external efficacy) were drawn from the 1987 NES Pilot Study (Craig, Niemi, & Silver, 1990). The first five items measure internal efficacy, the following two measure external efficacy. Because of a preliminary qualitative test of participants, the item "I feel that I could do as good a job in public office as most other people", was taken out due to repeatedly given feedback from the pre-test panel that this item caused much confusion, leaving internal efficacy with four items.

First, all ten items were included in a factor analysis. The correlation matrix revealed the presence of all the coefficients of .3 and above and Bartlett' Test of Sphericity reached statistical significance, supporting the factorability of the correlation matrix. Principal component analysis informed the presence of three main components.

Four items loaded onto Factor 1. *Internal efficacy* is measured with the following four items: 1) I consider myself well qualified to participate in politics; 2) I feel I have a pretty good understanding of the important political issues facing our country; 3) I usually feel sure of myself when talking with other people about politics; and 4) I think that I am as well informed about politics and government as most people. It is clear from the literature previously described that all four are related to internal efficacy. The eigenvalue for this factor exceeded 1 (Eigenvalue = 3.18), explaining 31.78% of the variance respectively. The subsequent reliability analysis showed that it was a good reliable scale with a Cronbach's alpha of .85 (Landis & Koch, 1977).

Three items loaded onto Factor 2. *Response efficacy* is measured by using a scale template provided by the scholars Witte, Cameron, McKeon and Berkowitz (1996). The template is developed for researchers to create their own response efficacy index tailored to a desired specific context. This resulted in three items measuring response efficacy: 1) the proposed reduction of CO2 levels works in preventing further climate change; 2) reducing CO2 levels is effective in preventing further climate change; and 3) if we act according to the proposed policy of reducing CO2 levels, climate change is less likely to worsen. It is clear from the literature described in the theoretical framework that all three relate to the response efficacy and stimulus material. The eigenvalue for this factor exceeded 1 (Eigenvalue = 2.01), explaining 20.14% of the variance respectively. For this second component the item 'The proposed reduction of CO2 levels works in preventing further climate change', has the highest component loading of .83. The consecutive reliability analysis showed that it was a reliable scale with a Cronbach's alpha of .76 (Landis & Koch, 1977).

Three items loaded onto Factor 3. *External efficacy* is measured with the following three items: 1) most public officials are truly interested in what the people think; 2) I *don't* think public officials

care much about what people like me think; 3) the average person can influence politicians. The eigenvalue for this factor exceeded 1 (Eigenvalue = 1.41), explaining 14.08% of the variance respectively. The consecutive reliability analysis showed that it had a moderate reliable scale with a Cronbach's alpha of .60 (Landis & Koch, 1977). The measure for external efficacy was drawn from the 1987 NES Pilot Study (Craig, Niemi, & Silver, 1990) and thus was already validated. However, the last item 'the average person can influence politicians' was added but actually improved Cronbach's alpha, meaning that with item deleted Cronbach's alpha would be .577, which is thus lower than it currently is. The scale could thus not be further improved by deleting one of the items.

Table 3.4.2. Factor and reliability analyses: Efficacy measures (N = 215)

| Item | Internal | Response | External |
|---|----------|----------|----------|
| I consider myself well qualified to participate in politics (1) | .835 | | |
| I feel I have a pretty good understanding of the important political issues facing our country (2) | .838 | | |
| I usually feel sure of myself when talking with other people about politics (3) | .899 | | |
| I think that I am as well informed about politics and government as most people (4) | .696 | | |
| The proposed reduction of CO2 levels works in preventing further climate change | | .834 | |
| Reducing CO2 levels is effective in preventing further climate change | | .774 | |
| If we act according to the proposed policy of reducing CO2 levels, climate change is less likely to worsen. | | .831 | |
| Most public officials are truly interested in what the people think | | | .791 |
| I <i>don't</i> think public officials care much about what people like me think (REVERSED) | | | .779 |
| The average person can influence politicians | | | .632 |
| <hr/> | | | |
| <i>Cronbach's Alpha r</i> ($p < 0.1$) | .84 | .76 | .60 |
| <i>Eigenvalue</i> | 3.19 | 1.98 | 1.41 |

3.5. Stimulus material

An important component of this experiment is the formation of realistic stimuli that resemble real newspaper articles. A newspaper article was chosen as the medium of this research due to its highly informative character and since this research was mainly interested in the mobilizing effects of efficacy text messages. For this research, a fictitious stimulus is developed from existing newspaper articles as well as texts from the website mijnenergie2050.nl, the official webpage of the Energie Dialoog. Hereafter, the texts were textually modified. The three efficacy paragraphs were derived theoretically from the previous theoretical framework as well based on the work of Feldman and Hart (2015). Figure (3.5) shows these paragraph changes made per condition. The core information was the same for each group, only the title and efficacy information paragraph varied. Subject matter, linguistic cues, the essence and language of each article was kept constant. Participants were given the opportunity to read and think about the article at their leisure, thus enhancing the external validity of the research situation (Cook & Campbell, 1979).

The choice for a fictitious news article was twofold. First, it is not feasible to get a real news article covering all four different efficacy messages. Second, it offered freedom in topic choice: the fictitious news article addresses a climate threat that multiple environmental NGOs are facing. However, it is important to note that the articles are based on true facts, since it draws upon the information of real newspaper articles (ANP, 2016; Bremmer, 2016; Rijksoverheid, 2016). The formatting and layout were in the style of an article in *De Volkskrant*, a major newspaper in the Netherlands. The source of the fictitious article is shown to be ANP, a major independent news agency. Appendix A (the survey) shows all four articles having the layout of a PDF print-out of a *Volkskrant* web article. On average people read 200 to 250 words per minute, whereas slow readers read 200, and fast readers 330 words per minute (Rayner, Slattery & Bélanger, 2010). Moreover, there are differences for people with various stages of educational development. The average college student can read 450 words per minute, the average high level executive 575 words per minute and the average college professor 675 words per minute (Nelson, 2012). Therefore, it was decided to fabricate a medium-size article from about 500 words. The internal efficacy stimulus had 524 words, the external stimulus had 510 words and the text of the response condition had 522 words. The text of the control was necessarily shorter, here only the introduction together with the climate change threat was showed and thus contained 269 words.

3.5.1. De Energie Dialoog

The unabated emissions of anthropogenic greenhouse gasses, mainly from the burning of fossil fuels, are seen as a threat to global warming and its lasting effects are already visible (ANP, 2016). Increasingly, politicians recognize the importance of substantial reductions in these emissions to minimize these alarming anthropogenic impacts, as recognized and regulated by international law.

Similarly, the Netherlands faces the challenge to reduce its CO₂ emissions and plans on using more renewable energy sources in the coming 35 years. The Energy Agreement must ensure plans to make 16% of the country's total power supply sustainable by 2023 (Rijksoverheid, 2016). To make this transition from mainly fossil fuels to renewable energy possible, the government works together with dozens of organizations. Additionally, the government calls companies and citizens across the Netherlands to be involved in taking steps to save energy, increase sustainability and therewith reduce CO₂ emissions (Bremmer, 2016). By means of the "Energie Dialoog", the government is able to gain knowledge from different expertise around the country and as well learn from citizen's experiences.

Controle Groep

Headline: Ernstige gevolgen van klimaatverandering in de nabije toekomst volgens onlangs verschenen rapport.

(No efficacy information)

Internal efficacy

Headline: Vele Nederlanders doen mee aan de energie dialoog

Uit cijfers van de website blijkt dat vele Nederlanders al meedoen aan deze periode van publieke discussie. De meeste gedachteswisseling vindt plaats rond de vraag hoe en waar we in de toekomst onze energie zullen opwekken. "Het is erg laagdrempelig om een reactie op de website te plaatsen, een brief te schrijven of een email te sturen" zegt politiek analist Jan Bremmer. Vele burgers voelen daarnaast dat ze een redelijk goed begrip hebben van klimaatverandering en hoe het politieke proces werkt. Als gevolg daarvan hebben ze er meer vertrouwen in dat ze effectief kunnen bijdragen aan dit klimaatplan en de energiedialoog.

External efficacy

Headline: Door de energie dialoog hebben burgers invloed op het Energieakkoord 2.0

De periode van publieke discussie maakt het mogelijk dat met de opvattingen van de gewone burger rekening wordt gehouden voordat de voorgestelde regelgeving wordt afgerond. "Ik denk dat de regering vastbesloten is de adviezen van het publiek op te nemen bij de herziening van het voorstel in het komende jaar. De minister staat open voor het veranderen van de voorgenomen regelgeving als gevolg van de inbreng van het publiek aangezien het debat een belangrijk onderdeel is van het gehele regelgeving proces," aldus politiek analist Jan Bremmer.

Response efficacy

Headline: Het energieakkoord 2.0 kan de negatieve gevolgen van de klimaatverandering helpen stoppen

De door het akkoord voorgestelde vermindering van de CO₂-uitstoot zal naar verwachting een effectief instrument zijn in de inspanning om de negatieve gevolgen van de klimaatverandering te stoppen. Op basis van schattingen van het KNMI, kunnen de voorgestelde maatregelen de stijging van de wereldwijde gemiddelde temperatuur helpen vertragen, waardoor een deel van de catastrofale gevolgen van klimaatverandering kunnen worden voorkomen. Verder zouden volgens politiek analist Jan Bremmer, andere grote vervuilers ter wereld, zoals de VS en China dit leiderschap van Europa en Nederland kunnen volgen en striktere limieten op CO₂-emissies vaststellen in hun eigen land.

Figure 3.5. Efficacy paragraphs (Dutch)

This so-called National Energy Dialogue is chosen to be integrated into the stimulus material since it fits the overall argument of this paper: an environmental issue is addressed as well as there being a clear call to action for citizens. People can participate both online, through MijnEnergie2050.nl, and as well join discussions about the decisions that lead up to the subsequent agreements between 2023 and 2050 on sustainable energy, energy consumption and the issue of climate change (mijnenergie2050.nl). For the purpose of this study, each condition also contains a threat (i.e. fear-inducing) situation which describes the consequences of climate change. As mentioned above, the control condition did not include any efficacy information and solely consist of this threat information and the introductory paragraph, meaning that the text is necessarily shorter. The three other conditions contain efficacy information and manageable solutions for people to participate, meaning that both the efficacy information, and the threat paragraph are added to this original news article about the National Energy Dialogue.

3.5.2. De Volkskrant and ANP

As earlier stated, the news articles are fictitious; however, all four messages have the layout of a PDF print-out from the Volkskrant webpage. It was decided to present the news article in De Volkskrant style, which is one of the mayor Dutch newspapers and often considered being a newspaper with reliable news. It must be noted however that since newspapers have different political backgrounds, De Volkskrant's perceived political leanings may unconsciously lead to bias in participants answering choices. Therefore, it was decided that the source would be ANP (Algemeen Nederlands Persbureau). ANP is the largest independent news agency in the Netherlands. ANP Pers Support is a joint initiative of Algemeen Nederlands Persbureau (ANP) and the globally operating PR Newswire, to assist organizations in disseminating their news. The news is screened before publishing, and ANP Pers Support is recognized as a reliable source of newsworthy information and relevant content. Another reason for using ANP was that almost all papers in the Netherlands obtain their information from that organization. The measure of 'credibility' for message credibility was included as control variable and can verify the perceived impartiality of ANP.

3.5.3 Efficacy messages

This chapter will discuss the manipulated efficacy paragraphs of the stimulus material. As mentioned earlier, efficacy messages may increase civilian political engagement around the topic of climate change since climate change is framed as an addressable problem (Feldman & Hart, 2015). Participants will be exposed to a news article corresponding one of the treatment conditions. Across all four experimental conditions (including the control), the article included a paragraph about the July 2016 proposal of the government targeting the issue of CO₂ emissions and its climate impacts. The news article first described the details about the proposal and announced that the government will take public comment

into consideration on the proposal before finalizing the regulations end of 2016. This core information will be the same for each group. The efficacy information paragraph, however, will vary. The first group or control condition, will be given a news article with no efficacy information. This news article only includes a threat paragraph about climate change impacts and no further information about the proposal. For the second group or internal-efficacy condition, the efficacy information will highlight the ease with which individuals can participate in the government's proposal for the aforementioned period. For the third group or the external efficacy condition, the efficacy information will highlight the willingness of the governmental entity to consider the public's remarks into account before the suggested regulations are finalized. In the fourth group or response efficacy condition, the efficacy information will highlight the expected effectiveness of the suggested regulations of the government for decelerating the negative impacts of climate change.

3.6. Experimental procedure

An online questionnaire was developed and distributed among the targeted participants through a number of SNS networks such as, Facebook, Twitter, Greenwire. Participants were contacted via email and social media and asked to participate in a study about the effects of environmental communication on behavior. After clicking on the link, they were redirected to the experiment, which was constructed using *Qualtrics*, a professional online survey tool. All conditions followed the same protocol. The questionnaire commenced with a short introduction about the research topic, and background information about the research institute (Erasmus University Rotterdam; ESHCC) under which supervision the research is conducted was given. Hereafter, participants were asked to sign an informed consent form, which stated the possibility to stop at any given moment during the research and guaranteed anonymity. When participants had signed the consent form, the first question appeared on the screen, which consisted of 12 sub-questions to find out about participants' previous environmental political participation. Then, participants were randomly assigned to one of the three efficacy conditions or the control condition, in the form of a news article. The control group provided a baseline, unaltered measure of a non-efficacy inducing condition. Random assignment of participants to the conditions was performed by *Qualtrics*' randomization mechanism, which thus allowed for similar participant count in all groups. After the exposure to one of the four messages, all participants answered an environmental political opinion survey, mainly composed of 7-point Likert scales. To maintain high quality data, all variables were measured using previously validated scales and prior empirical studies (Bandura, 1982; Feldman & Hart, 2015). The respondents were asked to answer questions regarding the credibility of the news article message and their emotional state after reading it. Furthermore, their intentions of environmental political participation, their efficacy values and their ecological values were measured. Hereafter, demographic questions including, age, gender, educational level, employment status, average income, and political voting preference were solicited. At the end of the questionnaire, we inserted a

participation button, by which participants could either click on the button to be redirected to the website mijnenergie2050.nl after finishing the questionnaire, or decide not to click on the button and proceed to the next question. This participation button was in fact a heat map question⁴, and was used to measure if the participants clicked on the link or not. By means of this question, it was measured if people actually intend to participate on the Energie Dialoog. The questionnaire ended with an open question where participants could express their ideas what they thought the study was about. At the end of the survey, the participant was thanked for his/her participation and debriefed. The entire experiment took approximately ten minutes to complete. A total of $N = 215$ respondents completed the survey.

3.7. Data analysis

Quantitative survey and experiment results data was obtained from *Qualtrics*. The responses were gathered and analyzed by different software including *Excel* and *SPSS statistics*. The main and interactive effects of the efficacy conditions and current degree of political participation (slacktivist, moderate, activist) on each emotion were tested by using a two-way analysis of variance (ANOVA). Regression analyses were used to predict the dependent variables – intentions to act in climate activism – from the efficacy conditions, emotion mediators, and activism level. The overall conceptual model, proposing the indirect effects of efficacy information on participation through emotions, conditional on current online participation, were tested with regression-based path analytic framework (i.e. mediation analysis). For this, the SPSS PROCESS macro (Hayes, 2013) was used, where the manipulation of the efficacy message condition served as the independent variable, environmental political participation was considered to be the dependent variable, the three emotions (fear, hope, anger) were considered to be mediating variables, and activism level was considered to be the moderating variable. The efficacy independent variable was employed in two ways: 1) as separate dummy (or indicator) variables for each of the conditions and 2) as a single dummy variable distinguishing no efficacy vs. any efficacy. In the theoretical framework, one can find Figure (2.5) depicting the conceptual model.

⁴ A heat map question is a *Qualtrics* survey mechanism, which is added to gather feedback on the participation button, meaning that after obtaining the results, the researcher is able to distinguish if respondents clicked on the button or not.

4. Results

The preceding chapters including the theoretical framework and the methodology section were the base for the completion of this chapter, the results section. This chapter, will introduce the results from multiple conducted data analyses. Section 4.1 will present the descriptive results of the research sample. Hence, details about the participants, such as age, education level and gender will be discussed. After these descriptive results, section 4.2 will discuss the manipulation checks and the distribution of respondents to experimental conditions. In section 4.3, the results for the main and interactive effects of the three efficacy conditions and activism level on each emotion conducted via a two-way analysis of variance (ANOVA) will be discussed. In section 4.4, we turn to the proposed conceptual model (see Figure 2.5), testing whether emotions mediate the relationship between our independent variable (efficacy messages) and the dependent variable (environmental political participation), moderated by activism level, all conducted via a mediation/moderation analysis with the SPSS PROCES macro (Hayes, 2013).

4.1. Descriptive results

In total, 296 people clicked on the link to access the survey, where after only 253 people actually started the questionnaire. Ultimately, 218 people finished the survey completely. Since we conduct several analyses and we also compare these results with each other, we wanted the sample to be the same across all analyses. To ensure that the assumptions of normality, linearity, multicollinearity and homoscedasticity were not being violated, preliminary analyses were conducted. With the use of outliers' statistics Mahalanobis Distance, Cook's distance and Centered Leverage, three outliers were deleted. Once one respondent was detected as an outlier by two out of three or more outlier statistics, this case was deleted from the sample for this part of the analysis, meaning that the sample consisted of $N = 215$ participants.

The sample consisted of 60.5% women ($n = 130$) and 39.5% men ($n = 85$). The age ranged from 19 to 81 years' old ($n = 214$)⁵ with an average of 33 years ($SD = 14$). Because it was more complicated to recruit older participants, their number might be underrepresented. Most of the respondents were students or were employed. More specifically, 39.1 % of the respondents were students ($n = 84$), 31.2% were employed full-time ($n = 67$), and 21.9% were part-time employed ($n = 47$). Most of the participants are pursuing or have completed either their WO Master's degree (35.3%; $n = 76$), or their HBO bachelor's degree (29.8%; $n = 64$) or their WO bachelor's degree (22.3%; $n = 48$), meaning that this sample is relatively highly educated. 40.5% of the respondents earn half of the average income or lower ($n = 87$), which is not surprising since the sample consists of many students. 19.5% earn somewhat lower than the average income ($n = 42$), 11.6% earn about the same as the average

⁵ 1 missing value for age.

income ($n = 25$) and 14.9% earns somewhat higher than the average income ($n = 32$). 5% does earn 2 times the average income or higher ($n = 11$) and 8.4% declined to answer this question or did not know ($n = 18$). Slightly more than half of this sample are politically left-oriented: 38.1% has a tendency to vote left ($n = 82$) or center left, 20.5% ($n = 44$). Furthermore, 7.4% indicated to vote center ($n = 16$), 13.5% center right ($n = 29$), 3.7% right ($n = 8$). 6% of the respondents did mention not to intend to vote ($n = 13$), 7.9% did not know ($n = 17$), and 2.8% ($n = 6$) had a different voting preference. The credibility of the newspaper article had an average of 4.62 ($SD = 1.21$), and the value for credibility that appeared most often in the data set was 5, which was measured on a Likert scale from 1 to 7, meaning that most participants have a tendency to agree that the news article was credible.

4.1.1. Results on the question “What do you think this study was about”?

By means of an open question, respondents were asked to indicate what they thought the study was about. Answers touched upon the different elements of the experiment. Some answers were more generic such as “climate change”. However, several answers came close to the true aim of this research such as “governmental communication on environmental issues and mobilize citizens to action”, “to what extent do people believe they can influence political policy on climate change”, and “about the way events are represented in an article and what effects it has on the emotions and beliefs of the reader”. However, none of the respondents deduced the complete conceptual model behind this experiment.

4.1.2. Participation intent and behavior

Since there is a considerable discrepancy between saying to perform a certain activity, also called ‘participation intent’, and actually performing this activity, also defined as ‘participation behavior’, we integrated a so-called participation button into the survey. By clicking on the button, the participant was told to be directed to the mijnenergie2050.nl website, where he or she could look further into the Energie Dialoog, described in the stimulus, and make a contribution in some form. However, the participation button was in reality a heat map question, which was able to measure if one clicked on it or not. Participation behavior was therefore measured as a dummy variable with 0 meaning ‘not clicked on the button’ and 1 meaning ‘clicked on the button’. Out of 215 respondents, 34 clicked on the button (15.8%), and 181 did not click on the participation button (84.2%). These results are taken into account by the regression analysis (Table 4.4.2b) and serves as a second measure of environmental political participation.

4.2. Manipulation checks

Feldman and Hart (2015) argue that efficacy messages entail intrinsic message features, meaning that the stimulus material either includes or does not include efficacy information of different types, and therefore do not need a manipulation check (O’Keefe, 2003). However, this argument could be strengthened by making sure that the message is actually received. Therefore, we included a timer of 30 seconds, so that respondents could only click ‘further’ after this time was passed. All participants in this sample have complied with this condition.

Our main focus just as Feldman and Hart (2015) is on whether the inclusion of efficacy information in a message impacts emotions and political participation, without paying attention whether it makes respondents feel more efficacious. However, because several researchers have argued that feeling efficacious is an important predictor for political participation (Bandura, 1982; Craig, Niemi, & Silver, 1990; Lutz, Hoffman & Meckel, 2014; Terracina-Hartman et al., 2011; Valentino, Gregorowicz & Groenendyk, 2009), it might be interesting to explore whether the different efficacy messages had an effect on feeling more efficacious. The different conditions were used as independent variables (IV), the mean of the efficacy scales, measured on a Likert scale from 1 to 7, as dependent variables (DV). The performed MANOVA did show insignificant results⁶ for the different condition groups $F(3, 211) = .78, p = .638, \eta^2 = .01$, meaning that 1% of the variability in efficacy is being accounted for by the conditions. More specifically, the effects were insignificant for each scale: internal efficacy scale, $F(3, 211) = .13, p = .941, \eta^2 = .00$; external efficacy scale, $F(3, 211) = 1.04, p = .375, \eta^2 = .02$, response efficacy scale, $F(3, 211) = 1.35, p = .258, \eta^2 = .02$. LSD post-hoc tests revealed that respondents in the internal condition had a higher level of internal efficacy compared to the control condition ($M_{\text{difference}} = .05$); external condition ($M_{\text{difference}} = .13$); and response condition ($M_{\text{difference}} = .14$), although at minimal levels and all insignificant. The LSD post-hoc comparison tests revealed that respondents in the external condition had a higher level of external efficacy compared to the internal condition ($M_{\text{difference}} = .05$); and response condition ($M_{\text{difference}} = .10$); however, the external condition had a lower level of external efficacy compared to the control condition ($M_{\text{difference}} = -.24$). All these results were insignificant. Surprisingly, the LSD post-hoc comparison tests revealed that respondents in the response condition had a lower level of response efficacy compared to the control condition ($M_{\text{difference}} = -.23$); and the internal condition ($M_{\text{difference}} = -.11$); however, the response condition had a higher level of response efficacy compared to the external condition ($M_{\text{difference}} = .23$). All these results were also insignificant. As this research builds further on the earlier mentioned arguments of Feldman and Hart (2015), this does not necessarily mean we cannot perform our further analyses. However, these findings offer the interesting insight that none of internal, external, or response efficacy information does necessarily make people feel more efficacious in the associated condition, which must be taken into consideration in this and future research.

⁶ Pillai’s Trace multivariate test.

4.2.1. Distribution of respondents to experimental conditions

For an experimental research design, it is essential to have a clear outline of the dissemination of subjects across the experimental conditions. In order to explore the distribution of the cells, a crosstabulation for the independent variable ‘efficacy messages’ and the moderating variable ‘activism level’, implemented as a covariate, were conducted. The results of this analysis are presented in Table 4.2. An important rule of thumb is that in for a between-subject experiment, every condition requires at least 30 respondents Christensen (2007). The four levels of efficacy messages were quite equally distributed and every condition has over 49 respondents. However, the crosstabulation exposes as well that the distribution of the activism levels were unequal.

Table 4.2.1. Distribution of conditions

| | | Slacktivism - Activism | | |
|--------------------|----------|------------------------|----------|-------|
| | | Slacktivist | Activist | Total |
| Efficacy Condition | Internal | 39 | 16 | 55 |
| | External | 43 | 14 | 57 |
| | Response | 31 | 19 | 50 |
| | Control | 38 | 15 | 53 |
| Total | | 151 | 64 | 215 |

4.3. Univariate Analysis of Variance (ANOVA)

In order to test the main and interactive effects of the three efficacy conditions and activism level on each emotion, we conducted several two-way analysis of variances (ANOVAs). The independent variable (IV1) consisted of two categorical, independent groups, namely slacktivist ($n = 151$) and activist group ($n = 64$). The independent variable (IV2) consisted of four categorical, independent groups, namely, the internal efficacy ($n = 55$) condition, external efficacy condition ($n = 57$), response efficacy condition ($n = 50$), and a control condition ($n = 53$). The emotions (hope, fear, anger) are used as the dependent variable. The H1 hypotheses again are as follows: **H1a**: The climate change message including any efficacy information will increase hope, compared to a message that does not include efficacy information; **H1b**: The climate change message including any efficacy information will decrease fear, compared to a message that does not include efficacy information; **H1c**: The climate change message including any efficacy information will decrease anger compared to a message that does not include efficacy information.

4.3.1. Hope

First, we test if the assumptions underlying analysis of variance are met. A Levene's test of homogeneity of variances was conducted to test whether the variability of scores is similar across the different groups. The Levene's test showed significant: $F(7, 207) = 2.43, p < .05$. Thus, the variance of the dependent variable (hope) across the groups is not equal, meaning that the homogeneity of variance is violated. In addition, we therefore conduct a series of pairwise comparisons. The pairwise comparisons in the two-way ANOVA are derived from the Least Significant Differences (LSD) test. However, there remains some concern over the significance of findings as the Type I error increases with multiple comparisons. Accordingly, this way multiple *t*-tests are conducted, which use a pooled standard deviation error term (Keselman, Games & Rogan, 1979). Therefore, we keep $\alpha = .05$, meaning that the confidence level for confidence intervals was set on 95%. It must be noted that the estimated marginal means (LSD) are different from the descriptive statistics means displayed in Table (4.3.1) because the sample sizes of scores are unequal across the different conditions and the two-way ANOVA employs grouped means. Moreover, we used Type III sums of squares (SS) since this unweighted mean approach is recommended when equal variances cannot be assumed (Field, 2009)⁷.

The ANOVA results for *hope* showed significant main effects of the treatment, $F(3, 207) = 9.32, p < .001, \eta^2 = .12$ as well as the interaction between treatment and activism level, $F(3, 207) = 2.79, p < .05, \eta^2 = .04$. The main effects of activism level however, did not show significant, $F(1, 207) = 1.21, p = .27, \eta^2 = .01$. For the main effect, pairwise comparisons reveal that all three efficacy messages significantly increase hope, ($M_{internal} = 3.26, SE = .19; M_{external} = 3.62, SE = .20; M_{response} = 3.29, SE = .19$) relative the control or no efficacy condition ($M_{control} = 2.24, SE = .20$; all contrasts are $p < .001$). This means a difference of the control group compared to the internal efficacy group ($M_{difference} = -1.01$); external efficacy group ($M_{difference} = -1.38$); and response efficacy group ($M_{difference} = -1.05$). Results thus show that the control group were less hopeful compared to all efficacy groups, supporting **H1a**. To support this hypothesis, the binary indicator variable, representing the combination of the efficacy messages⁸, compared to the control group also showed significant $F(1, 211) = 25.10, p < .001, \eta^2 = .11$. No significant differences in effect were found in comparisons among the three different efficacy groups.

While looking at the interactive effects, also displayed in Figure (4.3.1), we see that the influence of the efficacy conditions on hope varied by activism level. There is a statistically significant mean difference for hope between the slacktivist and activist when paired with the control condition ($M_{difference} = .88, p < .05$). The news article message in the control condition, which was a 'fear appeal', is thus experienced as being less hopeful for activists, compared to slacktivists. The difference in

⁷ The same approach is followed for the fear and anger ANOVA.

⁸ Levene's test showed significant $F(3, 211) = 3.30, p < .05$.

pairwise comparisons for slacktivists compared to activist for the external condition approached significance (or was weakly significant) ($M_{difference} = -.69, p = .084 < .10$), and the trend was contrary to those of the other conditions: activism increased hopefulness. Furthermore, pairwise comparison for slacktivists compared to activists did not show significant when paired to internal efficacy ($M_{difference} = .39, p = .311$), and response efficacy: ($M_{difference} = .26, p = .485$).

Table 4.3.1. Hope (DV)

| | Mean | Standard deviation | N |
|--------------------------|------|--------------------|-----|
| <u>Control</u> | | | |
| Slacktivist | 2.68 | 1.10 | 38 |
| Activist | 1.80 | 0.82 | 15 |
| Total | 2.43 | 1.10 | 53 |
| <u>Internal Efficacy</u> | | | |
| Slacktivist | 3.45 | 1.33 | 39 |
| Activist | 3.06 | 0.81 | 16 |
| Total | 3.34 | 1.21 | 55 |
| <u>External Efficacy</u> | | | |
| Slacktivist | 3.28 | 1.45 | 43 |
| Activist | 3.96 | 1.69 | 14 |
| Total | 3.45 | 1.53 | 57 |
| <u>Response Efficacy</u> | | | |
| Slacktivist | 3.42 | 1.33 | 31 |
| Activist | 3.16 | 1.29 | 19 |
| Total | 3.32 | 1.31 | 50 |
| <u>Total</u> | | | |
| Slacktivist | 3.20 | 1.34 | 151 |
| Activist | 2.99 | 1.39 | 64 |
| Total | 3.14 | 1.35 | 215 |

Means for hope across message conditions and slacktivist/activist groups

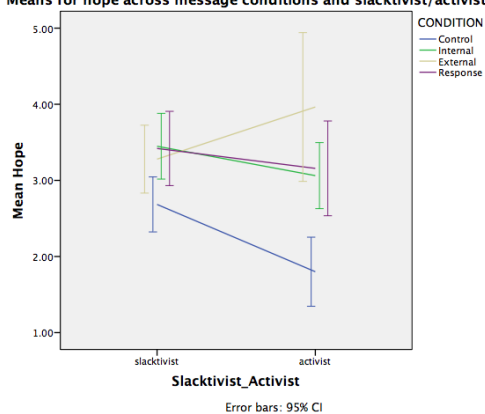


Figure 4.3.1. Means for hope across message conditions and slacktivist/activist groups

4.3.2. Fear

Turning to *fear*, the Levene's Test of Homogeneity of Variances does not show significant, $F(7, 207) = .43, p = .882$. The ANOVA results for the main effects of the treatment were non-significant, $F(3, 207) = 2.22, p = .087, \eta^2 = .03$, as well as the interaction between treatment and activism level, $F(3, 207) = .18, p = .909, \eta^2 = .00$. Nonetheless, the main effects of activism level did show significance, $F(1, 207) = 16.11, p < .001, \eta^2 = .07$. As depicted in Figure (4.3.2), the overall trend in means show a similar increase in fear amongst the three efficacy manipulations while comparing slacktivists with activists, meaning that overall activists seemed to experience slightly more fear amongst all conditions compared to slacktivists. For the main effect, pairwise comparisons reveal that the internal efficacy condition significantly decreases fear ($M_{\text{difference}} = -.80, p = .012$) relative to the control or no efficacy condition. The external condition ($M_{\text{difference}} = -.29, p = .362$) and response condition ($M_{\text{difference}} = -.42, p = .182$) also showed a decrease in fear when compared with the control condition, but did not show significant. **H1b** is thus partially supported since all messages including any efficacy⁹ information did decrease fear when compared to the control condition; using a dummy variable for any efficacy vs. control, the ANOVA results are $F(1, 211) = 3.93, p < .05, \eta^2 = .02$. However, only the internal efficacy condition was significantly different. Additionally, no significant differences were found for the pairwise comparisons between the different kinds of efficacy messages.

The overall trend in means (see figure 4.3.2) suggests that amongst all four conditions, activists seem more fearful compared to slacktivists. A pairwise comparison between slacktivists and activists shows that there is indeed a significant mean difference in fear ($M_{\text{difference}} = -.90, p < .001$). While looking at the interactive effects, also displayed in Figure (4.3.2), we see that the influence of the four conditions on fear varied by activism level. Slacktivists expressed less fear compared to activists when paired with the external efficacy condition ($M_{\text{difference}} = -1.18, p = .01$), and the response efficacy condition ($M_{\text{difference}} = -.86, p < .05$). For the internal efficacy condition, slacktivists expressed less fear as well ($M_{\text{difference}} = -.78, p = .080$) when compared to activists; and the same trend was visible for the control condition ($M_{\text{difference}} = -.77, p = .092$); however, neither reach significance.

⁹ Levene's test did not show significant $F(3, 211) = .79, p = .501$

Table 4.3.2. Fear (DV)

| | Mean | Standard deviation | N |
|--------------------------|------|--------------------|-----|
| <u>Control</u> | | | |
| Slacktivist | 4.00 | 1.45 | 38 |
| Activist | 4.77 | 1.70 | 15 |
| Total | 4.22 | 1.55 | 53 |
| <u>Internal Efficacy</u> | | | |
| Slacktivist | 3.19 | 1.58 | 39 |
| Activist | 3.97 | 1.44 | 16 |
| Total | 3.42 | 1.57 | 55 |
| <u>External Efficacy</u> | | | |
| Slacktivist | 3.50 | 1.50 | 43 |
| Activist | 4.68 | 1.30 | 14 |
| Total | 3.79 | 1.53 | 57 |
| <u>Response Efficacy</u> | | | |
| Slacktivist | 3.53 | 1.48 | 31 |
| Activist | 4.39 | 1.32 | 19 |
| Total | 3.86 | 1.47 | 50 |
| <u>Total</u> | | | |
| Slacktivist | 3.55 | 1.52 | 151 |
| Activist | 4.44 | 1.44 | 64 |
| Total | 3.82 | 1.55 | 215 |

Means for fear across message conditions and slacktivist/activist groups

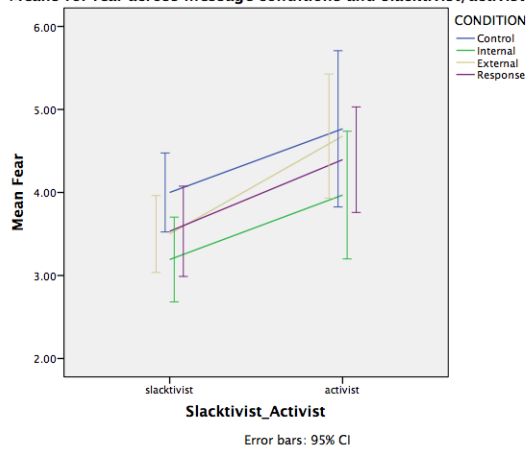


Figure 4.3.2. Means for fear across message conditions and slacktivist/activist groups

4.3.3. Anger

Levene's Test of Homogeneity of Variances does show significance, $F(7, 207) = 2.31, p < .05$. The ANOVA results for *anger* showed non-significant main effects of the treatment, $F(3, 207) = 1.12, p = .344, \eta^2 = .02$. The interaction between the treatment and activism level did not show significant either, $F(3, 207) = .60, p = .619, \eta^2 = .01$. The main effects of activism level however, did show significance, $F(1, 207) = 28.67, p < .001, \eta^2 = .12$. The pairwise comparison showed that the means of anger were significantly lower for slacktivists ($M_{\text{difference}} = -1.37, p < .001$), when compared to activists. For the main effect, pairwise comparisons reveal that the three efficacy conditions did decrease anger (albeit insignificantly) compared to the control group. The differences are for internal condition ($M_{\text{difference}} = -.64, p = .080$), external efficacy ($M_{\text{difference}} = -.17, p = .643$), response efficacy ($M_{\text{difference}} = -.30, p = .406$). Similarly, a combination of the efficacy messages¹⁰ compared to the control group (a binary indicator variable) also showed insignificant $F(1,211) = 1.66, p = .198, \eta^2 = .01$. Thus, **H1c** is not supported (or perhaps very weakly supported), since no efficacy information significantly decreased anger compared to the control condition, but still all effects were negative. Similarly, no significant differences were found between the three different efficacy groups.

While looking at the interactive effects, also displayed in Figure (4.3.3), we can see that the influence of the four conditions on anger varied by activism level. Three conditions are showing significant mean differences when comparing slacktivists with activist, namely the control condition ($M_{\text{difference}} = -1.60$), $F(1, 207) = 9.47, p = .002, \eta^2 = .04$; external efficacy condition ($M_{\text{difference}} = -1.79$), $F(1, 207) = 11.53, p = .001, \eta^2 = .05$; and the response condition ($M_{\text{difference}} = -1.21$), $F(1, 207) = 5.88, p = .016, \eta^2 = .03$. This shows that, for slacktivists, these three texts evoked significantly less anger in slacktivists than they did for activists. Although a similar trend occurs for the internal efficacy condition, these results do not show significant (or only weak significance) ($M_{\text{difference}} = -.901$), $F(1, 207) = 3.15, p = .077, \eta^2 = .02$.

¹⁰ Levene's test showed significant $F(3, 211) = 3.70, p < .05$.

Table 4.3.3. Anger (DV)

| | Mean | Standard deviation | N |
|--------------------------|------|--------------------|-----|
| <u>Control</u> | | | |
| Slacktivist | 3.26 | 1.83 | 38 |
| Activist | 4.87 | 2.29 | 15 |
| Total | 3.72 | 2.08 | 53 |
| <u>Internal Efficacy</u> | | | |
| Slacktivist | 2.97 | 1.71 | 39 |
| Activist | 3.88 | 1.89 | 16 |
| Total | 3.24 | 1.79 | 55 |
| <u>External Efficacy</u> | | | |
| Slacktivist | 3.00 | 1.65 | 43 |
| Activist | 4.79 | 1.58 | 14 |
| Total | 3.44 | 1.79 | 57 |
| <u>Response Efficacy</u> | | | |
| Slacktivist | 3.16 | 1.53 | 31 |
| Activist | 4.37 | 1.21 | 19 |
| Total | 3.62 | 1.52 | 50 |
| <u>Total</u> | | | |
| Slacktivist | 3.09 | 1.67 | 151 |
| Activist | 4.45 | 1.76 | 64 |
| Total | 3.50 | 1.81 | 215 |

Means for anger across message conditions and slacktivist/activist groups

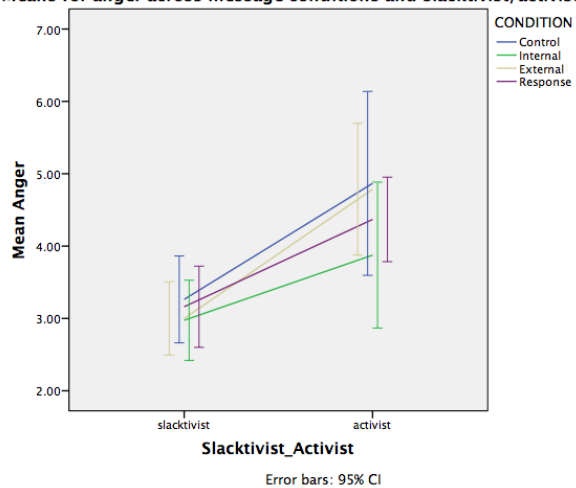


Figure 4.3.3. Means for anger across message conditions and slacktivist/activist groups

4.4. Mediation with SPSS PROCESS macro

We now turn to the proposed conceptual model (see Figure 2.5), to test whether emotions mediate the relationship between our independent variable (efficacy messages) and dependent variable (environmental political participation), conditional on activism level (slacktivist/activist). For the mediation analysis, we followed the traditional approach of Baron & Kenny (1986). Additionally, for this analysis, we used Hayes work on the SPSS PROCESS macro (Hayes, 2013), which operates a regression-based path analytic framework to test indirect effects of the proposed model. Hayes (2013) argues that for a test of mediation, bootstrap methods are advised above alternative approaches such as the Sobel test or causal steps approach. The bootstrap analysis was conducted with the default setting of 1,000 iterations and bias corrected estimates (Hayes, 2013). The confidence level for confidence intervals was set on 95%. As mentioned earlier in this chapter, to ensure that the assumptions of normality of errors, linearity, multicollinearity and homoscedasticity were not being violated, preliminary analyses were conducted and shown to be adequate. The sample consists of $N = 215$ participants.

4.4.1. Mediation design

The mediation design depicted in Figure 2.5 is as follows. We predict that the treatment conditions (efficacy messages) affect participants' environmental political participation when compared to the control group. Furthermore, we hypothesize that the emotions experienced by respondents mediate the relationship between the conditions and environmental political participation. First, it is important to discuss when we can speak of mediation. According to the approach of Baron and Kenny (1986), we can consider mediation to be present when the following criteria are met. First, there is a significant effect of the independent variable ($X =$ efficacy conditions) on the dependent variable ($Y =$ environmental political participation). Hayes (2013) also describes this direction as path 'c'. Second, there is a significant effect between ($X =$ efficacy conditions) and the mediators' ($M =$ fear), ($M =$ hope), and ($M =$ anger). This direction is also described as path 'a' (Hayes, 2013). Third, the mediators are significantly related to the dependent variable ($Y =$ environmental political participation). This direction is also described as path 'b' (Hayes, 2013). Fourth, the effect of the independent variable ($X =$ efficacy conditions) on the dependent variable ($Y =$ environmental political participation) is reduced in magnitude when the mediator is included in the model. This direction is also described as path c' (Hayes, 2013). Now the process of mediation is clear, we first report the mediation results without the control covariates. Model 4 of the SPSS PROCESS macro was adopted, with Y being environmental political participation intention; X a combination of the efficacy messages compared to the control group (a binary indicator variable); the mediators are hope, fear and anger, meaning that all emotions are controlled for each other, and $N = 215$.

To check for the first criterion, the assumption is that respondents who read any efficacy message have a significantly different environmental participation compared to the respondents who read the control or also called the “fear-inducing” message. A regression analysis with the use of SPSS PROCESS was performed with ‘any efficacy’ message as independent variable and environmental political participation as dependent variable (with the mediators hope, fear, and anger) to check for this relationship. No significant experimental effects were found, $F(1, 213) = .00, p = .9968, R^2 = .00$ where $b = .00, t(213) = .00, p = .9968$. Showing different efficacy messages is thus not useful for predicting environmental political participation level. Unfortunately, this first criterion of Baron and Kenny (1986) is already violated, which means we cannot speak of standard mediation. However, we still decided to test for the other criteria of this approach to investigate other possible effects of the hypotheses and to see if indirect mediation is present.

The second criteria of Baron and Kenny (1986) is that a significant effect between the independent variable, (efficacy conditions) and the mediators (fear, hope and anger) must be present. Significant effects were found for hope, $F(1, 213) = 20.93, p < .001, R^2 = .09$ where $b = .94, t(213) = 4.58, p < .001$. Therefore, the treatment conditions do significantly increase the emotion hope. Furthermore, significant effects were found for fear, $F(1, 213) = 4.81, p = .0294, R^2 = .02$ where $b = -.53, t(213) = -2.19, p = .0294$. Therefore, the treatment conditions significantly decrease the emotion fear with an absolute effect size about half that for hope. For anger however, no significant effects were found, $F(1, 213) = 1.03, p = .3102, R^2 = .00$ where $b = -.29, t(213) = -1.02, p = .3102$. Therefore, the treatment conditions do not significantly decrease the emotion anger.

The third criteria of Baron and Kenny (1986) is that the mediators (hope, fear, anger) in the presence of the independent variable need to be significantly related to the dependent variable (environmental political participation). All the mediators were put into the regression model at the same time; therefore, emotions are controlled for each other. This overall model turned out to be significant, $F(4, 210) = 16.47, p < .001, R^2 = .24$. Fear was significantly related to environmental political participation, ($b = .24, t(210) = 2.87, p < .01$) as well as anger ($b = .28, t(210) = 3.93, p < .001$) having a comparable effect as fear. Hope, however, was not significantly related to environmental political participation, $b = .02, t(210) = .30, p = .7652$.

The fourth criteria of Baron and Kenny (1986) states that the effect of the independent variable (efficacy messages) on the dependent variable (environmental political participation) is reduced in magnitude when the mediator is present in the model. This path did not show significant, $b = .19, t(210) = .79, p = .4325$. However, it turned out to be more significant and with a larger effect size compared to the first step in the model: the direct effect of X (conditions) on Y (participation level), where F -statistic is $F(1, 213) = .00, p = .9968, R^2 = .00$, and where $b = .00, t(213) = .00, p = .9968$ which means again this approach does not expose any mediation.

4.4.2. Control variables

We now turn to the tables of the ordinary least square regression moderation model results showing the effects of efficacy messages, activism level, and the interaction between them on emotions, as well several other covariates serving as control variables. These results are generally consistent with the results of the ANOVA. Eventually, the number of the sample became $N = 214$ since there was one missing value for age. The experimental condition categories were operationalized as indicator independent variables and hope, fear and anger again as mediators. Control variables included activism level, coded as being either a slacktivist (0) or activist (1). As well as the interaction between slacktivism level and each efficacy condition. Furthermore, age is put in as a scale (19 t/m 81), gender as a binary code (0 = male, 1 = female), voting preference includes (0 = left, 1 = moderate, 2 = right). Ecological beliefs are measured on a scale. Education is divided into a binary code (0 = below university level, 1 = HBO/WO bachelor or higher). Income includes (lower than average = 0; average/more than average income = 1, N/A = 2). Credibility is measured on a scale. Employment is a binary code of 0 = not employed, 1 = employed).

First, a moderation regression was performed on emotions (see Table 4.4.2a). These results allow for further testing for the hypotheses **H1a**, **H1b**, and **H1c**. Looking to the results for hope, $F(15, 198) = 3.72, p < .001, R^2 = .22$ (Table 4.4.2a, Column 1), there is a significant interaction between the external efficacy message and activism level, while all of the efficacy conditions significantly increased hope at comparable effect sizes. Specifically, the external efficacy condition had a more positive effect on hope between activists than between slacktivists controlling for activism's significantly negative main effect. This means that, while overall activists registered less hopeful amongst all conditions combined compared to slacktivists, the external efficacy condition raised hope for activists and hopelessness was moderated by the other two experimental conditions. Educational level was significantly negatively predictive ($p < .05$), meaning that people with an academic background (applied university or higher) are less hopeful. Credibility of the news message significantly boosted hope ($p < .001$).

Looking to the results for fear, $F(15, 198) = 4.39, p < .001, R^2 = .25$ (Table 4.4.2a, Column 2), we see that while all efficacy conditions reduced fear relative to the control condition, only internal efficacy did so significantly. Even though a trend is visible that activists showed higher means of fear compared to slacktivists, these results were not significant. For gender, women displayed more hope ($p < .05$) as did those with stronger ecological beliefs ($p < .001$).

Turning to anger, $F(15, 198) = 5.29, p < .001, R^2 = .29$ (Table 4.4.2a, Column 3), none of the efficacy conditions resulted in greater decrease of anger among slacktivists than among activists, consisted with the pattern in the ANOVA. However, the overall activism level, was positive and significant ($p < .05$), meaning that overall activists registered angrier amongst all conditions combined

compared to slacktivists. Voting preference towards left slightly reduced anger ($p < .05$) and ecological beliefs increased the emotion ($p < .001$).

Table (4.4.2a) Ordinary Least Square Regression Results Predicting Emotions

| Predictor Variables | Hope, B (SE) | Fear, B (SE) | Anger, B (SE) |
|--|----------------|---------------|---------------|
| <i>Conceptual variables</i> | | | |
| Constant | 2.90 (.73) *** | 1.48 (.82) | .49 (.94) |
| Efficacy condition^a | | | |
| Internal efficacy | .89 (.28) ** | -.84(.32) ** | -.33 (.36) |
| External efficacy | .82 (.28) ** | -.44 (.31) | -.22 (.36) |
| Response efficacy | .79 (.30) ** | -.45 (.34) | -.16 (.38) |
| Efficacy condition x Activism Level | | | |
| Activism ^b | -.90 (.40) * | .38 (.44) | 1.16 (.51) * |
| Internal*Activ | .70 (.54) | .09 (.60) | -.69 (.69) |
| External*Activ | 1.70 (.56) ** | .51 (.62) | .34 (.71) |
| Response*Activ | .80 (.53) | .13 (.59) | -.52 (.68) |
| Control variables | | | |
| Age | -.00 (.01) | -.01 (.01) | -.0045 (.01) |
| Gender | -.07 (.18) | .51 (.20) * | -.13 (.23) |
| Voting Preference | -.01 (.08) | -.03 (.09) | -.22 (.10) * |
| Ecological beliefs | -.15 (.10) | .46 (.11) *** | .67 (.13) *** |
| Education | -.65 (.29) * | -.01 (.33) | -.27 (.38) |
| Income | -.03 (.14) | .01(.16) | -.30 (.18) |
| Credibility | .28 (.08) *** | .08 (.09) | .03 (.10) |
| Employed | -.13 (.19) | -.25 (.21) | -.07 (.24) |
| R^2 | .22 | .25 | .29 |
| N | 214 | 214 | 214 |

Note. (Confidence Interval 95%). Reported coefficients are unstandardized.

^a No efficacy information (control condition) is the reference category.

^b Slacktivist is the reference category.

* $p < .05$, ** $p < .01$, *** $p < .001$.

We now turn to another moderation regression on the two environmental participation variables, meaning 1) Environmental political participation level, and 2) the button (see Table 4.4.2b). This regression model had to be performed twice since SPSS PROCESS only allowed for one dependent variable at a time. First, we included participation level as dependent variable and, second, we put in the button¹¹ as dependent variable (see Table 4.4.2), to measure both environmental political participation intentions. As the ‘button’ variable is binary, the PROCESS macro engages a binary logistic regression model; thus, the reported coefficients contribute to the log-odds of the probability for the dependent variable to be 1.

The regression results in Table (4.4.2b), $F(18, 195) = 12.78, p < .001, R^2 = .54$, predict the dependent variables – intentions to engage in environmental political participation and comment on the Energie Dialoog via the button – from the different efficacy conditions, activism level, the interactions between the efficacy conditions and activism level, the emotion mediators (employed as mediators), and the control variables. While looking at the first dependent variable (Table 4.4.2b, Column 1) environmental political participation, only fear ($b = .16, SE = .07, p < .05$) is a significant positive predictor. Both hope ($b = .10, SE = .07, p = .13$) and anger ($b = .10, SE = .06, p = .11$) are unrelated to environmental political participation. These results are mildly aligned with the results from the leaner regression performed for path ‘b’ in Section 4.4.1 where fear and anger were significantly positively predictive of participation.

For the second dependent variable, the button for commenting on the Energie Dialoog, none of the emotions are associated to respondents’ button action that would lead to commenting on the proposal: hope ($b = .01, SE = .17, p = .96$), fear ($b = -.02, SE = .20, p = .93$), and anger ($b = .29, SE = .18, p = .11$). Solely for the dependent variable environmental political participation, there is a significant positive effect of prior activism level, meaning that activists are unsurprisingly more prone to participate than slacktivists. Furthermore, solely for the dependent variable commenting via the button, there is a significant interaction between response efficacy message and activism level. Specifically, the response efficacy condition for activists had a much higher probability of button commenting than slacktivists, inferred by considering both the main effect of activism and the interaction coefficient.

Results of the control variables show that for environmental political participation age was significantly but only slightly positively predictive ($+.02$) on participation response per year of age ($p < .01$). Ecological beliefs had a stronger significant effect ($+.35$) on participation ($p < .001$). None of the control variables show significant for commenting on the Energie Dialoog via the button (Table 4.4.2b, Column 2), except for message credibility which had a positive significant effect ($+.43$) on participation.

¹¹ Clicking on the button to be redirected to the website mijnenergie2050.nl as proxy for environmental political participation.

Table (4.4.2b) Regression Results Predicting Environmental-Related Participation

| Predictor Variables | Environmental Political Participation, B (SE) | Button Commenting, B (SE) |
|---------------------------------------|---|---------------------------|
| Conceptual variables | | |
| Constant | -1.53 (.71) * | -5.52 (2.05) ** |
| Efficacy condition^a | | |
| Internal efficacy | -.10 (.28) | -.08 (.79) |
| External efficacy | .40 (.27) | .75 (.69) |
| Response efficacy | .06 (.29) | -1.46 (1.17) |
| Efficacy x Activism Level | | |
| Activism ^b | 1.90 (.38) *** | -.85 (1.03) |
| Internal*Activism | -.14 (.51) | -.18 (1.56) |
| External*Activism | -.87 (.53) | 1.02 (1.29) |
| Response*Activism | -.61 (.50) | 3.97 (1.54) ** |
| Emotion mediators | | |
| Hope | .10 (.07) | .01 (.17) |
| Fear | .16 (.07) * | -.02 (.20) |
| Anger | .10 (.06) | .29 (.18) |
| Control variables | | |
| Age | .02(.01) ** | -.02 (.02) |
| Gender | .18 (.18) | .35 (.47) |
| Voting Preference | -.02 (.07) | .18 (.20) |
| Ecological beliefs | .35 (.10) *** | .14 (.29) |
| Education | .48 (.28) | -.21 (.73) |
| Income | -.05 (.13) | .39 (.36) |
| Credibility | .04 (.07) | .43 (.20) * |
| Employment | -.16 (.18) | -.02 (.47) |
| R^2 | .54 | .23 ^c |
| -2 Log Likelihood | | 153.03 |
| Model Log Likelihood | | 30.98 |
| N | 214 | 214 |

* $p < .05$, ** $p < .01$, *** $p < .001$.

Note. (Confidence Interval 95%). Reported coefficients are unstandardized.

^a No efficacy information (control condition) is the reference category.

^b Slacktivist is the reference category.

^c Reported R^2 for the Button model (logistic regression) is Nagelkerke Pseudo R^2 .

* $p < .05$, ** $p < .01$, *** $p < .001$.

4.5. Indirect mediation

Table 4.5a and 4.5b report the bootstrapped indirect effects of the combination of efficacy conditions combined on environmental political participation via hope, fear, and anger across activism level. This was analyzed with model 8 of the SPSS PROCESS (Hayes, 2013), whereas environmental political participation scale was the dependent variable as well as the button. The combination of efficacy messages (indicator variable) was the independent variable whereas no efficacy information (control condition) is the reference category. This indicator independent variable had to be used because PROCESS does not yet produce statistics for indirect, moderated effects for multicategorical variables. Again, hope, fear and anger are used as mediator variables and activism level as moderator. Table (4.5a) addresses the bootstrapped indirect effects of the different efficacy conditions as a combined variable on environmental political participation via hope, fear, and anger across activism groups. Solely among slacktivists, the conditions exerted a significant negative indirect effect on activism via fear (i.e., the 95% confidence interval does not include zero). There were no significant indirect effects via hope or anger for either slacktivists or activists. Table 4.5b addresses the bootstrapped indirect effects of the different efficacy conditions as a combined variable on button commenting via hope, fear, and anger across activism groups. There were no indirect effects via hope, fear or anger, for any combination of efficacy condition and both types of activism.

Table (4.5a). Conditional indirect effect(s) of any efficacy message^a type on participation level via emotional mediators across levels of activism.

| Mediator | Activism level | Indirect effect (Boot <i>SE</i>) | Boot 95% CI [BootLLCI, BootULCI] |
|-----------------|--------------------|--------------------------------------|-------------------------------------|
| Hope | Slacktivist | .08 (.06) | [-.0212, .2107] |
| | Activist | .18 (.13) | [-.0544, .4618] |
| Fear | Slacktivist | -.10 (.06) | [-.2687, -.0119] |
| | Activist | -.06 (.08) | [-.2756, .0620] |
| Anger | Slacktivist | -.02 (.04) | [-.1539, .0230] |
| | Activist | -.05 (.07) | [-.3149, .0189] |

Note. Bootstrapped standard errors and confidence intervals (CIs) were computed using 1,000 bootstrap samples.

Boldface text is used to denote significant effects, $p < .05$.

^aRelative to no efficacy information (control condition)

Table (4.5b). Conditional indirect effect(s) of any efficacy message^a type on button commenting via emotional mediators across levels of activism.

| Mediator | Activism level | Indirect effect (Boot <i>SE</i>) | Boot 95% CI [BootLLCI, BootULCI] |
|-----------------|----------------|--------------------------------------|-------------------------------------|
| Hope | Slacktivist | -0.00 (.20) | [-.3762, .4312] |
| | Activist | -0.00 (.41) | [-.7856, .8275] |
| Fear | Slacktivist | -0.00 (.14) | [-.3060, .2761] |
| | Activist | -0.00 (.13) | [-.3572, .2059] |
| Anger | Slacktivist | -0.06 (.12) | [-.4750, .0825] |
| | Activist | -0.14 (.20) | [-.7542, .0886] |

Note. Bootstrapped standard errors and confidence intervals (CIs) were computed using 1,000 bootstrap samples. Boldface text is used to denote significant effects, $p < .05$.

^aRelative to no efficacy information (control condition).

4.6 Hypotheses

Now, we turn to the remaining hypotheses of this research. Any efficacy message (internal, external, response condition combined) positively and significantly predict hope. The experimental conditions thus induce more hope than the control condition, supporting **H1a**. Contrary to our expectations, hope is unrelated to environmental political participation, which means that **H2a** is not supported by this data. The indirect effect is positive but insignificant as well. This means that the experimental conditions increase hope, but this increase does not necessarily evoke environmental political participation. Because this effect is not significant, the data rejects **H3a**.

Any efficacy message (internal, external, response condition combined) significantly and negatively predicts fear. The experimental conditions thus induce less fear than the control condition, supporting **H1b**. Breaking up the conditions shows that the internal efficacy condition is the main player in the fear mediation. Furthermore, contrary to our expectations fear significantly and positively predicts environmental political participation, which means that the data fully rejects **H2b**. The indirect effect is negative but significant as well. Also, the activism level dummy variable plays a role here as well. That is, the fear mediation only happens significantly for the slacktivist. This means that any experimental condition reduces fear and then the reduction in fear reduces participation level (while fear itself increasing participation levels), **H3b** is therefore rejected as well, and in fact the data predicts the opposite.

Any efficacy message (internal, external, response condition combined) negatively but insignificantly predict anger. The experimental condition thus induces less anger than the control

condition, however insignificant. Therefore, one must reject **H1c**. According to our expectations, anger significantly and positively predicts environmental political participation; **H2c** is therefore accepted. The indirect effect is negative but insignificant. This means that the experiment reduces anger and then the reduction in anger reduces participation level. However, not significantly, which means that **H3c** is rejected as well.

5. Discussion and conclusion

Public participation and sustaining people's attention around environmental issues such as global warming are some of the main goals for environmental organizations and are, for a large part, dependent upon effective mobilization strategies (Oepen, 2006). Organizations struggle with devising such mobilizing communication and understanding what kinds of narratives work well within specific contexts and for particular topics (Reestorf, 2015; Rosenblatt, 2010). Among other communication strategies, many scholars have studied the concept of efficacy information and its mobilizing effect on political participation (Craig, Niemi, & Silver; 1990; Easton & Dennis; 1967; Finkel, 1985; Iyengar, 1980; Madsen, 1987; Nabatchi, 2007; Park, 2015; Tausch et al., 2011; Valentino, Gregorowicz & Groenendyk, 2009). However, studies on the mobilizing effects of efficacy messages in an environmental setting are still very scarce (Hard & Feldman, 2015). Therefore, the present study aimed to offer insights from empirical evidence on efficacy messaging and its mobilizing effects on environmental political participation. As a result, the main objective of this research was to answer the following research questions: *To what extent do different types of efficacy messages (internal, external, response) affect emotions (hope, fear, anger), and how do these different types of efficacy messages affect an individual's behavioral intent to take action on environmental issues?* In addition, this research aimed to explore the extent to which environmental political participation (distinguished by activism and slacktivism) would moderate the effects of efficacy information on emotional responses as well as environmental political behavior. By conducting an online experiment, insights into the different effects between the groups were obtained.

5.1. Main findings

5.1.1. Hope

The first hypothesis (**H1a**) stated that a climate change message including any efficacy information would increase hope, compared to a message that did not include efficacy information. All three efficacy conditions, internal, external, and response efficacy positively and significantly predicted hope and thus induced more hope than the control condition (supporting **H1a**). These results are in a similar vein with research of Feldman and Hart (2015) who argued that efficacy messages would increase hope since they frame climate change as an addressable problem. This is also in line with research by Chadwick (2015), which revealed that disclosure of information asserting citizen's opportunity to take action to mitigate climate change increased personal feeling of hope. However, the expectation (**H2a**) that hope would be positively related with climate-related political participation was not supported. Hope was not significantly related to environmental political participation (refuting **H2a**). Lazarus (1991) already stated that hope exhibits a desire for a better situation when generally a positive outcome is not guaranteed. Moreover, Nabi (2002) stated that this emotion generally comforts and mitigates emotional distress but not necessarily alleviates it, which may deter someone from pursuing more

realistic goals. This might be a possible explanation why there was found a positive relationship between hope and environmental political participation, although the relationship was not significant. Similarly, we must keep in mind that both direct and indirect effects were not significant and one cannot frame the effects as mediation (refuting **H3a**). Another interesting finding was that, while overall activists registered as being less hopeful amongst all conditions combined compared to slactivists, the external efficacy condition raised hope for activists, and hopelessness was moderated by the other two experimental conditions. As the external efficacy information highlighted the willingness of the government to take the public's remarks into account, this efficacy inducement may have made the activists more hopeful as the belief in the responsiveness of the political system was evoked (Craig, Niemi & Silver, 1990). As political participation is conceptualized as "an activity that is intended or has the consequence of affecting, either directly or indirectly, government action" (Verba et al., 1995), this might give the activists the feeling that their voices are heard, which would in turn make them feel more hopeful.

5.1.2. Fear

Hypothesis **H1b** stated that a climate change message including any efficacy information would decrease fear, compared to a message that did not include efficacy information. A combination of the efficacy messages compared to the control group (a binary indicator variable) significantly and negatively predicted fear, meaning that the efficacy conditions induced less fear than the control condition (supporting **H1b**). Breaking up the conditions showed us that the internal efficacy condition was the only significant condition predicting fear, meaning that with a more conservative view hypothesis **H1b** is only partially supported. Fear, however, significantly and positively predicted environmental political participation (refuting **H2b**). This is thus against our expectation (**H2b**) that fear would be negatively related with climate-related political participation. Up until now, the literature on the effectiveness of fear-inducing appeals on environmental political participation has been rather contradicting as well (Witte & Allen, 2000). Fear would evoke either a flight or fight reaction, whereas this research shows a fight reaction. Several researchers state that fear inducing appeals would only attract people's attention to the issue but not affect genuine personal engagement (O'Neill & Nicholson-Cole, 2009) as fear is typically incited once a situation is being perceived as threatening to one's physical or psychological self as well as being outside of one's control (Frijda, 1986; Lazarus, 1991; Nabi, 2002; Scherer, 1984), which would evoke a flight reaction. However, where fear arises from a situation that seems to be outside an individual's control, anger emerges from assessments of individual agency over the threat (Hart & Feldman, 2015). Referring back to the factor analysis performed earlier in this research, the emotions 'fear' and 'anger' together had a high correlation and Cronbach's alpha (.829). This high correlation between these two emotions could be an explanation for the 'fight' reaction as anger is associated with this response. Moreover, the indirect mediation effect was negative but

significant as well (refuting **H3b**), which means that the experiment reduced fear but then the reduction in fear overall reduces participation level, despite fear's positive contribution towards participation. However, the activism binary dummy variable in the mediation analysis showed that the fear mediation only happened significantly for the slacktivists.

5.1.3. Anger

Hypothesis **H1c** stated that a climate change message including any efficacy information would decrease anger compared to a message that did not include efficacy information. This was argued since anger is evoked once someone's goals become frustrated (Averill, 1982; Hampton, 1978; Izard, 1977; Lazarus, 1991; Plutchik, 1980), and efficacy information would remove obstacles to goal attainment, which would thus decrease the feeling of anger (Bandura, 1982). All individual efficacy messages, as well as the combination of the efficacy messages compared to the control group (a binary indicator variable) negatively but insignificantly predicted anger, refuting **H1c**. This result is in similar vein with findings from prior research, however, in this research, this effect is not statistically proven. The mediation results showed that anger significantly and positively predicted environmental political participation, supporting **H2c**. However, in the model with full covariates, it is found to have a non-significant impact on participation. This is because, the ecological beliefs scale reduced anger's predictive power, meaning that with a more conservative view hypothesis **H2c** is rejected or maybe partially supported. Ultimately, anger mediated a slightly negative, but insignificant, indirect effect of the efficacy on participation, thus refuting **H3c**. It also must be noted that activists registered angrier among the combination of efficacy conditions compared to slacktivists. A possible explanation for this result could be the degree of cause involvement. Grau and Folse (2013) define cause involvement as "the degree to which consumers find the cause to be personally relevant to them" (p. 10). Maheswaran and Levy (1990) argue that individuals, who are deeply involved with a cause, process information with a higher focus on detail and on a more systematic level. Furthermore, it is argued that low-involved audiences develop attitudes concerning a message based on more elementary peripheral cues and gravitate towards more positive rather than negative cues (Grau & Fols, 2007; Maheswaran & Levy, 1990).

5.2. Theoretical and practical implications

This research can help improve the practice of science on sustainability and environmental communication, more specifically climate change communication. The results of this study would therefore be of interest to environmental communication and policy professionals who are seeking to engage publics on environmental issues, and climate change in particular, and improve their own communication strategies. This research may also be of interest to concerned citizens who want to become more involved in advocacy and public participation in environmental affairs.

Overall, this study contributed to existing literature in several ways. First, this research found no significant direct effect between efficacy messages and environmental political participation. The results of Feldman and Hart (2015), who conducted similar research on this topic, also showed that there were no significant direct effects of the efficacy treatments on environmental political participation, either independently or in interaction with ideology. However, the study of Feldman and Hart (2015) did show significant indirect effects for both hope (positive) and fear (negative) for the environmental participation scale, as well as an indirect significant for anger on commenting on the EPA (Environmental Protection Agency) website. In contrast, a significant indirect effect for fear (solely significant for slacktivists) for the environmental participation scale was found, and none for the emotions' effects on commenting on the Energie Dialog (the 'button'). Although the research setup in this thesis differs in that Feldman and Hart (2015) focused their research on political ideological groups (i.e. liberals, moderates and conservatives), it is interesting to compare these results. The results of both studies together offer the indication that efficacy messages do not have a direct effect in increasing political participation. A possible explanation for this finding is that the manipulation check performed in this research showed that the reading of messages including efficacy information does not necessarily translate into feeling more efficacious. Feldman and Hart (2015) did not perform such manipulation check to see if efficacy was indeed evoked. Moreover, Dahlstrom et al. (2012) argued in their research on effects of efficacy information on affective and behavioral outcomes that such manipulation check is perceived to be beyond the scope of the aim of such kind of research, meaning that the aim is to examine the effect of efficacy variables present in news coverage, regardless whether respondents are conscious of the presence of these efficacy variables. However, the manipulation check in this study might be an indication of why the mediation model did not hold. After all, the mediation model is conceptualized on the basis of prior studies which have shown that perceived efficacy is a critical predictor for an individual to take action on an issue (Lutz, Hoffman & Meckel, 2014; Rosenstone & Hansen, 2003; Ryu et al., 2009; Witte, 1992). However, the results of the manipulation check, which did not show significant differences of perceived efficacy between groups might thus be an explanation why our study did not show a statistically direct effect of efficacy information on environmental political participation. This lack of evidence for the direct effects of efficacy information on environmental political participation makes it an interesting issue to investigate in further research.

Second, for both the discrete emotions fear and anger there were findings that showed an unintended effect, meaning that efficacy messages decreased the emotions fear and anger, but both these emotions predicted environmental political participation. Nonetheless, it must be noted that only for fear this effect was significant, whereas for anger it was not. Moreover, this effect was only present for the environmental political participation scale and not for the participation through the button. The effect was most prominent for the internal efficacy condition, meaning that fear appeals in combination with internal efficacy information, a message which asserts the ease with which a citizen can take action

in the political sphere and that many people already participate, might actually have an opposing effect. The context of the message might have been an explanation for this unintended effect, a possible tendency of thought might be that when people think that many other people already participate they become hopeful but do not feel the need to participate necessarily themselves. This result was found significantly for slacktivists, which is in line with earlier research done on their participation behavior (Morozov, 2009). Similarly, Feldman and Hart (2015) showed a similar indirect effect for fear, meaning that the experiment reduces fear but then the reduction in fear overall reduces participation level. Both this research as well as that of Feldman and Hart (2015) thus indicate that (internal) efficacy messages may have unintended demobilizing effects, which professionals in the field should take in mind when drafting their mobilization strategies. This research shows as well that this is especially the case for people being considered slacktivists or non-activists.

Third, in this research the discrete emotions fear and anger were used separately as it was argued in the literature that fear and anger have distinct mobilizing forces in developing participatory behavior (Feldman & Hart, 2015; Valentino, Gregorowicz, and Groenendyk, 2009). According to cognitive appraisal theory, two central dimensions of appraisal are certainty and control over a threatening stimulus, situation, or event (Lazarus, 1991). Moreover, these two dimensions would be essential to ascertain whether fear or anger arises once an individual encounters an external threat (Smith & Ellsworth, 1985). Fear would appear once outcomes are uncertain and the situation is perceived to be outside the individual's control, whilst anger would occur once an individual considers himself to be in control of the threat (Lerner & Keltner, 2001). However, an interesting discussion point could be to also take into account the combination of the discrete emotions anger and fear in further research on the topic of environmental political participation. Experimental research done by Brader (2006) has found that negative emotions in general can change people's political habits of thought. Moreover, this study showed a high Cronbach's alpha (.829) in the combination of the two emotions as one scale (including fearful, anxious, and angry). Similarly, literature furthermore suggests that both emotions fear and anger may evoke either a fight or a flight action (Berger, 2011; Witte & Allen, 2000). In this research, both emotions showed a fight reaction (whereas only fear significantly), and both were significantly decreased by efficacy information, thus showing a similar unintended effect on environmental political participation.

5.3. Research limitations

Although, the findings of this study reveal additional insights to the field of mobilization theory in an environmental context, there are several limitations (together with the ones already mentioned in the preceding subchapters) that should be kept in mind.

First of all, the case described in the stimulus material was taken from existing newspaper articles from dates ranging between April and May 2016. Considering that the content received attention

in the daily newspapers, it might have been possible that certain participants had prior knowledge of this news. However, this was not controlled for in this study. Additionally, the news articles containing the efficacy information were moderately long which may have caused that some people to have skimmed through the text rather than reading the text attentively. However, the length of the text was needed in order to provide the full overview of the main issue and the suggest opportunities for action inherent in the efficacy message and the threat message. It must be noted that as described in the method section, there was a survey mechanism in place, in which people could only click on the 'next' button to proceed to the questionnaire after 30 seconds to help ensure that people read through the text. Arguments can be made about different reading speeds. However, there were some cases where participants read the efficacy texts faster than one minute or even forty-five seconds, which is considered as very fast (Rayner, Slattery & Bélanger, 2010). Consequently, some participants might have perceived the newspaper article as too long, which could have had an impact on their reported efficacy. For the control condition, this issue is not seen as a limitation since this text only included 269 words and can easily be read in around a minute by a fast reader. Future research which gathers more participants might omit some who are outliers due to reading speeds, which would require a much larger and broader study.

Second, it might have been possible that the effect of the stimulus material was not strong enough to associate clearly with participation since the efficacy passage constituted only about 25% of the entire text. A stronger and more prominent stimulus may thus be necessary to achieve the intended effect. Unfortunately, the qualitative preliminary test analysis was not able to detect this issue. Therefore, a preliminary quantitative analysis may have been useful to detect this early on. All in all, the lack of prominence in the efficacy messages may have had a consequence on the mediation model, since for all the three emotions (hope, fear, anger), given that the direct effect of independent variable (efficacy messages) on the dependent variable (environmental political participation) was found insignificant. These results of the direct effects are similar as that of Feldman and Hart (2015). The efficacy messages used in the research of Feldman and Hart (2015) and in this research were crafted along a similar format, meaning that both discussed a climate change treat together with a similar prominence of efficacy information. The lack of a direct effect has profound implications for the mediation analysis of the three mediators, hope, fear, and anger since the first step of mediation according to the Baron and Kenny approach (1986) was already violated, consequently making the standard mediation approach irrelevant.

Third, it must be noted that the external efficacy measure, used for the manipulation check, had a low Cronbach's alpha, which shows low reliability of scale. It may thus be possible that this scale did not capture perceived external efficacy adequately or consistently.

Fourth, preferably a much broader study is needed for mediation analysis. Due to the relative small sample sizes for each condition, the models may have suffered from low power, meaning that

they were vulnerable to Type II errors (rejecting alternative hypothesis when it's actually true). Although the conservative minimum of 208 participants ($N = 215$) was reached, further studies would do well studying a larger sample size for higher power.

5.4. Directions for further research

How specific efficacy frames and different personal values may come together in advocacy campaigns for environmental causes was examined in this thesis. Continued consideration is needed on how communication is used to accomplish practical goals, as well as how people's political behavior on environmental issues are affected. Tackling environmental issues requires change on many different levels. Politics, influential organizations, and businesses need to bring about change. But, more importantly, the broad base of citizens needs to be inspired for changes in their own behavioral or political change. More research on this issue is vital since climate change and other environmental issues do have an effect on everyone's future (Stern, 2012). With the foregoing results of this study in mind, several recommendations for further research are drafted.

First, with regards to the stimulus material, prospective research efforts should focus on the formation of stimulus material that includes efficacy information, especially for research objectives. Credible news articles can be created, which mirror existing ones. By doing so, different research topics such as environmental political participation on climate change, environmental behavioral change, donation behavior can be studied separately and more systematically. Moreover, differing prominence of efficacy information in a news text could be studied to see if there is an optimal balance of various kinds of efficacy information in order for there to be an intended effect on emotions and environmental political participation.

Second, there are as well potential venues for further research regarding the slacktivism issue. This research shown that emotional cues of hope and anger were significantly different for slacktivist and activist. Activists showed lower levels of hope amongst all conditions, except for the external efficacy condition as well as higher levels of anger amongst the different conditions. Fear was the only emotion mediated through slacktivists, meaning that the experiment reduces fear but then the reduction in fear overall reduces participation level, despite fear's positive contribution towards participation. These results thus call more research on activists and slacktivists (emotional) motivational profiles. Van Zomeren (2015) already indicated there is a need to compare such motivational profiles of activists and non-activists in a more systematic manner as well as to track in a longitudinally study how non-activists might turn into activists as well as the other way around. Therefore, it is important for environmental organizations to consider characteristics such as a slacktivist or an activist tendency of their audience in their messaging strategies. More research could also be done on the effects of efficacy messages in other spheres such as social media platforms as Facebook, Twitter or YouTube as well as blogs and other information found on websites (e.g., activism website). This might be especially relevant since

the main issue of slacktivism starts in the digital sphere and individuals' reactions to online information may vary by platform or source.

Another interesting discussion point is that psychologists state that every human being has a rational side and an emotional side (James, 2010). Consequently, a focus on merely rational appeal may be insufficient motivation for change. However, what is problematic about emotional triggers is that they vary from person to person (James, 2010). Thus, relying solely on emotions such as fear may not be effective; scholars warn that people can only handle a certain amount of bad news at a time (Stoknes, 2015). Furthermore, it seems that more immediate concerns in daily life likely dominate long-term fears such as climate change (Marx, 2010). Therefore, a fear message appeal might not be remembered on this feature alone. Individuals can cope with threats in two main different ways. The first is problem-focused coping (taking action), and the second form conversely is emotion-focused coping and may result in denial (Mckenzie-Mhor, & Smith, 1999). People thus need a sense of control to avoid the occurrence of apathy when confronted with threats. From a practical perspective, it is therefore a challenge for environmental organizations and other practitioners in the field to strike a balance in the amount of threatening as well as empowering information in their messaging, in order to achieve a mobilizing effect.

5.5. Conclusion

This research asks what motivates people to engage with and act on environmental issues? More specifically, whether efficacy information affect the emotions hope, fear and anger, and how these different forms of information affect an individual's behavioral intent to take action on environmental issues. It is an issue for which we are sorely lacking sufficient evidence. Therefore, this study also intended to contribute to the overall framework on this topic.

Accordingly, the main objective of this study was to examine if a fear appeal (control condition) or an efficacy message in combination with a fear appeal plays a role on the intensity of emotions as well as environmental political participation. This research found no significant direct effect between efficacy messages and environmental political participation. This can probably be explained by the manipulation check, which showed that the reading of messages including efficacy information does not necessarily translate into feeling more efficacious. For hope, internal, external, and response efficacy messages induced more hope than the control condition. However, hope was not significantly related to environmental political participation. Activists registered less hopeful amongst all conditions combined compared to slacktivists. However, the external efficacy condition raised hope for activists. The most important findings were for fear: the combination of the efficacy messages in contrast to the fear appeal message induced less fear than the control condition. The internal efficacy condition was seen as the main player for this result. Fear was shown to be a predictor for environmental political participation. Most importantly, it was found that this experimental condition reduced fear but then the

reduction in fear overall reduces participation level, despite fear's positive contribution towards participation. This indirect mediation happened only significantly for slacktivists. Anger did not show significant results, however, showed a similar trend as fear. Activists registered angrier amongst the combination of efficacy conditions compared to slacktivists.

This study thus found that the model based on theoretical findings is more complex than originally portrayed by Feldman and Hart (2015). Many practitioners and scientist still use fear appeals to prompt public support in climate issues, which is contrary to the often heard argument that fear would not evoke genuine personal engagement. However, this research showed a fight reaction of fear. Surprisingly the level of perceived fear was reduced by internal efficacy information and thus showed an unintended effect, which actually might harm mobilization. By studying the indirect effects, we can understand how the emotional responses produced by the different treatments impact the likelihood of environmental political participation. The complexity of the model, and the diverse interactions and relationships that seem to have an influence on environmental participation makes this subject thus especially relevant for further inquiry. Until then, practitioners in the field of climate change communication would do well to take the indirect effect of diminished fear produced by internal efficacy information into account since it has a negative impact on the likelihood of environmental political participation of slacktivists.

References

- ANP. (2016, May 18). Ook gletsjer aan oostkant Zuidpool is gevaar voor zeespiegel. *Trouw*. Retrieved from <http://www.trouw.nl/tr/nl/4496/Buitenland/article/detail/4303242/2016/05/18/Ook-gletsjer-aan-oostkant-Zuidpool-is-gevaar-voor-zeespiegel.dhtml>.
- Appelman, A., & Sundar, S. S. (2015). Measuring message credibility construction and validation of an exclusive scale. *Journalism & Mass Communication Quarterly*, *42*(1), 103-120. <http://doi.org/10.1177/1077699015606057>.
- Averill, J. R. (1982). *Anger and aggression: An essay on emotion*. (1st edition). New York: Springer Verlag.
- Babbie, E. (2007). *Introduction to Social Research*. (4th edition). Stamford, CT: Cengage Learning Inc.
- Bain, P. G., Hornsey, M. J., Bongiorno, R., & Jeffries, C. (2012). Promoting pro-environmental action in climate change deniers. *Nature Climate Change*, *2*(8), 600-603.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, *37*(2), 122-147.
- Banks, N., Hulme, D., & Edwards, M. (2015). NGOs, States, and Donors Revisited: Still too close for comfort? *World Development*, *66*, 707-718.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173-1182. <http://doi.org/10.1037/0022-3514.51.6.1173>
- Baumgartner, J. C., & Morris, J. S. (2009). MyFaceTube politics: Social networking web sites and political engagement of young adults. *Social Science Computer Review*, *28*(1), 24-44. <http://doi.org/10.1177/0894439309334325>
- Bem, D. J. (1972). Self-perception theory. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (pp. 1-62). New York: Academic Press.
- Berger, J. (2011). Arousal increases social transmission of information. *Psychological Science*, *22*(7), 891-893. <http://doi.org/10.1177/0956797611413294>
- Best, S. J., & Krueger, B. S. (2005). Analyzing the representativeness of Internet political participation. *Political Behavior*, *27*(2), 183-216.
- Bimber, B. (2001). Information and political engagement in America: The search for effects of information technology at the individual level. *Political Research Quarterly*, *54*(1), 53-67. <http://dx.doi.org/10.1177/106591290105400103>
- Bimber, B., & Copeland, L. (2011, August). Digital media and political participation overtime in the US: Contingency and ubiquity. In *Annual Meeting of the European Consortium for Political Research, Reykjavik, Iceland*.

- Bimber, B., Stohl, C., & Flanagin, A. J. (2009). Technological change and the shifting nature of political organization. *Routledge handbook of Internet politics* (pp. 72-85). New York, Routledge.
- Blake, J. (1999). Overcoming the 'value-action gap' in environmental policy: Tensions between national policy and local experience. *Local Environment*, 4(3), 257-278.
<http://doi.org/10.1080/13549839908725599>
- Boster, F. J., & Mongeau, P. (1984). Fear-arousing persuasive messages. *Annals of the International Communication Association*, 8(1), 330-375.
- Boulianne, S. (2009). Does Internet use affect engagement? A meta-analysis of research. *Political Communication*, 26(2), 193-211. <http://dx.doi.org/10.1080/10584600902854363>
- Brader, T. (2006). *Campaigning for hearts and minds: How emotional appeals in political ads work*. Chicago: University of Chicago Press.
- Brady, H. E., Verba, S., & Schlozman, K. L. (1995). Beyond SES: A resource model of political participation. *American Political Science Review*, 89(2), 271-294.
- Bremmer, D. (2016, April 8). Kamp ziet schone en groene toekomst: Minister wilenergieplan tot 2050. *Algemeen Dagblad*.
- Breuer, A., & Farooq, B. (2012, May). *Online political participation: Slacktivism or efficiency increased activism? Evidence from the Brazilian Ficha Limpa Campaign*. Paper presented at the 2012 ICA Annual Conference, San Francisco. <http://dx.doi.org/10.2139/ssrn.2179035>
- Budescu, D. V., Broomell, S., & Por, H. H. (2009). Improving communication of uncertainty in the reports of the Intergovernmental Panel of Climate Change. *Psychological Science*, 20(3), 299-308.
- Butler, M. (2011). *CLICKTIVISM, SLACKTIVISM, OR_REAL 'ACTIVISM CULTURAL CODES OF AMERICAN ACTIVISM IN THE INTERNET ER* (Doctoral dissertation, University of Colorado).
- Cammaerts, B. (2015). Social media and activism. *The International Encyclopedia of Digital Communication and Society*. <http://dx.doi.org/10.1002/9781118767771.wbiedcs083>
- Campbell, A. Gurin G., & Miller, W. E. (1954). *The voter decides*. Evanston, IL: Row, Peterson.
- Catone, J. (2009, June 24). How WWF is using social media for good #FindingTheGood. *Mashable*. Retrieved from <http://mashable.com/2009/06/24/wwf-profile/#YIbbXYjVREqC>.
- Chadwick, A. E. (2015). Toward a theory of persuasive hope: Effects of cognitive appraisals, hope appeals, and hope in the context of climate change. *Health Communication*, 30(6), 598-611.
<http://dx.doi.org/10.1080/10410236.2014.916777>
- Christensen, H.S. (2012). Simply Slacktivism? Internet participation in Finland. *JeDEM eJournal of eDemocracy and Open Government*, 4(1), 1-23.

- Christenen, H. S. & Bengtsson, Å. (2011). The political competence of Internet participants: Evidence from Finland. *Information, Communication & Society*, 14(6), 896-916.
- Christensen, L. (2007). *Experimental methodology*. Boston: Pearson.
- Conroy, M., Feezell, J. T., & Guerrero, M. (2012). Facebook and political engagement: A study of online political group membership and offline political engagement. *Computers in Human Behavior*, 28(5), 1535-1546. <http://dx.doi.org/10.1016/j.chb.2012.03.012>
- Conway, M. M. (2000). *Political participation in the United States*. (3rd edition). Washington, D. C.: Congressional Quarterly.
- Cook, T. D., Campbell, D. T., Day, A. (1979). *Quasi-experimentation: Design and analysis for field settings*. (Vol. 351). Boston: Houghton Mifflin.
- Coopman T. M. (2011). Networks of dissent: Emergent forms in media based collective action. *Critical studies in media communication*, 28(2), 153-172.
- Craig, S. C., Niemi, R. G., & Silver, G. E. (1990). Political efficacy and trust: A report on the NES pilot study items. *Political Behavior*, 12(3), 289-314. <http://dx.doi.org/10.1007/BF00992337>
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative and mixed method approaches*. (2nd edition). London: Sage Publications.
- Davis, A. (2010). New media and fat democracy: The paradox of online participation. *New Media & Society*, 12(5), 745-761. <http://dx.doi.org/10.1177/1461444809341435>
- Davis, J. (2011, October 27). Cause marketing: Moving beyond corporate slacktivism. *Evidence Based Marketing*. Retrieved from <http://evidencebasedmarketing.net/cause-marketing-moving-beyond-corporate-slacktivism>
- De Choudhury, M., Counts, S., & Gamon, M. (2012, May). Not all moods are created equal! Exploring human emotional states in social media. In *ICWSM*.
- Dietz, T., & Stern, P. C. (Eds). (2002). *New tools for environmental protection: Education, information, and voluntary measures*. Washington D.C.: National Academy Press.
- Di Gennaro, C., & Dutton, W. (2006). The Internet and the public: Online and offline political participation in the United Kingdom. *Parliamentary Affairs*, 59(2), 299-313. <http://dx.doi.org/10.1093/pa/gsl004>
- DoSomething.org. Index on Young People and Volunteering. (2012). Retrieved from <http://www.brivpratigais.lv/attachments/article/393/2012%20do%20somethingorg.pdf>
- Dunlap, R. E., & Van Liere, K. D. (1978). The “new environmental paradigm”: A proposed measuring instrument and preliminary results. *Journal of Environmental Education*, 9(4), 10-19.
- Easton, D. (1965). *A systems analysis of political life*. New York: Wiley.
- Easton, D., & Dennis, J. (1967). The child’s acquisition of regime norms: Political efficacy. *American Political Science Review*, 61(1), 25-38. <http://dx.doi.org/10.2307/1953873>

- Effron, D. A., & Monin, B. (2010). Letting people off the hook: When do good deeds excuse transgression? *Personality and Social Psychology Bulletin*, 36(12), 1618-1634.
<http://dx.doi.org/10.1177/0146167210385922>
- Entman, R. M. (1993). Framing: Towards clarification of a fractured paradigm. *Journal of Communication*, 43(4), 51-58. <http://dx.doi.org/10.1111/j.1460-2466.1993.tb01304.x>
- Eurobarometer, S. (2008). Attitudes of European citizens towards the environment. *European Commission*, 295. Retrieved from
http://www.socioilologico.com/Attitudes_Europeans_MD_2007.pdf
- Eurobarometer, S. (2014). Attitudes of European citizens towards the environment. *European Commission*, 416. Retrieved from
http://ec.europa.eu/public_opinion/archives/ebs/ebs_416_en.pdf
- Feldman, L., & Hart, P. S. (2015). Using political efficacy messages to increase climate activism: The mediating role of emotions. *Science Communication*, 38(1), 1-29.
<http://dx.doi.org/10.1177/1075547015617941>
- Festinger, L. (1962). *A theory of cognitive dissonance*. (Vol. 2). Stanford, CA: Stanford University Press.
- Field, A. (2009). *Discovering statistics using SPSS*. (3rd edition). London: Sage Publications.
- Finkel, S. E. (1985). Reciprocal effects of participation and political efficacy: A panel analysis. *American Journal of Political Science*, 29(4): 891-913. <http://dx.doi.org/10.2307/2111186>
- Fox, L. (2012). Stop calling them 'slacktivists'.
<https://koodooz.wordpress.com/2012/08/09/stop-calling-them-slacktivists/>
- Frijda, N. H. (1986). *The emotions*. London: Cambridge University Press.
- Gardner, G. T. & Stern, P. C. (1996). *Environmental problems and human behavior*. Allyn & Bacon.
- Gibson, R. K., Howard, P. E. N., & Ward, S. (2000, August). *Social capital, Internet connectedness political participation: A four-country study*. Paper presented at the International Political Science Association, Québec, Canada.
- Gladwell, M. (2010, October 4). Small Change: Why the revolution will not be tweeted. *The New Yorker*. Retrieved from <http://www.newyorker.com/magazine/2010/10/04/small-change-malcolm-gladwell>
- Goodling, L. (2015). MOAR digital activism please. *Kairos: Rhetoric, Technology, Pedagogy*, 19(3).
- Graham, M. C., Priddy, L., & Graham, S. (2014). *Facts of life: Ten issues of contentment*. Outskirts Press.
- Hale, S. (2010) The new politics of climate change: Why we are failing and how we will succeed. *Environmental Politics*, 19(2), 255-275.

- Halupka, M. (2015). The rise of information activism: how to bridge dualisms and reconceptualise political participation. *Information, Communication & Society*, 1487-1503.
<http://dx.doi.org/10.1080/1369118X.2015.1119872>
- Hampton, P. (1978). The many faces of anger. *Psychology*, 15, 35-44.
- Harlow, S., & Harp, D. (2012). Collective action on the web: A cross-cultural study of social networking sites and online and offline activism in the United States and Latin America. *Information, Communication & Society*, 15(2), 196-216.
<http://dx.doi.org/10.1080/1369118X.2011.591411>
- Hart, P. S., & Feldman, L. (2014). Threat without efficacy? Climate change on U.S. network news. *Science Communication*, 36(3), 325-35. <http://dx.doi.org/10.1177/1075547013520239>
- Hay, C. (2011, January 22). Last change to see? Bearing witness [Blog post]. Retrieved from <http://www.greenpeace.org/international/en/news/Blogs/makingwaves/last-chance-to-see-bearing-witness/blog/32517/>.
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY: Guilford Press.
- Herle, D. (2012, November 1). The spectators [Blog post]. Retrieved from <http://policyoptions.irpp.org/magazines/come-together/herle/>
- Hibbert, S., Smith, A., Davies, A., & Ireland, F. (2007). Guilt appeals: Persuasion knowledge and charitable giving. *Psychology & Marketing*, 24(8), 723-742.
<http://dx.doi.org/10.1002/mar.20181>
- Hines, J. M., Hungerford, H.R., & Tomera, A.N. (1987). Analysis and synthesis of research on responsible pro-environmental behavior: a meta-analysis. *The Journal of Environmental Education*, 18(2), 1-8.
- Hoffman, L. H. (2012). Participation or communication? An explication of political activity in the Internet age. *Journal of Information Technology & Politics*, 9(3), 217-233.
<http://dx.doi.org/10.1080/19331681.2011.650929>
- Hudson, D., vanHeerde-Hudson, J. Dasandi, N., & Gaines, N. S. (2015, September). *Emotional pathways to engagement with global poverty: An experimental analysis*. Paper presented at the 2015 Annual Meeting of the American Political Science Association, San Francisco.
- Hwang, H., & Kim, K. O. (2015). Social media as a tool for social movements: the effect of social media use and social capital on intention to participate in social movements. *International Journal of Consumer Studies*, 39(5), 478-488.
- Iyengar, S. (1980). Subjective political efficacy as a measure of diffuse support. *The Public Opinion Quarterly*, 44(2), 249-256. <http://dx.doi.org/10.1086/268589>
- Izard, C. E. (1977). *Human emotions*. New York: Plenum.

- Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York: New York University Press.
- Jenkins, H. (2012, November 1). The new political commons [Blog post]. Retrieved from <http://policyoptions.irpp.org/magazines/come-together/jenkins/>.
- Jenkins, H., Ford, S., & J. Green. (2014). *Spreadable media: Creating value and meaning in a networked culture*. New York: New York University Press.
- Jennings, M. K., & Zeitner, V. (2003). Internet use and civic engagement: A longitudinal analysis. *Public Opinion Quarterly*, 67(3), 311-334.
- Jensen, B. B. (2002). Knowledge, action and pro-environmental behaviour. *Environmental Education Research*, 8(3), 325-334.
- Karl, H., Curtin, C., Scarlett, L., & Hopkins, W. (2011). In I. Linkov, & T. S. Bridges (Eds.), *Climate* (pp. 237-255). Dordrecht: Springer Netherlands.
- Keselman, H. J. Games, P. A., & Rogan, J. C. (1979). Protecting the overall rate of Type I errors for pairwise comparisons with an omnibus test statistic. *Psychological Bulletin*, 6(4), 884-888.
- Khan, U. & Dhar, R. (2007). Where there is a way, is there a will? The effect of future choices on self-control. *Journal of Experimental Psychology: General*, 136(2), 277- 288.
- Khazan, O. (2013, April 30). UNICEF tells slacktivists: Give money, not Facebook Likes. *The Atlantic*. Retrieved from <http://www.theatlantic.com/international/archive/2013/04/unicef-tells-slacktivists-give-money-not-facebook-likes/275429/>
- Kollmuss, A., & Agyeman, J. (2002). Mind the gap: Why do people act environmentally and what are the barriers to pro-environmental behavior? *Environmental Education Research*, 8(3), 239-260. <http://dx.doi.org/10.1080/13504620220145401>
- Kristofferson, K., White, K., & Peloza, J. (2014). The nature of slacktivism: How the social observability of an initial act of token support affects subsequent prosocial action. *Journal of Consumer Research*, 40(6), 1149-1166.
- Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, 33, 159-174.
- Lazarus, R. J. (2009). Super wicked problems and climate change: Restraining the present to liberate the future. *Cornell Law Review*, 94, 1153-1234.
- Lazarus, R. S. (1991). *Emotion and adaptation*. New York: Oxford University Press.
- Lee, Y. H., & Hsieh, G. (2013, April). Does slacktivism hurt activism? The effects of moral balancing and consistency in online activism. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 811-820). ACM.
- Leiserowitz, A. A. (2005). American risk perceptions: Is climate change dangerous? *Risk Analysis*, 25(6), 1433-1442. <http://dx.doi.org/10.1111/j.1540-6261.2005.00690.x>

- Lerner, J. S., & Keltner, D. (2001). Fear, anger, and risk. *Journal of Personality and Social Psychology*, 81(1), 146-159. <http://dx.doi.org/10.1037/0022-3514.81.1.146>
- Leviston, Z., Price, J., & Bishop, B. (2014). Imagining climate change: The role of implicit associations and affective psychological distancing in climate change responses. *European Journal of Social Psychology*, 44(5), 441-454.
- Lewis, K., Gray, K., & Meierhenrich, J. (2014). The structure of online activism. *Sociological Science*, 1, 1-9. <http://dx.doi.org/10.15195/v1.a1>
- Lutz, C., Hoffmann, C. P., & Meckel, M. (2014). Beyond just politics: A systematic literature review of online participation. *First Monday*, 19(7).
- Madsen, D. (1987). Political self-efficacy tested. *American Political Science Review*, 81(2), 571-582. <http://dx.doi.org/10.2307/1961970>
- Marcus, G. E., Neuman, W. R., & MacKuen, M. B. (2000). *Affective intelligence and political judgment*. Chicago: University of Chicago Press.
- Mazar, N. & Zhong, C. B. (2010). Do green products make us better people? *Psychological Science* 21, 494-498.
- McCright, A. M., & Dunlap, R. E. (2011) The politicization of climate change and polarization in the American public's views of global warming, 2001-2010. *The Sociological Quarterly*, 52(2), 155-194
- McGrath, M. (2016, April 22). Nations sign historic Paris climate deal. *BBC News*. Retrieved from <http://www.bbc.com/news/science-environment-36108194>
- Meritt, A. C., Effron, D. A., & Monin, B. (2010). Moral self-licensing: When being good frees us to be bad. *Social and Personality Psychology Compass*, 4(5), 344-357. <http://dx.doi.org/10.1111/j.1751-9004.2010.00263.x>
- Mongeau, P. A. (1998). Another look at fear-arousing persuasive appeals. In M. Allen & R. W. Preiss (Eds.), *Persuasion: Advances through meta-analysis* (pp. 53-68). Cresskill, NJ: Hampton.
- Morozov, E. (2009). The brave new world of slacktivism. *Foreign Policy*, 19(5).
- Morozov, E. (2009, September 5). From slacktivism to activism. *Foreign Policy Blogs*.
- Morozov, E. (2012). *The net delusion: The dark side of Internet freedom*. New York: Public Affairs.
- Moser, S. C. (2010). Communicating climate change: History, challenges, process and future directions. *Wiley Interdisciplinary Reviews: Climate Change*, 1(1), 31-53. <http://dx.doi.org/10.1002/wcc.11>
- Nabatchi, T. (2007). *Deliberative democracy: The effects of participation on political efficacy*. ProQuest.
- Nabi, R. L. (2002). Discrete emotions and persuasion. In J. P. Dillard & M. W. Pfau (Eds.), *The persuasion handbook: Developments in theory and practice* (pp. 289-308). Thousand Oaks, CA: Sage.

- Neiger, B. L., Thackeray, R., Van Wagenen, S. A., Hanson, C. L., West, J. H., Barnes, M. D., & Fagen, M. C. (2012). Use of social media in health promotion purposes, key performance indicators, and evaluation metrics. *Health Promotion Practice, 13*(2), 159-164. <http://dx.doi.org/10.1177/1524839911433467>
- Nekmat, E., Gower, K. K., Gonzenbach, W. J., & Flanagin, A. J. (2015). Source effects in the micro-mobilization of collective action via social media. *Information, Communication & Society, 18*(9), 1076-1091.
- Nelson, B. (2012, June 4). Do you read fast enough to be successful? *Forbes*. Retrieved from <http://www.forbes.com/sites/brettnelson/2012/06/04/do-you-read-fast-enough-to-be-successful/#5ab4fc8758f7>
- Neumayer, C., & Raffl, C. (2008, October). *Facebook for global protest: The potential and limits of social software for grassroots activism*. Paper presented at the Proceedings of the 5th Prato Community Informatics & Development Informatics Conference, Prato, Italy.
- Nisbet, M. C. (2009) Communicating climate change: Why frames matter for public engagement. *Environment: Science and Policy for Sustainable Development, 51*(2), 12-23. <http://dx.doi.org/10.3200/ENVT.51.2.12-23>
- Nuttall, N. (2015, December 12). Historic Paris agreement on climate change: 195 nations set path to keep temperature rise well below 2 degrees Celsius. *UN Climate Change Newsroom*. Retrieved from <http://newsroom.unfccc.int/unfccc-newsroom/finale-cop21/>
- Ockwell, D., Whitmarsh, L., & O'Neill, S. (2009). Reorienting climate change communication for effective mitigation: Forcing people to be green or fostering grassroots engagement? *Science Communication, 30*(3), 305-327. <http://dx.doi.org/10.1177/1075547008328969>
- Oepen, M. (2006). *Strategic communication for sustainable development, a conceptual overview*. Schneller Druck, Reutlingen, Eschborn.
- Ohanian, R. (1990). Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness. *Journal of Advertising, 19*(3), 39-52. <http://dx.doi.org/10.1080/00913367.1990.10673191>
- O'Keefe, D. J. (2003). Message properties, mediating states, and manipulation checks: Claims, evidence, and data analysis in experimental persuasive message effects research. *Communication Theory, 13*(3), 251-274. <http://dx.doi.org/10.1111/j.1468-2885.2003.tb00292.x>
- O'Neill, S. J., & Hulme, M. (2009). An iconic approach for representing climate change. *Global Environmental Change, 19*(4), 402-410. <http://dx.doi.org/10.1016/j.gloenvcha.2009.07.004>
- O'Neill, S., & Nicholson-Cole, S. (2009). "Fear won't do it": Promoting positive engagement with climate change through visual and iconic representations. *Science Communication, 30*(3), 355-379. <http://dx.doi.org/10.1177/1075547008329201>

- Ortony, A., Clore, G. L., & Collins, A. (1990). *The cognitive structure of emotions*. New York: Cambridge University Press.
- Park, C. S. (2015). Pathways to expressive and collective participation: Usage patterns, political efficacy, and political participation in social networking sites. *Journal of Broadcasting & Electronic Media*, 59(4), 698-716. <http://dx.doi.org/10.1080/08838151.2015.1093480>
- Park, H. M., & Perry, J. L. (2008). Do campaign Web sites really matter in electoral civic engagement? Empirical evidence from the 2004 post-election Internet tracking survey. *Social Science Computer Review*, 26(2), 190-212. <http://dx.doi.org/10.1177/0894439307309026>
- Plutchik, R. (1980). *Emotion: A psycho-evolutionary synthesis*. New York: Harper & Row.
- Punch, K. F. (2003). *Survey research: The basics*. London: Sage.
- Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon & Schuster.
- Rayner, K., Slattery, T. J., & Bélanger, N. N. (2010). Eye movements, the perceptual span and reading speed. *Psychonomic Bulletin & Review*, 17(6), 834-839. <http://dx.doi.org/10.3758/PBR.17.6.834>
- Reestorff, C. M. (2015). 'LEGO: Everything is not awesome!' A conversation about mediatised activism, Greenpeace, Lego, and Shell. *Conjunctions: Transdisciplinary Journal of Cultural Participation*, 2(1), 21-43.
- Rice, R. E., & Fuller, R. P. (2013). Theoretical perspectives in the study of communication and the Internet, 2000-2009. In: William H. Dutton (Ed). *Oxford handbook of Internet studies* (pp. 353-377). Oxford: Oxford University Press.
- Rijksoverheid. (2016). *Waarom nu de energiedialoog?* [Website]. Retrieved from <http://mijnenergie2050.nl/Over/default.aspx>
- Roseman, I., Abelson, R. P., & Ewing, M. F. (1986). Emotion and political cognition Emotional appeals in political communication. *Political Cognition*, 279-294.
- Rosenblatt, G. (2010). The engagement pyramid: Six levels of connecting people and social change. <http://www.idealware.org/articles/engagement-pyramid-six-levels-connecting-people-and-social-change>
- Rosenstone, S. J., & Hansen, J. M. (2003). *Mobilization, participation, and democracy in America*. (1st edition). New York, NY: Pearson.
- Roser-Renouf, C., Maibach, E. W., Leiserowitz, A., & Zhao, X. (2014). The genesis of climate change activism: From key beliefs to political action. *Climatic Change*, 125(2), 163-178. <http://dx.doi.org/10.1007/s10584-014-1173-5>
- Ryu, M. H., Kim, S., & Lee, E. (2009). Understanding the factors affecting online elderly user's participation in video UCC services. *Computers in Human Behavior*, 25(3), 619-632. <http://dx.doi.org/10.1016/j.chb.2008.08.013>

- Sachdeva, S. Iliev, R., & Medin, D.L. (2009). Sinning saints and saintly sinners: The paradox of moral self-regulation. *Psychological Science* 20(4), 523-528.
- Sandoval-Almazan, R., & Gil-Garcia, J. R. (2014). Towards cyberactivism 2.0? Understanding the use of social media and other information technologies for political activism and social movements. *Government Information Quarterly*, 31(3), 365-378.
<http://dx.doi.org/10.1016/j.giq.2013.10.016>
- Saunders, M. N. K., Lewis, P., & Thornhill, A. (2003). *Research methods for business students*. (3rd edition). Prentice Hall, London.
- Scherer, K. R. (1984). On the nature and function of emotion: A component process approach. In K. R. Scherer & P. Ekman (Eds.), *Approaches to emotion* (pp. 293-318). Hillsdale, NJ: Lawrence Erlbaum.
- Shah, D. V., Kwak, N., & Holbert, R. L. (2001). “Connecting” and “disconnecting” with civic life: Patterns of Internet use and the production of social capital. *Political Communication*, 18(2), 141-162.
- Shah, D. V., McLeod, J. M., & Yoon, S. H. (2001). Communication, context, and community an exploration of print, broadcast, and internet influences. *Communication Research*, 28(4), 464-506.
- Shirky, C. (2011). The political power of social media. Technology, the public sphere, and political change. *Foreign Affairs*, 28-41.
- Shome, D., Marx, S. (2009). *The psychology of climate change communication: A guide for scientists, journalists, educators, political aides, and the interested public*. Center for Research on Environmental Decisions.
- Shulman, S. W. (2009). The case against mass e-mails: Perverse incentives and low quality public participation in U.S. federal rulemaking. *Policy & Internet*, 1(1), 23-53.
<http://dx.doi.org/10.2202/1944-2866.1010>
- Smith, C. A., & Ellsworth, P. C. (1985). Patterns of cognitive appraisal in emotion. *Journal of Personality and Social Psychology*, 48(4), 813-838.
<http://dx.doi.org/10.1037/0022-3514.48.4.813>
- Smith, N., & Leiserowitz, A. (2014). The role of emotion in global warming policy support and opposition. *Risk Analysis*, 34(5), 937-948. <http://dx.doi.org/10.1111/risa.12140>
- Snyder, C. R., Irving, L., & Anderson, J. R. (1991). Hope and health: Measuring the will and the ways. In C.R. Snyder & D. R. Forsyth (Eds.), *Handbook of social and clinical psychology: The health perspective* (pp. 285-305). Elmsford, New York: Pergamon Press.
- Sørensen, M. P. (2016). Political conversations on Facebook – the participation of politicians and citizens. *Media, Culture & Society*, 38(5), 664-685.
<http://dx.doi.org/10.1177/0163443715620924>

- Stedman, R. C. (2004). Risk and climate change: Perceptions of key policy actors in Canada. *Risk Analysis*, 24(5), 1395-1406. <http://dx.doi.org/10.1111/j.0272-4332.2004.00534.x>
- Stern, P. C. (2012). Psychology: Fear and hope in climate messages. *Nature Climate Change*, 2(8), 572-573. <http://dx.doi.org/10.1038/nclimate1610>
- Stern, P. C., Dietz, T., Abel, T. D., Guagnano, G. A., & Kalof, L. (1999). A value-belief-norm theory of support for social movements: The case of environmentalism. *Human Ecology Review*, 6(2), 81-97.
- Štětka, V., & Mazák, J. (2014). Whither slacktivism? Political engagement and social media use in the 2013 Czech Parliamentary elections. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 8(3). <http://dx.doi.org/10.5817/CP2014-3-7>
- Stevens, J. (1996). *Applied multivariate statistics for the social sciences*. (3rd edition). Mahwah, NJ: Lawrence Erlbaum.
- Stoknes, P. E. (2015). *What we think about when we try not to think about global warming: Toward a new psychology of climate action*. Chelsea Green Publishing.
- Tabachnick, B. G. & Fidell, L. S. (2007) *Using multivariate statistics*. (5th edition). Boston Pearson Education.
- Tausch, N., Becker, J. C., Spears, R., Christ, O., Saab, R., Singh, P., & Siddiqui, R. N. (2011). Explaining radical group behavior: Developing emotion and efficacy routes to normative and nonnormative collective action. *Journal of Personality and Social Psychology*, 101(1), 129-148. <http://dx.doi.org/10.1037/a0022728>
- Terracina-Hartman, C., Bienkowski, B., Myers, M., & Kanthawala, S. (2013). Social media for environmental action: What prompts engagement and intent toward activism? *Technology, Knowledge and Society*, 9(4), 143-161.
- Turpijn, L., Kneefel, S., & van der Veer, N. (2015). Nationale social media onderzoek 2015. *Amsterdam: Newcom Research & Consultancy*. http://www.c-works.be/cw1/sites/default/files/Newcom%20-%20Nationale%20Social%20Media%20Onderzoek%202015_2.pdf.
- UNICEF Sweden. (2013). Likes Don't Save Lives. Promotional Campaign. <http://unicef.se/>.
- Valentino, N. A., Gregorowicz, K., & Groenendyk, E. W. (2009). Efficacy, emotions and the habit of participation. *Political Behavior*, 31, 307-330. <http://dx.doi.org/10.1007/s11109-008-9076-7>
- Van Meter, K. M. (1990). Methodological and design issues: Techniques for assessing the representatives of snowball samples. *NIDA Research Monograph*, 98, 31-43.
- Van Zomeren, M. (2015). *Just how "weird" are activists?* [PowerPoint slides]. Retrieved from University of Groningen: http://portal.idc.ac.il/en/schools/psychology/documents/martijn%20van%20zomeren_just%20how%20%E2%80%9Cweird%E2%80%9D%20are%20activists.pdf

- Verba, S., Lehman-Schlozman, K., & Brady, H.E. (1995). *Voice and equality: Civic voluntarism in American politics, 4*. Cambridge: Harvard University Press.
- Videbeck, S. (2011). *Psychiatric-mental health nursing*. (5th edition). Lippincott Williams & Wilkins.
- Vitak, J., Zube, P., Smock, A., Carr, C. T., Ellison, N. B., & Lampe, C. (2011). It's complicated: Facebook users' political participation in the 2008 election. *Cyberpsychology, Behavior, and Social Networking, 14*(3). 107-114. <http://dx.doi.org/10.1089/cyber.2009.0226>
- Warner, M. (2005). *Publics and counterpublics*. New York: Zone Books.
- Weber, E. U., & Stern, P. C. (2011). Public understanding of climate change in the United States. *American Psychologist, 66*(4), 315. <http://dx.doi.org/10.1037/a0023253>
- White, A. (2013, June 7). Can online environmental activism deliver change offline? *The Guardian*. Retrieved from <https://www.theguardian.com/environment/southern-crossroads/2013/jun/07/online-environmental-activism-offline-change-clicktivism>.
- White, M. (2010, August 3). Clicktivism is ruining leftist activism. *The Guardian*. Retrieved from: <http://www.theguardian.com/commentisfree/2010/aug/12/clicktivism-ruining-leftist-activism>.
- White, M. (2010, November 17). *Activism after clicktivism*. Retrieved from <https://www.adbusters.org/article/activism-after-clicktivism/>.
- Whitmarsh, L. (2009). Behavioural responses to climate change: Asymmetry of intentions and impacts. *Journal of Environmental Psychology, 29*(1), 13-23. <http://dx.doi.org/10.1016/j.jenvp.2008.05.003>
- Williams, C., & Gulati, G. (2008). What is a social network worth? Facebook and vote share in the 2008 presidential primaries. In *Annual Meeting of the American Political Science Association*, 1-17. Boston, MA.
- Witte, K. (1992). Putting the fear back into fear appeals: The extended parallel process model. *Communication Monographs, 59*(4), 329-349.
- Witte, K., & Allen, M. (2000). A meta-analysis of fear appeals: Implications for effective public health campaigns. *Health Education & Behavior, 27*(5), 591-615. <http://dx.doi.org/10.1177/109019810002700506>
- Witte, K., Cameron, K.A., McKeon, J. K., & Berkowitz, J. M. (1996). Predicting risk behaviors: Development and validation of a diagnostic scale. *Journal of Health Communication, 1*(4), 317-342. <http://dx.doi.org/10.1080/108107396127988>
- Xenos, M., & Moy, P. (2007). Direct and differential effects of the Internet on political and civic engagement. *Journal of Communication, 57*(4), 704-718.
- Xie, J. (2013, May 14). Pew: Online political activism grows, but 'slacktivism' problem remains [Blog post]. Retrieved from <http://mediashift.org/2013/05/pew-online-political-activity-is-growing-but-slacktivism-and-class-related-gaps-loom/>.
- Zhou & Sloan, D. (2009). *Research Methods in Communication*. Northport, Alabama: Vision Press.

Appendices

APPENDIX A – Online survey including stimulus material (experiment)

Beste Meneer/Mevrouw,

Hartelijk dank voor het deelnemen aan dit onderzoek over milieucommunicatie en burgerparticipatie. Dit onderzoek wordt uitgevoerd als onderdeel van een master scriptie voor de Master Media & Business van de Erasmus Universiteit Rotterdam. De vragenlijst bestaat uit 14 vragen en het duurt gemiddeld 10 minuten om de vragen in te vullen. Dit onderzoek kan alleen worden ingevuld door deelnemers van 18 jaar of ouder. Verder is het belangrijk dat u de Nederlandse taal spreekt en begrijpt, aangezien u in dit onderzoek wordt gevraagd een nieuwsbericht over een milieukwestie te lezen.

Voor het succes van dit onderzoek is het belangrijk dat u alle vragen beantwoordt. U dient de vragenlijst in één keer af te ronden. Natuurlijk bent u vrij om op ieder moment tijdens het onderzoek te stoppen. Uw resultaten kunnen dan echter niet worden meegenomen in de analyse van de data.

Al uw antwoorden zullen vertrouwelijk worden behandeld en anoniem blijven gedurende het gehele onderzoek. De resultaten worden alleen gebruikt voor de master scriptie en worden dus niet gebruikt voor commerciële doeleinden. Vul de vragen individueel en zo waarheidsgetrouw mogelijk in. Er zijn geen goede of foute antwoorden.

Heeft u enige vragen tijdens of na het invullen van de vragenlijst, neemt u dan contact op met Josta Valk via 432948jv@student.eur.nl.

Als u het eens bent met het bovenstaande en voldoende bent geïnformeerd, kunt u nu beginnen met het onderzoek door te klikken op de pijl rechtsonder.

Hartelijk dank voor het invullen van deze vragenlijst!

Met vriendelijke groet, Josta Valk

P.S. Deze vragenlijst kan het best worden ingevuld op een computer met uitgezoomd beeldscherm

1. De volgende vragen gaan over uw deelname aan activiteiten met betrekking tot milieu onderwerpen. "Onder het milieu, verstaan we het biologisch leefklimaat (atmosfeer, bodem, water) die van invloed is op het welzijn van plant, dier en mens".

Met betrekking tot milieu onderwerpen, hoe vaak heeft u deelgenomen aan de volgende activiteiten in de **afgelopen 12 maanden?**

| | Nooit (1) | Een keer (2) | Tussen de 2 en 4 keer (3) | Meer dan 4 keer (4) |
|---|-----------------------|-----------------------|---------------------------|-----------------------|
| Een pagina/post/tweet/video/foto geliked op social media (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Een pagina/post/video/foto gedeeld op social media (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Online nieuws gepost en/of gereageerd op een post (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Informatie opgezocht online of op social media (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Een (online) petitie ondertekend (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Een evenement of product geboycot (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Geschreven over milieukwesties (bijv. in publieke media, eigen blog) (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Contact opgenomen met een (overheids)ambtenaar om diegene aan te sporen actie te ondernemen (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Deelgenomen aan een crowdfunding campagne of geld ingezameld (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Geld gedoneerd aan een milieuorganisatie (10) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Deelgenomen aan een demonstratie of protest (11) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mij ingezet als vrijwilliger (12) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Lees het volgende nieuwsartikel zorgvuldig door. De volgende vragen gaan over deze tekst. Let op! Het kan even duren voordat de tekst laadt!

Stimulus (Internal)

Vele Nederlanders doen mee aan de energie dialoog

DEN HAAG

Terwijl het nog een opgave wordt om de in het Energieakkoord vastgelegde doelen voor 2023 te halen, kijkt minister Henk Kamp (EZ) al verder. In april trapt hij een 'nationale energiedialoog' af.

ANP - Nederland staat voor de opgave om in de komende 35 jaar de energievoorziening te verduurzamen en de CO₂-uitstoot drastisch te verminderen. In 2020 moet 14 procent van onze energie worden opgewekt uit hernieuwbare bronnen, 3 jaar later nog 2 procent meer. Verder moet ons land in 2020 een vijfde minder CO₂ uitstoten dan in 1990. In werkelijkheid wekt Nederland nu slechts 5,8 procent van de stroom op uit zon, wind, biomassa en aardwarmte. De rest komt uit fossiele brandstoffen: kolen, gas, wat kernenergie in Borssele.

In het Energieakkoord zijn miljarden euro's vrijgemaakt voor duurzame projecten. De energie-transitie van voornamelijk fossiele brandstoffen naar hernieuwbare energiebronnen heeft invloed op ons dagelijks leven: de manier waarop we onze huizen verwarmen, onszelf en onze producten vervoeren en de inrichting van het landschap.

De komende maanden gaat Kamp met tientallen organisaties om tafel en inventariseert hij alle opties. Om iedereen de kans te bieden te participeren, bestaat de dialoog uit zowel bijeenkomsten in het land als activiteiten via internet. Via de website www.mijnenergie2050.nl kan iedereen online een reactie plaatsen op relevante vraagstukken of meedoen met de Energie Brainstorm. De Energie dialoog is gestart op 7 april 2016 en loopt tot juli 2016. Het is de bedoeling dat de dialoog sterk zal bijdragen aan een Energieakkoord 2.0.

Uit cijfers van de website blijkt dat vele Nederlanders al meedoen aan deze periode van publieke discussie. De meeste gedachtewisseling vindt plaats rond de vraag hoe en waar we in de toekomst onze energie zullen opwekken. "Het is erg laagdrempelig om een reactie op de website te plaatsen, een brief te schrijven of een email te sturen" zegt politiek analist Jan Bremmer. Vele burgers voelen daarnaast dat ze een redelijk goed begrip hebben van klimaatverandering en hoe het politieke proces werkt. Als gevolg daarvan hebben ze er meer vertrouwen in dat ze effectief kunnen bijdragen aan dit klimaatplan en de energiedialoog.

Dat het belang van het opstellen van nieuwe ambities groot is blijkt uit een recent rapport van de World Meteorological Organisation, het VN-orgaan dat gaat over weer en klimaat, dat stelt dat de gemiddelde wereldwijde temperatuur de eerste vier maanden van 2016, 1.14 graden warmer was dan het gemiddelde in de 20^{ste} eeuw. Hierdoor worden "ongekende extreme weersomstandigheden en klimaat gebeurtenissen", zoals hittegolven, overstromingen en droogte steeds waarschijnlijker in de aankomende decennia als gevolg van de klimaatverandering. Ook is "Oost-Antarctica veel kwetsbaarder voor opwarming dan we dachten. Daar moeten we ons zorgen over maken" zeggen de onderzoekers. Het oosten van de Zuidpool is de grootste ijsmassa op aarde. "Elke kleine verandering daar heeft grote invloed over de hele wereld". Als de uitstoot van broeikasgassen tussen nu en 2100 wordt teruggebracht tot 0, blijft de bijdrage van de Antarctische ijskap voor de zeespiegelstijging bij Nederland beperkt tot 70 centimeter extra, in plaats van een meter, zegt het KNMI. De zeespiegelstijging kan grote gevolgen hebben voor de kustverdediging van Nederland.

Q26 NB: Na minimaal 30 seconden kunt u drukken op de pijltjes (>>) om verder te gaan.

Intro stimulus Lees het volgende nieuwsartikel zorgvuldig door. De volgende vragen gaan over deze tekst. Let op! Het kan even duren voordat de tekst laadt!

Stimulus (External)

Door de energie dialoog hebben burgers invloed op het Energieakkoord 2.0

DEN HAAG

Terwijl het nog een opgave wordt om de in het Energieakkoord vastgelegde doelen voor 2023 te halen, kijkt minister Henk Kamp (EZ) al verder. In april trapte hij een 'nationale energiedialoog' af.

ANP - Nederland staat voor de opgave om in de komende 35 jaar de energievoorziening te verduurzamen en de CO2-uitstoot drastisch te verminderen. In 2020 moet 14 procent van onze energie worden opgewekt uit hernieuwbare bronnen, 3 jaar later nog 2 procent meer. Verder moet ons land in 2020 een vijfde minder CO2 uitstoten dan in 1990. In werkelijkheid wekt Nederland nu slechts 5,8 procent van de stroom op uit zon, wind, biomassa en aardwarmte. De rest komt uit fossiele brandstoffen: kolen, gas, wat kernenergie in Borssele.

In het Energieakkoord zijn miljarden euro's vrijgemaakt voor duurzame projecten. De energie-transitie van voornamelijk fossiele brandstoffen naar hernieuwbare energiebronnen heeft invloed op ons dagelijks leven: de manier waarop we onze huizen verwarmen, onszelf en onze producten vervoeren en de inrichting van het landschap.

De komende maanden gaat Kamp met tientallen organisaties om tafel en inventariseert hij alle opties. Om iedereen de kans te bieden te participeren, bestaat de dialoog uit zowel bijeenkomsten in het land als activiteiten via internet. Via de website www.mijnenergie2050.nl kan iedereen online een reactie plaatsen op relevante vraagstukken of meedoen met de Energie Brainstorm. De Energie dialoog is gestart op 7 april 2016 en loopt tot juli 2016. Het is de bedoeling dat de dialoog sterk zal bijdragen aan een Energieakkoord 2.0.

De periode van publieke discussie maakt het mogelijk dat met de opvattingen van de gewone burger rekening wordt gehouden voordat de voorgestelde regelgeving wordt afgerond. "Ik denk dat de regering vastbesloten is de adviezen van het publiek op te nemen bij de herziening van het voorstel in het komende jaar. De minister staat open voor het veranderen van de voorgenomen regelgeving als gevolg van de publieke inbreng aangezien het debat een belangrijk onderdeel is van het gehele regelgeving proces," aldus politiek analist Jan Bremmer.

Dat het belang van het opstellen van nieuwe ambities groot is blijkt uit een recent rapport van de World Meteorological Organisation, het VN-orgaan dat gaat over weer en klimaat, dat stelt dat de gemiddelde wereldwijde temperatuur de eerste vier maanden van 2016, 1.14 graden warmer was dan het gemiddelde in de 20^{ste} eeuw. Hierdoor worden "ongekende extreme weersomstandigheden en klimaat gebeurtenissen", zoals hittegolven, overstromingen en droogte steeds waarschijnlijker in de aankomende decennia als gevolg van de klimaatverandering. Ook is "Oost-Antarctica veel kwetsbaarder voor opwarming dan we dachten. Daar moeten we ons zorgen over maken" zeggen de onderzoekers. Het oosten van de Zuidpool is de grootste ijsmassa op aarde. "Elke kleine verandering daar heeft grote invloed over de hele wereld". Als de uitstoot van broeikasgassen tussen nu en 2100 wordt teruggebracht tot 0, blijft de bijdrage van de Antarctische ijskap voor de zeespiegelstijging bij Nederland beperkt tot 70 centimeter extra, in plaats van een meter, zegt het KNMI. De zeespiegelstijging kan grote gevolgen hebben voor de kustverdediging van Nederland.

Q29 NB: Na minimaal 30 seconden kunt u drukken op de pijltjes (>>) om verder te gaan.

Intro stimulus Lees het volgende nieuwsartikel zorgvuldig door. De volgende vragen gaan over deze tekst. Let op! Het kan even duren voordat de tekst laadt!

Stimulus (Response)

Het Energieakkoord 2.0 kan de negatieve gevolgen van de klimaatverandering helpen stoppen

DEN HAAG

Terwijl het nog een opgave wordt om de in het Energieakkoord vastgelegde doelen voor 2023 te halen, kijkt minister Henk Kamp (EZ) al verder. In april trapte hij een 'nationale energiedialoog' af.

ANP - Nederland staat voor de opgave om in de komende 35 jaar de energievoorziening te verduurzamen en de CO₂-uitstoot drastisch te verminderen. In 2020 moet 14 procent van onze energie worden opgewekt uit hernieuwbare bronnen, 3 jaar later nog 2 procent meer. Verder moet ons land in 2020 een vijfde minder CO₂ uitstoten dan in 1990. In werkelijkheid wekt Nederland nu slechts 5,8 procent van de stroom op uit zon, wind, biomassa en aardwarmte. De rest komt uit fossiele brandstoffen: kolen, gas, wat kernenergie in Borssele.

In het Energieakkoord zijn miljarden euro's vrijgemaakt voor duurzame projecten. De energie-transitie van voornamelijk fossiele brandstoffen naar hernieuwbare energiebronnen heeft invloed op ons dagelijks leven: de manier waarop we onze huizen verwarmen, onszelf en onze producten vervoeren en de inrichting van het landschap.

De komende maanden gaat Kamp met tientallen organisaties om tafel en inventariseert hij alle opties. Om iedereen de kans te bieden te participeren, bestaat de dialoog uit zowel bijeenkomsten in het land als activiteiten via internet. Via de website www.mijnenergie2050.nl kan iedereen online een reactie plaatsen op relevante vraagstukken of meedoen met de Energie Brainstorm. De Energie dialoog is gestart op 7 april 2016 en loopt tot juli 2016. Het is de bedoeling dat de dialoog sterk zal bijdragen aan een Energieakkoord 2.0.

De door het akkoord voorgestelde vermindering van de CO₂-uitstoot zal naar verwachting een effectief instrument zijn in de inspanning om de negatieve gevolgen van de klimaatverandering te stoppen. Op basis van schattingen van het KNMI, kunnen de voorgestelde maatregelen de stijging van de wereldwijde gemiddelde temperatuur helpen vertragen, waardoor een deel van de catastrofale gevolgen van klimaatverandering kunnen worden voorkomen. Verder zouden volgens politiek analist Jan Bremmer, andere grote vervuilers ter wereld, zoals de VS en China dit leiderschap van Europa en Nederland kunnen volgen en striktere limieten op CO₂-emissies vaststellen in hun eigen land.

Dat het belang van het opstellen van nieuwe ambities groot is blijkt uit een recent rapport van de World Meteorological Organisation, het VN-orgaan dat gaat over weer en klimaat, dat stelt dat de gemiddelde wereldwijde temperatuur de eerste vier maanden van 2016, 1.14 graden warmer was dan het gemiddelde in de 20^{ste} eeuw. Hierdoor worden "ongekende extreme weersomstandigheden en klimaat gebeurtenissen", zoals hittegolven, overstromingen en droogte steeds waarschijnlijker in de aankomende decennia als gevolg van de klimaatverandering. Ook is "Oost-Antarctica veel kwetsbaarder voor opwarming dan we dachten. Daar moeten we ons zorgen over maken" zeggen de onderzoekers. Het oosten van de Zuidpool is de grootste ijsmassa op aarde. "Elke kleine verandering daar heeft grote invloed over de hele wereld". Als de uitstoot van broeikasgassen tussen nu en 2100 wordt teruggebracht tot 0, blijft de bijdrage van de Antarctische ijskap voor de zeespiegelstijging bij Nederland beperkt tot 70 centimeter extra, in plaats van een meter, zegt het KNMI. De zeespiegelstijging kan grote gevolgen hebben voor de kustverdediging van Nederland.

Q31 NB: Na minimaal 30 seconden kunt u drukken op de pijltjes (>>) om verder te gaan.

Intro stimulus Lees het volgende nieuwsartikel zorgvuldig door. De volgende vragen gaan over deze tekst. Let op! Het kan even duren voordat de tekst laadt!

Stimulus (Control)

Ernstige gevolgen van klimaatverandering in de nabije toekomst volgens onlangs verschenen rapport

DEN HAAG

ANP - Nederland staat voor de opgave om in de komende 35 jaar de energievoorziening te verduurzamen en de CO₂-uitstoot drastisch te verminderen. In 2020 moet 14 procent van onze energie worden opgewekt uit hernieuwbare bronnen, 3 jaar later nog 2 procent meer. Verder moet ons land in 2020 een vijfde minder CO₂ uitstoten dan in 1990. In werkelijkheid wekt Nederland nu slechts 5,8 procent van de stroom op uit zon, wind, biomassa en aardwarmte. De rest komt uit fossiele brandstoffen: kolen, gas, wat kernenergie in Borssele.

Dat het belang van het opstellen van nieuwe ambities groot is blijkt uit een recent rapport van de World Meteorological Organisation, het VN-orgaan dat gaat over weer en klimaat, dat stelt dat de gemiddelde wereldwijde temperatuur de eerste vier maanden van 2016, 1.14 graden warmer was dan het gemiddelde in de 20^{ste} eeuw. Hierdoor worden "ongekende extreme weersomstandigheden en klimaat gebeurtenissen", zoals hittegolven, overstromingen en droogte steeds waarschijnlijker in de aankomende decennia als gevolg van de klimaatverandering. Ook is "Oost-Antarctica veel kwetsbaarder voor opwarming dan we dachten. Daar moeten we ons zorgen over maken" zeggen de onderzoekers. Het oosten van de Zuidpool is de grootste ijsmassa op aarde. "Elke kleine verandering daar heeft grote invloed over de hele wereld". Als de uitstoot van broeikasgassen tussen nu en 2100 wordt teruggebracht tot 0, blijft de bijdrage van de Antarctische ijskap voor de zeespiegelstijging bij Nederland beperkt tot 70 centimeter extra, in plaats van een meter, zegt het KNMI. De zeespiegelstijging kan grote gevolgen hebben voor de kustverdediging van Nederland.

Q33 NB: Na minimaal 30 seconden kunt u drukken op de pijltjes (>>) om verder te gaan.

2. Geef alstublieft hieronder aan hoe u denkt over de inhoud van het artikel dat u net gelezen heeft. Gelieve aan te geven op een schaal van 1 tot 7. Waar 1 betekent dat u het er helemaal mee oneens bent en 7 dat u het er helemaal mee eens bent.

| | Helemaal mee oneens (1) | (2) | (3) | (4) | (5) | (6) | Helemaal mee eens (7) |
|--------------------------------|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| De inhoud is accuraat (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| De inhoud is geloofwaardig (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| De inhoud is authentiek (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

3. In hoeverre voelde u de volgende emoties tijdens het lezen van het nieuwsartikel? Gelieve aan te geven op een schaal van 1 tot 7. Waar 1 betekent helemaal niet en 7 heel erg.

| | Helemaal niet (1) | (2) | (3) | (4) | (5) | (6) | Heel erg (7) |
|-----------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Hoopvol (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Enthousiast (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Angstig (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Bezorgd (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Boos (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

4. Hoe waarschijnlijk zou u deelnemen aan de volgende activiteiten in de komende 12 maanden, specifiek gericht op het beperken van klimaatverandering?

Gelieve aan te geven op een schaal van 1 tot 7. Waar 1 betekent zeer onwaarschijnlijk en 7 zeer waarschijnlijk.

| | Ze er on waarschijnlijk (1) | (2) | (3) | (4) | (5) | (6) | Ze er waarschijnlijk (7) |
|--|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------------------|
| Contact opnemen met overheidsambtenaren om hen aan te sporen actie te ondernemen om klimaatverandering te beperken (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Deelnemen aan een bijeenkomst of protest ter ondersteuning van maatregelen om klimaatverandering te beperken (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Een petitie ondertekenen ter ondersteuning van maatregelen om klimaatverandering te beperken (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Lid of vrijwilliger worden bij een organisatie die werkt aan het beperken van klimaatverandering (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Geld doneren aan een organisatie die werkt aan het beperken van klimaatverandering (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

5. Lees elk van onderstaande stellingen zorgvuldig door en geef aan in hoeverre u het wel of niet eens bent met elke stelling.

Gelieve aan te geven op een schaal van 1 tot 7. Waar 1 betekent dat u het er helemaal mee oneens bent en 7 dat u het er helemaal mee eens bent.

| | Helemaal mee oneens (1) | (2) | (3) | (4) | (5) | (6) | Helemaal mee eens (7) |
|--|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------------|
| Ik voel dat ik een redelijk goed begrip heb van de belangrijke politieke problemen waarmee ons land te maken heeft (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ik voel me meestal zeker van mezelf bij het praten met andere mensen over politiek (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ik denk dat ik net zo geïnformeerd ben over de politiek en de overheid als de meeste mensen (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ik beschouw mezelf goed in staat om deel te nemen aan politieke activiteiten (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| De meeste overheidsfunctionarissen zijn echt geïnteresseerd in wat de mensen denken (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ik denk niet dat overheidsfunctionarissen geven om wat mensen zoals ik denken (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| De gemiddelde persoon kan politici beïnvloeden (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| De voorgestelde verlaging van de CO2-uitstoot werkt bij het voorkomen van verdere klimaatverandering (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| <p>Het verminderen van de CO2-uitstoot is effectief in het voorkomen van verdere klimaatverandering (9)</p> | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| <p>Als we handelen naar het voorgestelde beleid van het verminderen van de CO2-uitstoot, dan zal klimaatverandering minder snel verergeren (10)</p> | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

6. Lees elk van onderstaande stellingen zorgvuldig door en geef aan in hoeverre u het wel of niet eens bent met elke stelling.

Gelieve aan te geven op een schaal van 1 tot 7. Waar 1 betekent dat u het er helemaal mee oneens bent en 7 dat u het er helemaal mee eens bent.

| | Helemaal mee oneens (1) | (2) | (3) | (4) | (5) | (6) | Helemaal mee eens (7) |
|--|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------------|
| De natuurlijke balans is zeer kwetsbaar en makkelijk verstoord door menselijke activiteiten (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ecologische, in plaats van economische, overwegingen moeten ons leiden bij het gebruik van natuurlijke hulpbronnen (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| We hechten te veel belang aan economische aspecten van het welzijn van onze samenleving (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| We komen steeds dichterbij het maximumaantal mensen dat de aarde kan dragen (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Als mensen zich met de natuur bemoeien heeft dat vaak desastreuze gevolgen (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mensen moeten in harmonie leven met de natuur om te overleven (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Er zit een limiet aan de groei van onze geïndustrialiseerde samenleving (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Tot slot, worden er op de volgende pagina nog een paar algemene vragen gesteld.

7. Wat is uw leeftijd?

8. Wat is uw geslacht?

- Man (1)
- Vrouw (2)

9. Wat is uw hoogst genoten opleiding? (Momenteel ingeschreven of voltooid)

- Basisonderwijs (1)
- Lager beroepsonderwijs (VMBO, MULO, ULO MAVO) (2)
- Hoger voortgezet onderwijs (HAVO) (3)
- Voorbereidend wetenschappelijk onderwijs (VWO) (4)
- Middelbaar beroepsonderwijs (MBO) (5)
- Hoger beroepsonderwijs - Bachelor (HBO) (6)
- Wetenschappelijk onderwijs - WO Bachelor (Universiteit) (7)
- Wetenschappelijk onderwijs - WO Master (Universiteit) (8)
- PHD (9)
- Anders: (10) _____

10. Wat is uw huidige werksituatie?

- Student (1)
- Met pensioen (2)
- Invalide (3)
- Volledig dienstverband (4)
- Parttime dienstverband (5)
- Werkloos op zoek naar werk (6)
- Werkloos niet op zoek naar werk (7)

Q11 11. Het modaal inkomen, volgens het CPB is €36.500 per jaar per persoon. (Per maand is dit bruto €2.808 en netto ongeveer 2.021€). Geef alstublieft hieronder aan hoe hoog uw bruto jaarinkomen is in vergelijking met dit gemiddelde.

- De helft van het modaal inkomen of minder (1)
- Iets lager dan het modaal inkomen (2)
- Ongeveer gelijk aan het modaal inkomen (3)
- Iets hoger dan het modaal inkomen (4)
- 2x modaal inkomen of hoger (5)
- Wil ik niet zeggen (6)
- Weet niet (7)

12. Als er vandaag nationale verkiezingen zouden worden gehouden, zou u dan op een meer linkse partij of een meer rechtse partij stemmen?

- Links (1)
- Centrumlinks (2)
- Midden (3)
- Centrumrechts (4)
- Rechts (5)
- Niet van plan om te stemmen (6)
- Weet niet (7)
- Anders: (8) _____

13. Waar denkt u dat deze studie over ging? Als u het niet weet, druk dan >> om verder te gaan.

14. Onderstaande button geeft u de mogelijkheid om na dit onderzoek te reageren op de voorgestelde regelgeving van de overheid om de CO2-uitstoot te verminderen. Door op de button te klikken, wordt u na afloop van deze enquête doorverwezen naar de officiële website van mijnenergie2050.nl. Als u dit niet wilt hoeft u deze button niet aan te klikken.

GA NAAR DE SITE

Klik na u keuze op verder (>>) om door te gaan naar de volgende pagina van dit onderzoek.

End Note:

U bent aan het einde gekomen van deze vragenlijst. Vergeet niet om nog één keer op volgende (>>) te klikken, dan pas worden uw antwoorden opgeslagen!

Heeft u naar aanleiding van de vragenlijst nog vragen of bent u geïnteresseerd in de resultaten van dit onderzoek? Neem dan contact op met Josta Valk door te mailen naar 432948jv@student.eur.nl of laat in onderstaande balk een e-mailadres achter.

De button in de laatste vraag is onderdeel van deze studie en is om die reden helaas niet echt. Hiermee is slechts gemeten in hoeverre u bereid bent om te reageren op de website. Mocht u alsnog geïnteresseerd zijn, dan verwijs ik u door naar de officiële website van mijnenergie2050.nl. Het nieuwsbericht dat u net gelezen heeft is ten behoeve van het onderzoek tekstueel aangepast, de inhoud is waarheidsgetrouw.

Nogmaals hartelijk dank voor uw deelname!

Het is belangrijk om op de >> te klikken om uw antwoorden op te slaan!

Met vriendelijke groeten,
Josta Valk

APPENDIX B – Factor loadings questionnaire items

Convergent validity and reliability statistics (N = 215)

| Construct | Items | Factor Loadings (Varimax Rotation) |
|--|---|---------------------------------------|
| Credibility | De inhoud is accuraat (1) | .92 |
| | De inhoud is geloofwaardig (2) | .89 |
| | De inhoud is authentiek (3) | .81 |
| | Cronbach's alpha: .85 Eigenvalue: 2.30 | |
| Environmental political participation | Deelnemen aan een bijeenkomst of protest ter ondersteuning van maatregelen om klimaatverandering te beperken (2) | .85 |
| | Lid of vrijwilliger worden bij een organisatie die werkt aan het beperken van klimaatverandering (4) | .84 |
| | Een petitie ondertekenen ter ondersteuning van maatregelen om klimaatverandering te beperken (3) | .80 |
| | Geld doneren aan een organisatie die werkt aan het beperken van klimaatverandering (5) | .75 |
| | Contact opnemen met overheids-ambtenaren om hen aan te sporen actie te ondernemen om klimaatverandering te beperken (1) | .74 |
| | Cronbach's alpha: .86 Eigenvalue: 3.18 | |

Efficacy

Internal Efficacy

| | |
|--|-----|
| Ik voel me meestal zeker van mezelf bij het praten met andere mensen over politiek (2) | .90 |
| Ik voel dat ik een redelijk goed begrip heb van de politieke problemen waarmee ons land te maken heeft (1) | .84 |
| Ik beschouw mezelf goed in staat om deel te nemen aan politieke activiteiten (4) | .84 |
| Ik denk dat ik net zo geïnformeerd ben over de politiek en de overheid als de meeste mensen (3) | .70 |

Cronbach's alpha: .84
Eigenvalue: 3.18

External Efficacy

| | |
|---|-----|
| De meeste overheidsfunctionarissen zijn echt geïnteresseerd in wat de mensen denken (5) | .79 |
| Ik denk niet dat overheidsfunctionarissen geven om wat mensen zoals ik denken (6R) REVERSED | .79 |
| De gemiddelde persoon kan politici beïnvloeden (7) | .62 |

Cronbach's alpha: .60
Eigenvalue: 1.40

Response Efficacy

| | |
|--|-----|
| De voorgestelde verlaging van de CO2-uitstoot werkt bij het voorkomen van verdere klimaatverandering (8). | .83 |
| Als we handelen naar het voorgestelde beleid van het verminderen van de CO2-uitstoot dan zal klimaatverandering minder snel verergeren (10). | .83 |
| Het verminderen van de CO2-uitstoot is effectief in het voorkomen van verdere klimaatverandering (9) | .78 |

Cronbach's alpha: .76
Eigenvalue: 2.01

Ecological Beliefs

| | |
|--|-----|
| We hechten te veel belang aan economische aspecten van het welzijn van onze samenleving (3) | .73 |
| Mensen moeten in harmonie leven met de natuur om te overleven (6) | .73 |
| Er zit een limiet aan de groei van onze geïndustrialiseerde samenleving (7) | .73 |
| Ecologische, in plaats van economische, overwegingen moeten ons leiden bij het gebruik van natuurlijke hulpbronnen (2) | .72 |
| Als mensen zich met de natuur bemoeien heeft dat vaak desastreuze gevolgen (5) | .62 |
| We komen steeds dichterbij het maximumaantal mensen dat de aarde kan dragen (4) | .60 |
| De natuurlijke balans is zeer kwetsbaar en makkelijk verstoord door menselijke activiteiten (1) | .55 |

Cronbach's alpha: .79**Eigenvalue: 3.14****Emotions****Hope**

| | |
|------------------|-----|
| Hopeful (1) | .92 |
| Enthusiastic (2) | .92 |

Cronbach's alpha: .82**Eigenvalue: 1.70****Fear**

| | |
|-------------|-----|
| Anxious (4) | .89 |
| Fearful (3) | .87 |

Anger

| | |
|-----------------------------------|-----|
| Angry (5) (used as a single item) | .83 |
|-----------------------------------|-----|

Cronbach's alpha: .83**Eigenvalue: 2.24**

APPENDIX C – English translation of online survey (experiment)

Dear Sir/ Madam,

Thank you for taking part in this study on environmental communication and civic participation. This research is conducted as part of a master's thesis for the Master Media and Business from Erasmus University Rotterdam. The questionnaire consists of 14 questions and it takes about 10 minutes of your time. This research can only be filled in by participants of 18 years or older. You can only participate in this study if you speak and understand Dutch as this research involves reading one short news article about an environmental issue.

For the success of this research, it is very important that you answer all of the questions. You can decide to stop the study at any time, however, your results will not be included in the data analysis.

All your answers will be kept confidential and remain anonymous throughout the entire research. The results are used only for the Master's thesis and are not used for commercial purposes. Fill out the questions individually and as truthfully as possible. There are no right or wrong answers.

If you have any questions during or after completing the questionnaire, please contact Josta Valk via 432948jv@student.eur.nl.

To continue to the survey and to acknowledge you understand above noted terms, please click the arrow button on the right-hand corner.

Thank you!
Josta Valk

P.s. The questionnaire can best be completed on a desktop computer with zoomed out screen.

1. The following questions are about your participation in activities related to environmental issues. "By environment, we mean the organic climate (the atmosphere, soil, water) that affects the well-being of plants, animals, and humans".

With regard to environmental issues, how often did you participate in following activities **in the past 12 months?**

| | Never (1) | Once this year (2) | Between 2-4 times (3) | More than 5 times (4) |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| Liked a page/post/tweet/video/picture on social media (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Shared a page/post/tweet/video/picture on social media (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Posted news or comments online (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Got information online or on a social networking site (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Signed an (online) petition (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Boycotted an event or product (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Written about environmental issues (e.g. public media, own blog) (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Contacted government officials to urge them to take action (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Participated in a crowdfunding campaign or raised money (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Donated money to an environmental organization (10) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Participated in a rally or protest (11) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Volunteered (12) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Intro Stimulus: Please read the following news article carefully. The following questions are about this text.

Stimulus (Internal)

Q25 NB: You can only press the arrow to continue after 30 seconds.

Q26 Timing

- First Click (1)
- Last Click (2)
- Page Submit (3)
- Click Count (4)

Intro Stimulus: Please read the following news article carefully. The following questions are about this text.

Stimulus (External)

Q29 NB: You can only press the arrow to continue after 30 seconds.

Q28 Timing

- First Click (1)
- Last Click (2)
- Page Submit (3)
- Click Count (4)

Intro Stimulus: Please read the following news article carefully. The following questions are about this text.

Stimulus (Response)

Q31 NB: You can only press the arrow to continue after 30 seconds.

Q30 Timing

- First Click (1)
- Last Click (2)
- Page Submit (3)
- Click Count (4)

Intro Stimulus: Please read the following news article carefully. The following questions are about this text.

Stimulus (Control)

Q33 NB: You can only press the arrow to continue after 30 seconds.

Q32 Timing

- First Click (1)
- Last Click (2)
- Page Submit (3)
- Click Count (4)

2. Please indicate below how you think about the content of the article you have just read.

Please indicate on a scale from 1 to 7, where 1 means you strongly disagree and 7 that you strongly agree.

| | Strongly disagree (1) | (2) | (3) | (4) | (5) | (6) | Strongly agree (7) |
|-------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| The content is accurate (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The content is believable (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The content is authentic (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

3. How much have you felt each of the following emotions while reading the news article? Please indicate on a scale from 1 to 7, where 1 means not at all and 7 very.

| | Not at all (1) | (2) | (3) | (4) | (5) | (6) | Very (7) |
|------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Hopeful (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Enthusiastic (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Fearful (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Anxious (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Angry (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

4. How likely are you to engage in the following activities over the next 12 months aimed specifically at mitigating climate change?

Please indicate on a scale from 1 to 7, where 1 means it is extremely unlikely and 7 that it is extremely likely.

| | Extremely unlikely (1) | (2) | (3) | (4) | (5) | (6) | Extremely likely (7) |
|---|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Contact government officials to urge them to take action to reduce climate change (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Participate in a rally or protest in support of action to reduce climate change (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sign a petition in support of taking action to reduce climate change (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Join or volunteer with an organization working to reduce climate change (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Donate money to an organisation working to reduce climate change (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

5. Please carefully read each statement below and indicate how much you agree with each statement. Please indicate on a scale from 1 to 7. Where 1 means that you strongly disagree and 7 that you strongly agree.

| | Strongly disagree (1) | (2) | (3) | (4) | (5) | (6) | Strongly agree (7) |
|--|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I feel I have pretty good understanding of the important political issues facing our country (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I usually feel sure of myself when talking with other people about politics (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I think that I am as well informed about politics and government as most people (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I consider myself well qualified to participate in politics (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Most public officials are truly interested in what the people think (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I don't think public officials care much about what people like me think (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| | | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| The average person can influence politicians. (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The proposed reduction of CO2 levels works in preventing further climate change. (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Reducing CO2 levels is effective in preventing further climate change. (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| If we act according to the proposed policy of reducing CO2 levels, climate change is less likely to worsen. (10) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

6. Please carefully read each statement below and indicate how much you agree with each statement. Please indicate on a scale from 1 to 7. Where 1 means that you strongly disagree and 7 that you strongly agree.

| | Strongly disagree (1) | (2) | (3) | (4) | (5) | (6) | Strongly agree (7) |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| The balance of nature is very delicate and easily upset by human activities (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ecological, rather than economic, factors must guide our use of natural resources (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| We attach too much importance to economic measures of the well-being of our society (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| We are approaching the limit of the number of people the earth can support (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When humans interfere with nature, it often produces disastrous consequences (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Humans must live in harmony with nature in order to survive (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| There are limits to growth beyond which our industrialized society cannot expand (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Finally, we would like you to fill in the following information

7. What is your age?

8. What is your gender?

- Male (1)
- Female (2)

9. What is your highest completed educational level? (currently enrolled or completed)

- Primary school (1)
- Lower vocational education (VMBO, MULO, ULO MAVO) (2)
- Upper secondary education (HAVO) (3)
- Pre-university secondary education (VWO) (4)
- Secondary vocational education (MBO) (5)
- University of Applied Sciences - Bachelor (HBO) (6)
- Bachelor's degree (University) (7)
- Master's degree (University) (8)
- PHD (9)
- Other: (10) _____

10. What is your current employment status?

- Student (1)
- Retired (2)
- Disabled (3)
- Employed full time (4)
- Employed part time (5)
- Unemployed looking for work (6)
- Unemployed not looking for work (7)

11. The average income, according to CPB is €36.500 per year per person. (Per month this is gross €2.808 and net about 2.021€). Will you please indicate how high your gross annual income is compared to this average?

- Half the average income or less (1)
- Slightly lower than the average income (2)
- Approximately equal to the average income (3)
- Slightly higher than the average income (4)
- 2x the average income or higher (5)
- I would rather not say (6)
- Don't know (7)

12. If national elections were held today, would you vote for a more left-wing party or a more right-wing party?

- Left (1)
- Center left (2)
- Center (3)
- Center right (4)
- Right (5)
- Not intend to vote (6)
- Don't know (7)

○ Other: (8) _____

13. What do you think this study was about? If you don't know, press >> to proceed.

14 The button below gives you the opportunity to go to the website mijnenergie2050.nl where you can comment on the proposed regulations of the government to reduce carbon emissions. By clicking the button, you will be redirected to the official website mijnenergie2050.nl after this survey.



(Subsequently) click on >> to proceed to the next page of this study.

End note:

You have reached the end of the questionnaire. Don't forget to press on next (>>) to save your answers!

If you have any questions or feedback as a result of this survey or if you are interested in the results of this research, please contact Josta Valk by emailing 432948jv@student.eur.nl or leave an email address in the bar below.

The button in the preceding question is part of this study and is for that reason not real. This only measured to what extent you are willing to respond on the website. If you are still interested, I refer you to the official website of mijnenergie2050.nl.

Once again thank you for your participation!

It is important to press the >> button to save your answers!

Kind regards,
Josta Valk

APPENDIX D – English translation of stimulus material (experiment)

Many Dutch are Finding it Easy to Weigh in on the Energy Dialogue

THE HAGUE

While it is still a challenge to achieve the objectives set out in the Energy Agreement 2023, Secretary Henk Kamp (EZ) already looks ahead. In April he launched the national energy dialogue.

ANP – In the coming 35 years, The Netherlands will face the challenge of making its energy supplies more sustainable and reducing CO₂-emissions drastically. In 2020, 14 percent of our energy needs to be generated from renewable sources, and three years later, another 2 percent. Furthermore, by 2020, our country needs to reduce a fifth less CO₂ emissions than in 1990. At the moment, the Netherlands only generates 5,8 percent of its current energy from solar, wind, biomass and geothermal sources while most of the energy is derived from fossil fuels: coal, gas, some nuclear energy in Borssele.

We should honestly see improvements in the coming years. Through the Energy Agreement, billions of euros have been made available for renewable energy projects. This energy-transition, from mainly fossils fuels to sustainable energy sources, has been having an impact on our daily lives: the way we heat our homes, transport ourselves and our products, and landscaping.

In the coming months, Kamp will get together with dozens of stakeholder organizations and enumerate all options. To give everyone the opportunity to participate, the energy dialogue includes meetings across the country as well as activities on the internet. Via the website www.mijnenergie2050.nl, anyone can post a comment online on relevant issues or join the Energy Brainstorm. The website of the “Energy dialogue” was launched begin April and will run until July 2016. It is envisaged that the dialogue will strongly contribute to an “Energy Agreement 2.0”.

Already, many Dutch are taking advantage of the public commenting period, according to figures of the website. Much of the discussion has been on the question of how and where we generate our future energy supplies. “It’s easy enough to submit a comment on the website, send an e-mail, or write a letter” said political analyst Jan Bremmer. Many citizens also feel they have a reasonable grasp of climate change and of how the political process works. As a result, they are more confident that they can effectively comment on the climate plan and energy dialogue.

The importance for drafting new ambitions is apparent from a recent report by the World Meteorological Organization, the UN body for climate and weather, which claims that the average global temperature in the past four months of 2016 was 1.14C warmer compared to the average in the 20th century. Unprecedented extreme weather and climate events, such as heat waves, floods and drought, have become increasingly likely in the coming decades due to climate change. Furthermore, “East Antarctica is much more vulnerable to global warming than we thought. This we have to worry about” the scientists say. The east of the South Pole is the largest mass of ice on Earth. “Every small change there has great impact on the environment all around the world”. If CO₂ emissions between now and 2100 are reduced to 0, then the contribution of the Antarctic ice sheet to rising sea levels in the Netherlands will be limited to 70 extra centimeters, instead of a meter, says the KNMI. Rising sea levels could have major implications for the coastal defense of the Netherlands.

Severe impacts of climate change on the horizon according new report

THE HAGUE

ANP – In the coming 35 years, The Netherlands will face the challenge of making its energy supplies more sustainable and reducing CO₂-emissions drastically. In 2020, 14 percent of our energy needs to be generated from renewable sources, and three years later, another 2 percent. Furthermore, by 2020, our country needs to reduce a fifth less CO₂ emissions than in 1990. At the moment, the Netherlands only generates 5,8 percent of its current energy from solar, wind, biomass and geothermal sources while most of the energy is derived from fossil fuels: coal, gas, some nuclear energy in Borssele.

The importance for drafting new ambitions is apparent from a recent report by the World Meteorological Organization, the UN body for climate and weather, which claims that the average global temperature in the past four months of 2016 was 1.14C warmer compared to the average in the 20th century. Unprecedented extreme weather and climate events, such as heat waves, floods and drought, have become increasingly likely in the coming decades due to climate change. Furthermore, “East Antarctica is much more vulnerable to global warming than we thought. This we have to worry about” the scientists say. The east of the South Pole is the largest mass of ice on Earth. “Every small change there has great impact on the environment all around the world”. If CO₂ emissions between now and 2100 are reduced to 0, then the contribution of the Antarctic ice sheet to rising sea levels in the Netherlands will be limited to 70 extra centimeters, instead of a meter, says the KNMI. Rising sea levels could have major implications for the coastal defense of the Netherlands.

The energy dialogue will strongly consider public comments before finalizing “Energy Agreement” 2.0

THE HAGUE

While it is still a challenge to achieve the objectives set out in the Energy Agreement 2023, Secretary Henk Kamp (EZ) already looks ahead. In April he launched the national energy dialogue.

ANP – In the coming 35 years, The Netherlands will face the challenge of making its energy supplies more sustainable and reducing CO₂-emissions drastically. In 2020, 14 percent of our energy needs to be generated from renewable sources, and three years later, another 2 percent. Furthermore, by 2020, our country needs to reduce a fifth less CO₂ emissions than in 1990. At the moment, the Netherlands only generates 5,8 percent of its current energy from solar, wind, biomass and geothermal sources while most of the energy is derived from fossil fuels: coal, gas, some nuclear energy in Borssele.

We should honestly see improvements in the coming years. Through the Energy Agreement, billions of euros have been made available for renewable energy projects. This energy-transition, from mainly fossils fuels to sustainable energy sources, has been having an impact on our daily lives: the way we heat our homes, transport ourselves and our products, and landscaping.

In the coming months, Kamp will get together with dozens of stakeholder organizations and enumerate all options. To give everyone the opportunity to participate, the energy dialogue includes meetings across the country as well as activities on the internet. Via the website www.mijnenergie2050.nl, anyone can post a comment online on relevant issues or join the Energy Brainstorm. The website of the “Energy dialogue” was launched begin April and will run until July 2016. It is envisaged that the dialogue will strongly contribute to an “Energy Agreement 2.0”.

The public commenting period ensures that the views of ordinary citizens will be taken into account before the proposed regulations are finalized. “I think the government is committed to incorporating the opinions of the public when revising the proposal over the next year. The minister is open-minded and may change the proposed regulations as a result of public input since the debate is an important part of the regulatory process,” said political analyst Jan Bremmer.

The importance for drafting new ambitions is apparent from a recent report by the World Meteorological Organization, the UN body for climate and weather, which claims that the average global temperature in the past four months of 2016 was 1.14C warmer compared to the average in the 20th century. Unprecedented extreme weather and climate events, such as heat waves, floods and drought, have become increasingly likely in the coming decades due to climate change. Furthermore, “East Antarctica is much more vulnerable to global warming than we thought. This we have to worry about” the scientists say. The east of the South Pole is the largest mass of ice on Earth. “Every small change there has great impact on the environment all around the world”. If CO₂ emissions between now and 2100 are reduced to 0, then the contribution of the Antarctic ice sheet to rising sea levels in the Netherlands will be limited to 70 extra centimeters, instead of a meter, says the KNMI. Rising sea levels could have major implications for the coastal defense of the Netherlands

Proposed Energy Agreement can help stop negative impacts of climate change

THE HAGUE

While it is still a challenge to achieve the objectives set out in the Energy Agreement 2023, Secretary Henk Kamp (EZ) already looks ahead. In April he launched the national energy dialogue.

ANP – In the coming 35 years, The Netherlands will face the challenge of making its energy supplies more sustainable and reducing CO₂-emissions drastically. In 2020, 14 percent of our energy needs to be generated from renewable sources, and three years later, another 2 percent. Furthermore, by 2020, our country needs to reduce a fifth less CO₂ emissions than in 1990. At the moment, the Netherlands only generates 5,8 percent of its current energy from solar, wind, biomass and geothermal sources while most of the energy is derived from fossil fuels: coal, gas, some nuclear energy in Borssele.

We should honestly see improvements in the coming years. Through the Energy Agreement, billions of euros have been made available for renewable energy projects. This energy-transition, from mainly fossils fuels to sustainable energy sources, has been having an impact on our daily lives: the way we heat our homes, transport ourselves and our products, and landscaping.

In the coming months, Kamp will get together with dozens of stakeholder organizations and enumerate all options. To give everyone the opportunity to participate, the energy dialogue includes meetings across the country as well as activities on the internet. Via the website www.mijnenergie2050.nl, anyone can post a comment online on relevant issues or join the Energy Brainstorm. The website of the “Energy dialogue” was launched begin April and will run until July 2016. It is envisaged that the dialogue will strongly contribute to an “Energy Agreement 2.0”.

The Energy Agreement proposed emissions reduction is expected to be an effective tool in the effort to stop the negative impacts of climate change. Based on estimates from the KNMI, the proposed measures can help slow the increase in global average temperatures and reduce sea level rise, preventing some of the catastrophic effects of climate change. Plus, according to political analyst Jan Bremmer, some of the world’s biggest polluters such as the US and China should follow the leadership of Europe and The Netherlands and institute stronger limits on emissions in their countries.

The importance for drafting new ambitions is apparent from a recent report by the World Meteorological Organization, the UN body for climate and weather, which claims that the average global temperature in the past four months of 2016 was 1.14C warmer compared to the average in the 20th century. Unprecedented extreme weather and climate events, such as heat waves, floods and drought, have become increasingly likely in the coming decades due to climate change. Furthermore, “East Antarctica is much more vulnerable to global warming than we thought. This we have to worry about” the scientists say. The east of the South Pole is the largest mass of ice on Earth. “Every small change there has great impact on the environment all around the world”. If CO₂ emissions between now and 2100 are reduced to 0, then the contribution of the Antarctic ice sheet to rising sea levels in the Netherlands will be limited to 70 extra centimeters, instead of a meter, says the KNMI. Rising sea levels could have major implications for the coastal defense of the Netherlands.